

EIGHTH REPORT **1**
FROM THE
ESTIMATES COMMITTEE

TOGETHER WITH PART OF THE MINUTES OF THE
EVIDENCE TAKEN BEFORE SUB-COMMITTEE B
AND APPENDICES

Session 1963-64

SERVICE COLLEGES

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The Estimates Committee was nominated of—

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Mr. Bence,	Captain Litchfield,
Mr. Bidgood,	Mr. MacColl,
Mr. Bourne-Arton,	Mr. Mackie,
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Mr. Gresham Cooke,	Sir Richard Thompson,
Mr. Gurden,	Mr. Webster,
Mr. William Hamilton,	Mr. Wilkins,
Mr. Hilton,	Mr. Woof, and
Mr. Hopkins,	Mr. Woollam.
Mr. Kershaw,	

Wednesday, 11th December, 1963

Ordered, That Mr. Webster be discharged from the Estimates Committee, and that Mr. Anthony Royle be added to the Committee.

The cost of preparing for publication the shorthand Minutes of Evidence taken before Sub-Committee E was £438 16s. 3d.

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NOTES

In the Report, references to the Minutes of Evidence are indicated by the letter "Q" followed by the number of the Question referred to. References to Memoranda included in the Minutes of Evidence are indicated by the word "Evidence" followed by the number of the page referred to. References to Memoranda included in the Appendices are indicated by "Appendix" followed by the number of the page referred to.

In the Minutes of Evidence a row of asterisks indicate that the Evidence has not been reported.

EIGHTH REPORT

The Estimates Committee have made further progress in the matter to them referred and have agreed to the following Report:—

SERVICE COLLEGES

INTRODUCTION

1. Your Committee referred to Sub-Committee E the Defence Estimates, so far as they relate to Service Colleges.

2. The Estimates do not readily reveal the total expenditure on Service Colleges as it is distributed over several Votes. The Ministry of Defence therefore extracted the details of expenditure incurred. In some cases it was necessary to produce a statistical estimate, where for example a college is a "lodger" in a larger unit. After deducting appropriations in aid of £350,000, mainly derived from fees from overseas students, total net costs for 1963-64, the last year for which figures are available, are estimated at £6,200,000.

3. In the course of their enquiry Sub-Committee E met on 21 occasions and heard evidence from witnesses representing the Service Departments, the Ministry of Defence and the Treasury, and from Mr. G. W. Reynolds, a Member of the House. Memoranda were also received from the Ministry of Education and the Institution of Professional Civil Servants. The Sub-Committee visited Service colleges at Sandhurst, Camberley, Greenwich, Cranwell, Henlow, Bracknell, Manadon, Dartmouth and Shrivenham, and also paid visits to the Imperial Defence College and the Joint Services Staff College. Your Committee wish to record their appreciation of the help given to Sub-Committee E in the course of its enquiry by the staffs of the ministries and colleges, and those others they consulted.

4. The Sub-Committee decided that the total number of colleges and training schools maintained by the Services was too great and covered too wide range to be suitable for their enquiry. They therefore excluded from their attention all colleges concerned only in the training of officers and officer cadets in specialised work for a particular service. To facilitate comparison between colleges performing similar functions in the three Services, the costs of single-Service training have been excluded wherever these could be isolated and quantified¹.

5. Entry to commissioned service is not restricted to those who begin their service career in the cadet-colleges of the three Services. There is a variety of schemes in each of the Services whereby apprentices, servicemen from the ranks and university graduates are able to train for commissions. These forms of entry at present contribute only a small number of officers to the total officer-strength of the Services. More officers are recruited as supplementary or short-service commissioned officers. This type of commission plays an important role in allowing the Services to obtain the numbers of officers they need in the junior and intermediate

¹ Evidence, p. 1.

ranks, while retaining a General or Permanent List of sufficiently modest proportions to enable all officers on it to look forward to a complete career in the service. Your Committee have concerned themselves primarily with the training of officers and officer-cadets on permanent commissions. They have examined the provision made for other types of entry only insofar as entrants receive part of their training in Service colleges.

THE GENERAL PATTERN OF OFFICER-EDUCATION

6. The training received by an officer on a permanent commission today falls into three main stages (Q. 1). In the first, the officer-cadet receives all the professional and academic instruction needed to fit him for junior posts immediately. This first phase of training may take anything from two to six years depending on the Service and Branch for which the cadet is being trained and the type of entry by which he has joined the Service. There are opportunities in all three Services for officers of all branches to continue their training after one or two postings.

7. The second stage, the Staff College stage, is designed to train selected officers for the basic staff and command posts. The basic staff-course lasts a year in each of the three Services; students on the Army Technical Staff course take a course lasting $2\frac{1}{2}$ years (shortened by 9 months for those who possess a degree in scientific subjects).

8. The third stage is intended only for those officers who are expected to fill the more senior staff and command appointments. Those destined for the joint-Services staff posts in the Ministry of Defence would expect to be selected at about 39 for the six-months' course at the Joint Services Staff College, Latimer.

OFFICER-EDUCATION IN THE ROYAL NAVY

9. The basic training requirements to produce a fully qualified naval officer are at present given by three colleges, the Britannia Royal Naval College, Dartmouth, the Royal Naval Engineering College, Manadon, and the Royal Naval College, Greenwich. Dartmouth and Manadon are responsible for training all General List (permanent commission) officers for their first posting and in addition undertake part of the training of Supplementary List (short-service commission) officers. Cadets spend two years training together, the first year being spent at Dartmouth and the second at sea. In their third year most engineer specialists go to Manadon and take a four-year course at the college, but a few officers read Mechanical Sciences at Cambridge: seven did so in 1962, and eight in 1963. Seaman officers return to Dartmouth for a year of academic studies, followed by a year in the specialist schools in the Portsmouth area and elsewhere on further technical training.

10. Provision for practical training during the engineer officers' course is limited to time spent in the workshops at Manadon in the course of the academic syllabus and to one month spent in the Devonport dockyards (Q. 1333, 1336). The Royal Air Force Technical College, Henlow, follows a different procedure, and provides the equivalent of a "sandwich" course

consisting of academic instruction combined with practical experience in private industry and at Air Force stations for its cadets¹. As many engineer officers will later on be holding managerial posts in naval dockyards (Q. 1697), there would be an advantage in naval students having longer in the dockyards. Your Committee therefore recommend that the Navy Department enquire into the possibility of introducing more practical experience into the Manadon syllabus, either in outside industry or in the naval dockyards.

11. Manadon was opened in 1940 and has gradually taken over the functions of the Royal Naval Engineering College, Keyham, which was closed in 1958. The building of permanent instruction and accommodation blocks has been in progress since 1940. At present extensions to the Wardroom are being built; when these are complete the last of the temporary hatted accommodation will be removed, though some huts of better quality will be retained for officers attending the College for short courses. One special difficulty of accommodation has already been acutely felt. The Great Hall of the Wardroom, opened in 1958, was planned for a student population of 350, the number then in residence and taking the Long Engineering Course, the main course provided at that time (Q. 1348). As a result of the introduction of the present training scheme in 1962 that number is expected to rise from 416 at present to 529 in January 1966. Nevertheless it appears to be impossible to extend this hall. Since it was known when the Hall was being planned that the training scheme then operating was due to be reviewed in the near future, and that the numbers attending the college might therefore alter, it is difficult to understand why a flexible plan for the hall was not adopted, which could then be altered or added to, to meet changing needs.

12. The Royal Naval College, Greenwich, performs a multiple role in the system of officer education in the Royal Navy. It is responsible for most of the advanced technical and scientific training required by the Navy, and for a number of non-technical professional courses. Witnesses attached considerable significance to the presence at the college of officers at every stage of their career and pointed to the advantages of a common academic staff providing services to the various technical and non-technical courses in addition to the naval staff attached to each course. However, after examination of the time given to different courses Your Committee came to the conclusion that the extent of social mixing was exaggerated and that the technical and non-technical courses shared very few of the academic facilities. In the circumstances Your Committee cannot see much substance in the claim that the college gains by having a common academic staff.

13. The technical courses are designed to meet specifically naval needs, and are provided regularly however small the numbers on them. The Advanced Communications Course, for example, has 4 students taking a course lasting two terms; the previous course had 2 students.

14. The college also provides a three-years' course leading to the external London B.Sc. in Electrical Engineering. Until 1962 all officers entering the Electrical Engineering Branch took this course at Greenwich. Following

¹ Appendix 3, p. 267.

the reorganisation of the Engineering specialisation covering both Electrical and Marine Engineers it was decided that all engineer officers should train together at Manadon (Q. 712). The 1961-62 intake was the last to enter Greenwich. The Navy Department were, however, reluctant to close this course since it had traditionally been attended by certain Navy Department civilians of the Navy Engineering Service and others (Q. 511). They therefore kept it in being and have since made efforts to increase numbers on the course by training other Navy Department civilians, civil servants from other ministries and, more recently, private civilians. Your Committee hope that the plan to invite up to a dozen civilian students to study either electrical or mechanical engineering at Greenwich will soon be put into operation.

OFFICER-EDUCATION IN THE ARMY

15. Service colleges provided by the Army for the initial training of officers and officer cadets comprise the Royal Military Academy, Sandhurst, and the Royal Military College of Science, Shrivenham. The latter has an additional function in the provision of training for Technical Staff Officers.

16. Sandhurst combines the functions previously performed by the Royal Military College, Sandhurst, and the Royal Military Academy, Woolwich. The decision to amalgamate the two colleges was actually taken in the last century, but was only implemented in 1947 (Q. 108). Subsequently the curriculum was extended to include more academic education, and the course increased from 18 months to 2 years. The Academy has in consequence had to depend on a considerable amount of temporary accommodation, both to house cadets and for teaching and administrative purposes. Sub-Committee E were informed that plans for the building of an additional college and an assembly hall have been approved by the Army Council. Witnesses were confident that these would result in economies in maintenance and in the use of teaching staff (Q. 334). Your Committee welcome these assurances, even though they were expressed in general terms. They consider, however, that on completion of the present plans for rebuilding the Army Department should make a definite assessment of the economies obtained.

17. Entry to the Academy is by Civil Service Examination (though boys with five passes in G.C.E. including two A levels are granted an exemption from this) and selection board. Members of the Sub-Committee expressed some surprise that the Army Department should be reluctant to have an invariable entry-qualification of two passes at A level in G.C.E. when this had been insisted upon by the other two Services for some years. In view of the increasingly technical nature of the Service officer's task it might be held that two A levels are the very least that should be expected of candidates for a commission. Since all candidates have to pass the Regular Commissions Board which considers the specifically human and personal qualities, there would be no question of unsuitable candidates being admitted to Sandhurst on academic achievement alone. Witnesses contended that for the Army's needs a two A level qualification would be unnecessary and unduly restrictive: "the size of our entry is twice that of Dartmouth, and we know that if we demanded two A levels we would not get the necessary number of recruits" (Q. 143).

18. During the course of the Sub-Committee's enquiry the Army Department announced that as from 1966 the Civil Service-Commissioners' examination for entry to Sandhurst would be abolished. Instead, the normal qualification for entry will be five passes in G.C.E. of which two should be at A level. However, the Army Department made it clear that this is only a change of emphasis: "boys with two or even one A level will, all other things being equal, have a better chance of being accepted for Sandhurst than those who have not got an A level. . . . If we do not make up the numbers with boys possessing A levels we shall still accept the others" (Q. 1932). In Your Committee's view, this is an unsatisfactory solution to what is an admittedly difficult problem. According to the Report of the Robbins Committee on Higher Education, the proportion of the male age-group obtaining two or more A levels has risen from 5.4 per cent. in 1954 to 8.1 per cent. in 1961, and is expected to continue to rise at the same rate for the next 15 years¹. The Sub-Committee were told in evidence that of the latest intake to Sandhurst some 62 per cent. have two or more A levels (Q. 350), which, the witness commented, "is a great improvement on the figures over the last two years". It is clear, therefore, that in general the supply of adequately qualified school-leavers is in little danger of drying up.

19. The fear that the Army might fail to attract enough of them is a real one. The Grigg Committee on Service Recruiting² pointed out in 1958 that the Army was still drawing its officer-cadets from too restricted a sector of the population: between 1947 and 1958, 67 per cent. of all entrants came from Headmasters' Conference schools. At present 60 per cent. of schools entrants come from H.M.C. schools (Q. 113). So large a percentage is due not so much to discrimination against boys from maintained schools as to a dearth of boys coming for interview from those schools. In a period of 9 months examined by the Grigg Committee 61 per cent. of all candidates were from H.M.C. schools; of the successful candidates 77 per cent. were from H.M.C. schools. The answer to the Army's fears, therefore, must lie not in arbitrarily reducing the number of adequately qualified entrants from H.M.C. schools but in increasing the effectiveness of the Army's public relations to maintained schools. Since 80 per cent. of all boys in the sixth-forms of schools in England and Wales are in maintained or direct-grant schools, it is clear that the system of schools liaison officers, circulars and visits is not having an impact on those it is intended to reach.

20. In the circumstances Your Committee regard the assurance that "We are very ready to take [cadets] from any source. It is just a question of who comes along" (Q. 1938) as unduly complacent. The Royal Air Force, with a considerably smaller annual cadet-entry, have found it possible to cast their net more widely in recent years and comment that this has led "to not necessarily a reduction in the number of people who come from the independent schools but an increase in the numbers that come from the rest" (Q. 786). In Your Committee's view there is need for considerably more understanding of the reasons for the Army's continued failure to attract school-leavers from maintained schools. They

¹ Cmnd. 2154, 1963, App. I, Part IV, Table 5.

² Cmnd. 545, 1958.

recommend that the Army Department keep under constant review the sources of its officer-recruiting and the effectiveness of its recruiting machinery.

21. Entry to Sandhurst from the ranks does not depend on the prior possession of academic qualifications. Serving soldiers are recommended by their Commanding Officer to go before the Regular Commissions Board and, if successful, may be given a special educational course to bring them up to the educational standards required by Sandhurst. In recent years the number of cadets coming from the ranks has increased; at the present time 23 per cent. of the cadet body come from the ranks (Q. 346). Your Committee welcome any opportunity which may be given to serving soldiers to train for commissions since they believe it is in the Army's interest to have a diversified entry.

22. They note, however, that 65 per cent. of entrants from the ranks were educated at H.M.C. schools, a percentage which is higher than that for cadets entering straight from school (Q. 113). It is clear that the policy of opening Sandhurst to a "broadly-based intake" is not being achieved. The Army entry, designed to provide for serving soldiers without particular educational advantages, is instead producing a more narrowly-based intake than the schools entry. Your Committee are reluctant to attribute this to the lack of men in the ranks from maintained schools with "the right officer qualities and leadership qualities and . . . reasonably intelligent" (see Q. 342). They conclude, however, that existing procedures are failing to attract them.

23. The Royal Military College of Science, Shrivenham, was established on its present site in 1946. It continues the work of the old Artillery College and Military College of Science at Woolwich. Its two main functions at the present time are to train young officers to qualify for the external London B.Sc. in either Engineering, Special or General Science, and to train entrants to the Technical Staff.

24. Until two or three years ago young officers qualified to take the degree course invariably came straight from Sandhurst to Shrivenham. Your Committee understand that as a result of recommendations by the last Commandant, the Army Department have begun to send officers for a tour of regimental duty before attending Shrivenham whenever possible. Sub-Committee E were informed by the Commandant that he regarded the policy as fully justified in that examination results tended to be better and officers more mature when they had been away in a unit (Q. 1907). Your Committee are impressed with the evidence of high standards at the College. Last year the pass rate in all stages of the degree examinations was 83 per cent. Moreover, these results are obtained by young officers many of whom would have had difficulty in getting a university place when leaving school. Your Committee note that of those selected at Sandhurst for Special Mathematics and Science, the "cream" go to Cambridge to the number of 20 annually, leaving Shrivenham with the lower strata (Q. 1867). Your Committee consider that such a policy of "creaming" may act as a disincentive to the staff at Shrivenham, who are thereby deprived of the stimulus of teaching exceptional students.

25. The annual intake of officers to the degree course is 70-80, mainly from the technical arms but including an increasing number of Gunners and infantrymen. In addition the Army Department admit to the degree course up to 15 civilian "Shrivenham scholars" per annum, paying their fees and maintenance costs. These civilians are under a moral obligation to enter the Scientific Civil Service afterwards if vacancies occur and they are successful in the competition; at present about 50 per cent. enter while others may go on to take higher degrees or join the staff at Shrivenham. In addition, under a new scheme beginning in the academic year 1964-65, up to 10 civilian students will be admitted to the degree course without obligation, but financed by their local education authority or the Department of Education and Science. If this scheme succeeds its numbers may be expanded. The Army Department are also planning to provide up to 20 places for short-service officers and 10 places for direct-entry officers at Shrivenham from October, 1964 (Q. 1958). This will have the effect of raising the total number in the first year of the degree course to 125.

26. Your Committee are glad to see that the Army Department by taking such steps are not only making a more economic use of the extensive facilities available at Shrivenham but also contributing to an easing of the present shortage of university places for school-leavers. The Commandant explained that "it was felt (I think rightly) that it is not right to have any spare capacity university-wise, particularly in the case of engineering and science, today" (Q. 1867). Your Committee consider, however, that with a staff of 75 civilian lecturers (Q. 328) an annual intake of 125 is still uneconomically low. The Commandant suggested that on existing staff and instructional facilities 150 per annum could be taken, though he pointed out that additional accommodation would have to be provided.

27. It appears likely that the maximum Army requirement for the foreseeable future will be 100 graduates from Shrivenham a year. If, therefore, numbers on the course were to be expanded to 150 a year or more it would be either by expanding civilian representation or by bringing in students from the other Services. Witnesses suggested that too great an increase in the percentage of civilians might have an adverse effect on the character of the College as a Service institution and would be resented by the young officers (Q. 1894). To bring in a number of students from the other Services at present reading for degrees either at university or at their own Service colleges would only be a solution to Shrivenham's problem if it were done on a large enough scale, and this would necessarily be at the expense of depleting the other Service colleges. Your Committee are of the opinion that any redistribution of the relative functions of the Service colleges as regards degree courses must be part of a wider examination of the future need and provision for technically-qualified officers in three Services. (See paragraph 113.)

28. The College occupies buildings erected in 1938 for an Artillery Brigade and its headquarters but never used for that purpose. An old country-house, Beckett Hall, is used as the mess for one of the four halls of residence, and most of the laboratories and workshops are housed in converted gunshops. New buildings are planned to replace the Rutherford Nuclear Laboratory and to provide the College with a lecture hall to

seat 250 people. As the estate totals 736 acres, of which only 464 acres are at present used by the College, it is clear that no problem should arise over land for future rebuilding or extensions.

OFFICER-EDUCATION IN THE ROYAL AIR FORCE

29. The pattern of officer-training in the Royal Air Force is determined by the functional division of the Royal Air Force into the General Duties, Technical, Equipment and Secretarial Branches and the R.A.F. Regiment. Technical cadets go to R.A.F. Technical College, Henlow, cadets in the other branches to R.A.F. College, Cranwell¹. The course at each college makes provision for a small proportion of cadets to take a university course. Cranwell cadets take a mixed academic and professional course lasting three years, followed by an advanced flying course. The academic element may be taken at degree standard, arts specialists reading for the external London general degree, science specialists for the examination for associate fellowship of the Royal Aeronautical Society. At present 17 per cent. of the total cadet body are in the two specialist streams. There is, however, no provision for cadets to go away to university. At Henlow up to twenty Technical cadets annually are sent to university after a year at the college, and take a degree course in engineering before returning to Henlow for two terms postgraduate training. The remainder take a course leading either to the Diploma in Technology or the Higher National Certificate.

30. Your Committee understand that there has been some dissatisfaction with this system. General Duties cadets were being given insufficient time for work of the standard required of a degree course; in consequence "very small numbers" obtained a degree. But neither were any cadets fully qualified to fly after leaving the College. Because of this the syllabus is to be altered from October, 1964: the length of the course will remain at three years but all cadets will be fully trained to advanced flying standard in that time. The provision for cadets to take external courses will disappear, but in its place there will be opportunities for a "selected subject phase" (Q. 1042). The College also hope that some form of external moderation of examinations will be possible. The course for Technical cadets will remain as it is, though after last year's intake of University cadets, numbering 11, go up to university in October, 1964, no more will enter on that variant of the Henlow scheme. Instead, under a scheme introduced in 1963, up to 25 cadetships a year are to be offered to General Duties and Technical Branch entrants. University cadets go straight to university and receive only professional training after leaving, thus saving a year in the case of Technical Branch entrants.

31. From October, 1965, the courses at present provided at Henlow will be transferred to Cranwell and R.A.F. College, Henlow, closed. It has since the end of the last war been the intention of the R.A.F. to concentrate the training of all General List cadets in one place, "so that", one witness said, "we did not breed competition between two sorts of branches" (Q. 862). The final decision was taken in 1961 as the result of a working party. Previously, however, plans had been prepared for the redevelopment of the mechanical engineering wing and the domestic facilities at Henlow costing about £1½ million (Q. 1068). In view of the

¹ Evidence, pp. 4 and 8.

expense which would be incurred if the direct-entry and postgraduate officer training were to remain at Henlow and new engineering facilities and instructors provided at both Cranwell and Henlow it was decided that the whole of the technical college should move to Cranwell. The only part of the plans for rebuilding at Henlow to be begun, a new cadet mess, had been sanctioned in 1958 and this was completed soon after the decision to move to Cranwell. Your Committee understand that any new unit moving into the Henlow premises will be able to use the new building. Nevertheless it is disturbing to learn that the Air Ministry should have envisaged extensive capital developments at Henlow at the same time as a working party was examining the possibility of moving Henlow cadets to Cranwell. Your Committee find it hard to believe that those responsible for recommending reconstructions and additions at Henlow were unaware of the possible transfer to Cranwell—of at least the cadet-training. One witness admitted that a union at Cranwell had “been looked at by the Air Ministry a number of times, originally soon after the war” (Q. 862).

32. The effect of the merger will be that the unified College will be responsible for the training of all General List Officers and Supplementary List Technical Officers besides a number of postgraduate and specialist technical courses. For this purpose the premises at Cranwell are being extended. New buildings at present under construction include a block at present known as the Institute of Technology in which will be concentrated all applied science teaching, both for General Duties and Technical cadets and officers; a separate mess for student officers is also planned. All existing facilities will be shared and cadet squadrons will be formed from both General Duties and Technical cadets. The College itself will be under a unified command and administration, but it has not yet been decided what pattern the organisation of instruction will take. Your Committee welcome this step towards the rationalisation of General List officer education.

STAFF TRAINING IN THE SERVICES

33. The staff colleges of the three Services and the colleges for senior officers share, perhaps naturally, a marked similarity in their instructional techniques which contrasts with the variety of schemes in use in the cadet colleges. They are in the first place working to comparable syllabuses consisting of lectures, syndicate activity, visits and single-Service and joint-Service exercises. Each of the single-Service staff colleges has a course lasting a year and beginning in January. The similarity of approach has been emphasised and developed by the decision of the Chiefs of Staff Committee in 1962 that all single-Service staff colleges should devote 20 per cent. of their training time to joint-Service activities. Only one course has been completed since the promulgation of that decision, but Your Committee understand that it is now the practice for the planning staff at each college to be informed of what the other colleges are doing, so that students receive comparable training before arriving at the joint-Service activities. Some witnesses suggested that the formal decision to make 20 per cent. of the training joint-Service had only accelerated

a process which had been going on for many years (Q. 1618). Others, however, said that they had found difficulty in making time for joint-training as opposed to merely "getting together to study things of common interest" though they hoped to be able in the future fully to implement the Chiefs' of Staff decision (Q. 414). Sub-Committee E gained the general impression that 20 per cent. of joint-training was the very most that colleges were prepared to absorb into a primarily single-Service syllabus. Your Committee consider that should a decision be contemplated to increase the amount of time given to joint-training, this should be taken only after a comprehensive review of the policy of single-Service staff colleges.

Staff Training in the Army

34. At present staff training in the Army is divided between the Staff College, Camberley, and the Royal Military College of Science, Shrivenham. Officers selected for training on the General Staff take a ten-weeks' course at Shrivenham in general science before proceeding to the one-year course at Camberley. Officers selected for the Technical Staff take a scientific course at Shrivenham lasting $2\frac{1}{2}$ years, though this is reduced to $1\frac{1}{2}$ years for officers possessing a degree in a scientific subject. The Army Department have now decided that as from 1966 there will be a single Staff with four sub-divisions: general staff, administrative staff, quartermaster-general staff and weapons staff; and staff officers will in future be posted to particular work according to their technical qualifications. Training for the unified staff will continue to be shared between Shrivenham and Camberley. All officers will spend a year at Camberley, and this will be preceded by a scientific course at Shrivenham, the length and contents of which will be varied according to the prior qualifications of the officers concerned: officers with a scientific degree taking a year's course in advanced science, those with two A levels in scientific subjects taking a year's course at a less advanced level, and those with fewer science qualifications taking a course lasting three months. The intention is not to produce a staff all of whose members are equally qualified in all subjects, but to provide a more comprehensive training which will make possible greater interchange of staff officers.

35. The Staff College, Camberley, is housed in a complex of buildings dating back to the 1860's, but including also temporary tutorial and office billets erected in 1939 and the Alanbrooke Hall, opened in 1961. Because of the increased number of officers on the course in recent years, accommodation at Minley, in the same area, is used as an overspill: this provides messing and tutorial accommodation, but for all other purposes is dependent on Camberley. The College admitted the waste involved in distributing the College between two centres, but attributed it to the necessity to train the number required of them. The Army Department, however, point to the value of retaining a small independent unit for conferences like the C.I.G.S. conference, when the larger Staff College, Camberley, is closed during the recess, but concede that if there were to be a major building project at Camberley, the need for it would diminish (Q. 1989).

36. While the main building of the College is satisfactory for most purposes the same cannot be said of any of the auxiliary buildings other than the Alanbrooke Hall (see paragraph 37). The syndicate rooms were erected in 1939 and are of temporary construction. The kitchens are extremely inconvenient for the numbers for which the College caters. The photographic and reproduction facilities, used not only by the College but also in part by R.A.F. Staff College, Bracknell, are housed in disused stable blocks and separate from the store in the main block, to which all printed material has to be carried by hand to be made up for distribution. The only rebuilding envisaged at present is a scheme costing £50,000 to improve the kitchens and a scheme costing £100,000 to rehouse the instructional facilities, including provision for an automatic telephone exchange for staff exercises. Your Committee are concerned lest the character of the works to be undertaken make future development of the College more difficult. Since the frontage of the main College building is protected by the Royal Fine Arts Commission the area in which new buildings can be erected is extremely limited and is already partly occupied by the Alanbrooke Hall. Any development plan should take into account the need at some time in the future to rehouse the printing facilities, to concentrate all Army general staff training at Camberley and to close Minley. It would clearly be short-sighted to make alterations costing £150,000 without considering their effect on possible other rehousing projects. Your Committee accordingly recommend that comprehensive plans be drawn up for the gradual rehousing of all facilities and services at present in temporary or converted accommodation at the Staff College, Camberley, that the replacement of the existing kitchens and instructional facilities be given priority, and that the design of the instructional facilities allow for extensions in the future.

37. The Alanbrooke Hall, opened in 1961, was the subject of an inquiry by the Committee of Public Accounts of Session 1962-63, when the War Office were criticised for extravagance in spending some £180,000 on a hall of 400 seats¹. Your Committee are satisfied that this Hall is being fully used, not only for specifically Army purposes, but also for joint-Services work, most of which takes place in the Camberley-Bracknell area. Because of the need to rehearse presentations thoroughly, four times the actual presentation-time is spent in the hall and at times it would be in use two or three times in one day (Q. 433).

38. At present only those officers training for the General Staff come to Camberley: Technical Staff students receive all their training at Shrivenham, which in addition gives a ten-weeks scientific course to General Staff students. Under the new system of training to be introduced in 1966 all students will spend one year at Camberley. This, however, will not lead to any increase in the numbers under training, which instead will decline during the next few years. The introduction of the "staff qualified" system and the lieutenant-colonel's list, and the implementation of the "careers to 55" decision have all led to the opening of staff appointments to officers without requiring them to take the Staff course (Q. 1973). The effect on the Camberley entry at present would be to

¹ H.C. (1962-63), 275.

reduce it by 40; as the additional number of students at present trained at Shrivenham who will be coming to Camberley is of that order, overall numbers at Camberley will remain constant.

Staff Training in the Royal Navy

39. Staff training in the Royal Navy is provided by the R.N. Staff College, located at Greenwich as part of the Royal Naval College. It has its own headquarters and directing staff but shares administrative services and messing with the rest of the College and draws on the services of some of the academic departments for lectures in addition to visiting lecturers.

40. The Staff Course was until the end of 1962 held twice yearly. The length of the course was extended to a year to achieve uniformity with the other staff courses and permit an increase in the joint staff training content of the course following the decision of the Chiefs of Staff in 1962. Since much of the joint activity of the Colleges consists in visits with the other Staff Colleges and joint exercises, the siting of the Colleges is of some importance. If the naval staff course continues to be held at Greenwich the quality and impact of joint activity may be adversely affected. Because of its remoteness from the other Staff Colleges (Camberley, Bracknell and Andover) and from Salisbury Plain and Portsmouth, no joint staff training takes place at Greenwich (Q. 1212): instead the Greenwich course travels out to Bracknell and Camberley and its staff and students are lodged with them. The Commandant of R.A.F. Staff College, Bracknell, pointed out that this meant that half-day or one-day joint exercises were impossible and commented: "Greenwich is very badly placed" (Q. 1223). One of the witnesses at Camberley also declared that "The difficulty about the joint work, a physical difficulty, is the distance Greenwich is from here" (Q. 411).

41. The view of naval witnesses was that although the location of the naval staff course did present a difficulty for joint training (Q. 603), this was balanced by what in their opinion were overwhelming advantages in the Greenwich location. The college was able to get visiting lecturers without any difficulty since it was so close to central London; it was of direct advantage to Staff College students to be studying and mixing with other naval officers in a naval atmosphere; and because of the presence of the academic departments the course was able to draw on internal lecturers for specialised studies.

42. Your Committee do not regard these as decisive arguments. They recognise that when relations with the other Services were restricted to the presence of a few soldiers and airmen on the course it was appropriate to locate the course in a predominantly naval institution. But this is now outweighed by the growing importance of making a reality of joint-activity and study; and in this situation to dwell on the "intangible benefit of being in a Naval establishment" (Q. 608) seems too complacent. All three Services have had in the past few years to face the need to overcome the divisive effects of technical specialisation, but Your Committee do not

believe either the Royal Air Force or the Army claim that merely sharing a common mess is sufficient. Your Committee have already examined the use made by the Staff Course and other non-technical courses of the academic departments (see paragraph 12). The Staff Course draws on the services of only two departments, Humane Studies and Nuclear Science, spending three periods a week with the former out of 102 given by the department, and fewer than two with the latter out of 77. It is apparent that these are services provided by the departments outside their main functions, which are to do with the Lieutenants' (Greenwich) and the Special Duties Officers' Courses, and the nuclear courses, respectively. It is true that external lecturers find it convenient to visit Greenwich if they are based on London, as 80 per cent. of them are (Q. 606). But the other Staff Colleges, situated at about an hour's train-journey from London, experience no difficulty in obtaining lecturers from London on this account (see Appendix 2 and Q. 901-3).

43. On being asked whether they had considered moving the naval staff course nearer to Camberley and Bracknell, Navy Department witnesses said that the possibility had been investigated, "difficulties of moving (for instance, the capital cost involved)" (Q. 1702) being adduced against it. Your Committee believe, however, that the costs involved would depend on the nature of the solution adopted, and they therefore recommend that the question of the transfer of the Naval Staff Course to the Andover-Camberley-Bracknell area be re-examined by the Navy Department.

Staff Training in the Royal Air Force

44. The Royal Air Force has not one staff college but two, R.A.F. Staff College, Bracknell, and R.A.F. Staff College, Andover, the former an independently administered station, the latter a "lodger" unit at R.A.F. Andover. Each college follows broadly the same curriculum, and R.A.F. students are distributed between the two colleges. The main difference between the two courses lies in the security content. With Air Force subjects it is difficult to separate secret information from the rest, and the solution adopted at the Army and Navy Staff Colleges, of grouping secret instruction at the end of the course, from which foreign students are excluded, has not been found possible. R.A.F., American and some Commonwealth students are sent to either college, and all other overseas students go to Andover. Although students at Andover do not take part in all activities undertaken by Bracknell students, the pattern of training is the same, including the 20 per cent. joint-Services training; of five inter-service staff exercises Andover participates in three.

45. R.A.F. Staff College, Andover, owes its separate existence to the policy of the Air Force Department in training overseas students, especially foreign students, in staff duties. Witnesses discounted the suggestion of training all overseas students separately, pointing out that this would lead to an undesirable sense of segregation (Q. 1240).

46. Because of the small size of both Colleges unit costs per student are higher than at Camberley, as the following table shows.

	Total Annual Cost	Number of Students	Unit Cost	Establishment	
				Service	Civilian
Andover	£ 107,650	42	£ 2,563	15	70
Bracknell	299,150	96	3,116	59	180
Camberley	331,250	174	1,903	50	237

(All figures 1963-64)

Witnesses explained that costs at Andover were lower because it was a lodger unit of R.A.F. Andover and consequently shared many of its support services with the larger unit. Bracknell, however, as a wholly self-supporting unit has to provide its own services. Comparisons of costs are made more difficult, however, because students at the R.A.F. Staff Colleges are on average one rank higher than at Camberley and therefore the directing staff are of higher rank. This affects the costs of the directing staff directly; it also affects total personnel costs indirectly since officers at Bracknell, because of their higher rank, and because of the higher proportion of them in married quarters than at Camberley, have a higher entitlement to batmen.

47. At present it would be impossible to bring all those at Andover to Bracknell: in addition to the security limitation there is a shortage of tutorial accommodation. This, however, at present in temporary premises, is due to be rebuilt in a permanent form. As it would be possible in other respects to take both courses at Bracknell (Q. 871), the Air Force Department have said they are going to review the possibility of a merger later in the current year. The savings in personnel are not expected to be great: three officers and a few civilians might be saved (Q. 870), and because the Andover station is also used for other purposes there would be little immediate savings in costs. The Air Force Department recognise that if R.A.F. Staff College, Andover, is to remain in its present position some rebuilding will be necessary and are aware of the need to take an early decision one way or the other. Since R.A.F. Staff College, Bracknell, is in the process of preparing plans for the rebuilding of its tutorial site on the basis of existing requirements, it will be necessary either to take a decision for or against the merger of Andover with Bracknell before plans are approved (Q. 2022) or to include in them provision for extensions in the future if Air Force Department policy changes. Witnesses at the Staff College were emphatic that Bracknell was the right place for a combined College, provided the security problem could be overcome; and this view was shared by Treasury witnesses. "It is a matter, I think, very much of timing. If a new building were to be put up at Bracknell that might be the opportunity to raise this question" (Q. 1770). Your Committee welcome the acknowledgment of the need for an early decision by the Air Force Department.

SENIOR OFFICER-EDUCATION

48. Senior Officer-Education is not related so much to particular appointments as is Staff training. It is concerned rather with those problems which present themselves to the higher reaches of Service departments and the higher command. For this reason all three Colleges which train senior officers—the Joint Services Staff College, the Royal Naval War College and the Imperial Defence College—not only give a large part of their time to political and economic problems but have a considerably larger representation of civil servants and scientists as students on the course than is possible at the single-Service Staff Colleges. All three colleges function as joint-Service institutions, though the R.N. War College is administered as part of the Royal Naval College, Greenwich, whose premises it shares, and still has a preponderance of naval officers and civilians in Navy Department employment on each course. The other two colleges are administered by the Ministry of Defence (Central).

Joint Services Staff College

49. The work of the Joint Services Staff College, Latimer, is described in detail in the memorandum¹ submitted by the Ministry of Defence. The purpose of the College is more specific than either of the other two colleges in this category in that it “aims to train serving officers to fill joint Command and Staff appointments . . .”. Officers attend at about the age of 39, compared to an average age at the single-Service staff colleges of 33, and the majority of students at the College will have taken a course at either their own Service staff college or another. Of 87 R.A.F. officers attending the College in the last 3 years 62, or 71 per cent., had taken a staff college course (Q. 2024). Your Committee understand that though there is no formal bar to an officer proceeding to higher rank without going to Latimer, in practice an officer marked out for higher responsibilities would be selected for training at Latimer.

50. The course at present lasts six months and is attended by between 70 and 80 students, including 18 Commonwealth and American students and 4 United Kingdom civil servants. Plans are under consideration for alterations to the College to allow for a slight increase in student-numbers and to replace temporary accommodation erected during the Second World War; and the Ministry of Defence are looking into the possibility of finding another home for the College as an alternative to rebuilding at Latimer (Q. 2091). But witnesses were broadly satisfied that the capacity of the College meets the Services' requirements for officers with such a training and “see no reason why it should get any greater in the future” (Q. 2089).

Imperial Defence College

51. Your Committee appreciate that it is important that senior officers who may later hold responsible commands or staff appointments concerned with defence policy should be educated in the broader aspects of national policy

¹ Appendix 1, p. 265.

and in the political and economic implications of defence problems. This applies equally to civil servants. Your Committee consider that the Imperial Defence College fulfils an essential need in this respect. In recent years it has departed from its earlier emphasis on specifically military studies: of 14 studies which make up each year's syllabus, only 3 or 4 are now directly military (Q. 1532, 1620). The Commandant defined the aim of the course as "to look at the world in the broadest political, economic and military sense and, having had a look at it, in the latter part of the course to fine it down to our particular defence problems" (Q. 1532).

52. The College occupies a self-contained mansion in Belgrave Square. It was founded in 1927. Although it was always the intention of the Committee of Imperial Defence in establishing it to include Commonwealth representatives among the students, their numbers were small until after the Second World War when the College as a whole expanded. In the last completed course consisting of 64 students, 41 were United Kingdom officers or civil servants, 19 came from the Commonwealth and 4 from the United States. However, although the number of Commonwealth countries entitled to send students is increasing, many are finding it difficult to spare their most senior men for a year and the number of Commonwealth countries represented has in fact fallen over the last 3 years from 12 to 8. The fee for the course was fixed at £100 (excluding maintenance and tour costs) in 1947 and the Ministry of Defence comment that "the fee is low, but this enables the poorest member of the Commonwealth to take advantage of the course"¹. The average age of the students is 45, though the age-spread of the Commonwealth students is very wide, ranging from 32 to 54.

53. Civil servants attending the Imperial Defence College are drawn from all departments. Places are reserved on all courses for the Foreign Office and the Commonwealth Relations Office and "semi-reserved" for the Service departments, and other places are filled from a short-list of nominations. On the present course five came from departments other than those mentioned: Government Communications Headquarters, Ministry of Aviation, which sent two, the Board of Trade and the Colonial Office. A complaint was expressed by both the Imperial Defence College and the Joint Services Staff College that they rarely had Treasury nominees. As the Commandant of the Imperial Defence College said in evidence, "The Treasury is always getting a kick in the heels throughout the course and it is nice to have someone to answer back for them in syndicate discussion" (Q. 1562). In the past nine years 3 Treasury civil servants have attended the course (Q. 2100); a Ministry of Defence witness agreed that, while there was no case for substantially increasing the proportions of the Civil Service at the College, it would be advantageous for more officers of the Treasury to attend the course (Q. 2095-97). It is claimed that the Treasury, as a hard-worked department, find it difficult to spare people (Q. 2098). Nevertheless, the Treasury as the central Department of State may be assumed to have a valuable contribution to make on most of the questions studied by the Imperial Defence College and Joint Services Staff College. Your Committee accordingly recommend that the Treasury undertake to release two officers from their department each year to go on either the Imperial Defence College course or the Joint Services Staff College course.

¹ Evidence, p. 185.

Royal Naval War College

54. The War College, like the Royal Naval Staff College, functions under the aegis of the Royal Naval College, Greenwich. It has a small Directing Staff of 4 in addition to the Admiral President of the Royal Naval College who is President of the War Course. Like the Imperial Defence College, it takes officers in their middle 40's, naval officers at Junior Captain rank, with an occasional Flag Officer, and the equivalent in the other Services. Founded in 1900 as a course for senior naval officers in the strategy of war, the College has dwelt increasingly on joint-Service problems and has been attended by an increasing number of members of the other Services and of the Civil Service. In the six-months' course 14 per cent. of the time is given over to specifically naval subjects: the syllabus is divided up into: Defence problems (63.1 per cent.), Current Affairs (20.8 per cent.) and General Interest (16.1 per cent.). The Army and the Royal Air Force are each allotted five places out of 24, the rest being distributed between the Royal Navy (10) and the Navy Department and the Naval Services (4). A Navy Department witness pointed out that the Imperial Defence College, because of the presence of overseas students, was not able to have such a high security rating as the War College, students at which have access to material classified as "Top Secret". A Ministry of Defence witness justified the War College mainly in terms of its supplementing the limited number of people who can go to the Imperial Defence College (Q. 2103).

55. Your Committee do not doubt that the College is producing "very well worth-while results" (Q. 2103) and agree with the President of the College that it is not a waste of time for anyone, since "it is such an exceptionally widening experience" (Q. 676). Following on the reorganisation of the Ministry of Defence an interdepartmental committee is seeking to identify common requirements in Service training (Q. 2025) and considering *inter alia* whether there is in the long term a place for the War College (Q. 2103). In order to justify the expense of the College it is necessary to go further than to establish that it is useful, and to demonstrate that its products are essential to the working of the Services and cannot be provided more satisfactorily in any other way. Your Committee had little evidence that the facilities at the Imperial Defence College were inadequate to fill expected posts of higher responsibility and they were not satisfied that in all cases the War College was being used for that purpose. Your Committee therefore recommend that consideration be given to the possibility of abolishing the Royal Naval War College.

DEPARTMENTAL CONTROL OF COLLEGES

56. Departmental control of Service establishments, including Service Colleges, is exercised functionally. No one section of a Service department is concerned solely with colleges, but the functional division of activities within the department, into Finance, Training, Civil Establishments and Service Personnel, ensures that provision for the colleges is being controlled according to the same standards as apply to other establishments within the Service. For example, the employment of civilians in a Service college will be controlled by the Civil Establishments division of the relevant Service

department in accordance with its general policy regarding civilians in Service establishments in the United Kingdom and having regard to any special policy relating to civilians for special purposes such as lecturing.

57. To work satisfactorily such a system requires not only that there is regular and easy communication between all the Divisions jointly concerned in the control of any one unit and with the Commanding Officer and his administrative staff. There should also be periodical examinations of all aspects of the work of the unit, to assess its effectiveness and, wherever possible, to facilitate comparison with other bodies doing similar work within the same Service, in other Services and in the civil field.

Control of Expenditure

58. Control is exercised by the Finance Division in each of the Service departments and of the Ministry of Defence (Central) for the Joint Services Staff College and the Imperial Defence College. Annual estimates, and proposals for expenditure during the course of the financial year, are submitted to the Finance Division for scrutiny and approval. Where there are proposals for changes in the established service or civilian complement or for new works or extensions the Finance Division will consult with the Division most nearly concerned. Since 1st April, 1963, the Ministry of Public Building and Works have assumed responsibility for works and services for the Service departments and act as agents and designers once a decision to approve expenditure has been taken inside the Ministry of Defence. This has also resulted in the transfer of Service department employees concerned with maintenance to the local establishment of the Ministry of Public Building and Works (Q. 268).

59. The Finance Division produce annual costings for the colleges including all costs, whether borne on Service or other Votes. This procedure was recommended by the Committee of Public Accounts in their Third Report of 1960-61 to enable the Treasury to make comparisons and, if necessary, recommendations for economy¹. The Navy Department say they also make use of such costings "as are available to us of other institutions in the other Services" (Q. 7). Your Committee consider that statements of detailed costs should be made available as a matter of course not only to the Treasury, but to the other Service departments; comparisons between the Services should be made in the first instance within the Ministry of Defence.

60. Your Committee are not fully satisfied with the existing distribution of responsibility between the Service Departments and the Ministry of Public Building and Works. Sub-Committee E examined maintenance costs to find out which old buildings and obsolete heating systems were proving extravagant. They were told by the Admiral President of the Royal Naval College, Greenwich, that a new district heating scheme to be provided in place of a very diverse collection of boilers would be a tremendous saving, an "example of the Treasury spending capital instead of income" (Q. 640), which would bring a great saving in both fuel and labour costs. On pursuing the same enquiry into the apparently excessive increase in fuel costs at Bracknell in comparison with the Army and Navy Staff Colleges, the Sub-

¹ H.C. (1960-61), 252.

Committee were told by Air Force Department witnesses that these did not seem surprising, and that they did not know whether a different type of fuel was being used (Q. 937). At Bracknell the officer commanding the Staff College unit explained that owing to the number and variety of heating units, costs were being pushed up, since contracts for large consignments of fuel could not be placed. Plans to substitute a central boiler had been discussed with the appropriate officials at No. 5 works area of the Ministry of Public Building and Works. "It was projected last year but I believe it was dropped through lack of funds"; the project is now to begin during the current financial year (Q. 1250-61). While Your Committee appreciate that some rationing of building resources is necessary, they consider that the disparities in fuel costs which were immediately apparent to the Sub-Committee and a matter of urgent concern to the Service officers on the spot should have been a matter of more concern to the two Ministries involved at the centre.

61. Another instance of division of responsibility reducing sensitivity to economy occurred at Dartmouth. The Sub-Committee inquired into increased costs of maintenance of buildings between 1961-62 and 1963-64. The reply was that "we cannot give the answer. We do not know how these figures are worked out by the Admiralty. It would be pure guesswork" (Q. 1508). It appears that the costing is done by the Navy Department, and the work by the Ministry of Public Building and Works, and officers on the spot have neither the information nor the incentive to be "cost-conscious". Your Committee recommend that a closer link be established between the responsible departments and the staff of the colleges, to secure more informed control of maintenance costs and the speedier introduction of cost-saving equipment.

Control of Establishments

62. Departmental control of establishments is divided between Service Personnel and Civilian Establishments Branches within each Service department. Total college complements comprising both Service personnel and civilians are fixed, and can only be altered after an examination of the teaching and administrative load by the departmental division. This examination takes into account departmental policy on the distribution of particular posts between Service and civilian personnel.

63. The Army and Air Force Departments have long exercised a direct control, in addition to that implied by fixed complements, through the use of joint civilian and Service inspection teams to examine the total establishment of their colleges. The Air Force Department aims to inspect each of its establishments every eighteen months (Q. 841), the Army Department rather less frequently, though specific inspections may be provided to examine a claim for an increase. An inspection of Camberley in 1959 resulted in reductions in the complement of four Service personnel and 16 civilians, and a subsequent inspection of the instructional staff took place in 1963 to examine the workload of the directing staff. As a result of that inspection the number of majors was increased by three for 1963-64.

64. Inspections of naval establishments are undertaken by the Navy Department's Civil Establishments branch for civilians and by the Commander-in-Chief of the Command in which the college falls for all naval purposes. The Commander-in-Chief's inspection, termed a Training Efficiency Inspection, was introduced generally two years ago and inspections are planned to take place biennially. Greenwich was inspected for the first time under this system in March 1964. Such inspections are concerned with naval training alone and include an examination of the naval establishment, staff-student ratios, and hours worked¹.

65. Control of civilian academic complements in naval colleges has varied considerably in recent years, especially since the introduction of new training courses at Dartmouth in 1960 and Manadon in 1962 and the alteration of the teaching tasks of the academic departments at Greenwich. Your Committee were concerned to hear that there was no examination of the civilian academic staff comparable to that of the naval side (Q. 561), but they understand that regular inspections are to be introduced. An ad hoc inspection of the lecturing staff at Dartmouth took place in 1963 to examine a request for two additional lecturers. The inspecting board recommended a net increase of one. A similar inspection is due to take place this summer at Greenwich.

Staffing Policy

66. There is considerable variety in departmental practice in the staffing of Service Colleges, not only between the different Services, but also in the case of the Navy, between colleges within one Service. The only Service to express a marked preference for the employment of Service staff in their colleges was the Royal Air Force (Q. 835), though they employ a civilian Director of Studies at Cranwell. The other Services employ a mixed staff, except at Manadon, where an almost wholly Service staff is employed. The reasons for this disparity of practice must be sought in differing conditions of work in the Services, and the different provision made for research in the various Colleges.

67. *Research.* In addition to the ordinary technical instruction of students, a number of Service colleges provide opportunities for post-graduate work and research. At Greenwich fundamental and applied research is undertaken by the staff, and much of the practical work of advanced students is in the form of applied research². £10,000 was allowed for research in 1962-63. This represents a tiny part of the total expenditure of the Royal Navy in this field, but the results are "certainly of interest to the Admiralty" (Q. 470). The amount of lecturing fixed for the staff allows for time to be spent on research. The main reason given for this work is not its intrinsic value, since it could be absorbed into the general organisation for Research and Development in the Navy, but its function in attracting and retaining staff: "if you said, when you were advertising for staff, that no research was done at Greenwich, you would get nobody of any calibre" (Q. 470). At Manadon no allowance is made in staffing for time spent on research. But the Captain's view was that the staff would want to undertake research as soon as the degree course had settled down there (Q. 1316).

¹ Appendix 6, p. 270.

² Evidence, p. 61.

68. At Shrivenham time spent in research is taken into account in assessing the establishment of teaching staff; and demonstrators, scientific assistants and experimental officers also assist in research work (Q. 328). Most of the postgraduate work is done by civilian students (Q. 1889), only about one Service student a year being spared. In the words of the Dean, Sir Donald Bailey, "to maintain a high-quality staff you must do a reasonable amount of postgraduate work. Robbins mentioned 20 per cent. We are miles below that but we would like to increase it a little if we could. It would have a great effect upon the recruitment of staff and upon the maintenance of their morale and their general 'on-the-ballness' if you can put it that way" (Q. 1892).

69. At Henlow there is more stress on development than on straight scientific research. Much of the work done in the last year "has been on the borderline of research and development . . . it is probably near enough research to satisfy people like the National Council for Technological Awards and, by virtue of the fact that it is tied up with things happening in the Service, it is in a way of more use to the student" (Q. 1998).

70. Research is expensive both in respect of the extra lecturers required to leave time for it and the ancillary staff who assist them in it. On the credit side it is said to make it easier to attract and hold staff of the right quality and to maintain the standards of their work. This is something which is difficult to measure. If it is true, Your Committee would not question that the work should be done, but careful supervision is necessary to ensure that it is worthwhile and essential. There should also be close contact with the Research and Development Establishments of the Services to ensure that there is no duplication of effort.

71. *Professional Training.* Instructional work in a Service college falls into two different groups, depending on whether its primary emphasis is educational or professional. Your Committee will consider later how far academic instruction should be in civilian hands. They accept that with professional training the balance of advantage at each level lies with having it given by people who have direct experience of Service life. This view was not challenged by the Institution of Professional Civil Servants¹. It is most clearly seen in the Staff Colleges, where only those who have the most recent professional experience and the highest competence can hope to keep up with their students. This raises the inevitable question of the Service tour of duty. How long should serving officers stay in an instructional post? The answer has to reconcile three conflicting elements. The longer an officer stays the more opportunity there is for him to master the complexities of his work and learn by his mistakes. But if he is to keep up with the changing practices of his profession he must not be removed from it for too long. Finally, if the work is to appeal to those professionally most competent it must not interfere with their later careers.

72. The Imperial Defence College illustrates all these points. Here clearly the directing staff must be of the highest quality. According to the Commandant the senior staff could never do more than two years because "it is at a very crucial time in their career. . . . If you asked someone to do

¹ Appendix 10, p. 274.

more than a few months over two years it would be interfering with his future career" (Q. 1576). The course lasts one year, so staff rarely see more than three groups of students. They will, however, frequently have had experience of syndicate discussion as instructors or students earlier in their careers. Your Committee are persuaded that under existing conditions to extend the tour of duty of directing staff would be impracticable. They are not convinced that the same applies to the Commandant's tour. The present Commandant was staying two years and eight months and was "the longest Commandant ever" (Q. 1572). He told Sub-Committee E that in spite of misgivings he had found the extra time of great advantage to his work (Q. 1577, 1612). From a career point of view the obstacles are not so great, since a high proportion of Commandants are appointed as a last posting before retirement (Q. 1573). Your Committee accordingly recommend that the tour of duty of the Commandant of the Imperial Defence College should so far as practicable be at least three years.

73. Witnesses at staff colleges put forward a further point for consideration. The work there is so exacting that directing staff could not stand more than a short tour. The Commandant of the Staff College, Camberley, thought that "2 to 2½ years at the pace they have to go is about enough" (Q. 420). Air Force Department witnesses thought that it was "very useful to be at it for a long time, from the point of view of tuition, but it is not a good thing for the officer himself and also from the course point of view" (Q. 897). The Commandant of the Royal Air Force Staff College, Bracknell, agreed that a directing officer needed to be there for "a reasonable length of time because it is a slightly unusual job to pick up in the first place" (Q. 1279). While Your Committee consider that the strain on the staff might be less if they had more time to accustom themselves to the work, they accept that a tour of between 2½ and 3 years is a not unreasonable resolution of these conflicting demands.

74. The professional instructors at the cadet and technical colleges are in a rather different position. The need to be right up to date is not so immediately pressing. What is being taught is basic professional knowledge. As the Captain of the Royal Naval College, Dartmouth, suggested, "it requires an ordinary, plain, straightforward, good naval officer" (Q. 1483). While the same witness recognised that longer tours would be more economical, he insisted that "two years is as much as any professional officer can really allow out of his career in a teaching job without going to sea" (Q. 1481). At Henlow the expected tour for ordinary Air Force officers is 2½ to 3 years; for Technical Branch officers "it is an absolute minimum of three years" (Q. 1144). At Sandhurst the average is 2½ years, though some officers have spent 3½ years there. The Navy may reasonably comment that Army and Royal Air Force officers are nearer their natural element while instructing and do not suffer so sharp a separation. Extending naval tours may therefore be more difficult.

75. Your Committee understand that postings to Service colleges are highly regarded by the ablest officers. A posting to Dartmouth "means nearly always that he is pretty well thought of" (Q. 79); officers at Sandhurst "are the best persons which the regiments can possibly produce"

(Q. 174). At this comparatively early stage in an officer's career the adjustments required to enable him to spend longer in an instructing post should not prove unduly complicated. Your Committee accordingly recommend that for officers not members of the Education or Instructor Branches and engaged on administrative or instructing duties at cadet or technical colleges the normal tour be not less than three years.

76. *Academic Instruction.* The teaching of academic subjects at Service colleges is undertaken by either civilians or members of Service education branches. The Navy employ both civilians and Instructor Officers, Dartmouth being predominantly civilian, Manadon almost entirely Service, and Greenwich employing both. The Army employ officers of the Royal Army Educational Corps at Service colleges only as stop-gaps; for the rest, Sandhurst and Shrivenham are staffed by civilians for academic purposes. The Air Force use members of the Education Branch almost exclusively at Cranwell and Henlow, though the Director of Studies at Cranwell remains a civilian for traditional reasons (Q. 1992).

77. The reasons for this disparity of practice are in part historical. Sandhurst and Shrivenham both derive from earlier military institutions which employed civilians for academic teaching purposes from their foundation. Similarly Dartmouth has continued a practice established when it was catering for boys of 13½ and upwards. Manadon until 1962 prepared only a few officers annually for a degree examination (Q. 1313); their main course, the Long Engineering Course, was more directly related to naval professional needs and as such was appropriately taught by Service officers. Cranwell was until 1937 staffed by civilians for academic purposes. As a result of an inspection in that year which led to adverse comments on the standard of work, they were replaced by members of the R.A.F.'s civilian education service, which was itself converted into a uniformed Education Branch in 1944 (Q. 1990-1).

78. There is no virtue in uniformity for its own sake. It may be that each college has adopted the particular balance of Service and civilian staff that serves its own needs. But the divergences are difficult to reconcile and they do form an obstacle to any move towards technical education on an inter-Service basis. The Institution of Professional Civil Servants in their evidence complained that in some colleges training which could be done by civilian lecturers was undertaken by Service instructors¹. They regarded this as a wrong use of Service personnel and asked that the work be progressively handed over to civilian staff. This is in general conformity with the views of previous Estimates Committees, and it seems therefore desirable that Your Committee should examine the position rather more thoroughly.

79. The Treasury advised that financial savings were marginal "one way or the other" (Q. 1740). The Navy Department made an estimate of the financial effects of "civilianising" Manadon. This showed an extra cost, mainly because staffing ratios were assumed to be more generous in order to allow for research. At Henlow (Q. 835) and Manadon (Q. 1332) it was thought to be advantageous for instruction to be given by people with professional knowledge of the Service into which the students were going.

¹ Appendix 10, p. 274.

At Henlow the point was also made that such a lecturer "does his share of orderly officer and pay officer duties" (Q. 1139). The opposite view was expressed at Dartmouth: "It is extremely valuable to have a civilian atmosphere in the teaching of a naval officer . . . it is very important that he should see civilian life right from the word go" (Q. 1475). At Shrivenham the explicit aim is to make the College as much like a university as possible (Q. 1920).

80. Divergent views are also held on the quality and availability of the two types of instructor. The Institution of Professional Civil Servants assume that particularly in teaching at degree level "there must be continuity of staff which cannot be realised with Service officers"¹. At Manadon, where degree level teaching is done, witnesses pointed to their results as demonstrating that they "are well capable of teaching to degree standard and are doing better than the national average" (Q. 1410). Degree work is only done in the Royal Air Force at Cranwell, but Greenwich and Shrivenham use civilians. At both emphasis is placed on the importance of research and post-graduate work if the quality of the staff is to be maintained. The Dean of the Royal Naval Engineering College, Manadon, agreed that without research "it would be extremely difficult to get high quality civilian staff here who would remain" (Q. 1326). The assumption that civilian staff stay longer is also questioned by the Royal Air Force. It is possible to post Service officers to a remote place like Cranwell that few civilians would consider. Moreover Service officers have a clearer and surer career structure than civilians, who have fewer opportunities of promotion within the Service and are, it is argued, too far removed from civilian education to be sure of advancing their careers by moving outside (Q. 2001).

81. At Dartmouth there were also complaints of difficulties in filling vacancies quickly because of the procedure involved in becoming established civil servants (Q. 1517, 1792), but no difficulty has been encountered at Shrivenham in getting lecturers to come as temporary staff with the object of becoming established in due course (Q. 1900). Where teaching by Service officers has been found successful it has been customary to serve more than the normal tour of duty (Q. 834, 1050, 1144, 1402). Whatever the difficulties with officers in other branches, the career-structure for officers in the Education or Instructor Branches should be adaptable to meet the needs of advanced teaching.

82. In the absence of any clear differences in cost or results, the choice between the Service or civilian teaching staffs turns on whether the future for technical education in the Services lies in the Manadon or Shrivenham type of college. Your Committee suspect that the rapid developments in civilian university and technological education will mean that the answer is Shriyenham. This would mean that the technical college of the future would be predominantly staffed by civilian lecturers. The evidence is, however, inconclusive, and Your Committee would not be justified in basing any recommendations upon it. If higher education by serving officers is to continue it is essential that increasing opportunities for those with high qualifications should be opened up and tours of duty of not less than five years should be expected.

¹ Appendix 10, p. 274.

Control of Training Programme and Standards

83. Responsibility for the content of the training programme (including academic instruction) of the single-service colleges lies with the Directorate-General of Training in each Service Department. In the Air Force Department, responsibility is divided between the Directorate-General of Ground Training and the Directorate of Flying Training. The Directorate of Education or Educational Services in each Department is responsible for the provision of goods and services, including, where these are employed, uniformed officers of the Education Branch or Instructor Branch. The relationship between the Directorates of Training and Education in respect of Service colleges appears to work satisfactorily. Responsibility for professional purposes for the Joint Services Staff College and the Imperial Defence College is vested in the Chiefs of Staff¹. Apart from submitting a periodical report to the Chief of the Defence Staff and informing him of proposed changes, the Commandant of the I.D.C. enjoyed a virtual autonomy on training matters (Q. 1571).

84. The training task of the cadet and technical colleges changes slowly, and Your Committee consider that the present arrangement, whereby training efficiency and establishment inspections are supplemented by visits by members of the staff of the colleges to colleges of the other Services, is sufficient to maintain standards. In those colleges where external examinations are taken, either G.C.E., Dip. Tech. or the external London B.Sc., the periodical visits by representatives of the Boards and London University, and external moderation of examinations, ensure that the required standards of facilities and tuition are maintained. In the staff colleges the emphasis is more on the training of officers for a continually changing task, one, moreover, which is increasingly seen in inter-Service terms. The need at this level therefore is for a dual structure whereby each college is at one and the same time able to maintain close contact with its own Service, and also to keep in step with colleges of the other Services.

85. Consultation at Departmental level has been regularised by an inter-Services training committee, consisting of the three Directors-General of Training, and reporting to the Principal Personnel Officers' Committee in the Ministry of Defence. The training committee is concerned with all aspects of Service training; the Director-General of Army Training described its function as "to study and to take account of and get authority for, changes in the direction of staff training among other things" (Q. 245).

86. The Directors-General of Training Committee is not the only central body responsible for the oversight of joint-Service matters in the Staff Colleges. The Joint Warfare Staff in the Ministry of Defence (Central) have been given the task of keeping in touch with the Staff Colleges to ensure that the content of their joint-Services training is kept up to date (Q. 413, 918), and the Director of Joint Warfare has the entrée to the staff Colleges, "which", Sub-Committee E were assured, "he constantly uses" (Q. 275).

87. There appears to be no clear relationship between the functions of the Committee of the Directors-General of Training so far as it affects the Staff Colleges, and the oversight exercised by the Joint Warfare Staff. Your

¹ Appendix 1, p. 265, and Evidence, p. 184.

Committee appreciate that the introduction of a considerable amount of joint-Service activity into the Staff College syllabuses in 1963 required central bodies to co-ordinate and supervise its content. They consider, however, that the task of the planning staff in the Staff Colleges would be made easier if the division of functions between the Joint Warfare Staff and the Directors-General Committee were more clearly defined. Your Committee accordingly recommend that the Ministry of Defence examine the work of, and distribution of functions between, the Joint Warfare Staff and the inter-Services training committee of the Directors-General of Training, so far as they relate to single-Service Staff Colleges.

SELECTION AND TRAINING OF OVERSEAS STUDENTS

88. In addition to training Commonwealth and colonial personnel as officers in the United Kingdom forces, the Service colleges reviewed in this Report are responsible for training members of overseas forces and civilians, both from Commonwealth and foreign countries. All witnesses agreed that there was great value in this country accepting overseas students. There are political advantages in extending an invitation to other countries to share facilities not readily available to them elsewhere. In a world of regional alliances there are direct gains in military terms in having officers throughout the world trained in British Service techniques alongside British officers. Since the war, for example, the R.A.F. Staff College, Andover, has trained 10 future Chiefs of Staff for foreign air-forces. Witnesses emphasised that the gains are not all on one side. In the single and joint-Service Staff Colleges there was considerable advantage to British students in being able to discuss and examine military and political problems from a wide range of viewpoints (Q. 2110). Your Committee share the view that this is an invaluable form of overseas aid, one moreover which is recognised as such by recipient countries.

89. Training is not given free. Fees are charged at all the single-Service colleges on the basis of the extra costs incurred as a result of the presence of overseas students (Q. 156). This principle has been decided by the Treasury in agreement with the Service and overseas Departments on the assumption that the premises and facilities of the Service Colleges are needed in any case for British Service needs and that it is therefore appropriate only to recoup the extra expenses incurred. The principle may sometimes be difficult to apply in particular cases. It is, for example, difficult to assess where a college is expanded or not contracted because it is being used for overseas students (Q. 1766-9). Nor is it always easy to measure the amount of time an instructor may have to give a student through the latter's linguistic or other difficulties. As a result of observations by the Committee of Public Accounts in their Third Report of Session 1960-61, the level of fees has been reviewed and in some cases increased; and it is the intention to review it from time to time (Q. 158)¹. The level of fees varies from college to college depending on the extent and nature of the training given. At Sandhurst inclusive fees of £860 p.a. are charged; average costs per student in the financial year 1963-64 amounted to about £1,700 p.a. (Q. 160), for a two-year course. Fees at Dartmouth amount

¹ H.C. (1960-61), 252.

to £690 p.a. Training fees at Cranwell for the three-years' pilot's course average £4,280 p.a., to which must be added extra charges for rations, accommodation and personal items¹.

90. Overseas students at the Joint Services Staff College and the Imperial Defence College are charged tuition fees, 13 guineas a week for a six-months' course at the Joint Services Staff College and £100 to cover the year's course at the Imperial Defence College. At the former, maintenance costs are also payable at the rate of 13s. 6d. a day (living in) and 1s. 0d. a day (living out). The Ministry of Defence justify the low fees at the Imperial Defence College by saying that "this enables the poorest member of the Commonwealth to take advantage of the course"² and point out that parent governments are also responsible for their students' living expenses while in the United Kingdom. At both colleges tour costs are borne by the parent government, except where reciprocal arrangements exist.

91. Your Committee accept that the practice of basing fees on the additional costs incurred represents the most effective way of reimbursing the Service Departments for training overseas students. They are not convinced that the special character of the Imperial Defence College requires a system of assessing fees different from that in force in every other college, though they note that the figure of £100 is due to be reviewed again shortly. The existing £100 fee appears to be related to no identifiable costs and to have been determined as a purely nominal sum. Your Committee consider there is little justification for such a fee. The Ministry of Defence say that "it was always intended that the presence of Commonwealth students should be an essential feature of the College"³. If the addition of realistic fees to the maintenance and touring costs being already borne by parent governments makes them reluctant to send their students, the Ministry of Defence should reduce the fee. Your Committee accordingly recommend that the fee for Commonwealth students at the Imperial Defence College should be assessed on the basis of the extra cost incurred: provided that if there is any likelihood of countries being deterred thereby from sending students, the fee should be reduced.

92. The Service Departments and colleges have no direct means of controlling the standards of those sent to them for training⁴. In the invitations to countries to select students advice of a general character is tendered: students should be able to speak English proficiently and should have, for the cadet and technical college, a general educational standard as near to those required of British cadets as possible (Q. 1723). "Having said this is what we set out to do", a Navy Department witness admitted, "we do not always manage to get people who measure up" to all requirements. The expedient has been adopted at some colleges of giving overseas students an introductory course at crammers, schools of English, or at the Army School of Education; and the Navy decided that those overseas cadets at Dartmouth who have special difficulty in following instruction in their first year should be instructed in separate classes. After Admiralty permission had been given this was introduced. Witnesses

¹ Evidence not reported. ² Evidence, p. 185. ³ Evidence p. 185. ⁴ Appendix 7, p. 270.

admitted the risk of engendering black versus white feeling but say that this has not occurred and that the class has "benefited enormously by being separated because it has been able to go at a slower pace and has learned more as a result" (Q. 1526).

93. Your Committee note that by the time these students return from the Fleet their English has greatly improved and they are able to hold their own with other Sub-Lieutenants. They accept the assurances that the decision to separate tuition has had no repercussions. It is basically undesirable, however, that Service colleges should be forced to adopt such expedients, which may lead to adverse, even if misinformed, comment.

94. The Ministry of Defence informed Sub-Committee E that at present there are no facilities for British representatives overseas to interview people selected to come for courses at Service colleges, "except in so far as the country concerned might ask our people serving with them to advise them on the sort of people they should send" (Q. 2052). Your Committee do not believe that such a generalised consultation can be of much value, while diplomatic representations to countries some of whose students are not getting the full value from the course (Q. 2050) are only of use if it can be shown that an improvement takes place subsequently. Since this problem is, on the contrary, a recurrent one, Your Committee believe there is need for a greater participation by British representatives overseas in the process of selection. Your Committee do not accept that such participation, consisting as it might of an interview of candidates on a short-list and the submission of a report in confidence to the parent government, could be regarded as either "invidious or politically undesirable"¹. It would represent no more than an underwriting of the requirements laid down at present in general terms, and could save the expense and disappointment for parent governments who find that a student has failed to profit from the training. Moreover, it would make it unnecessary to introduce such measures as those in use at Dartmouth which must be regarded as politically undesirable even if educationally sensible. Your Committee therefore recommend that greater efforts be made to secure the consent of overseas governments for British representatives overseas to interview candidates for courses at Service colleges before a final selection is made, and to advise these governments of any who would be unsuitable for training, without, however, any right of veto.

RELATIONS WITH CIVILIAN EDUCATIONAL INSTITUTIONS

95. The Directorates described in paragraph 83 form the apex of a system of surveillance which extends down into the colleges themselves and outwards to include members of civilian educational institutions. The Navy have developed a comprehensive system whereby each of its Service colleges is linked together with the others by an advisory committee of Service and civilian educationalists. The composition and functions of the Naval Education Advisory Committee are described in the Navy Department's memorandum². By this means the colleges are able to draw on the advice of members and use them as moderators for internal examinations.

¹ Appendix 7, p. 270.

² Appendix 4, p. 268.

96. Provision in the other Service Departments is not so comprehensive. The Army Department and Air Force Department both have Education Advisory Committees (Q. 2031-2) and, in addition separate committees, the Sandhurst Main Committee (Q. 1946) and the Shrivenham Advisory Council, meet to advise on these colleges (Q. 1916-8). The Army Education Advisory Board is primarily concerned with the activities of the Royal Army Educational Corps; its Chairman, who is also the Director of the Department of Education at Oxford, is also a member of the Sandhurst Main Committee but, as an Army Department witness commented, "this is simply an extra job we asked [him] to do" (Q. 1947). The Sandhurst Main Committee meets twice a year under the chairmanship of the Director-General of Army Training. Only the Shrivenham Advisory Council attempts to match the scope of the Naval Education Advisory Committee; it includes representatives of universities and of the Directorate of Army Education in addition to other members of the Army Department. The Navy Department, including the Director-General of Naval Training, and the Air Force Department are also represented on it. Lay members of this Council are drawn upon not only for advice, but also as members of staff inspection teams (Q. 1747).

97. Your Committee attach great importance to the presence of representatives of other Services, as well as civilian academic institutions, on these advisory bodies. They believe that the cross-fertilisation of ideas which they afford can be of considerable value so long as each of the Services is alert to the possibilities for itself of work going on elsewhere. For example, the presence of the Director-General of Naval Training on the Shrivenham Advisory Council influenced the Navy Department in deciding to admit "unofficial" civilians to courses at Greenwich (Q. 1917). In default of any early move towards inter-Service colleges, there should, in the opinion of Your Committee, be an inter-Services advisory system. Your Committee regard the composition and activities of the Naval Education Advisory Committee as the best pattern to copy. They recommend that a Defence Education Advisory Council be established with a membership drawn from the Training, Educational and related divisions of the Service Departments and from the academic and technological communities. They further recommend that the sub-committee for each Service college contain civilian members in contact with other Service colleges, including those of the other Services.

98. The informal work of the advisory committees in integrating Service colleges, especially the cadet and technical colleges, more closely into the structure of educational provision in this country is supplemented by the formal requirements of London University, the National Council for Technological Awards, and the Schools Examination Boards, which ensure that those colleges which prepare cadets and officers for external examinations are periodically subject to visits of inspection. Beyond this the Service colleges do not as a matter of course go. The Royal Naval College, Dartmouth, was inspected by Her Majesty's Inspectors at the time when it had a 13½-year old entry; and R.A.F. College, Cranwell, was inspected in 1937 and 1958 by Her Majesty's Inspectors. The Ministry of Education was also consulted by the Air Force Department during the discussion of the merger

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of Henlow and Cranwell and the design of instructional facilities (Q. 1033); and by the Admiralty during an examination of the number of "contact hours" spent by lecturers at Dartmouth.

99. Your Committee believe that regular consultation with the Department of Education and Science, the University Grants Committee, and academic bodies is essential not only for the educational advantages this would bring, but also for financial reasons, even if no precise equivalents to Service colleges exist in civilian life. In the meantime it is clearly in the interests of economical administration as well as for purely educational reasons valuable for the Service Departments to keep constantly in view the practice, standards and economics of educational provision in the civil field and invite the co-operation of civilian bodies in establishing comparable standards in Service colleges.

100. Your Committee believe also that when there are considerable divergences in staffing ratios, costings and educational facilities as between civilian institutions and Service colleges, Parliament has the right to expect an explicit justification. Sub-Committee E had before them figures for Colleges of Advanced Technology supplied by the Ministry of Education, including Loughborough College of Advanced Technology. Loughborough, being a residential college, is comparable in many respects to Service cadet and technical colleges. It had in November, 1962, a residential student population of 1,094, only 104 more than at Sandhurst, and it provides a pattern of courses similar to those at the Royal Military College of Science, Shrivenham. Your Committee note that Loughborough cost a total of £807,512 in the financial year 1962-63 (excluding loan charges, etc.), a cost per student of £738 p.a.¹. Sandhurst cost during the same year £1,289,250². Average costs per student at Shrivenham were £3,081 p.a., which may be explained by the smaller number of students and the staff required to maintain the wide variety of courses³.

College	Average no. of students in residence	Total costs per annum £	Average cost per student £	Salaries, wages, etc. £	Other expenses £
Shrivenham ...	343	1,056,650	3,081	770,500	286,150
Sandhurst ...	990	1,289,250	1,302	946,250	343,000
Loughborough ...	1,094	807,512	738	568,457	239,055

(All figures 1962-63)

101. If the figures for salaries, wages, etc., are deducted, the remaining expenses of each college are roughly comparable, though even here the fact that a College of Advanced Technology with a residential student population of 1,094 can be maintained for a net cost (excluding salaries and wages) of £100,000 a year less than a college of 990 cadets, surely calls for some comment. The wage and salary bill makes the same point only more forcibly. Closer analysis of the establishments reveals that while numbers of academic

¹ Appendix 9, p. 272.

² Evidence, p.3.

³ Evidence, p. 7.

and instructional staff in each college in general terms bear a similar proportion to the number of students, the number and expenses of supporting staff at Sandhurst and Shrivenham bear no relation to their equivalents at Loughborough.

102. Your Committee consider that this is a field for further examination. They accept the statement of Service witnesses that the function of Service colleges is as much to produce officers as to teach academic disciplines; they believe, however, that Parliament should be made aware of all the implications of this policy, especially as they affect costings and complements.

103. Your Committee in their Fifth Report of this Session¹ have recommended (paragraph 26) that the Defence and Overseas Personnel Division of the Treasury should be abolished and its present functions divided among the specialist divisions of the Treasury. Your Committee consider that the disparity in costs and staffing revealed in its examination of comparative figures for Service and civilian colleges arises in large measure out of the separate treatment of Service institutions by the Treasury in the past, and especially in the existence of a separate inspectorate in the Defence and Overseas Personnel Division working beside the Service Department staff inspectorates. This has perpetuated the assumption that Service institutions are incomparable, an attitude which may have been fostered by the presence in the Service Departments of a large body of serving officers with professional loyalties, but which has had the consequence that technical and specialist knowledge of certain value to the Services is being ignored. To cite but one example, Sub-Committee E were informed by the Ministry of Education that, whereas the Air Ministry had invited a member of H.M. Inspectorate to participate in an examination of R.A.F. Technical College, Henlow, there has been no such contact with the technical Inspectorate on parallel institutions maintained by the other two Services².

104. It is now common practice for the Department of Education and Science, the University Grants Committee and the universities to be consulted whenever possible on the design of new buildings for Service colleges. Your Committee consider such consultation should be an invariable practice when the Service Departments are making costings of their colleges and examining complements. Your Committee accordingly recommend that an interdepartmental committee be set up to examine the scope for increased co-operation and consultation between the Treasury, the Ministry of Defence and the Department of Education and Science on matters of common interest and especially on the administration, costing and complementing of Service and other colleges.

GRADUATES IN THE SERVICES

105. In the course of their detailed examination of particular colleges, Your Committee have been made aware of two more general problems which bear on the work of the Service colleges and on the policies implicit in that work. The first concerns the changes that may be expected in the next twenty years in the field from which recruits to the commissioned ranks of the Services are drawn, to which the Report of the Robbins Committee on

¹ H.C. (1963-64), 228.

² Appendix 8, p. 271.

Higher Education has drawn attention. The second is the effect on the number and character of Service colleges of the increasing inter-dependence of the Services, which has been emphasised by the establishment of a unified Ministry of Defence. Your Committee understand that following the establishment of the Ministry of Defence, enquiries have been started within the department on both these problems; of the enquiry into the consequences likely to flow from the proposals of the Robbins Report, a Ministry of Defence witness commented: "We think this study may throw up further possibilities of integrated training in the longer term" (Q. 2025).

106. All the Services have for several years made provision for graduates to enter without any previous commitment to a Service career. The graduate entrant, by the different character of his initial qualifications, is regarded as a useful addition to an otherwise homogeneous group; and the absence of a cadet-college training need not be a disadvantage (see Q. 1920). This mode of entry also provides for those who have left till late their choice of a career.

107. In the past year the Army and the Royal Air Force have introduced, or decided to introduce, new schemes to attract a greater number of graduates in addition to those few who find their way in through existing procedures. Under these new schemes successful applicants will be financed for the duration of their degree course at a university and on graduating will enter the Service as officers, requiring only to receive professional training. The Army are to finance 30 places a year (Q. 1958), and the Royal Air Force 25¹. In addition 10 places a year are to be made available at Shrivenham (Q. 1958). Only the Royal Air Force scheme has so far begun: 22 places were awarded in the first competition for the academic year 1963-64.

108. Direct graduate entry into the Services is already supplemented by the provision for a considerably greater number of each Service either to go to university during their training or to read for an external London degree. The Navy have about 8 a year at university, the Army 28 and the Royal Air Force, under the old Henlow/University cadetship which was superseded last year by the new scheme, 20. Manadon, Shrivenham and Cranwell all provide for students to take external degrees while at Henlow there is provision for the Diploma in Technology qualification.

109. The graduate entry is one that it is clearly to the Services' advantage to encourage. Those who decide at the end of their university career to enter the Services have only to be given specifically Service and "application" training to equip them as officers, saving the Service the expense and responsibility of a complete higher education. Despite this, however, Service witnesses made it clear that they did not expect the graduate entry to become a significantly larger proportion of the total than at present. The Director-General of Army Training spoke of a graduate entry of ten per cent. as a target but said that they were unlikely to reach that figure (Q. 1944). If to that is added the number who are given a university education by the Services the graduate proportion of the total annual entry becomes nearer twenty per cent.

¹ Evidence, p. 8.

110. The expressed view of the Services is that they prefer to give a man a university education after he has spent some time in the Service: the Commandant of Shrivenham deliberately introduced a delay of two years between a young officer's leaving Sandhurst and coming to Shrivenham for the degree course. The slight chance of the man's becoming rusty in some subjects was more than compensated for by his greater maturity of outlook and capacity for work. Because of this, and because of the size of the annual age-group whose education finishes at 18 the Services still regard the 18-year old entry from school as one which will remain their main source of officer-cadets (Q. 533, 1944, 2042). They find support for this in the Robbins Report, which forecasts an increase in the number of school-leavers with at least two A levels but who will not proceed to university. The field from which the Services will be able to draw, both for a graduate and for an 18-year old entry, will thus increase (Q. 2041).

111. If, however, the proportion of the qualified age-group during the next 20 years deciding for a university education increases, the Services may find that the only means of attracting school-leavers to a Service career lies in being able to offer as good a chance, if not better, of a university education as would be available to a school-leaver remaining in civilian life.

112. Such an extension of university education within, or financed by, the Services will become necessary for another reason. In the past it was possible to give an officer a professional technical training which would stand him in good stead for the whole of his career. Today, with the existing rate of technological change, this is becoming increasingly difficult. Professional technical training is liable to become obsolete within a few years. For those officers recruited on short-service commissions this presents no problem. For permanent-list officers the Services have two possible solutions: either completely to retrain an officer once or twice in the course of his career, or to give him that theoretical grounding in his subject on the basis of which a rapidly changing professional expertise can be later taught. It is the function of academic courses of a degree level to give such a theoretical grounding; and Your Committee consider that specifically Service needs will come to demand the same extension of university facilities within the Services as is now accepted in the civilian field.

113. The extension of university education is related to the question of joint-Services training to which Your Committee has already referred. Your Committee view with some concern the proliferation of colleges providing degree courses for small numbers of people. At present Manadon, Greenwich, Cranwell and Shrivenham provide degree courses, and Henlow (to be merged with Cranwell in 1965) provides a course leading to a Diploma in Technology. None of these has more than 500 students and only some of these are reading for a degree. At Greenwich the degree course is provided entirely for official civilians though a number of unofficial civilians is due to enter in October, 1964. Such a distribution of work is manifestly wasteful not only of Service resources but also of the nation's scarce supply of teachers and equipment. In addition, as the Commandant of Shrivenham

pointed out, it leads to inbreeding, since students are being withdrawn from an essential element of a university education, the presence of students of a variety of disciplines (Q. 1867, 1922).

114. In the White Paper "Central Organisation for Defence"¹ published in 1963 it was envisaged that the unification of the Ministry of Defence would lead to the removal of differences in administrative and management practices and the extension of the procedure whereby one Service undertakes a task on behalf of all three. Following the establishment of the new Ministry an enquiry has been set up as provided in paragraph 68 of the White Paper to examine measures of rationalisation in the field of training (Q. 2025).

115. Your Committee consider that the provision of degree-instruction by one Service on behalf of all three should be examined by the departmental committee of enquiry with great seriousness. When the Council for National Academic Awards recommended by the Robbins Report (paragraph 433) begins its work, colleges will be able to devise their own courses leading to autonomous degrees as an alternative to the external London degree. The desire for such a system at the Royal Military College of Science, Shrivenham, was clearly expressed by the Dean of the College (Q. 1923). Your Committee consider that if a joint-Services technical college were established, such a degree-conferring power would also meet the needs of the other Services for whom the present external London degree is not an entirely satisfactory course for most of their students. A technical college with degree-conferring powers and run on a joint-Services basis would have not only the advantage of larger numbers than are possible in any college at present, even if it were restricted to Service officers. It would also make it possible for officers of the three Services to live together, as the Commandant of Shrivenham said, "during a very formative part of their life—in other words, during three years of their educational life" (Q. 1922). Your Committee also regard the Royal Military College of Science, Shrivenham, as eminently suited, by reason not only of its geographically central position and its existing facilities, but also of the extent of land available for extensions, for providing degree instruction for officers of all three Services. Your Committee accordingly recommend that the inter-departmental committee at present examining the field of Service training examine and report on the feasibility of introducing a joint-Services degree course based on Service needs, as envisaged in the Report of the Committee on Higher Education, such a course to be provided at the Royal Military College of Science, Shrivenham, for all three Services.

SUMMARY OF RECOMMENDATIONS

116.—(1) The Navy Department should enquire into the possibility of introducing more practical experience into the Manadon syllabus, either in outside industry or in the naval dockyards (Paragraph 10).

¹ Cmnd. 2097, 1963.

(2) The Army Department should keep under constant review the sources of its officer-recruiting and the effectiveness of its recruiting machinery (Paragraph 20).

(3) Comprehensive plans should be drawn up for the gradual rehousing of all facilities and services at present in temporary or converted accommodation at the Staff College, Camberley, the replacement of the existing kitchens and instructional facilities should be given priority, and the design of the instructional facilities should allow for extensions in the future (Paragraph 36).

(4) The question of the transfer of the Naval Staff Course to the Andover-Camberley-Bracknell area should be re-examined by the Navy Department (Paragraph 43).

(5) The Treasury should undertake to release two officers from their department each year to go on either the Imperial Defence College course or the Joint Services Staff College course (Paragraph 53).

(6) Consideration should be given to the possibility of abolishing the Royal Naval War College (Paragraph 55).

(7) A closer link should be established between the responsible departments and the staff of the colleges, to secure more informed control of maintenance costs and the speedier introduction of cost-saving equipment (Paragraph 61).

(8) The tour of duty of the Commandant of the Imperial Defence College should so far as practicable be at least three years (Paragraph 72).

(9) For officers not members of the Education or Instructor Branches and engaged on administrative or instructing duties at cadet or technical colleges, the normal tour should be not less than three years (Paragraph 75).

(10) The Ministry of Defence should examine the work of, and distribution of functions between, the Joint Warfare Staff and the inter-Services training committee of the Directors-General of Training, so far as they relate to single-Service staff colleges (Paragraph 87).

(11) The fee for Commonwealth students at the Imperial Defence College should be assessed on the basis of the extra cost incurred: provided that if there is any likelihood of countries being deterred thereby from sending students, the fee should be reduced (Paragraph 91).

(12) Greater efforts should be made to secure the consent of overseas governments for British representatives to interview candidates for courses at Service colleges before a final selection is made, and to advise these governments of any who would be unsuitable for training, without, however, any right of veto (Paragraph 94).

(13) A Defence Education Advisory Council should be established with a membership drawn from the Training, Educational and related divisions of the Service Departments and from the academic and technological communities. The sub-committee for each Service college should contain civilian members in contact with other Service colleges, including those of the other Services (Paragraph 97).

(14) An inter-departmental committee should be set up to examine the scope for increased co-operation and consultation between the Treasury, the

Ministry of Defence and the Department of Education and Science on matters of common interest and especially on the administration, costing and complementing of Service and other colleges (Paragraph 104).

(15) The inter-departmental committee at present examining the field of Service training should examine and report on the feasibility of introducing a joint-Services degree course based on Service needs, as envisaged in the Report of the Committee on Higher Education, such a course to be provided at the Royal Military College of Science, Shrivenham, for all three Services (Paragraph 115).

22nd July 1964.

PROCEEDINGS OF THE COMMITTEE

WEDNESDAY, 22ND JULY, 1964

Members present:

Mr. Bourne-Arton.	Mr. Mackie.
Sir Beresford Craddock.	Sir Frank Markham.
Mr. Harold Davies.	Mr. Milian.
Sir Eric Errington.	Mr. Norman Pannell.
Sir Myer Galpern.	Mr. Rhodes.
Sir Richard Glyn.	Sir Spencer Summers.
Mr. Gurden.	Sir Leslie Thomas.
Mr. William Hamilton.	Mr. Wilkins.
Captain Litchfield.	Mr. Woof.
Mr. MacColl.	Mr. Woollam.

In the absence of the Chairman, Sir Spencer Summers was called to the Chair.

Report from Sub-Committee E brought up and read, together with part of the Minutes of Evidence taken before Sub-Committee E and Appendices.

Ordered, That the report be read a second time, Paragraph by Paragraph.

Paragraphs 1 to 32 read and agreed to.

Paragraph 33 read, amended and agreed to.

Paragraphs 34 to 42 read and agreed to.

Paragraph 43 read as follows:—

“On being asked whether they had considered moving the naval staff course nearer to Camberley and Bracknell, Navy Department witnesses said that the possibility had been investigated, “difficulties of moving (for instance, the capital cost involved)” (Q. 1702) being adduced against it. Your Committee believe, however, that the costs involved would depend on the nature of the solution adopted. If cost were no object it would clearly be ideal for the Navy Department to build a new Staff College to suit its needs. The alternatives to this do not appear to have been sufficiently explored. One is for the Navy Department to acquire one of the stations falling vacant as a result of the concentration of the Royal Air Force. By such a step the only expenses incurred would be those of preparing instructional facilities, since messing and accommodation would be already in existence. The other solution is for the Naval Staff College to become a “lodger” of another unit either naval or military. The cost of basic services would be shared with the host unit and the College would be responsible only for its own administrative and directing staff and for a proportion of the supporting staff. Your Committee therefore recommend that the Navy Department re-examine the possibility of transferring the Naval Staff Course to a station or unit in the Andover-Camberley-Bracknell area.”

Amendment proposed, in line 6, to leave out from the word “adopted” to end of Paragraph, and add the words “and they therefore recommend that the question of the transfer of the Naval Staff Course to the Andover-Camberley-Bracknell area be re-examined by the Navy Department”—(Captain Litchfield):—

Question put, That the words proposed to be left out, to the word "By" in line 11, stand part of the Paragraph:—

The Committee divided:

Ayes, 4

Mr. Bourne-Arton.
Mr. MacColl.
Sir Frank Markham.
Mr. Wilkins.

Noes, 11

Sir Beresford Craddock
Mr. Harold Davies.
Sir Eric Errington.
Mr. William Hamilton.
Captain Litchfield.
Mr. Mackie.
Mr. Millan.
Mr. Norman Pannell.
Mr. Rhodes.
Sir Leslie Thomas.
Mr. Woof.

Proposed words there added.

Paragraph, as amended, agreed to.

Paragraphs 44 and 45 read and agreed to.

Paragraph 46 read, amended and agreed to.

Paragraphs 47 to 50 read and agreed to.

Paragraph 51 read, amended and agreed to.

Paragraphs 52 to 54 read and agreed to.

Paragraph 55 read, amended and agreed to.

Paragraphs 56 to 81 read and agreed to.

Paragraph 82 read, amended and agreed to.

Paragraphs 83 to 115 read and agreed to.

Paragraph 116 read as follows:—

"Your Committee have also considered a proposal which would have the effect of linking the Services more closely with the civilian academic world and also incidentally of strengthening the connection between this country and the Commonwealth (Q. 2081). This would be to end the present duplication of functions as between the Royal Naval College, Greenwich, and the Royal Naval Engineering College, Manadon, by transferring all existing technical courses either to Manadon or to other technical training establishments, and housing the remaining professional courses elsewhere. The buildings and facilities at the Royal Naval College, Greenwich, should then be used as the nucleus of a Maritime University of the Commonwealth. It would be staffed to begin with by officers of the Royal Navy, though it is envisaged that it would subsequently acquire a staff of its own. Tuition would be provided in all maritime subjects, including those appropriate to Merchant Navy students, as well as those at present taught."

Question put, That the Paragraph start part of the Report:—

The Committee divided:

Ayes, 2

Mr. MacColl.
Mr. Wilkins.

Noes, 11

Mr. Bourne-Arton.
Mr. Harold Davies.
Sir Eric Errington.
Sir Richard Glyn.
Mr. William Hamilton.
Captain Litchfield.
Sir Frank Markham.
Mr. Millan.
Mr. Norman Pannell.
Mr. Rhodes.
Mr. Woof.

Paragraphs 117 and 118 read and disagreed to.

Paragraph 119 read, amended and agreed to.

Resolved, That the Report, as amended, be the Eighth Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Ordered, That so much of the Minutes of the Evidence taken before Sub-Committee E as has been reported by them to the Committee be reported to the House, together with Appendices.

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ESTIMATES COMMITTEE

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WEDNESDAY, 11TH DECEMBER, 1963.

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Mr. W. A. Wilkins.

Mr. John Woollam.

Memorandum submitted on behalf of the Minister of Defence

SERVICE TRAINING ESTABLISHMENTS

We were asked to provide statements on the work, costs, and establishments of Service training colleges concerned in the training of officers and officer cadets for purposes other than those of a specialised nature-relevant almost entirely to a single Service. This memorandum deals with colleges whose primary tasks are the training of officer cadets (Dartmouth, Sandhurst and Cranwell) and the technical training of officers (Manadon, Shrivenham and Henlow).

2. The statements of cost of the six colleges cover the annual running costs estimated for the current financial year and the two preceding financial years. In order to show the trend, major capital costs and associated depreciation charges are excluded from the calculations. In view of the emphasis on the non-specialist aspects of training the costs of sea training at Dartmouth and flying training at Cranwell are also excluded, and in the case of Cranwell, where flying training and ground training are closely integrated, statistical estimates have been made to allocate overheads between the two forms of training. It has not been possible to identify and exclude the cost of field training at Sandhurst.

BRITANNIA R.N. COLLEGE, DARTMOUTH

3. The College was built in 1905 and extended in 1918. Most Cadets enter direct from school or from the lower deck of the Royal Navy.

Training

4. The training provided at the College is both professional and academic and is designed to give the officer cadet basic training in naval subjects as well as developing his powers of leadership and other qualities required of a naval officer. The full course for a seaman officer on the General List is 4 years, the first and third of which are spent in the College. The first year consists of two terms in the College devoted to basic naval training and one term at sea with the Dartmouth Training Squadron. The second year is spent at sea as a midshipman with the fleet. For the third year officers return to Dartmouth mainly for academic study. The fourth year is spent in the naval specialist schools in the Portsmouth area where they receive further instruction in professional subjects. Shorter courses are run at Dartmouth for officers on the Supplementary Lists (Seamen, Aircrew and Engineers (Electrical)) and the Instructor Branch.

5. Ratings selected for commissions on the General List undergo an academic course at Dartmouth for up to two years during which they are expected to acquire the educational qualifications required for direct entry cadets. Thereafter they proceed to sea as midshipmen.

Number of Students and Establishment

6. The average number of students over the last three years was:—

1961-62	...	...	...	...	...	484
1962-63	...	...	...	...	...	455
1963-64	521 (estimated)

These figures include an average of 75 overseas students.

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[Continued.]

7. The establishment over the last three years was:—

	1961-62	1962-63	1963-64
<i>Naval</i>			
Captains	1	1	1
Commanders	7	6	6
Other Officers... ..	47	44	39
Ratings	101	91	94
<i>Civilian</i>			
Scientific and Professional	37	38	41
Executive	—	—	—
Retired Officers	—	—	—
Technical Classes	2	2	2
Drawing Office Classes	2	2	2
Clerical and Typing	17	17	17
Other Civilians	355	331	340
TOTAL	569	532	542

8. Costs

	1961-62	1962-63	1963-64
	£	£	£
<i>Personnel</i>			
Officers	107,300	96,400	88,000
Ratings	102,300	90,600	94,000
Civilian Non-Industrial	77,800	84,000	92,000
Industrial	183,000	194,300	220,700
<i>Stores, Furniture etc.</i>	38,560	44,960	44,000
<i>Maintenance and Repair</i>			
Machinery and Equipment	22,500	22,800	27,850
Buildings and Works	32,300	33,000	40,500
<i>Utilities</i>			
Electricity, gas, fuel (excluding M.T.)	27,400	28,900	32,300
Water	1,500	1,300	1,500
Motor and other transport (P.O.L.)	3,400	4,100	4,000
<i>Miscellaneous</i>			
Contribution in lieu of rates	17,600	15,900	16,000
Telecommunications, Stationery and Postage	10,400	6,700	7,000
TOTAL	628,360	622,960	667,850

ROYAL MILITARY ACADEMY SANDHURST

9. The present Royal Military Academy Sandhurst was opened in 1947 and cadets may enter it direct from school or from the ranks of the Army.

Training

10. Training in the Academy is both military and academic and is designed to give the officer cadet a broad view of his profession and at the same time develop his powers of leadership and man management.

11. The course undertaken by the officer cadet lasts two years, the basic subjects being:—

<i>Military</i>	<i>Academic</i>
Tactics.	Main Arts.
Drill and Weapon Training.	Main Science.
Signals and Communications.	Special Science.
Leadership.	Special Mathematics and Science.
Military Law.	Special Languages.
Administration and Accounts.	Special Arts.
Military History.	

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[Continued.]

The course consists of six terms, each of fourteen weeks. There are three terms in each year, intakes in the spring and winter terms and Commissioning (Sovereign's) Parades at the end of the winter and summer terms. The first and last terms are devoted mainly to military subjects and the middle terms are devoted mainly to academic subjects (occupying about two-thirds of the cadet's time).

Number of Students and Establishment

12. The average number of students over the last three years was:

1961-62	...	...	...	...	...	...	...	944
1962-63	...	...	...	...	...	...	...	990
1963-64	...	...	...	...	...	...	...	987

These figures include an average of 120 overseas students.

13. The establishment over the last three years was:

	1961-62	1962-63	1963-64
<i>Military</i>			
General	1	1	1
Brigadier	1	1	1
Colonels and Lieutenant-Colonels	6	7	7
Majors, Captains and Quartermaster-Sergeants	83	81	82
Other Ranks	274	273	267
<i>Civilians</i>			
Administrative	—	—	—
Scientific and Professional	79	80	85
Executive	7	7	8
ROs.	8	8	6
Technical Classes	—	—	—
Survey and Drawing Office Classes	1	1	1
Clerical and Typing	91	90	95
Other civilians	448	455	472
TOTAL	999	1,004	1,025

14. *Costs*

	1961-62	1962-63	1963-64
<i>Personnel</i>			
Officers	£ 179,850	£ 183,000	£ 190,500
Other Ranks	201,650	210,750	217,600
Civilian Non-Industrials	246,500	259,100	258,100
Civilian Industrials	287,000	293,400	309,000
<i>Stores and Furniture</i>	68,050	69,100	70,050
<i>Maintenance and Repair</i>			
Machinery and Equipment	33,600	34,800	36,000
Building and Works	103,300	119,100	105,550
<i>Utilities</i>			
Electricity, gas, fuel (excluding M.T.)	52,850	60,200	57,200
Water	2,700	3,000	3,150
Transport (P.O.L.)	6,500	7,050	7,200
<i>Miscellaneous</i>			
Contributions in lieu of rates	30,200	34,800	31,150
Telecommunications, postage and stationery	14,500	14,950	14,600
TOTAL	£ 1,226,700	1,289,250	1,300,100

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[Continued.]

R.A.F. COLLEGE CRANWELL

15. The aim of the R.A.F. College is to provide the Service with officers of character and ability whose general education and Service training will enable them progressively to develop their powers and faculties to meet the demands of the higher ranks. About 20 per cent. of the annual intake of candidates for commission in the General Duties Branch attend the College. In addition, cadets for the Equipment and Secretarial Branches and for the R.A.F. Regiment are trained at Cranwell.

Training

16. The course lasts three years and is divided into nine terms. There are two intakes annually. The syllabus provides general service, professional and academic training. General service training includes subjects such as drill, ground defence and R.A.F. law and administration. Professional training includes flying and navigator training for the General Duties Branch and appropriate specialised studies for Equipment, Secretarial and Regiment officers. The academic syllabus provides a choice of scientific and arts subjects which can be pursued to degree or broadly equivalent standard.

Number of Students and Establishment

17. Average total student strengths, including about 10 non-R.A.F. students, since 1961-62 are:

1961-62	...	...	...	...	...	281
1962-63	...	...	...	...	...	283
1963-64	...	...	...	...	...	280 (estimated)

18. Average establishments of staff for ground training are:

	1961-62	1962-63	1963-64
<i>Service</i>			
Air Commodore	1	1	1
Group Captains and Wing Commanders	10	10	9
Squadron Leaders and below	64	65	64
Airmen	109	109	100
<i>Civilian</i>			
Administrative	—	—	—
Scientific and Professional	8	8	9
Executive	3	3	3
Retired Officers	—	—	—
Technical Classes	2	2	2
Survey and Drawing Office Classes	4	4	4
Clerical and Typing	27	27	29
Other civilians (Messengers, Cleaners, etc.)	152	158	155
TOTAL	380	387	376

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[Continued.]

Cost

19. Annual costs of ground training over the same period are:

	1961-62	1962-63	1963-64 (estimated)
	£	£	£
<i>Personnel</i>			
Officers	148,200	154,500	156,650
Airmen	86,100	94,750	92,800
Civilian Non-Industrials	36,700	38,250	42,050
Civilian Industrials	83,450	92,750	97,950
<i>Stores and Furniture</i> (estimated)	13,000	14,000	15,000
<i>Maintenance and Repair</i>			
Machinery and equipment	1,300	2,400	2,400
Building and Works	15,650	18,250	20,900
<i>Utilities</i>			
Electricity, gas, fuel (excluding M.T.)	12,150	14,600	16,000
Water	1,500	2,050	2,150
Transport (P.O.L.)	2,550	2,700	2,800
<i>Miscellaneous</i>			
Contributions in lieu of rates	11,500	12,000	12,500
Telecommunications, postage and stationery	10,300	12,500	12,250
TOTAL	422,400	458,750	473,450

ROYAL NAVAL ENGINEERING COLLEGE, MANADON

20. The R.N. Engineering College was finally established in its present location in 1958. The main course has been the three-year Long Engineering Course leading to a professional qualification. The last of these courses started in September, 1963. Under the new scheme of training introduced in 1960, Engineer Officers will undergo a three-year degree or diploma course followed by a one-year application course on Naval equipment. These new style courses began in 1962 and from September, 1964, will form the main task of the College.

Training

21. The following courses are also run at the College:

Six-months Engineering Course for S.D. List Officers

Special one-year Basic Engineering Course for overseas students

Miscellaneous short engineering courses ranging in length from a few days to several weeks.

Number of Students and Establishment

22. The average number of students over the last three years was:

1961-62	224
1962-63	291
1963-64	383 (estimated)

The figures include an average of 86 overseas students.

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[Continued.]

23. The establishment over the last three years was:

	1961-62	1962-63	1963-64
<i>Naval</i>			
Captains	2	2	2
Commanders	7	8	8
Other Officers... ..	45	53	63
Ratings	34	41	23
<i>Civilian</i>			
Scientific and Professional	—	—	—
Executive	—	—	—
Retired Officers	1	1	1
Technical Classes	30	38	41
Drawing Office Classes	8	7	5
Clerical and Typing	12	12	13
Other Civilians	220	220	267
TOTAL	359	382	423

24. Costs

	1961-62	1962-63	1963-64
<i>Personnel</i>			
Officers	£ 104,500	£ 119,000	£ 124,300
Ratings	40,200	52,500	22,400
Civilian Non-Industrials	47,200	48,920	56,200
Civilian Industrials	114,960	125,110	165,200
<i>Stores, Furniture, etc.</i>	23,110	26,930	26,400
<i>Maintenance and Repair</i>			
Machinery and Equipment	32,550	41,760	30,000
Buildings and Works	19,200	21,700	23,500
<i>Utilities</i>			
Electricity, gas, fuel (excluding M.T.)	16,200	20,800	21,650
Water	700	800	800
Motor and other transport (P.O.L.)	1,400	1,000	1,200
<i>Miscellaneous</i>			
Contribution in lieu of rates	16,900	15,800	16,000
Telecommunications, stationery and postage	£ 4,100	6,500	6,500
TOTAL	421,020	480,820	494,150

ROYAL MILITARY COLLEGE OF SCIENCE, SHRIVENHAM

25. The Royal Military College of Science, Shrivenham, was established in its present location in 1946 to serve the Army as a centre of Scientific Study and to train Army Officers of all Arms and Services in scientific and technical subjects with a view to the application of such matters in war. The Degree Courses held in the College are purely academic and are attended by young military officers and a few civilian scholars, who read for external degrees of the University of London in Science and Engineering. Other courses, particularly those for more senior officers, include military as well as academic study. The College is intended to act as a centre of knowledge and reference on scientific and technological matters in general and especially in their applications to war.

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[Continued.]

Training

26. The following Courses are run at the College:

- Technical Staff Course (2½ years)
- Young Officers' Degree Course (3 years)
- General Staff Science Course (10 weeks)
- Guided Weapons Course (1 year)
- The Nuclear Science and Technology Course (10 weeks)
- The Short Nuclear Course (3 weeks)
- The Ammunition Technical Officers' Course (6 months)

In addition various Study Periods and Conferences are held for senior officers, scientists and engineers.

27. A small number of graduate officers return to the College for a period of post-graduate training, usually leading to the award of a higher degree (M.Sc. or Ph.D.).

28. Individual and directed research is also carried out at the College and important work has been carried out in several fields.

Number of Students and Establishment

29. The average student strength (including students from Commonwealth Armies and civilians) was 355 in 1961-62, 343 in 1962-63 and is 386 in 1963-64.

30. The establishment over the last three years was:

	1961-62	1962-63	1963-64
<i>Military</i>			
General	1	1	1
Brigadier	1	1	1
Colonels and Lieutenant-Colonels	8	8	8
Majors, Captains and Quartermasters	33	30	30
Other Ranks	316	81	69
<i>Civilian</i>			
Administrative	1	1	1
Scientific and Professional	171	177	177
Executive	4	4	4
R.O.s	4	5	5
Technical Classes	11	14	14
Survey and Drawing Office Classes	10	14	14
Clerical and Typing	98	99	99
Other Civilians	260	466	479
TOTAL	918	901	902

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[Continued.]

31. *Costs*

	1961-62	1962-63	1963-64
<i>Personnel</i>	£	£	£
Officers	91,750	92,000	91,000
Other Ranks	128,100	77,200	55,400
Civilian Non-industrials	324,300	361,300	400,300
Civilian Industrials	220,000	240,000	250,000
<i>Stores and Furniture, etc.</i>	44,400	47,800	48,150
<i>Maintenance and Repair</i>			
Machinery and Equipment	38,500	32,500	46,000
Building and Works	55,200	57,700	61,450
<i>Utilities</i>			
Electricity, gas, fuel (excluding M.T.)	71,550	80,150	88,750
Water	4,300	5,700	6,200
Transport (P.O.L.)	3,650	3,250	3,000
<i>Miscellaneous</i>			
Contributions in lieu of rates	42,250	46,050	45,000
Telecommunications postage and stationery	13,100	13,000	13,000
TOTAL	£ 1,037,100	1,056,650	1,108,350

R.A.F. TECHNICAL COLLEGE, HENLOW

32. The R.A.F. Technical College provides initial training for all Technical Branch officers of the R.A.F. and certain post-graduate training.

33. The Technical Cadetship Scheme is the main source of supply of technical officers for the R.A.F. The planned annual intake of cadets is 60. Of these about 20 may, after their first year at Henlow, go on to a three-year course in engineering at a University, returning to Henlow thereafter for two terms of post-graduate training. The rest take a course lasting four years and two terms leading either to a Diploma in Technology or to a Higher National Diploma. The Henlow/University course is ending with the Autumn 1963 intake, and is being replaced by the University Cadetship Scheme, which has started this year, for sending up to 25 entrants for the General Duties and Technical Branches to Universities each year to take degree courses before their Service training.

34. In addition to the cadet courses, Henlow provides initial courses of two terms for graduate and professionally qualified entrants to the Technical Branch and also an initial course of two years and two terms for Technical Branch entrants who are either not eligible or not acceptable for cadetship.

35. A number of post-graduate courses are conducted, for example, on guided weapons and on electrical engineering for Education officers. The College also supervises officers undergoing post-graduate training outside the Service, for example, at the College of Aeronautics and at Southampton University.

Number of Students and Establishment

36. Average student strengths, including about 40 non-R.A.F. students, since 1961-62 are:

1961-62	273
1962-63	275
1963-64	283 (estimated)

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[Continued.]

37. Average staff establishments are:

	1961-62	1962-63	1963-64
<i>Service</i>			
Air Commodore	1	1	1
Group Captains and Wing Commanders	15	15	15
Squadron Leaders and below	94	96	96
Airmen	250	242	249
<i>Civilian</i>			
Administrative	—	—	—
Scientific and Professional	27	23	23
Executive	2	2	2
Retired Officers	—	—	—
Technical Classes	4	4	6
Survey and Drawing Office Classes	2	2	3
Clerical and Typing	45	43	44
Other civilians (Messengers, cleaners, etc.)	177	183	178
TOTAL	617	611	617

Cost

38. Annual costs over the same period are:

	1961-62	1962-63	1963-64 (estimated)
	£	£	£
<i>Personnel</i>			
Officers	208,200	221,150	229,300
Airmen	182,500	196,050	215,200
Civilian Non-Industrials	69,050	67,350	73,800
Civilian Industrials	97,150	107,400	112,500
<i>Stores and Furniture (estimated)</i>	21,000	22,000	23,000
<i>Maintenance and Repair</i>			
Machinery and equipment	27,000	33,000	22,000
Building and Works	59,000	64,000	69,500
<i>Utilities</i>			
Electricity, gas, fuel (excluding M.T.)	27,450	22,150	24,000
Water	2,300	3,450	3,700
Transport (P.O.L.)	2,700	2,850	3,050
<i>Miscellaneous</i>			
Contributions in lieu of rates	23,700	25,000	26,400
Telecommunications, postage and stationery	18,600	22,050	23,300
TOTAL	735,950	786,450	825,750

Ministry of Defence, S.W.1.

3rd December, 1963.

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[Continued.]

Examination of Witnesses.

Rear-Admiral J. M. D. GRAY, O.B.E., Director General of Training, Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E., Director, Naval Education Service, Mr. E. A. SHILLITO, Under Secretary, Naval Personnel, Mr. P. D. NAIRNE, M.C., Head of Naval Branch, I, Mr. W. R. WILLIAMS, General Finance Branch I, the Admiralty, and Mr. J. A. DREW, C.B., Under Secretary, Ministry of Defence, called in and examined.

Chairman.

1. May I begin by thanking you for coming. I think probably the first question that I have to ask is one directed mainly to Mr. Drew. Can he give us the picture of what general co-ordination there is in this field as between the Services in the way of organisation?—(Mr. Drew.) Perhaps, Sir, I could best answer that by explaining what our general approach to this problem is in the context of the three stages in an officer's career—to wit, the academy stage, the initial stage, that is to say; the Staff College stage and, later on, the stage at which he might go to the Imperial Defence College, or the Joint Services Staff College.

As our philosophy stands at the moment we would, I think, say that the job of the individual Service Academies is to train the man in the elements of his arm. He is of course a member of a general profession of arms, but what he is there for is the purpose of being trained to be a sailor, a soldier or an airman. It is perfectly true that there is a certain amount of commonality in the academic training that he receives, and there is and there has been contact between the three Service Departments and the Ministry of Defence about the degree to which that common academic training can be of the same nature.

2. Is there some sort of formal consultation?—No, informal consultation between the Commandants.

3. Is there no standing conference, for instance?—No, none has so far been thought to be necessary. At the Staff College stage, to which a selected officer goes about the age of 32 or perhaps a little older—it varies slightly between the three Services—he is still being trained to be a staff officer in his own Service. The degree of what we call joint training, joint working, at that stage of a man's career, even in present circumstances, is not very great. Nevertheless there will be occasions on which he will be engaged in joint operations, and at the moment something like 20-25 per cent. of the

training between the three Staff Colleges is joint. It is concerned with joint warfare, joint administration, joint logistics and so on. Finally, and again here I am not quite sure of the ages but I think it is 42 and upwards, roughly at the rank of Brigadier or equivalent, he may go to the Imperial Defence College, where the training is wholly joint and fits a man for the highest, or is intended to fit a man for the highest, offices in the three armed Services.

At a slightly lower level than that, perhaps a little younger than that, the officer might go to the Joint Services Staff College where he is trained to be a joint staff officer capable of going into one of the joint organisations, in the Ministry of Defence, for example, the Joint Administrative Planning Staff, the Joint Operational Planning Staff, the Joint Intelligence Staff, and so on.

So that while there is no formal arrangement for contact between the three Services we are, as things stand, fairly confident that there is a sufficient degree of separateness, if you follow me, between the needs of the three Service Colleges at the early stages of a man's career as not to need any such formal association between them, and that to the extent to which there is a need when you come on to the joint studies at the Staff College and later, the Commandants of the Staff Colleges have in the past been in contact and indeed the existing arrangements for joint training between the three Staff Colleges have been worked out by the Commandants themselves.

4. You have talked mainly about the quality of the training curriculum. On the material side, is there any attempt to get standard costing or standard measurement of things such as how much it costs to feed a student, as between the Services?—No, Sir, not so far.

5. Perhaps it is a little early to ask you; we have not dealt with the Defence (Transfer of Functions) Bill yet. Is there anything envisaged for the future?—Specifically in the terms in which you ask

11 December, 1963.] Rear-Admiral J. M. D. GRAY, O.B.E., [Continued.
Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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the question, no. But I would have thought, and here I am rather looking to the future, although without specific knowledge, that within the new Department it is highly improbable that the costs of training in the sense that you name, comparative costings, would be left out of account.

6. Coming now to the Admiralty specifically, could I ask a question which is really in the same context. Within the narrower context of the Navy, could we have a picture of the organisation above the institutions?—(Mr. *Shillito*.) These institutions that are in the paper? I think Rear-Admiral Gray could best answer that, Sir.—(Rear-Admiral *Gray*.) The Second Sea Lord is the Board Member for Personnel, and he is a member of the Principal Personnel Officers Committee. Under him he has a Director General of Training, which is myself; a Director General of Manpower and a Director General of Personnel Services on the welfare side. As far as the training is concerned, my job embraces all officer colleges and sailors' training establishments, and the individual Service Staff College, but not the Joint Services Staff College, and not the I.D.C. My organisation is responsible, therefore, to the Second Sea Lord, for the policy, for those colleges and institutions. The Commanders in Chief of the various areas in the country, that is to say Plymouth, Portsmouth and Scotland, look after the administration, day to day efficiency and running of the training establishments within their Commands, and we naturally work very closely together with them. That is the broad picture, I think, of the training field in the Navy.

7. What about the comparative costs between the different institutions?—May I ask Mr. Williams to answer this?—(Mr. *Shillito*.) Could I just try a general answer there, that certainly the costs of the different institutions are compared within the Admiralty, and I think a good deal of reference is paid to costings such as are available to us of other institutions in the other Services. I think we are gradually developing this. I do not know if Mr. Williams could elaborate on that?—(Mr. *Williams*.) We do get out costings every year of these colleges and other institutions, and in the last few years the Board

have been extremely conscious of the cost of these colleges and have in fact taken stronger action and asked for explanation where they thought it necessary—say, in comparing the costs of these institutions—and they are very much alive to this and to the comparative costs between the various establishments.

8. Do these comparative costs break down the expenditure in more detail than we have in this note?—Slightly more detail, yes.

9. I wonder whether we could possibly have one or two of those, so that we can get an idea of what the picture is and how much detail there was, under general headings? I am not thinking of a great deal of detail?—(Mr. *Shillito*.) This is for Dartmouth and Manadon?

10. Yes, start with that for the moment, and if we see then what there is we can look at it again in the context of the others?—I do not know how much further breakdown would be possible, but may we look at that and let you know?

11. Yes. I think if we go further there are some points I would like to ask you about regarding details, and that may give you some idea of what we have in our minds. Coming now to Dartmouth, you start by telling us that it was built in 1905 and extended in 1918. Has there been a considerable change in the objects of Dartmouth?—(Rear-Admiral *Gray*.) Yes, indeed there has, Sir. When I entered Dartmouth in 1926 boys came in at the age of 13½ and then went through a 4-year training, then went to sea for 2½ years as midshipmen. It then went through various stages. A 16-year old entry came in in 1950, and finally as a result of a committee which met the present scheme evolved whereby boys enter from school at the age of around 18. They do a year at Dartmouth, of which one term is at sea in the Training Squadron, and then they go to sea for another year as midshipmen, with the fleet. They then come back again to Dartmouth for what is known as the third year, where they bring up to date their academic knowledge and prepare themselves for the fourth year, which is at the Portsmouth Schools, on up to date naval

11 December, 1963.] Rear-Admiral J. M. D. GRAY, O.B.E., [Continued.
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equipment, and then they go to sea as Sub-Lieutenants. So there has been considerable change since pre-war days in this entry.

12. Is Dartmouth the only entry for cadets, or the only place of entry?—Dartmouth is the only place of entry for cadets, yes.

13. What about the lower deck entries?—The Upper Yardmen, as they are called, come into Dartmouth from the fleet through a process of interviews and recommendations, and they come to Dartmouth for a period of time which can be anything up to 2 years, to equip them to two A Level standard, which is our standard of education for entry, and from then on they go to sea and join up with the general list. They are in fact General List Officers.

Mr. Gurden.

14. What is the maximum capacity of Dartmouth? — (Rear - Admiral Darlington.) Between 650 and 700—just over 700 is the maximum, I think. (Mr. Shillito.) We do not envisage it building up to that, though, for some time ahead.

Chairman.

15. Is it intended to expand in the short term?—There are, all told, in the current term 560 students at Dartmouth. That will go down a bit immediately in 1963-4, but will rise again to virtually 600, I think, in about 3 or 4 years time. That is the broad picture.

Mr. Wilkins.

16. From these figures, then, it would seem to show that you have just had an intake?—(Rear-Admiral Gray.) We have a yearly intake.

17. And the figures recently put these figures up to 600?—(Mr. Shillito.) 561 at the moment.

18. It is 521 here?—That is the average number of students over the year. I think the number present at this time of the year, in the autumn term, is normally larger than the number earlier in the year. (Rear-Admiral Darlington.) Yes, because more students are in the Squadron then.

Chairman.

19. Do you have much of a wastage?—(Rear-Admiral Gray.) We do not,

in fact we are very fortunate. I believe the figure is about 3 per cent.

20. When you give us a maximum possible figure of 650 to 700, what is the limitation? Is it the buildings?—I think accommodation, and also of course our figure for officer intake.

21. Yes, but I was wondering which really was the foremost resistant?—I think the latter, probably the officer intake. We could obviously expand Dartmouth if we spent a lot of money on it, but the officer intake is geared to the number of officers we can take into the Navy. (Mr. Shillito.) I think it is fair to say that with numbers of the order of 600 the College as at present constituted will be pretty well working to capacity.

22. This is the largest number there has been since the war, is it?—(Rear-Admiral Gray.) I have not got the actual figure for that. I am not sure if we have it in our heads. (Mr. Nairne.) I should think it is, probably.

Mr. Gurden.

23. The students to staff ratio is rather surprising. We have figures going back to 1961-2 here. Has it previously to that date been the case that you have more staff than students in Colleges? This does not only apply to Dartmouth, I know.—(Mr. Shillito.) That is counting everybody that is shown in paragraph 7 of our note. (Rear-Admiral Gray.) That includes the ratings, of course, who are not staff.

Chairman.

24. I have it in mind that we might probe those figures a little. In the meantime, I wonder if you could tell us something about the method of recruitment from the schools?—(Mr. Nairne.) For the General List or permanent career entrants to Dartmouth are coming from two types of competition. One type is for boys roughly between the ages of 15 and 17½, which is called the R.N. Scholarship Competition. This is a competition by which boys from any type of school can undergo an interview at the Admiralty Interview Board, and are then required to get a certain number of O Level passes in their G.C.E. examination. The best of these boys get one of 72 annual scholarship awards

11 December, 1963.] Rear-Admiral J. M. D. GRAY, O.B.E., [Continued.
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and those who do not quite achieve this award get what we call a reserve cadetship, by which without any payment the Admiralty guarantees a boy a place at Dartmouth in about 2 years time, when he is about 18, provided he has by then acquired two A Level passes in his G.C.E. That is the first form of entry, the Scholarship Competition.

The other form is what we call the Direct Cadet Entry, which is for boys between the ages of 17 and 19½ or thereabouts, who can present themselves for interview at the Admiralty Interview Board in their last year at school. There, again subject to attaining two A Level passes in the G.C.E. and being medically fit and so on, they enter at about the age of 18. From these two sources we get an annual entry running at the moment at about 200 a year.

In addition to the General List entry to the College, which provides the bulk of the numbers, we also have what we call the Supplementary List entry. These are young men who are coming in for shorter forms of commission; some of them are only 5 years in length and others may be 16 years in length. They will have commissions either in the seaman world or the aircrew world, or the electrical world, and they come to Dartmouth for a much shorter period of time to do introductory courses prior to undergoing more specialised forms of training. The third form of entry is what we call the Upper Yardmen scheme, by which ratings selected for General List commissions come for their A Level course to the College.

25. Do you have any special methods of advertising this to the schools?—Very much so, Sir, yes. We have of course advertising in the ordinary way through the press, a fairly large-scale press advertisement campaign. Secondly we have a team of schools liaison officers—not very many, about a dozen—who go round the schools and keep contact with them. Thirdly we invite headmasters of schools to come and see Dartmouth and see the Admiralty Interview Board. In every way possible we try and present to the schools of every kind what we have to offer in the way of entry schemes.

26. I believe the Grigg Committee made some recommendations about

associating schoolmasters with the selection board? Has anything been done along those lines?—Yes, we have for some time had at the Admiralty Interview Board a headmaster or a director of education as a full member of the Board itself.

27. Could you give us a picture at all of the kind of proportions between local authority schools and independent schools among those who come in and among the applications?—For the Scholarship Competition I would have said that it is about 60 per cent. from the independent schools and about 40 per cent. from the maintained or direct grant schools. For the Direct Cadet Entry Competition at the 17 to 18-year old age I would have said it was roughly the other way round.

28. This may not be a fair question to ask because you may not have the details, but do those who come up from the ranks tend to be people who have come in from independent schools, or does that pick up people who have not taken the G.C.E.?—Quite a number of them, Sir, are those who have come in as Artificer Apprentices, and then find they have the basic qualifications for entry as Upper Yardmen candidates; and if they have the personal qualities and shape up well before the Selection Board they can be picked out for General List officer training.

Mr. Wilkins.

29. Does this mean that generally speaking those who come up from the ranks for entry into the College are essentially people going into the technical grades rather than the seamanship branches?—Not entirely, Sir. I would have said something approaching half of our Upper Yardmen entries each year, the total number being around 30 or thereabouts, are in fact those who have started as Artificer Apprentices and therefore, as you imply, are on the technical side, but some of them also come from the seaman side as well.

30. Would it be possible to get a breakdown of the figures at the bottom of the first page of your memorandum some time, showing the numbers coming from the schools and the numbers coming from the ranks?—We would very gladly find you that, yes, Sir.

11 December, 1963.] Rear-Admiral J. M. D. GRAY, O.B.E., [Continued.
 Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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Chairman.

31. How long is the term? You tell us in paragraph 4 that the first year consists of two terms. How long actually is the term?—(Rear-Admiral Gray.) The dates match the ordinary school term.

32. Do you have three in a year?—Yes.

33. And about the ordinary school holidays?—Yes, although I think the holidays are slightly shorter. I have not got the exact dates, but it is to all intents and purposes the same as the ordinary school term. (Rear-Admiral Darlington.) In the summer, from the end of July until the first week in September, and about a fortnight between the other two.

34. It is about 3 months altogether, is it?—Yes.

35. About 9 months of term and about 3 months holiday?—Yes, roughly. If you like we can give you the exact answer?

36. It was not so much that we want to be fussy about exact dates, but when you talk about "a term", it could be two weeks?—(Rear-Admiral Gray.) It is a school term, Sir.

Mr. Woollam.

37. With regard to the reference to the 75 overseas students, I assumed, but I was not too clear, that that meant cadets who would after their training return to either the Commonwealth or foreign navies?—Yes.

38. If that is so, is there a reciprocal arrangement here, or are you in receipt of some sort of subsidy for their cost?—(Mr. Shillito.) We charge overseas governments a certain fee for their students when they come to us. The present level of fees, I think I am right in saying, is £690 a year, or rather I should put it, £230 a term.

Chairman.

39. You mentioned earlier on about awarding scholarships. I am not quite clear what is the value of the scholarship. Is it a financial advantage, or purely a matter of distinction?—(Rear-Admiral Gray.) It pays for their time at school. (Mr. Nairne.) It pays for their school fees and something for maintenance. Basically it is school fees,

plus certain maintenance costs which are paid as well. The Scholarship Scheme operates while the boy remains at school.

40. Is it an inducement to stay on at his school after his G.C.E. for his A level?—(Rear-Admiral Darlington.) Yes, the scholarship is awarded at the age of about 15 or 16.

41. What is the amount of the scholarship?—(Mr. Nairne.) We pay the school fees plus a maintenance award, which I think is something over £100, to pay for things like books, clothing and that sort of thing.

42. And the school fees vary according to the school he is at. If he is at a State school there are no fees, is that it?—Yes, that is right, Sir.

43. But is the maintenance the same whatever the school? You would pay less, presumably, at a day school than a boarding school? Or is it a flat rate?—Perhaps we could put a note in? It is quite a complicated scheme.

44. Perhaps you would give us a copy?—(Mr. Shillito.) We would like to send you a note on that, Sir.

45. We observed from studying some of the earlier Estimates that the Dartmouth course was 2½ years and it has been extended to 4 years?—(Rear-Admiral Gray.) 2½ years; 8 terms. (Rear-Admiral Darlington.) Under the old scheme, yes. (Rear-Admiral Gray.) We tried to do two things basically. One was to get the young men to sea again. This is vitally important in a young officer's life, that he should have practical experience and be in the company of sailors as soon as possible. This added a year on to the course, but of course it was not at Dartmouth but at sea. I think that really explains the difference.

46. I was not quite clear whether the present 4 year course was more ambitious than the older one in what it covered, or merely was an extension?—I think it is really a different concept. It is really trying to get the best of the old concept with present-day needs, and this year at sea as a midshipman of course is an absolutely vital part of their training. (Rear-Admiral Darlington.) I think perhaps one might add that in the previous scheme the

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academic standard of entry was not quite so high.

47. I am still not absolutely clear. Going back to the scholarship point again, there is no maintenance charge for those who are students at Dartmouth. Are they paid as naval service officers in the Navy?—(Rear-Admiral Gray.) Yes, they are, Sir, as cadets when they first go and when they come back as Acting Sub-Lieutenants.

48. Are the people who come up from the ranks paid as cadets, or do they get their old pay that they had?—(Mr. Nairne.) They get paid as cadets, I think, unless—(Rear-Admiral Gray.) I do not think we do anybody down; it might be that a young man might get more. Perhaps we could cover this in our note.* I must admit I have not got the rates of pay at my fingertips.

49. Thank you. In the field of the academic subjects, is the College self-contained as far as teaching staffs are concerned, or does it draw on outside staffs?—(Rear-Admiral Darlington.) It has a Director of Studies, Sir, who is a civilian, and a civilian staff which covers all the necessary subjects. It is therefore self-contained in that way.

Mr. Woollam.

50. May I put the question round another way?—If you did not want in fact to be self-contained, it would not be easy to find the qualified instructors and teachers in the locality; you would in fact have to be self-contained?—Yes, I think that is a fair statement. Dartmouth is a bit out on a limb.

Chairman.

51. Geography is not my strong subject, but I was wondering about Exeter, for instance?—Yes, it is not too far away. Exeter is rather over an hour's fast driving in a car from Dartmouth.

52. But the standard you are aiming at is roughly university standard?—All the people come in with two A Levels, and therefore the minimum standard of entry to a university. That can be, of course, either Science or Arts, and the third year, the academic year so-called, takes notice of this. They are streamed

* Note by witness: Upper Yardmen Cadets retain their rate of pay as ratings where it is more favourable than the cadet rate of pay.

on the Science side, and about two fifths of the time spent is on the humanities and languages, but on the scientific side the aim is to prepare the officers for their fourth year, the professional courses, as Admiral Gray said, in the Portsmouth Technical Schools and Seamen's Training establishments—gunnery, torpedoes and so on. (Rear-Admiral Gray.) I would like to make one thing clear, which is that all cadets go to Dartmouth; after their second year at sea the technical ones go to Manadon and the seamen and supply go to Dartmouth. I am not sure if that has been made clear.

53. I was going to ask you about that?—The technical ones get a degree at Manadon.

54. The ones that stay on for their full course at Dartmouth do not necessarily reach a degree equivalent?—The first year—I suppose that sort of thing. (Rear-Admiral Darlington.) They do one year academic study.

Mr. Wilkins.

55. What is the educational test applied to the ranker who is going to Dartmouth for seaman officer training, if I may use that term just to distinguish it from artificers or people like that?—The Upper Yardmen, as we call them, the people who come from the ranks, as Mr. Nairne said a short time ago, can be either artificers or seamen or supply ratings, or anything. Their standard requirement is four O Levels. They must have O Level qualifications in order to be selected academically. They have other hurdles to pass on the personal side and so forth. They then spend two years at Dartmouth getting two A levels; some of them do it quicker but that is the time. In other words, the Upper Yardmen course at Dartmouth is designed to bring a rating up to the cadet entry standard, or the standard required for that.

56. I am sorry to pursue this, but I am rather interested in this side of it. How would the approaches be made? You would have all his documents, and you would have his educational attainments at school before he came to you. Is he advised by notices put up in the ship, or something like that, that certain vacancies are arising? How is he encouraged, shall we say, to think in

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terms of going?—The Commanding Officers and their Divisional Officers are automatically throughout the Navy very much on the *qui vive* to select anybody who shows any sign of being, if you like, a potential officer. This is a standard procedure throughout, and everybody who shows any sign at all—for example, we have a scheme even before this whereby the rating who is regarded as a potential officer, who has not even got O Levels, is sent on a special draft to Portsmouth where he is given up to a year's coaching in order to take O Levels, in order to fit him to be selected as an Upper Yardman. It is, in other words, a pre-course. I think we are very keen.

57. My question is prompted by the fact that even during the war—and I am talking about the first war, not the last one—even in wartime there were opportunities?—There are now, Sir, throughout the fleet.

58. I am wondering whether these opportunities still exist even in the smaller ships, and that through this process you get to know the people who have certain educational attainments, and so on?—(Rear-Admiral Gray.) Yes, and one thing that makes it possible is that we start a form early in a man's career and this is passed personally from captain to captain; this young man is marked very early in his career and every effort is made to get over the education hurdle, which is always difficult. (Rear-Admiral Darlington.) We also have a small unit in Portsmouth which runs correspondence courses throughout the fleet for anyone who is not in a ship where there is an Instructor Officer. At the moment there are 1,500 correspondence courses running in the fleet. (Rear-Admiral Gray.) We are also thinking of putting teaching machines in ships, which might help. I think it would be quite a good field.

Chairman.

59. Is the academic course finally tested by examination?—(Rear-Admiral Darlington.) Yes, Sir, the examinations are externally moderated but set internally.

60. Are they moderated externally by the university?—Virtually so, we have what we call the Naval Education Advisory Committee for each of the three

Colleges, and two moderators of the Dartmouth examinations at this moment are Dr. Vick, who is Director of Research at Harwell, and Professor Gibbs, an Oxford Professor—one of Arts and one of Science.

61. Going now to establishments, I wonder if you could give us a picture of the hierarchy here? I presume the Captain is the Commandant, is that right? It is not easy to see from these lists of numbers exactly who is who under the Captain?—(Rear-Admiral Gray.) Briefly, the Captain is the Executive Captain, normally straight from sea if possible. The Commander is the Executive Commander, and he has a Training Commander plus Supply and other Commanders. I have not got the complete list. Then there are Divisional Officers who are the other officers who would be normally of Lieutenant's rank, and they are the Divisional Officers. We have Royal Marine Officers who are the sports and P.T. officers; we have officers for every specialisation—that is to say, executive, M.E.'s, submariners, gunnery officers and so on—spread right across the board so that they can speak to the cadets of their own specialisation. They make up really the divisional system at the college.

Mr. Wilkins.

62. While we are on the subject of officers, is there any explanation of this run-down in the other officers from 47 in 1961-62 to 39 now?—(Mr. Shillito.) I think the short answer to that is that we made very strenuous efforts to be economical, and we succeeded.

Chairman.

63. I noticed in the Estimates as opposed to the figures given here that there seems to be a discrepancy, which we have difficulty in following. The number of Commanders is given as 6, and in the Estimates as 3 for the same year?—(Rear-Admiral Gray.) I have the actual list here now, Sir. Perhaps I could give you an actual note of the people. There is the Commander; there is the Engineer Officer, who is a Commander; the Supply Officer, who is a Commander; a Training Commander, and there is the Surgeon Commander and a Dental Officer, who is also a Surgeon Commander. That makes six,

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Sir. (Mr. *Shillito*.) If there is a discrepancy between our note and the Estimates, could we please look into it and let you know the explanation?

64. Yes; there are one or two discrepancies. In the case of the Ratings, for instance, which are given here, for the same year the figures are 101 and 91 and, in the Estimates, 71 and 69, which is a rather large discrepancy. There is a figure of 91 for 1962-63 in your memorandum, but the figure for that year is 69 in the Estimates?—We will certainly look into this and let you have a note.

Chairman.] I do not think it is worth wasting a lot of time on it, but it would help if you could.

Mr. *Gurden*.

65. Is the reduction in the number of ratings from 1961-62 and 1962-63 due to the same explanation, that of economy?—(Rear-Admiral *Gray*.) We are always trying to economise, Sir. That is the explanation.

Chairman.

66. You were about to say something about the distribution of the civilian staff?—(Rear-Admiral *Darlington*.) Yes, Sir. They are divided into groups, Mathematics, Science, Arts and so on, and headed by a Director of Studies. In Science there are 8; Applied Mechanics 4, Languages 4, Music 1, and so on. With the Director of Studies there are 34; the Scientific and Professional list also includes, for example, the Senior Store Officer and one or two other people of that sort. They are not all teaching staff in that number, but the vast majority of them are.

Mr. *Gurden*.

67. Where are the cleaners, for instance, in this list?—They are under Other Civilians, Sir.

Chairman.

68. How does the Director of Studies fit into the hierarchy in comparison with the Service people?—The civilian Director of Studies is responsible to the Captain for carrying out the academic side of the work, as opposed to the Training Commander who is responsible for the professional side. They run two parallel ladders, as you might say.

69. Could you explain exactly what the ratings do? I think I am on the same point here that Mr. Gurden mentioned. The staffing ratio seems to be very high, and if you include the ratings in it, it is extremely high?—(Mr. *Shillito*.) The ratings are needed mainly for specialist instruction duties, for maintenance of equipment, drills on the parade ground, boat work and so on; there is also a Marine's Band, and they are used for miscellaneous small tasks about the College. (Rear-Admiral *Gray*.) Physical training takes up quite a number, which is rather a big item, of course—physical training instructors.

70. They would be under Ratings here, would they?—Yes, Sir.

71. I thought they were Royal Marine officers?—No, I am sorry if I misled you there. The Royal Marine officer is in charge of the physical training activities as a whole, and swimming and that sort of thing.

Mr. *Gurden*.

72. Could we pursue this point? As an example, how many staff are employed in physical training instruction?—There are 8 P.T. instructors.

Chairman.

73. What is the tour of duty of a naval officer at the College?—Normally one would expect about 2 years.

74. Including the Commandant?—Including the Captain.

75. And do the civilians stay longer there?—(Rear-Admiral *Darlington*.) Oh, yes. They are more or less permanent. When I say that, they are Civil Servants, and are appointed there. The present Director of Studies has been there for a very large number of years.

76. I can understand that they are appointed for permanency, but you might get a situation where they have considerable mobility?—When I say "permanent" there is no set term at all. They may do a tour of duty, and then move on elsewhere. They are permanent in a sense, but of course quite a number of them may leave to go elsewhere, in which case we appoint another one.

77. But on the whole they stay a fair time?—Indeed, yes. As you know, at

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ordinary schools some masters stay for a long time, and others not so long.

Mr. Wilkins.

78. I would like to comment on this tour of duty, remembering our previous enquiry. We made some comments about what we regarded as an adequate tour as in length of service, fearing lack of continuity. Do you find this is happening? Is there any reason for just 2 years, or is it an arbitrary figure?—(Rear-Admiral Gray.) As far as a naval officer is concerned, his career is the thing which he has to consider, and all of us in the Navy have gone from one job to another at about 2 year intervals. It is important to get a sea experience and not spend too long, if you like, away from our particular element.

Mr. Gurden.

79. Would a number here in these Colleges be near to retirement? Is this a period at the end of their service which is used up?—No, Sir, I would say it is the opposite, that for an officer to get to Dartmouth it means nearly always that he is pretty well thought of and he is probably at the early stage of his career.

80. Would a number of them go there to get experience rather than to be skilled teachers?—Experience over a broad field, perhaps. That is to say, the appointing authorities try to give the average officer a pretty broad spectrum of jobs, and a training job at Dartmouth would be regarded as one such job—but only in that context, I would say.

Chairman.

81. In the Estimates, 1962-3, it is said that the complement of civilian lecturers is being reassessed to meet the changing needs of the College. Has that reassessment taken place, and what has been its effect?—(Rear-Admiral Darlington.) It has taken place, and it was agreed with the Treasury and the Admiralty establishments that it should be looked at again before next March. It was, in fact, done last Friday. The reason why the reassessment was made, of course, was because the third academic year was a new thing, in fact the first one under the new system of training was completed last July, so that quite new curricula and methods were needed. It was therefore agreed with the Treasury

that now there was a new academic set-up at the College it would be necessary to look at the academic staff anew.

82. Do you anticipate that it will result in a change in the balance between Service and civilian staff?—No, not particularly so. The numbers of the academic staff have fluctuated not very much, round about the 30 plus mark in the last few years, and I think it will remain about the same.

Mr. Woollam.

83. I bear in mind what you said about the majority of the naval staff at the College being specialist instructors, but does it follow that they are, none of them, other than instructors? You do not have a permanent education branch who do not lift their eyes up to anything else?—(Rear-Admiral Gray.) Not at Dartmouth. (Rear-Admiral Darlington.) There is, of course, the Instructor Branch in the Royal Navy which goes to sea and changes its work around in the same way as anybody else. There are several at the College—

84. Even if they were permanently on that work they would still have their rotation of sea and home duty?—Yes. I think there is probably a tendency for Instructor Officers to stay slightly longer in their appointments, but not at Dartmouth. There is no differentiation between the two.

85. We have always understood from other enquiries into other naval Estimates that they were following a general naval career in order to qualify for their appointment to Flag Officers, therefore at what may be significant steps in their career they must have at certain stages got in certain years doing this. But for those who are following just the education side of naval work, I am just wondering whether it would not be possible for them to have much longer tours of duties in establishments of this sort when the more general career considerations presumably cannot apply to them to the same extent as they must apply to those who are in other branches of the Service?—This is true to some extent, but your remarks apply very much more to what we may be discussing quite shortly, the appointments at Manadon, where the Instructor Officers do stay longer because they are dealing

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with work of degree standard. But I think at Dartmouth, after all, the standard is just post-A Level, and this is not quite so vital, I think.

Chairman.

86. Coming to the costs, I find it difficult in looking at this to get a picture of how much, for example, it costs to feed somebody at Dartmouth. There does not seem to be any reference to food at all in the costs?—(Mr. Williams.) This is included in fact in the personnel data of officers and ratings.

87. This figure includes cost of feeding as well as pocket money?—Yes, this is based on a capitation rate which covers all the immediate costs of maintaining the officers or ratings in the Service. The question of food is not a critical one from a cost point of view, because in any case it is governed by ration scales.*

88. Is the catering part of the general naval catering service, or is it done on its own? Again searching in my memory, when I investigated service catering a good many years ago we did get a picture of the different standards of Navy, Air Force and Army catering?—(Rear-Admiral Gray.) It is certainly run by a rather splendid lady who is a civilian caterer, and has been there for some time. The actual details of the naval rations that are used I will admit I have not got. We can let you have a note on that—but they eat extremely well.

89. Thank you. I notice a jump in the maintenance and repair, both on equipment and on building. Is there any particular reason for that?—(Mr. Williams.) I do not think we can answer that, Sir. It is the responsibility of the Ministry of Public Building and Works.

90. It is not in response to any particular development there, as far as you know?—No.

91. And fuel costs again have gone up fairly substantially. Is there any reason for that?—Again, no specific reasons. These fuel costs include fuel in harbour craft, as well as transport.

*The witness's replies in Q. 86-87 relate to the expenses of the staff: the pay, etc. of students is not included in the Ministry of Defence memorandum.

92. I notice that the contribution in lieu of rates since 1961/2 has dropped, which is not the experience of most of us, I think! I wonder how that has happened?—This is a reassessment. This figure is supplied by the Treasury Valuer—

93. And is the valuation done in the normal way, such as for other Crown property?—Yes.

94. And the contribution is based on changes in that?—Yes.

Mr. Gurden.

95. What do you feel about the economy of these Colleges by comparison with other Colleges—we talked earlier about this point of the ratio of staff to students—and do you consider that, for instance, Dartmouth would naturally tend to cost more, because of the nature of the training, and so on?—(Rear-Admiral Gray.) I think so, Sir. We are teaching them to become naval officers, in fact, as well as an academic standard.

96. Yes, that is what I mean. Does it cost more?—Yes. (Rear-Admiral Darlington.) I think at times they are more closely controlled than would be the case in any civilian establishment. For example, they get up about half-past six in the morning, and of course they have a lot of equipment, sailing on the river and so on. This all involves more staff.

97. Could I ask how many weeks in the year there are of active training? What percentage of a student's time is spent in actual training at the College?—(Rear-Admiral Gray.) Does that include activities such as on the river, and that sort of thing?

98. I mean, in other words, how much leave is there for the student?—I have the actual terms here. Let us take the Christmas Term, 1963. This ends on Monday, 16th December, and the Easter Term, 1964, starts on Tuesday, 7th January. Then I have a list here of the actual terms.

99. The big recess would be the summer one?—The Easter Term ends on Monday, 6th April; the Summer Term starts on Tuesday, 25th April and ends on the 27th July. The Christmas Term starts again on the 15th September.

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Chairman.

100. Are the fees for the overseas students based on the costs?—(Mr. *Shillito*.) They are based broadly on what the Admiralty expects to be out of pocket as a result of having those students there. The fees were reviewed two or three years ago, at the time when the Public Accounts Committee was looking into this question. The fees were raised then, and they are kept under review from time to time.

101. They did drop, or the Estimates dropped, between 1961/2 and 1962/3. Was that a bad year in 1962/3, or is that the trend?—(Mr. *Nairne*.) The number of overseas students has fluctuated at the College.—(Mr. *Shillito*.) We can check on this point and let you know.

102. I wonder if I could get the formula here. When I asked if it was done on costs per head I was thinking in terms of average cost, and I suspect your answer would imply that it was on marginal cost, the extra cost of having them?—Yes. The College is needed for our own use. It would have to be there whether or not Commonwealth and foreign navies sent their students to us to be trained. The view that has always been taken by the Board of Admiralty is that in those circumstances the right thing to do is to charge the identifiable additional cost.

103. Is there any reciprocal service, of our students going to Colleges overseas?—(Rear-Admiral *Gray*.) No, Sir. (Mr. *Nairne*.) Not at this level of rank, no.—(Mr. *Drew*.) Perhaps I might say a word about this? All the overseas Departments and the Ministry of Defence regard this as an extremely valuable means of strengthening the military efficiency of Commonwealth countries. If it was possible they would like to see more of it done. The diffi-

culties are largely difficulties of getting adequate numbers of students of the right quality, especially from the newer Commonwealth countries. This I think is why the numbers fluctuate pretty considerably.

104. That is looking at it in terms of a form of aid, as it were, which I can see. But you went on to say "foreign countries", and I think we are wondering whether we are having American students coming over here?—There are American students, I think, at the Staff Colleges.—(Rear-Admiral *Gray*.) Yes, there are.—(Mr. *Drew*.) And we have had American students at the J.S.S.C. and the I.D.C. too.

105. Where there might be reciprocal arrangements?—Oh, yes, but not at cadet level. We are training, as I said earlier on, a man in the elements of the British profession.—(Rear-Admiral *Gray*.) And as a matter of policy at this level, the cadet level, most of the overseas students are taken from countries which have no comparable facilities of their own.—(Mr. *Drew*.) In the main Commonwealth countries this applies particularly, and foreign, but I am thinking now of the Army and the Air Force where the big numbers are mainly cadets from Commonwealth rather than foreign countries.

Mr. Gurden.

106. Could we have the figures?—(Rear-Admiral *Gray*.) I have the list here, but it would probably be easier if we sent you the figures.

Chairman.

107. Could I clear up from Mr. *Drew* the same formula for fees? Is that applied now through the other Services?—(Mr. *Drew*.) So far as I know, Sir.—(Mr. *Nairne*.) Yes, indeed.

Chairman.] Thank you, Gentlemen.

WEDNESDAY, 15TH JANUARY 1964.

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Mr. W. A. Wilkins.

Lt.-General G. C. GORDON LENNOX, K.B.E., C.B., C.V.O., D.S.O., Director-General of Military Training, Mr. G. S. WHITTUCK, C.B., Director of Finance (A), and Mr. C. E. STARLING, Inspector of Establishments, War Office, called in and examined. Mr. J. A. DREW, C.B., Ministry of Defence, called in and further examined.

Chairman.

108. Could we turn to page 3 of the Ministry of Defence memorandum, paragraph 9. I notice you say the present Royal Military Academy, Sandhurst, was opened in 1947. Could you tell us what happened before that date?

—(Lt.-General Gordon Lennox.) Before that date it was divided into two—Woolwich and Sandhurst. The coalition took place on that date after the war when the cadets belonging to all the arms at Woolwich went to Sandhurst. The decision was taken in the last century but it took all that time to implement it.

109. Were there substantial differences made in the kind of training given and in the curriculum?—In 1949?

110. In 1947.—I think for a time the training was on the general lines of pre-war Woolwich and Sandhurst but in the last few years it has been very radically changed. The training has been increased in length by six months as a result of the Stopford Committee. This was a Committee of which General Stopford was Chairman. He strongly urged it should be increased from 18 months to two years. I think that was in 1951. The reason was twofold. One was to let the cadets mature for the extra six months, which he thought was necessary from what he found at Sandhurst at that time. Secondly, there is more to teach boys today than there used to be. On both grounds he advocated that increase, and it has remained at two years ever since.

111. Is there more to teach from the point of view of the job they are going to have to do, or is there more to teach from the point of view of what they have learned before they come to you?—It applies in almost every way. First of all, there was always the urge to build up a better academic education at Sandhurst, and secondly it is more necessary

than ever that these cadets should leave Sandhurst with basic military skills which reach a fairly high standard. The situation today, compared with what it was before the war, is very different. Then there was not time to teach them a lot of the things they ought to have been taught before they joined the army. Half of their training is academic training. It is the equivalent of an academic year. The other half is, broadly speaking, military training. Some of it is not pure military training but military law and that sort of thing. To that extent it has changed since the inception of the combined Royal Military Academy in 1947. In fact, it has changed a good bit since those days. It started off more or less according to pre-war lines.

112. Has the field of recruitment changed substantially?—Yes, I think it has. It is much, much broader. To give you an indication, I think it is, within a factor of one or two, accurate to say that 306 schools are represented at Sandhurst today. When you think of the numbers at Sandhurst it is a very broadly based intake. I think I am right in saying that this is apart from our own Welbeck.

113. Can you give us the breakdown as between the different types of school?—We have those figures, yes. (Mr. Whittuck.) About 60 per cent. of the school entrants come from H.M.C. types of school and about 65 per cent. of the Army entrants. Those types of entrants account for about 85 per cent. The balance, of course, come from the other schools.

114. "Other schools" including direct grant and local authority schools?—Yes.

115. What proportion come from schools and what proportion come from the ranks of the Army?—Normally

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and Mr. J. A. DREW, C.B.

about 60 per cent. of the entrants come from the schools. From the ranks of the Army come 25 to 30 per cent. The rest come from Welbeck and there are one or two from the Commonwealth.

116. Can you tell us something about how people get to Welbeck?—The purpose of Welbeck is to give boys two years at school, with the aim of obtaining two A levels and three or four O levels and going on from there to Sandhurst. Boys apply to enter Welbeck and are chosen as a result of interview.

117. They come from similar sorts of schools as the others?—(Lt.-General *Gordon Lennox*.) About 80 per cent. of the boys at Welbeck are from State-aided schools and about 20 per cent. are from other schools. They go there at the age of 16 and stay there for two years. The object of Welbeck when it started was, and still is, to a large extent, to produce officers for the technical arms. That object has been slightly extended now. When I say “the technical arms” I mean Sappers, Signals and R.E.M.E. in particular, but now the Gunners take a few and the R.A.S.C. take a few. It supplies a very important ingredient at Sandhurst.

118. I believe that the Grigg Committee wanted to see an extension of promotion from the ranks. Has there been much change since the Report?—A very considerable percentage of the Sandhurst entrants is now from the ranks. (Mr. *Whittuck*.) It is 25 to 30 per cent. I cannot say offhand if it is higher than it was at the time of the Grigg Report. We could find that out, if you wish. It is very much higher than it was before the war.

119. Is it higher than it was in 1958 when the Grigg Report was published?—(Lt.-General *Gordon Lennox*.) I do not know. It has been pretty steady (Mr. *Whittuck*.) We have only got figures with us going back to 1961. They seem to be running fairly steadily.

120. If you could put in a note to show whether there has been a change it would be helpful. Another recommendation which we discussed when the Navy were here was the question of having a headmaster to help in the selection. Has anything happened about that?—(Lt.-General *Gordon Lennox*.)

Do you mean on the Regular Commissions Board?

121. Yes?—That is outside my province. That is the business of the Adjutant-General. The actual selection of the boys and the systems by which they arrive at Sandhurst are his province. (Mr. *Whittuck*.) These boards last four days at a time and they go on for a large part of the year. It is unlikely that a headmaster could spare the time to be a regular member of such a board, but headmasters are invited to attend the proceedings and satisfy themselves of the validity of the method of selection.

122. What we were told by the naval witnesses, in answer to a similar question, was this: “Yes, we have for some time had at the Admiralty Interview Board a headmaster, a schoolmaster or a director of education as a full member of the Board itself”. Is that done in the Army?—(Mr. *Whittuck*.) No. (Lt.-General *Gordon Lennox*.) The Admiralty Interview Board sounds as if it is much shorter. Ours lasts for four days and goes on throughout the year. I think the time factor, as Mr. *Whittuck* has said, was the point against having a permanent headmaster on the board.

123. Is there any common procedure between the Services regarding financial assistance to the boys coming into the Services? We were told what happens in the case of the Naval scholarships?—(Mr. *Whittuck*.) There is a very similar Army scholarship scheme designed to select boys at the age of 16 and to make a substantial contribution towards the cost of the next two years of their education, with a view to their then entering Sandhurst. I think the schemes are almost identical in their arrangements. By that means we normally fill 40 places a year at Sandhurst.

124. Is the present proportion between the admissions direct from schools and from the ranks of the Army a matter of chance, according to the number of applications, or is there a policy about the proportion?—(Lt.-General *Gordon Lennox*.) It is a matter of chance, according to the applications. That is assuming we want all we can get, and that is a very safe assumption up to date. There is no hard and fast rule about how many should come from

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the schools and how many should come from the ranks.

125. Could you tell us something about the efforts which are made to widen the field of recruitment among the schools? Is there an advertising campaign or are special visits arranged?—This goes on all the time. Of course, there is the advertising campaign which you know about and which you have seen. There is constant contact between Sandhurst, which is the headquarters of the training and organisation which they want to see and know about, and the schools. They visit Sandhurst in quite large numbers. Those visits go on quite regularly throughout the year. Once a year, in October, headmasters from a great many schools visit Sandhurst. They come at the rate of about 30 a year regularly and spend two days at Sandhurst. They are invited to give us their assistance and advice and to comment on the course as we describe it to them. Those meetings have been most useful and most productive, and quite often we have been able to take advantage of their views and get their suggestions promulgated by the War Office.

126. What do you think is the main obstacle to extending the basis of recruitment?—I do not think there is any obstacle that we are conscious of. In fact, the numbers are pretty satisfactory, as you know, now. I am talking about the recruitment side. In fact, they were oversubscribed last September.

127. By "oversubscribed" you mean there were no vacancies at Sandhurst, or that the accepted establishment at Sandhurst had been completed?—I think there were something like 34 boys more than could physically be accepted into Sandhurst by virtue of accommodation and training facilities. They had to be deferred until January.

128. Is that a question of roof space, or of staff, or just equipment?—It is a question of two things. One is general facilities, including roof space. The other is that you cannot suddenly take a large intake because you then unbalance the whole thing for the next two years. All your staffing, both academic and military, would be wrong. You can only go up and down on a fairly level cycle. There was this sudden demand

for places at Sandhurst. We took all we could, yet still there were 35 left over, most of whom, I think, have been absorbed this January.

Mr. Gurden.

129. Is there a demand in the Services for these additional people?—Indeed. This is outside my sphere. It is the Adjutant-General's job. Sandhurst is geared and organised up to 1,000 cadets at any one time, of whom 100 odd would be from the Commonwealth.

130. In spite of all the changing levels of manpower in the Services, do these numbers remain stationary at this figure?—(Mr. Whittuck.) It would be fair to say in relation to the officer content of the 180,000 Army that a population of 1,000 at Sandhurst is required, and if we continue to fill that requirement of 1,000 at Sandhurst we will have the numbers we want.

131. What I had in mind was that the number of men in the Army 15 to 20 years ago was considered to be more normal than it is today. Does Sandhurst go on turning out the same number, regardless of the Army intake at the moment?—(Lt.-General Gordon Lennox.) You are talking about what has happened since the war. We then had National Service officers in great profusion and they took care of that extra requirement. Now they are a thing of the past.

Chairman.

132. Is the educational qualification of the entrants from the ranks the same as that from the schools?—No, it is not. In fact, there is no academic qualification from the ranks, but a boy has to satisfy the education officer at the regular commissions board that he has sufficient education potential so that, if given a very intensive three months' education course at Beaconsfield—the Army school of education—he can show up adequately by the time he gets to Sandhurst. As I say, there is no specific qualification from the ranks.

133. Is great effort made to advertise these opportunities among the soldiers?—I am sure any soldier realises that the way is open to him if he can get a recommendation from his commanding officer.

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134. Will a commanding officer feel it is his duty to persuade a boy that he should go ahead?—Yes, I am sure the good ones will. We have all done it many times in our lives, and I am sure that if there is a boy of obvious officer quality he will be urged to take the opportunity.

135. Is a boy more likely to get the opportunity in one branch of the Army than in another branch of the Army, and does it make very much difference which particular type of work he is doing: technical, for instance?—I think the short answer is no. I think in this age of very broad technological education he would be more likely to find himself an officer in the technical corps, but I am not very certain how these things go.

Mr. Gurden.

136. I assume that all the students leaving Sandhurst obtain a certain rank?—This is at Sandhurst?

137. No. After Sandhurst I assume they go into the Forces at a certain rank. Are there any failures?—The wastage for all reasons at this moment is about 7 per cent.

138. Some because of failure?—Some leave for medical reasons—because they suddenly damage themselves—some for disciplinary reasons and some for compassionate reasons. All together, the wastage is round about 7 per cent.

139. But none through failure to make the grade?—Yes, there is always an element of that.

Chairman.

140. On the military side of the training at Sandhurst, is it a general military training or does a recruit begin to specialise immediately on joining?—It is a general training. Most of the field training is infantry training, but it has been attempted in the past—for instance, at Woolwich—to introduce things like training in field gun drills and that sort of thing. However, it did not succeed there. There was too much to do. Now the special arms training is done at the special arms schools after Sandhurst.

141. On the academic side what is the goal of the academic training? It is not designed to reach degree level?—It is the equivalent of one academic year, as I have said.

142. One academic year at the university?—No, just one academic year. The aim is to make the best possible use of the material available, broadly speaking. That works out at present in gaining for 25 per cent. of the cadets at Sandhurst qualifications which will enable them to work for degrees. One-quarter of the Sandhurst cadets today move on either to Cambridge, Oxford or Shrivensham and obtain degrees. That is made possible by this academic year at Sandhurst, which is really the equivalent of one year in the sixth form. It brings 25 per cent. of our cadet output up to the standard necessary to work for an honours degree, and that they achieve. Apart from the obvious aim to prepare cadets to work for degrees, there is the need to broaden their education, both militarily and in a good many other ways. The academic studies are organised so that like work with like and the slow horse does not drag back the faster one.

143. Is there any consultation with the other Services about obtaining a common standard of academic work?—There is consultation. I would not think there is specific co-ordination at the moment. We have, in fact, as you may know, different standards of entry from those which apply at Dartmouth and Cranwell. We have just altered ours. We have really altered the emphasis. We always tried to demand two A levels for entry and maybe we should demand it, but the size of our entry is twice that of Dartmouth, and we know that if we demanded two A levels we would not get the necessary number of recruits. So we do not all do the same thing, although between us we often discuss it. (Mr. Whittuck.) The length of the course is different. At Cranwell it is three years and at Dartmouth I think it is three years, plus a year's sea training. At Sandhurst, though, we only require two, so you would not expect the standards at the end to be identical.

144. Is there any external inspection at the end of the course?—(Lt.-General Gordon Lennox.) Yes, there is. If a boy has two A levels at school he is exempt from what all the other boys have to take, the civil service examination which a boy takes at about the age of 17 at school. Before qualifying for Sandhurst he also has to have five O levels.

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145. What I meant was whether the curriculum and teaching at Sandhurst were subject to any external check on their efficiency?—Only to this extent. There are certain examinations which they take at Sandhurst. There is the A level examination which they take at Sandhurst, and some cadets may take three or four subjects at A level. Those examinations are taken by the boys who did not gain their A level subjects at school. Then there is the languages examination, the Army inter-pretership examination. A very high standard indeed is required to pass this examination. It is higher than the standard required to gain a university degree. There is also the qualifying Shrivenham examination and the Qualifying Examination which enables them to get their mechanical tripos at Cambridge. If they go to Cambridge for that they have to pass the Q.E. first. In order for this 25 per cent. to go to university at all—to Oxford, for instance—they have to have a very adequate number of G.C.E. A levels and possibly S levels. Otherwise I think most of the examinations are internal.

146. Without any external examiner helping you? I am sorry to have to compare you with the Navy, but that is our only source of information, and I believe we were told that at Dartmouth there are outside moderators in the case of the final examinations?—(Mr. Whittuck.) Perhaps we could do a note on this. We are not quite sure. (Lt.-General Gordon Lennox.) I think the answer is no, but I will find out.

147. Thank you very much. Mr. Whittuck mentioned the differences between Sandhurst and Dartmouth. At Dartmouth the cadets undergo training for a year at sea but there is nothing comparable to that at Sandhurst. Is there any particular reason why the Army should not have a break in that way?—They have two breaks while they are there. They have not got nice ships to sail in but twice a year Sandhurst goes overseas to train for a fortnight, and in relation to the whole length of the course this is roughly comparable with the period the Dartmouth cadets spend at sea. They go in July and in November either to Libya, Cyprus or Germany. They go to Portugal, too. That has a tremendously invigorating

effect. Not only does it teach them a lot but they grow up very quickly.

148. What proportion of your intake eventually ends up with commissions in the Army?—All but 7 per cent. It used to be 6 per cent.

149. Those people may be personally or educationally unsuitable or may just simply get bored with it?—There is every reason you can think of. There are boys who slip through the net and who should not be there at all. Certainly there are boys who damage themselves. During my time there there were quite a few who did that. There are disciplinary cases which have to be removed from Sandhurst. All that adds up to about 7 per cent.

150. You told us you were over-subscribed in the last year of entry?—In September.

151. Does that mean 990 is your full complement?—No. The reason why you cannot suddenly take a large number more is because you unbalance the whole of the teaching arrangements. If one intake were 300 odd it would mean there would be too many to a class. You would run out of equipment and even playing fields. You have to work it out carefully so that the four intakes running at the same time are more or less balanced. (Mr. Whittuck.) It is a healthy sign if we are oversubscribed in the September entry because the January one is not so easy to fill. Therefore, if there are a few entries over from September it suits us quite well.

152. What is the full establishment?—(Lt.-General Gordon Lennox.) 1,000.

153. I see. Therefore, the figures we were given as an average allowed for wastage. In paragraph 12 the figures given are 944, 990 and 987?—No. We have never reached the optimum yet, but we are going to next year.

154. What about the overseas students? Where do they come from and what do they do?—(Mr. Whittuck.) They come from a very wide variety of countries, the majority of which are in the Commonwealth. We could give you a list of the countries, if you wish. I should think at least 30 different countries are represented, mostly the newer members of the Commonwealth, although a few foreign countries are also represented, such as

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Iraq, Jordan, Thailand, Tunisia and Saudi Arabia.

155. Is the figure of 120 a quota or is it a matter of chance?—(Lt.-General *Gordon Lennox*.) It is a matter of some difficulty. Obviously there is a rate of absorption beyond which you cannot go. One has to admit that there is a great difference between the types one can absorb. On the whole, however, there is no statutory limit. It is a practical one. The War Office tries to keep to what it considers is the practical one, which is a quota not bigger than this figure. That again is not my business but that of the other side of the house.

156. What fees do they pay?—(Mr. *Whittuck*.) At the moment it works out at £860 a year for the foreign and Commonwealth students. There is a general ruling that we do not charge the full cost of the course to outside students. The Foreign Office and the Commonwealth Relations Office are naturally keen for us to accept such students, and they argue that they might be frightened off if the charges were too high. This is a matter which applies to training courses generally which are given by the Armed Services, I think. The fees charged are a combination of what it costs to maintain the cadet and the extra cost of training him over and above what we have to provide for our own cadets.

Mr. *Gurden*.

157. Who fixes the figure?—The War Office fixes the figure. We work out from time to time what is the appropriate charge for the maintenance and for the extra instruction.

158. I am sorry. Do you mean by "appropriate" the cost, and then a percentage is taken off? Who fixes the £860?—The War Office does. They review from time to time what it costs to maintain the student—to feed him and so on. We also periodically make a fresh calculation of what are the extra facilities we are providing in order to teach these outside students.

159. Correct me if I misunderstood you, but I thought you said there is a great demand for training and you have, in fact, to keep the numbers down for practical purposes. Therefore, this figure of £860 is certainly not a deterrent, and one would have thought

it could have gone up to the full cost?

—This ruling applies not only to Sandhurst but to training courses given generally throughout the Armed Services. It is a matter which has been agreed between the Defence Departments, the Treasury and the other interested Departments. I think it would be difficult for us to make an exception in the case of a particular college because the demand there is, perhaps, particularly high. It would certainly cause trouble with some of our friends overseas.

160. The difference between the actual cost and the charge is something like 20 per cent., is it not?—No, it is more than that. We reckon that the annual cost for one of our own cadets is of the order of £1,700 a year, so we are charging, in effect, something like half price. But we are not out of pocket. We recover our expenses because we only charge the extra cost.

Mr. *Gurden*.] I am not quite sure I understand that.

Chairman.

161. We discussed this last time. You charge the marginal cost of the additional people, which is less than the average cost taken over the whole period?—Yes, that is it.

162. When was this fee last fixed?—I think we do the calculations once a year.

163. And you do not just adjust certain costs. There is a thorough review?—We would have a thorough look at it, yes.

164. If we can come now to your establishment and staff, it did seem to me that you are not very fair to yourselves here, because you give us a figure of staff which is more than one member of staff per student. Presumably not all these people are directly engaged in the work of the college, are they? They are maintenance people and so on?—(Lt.-General *Gordon Lennox*.) Yes. I think the teaching staff works out at 24:1.*

165. You mean 24 students to one teacher?—Yes. These figures include certain people who have nothing to do with Sandhurst—for instance, the C.P.S. office. (Mr. *Whittuck*.) There is an

* *Note by witness*: The ratio for the civilian teaching staff is nearer 14:1.

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establishment and pay office for civilians who are employed by the Army in the surrounding area, and which is based at Sandhurst. I think it is fair to say that is the main exception. There is a large number of civilians who are employed at Sandhurst.

166. Is it possible to break down these figures as between training, maintenance, building and other things?—(Lt.-General *Gordon Lennox*.) Indeed it would.

167. There are four levels—the actual teaching and training, the running of the establishment as an institution, the maintenance of the fabric and the external commitments for other work in the neighbourhood?—Yes. There is the M.T. unit, which is quite a large unit, and, because there are four levels of instruction going on at the same time, they are very fully employed. There is a big signal wing. Signal training is one of the things which is common to all military training establishments, to all arms and to all Services. It is of interest to all of them. There is the P.T. staff and there is the ground staff. We could certainly give you a note of it all. (Mr. *Whittuck*.) Can Mr. *Starling* help you about this? (Mr. *Starling*.) We have inspected the college within the past year. A team of six staff inspectors visited the college and spent a fortnight there. We satisfied ourselves that the number of staff, military and civilian, is the number we require to do the job. You broke them down into different categories: one of those was maintenance of fabric. Under that heading there is very little charged. The Ministry of Public Building and Works now consider themselves responsible for the fabric. Perhaps I can give you a broad outline of the main centres of employment within the college. The headquarters staff itself, which is responsible for the overall administration of the college, is about 60 strong. Of that number 32 are military and 26 civilian supporting staff. The cadets are accommodated in three cadet colleges, with 300-odd cadets in each. The bill, in terms of manpower for administering the colleges, is 138 military and 15 civilians. Then there is the academic staff: about 104 civilians, of whom 79 are instructors. The General has said there is a signal wing.

This accounts for about 50 staff. A weapons training wing accounts for about 12 and the P.T. wing for about 20. Then there is the big support element, the supporting services which account for something like 600 staff. This is where the real weight of staff appears. In that section one finds staff employed in headquarters administration, the M.T. wing, Quartermaster Section, library, mess staff, hospital and so on. This accounts for the big bulk of the labour force required to equip, maintain and provide domestic services for 1,000 officer cadets and for such of the instructional staff as themselves have to be maintained within the organisation. This bill of just over 1,000 staff is one which we were unable to dispute. In fact, we were unable to make any cut-down in the strength. What we achieved as a result of the inspection was a reorganisation of certain of the functions and some saving in a fairly substantial overtime bill. This bill is incurred for two reasons. First, it is not easy in the Sandhurst area to recruit domestic staff. Secondly, if we could recruit as many as we wanted it would not be advisable to recruit the maximum number because in the recess we believe we would have more people standing idle than we needed. It is better to pay a certain element of overtime to a lesser number of staff in order to get the work done in term-time. That is a broad picture of the establishment and of the 1,000 odd staff.

168. You gave a figure of 104 academic staff. This does not fit in—?—No, I said 104 civilians were employed in the academic wing, of whom 79 are actual instructors and lecturers. The remainder are supporting staff in every case.

169. Could you give us a picture of the hierarchy? The General is in charge of the whole institution?—(Lt.-General *Gordon Lennox*.) The Brigadier is responsible technically for the training of the cadets. Then there are three college commanders who are responsible for the three colleges, each of which accommodates about 300 cadets. In each college there are four companies. That is the key to the organisation. The company commander is the commander of the cadets. In the companies there are three platoons. These have young officers who help to run the training and to lecture on military subjects. In each company

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the civilian lecturers are affiliated so that they fit in very closely at all times, especially in extra-mural activities, with their companies. That system is good and, I think, it has produced a very cohesive effort between the officers and the academic staff.

170. What would be the highest level of academic staff? What is the level of the top ranking person in comparison with the military staff?—The Director of Studies is equal to the Assistant Commandant.

171. The Brigadier?—Yes. He has an Assistant Director of Studies.—(Mr. Starling.) The Director of Studies has an Assistant. Principal lecturers head each of the main departments, and under them there is a corps of senior lecturers and lecturers. There are five departments of studies—science, mathematics, modern subjects, languages and military history.

172. Could you tell us what the tour of duty of the military staff is?—(Lt.-General Gordon Lennox.) On average I should say it is 2½ years. That did not apply to me because I was there for 3½ years. Some officers do two and some of the more senior ones do nearly three. The academic staff are on ordinary civil service terms.

173. I cannot ask you the next question because of what you have said—whether this is the job into which you push any of the people you want to get rid of! I take it that you put in the very best people?—Apart from present company, frankly yes, for all sorts of obvious reasons—regimental and otherwise.

174. Is this work which normally would be done by people who are advancing their careers or by people who are already established in their career and who have attained a senior rank?—Quite frankly, all the companies' officers are the best persons which the regiments can possibly produce.

175. Do the academic staff stay long?—Yes. Some of them stay a very long time.—(Mr. Starling.) They are appointed as masters are to a school—to a job.

176. That does not give us very much of an idea?—There is a slight turnover, a movement between Sandhurst and the schools, but it is a small one.—

(Lt.-General Gordon Lennox.) It is now slightly more than it was, which is what we want, not because we want to get rid of them but because the status of Sandhurst is becoming more important.

177. Do many of them have experience of schoolwork before they come to Sandhurst, or after Sandhurst? They do not go straight to Sandhurst and stay there for the rest of their lives, do they?—No, there are all types there. To give you an example, I think the senior lecturer, called Constantine, taught at Woolwich before the war, and he has taught most of the Commandants at Sandhurst since the war. He is still there. Naturally some of the young ones who have been coming in have come straight from university. Some, though, have been at schools.

Mr. Wilkins.

178. I have been trying to puzzle out what happens, as there are three colleges. Reference has been made a number of times to three colleges, with 300 in each. Do these three colleges in their training retain a separate identity all the way through, or is the training a progressive one, progressive from one to two, and from two to three because of different subjects?—Each college has four levels of entry at the same time. Each college has its juniors who are engaged almost entirely on military training. Each college has its junior intermediates, its senior intermediates and its seniors. So the academic education and the military education which can be run on a common basis goes right across Sandhurst. They have their being in three colleges but the training is progressive, not only within the colleges (which is mostly on the military subjects) but also on a broad strata right across Sandhurst on the academic level.

Chairman.

179. Does the Commandant have much discretion over his establishment? What is the procedure if you want to increase the numbers?—The procedure is just the same as in other military establishments. You make an application which is taken to the Establishments Committee, and it is either approved or not approved. I do not think there is any difference.

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180. We were discussing earlier on the breakdown of staff as between the different types of work. Is it possible to do a comparable breakdown of the costs? Again we have a lump sum of £1,300,000 as the total cost of the institution, which is a cost of £1,300 per place. Is that a fair test of cost to take?—(Mr. *Whittuck*.) Yes, that is fair. You have to add to that the pay and allowances of the cadets, which brings the figure up to the £1,700 I mentioned. Subject to that it is correct.

181. As I understand it, the intake or the boys from schools are paid as cadets?—Yes.

182. What is the position concerning the intake from the ranks?—If he is earning more than the rate for the cadet he retains the rate he has been receiving.

183. Is he likely to be earning more?—I believe it is rather unusual, because, of course, they are about the same age as the school entry, to within a year or so. So they probably have not got very far in their careers, as far as rank goes. Therefore, it would be rather unusual for them to be earning more than the cadet rate. But if they are they certainly keep that rate.

184. I think that would be a good moment to break off. We would like to continue the discussion next week. We hope by then to be able to discuss Camberley, because of the topographical problem presented to us. We want to make some visits the week after, and it is easier to do Camberley and Sandhurst together than Shrivenham and Sandhurst together. So it would be helpful to get the evidence on Camberley and then, possibly, start on Shrivenham?—There is a paper on Camberley on its way to you giving some of the facts.

185. We would be grateful to have it by tomorrow, in order to catch members?—Yes, you will have it by tomorrow. If that is the end of the evidence on Sandhurst, there is one point you ought to be aware of, which is that we have quite a big rebuilding plan for Sandhurst. A lot of the accommodation is hotted which we want to replace. Also the present layout of the college which has grown up is not as efficient as we would like it to be. You should be aware of that when you visit Sandhurst. I thought you would like to be given advance warning of it.

Chairman.] Thank you.

WEDNESDAY, 22ND JANUARY, 1964.

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Mr. A. V. Hilton.

Sir John Langford-Holt.

Sir Godfrey Nicholson.

Mr. W. A. Wilkins.

Mr. John Woollam.

Memorandum submitted on behalf of the Secretary of State for War

STAFF COLLEGE CAMBERLEY

1. The purpose of this memorandum is to provide information for the Sub-Committee on the Staff College Camberley analogous to that which has already been provided in respect of the Royal Military Academy, Sandhurst and the Royal Military College of Science, Shrivenham.

2. The aim of the Staff College is to train selected officers for war and, in so doing, to fit them for grade II staff appointments and, with further experience, for command.

Training

3. The course run at Camberley is known as the Staff Course and lasts 47 weeks. It is divided into *six terms*. All Foreign students leave at the end of the *fifth term*. Commonwealth, Colonial and United States students remain during the sixth term except for the final week.

Among the subjects covered by the course are:—

Staff Duties	Future Organisation and Tactics
Administration	Training
Intelligence	Foreign Armies
Communications	Military History
Phases of War	Army Operational Research Groups
Internal Security Operations	Joint Studies with the Royal Navy and the Royal Air Force

Number of Students and Establishment

4. The average number of students over the last three years was:—

1961-62	...	...	...	172
1962-63	...	...	...	179
1963-64	...	...	...	174

These figures include students from the Royal Navy, Royal Marines, Royal Air Force, Commonwealth Armies and Foreign Armies.

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[Continued.]

5. The establishment over the last three years was:—

	1961-62	1962-63	1963-64
<i>Military</i>			
General	1	1	1
Brigadier... ..	1	1	1
Colonels and Lt.-Colonels	4	4	5
Majors, Captains and Quarter Masters ...	27	28	30
Other ranks	12	13	13
<i>Civilian</i>			
Administrative	—	—	—
Scientific and Professional	—	—	—
Executive	—	—	—
R.O.s	3	3	3
Technical Classes	—	—	—
Survey and Drawing Office Classes	6	6	6
Clerical and Typing	37	37	40
Other Civilians	194	194	188
Total	285	287	287

6. Costs

	1961-62	1962-63	1963-64
	£	£	£
<i>Personnel</i>			
Officers	69,300	73,000	82,150
Other Ranks	8,850	10,050	10,600
Civilian Non-industrials	39,600	47,500	50,000
Civilian Industrials	113,500	117,400	118,000
<i>Stores and Furniture</i>	21,500	21,950	22,500
<i>Maintenance and Repair</i>			
Machinery and Equipment	1,600	1,700	1,800
Building and Works	4,400	6,100	18,400
<i>Utilities</i>			
Electricity, gas, fuel (excl. M.T.)	13,750	14,600	14,200
Water	1,500	1,700	1,750
Transport (P.O.L.)	1,400	1,000	1,000
<i>Miscellaneous</i>			
Contributions in lieu of rates	7,050	8,450	7,050
Telecommunications, postage and stationery	3,800	3,850	3,800
£	286,250	307,300	331,250

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[Continued.]

Lt.-General G. C. GORDON LENNOX, K.B.E., C.B., C.V.O., D.S.O., Director-General of Military Training, Mr. G. S. WHITTUCK, C.B., Director of Finance (A), and Mr. C. E. STARLING, Inspector of Establishments, War Office, called in and further examined.

Chairman.

186. I think it would be a good thing if we went straight on to Camberley because we want to clear that before we go and visit next week; and then, if we are going well, we can start on Shrivenham. You say that the aim is to train selected officers for war and staff appointments and then, with further experience, for command. Are these two separate stages of training at college or two separate stages of the same man's career?—(Mr. Whittuck.) The training covers both, so that after a year's course he will be better fitted whether to do a staff job or to take command.

187. So he does not have to make decision about his future career?—No. The decision as to his future postings will be taken, of course, by the military authorities, not by himself.

188. What he does at Camberley does not materially affect the freedom that the posting authorities have?—No.

189. Is it possible for people to reach staff appointments without having gone to the Staff College?—(Lt.-General Gordon Lennox.) Yes. There are various means which have been introduced fairly recently, the most important of which is a system called the "Staff Qualified" system. If you pass the staff college examination and through lack of vacancies do not get selected, but you are recommended for staff training, you can be employed as a third grade staff officer and if you are recommended for second grade staff employment you can get that; and if recommended from that to first grade employment you then get the qualifying mark against your name of "S.Q." That is a back door into the staff machine and the Military Secretary is authorised to fill by that means up to 25 per cent. of all grade II staff appointments. It is not quite as full as that, I think it is running at about 18 per cent. or something like that.

190. Is that a fairly steady proportion, 18 per cent.?—This system really only started recently, a few years ago. It is steady at the moment.

191. Is going to college a matter of application if you want to go or are they

sent there as an appointment?—You can take it that every officer wishes to go there, if he wishes to pursue his profession. If he is recommended by his commanding officer, then he takes the examination; if he qualifies, then the whole complicated process of selection by the Military Secretary takes place. There is a Staff College pool and he is selected from it to go there or not.

192. So that once he has qualified by examination the choice is not based on competitive examination?—There are some competitive vacancies completely irrespective of specific subsequent selection. Of course he has been selected as suitable for staff training or he would not be allowed to sit the examination, but there are some competitive vacancies. Otherwise you qualify and are selected by a very comprehensive piece of machinery.

193. If he qualifies by examination and fails to get in, and fails to get in under the special section, is there any advantage in taking the examination? Does he get any extra seniority?—No. I do not think there is any advantage, either in pay or otherwise.

194. Of those who do pass the examination what proportion are finally selected? Is that a fairly steady proportion?—(Mr. Whittuck.) It is a pretty high proportion now, I think. I think the number of those who pass the examination and do not finally get to Staff College is now probably very small.

195. Is that because the numbers who have taken the examination are smaller or is it because more are being admitted into the college?—I think it is because the standards for recommendation by the G.O.C. have been tightened up. Not only does the officer have to pass the examination but he has to be recommended by his G.O.C. by means of a report on his capabilities, and latterly those standards for reporting have been made fairly tight so that the chance of somebody getting to the selection stage who is not really up to it is now fairly small.

196. Is the introduction of the S.Q. category due to the fact that there are

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not enough Staff College men available for staff appointments?—(Lt.-General *Gordon Lennox*.) I think it is due to two things and that is one of them; we have been running short from time to time. The other, I think, is because like all, or like many, examination results for such a profession you do get disparities of chance and quite often very competent people make a mistake over one paper; they may have been less well situated to take the examination; they may have been in Aden or Singapore. So one recognises certain disparities of chance by the exigencies of the service. That is the other reason.

197. You are not influenced by views on the 11-plus, are you?—Not at all. I have no views on the 11-plus.

198. This is your independent experience, that examinations are not by themselves alone enough?—Examinations by themselves of course are only part of the machine of choosing a staff officer, though a very necessary part in my view. But I think there is no factor in this except to make the best use we can of officers who have ability to give to the service.

199. Can you tell us about the method of selecting the foreign officers?—There is a committee, is there not? (Mr. *Whittuck*.) I think the only part we play in it really is in determining in consultation with the other Government departments concerned which countries can have a given number of vacancies each year. I think, having allotted a vacancy to a particular country, we would normally leave it to that country to nominate its officer to take the course.

Mr. *Harold Gurden*.

200. How many are allotted for foreign students?—Normally about 45 Commonwealth and foreign together.

201. Commonwealth and Colonial students?—That 45 is really all officers outside the United Kingdom; they are largely Commonwealth but a certain number are foreigners.

202. For each 47 weeks?—For each course, yes.

Chairman.

203. Is there a reciprocal arrangement for our people to go to foreign colleges?—For a number of countries there is,

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yes. For example, several of the Commonwealth countries have their own staff college to which we send British Army officers in exchange, and a few foreign countries as well. But of course there are also countries who have not really got anything of the same standard as our Staff College and there would not be a reciprocal arrangement with them.

Mr. *A. V. Hilton*.

204. I note the course is one of six terms, yet the foreign students leave at the end of the fifth term. Why should they not stay and complete the six terms?—(Lt.-General *Gordon Lennox*.) For security reasons.

Chairman.

205. * * * * *

206. What is the fee charged to a foreign officer?—(Mr. *Whittuck*.) It is of the order of £600.

Mr. *Harold Gurden*.

207. And for Colonials?—For any non-U.K. student. You asked a similar question in regard to Sandhurst. The figure is a combination of the cost of maintaining him and of the extra cost of instructing him as compared with what we would provide for our own personnel.

Chairman.

208. Are the fees similar where we take advantage of facilities in other countries?—If we have a reciprocal arrangement, then we do not charge either way.

209. A knock for knock agreement?—Yes. Each country pays the pay and allowances of its officer but the host country then provides the instruction.

Mr. *Harold Gurden*.

210. Are there very few of the reciprocal arrangements? I assume you would have one perhaps with the United States, but this is not a very widespread thing, is it?—We have it with, I should think, about ten countries, mostly Commonwealth countries and the United States.

Sir *Godfrey Nicholson*.

211. When we send British officers to other countries, this is purely as students, not as instructors, I take it?—As students, yes.

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212. Do we lend any instructors?—
(Lt.-General *Gordon Lennox*.) Yes, we do. We have the odd one in Australia and in America, and I think in Canada. I have forgotten, but we could easily find out.

213. You do not send any to France, to St. Cyr?—Curiously enough the officer responsible for staff officer training in France is coming over this summer and I know he has something of this kind in mind, but it may be confined to visits, I think.

214. Am I not right in thinking that we use St. Cyr, do we not, and Saumur?—We have an officer at St. Cyr.

215. But not at the staff college?—I think not. I do not think we have got anybody in the *École de Guerre*. I could find out for you.

Mr. A. V. Hilton.

216. How does the number of students compare for the different services? I see you have Navy, Marines and the Air Force; how do they compare with those from the Army?—(Mr. *Whittuck*.) Do you mean how many students do we take?

217. Yes, from each of the services?—We take three from the Navy, four from the Royal Marines and three from the Royal Air Force, a year.

Sir *Godfrey Nicholson*.

218. How does that correspond to the R.A.F. Staff College?—(Lt.-General *Gordon Lennox*.) They have offered similar facilities, almost man for man. We send officers to Greenwich and to Bracknell.

Sir *John Langford-Holt*.

219. How do these foreign students come to be selected—on the basis that they are some future use to their own country afterwards or some future use to us through alliances, or what?—One hopes it is the former and perhaps the latter. But there is a meeting every October in the War Office at which the Foreign Office, the Commonwealth Relations Office and the Colonial Office are represented. There are 48 vacancies in all and they decide amongst themselves who should have them.

Sir *Godfrey Nicholson*.

220. And they receive exactly the same sort of confidential reports, they are put through mill in the same ruthless manner?—Subject to security matters. We are usually asked to report on them in a similar manner. What they are keen about is that they should get their p.s.c. and we do our best to conform to their wishes. Sometimes it is not so easy.

221. When you say 'some security matters' does it mean some aspect of defence policy concealed from them automatically?—Yes; this was raised just now. They peel off so, as they are not there the same length of time, it is not always very easy to be entirely equitable in comparison.

Mr. A. V. Hilton.

222. And they all take an identical course irrespective of the service from which they come or the country?—Yes. (Mr. *Whittuck*.) Subject only to this reservation.

Mr. *Harold Gurden*.

223. Do you find this high proportion of something over 25 per cent. is inconvenient? Does it not seem an excessive proportion?—(Lt.-General *Gordon Lennox*.) You mean foreign and Commonwealth students? No, I think it adds considerably to the value of the course. I think it is about as many as we want but it is not over-diluted to that extent.

224. Are we to assume that we have the same proportion supplied to those countries where we have reciprocal arrangements?—You mean that we should supply the same amount or ratio of overseas students?

225. Yes?—No, I think we have more here than, for instance, Australia would, because we live in a different part of the world. But I think they have their Australian officers and British officers, and we have of course a much bigger conglomeration.

Sir *Godfrey Nicholson*.

226. I may have missed this, but the Commonwealth countries are Australia, New Zealand and Canada?—All Commonwealth countries attend the Staff College.

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227. * * * * *

228. Again I may have missed this. How many Africans are there?—(Mr. *Whittuck*.) I think we would have to tot it up. There is no fixed number assigned to the African countries; they would simply compete with other Commonwealth and foreign countries each year for the 45 vacancies and it would depend very much what bids were received in a particular year. But we could, if you wanted, give you the actual figures for some of those.

229. If it is not security, I should be very much interested to know how many Indians, Pakistanis, Africans and so on, go?—(Lt.-General *Gordon Lennox*.) There are two Pakistanis; Indians dropped to one, it was two; New Zealand is one; Rhodesia is nothing this time; Sierra Leone, one. This is just giving you an idea. West India, one; Ethiopia, two; Ghana, three; and Nigeria, three; Kenya, two.

230. Do we send to the Indian Staff College?—We do, yes. We were about to send one this time when other events in India prevented it; it was closed down during the Chinese trouble.

231. Is there a Pakistan Staff College?—At Quetta, yes.

232. Do you send there?—Yes, we do.

Sir John Langford-Holt.

223. Could you tell me a little bit more about these foreign students? From which foreign countries do they basically come? I presume they are NATO countries. Are there any foreign countries from which students come which one might consider on the face of it unusual?—Yes, indeed there are. (Mr. *Whittuck*.) I think, if the Sub-Committee is interested, we could give you a list of all the countries which sent students over the last five years, with the numbers.

Chairman.] Yes, please.

Sir John Langford-Holt.

234. Earlier you said that an officer would have to pass the Staff College if he wished to pursue his profession. Does that mean that the absence of p.s.c. after your name is an effective bar to promotion or not?—(Lt.-General *Gordon*

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Lennox.) No, it is not. I said he would wish to because it obviously is an aid, which is not quite the same thing.

235. As to the cost of the other services, i.e. the Naval officers, the Royal Marine officers and the Royal Air Force officers, what do they pay? Is it exactly the same as foreign students pay? Is it completely defrayed by their own department?—(Mr. *Whittuck*.) Money does not pass because there are reciprocal arrangements. They send officers to our Staff College, and we send officers to theirs.

Sir Godfrey Nicholson.

236. This is a rather broad and vague question. Do you feel the existence of a Staff College tends to compartmentalise the services, or is every effort made during the course of study to see that there is integration of thought with the two other services?—(Lt.-General *Gordon Lennox*.) The latter is the case in fact, and more so recently than in the past years. At the moment we are under obligation, all three Staff Colleges, to do 20 per cent. of our respective syllabuses on inter-service matters and we do in fact physically join up with Bracknell and Greenwich for exercises and discussions.

Chairman.

237. You said 20 per cent., the Ministry of Defence said 25 per cent. of the training was comparable in the three services. Is that a difference of definition or is it a substantial difference?—I think you would get a certain amount of differing opinion between the services here because the requirement is different. May I answer the question in an indirect way? There is certainly 80 per cent. of time at the Army Staff College which is required for purely Army professional training.

Sir Godfrey Nicholson.

238. Is combined operations taken as a separate study completely?—Not now. It used to be. The whole of the study of joint techniques and procedures is the responsibility of the Ministry of Defence who have appointed an Air Vice-Marshal with great experience in service matters to collate and to put into pamphlets all the knowledge and experience that has been gathered over the

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past few years and also to take a leading line on a particular committee of the Ministry of Defence which deals with joint service matters and also in running certain establishments which are of joint service interest.

239. That would cover combined operations both with the Navy and with the Royal Air Force?—It would indeed, yes.

Chairman.

239A. What is the machinery for continually keeping the courses in the different colleges on a par with each other?—The most practical and useful piece of machinery is a committee of the Assistant Commandants of Staff Colleges who meet, I think, once a quarter and try to collate all their particular interests, both for the joint study, exercises and indeed I think certain other administrative matters.

240. And the students take part in common exercises, do they?—Of the three colleges?

241. Yes.—Yes, they do indeed.

242. All the students?—Yes.

243. This committee is only Assistant Commandants?—It is under the authority of the Commandants but they are the working chaps.

244. There is not a representative of the Ministry of Defence on it?—No, I would say not on the committee. I think that they are guided by their own Directors-General of Training in each case.

245. Could you explain how that works, or how some new change will be made if you wish to initiate it?—Complementary of course to what is happening in the Ministry of Defence, now certain care has to be taken by, for instance, the three Directors-General of Training. They are all called different things, actually, and their responsibilities are different; there is my own, and the Naval D.G.T. and the Airman is called D.G.G.T. We have a certain field of common interest, of which the Staff Colleges form part. We have a set-up under the authority of the Chiefs of Staff, an inter-service training committee, which meets from time to time and it is designed to study and to take account of and get authority for changes in the direction of

staff training amongst other things—indeed, almost any form of training. That is quite new and it has met twice, I think, so far. That would really be the link between the Assistant Commandants' Committee and the Chiefs of Staff.

Sir Godfrey Nicholson.

246. The I.D.C. would come under a totally different sort of heading?—It comes under the Ministry of Defence entirely.

247. That would not be regarded as interlocking at all with Camberley?—Not at all. (Mr. Whittuck.) It is a different stage.

Mr. Harold Gurden.

248. Going on to something else, could you tell me the average age of students at Camberley as compared with those at other colleges?—(Lt.-General Gordon Lennox.) They have to go there in any year during which their 31st, 32nd or 33rd birthdays fall. So it is 31 to 34, really.

249. Does a similar sort of rule apply to other colleges?—It is on an age structure, yes.

Sir John Longford-Holt.

250. Have they all reached the equivalent rank in each of the services or is there a disparity?—There is a slight disparity: either Major, Captain or the equivalent in the other services. (Mr. Whittuck.) I think in the Air Force the typical Staff College student would probably be a Squadron Leader. I am not sure they are not a few years older at Air Force Staff Colleges, but we are not expert on that, of course.

Chairman.

251. To go back for a moment to this new committee for inter-service training you were telling us about, does this committee initiate the changes in training?—(Lt.-General Gordon Lennox.) It can recommend, it is quite true. It is a permanent committee without being in its full sense a standing committee. It does not regularly meet every so often and it is really there to study questions which maybe come to it from below or indeed from above, and the authority to which it actually works, the senior committee, is the P.P.O.'s committee. But of course it would also take problems to

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the Chiefs of Staff Committees. It has hardly got going yet ; there is quite a lot for it to do.

252. At the end of the course what qualification do the students have? Do they pass an examination?—They do many tests during their time at Camberley. There is no passing-out examination as such. They are graded according to certain procedures. They get p.s.c. unless they actually fail, which is very rare.

253. Do the foreign students get a report or a grading?—They get a very full report which they do not see. Every student gets a very full report and he gets his p.s.c. and he gets his grading which he does see.

Sir Godfrey Nicholson.

254. Do you still provide horses for them?—No. I wish we did.

Chairman.

255. Are the numbers at the college fixed by the building or by the staff appointments available?—Well, of course it is fixed by the number of staff appointments required. It does not arise at the moment, it threatened to a short time ago, but I think now there is not an immediate building problem which is an anxiety.

256. When you say "it does not arise now", you mean at one time it looked as if you were going to overflow your building?—Exactly. Then there are other methods of appointment: the S.Q. I mentioned ; there is another list called the Lt.-Colonel's list and of course this all hinges on the actual staff officer requirements, so we are still all right as far as accommodation goes.

257. What then is your top level now? You are taking about 170 now?—(Mr. Whittuck.) 180 I think is the physical capacity. If I could just add to what the D.G.M.T. has said, I think the basic factor is you want to have enough officers to fill all your staff posts at grade II and grade I level. You really want twice as many officers available as there are posts of that nature because they will do other jobs as well. What you really want to do is to replace each year the number of officers who pass out of that pool either by promotion or retirement. That really determines your num-

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bers you want over a period, and fortunately that is within at the moment, and looks like being in the future, the physical capacity of the Staff College.

258. What is the lowest number you have had in since the war?—About 170.

Sir Godfrey Nicholson.

259. After qualifying am I right in thinking that the first appointment would be a junior staff appointment and then they would possibly go back to the unit for a bit?—(Lt.-General Gordon Lennox.) That is the sort of cycle, yes.

260. It would be a definite rule, would it ; a man must attend his unit for a certain time? How long do you consider that time to be?—There are rules about it which are the Military Secretary's rules, so I find it a little difficult to be precise about it. But I would think that on average (this is subject to correction) an officer would do two staff appointments at grade II level between the time he was at the Staff College and the time that he was due for command. It depends on his age exactly what these other occupations would be. He might leave the Staff College at just 32 and he might leave it at just 34.

261. Is it thought desirable that as many officers as possible have a period in the War Office?—No. (Mr. Whittuck.) The officers concerned might not think so! (Lt.-General Gordon Lennox.) I do not think that is so. Some escape it for many years.

262. Would it not teach them the facts of life?—Yes, it would do—certain facts. As a matter of fact there is a new habit which is a very good one of sending young officers, who have probably been Adjutants, there.

263. Not qualified?—No—to give them experience of staff work there and, as you say, to see the facts of life.

264. Before they have been to the Staff College?—Yes, probably before they have sat the examination.

265. Is the benefit derived out of that mainly on the War Office or the young officers?—You might well ask. There are one or two forthright young officers whom the War Office enjoy having around. (Mr. Whittuck.) I think there are a number of posts which are correctly graded as Captain and which

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are therefore filled by officers of that rank who, in the nature of things, probably would not have got to Staff College. (Lt.-General Gordon Lennox.) It does them a lot of good going to the Staff College at a moment when they have probably had a very hard three years as Adjutant and you want to take them away from their Regiment anyhow.

Chairman.

266. When we were talking about Sandhurst last time you undertook to give us a breakdown of the establishment as between teaching and general service people who were not actually taking part in teaching work. Would it be logical for us to have a similar breakdown for Camberley?—(Mr. Whittuck.) I am sure Mr. Starling would be prepared to do that for you. (Mr. Starling.) I had not appreciated that we were committed last week to such a breakdown in fact, but I will get these figures out for you.

267. It is question 166: "Is it possible to break down these figures as between training, maintenance, building and other things? (Lt.-General Gordon Lennox.) Indeed it would?"—(Mr. Whittuck.) We are in the Sub-Committee's hands of course, but I must say I thought the very long statement which Mr. Starling made in No. 167 possibly gave you the information you wanted. But if that is not so, we will be glad to supply it.

268. We will have another look at that?—What I would like to suggest is that Mr. Starling should now make a similar statement in respect of Camberley. (Mr. Starling.) We last inspected the establishment at Camberley in 1959 as a whole. The result of that inspection produced a recommendation which reduced the military staff by 4 and the civilian staff by 16. Since then we have examined in detail only the instructional staff. This took place a year ago. It had been represented to us by D.G.M.T.'s department that there was considerable pressure on members of the directing staff and we were asked to examine the work load and to make recommendations. We found that though the aim of the Staff College is simply to train selected officers for war and for command, in fact this is more efficiently

performed if the directing staff are in a position to keep abreast of developments in tactics, weapons and equipment. This means that they must in the course of their time as directing staff make liaison visits to other establishments, attend divisional and arms directors' study periods, attend conferences, and read papers produced by the arms schools and other periodicals. This work is in addition to their instructing duty and to activities on which they are engaged for two of the six terms in the year, activities designed to take them away from instruction and designed to give them time to correct précis, to re-write demonstrations, to re-write exercises. The hours of work were running between 55 and 60 hours a week, and on these other activities something of the order of 50 hours a week. It seemed therefore that there was a requirement for additional staff and in consequence we did add three staff officers of the rank of Major to provide assistance in the co-ordination of information in the tactical field, in the field of research and development, and in the general progress of work field. So that you will see from the memorandum we have submitted that in 1963-64 the number of officers has increased by three. In fact the increase is at Major level. The appearance of an additional Lieut.-Colonel is simply due to a Quarter-Master's time-promotion from Major to Lieut.-Colonel. There has been a slight reduction in the number of other civilians, a reduction caused by the transfer to the Ministry of Public Building and Works of groundsmen employed at the college now that the Ministry have responsibility for the fabric. The breakdown of the other civilian strength of 188—here again we are concerned mainly with the administrative backing to the college, and in this particular field there are close on 30 men employed as gatemen, porters, messengers; there are about 20 employed on the estate, apart from the maintenance of the building and ground as such; there are about 26 employed in the mess and 70 batmen for directing staff and for the students, which accounts for 154 of the 188 of the civilians. You will notice that instructional staff are entirely military; there are no civilian instructors.

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269. Is that a considered matter of judgment that there is no work civilians could do, or just chance that the best people happen to be military?—(Lt.-General *Gordon Lennox*.) Most of the training is purely professional, and another major factor is that there are a great number of outside very high level lecturers who come and cover what might be considered the normal academic field.

270. You mean people who are contracted to do lectures or merely guest lecturers?—Guest lecturers. There is a great number of them.

271. I was thinking of military history, for example. I can see the military part of it might be appropriate for officers but would not the historical part be appropriate for civilians?—For certain aspects of military history I know they do in fact borrow the odd expert from Sandhurst. There is one very well known character there who helps them in military history; he is a very well known historian. But I do not believe the incidence of military history at the Staff College would warrant the employment of what inevitably would have to be a very high powered principal lecturer.

272. What about the other services; do you have people coming from the other services?—Indeed. I think they have as wide a range of individuals as it is possible to think of, including lecturers from our own Shrivenham.

273. What is the normal tour of duty?—Of an officer at the Staff College?

274. Yes?—Normally I would say 2½ years.

Sir Godfrey Nicholson.

275. I have always felt that the danger of any professional training or instruction in anything is that your basic data, the framework in which you place your thinking, may become out of date. Are steps taken to see that the training in military thinking given at Staff College is continually in contact with developments of military thought all over the world? There must, after all, surely be certain basic data. Are they continually being questioned or does it become rather narrow and in a groove?—I hope, Sir, that we do not fall behind

seriously. Of course, any education establishment has to be geared to the teaching of a particular doctrine or a particular technique and procedures on a set pattern or of course you get nowhere, whether it is classics or whether it is staff duties in the Army. Therefore one might think that any staff college was marginally behind the very latest procedures of, for instance, the modern Army because they are practising it the whole time. But I believe there is a lot of contact between our three services and between foreign services on matters of doctrine; and, as we all know, they are difficult enough to resolve in the present context of nuclear and other horrors. The Director of Joint Warfare has the entrée to the Staff College which he constantly uses to make certain that the inter-service aspect of training there and at Greenwich and Cranwell are according to the most recently evolved techniques. He has the right to go there and listen to the instruction that goes on; that is on a joint service basis. On the higher matters of the higher direction of war, of course, that is not really the function of the Staff College.

276. May I give you a concrete example? I am told that before the war it was laid down at the Staff College that it was pretty safe to assume the modern Army could not retreat or advance more than 10 miles in a day. It was always more or less laid down that the loss of the Channel ports would be absolutely fatal to this country. Events disproved both these basic theses?—I was at the Staff College at the beginning of the war—I went there in January, 1940—and the Commandant of the day, who was an officer of great experience, before we left in April to go to France more or less told us exactly what was going to happen. He was hardly wrong at all. It was very far-seeing of him and it helped us a very great deal. That was just at the beginning of the war. Nowadays I hope that we are not too doctrinaire about anything. I think our friends from Shrivenham help to jolt us out of any too dogmatic theories on warfare. (Mr. *Whittuck*.) If I might mention a couple of points about the directing staff that bear on this, one is the directing staff spend on average a third of their time not in directing studies of the students but in keeping exercises

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and demonstrations up to date, for which purpose they have to get in touch with the people actually doing the things. Secondly, the fact that they change about every 2½ years means that you are bringing in a constant stream of people who have just come from operational duties and are therefore bang up to date. Those matters, I think, should prevent the Staff College from becoming too stereotyped in its approach.

Sir John Langford-Holt.

277. If a new weapon makes its appearance through intelligence sources in another country, how does the counter-acting of that weapon come through the machine to the teaching of the Staff College?—(Lt.-General Gordon Lennox.) It comes through me. The first thing that appears is a treatise from the Director of Military Intelligence on this matter. The next thing that happens is a counter-blast on the training aspect goes out from my department. That usually takes a longish time because, for instance, on C.W. there is a terrible problem of training—biological warfare—so it takes time. You get an Overseas Command saying, “Tell us what to do about this. We have got to get down to training”, and my office struggle to get out a sensible directive on the training against that type of threat. Then of course the syllabuses at the Staff College have both the D.M.I.’s assessment and also my staff’s direction on training. Sometimes it is applicable to staff training and sometimes it is not; it nearly always has certain staff applications but it does not necessarily very seriously alter the syllabuses at the Staff College because a lot of that particular subject is very largely individual training.

Mr. Harold Gurden.

278. Could you refresh my memory on the question of figures? Am I right in thinking that you said we charge for these foreign students about a third of the actual cost at Camberley; and how does that compare with the previous figures we had on the charges made to foreign students?—(Mr. Whittuck.) In each case the basis of charge is what it costs you to maintain the cadet or officer, and what extra expense you are put to in providing perhaps additional instructors or other equipment, over and above what you provide for your own students.

It works out in the case of the Staff College that you need to charge a little over £600 a year which in practice is, I think, about one-third of the assessed cost for our own students. At Sandhurst it turned out, I think, that the proportion was rather higher than one-third—it just worked out that way.

279. I could not reconcile the figures.—I think it would be difficult to do so without having all the detailed calculations in front of you.

Chairman.

280. Are the changes of the cost of personnel due to changes in emoluments, rates of pay?—Almost entirely, I think, because the numbers of staff at Camberley have varied very little over the three years for which we have given figures.

281. For example, if you take the civilian non-industrials, there was a jump of £8,000 between the first two years and then £2,500 between the last two years. Is that regrading?—I think it would be almost entirely changes in their rates of pay. That must be so, because the numbers of civilians have been very nearly constant over these three years.

282. Then is the building and works figure due to particular building?—The reason for the apparently big jump in 1963-64 is that in this year there has been a programme of completely re-decorating the married quarters.

283. Is that not normally done under a phased maintenance programme for every year?—I think it varies. Probably, in this case it was convenient to do it all in one year.

Mr. Harold Gurden.

284. May I clear up another point? Does paragraph 6 include everything such as food and rations and the like? Under which head would rations come?—The figure shown for service personnel would certainly include rations.

Chairman.

285. Rations of students or rations of staff?—These are rations of staff.

Chairman.] Where would rations of students appear?

Sir Godfrey Nicholson.

286. That would come under pay, would it not?—Yes. These figures

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do not include the emoluments of the students. These are the figures for the staff. So that where, for example, you see a figure of £82,150 for the officers, that is for all the officers on the staff, a figure covering their pay and allowances, rations, employers' contributions to National Insurance, clothing, laundry, medical stores, welfare allowances.

287. The assumption being the student would have to draw those anyhow, whatever his posting was?—That is so. We would have to pay the officer whether at Staff College or doing something else.

Sir John Langford-Holt.

288. In answer to an earlier question I understood that considerable numbers of the staff had been transferred to the Ministry of Public Building and Works. How does that tie up with the fairly large increase to which you yourself have drawn attention in the buildings and works item? Do not the Ministry of Public Building and Works do some of this work?—They do indeed. I think I am right in saying that for 1963-64 this figure would be a charge on the Ministry of Public Building and Works and not on the War Office. (Mr. Starling.) The number of staff transferred to the Ministry of Public Building and Works in the figures you have before you was only 6.

289. People out in the gardens and that sort of thing, I seem to remember?—Yes.

Chairman.

290. Does the maintenance figure include everything or is that maintenance done by the Ministry of Public Building and Works as well?—(Mr. Whittuck.) The maintenance is done by them as well, yes. They now do all the works.

291. Is this £18,400 merely part of a bigger sum which happens to be done by the Army?—That is a true figure for the works maintenance at Camberley which in that year was the responsibility of the Ministry of Public Building and Works.

292. What about building? For example, does Alanbrooke Hall, which I believe has been discussed by the P.A.C., come in this?—No, this does not include capital works. This is only maintenance.

Sir John Langford-Holt.

293. Would Alanbrooke Hall make a difference to this figure in subsequent years—perhaps not in its first year?—It might be in fact in a downward direction because it probably replaced an older building which would have needed more maintenance.

Chairman.

294. Could you explain to us the sharing of responsibility for the college between the War Office and the Command and the Commandant and the people at the college itself?—(Lt.-General Gordon Lennox.) Do you mean its administration?

295. Yes, the taking of decisions?—I think that the Aldershot District is in the position of being the landlord for the Staff College and for Sandhurst. (Mr. Whittuck.) I think the short answer possibly is that the training policy is laid down by the War Office, by the D.G.M.T. here. The detailed administration, of course, is entrusted to the Commandant. But on administrative matters he would report up through Aldershot District and Southern Command.

296. Then does the Inspectorate of Establishments come in—we are told they made this inspection—at the request of the other department or do they go in on their own and make assessments?—(Mr. Starling.) The inspection we carried out in 1962 was at the request of the Director-General of Military Training; it was our decision to investigate establishment. I determine what establishments should be inspected from time to time. When requests for additional staff are made and examined by the Inspectorate, then we do these at the bidding of the sponsor, in this instance the D.G.M.T.

297. Have there been increases in inspection since, I think it was, the Estimates Committee recommended certain increases?—Yes, there have.

298. That has been carried out?—Yes.

Sir Godfrey Nicholson.

299. Are any sporting activities helped by special grants—recreational activities?—(Lt.-General Gordon Lennox.) The Army Sports Board of course support sport, though not field sports, of every

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sort in most establishments as a rule. You meant field sport, did you?

300. I did?—The answer to that is that there are certain unofficial bodies like the Army Ski-ing Club and the Sailing Club. I am sure I am right in saying there is no public money given to any field sports.

Mr. *Harold Gurden*.

301. When did you cease to have horses then?—Before the war. I do not know exactly when. When we mechanised, I suppose.

Sir *Godfrey Nicholson*.

302. Efforts are made to see that even a staff officer undertakes physical activity?—Indeed, yes.

Chairman.

303. I think we might just spend a quarter of an hour possibly on Shrivenham. That is in the larger volume of reports, on page 8. Here we seem to have a clear distinction between a degree course which you say is purely academic and other courses for more senior officers. Are they two quite separate departments?—Quite, yes.

304. Would you give us the division between the two?—(Mr. *Whittuck*.) The numbers?

305. The numbers taking each course?—We aim to enter 70 a year on the young officers' degree course. They will be normally officers who have recently passed through Sandhurst but may have had a spell of regimental duty in the meantime. The technical staff course is for officers of about the same sort of seniority as those who go to the Staff College at Camberley, and we aim there to enter, I think, 65 a year, of whom a small proportion, those who are already well-qualified in scientific subjects, may only do an 18 month course but the balance will do the full 2½ years.

306. What decides whether you send an officer to Shrivenham or to Oxford or Cambridge?—These are the young officers?

307. Yes?—(Lt.-General *Gordon Lennox*.) For degree training. In the case of Oxford and Cambridge we have an agreement with them—indeed, to which the Treasury have to agree—that we may send 20 to Cambridge a year, 8

to Oxford, and 70 to Shrivenham. Other vacancies are being hoped for in the near future at other universities but I need not go into that. The Cambridge cadets reach, as I think we said last time, their mechanical tripos there, and they are generally intellectually the best. The others who qualify for Shrivenham, according to the examination which is carried out at Sandhurst, are up to the number of 70 which is both the requirement and the capacity at Shrivenham; it is geared to that.

Sir *Godfrey Nicholson*.

308. Are they all arms?—All arms, yes. That is the short answer. Naturally there are more of them than of the others. But curiously enough the two First Class Honours obtained were both infantry soldiers. It is very much an amalgam of arms in the services.

Chairman.

309. Would it be cheaper or more expensive to send young students to London University to take a degree or to run Shrivenham and examine them externally?—I can think of a lot of disadvantages to that. But on the straight question of finance I think Mr. *Whittuck* had better answer that. (Mr. *Whittuck*.) I think it would be bound to be cheaper, if only because Shrivenham is of course fairly small in relation to London University or any one of its colleges. But there are obviously a good many arguments as to why it would not suit us.

310. Such as what?—(Lt.-General *Gordon Lennox*.) In any university the entry has to be very competitive. Entry here is not competitive, it is by recommendation. The result of that (which we face frankly) is that quite a high proportion do not get degrees.

311. Of those?—Of the ones we send to Shrivenham and a much higher proportion of the ones we send to London University. Some of course would. They have to go there really to benefit the service at a certain age, and now all regiments and arms of the services are insisting on them going to regimental duty before they go to Shrivenham, which is right. They mature and it is advantageous. They do much better when they have been out in the world a bit, as indeed the

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older universities are finding too. Another factor in this is that a great many other things have to be run through them. If you have to maintain the place anyhow, it would be a pity to forgo the greater convenience of sending your young officers there.

312. Who are the civilian students?—(Mr. *Whittuck*.) There are a number who are given what are called Shrivenham scholarships which entitle them to do the same course, and they are under a moral but not a legal obligation to try and enter the Scientific Civil Service at the end of the course. Recently also we have been offering a small number of places to the various local authorities for students whom they are prepared to finance through Shrivenham.

Sir Godfrey Nicholson.

313. For what purposes?—I think it helps the Army students to have a small number of civilians there.

314. Would they go into Government service afterwards?—Well, we would be glad to see them do so but they are not under any obligation.

Chairman.

315. Have they been taking up these places?—This is the first year in which they are being offered. I think applications are being considered during this year and those selected would go next year.

316. What sort of figure is it?—Quite small, I think it is about 10 a year.

317. And the numbers in the Scientific Civil Service?—I think that is about 20 a year. (Lt.-General *Gordon Lennox*.) Fifteen.

Sir Godfrey Nicholson.

318. They would be suitable for Farnborough or something like that?—(Mr. *Whittuck*.) Yes, the Scientific Civil Service. Farnborough would be an example. (Lt.-General *Gordon Lennox*.) The odd one or two takes a commission, too.

Sir John Langford-Holt.

319. Is there any interchange between the services at Shrivenham? I mean, you have got an Ammunition Technical Officers' Course of 6 months which seems to coincide almost exactly with

the R.A.F. Armaments' Course and probably the Naval Gunnery Course. Do you have any interchange of students at that point or not?—I think the answer is no. On the other hand, I believe in fact one or two of the other services do send one or two people to this particular course you mention, but not in reverse, I think.

Chairman.

320. What is the present position; have you in fact got unused space in which you could extend either to take more from the services or more civilians than at present capacity?—I think we could say that the capacity of Shrivenham is supposed to be 440. It is now 380 or something like that. I believe it could be squeezed into taking something just under 500. That is the sort of measure, without major rebuilding.

Sir Godfrey Nicholson.

321. Is it the object that every student who passes through Shrivenham shall specialise on the scientific and mechanical side for the rest of his military career?—No, it is not.

322. He might become a regimental officer or go to Camberley?—Absolutely. If in fact he gets a degree and he then subsequently gets recommended or qualifies for Staff College he will probably, and under a system which is a slight variation of the old one which is being worked on, go to Shrivenham for one year to fit himself for a technical staff appointment, then go to Camberley for one year immediately after that. But it is not promulgated yet.

323. To get the best of both worlds?—We still have these technical staff appointments which we have to fill. In fact there are something in the nature of 220 at second grade level to be filled, and something like 70 to 90 at first grade level.

324. Would the majority normally go to the technical corps, or would they become cavalymen?—The majority, I would think, would be Sappers, R.E.M.E.s, Signals.

Chairman.

325. In answer to a further question I think I gathered what you said was that you could not extend without building if you took more than 500?—(Mr. *Whittuck*.) About 500, yes.

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326. You could presumably take more as far as staff is concerned, from the figures we have of staff here?—(Lt.-General *Gordon Lennox*.) I would not think that would be so. (Mr. *Whittuck*.) I am sure for a student population of over 500 we would certainly need more staff.

327. Is there room for building there?—I am sure there is room, yes. (Lt.-General *Gordon Lennox*.) There is, I am certain of that.

328. It would appear that with a staff of, taking it just at random, 177 scientific and professional people teaching 386 students, there was room for expansion?—(Mr. *Starling*.) It is not entirely teaching. There is a great deal of research

done within that figure. The number of instructional staff is something like 75 rather than 177. One must include in those figures the demonstrators, scientific assistants, experimental officers, who assist in research work and in the practical work within the classrooms and laboratories.

Sir John Langford-Holt.

329. What are the sizes of the laboratories? How much space have you got there?—(Lt.-General *Gordon Lennox*.) They are very well found, I can tell you.

330. They have plenty of room, in fact?—Yes.

Chairman.] Thank you very much, Gentlemen.

WEDNESDAY, 29TH JANUARY, 1964.

[*The Sub-Committee met at The Royal Military Academy, Sandhurst.*]

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Mr. W. A. Wilkins.

Sir John Langford-Holt.

Mr. John Woollam.

Major-General H. J. MOGG, C.B.E., D.S.O., Commandant, Brigadier A. J. DEANE-DRUMMOND, D.S.O., M.C., Assistant Commandant, Mr. K. INGHAM, O.B.E., M.C., M.A., D. Phil., F.I.A.L., Director of Studies, Lieutenant-Colonel J. R. GORDON, GSO 1 (Coord), and Lieutenant-Colonel P. R. B. MITCHELL, AA & QMG, and Mr. F. S. H. PHILLIPS, Deputy Accountant, The Royal Military Academy, Sandhurst, called in and examined.

Chairman.

331. If we could begin with the buildings we have seen, would you say in general the buildings were satisfactory to meet the needs of the College?—(Major-General *Mogg*.) I would say that the actual buildings, that is the cadet accommodation, where it is not Nissen huts, is reasonably satisfactory. But, as you saw yourselves going round today, there is a tremendous amount of last war accommodation where we have cadets doubling up.

Sir John Langford-Holt.

332. Last war?—World War II accommodation, where we have cadets

doubling up, where we have halls of study and instruction being given in thoroughly inadequate damp and depressing conditions. Therefore there is a scheme to rebuild the Academy to fit in with our requirements which would be perhaps to produce another college so that we could have three separate colleges. At the moment, as you know, we have one college in Old College, and two in the new buildings which forces cadets to sleep in Nissen huts. So we want one completely new college. The next thing is, as going round you probably saw, there is no place where the cadets can be got together either to be addressed by the Commandant or outside lecturers,

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other than a most inadequate drill hall which we passed, and there is an urgent need for a reasonable assembly hall with good acoustics for lectures. There are details of the future building which I can pass on to you if you like or we can get my A/Q to explain to you now with the diagram over there, if you would like it. But in general terms those are the reasons behind the general tidying up of this place to fit in with the importance of it as a training establishment.

Chairman.

333. What stage have the plans reached?—So far they have been approved by the Army Council and they are with the Treasury at the moment.

334. Do you think that they will result in economies in maintenance and in teaching?—Very much so; there is no doubt about that at all. At the moment we have all these old buildings which is tremendously expensive. (Lieut.-Colonel *Mitchell*.) That is so. Last year maintenance was £108,000 and this would be reduced considerably with new buildings which would be economic. (Major-General *Mogg*.) I would think also it could be economic perhaps in staff because the whole idea is to concentrate our academic teaching and our military teaching all in central buildings as opposed to their being spread all over the area as they are at the moment. So there would be economy in that way.

Mr. Harold Gurden.

335. Cleaning staff and the like?—Yes.

Chairman.

336. If we could come to the entry, you gave us a very interesting description of the entry. Have you any say at all in who comes here?—No. Naturally we are vitally interested in who comes here but the selection is done entirely under the auspices of the War Office and the Regular Commissions Board at Westbury.

Mr. W. A. Wilkins.

337. There is no representation from here?—None at all, except there is very close contact at all times with General Foster at Westbury and myself and also all the staff here, and they come up here many times to see what we are doing here. We go down and

see them and I myself personally have sat in on the Westbury Examination Board and I have gone through the process of selection actually with the cadets who have been examined in a squad and I am highly satisfied that Westbury is producing the right answer for us here at Sandhurst.

Mr. Harold Gurden.

338. Has there been any criticism at all over the past years?—None whatsoever, as far as I am concerned.

339. Could I ask a question about the qualifications for entry? I understood quite clearly about the home students but what about these from overseas? What qualifications do they need?—This is a little tricky to answer because again here, as you can imagine, certain politics come into this because of the countries who are applying for vacancies; again it is out of my hands and it is done by the Commonwealth Relations Office and the Foreign Office. If a country is particularly anxious to send representatives and it is good for the country, we would thoroughly support it. We hope—I will ask our Director of Studies to support me in a moment—there is certainly a fairly reasonably high standard of English, otherwise of course they are going to be a considerable liability, so that is the main factor. A lot of them come over here and do in fact go to crammers or even go to Beaconsfield and are brought up to a certain standard of education before they come. Some have been to schools in England. In the case of the King of Jordan's nephew, he has been to the Mons Officer Cadet course first and has done a military course there, so some of them are much more highly educated than others. (Mr. *Ingham*.) I think that is true. There is a problem of the English of overseas cadets and that I would have said was their main trouble. Academically they are not particularly weak but many of them find difficulty in following lectures adequately. They can maintain a conversation in English but to pursue academic studies in English does appear difficult to some of them, so that some indeed do fall rather below the normal academic standards here.

Chairman.

340. You have got better experience than most people of this problem. How

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does the intake that you get here from Africa compare with those you had in Uganda?—Academically they are of a lower standard but then of course the undergraduates who came to Makerere University College in Uganda were the pick of about 25 million people and therefore ought to be pretty good. (Major-General Mogg.) In general terms I would say that the 14 per cent., which is the figure we have now, is what we can manage. We would rather have it 12 or 10.

341. Could you tell us something about what sort of people the direct entrants from serving soldiers are? You gave us the school background of the direct entry from schools. What sort of background do soldiers have to have?—They vary tremendously, and cover a very broad field. There are those who for some reason or another did not decide to go into the Army until afterwards, some who may perhaps not have acquired the necessary academic standard, those—and there are quite a considerable proportion of these—who come up from the ranks as boys, recommended by their Commanding Officers for commissions, and in general it covers a very broad field.

342. It was not quite clear—do they all go for this intensive education course before coming here?—Only if when they take the Regular Commissions Board at Westbury they are found not to be up to standard academically for this place. But if they have the right officer qualities and leadership qualities and are reasonably intelligent, they can be brought up to the standard by going to Beaconsfield.

343. What sort of proportion are those?—At a guess, 15 per cent.

344. Less than a quarter?—I would think so, yes. (Lieut.-Colonel Gordon.) Was the question with regard to the proportion that come here or go to Beaconsfield?

345. The proportion of those service entrants who go to Beaconsfield?—Can I find that answer out for you? I am not sure.

346. Really what was behind my question about where the service entrants come from was as to how far it is a widening of the catchment area for

recruitment of officers or how far it is really only a back door for the same kind of boys who would come from independent schools?—(Major-General Mogg.) Certainly I would say it is widening considerably, certainly from the time when I was here. I am perhaps an example because I went through the ranks myself and came here to Sandhurst from the ranks. In those days I think we took 15 altogether out of the Army. I think I am right. Now, as you saw on the board, it is 23 per cent. of the cadets here which is really a considerable amount.

347. We were told by the Director of Studies about the link-up with Shrivenham and Oxford and Cambridge, and I think I understood him to say that the demand for places in universities about balances the places you are able to get?—(Mr. Ingham.) I do not quite follow that question.

348. You told us that you are competing for places and that therefore not everyone could get a place but that the number of people whom you could get a grant for from the Treasury was about the same as the number that you could get in on competitive standards?—I think that is about true now, yes, as far as the Arts people are concerned. As far as scientific entrants to Cambridge are concerned we could get very many more into other colleges for scientific subjects if there was not the Royal Military College of Science. We now do just about fill up the Scientific College places for scientific studies.

349. You regard it as your first obligation to fill Shrivenham. . . . We are talking about Shrivenham, are we?—Yes.

350. —rather than to find places for them in other universities?—We are not allowed to. As far as the scientific cadets are concerned we may only send them to Cambridge up to 20 a year and then the rest to the Royal Military College of Science. There is no financial provision for them to go to any other university. (Major-General Mogg.) There is a trend in connection with this and that is that in the new intake, as you saw, the figures are something like 62 per cent. of school and Welbeck entrants with two A levels or more. That is

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a great improvement on the figures over the last two years. They have been gradually going up, so therefore I think if we continue to get as good a lot or an increased academic standard I think the field would be wider. Would you not agree with that? (Mr. Ingham.) Yes. (Brigadier Deane-Drummond.) I think we get numerically more people in fact to that standard than the other two sister services.

351. The question as to whether or not you should use the other universities is really not one it would be fair to ask you?—(Major-General Mogg.) I do not think so.

352. What about the Arts men? I gather the vacancies are fewer for the Special Arts group?—Yes.

353. Is that partly because the proportion of top grade people is higher among the scientific than among the arts?—I think one of the reasons is that we have always had an arrangement with Cambridge in the first place, which take the engineering and Science degrees, and it is only quite recently that we have managed to persuade the Treasury to finance Arts degrees at Oxford. I think that is going quite well and we have of course just now got Treasury approval to open up at several other universities. I think the history goes back traditionally to our links with Cambridge, probably.

354. It would not be that on the whole the Army is more attractive to technicians or scientists?—I would think that is very much the case too. I would agree with that entirely. (Brigadier Deane-Drummond.) Half the entries, as Dr. Ingham stated, took up the Arts side and half took up the Science. (Mr. Ingham.) I think as far as persuading universities to take officers is concerned, there would be no problem providing the young men reached the required standard. It is really mainly a matter of finance; I think it is entirely a matter of finance.

355. None of them finances himself?—Some of them attempt to do but this does I think involve a certain loss of seniority and salary, and this does provide rather a bar to the idea of a young man paying his own expenses at university.

356. You mean comparing two students, one of whom is paying for himself and the other one of whom is officially going to university, the latter gets advantages?—One would lose the years at university from the point of view of seniority and that would also affect his pension rights, I think.

Mr. John Woollam.

357. If he goes officially he does not lose his seniority?—He loses no seniority at all.

Chairman.

358. I wonder if we could ask the Assistant Commandant about the working of the Assistant Commandants' Committee. I will put my question round the other way. What sharing of experiences is there between Sandhurst and Cranwell or Dartmouth in the methods of teaching syllabuses and so on?—(Brigadier Deane-Drummond.) I think we keep in fairly close touch with the general way in which they do the teaching but I do not think there is any suggestion of a Committee of Assistant Commandants.

359. No, I was in error there?—(Major-General Mogg.) I think it is very difficult to compare the three establishments because they all serve for a different length of time. We do two years, the Navy three years and the Royal Air Force, at Cranwell, do three years; and we produce finished products at different stages of their career. I think it is very difficult to compare the syllabuses. We continually have Cranwell and Dartmouth officers up here, both staying here with us and competing with us, and they are in very close touch in that way.

360. If you have developed a particular approach to some problem which seems to produce very good results, is there any way of sharing that with the others?—Very much so. I had Air Commodore Lyne, Commandant of Cranwell, here a few months ago; we gave him exactly the same briefing as you have had this morning and he went away with a full notebook in his hand of several ideas for Cranwell. I have done the same and the Director of Studies has done the same at Cranwell, so we are in close touch in that way. (Mr. Ingham.) The Head of the Department of History and English from Dartmouth

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is coming here on Friday to discuss the teaching of English as a means of communication (which we are studying at Sandhurst now) with the people who are working on it here.

361. What objective tests of your efficiency have you got, apart from the fact that where you do get them through these courses for cadets, university entrance and so on, there is a perfectly clear test of what they are able to do? Otherwise you have got a very large staff here and very different departments many of which you cannot presumably yourself know very much about. How do you satisfy yourself that they are really doing their job well?—About half the cadets do take external examinations of one sort or another. The work of the remainder can only be assessed by the quality of the teaching staff themselves. The form of appointment of these lecturers ensures that good men are appointed; their regular contacts with other educational bodies maintains their own interest and intellectual alertness. But we have no actual test of the performance of the cadets beyond the standards which the lecturers themselves impose, and it is only by ensuring that you have good staff and that they are kept in very regular contact with the national education system that we can really guarantee our standards.

362. What is the sort of level at which you could have that, because you are below universities, you are above schools? When you are thinking of your working conditions here and your qualifications of your staff, the type of equipment you have and so on, what do you compare yourself with?—It is not very easy to compare ourselves with anything simply because even on the Main Arts course the type of studies we pursue is directed rather to the professional requirements of the young officer. But some little while ago there was a proposal that teacher training colleges should have a third year which would be primarily academic; this seems to have gone by the board, I believe, to a large extent, but it was at that sort of level which we were assuming that our young men would work; in other words, at a level which is really beyond A level, in the sense that the approach is more adult though the academic content may not necessarily be higher than A level.

It was the sort of academic study which one would expect of people in a teacher training college working for further academic qualifications rather than simply for professional training.

363. Do you think that the time in which you have to do it is adequate for the job?—(Major-General Mogg.) I personally do. One is of course never satisfied, one would never be satisfied as regards turning out the perfect result, but I believe we are about right now. I believe that in 1951 the Stopford Committee recommended that the times be increased, I think from 18 months to 2 years; this was done and I myself think this is about right at the moment. Considerable changes have been made over the last two years in the syllabus, in concentrating the military side of it and the academic side of it. I think that has made a great improvement in the result; in other words, you do not have the distraction of a chap doing military and academic training almost at the same time. I believe this is working out well and I think the results are beginning to show already now.

Mr. Harold Gurden.

364. I would have thought that the requirements would have changed quite a bit, with the modern weapons and so on, of which you have examples. That I would have thought would make it necessary to increase the time; or is it that you have modern methods of teaching?—I would agree with you. One can go on educating the young officer for a very long time and the whole standard of technical knowledge is raised in the Army. On the other hand, if you go on giving him extra time at Sandhurst, it is a shorter time that he has with his regiment. The young man who comes straight from school then does three years here, then goes to his regiment, and then perhaps starts studying for Staff College, then another course, and you find that if you go on adding time on to his education he will have less time with his regiment. There is another point which could be made here, which is of course that militarily we try and turn out the young man from Sandhurst to be an infantry platoon commander, basically infantry tactics. So if he is going in the Royal Armoured Corps or the Royal Engineers

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or the Gunners, as soon as he leaves Sandhurst he has to do a special arms course and that adds on more time that he is being taught and less time that he is actually doing a soldiering job.

Chairman.

365. Is the balance between the military and academic training about right?—I think so. I said a minute ago changes have been made, and now it is an academic year and a military year, and within the period here now we have tried to concentrate military and academic. We are going through a period of transition now and I believe the results are very good indeed. There may possibly be—and we are examining the whole time—fields for more concentration of academic and military. There is a committee sitting this very moment examining that. But I would say that the balance is about right now; although of course I know on the academic side they say they want more, and it is the same on the military side.

366. There is less professional training than at Dartmouth?—I would not like to make a comparison with Dartmouth; I do not think that would be fair. I think at Dartmouth they have a year at sea. Comparatively we do two periods of overseas training. We do a lot of training on training areas away from Sandhurst and I would not think there was very much of a difference between us on our overseas training and our military training; I would not think there was all that difference.

367. Would you like to have a period of going out of the college for a period?—I think that is really a matter of policy which I would not like to discuss now because I think it is one that may be possibly in the minds of other people; it would be better if I did not discuss it.

368. Certainly. May I put this to you and so give you a chance of meeting it? I think that anyone seeing the note we have of the staff ratio would say there are very few bodies, except perhaps closed Borstals and nursery schools, with the same staffing ratio. It would be very interesting if you could give us an explanation of how your staff is built up and why it cannot be cut?—In the first

place I think I should make it quite clear, as I arrived at Sandhurst we had the independent inspectors from the War Office who were here for over a fortnight. They examined every single individual post on the establishment here and their recommendation is now with the War Office; they have strongly recommended there should be no cut. They recommended certain internal changes within the establishment. I feel that probably is as good a recommendation as any, an entirely independent board from outside. Secondly, we have certain peculiarities in that there is a certain amount of administration to be done from outside Sandhurst, on the civilian side. The civilian Accountant's Branch has a fairly large establishment here, and they are looking after 2,000 in addition to Sandhurst. Another point, I think, is the life that the cadets lead here. It is a seven-day week which you do not find in many other establishments. You have, I think, got to impress upon the cadets a certain high standard and we have, for instance, just a small example, two big meals a day, a big meal in the evening, for which you have to have staff to cook and prepare. You have work over the week-ends. So it does involve quite a large staff in every way.

369. How is your catering done?—The catering is done entirely by our own civilian staff here, the actual feeding of the cadets and the officers in the officers' mess; and the N.A.A.F.I. run, of course, the other canteen services.

370. Is the catering done by the civilian staff based on Army rationing?—Army rationing, yes, and civilian staff.

371. It is nothing to do with the Army Catering Corps?—There are certain posts which are A.C.C., but mostly they are civilian. (Lieut.-Colonel Mitchell.) That is so. We have a catering officer who is responsible for the overall feeding of the cadets and in the other ranks' mess of course we have a Catering Corps Sergeant. But those are the only Catering Corps members here. They control the civilian staff.

372. Is the rationing based on a cash grant per head or on physical rations?—It is based on a cash grant with the normal ration allowance each man gets.

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But we are allowed to draw up to a certain percentage in physical foodstuffs and use a proportion of what is left over from the cash to enable the meals to be made slightly better or to get in on bulk buying.

373. What means have you of measuring student reaction to catering?—They have a meeting in all three colleges once a month with the catering advisers there and the cadets tell us exactly what they think of the food. This varies of course according to personalities and stomachs. They can always at any time state what they do not like or what they do like and the catering adviser does keep a very close touch on what is not eaten at any meal. For instance, they are given three choices; if one choice is distinctly unpopular it is not repeated.

Sir John Langford-Holt.

374. You turn out, am I right in saying, about 500 cadets a year?—(Major-General Mogg.) 400 U.K. and about 100 others.

375. What is the limiting factor? Why is that not more? There could be three reasons: one is that the Army does not need any more; another is that Sandhurst could not take any more, which I believe is not the case; the third one is that you do not get enough candidates of a sufficiently high standard. Which is it, generally speaking, of those three?—The answer to it is we are really almost up to establishment now. We are very nearly up to a thousand which is the figure given by the War Office worked out on the regular officer requirement.

376. You provide all that the Army needs?—Yes. There are slight variations at the moment because with two intakes a year we are inclined to get more in our summer intake than in our winter intake. We cannot take more in any one intake than a certain maximum, otherwise we get out of step with our instructors, our accommodation, our syllabus and everything.

377. You mentioned earlier your building requirements. There are two things which appear to be the main ones: one is an assembly hall and the other is your new building. Is it a

question of either/or, and if so, which is the higher priority? That is point one. The second point is, would your assembly hall have a lot of use or to what extent would it be used? You mentioned the fact that it is the only place in which you, or anyone else for that matter, can address the whole assembled company. Would this in point of fact be very often or would the assembly hall be used for other things as well?—I hope it would not ever be a case of either/or. I think both are absolutely essential for the future. As regards its use, I think it could be used a great deal not only for getting all the cadets together. It is intended it should be an extra model room as well. The model rooms, instruction rooms, are not at all good so I feel it could be used a tremendous amount. (Lieut.-Colonel Mitchell.) On the last count I made it was that it would be used at a minimum of 36 times per term; that is three times a week, roughly. It has been designed so that whilst it can accommodate 1,200 people and the Commandant or outside lecturers can address the whole Academy, the lower half of the assembly hall is devised for smaller audiences where military history or briefing for overseas training can be given to those numbers of the Academy who at the moment do not fit into a model hall.

378. I wonder if I can ask the Director of Studies a question. I was most interested in your language laboratory. Could this method of education in an establishment like this be more widely applied?—(Mr. Ingham.) It would not be easy to extend this method because it does depend upon possessing tape-recordings of set lessons and of course the basis of this type of tuition is a question of learning by rote and repeating things which you have learnt. Very little of the education here is of that type. Naturally, in learning particularly the basis of a language this type of equipment is invaluable. Similarly when you have reached a more advanced stage, for practice in a language it is invaluable. But discussion is impossible and of course the basis of most education here is that there should be discussion at every stage and therefore the laboratory is not suitable for this type of teaching.

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379. Language teaching went through many of your courses, we noticed in the other room. Is that particular language laboratory just a pioneer one or is that the size which can cope with all your language teaching?—It is very much a pioneer; we only got it in the middle of last year. We have already asked for a considerable extension to this. We had to see at first if we could really make use of this equipment. It has proved a tremendous success at the two levels I particularly mentioned, the early and the very advanced. We have not yet had any experience of the middle section to say anything about it, but we desperately want more machines.

380. Would it be a fair question to ask you to what stage this need has gone forward?—It has only just begun, it is included in the 1964-65 estimates.

381. It may be at the stage at which you are still deciding in your minds? It has not been held up at any other point?—No, it has not.

Chairman.

382. In your design of new buildings have the staff here been consulted; have they had the opportunity of expressing their views?—(Major-General Mogg.) At every stage, both here and at the War Office. (Mr. Ingham.) I would say as regards the academic buildings the idea certainly emanated from the academic staff.

383. Are your views linked with all that is going on within non-military establishments?—As far as the academic side is concerned, very much so.

384. There is a good deal of building of new universities, college buildings and college halls; have you taken that into account or had any informal consultation?—(Major-General Mogg.) Our architects have. (Lieut.-Colonel Mitchell.) The firm of architects who are designing the buildings at the moment have had a great deal of experience of new universities and new school buildings and they have given us the benefit of every bit of advice they can give in forming our own requirements here. This has been welded into the military requirements as far as Sandhurst is concerned and the academic requirement.

385. May we go back to what you said about staff. You rather left the view that the inspectors found everything requiring no change. Is that so?—(Major-General Mogg.) Absolutely.

386. Very few changes were made?—Very few changes were made.

387. We were talking about the standards of entry for coming here. Do you think in the future those standards of entry are likely to go up or down? In other words, do you think it would be wise to have a higher proportion of A levels, higher standards?—This is a very interesting point and one which I discussed very freely with 40 headmasters who came here for a conference. An extraordinary thing is that headmasters are divided on their views about this. I personally would like to set our sights as high as we possibly can. At the same time one has got to be very careful not to set them so high that we lose out on getting the number of officers required, and I would say in general principle I would like to set the sights higher but at no stage ever must we lower the standard of officer qualities and leadership required. So you have to balance up the two. With the general trend nationally of education, academic ability, getting higher, in my view the standards of academic ability will rise at this Academy.

388. Do you think your methods of selection (I know you do not do it but you see the results) are sufficiently advanced to be able to test a lad's qualities of leadership when he is a schoolboy?—It is very difficult to say but I think the tests devised at Westbury are as good as they possibly could be and have been copied by practically every military establishment throughout the world. I think we have a great deal of confidence that, if one can test a boy at that stage that is probably one of the best ways of doing it.

389. Are there any points you would like to make to us where you think we have missed the boat?—I do not think so. I think you have been extremely kind to me. (Lieut.-Colonel Gordon.) May I give you the answer about Army entrants? Virtually 100 per cent. go to Beaconsfield. The only ones who do not are those who may have passed the Civil Service Commission examination.

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Mr. Harold Gurden.

390. I noticed on the extra interests for the students you have such things as boating and motor cars and so on. Who supplies the equipment for such things?—(Major-General Mogg.) The equipment and the money? There are grants from the War Office.

391. To buy motor cars?—No, to buy things such as sporting equipment. The Nuffield organisation, for instance, help us over the sailing yacht which we keep down in the Hamble. The cadets themselves have a subscription which comes in every term into a general sports fund and which of course we can allocate. The Brigadier sits on a committee which allocates these funds to the various sports that there are and of course they actually subscribe to things they do themselves; for instance they pay to go riding. If they belong to a shoot here they pay something to do with that in addition. For exploration certain grants are made from Academy funds towards the expedition but the cadets themselves subscribe a certain sum themselves.

392. These horses that we see are not Army horses then, they are individual ones?—Individual.

393. Are they stabled here?—Yes, they are.

394. And food and equipment and the staff to look after these horses?—They are all paid for by the boys themselves. (Brigadier Deane-Drummond.) Things like boats on the river are paid for either by the Nuffield Trust who, as you know, make grants to different organisations or comes out of the Academy funds. The Academy funds come from some £2,000 interest on in-

[The Sub-Committee adjourned to the Staff College, Camberley.]

Major-General J. F. WORSLEY, C.B., O.B.E., M.C., Commandant, Brigadier A. F. STANTON, O.B.E., Assistant Commandant, Colonel M. E. M. MACWILLIAM, D.S.O., M.C., T.D., GSO 1 Coord., Lieutenant Colonel R. S. C. DOWDEN, 1 Green Jackets, DAA and QMG, Staff College, Camberley; and Mr. M. H. TALLBOYS, a Principal, War Office, called in and examined.

Chairman.

399. What is the position now of the building? Would you say you have got all the buildings you re-

quirements and the other £6,000 from subscriptions from the cadets themselves.

Sir John Langford-Holt.

395. From what you said, the ability to ride a horse is not a military requirement. Is the ability to drive a motor car?—(Major-General Mogg.) They are not allowed to keep a car here when they are a junior. After that they are.

396. If they cannot drive do you teach them?—Yes, we do. One of the things that is very closely supervised here is the standard of driving. As you can imagine, there are about 500 cadets here, a lad of 19 is a considerable worry at times.

Mr. Woollam.

397. Do you as an Academy receive bequests or donations from former members of the Army, from their estates, which are put into a discretionary fund to be used for amenities and these things you have been describing; or if you were to be mentioned in a will would you have to hand the money over to the War Office, no matter what the testator's wishes might be?—Certainly in my experience (I do not know whether the Accountant can help) I would say that there are no bequests made specifically to Sandhurst. On the other hand there are to the Academy Fund and the Memorial Fund—enormous numbers. (Mr. Phillips.) I would say no, Sir.

398. I noticed your initiative in obtaining help from firms in industry and I wondered therefore whether it had ever been possible for people who wished to leave sums of money for providing those things which the War Office have not provided?—(Major-General Mogg.) No. I wish they would. Publicity in that line would be very helpful.

Chairman.] Thank you very much.

quire or will there be further extensions?—(Major-General Worsley.) No, I do not think it would be true to say that we were not going to make

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demands for any more building. First of all, there are the syndicate rooms which we showed you, built in 1939 of fairly temporary construction. They will do for the time being but I do not think we feel that they are up to the standard of the Staff College and the rest of the buildings here. So that I think is one requirement sometime. The drawing office, the reproduction side and the distribution side are all separated; one in disused stables, as you saw, one in the little room in the syndicate room block, and the other in this main block. It is frightfully inefficient, frightfully wasteful of effort and time, and we would like one day to get them all housed sensibly together. I think another one must be the rebuilding almost from scratch of the kitchens which we showed you and which really are terribly out of date now. One day, if only we can somehow fit it in without bringing the whole course to a halt, I think we must try and aim to replace those.

Mr. W. A. Wilkins.

400. Would you have thought it would have been better to reverse the priorities and start with the kitchens first?—What puts me off about the kitchens is that I cannot quite see how we are going to do it without bringing the whole place to a halt. It would take, I should think, six months to a year to redo these kitchens. I find it difficult to see how we are going to go on running the course here. I suppose we could have field ovens and things under the trees, but this is the snag. Otherwise I must say I think they are very high priority.

401. Are you suggesting site difficulties, that it must be rebuilt on that site, or the process of building could not go on?—I think it would have to be built more or less on the same site unless we are going to build a new dining room as well, which I do not think we would want to do. I think we would want to enlarge the dining room slightly. I do not think we would want completely to redo the whole of the dining room as well. (Colonel MacWilliam.) We are forbidden of course to touch the frontage which is classified as a fine art. Therefore we could not build beside the present building; it would have to be

in the rear and we really need it attached to the main building. That is the problem.

Chairman.

402. The staff in the kitchens and the other staff in the printing department are civilians?—(Major-General Worsley.) They are all civilians. Most of them have been here for many long years. It is in fact one of our problems how we are going to replace them as they get older and older.

403. Then is the military staff confined to the officers who are instructing?—Not quite. I think we have a total of 13 military staff other than officers. (Brigadier Stanton.) 13 other ranks. (Major-General Worsley.) Eight of whom (am I right?) are in the transport. There is the RSM, there are two RQMS, and two in the orderly room. That is about the lot, is it not? So that there are very few military personnel other than the directing staff. (Brigadier Stanton.) Were you asking about officers?

404. No, military generally. Do you have entirely your own transport department or can you draw on other parts of the Army?—(Major-General Worsley.) No, we do not. We do not attempt to hold transport to transport the whole student body from demonstration to demonstration. For that we indent on the transport officer in Aldershot District who is responsible for providing us with transport which he does in the shape of buses and coaches. Our transport is for our normal every day maintenance, our every day running. —(Colonel MacWilliam.) We have three staff cars and four landrovers and one 3-ton lorry. The staff cars and landrovers are driven by soldiers, the 3-ton by a civilian driver. As the Commandant has explained, we indent for coaches when we have to move en masse from one place to another. There is another way of transporting Staff College: on certain field exercises where it is necessary to break down syndicates into small groups, private cars are used, the students' private cars, and they claim an appropriate rate of mileage allowance.

405. Do the civilian staff have to do a lot of overtime?—(Major-General Worsley.) A certain amount, yes; par-

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ticularly the waiters and groundsmen at certain times in the year.

406. Is this regular overtime or just overtime in rush periods?—(Colonel *MacWilliam*.) It is controlled. It is not as much as we would like in fact. We have to pay a certain amount of overtime from private mess funds, for instance, for certain engagements.

407. What are the residential arrangements for the students?—Most of the students live in quarters or in hirings in the town; that is the British students. Some 20 or so British students live in this building and at Minley; and the balance are foreigners who have come without their families and live in.—(Major-General *Worsley*.) The bachelors in fact live in the mess either here or at Minley. The married ones who have got their wives with them during this course are living either in War Department quarters if there are enough to go round, or, when they run out, in hirings round and about.

408. What accommodation would those who are living as non-married get?—They have each got a room either in the mess here above us or a room in the mess at Minley if they are in C Division.

409. What domestic service do they get?—Could someone who has got the details give the number of batmen etc.?—(Colonel *MacWilliam*.) They each have a batman or rather, they share a batman, according to War Office scales. They have the facilities of the dining room and the ante-room. At lunchtime of course many of the married officers lunch in, and of course on certain evenings when there are official functions they have dinner. In the evening two or three waiters at each place come in for the others.

410. You told us earlier on and we have heard before that 20 per cent. of the work of the Staff College was shared with other services. Is that about the right percentage?—(Major-General *Worsley*.) I believe that it is. I do not believe it would make sense to try to do more than 20 per cent. Joint Staff work at this stage in an officer's career. We find it difficult enough as it is to teach them all that we would like to teach them and practise them in all that we would like to practise them in their

own single service knowledge and business. If I can put it like this, it is no good asking a violinist, for example, to go and play in an orchestra until he really has learnt to play the violin, and it is the same here: until the chap has learnt his own trade thoroughly he is not in our opinion fit to go and take part usefully in Joint Staff work. So my answer is that I think that 20 per cent. is about a maximum at this stage in an officer's career. It is quite different later on but, remembering that this is the beginning of their career as Staff Officers, I believe that that is the maximum, yes.

411. I believe there is an Assistant Commandant's Committee which discusses the common training?—This is something quite unofficial. It is in order to try and ensure that the 20 per cent. of our full time that we do spend on Joint Staff work is used to the best possible advantage. The two Commandants and the Director have set up this working party and I would ask Brigadier Stanton who happens to be one of them to carry on from there,—(Brigadier *Stanton*.) I am actually this year's chairman of it. It is an unofficial body, it only reports to the Commandants and it has been set up by them. We are in the process now of reviewing 1965. Let me say straight away we have to fix up joint work for 1965 about March, 1964, so all the stuff here (*indicating wall timetables*) in 1964 was fixed up at a meeting about 3rd April, 1963, because it is all bound up with all sorts of other events in the year, things like Joint Service demonstrations on the Plain. What we are trying to do in this coming year, 1965, is to get the Joint Staff training increased at the expense of some of the things like studying, say, the Commonwealth together. We are going to alter, if the Commandants agree—of course we report to them—a lot of the exercises, and of those three exercises I showed you, which you remember were two Army/Air and one a tri-service one, we hope to make in 1965 two of them tri-service ones (that is, two lots of a fortnight) and one an Army/Air. The feeling amongst the three of us is we get on very well and it works. The difficulty about the joint work, a physical difficulty, is the distance Greenwich is from here. There is no difficulty with

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Bracknell, which is a quarter of an hour in a car.

412. How long has the committee been going?—We always used to meet but it was not as a committee. We always met about March every year, as I said, to fix up the joint dates for the next year. As a semi-official committee set up by the Commandants I suppose it has been going since about last October, Sir?—(Major-General *Worsley*.) About that. (Brigadier *Stanton*.) But of course we always met before and talked these things over. We have now got a secretary and all the rest of it, on a much more even keel, and we meet as required. We met last week, we are meeting as a matter of fact next week. It is a particularly busy time of the year, trying to fix up next year. In addition of course we look at the exercises we have done and criticise them and try to improve them for next year.

413. How are you fed with problems, new ideas, the co-ordination of which you have got to consider how to work out? Is there some other part of the services which keeps you in touch with that sort of thing?—The people who keep us in touch very largely are the DS in our case, the next level down. And it is a fact now Joint Warfare Staff in London are taking a great interest in this and may in future give us some direction, I do not know.

414. You cannot give evidence on what happens above you. As far as you are concerned, so far has anything come from them or is this something in the future?—(Major-General *Worsley*.) As we said earlier on, the Chiefs of Staff have issued this clear directive to the two Commandants here and the Director at Greenwich that 20 per cent. of their time will be spent on Joint Staff training. We achieved 20 per cent. this last year, just about, by including things under the three heads that the Brigadier told you about, which includes getting together to study things of common interest like the Commonwealth or the Far East. What we are now trying to do is to implement what we believe to be the Chiefs' of Staff intention, which is that the 20 per cent. should be genuine Joint Staff training, not that we should merely get together to discuss things of common general interest. I think if we do that, which I hope we shall get by 1965 we

will be doing what the Chiefs of Staff say they want us to do. We are not I think fully able to do it just yet.

Sir *John Langford-Holt*.

415. 20 per cent., I take it, is a minimum, because if the three services have three different lengths of service?—They do not now, they used to. This is not really for me to say, but in fact Bracknell was already a one year course and Greenwich was not; but, starting this last year, it is coming into line. If I may just say this, this is one of the reasons we have had to move a bit slowly in all this, because Greenwich, on top of everything else, have completely had to recast their course, expanding from a 6 months' to a year's course, which has made it a little more difficult for us to get together and do our joint stuff.

Chairman.

416. Do you have any direct contact with the Joint Services Staff College?—No, I do not think we do. We do not go over there for any official purpose. They do not come here for any official purpose. Is that right?—(Brigadier *Stanton*.) Yes. We visit them now and again. (Major-General *Worsley*.) They have a completely different charter. They are dealing with people at a completely different level.

417. At a higher level?—At a much higher level. They are taking people who have already been to their respective Staff Colleges, who have had practical experience of Staff work, and who are now ready to get together and really get down to working on Joint Staff problems at a considerably higher level than we are here. This is really why we do not have anything like day to day or week to week official contact with them. (Brigadier *Stanton*.) I think it is fair to say when students go from here, because of the level or the age they are, they would not go to a posting in the Ministry of Defence, for instance. They are more senior postings there, which would be filled by the J.S.S.C. Our students would go to a Staff job in the Army or it might be a junior joint one.

418. It seems odd to the outside observer that you should have an organisation with a very stable bottom level of staff but with a continually changing

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top level of staff, so that everybody is on a tour of duty for three years or slightly less, with nobody who is permanently here at that sort of level. Is there a case for having a civilian element in the organisation in order to provide some sort of continuity in the work you are doing?—(Major-General Worsley.) I do not think that that is so, because what we have got to teach, what we have got to get across to these people who come here to be trained is in fact constantly changing, as people's ideas about warfare and military activities of one sort and another are constantly changing; as new equipment is being produced, as people are evolving new tactical techniques and doctrine in line with the provision of that new equipment. This is all happening in the War Office as far as we are concerned, where in fact there is the Director of Combat Development working under the D.C.I.G.S. From time to time they call together a thing called the Combat Development Committee on which I, as Commandant, am a member, and some of those G.2's we saw over there (*indicating wall timetables*) are here for the express purpose of keeping in touch with research and development, future thoughts on training, future thoughts on equipment production and so on, that are going on in the War Office. We in fact here are responsible for implementing, from the training point of view, the thinking that is going on in the War Office and I think for this reason there is not in fact any need for the civilian continuity man that you suggested.

Mr. Harold Gurden.

419. Would it not be better if the serving officers who are as experienced as this could stay another two or three years?—I think there are probably two answers to that. One is that one wants to have people here with as recent experience as possible of real life soldiering, in peace and war, outside. One wants to have people with up-to-date experience of what is in fact going on outside, and I think one would lose that if one kept them here, shall we say, for five or six years. The other is a personal point of view, from the officer's personal career prospect point of view, that if he spent

as long as five or six years here he would be, I think, severely handicapped, in that he would be unable to get the practical experience that he needs if he is going to go on and get higher command himself. By and large the instructors who come here are people who are going on to get higher command. The full Colonels are people whom we expect to get command of Brigades quite shortly and the GSO2s are all people with whom we should be bitterly disappointed if they did not get command of their regiments before long.

420. You would go as far as to say that this 100 per cent. change is justifiable?—I would be against extending the tour here beyond the three years. In fact I would go so far as to say that I think 2 to 2½ years at the pace they have to go is about enough.

Mr. Woollam.

421. We have to think of it then not as an academy with a permanent academic staff; we have to think of it as a group of young officers at a significant stage in their career who at that stage have got to be taught those sorts of things by those who have been doing those things very recently in their military career?—I think that puts it extremely well. If you come back to our method of teaching, the whole thing being based on the syndicate discussion, it is not so much a question of the schoolmaster teaching people something, it is a question of all getting together and by discussion learning from each other and from each other's experience. You see, the students come here with a good deal of experience. You get chaps who have been in Korea, chaps who have come back from Brunei, chaps who have been in Cyprus, you get chaps in the Services who have been doing work in big ordnance depots somewhere and all this experience is pooled. The thinking is guided by the directing staff, who have a slightly greater knowledge of the Army as a whole and a slightly greater experience. I think that is it.

Chairman.

422. Changing the subject rather, when we were looking at the printing I wondered how much use was made of

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any single précis or printed document which came out. In other words, are these all entirely new for every intake or do they go on being used?—I would say that every year some significant changes have to be made to pretty well every précis for one reason or another, either because tactics have changed or because the weapons with which we are equipped have changed or because the wireless sets with which we are equipped have changed. Tactics are constantly changing to keep in line with this. Tactics will be constantly changing to keep in line with experience in such places as Brunei now. I imagine that by next year we shall have all sorts of lessons based on experience in Tanganyika, Zanzibar, Kenya, Uganda, which will affect a lot of other précis. So I think the answer is it is not often that this year's précis can just have "1964" crossed out and "1965" put in. (Brigadier Stanton.) I would say it is just about never, Sir. It is not only the development. That is how they go out to students; that for instance is the "Artillery" folder and inside there may be four or five précis and at the end of each one we have a pink sheet which is from the author and it says, "Will you please send in to me any comments, suggestions, criticisms you have got?" That comes to everybody in the Staff College from Commandant downwards. So after that précis has been dealt with for next year, I have a conference here with my G.S.O.I.'s and decide next year's policy. We are constantly not only changing them because the Army is changing but constantly trying to improve them. So I would say it is virtually never used again. The basis may be but the thing is written again.

423. Are you satisfied that this printing machinery is the cheapest way of providing these copies for the comparatively small numbers for comparatively short use?—(Colonel MacWilliam.) It is the cheapest bearing in mind the limitations. * * * The time factor comes into this. We want these fairly quickly as a rule. For instance, Bracknell send theirs to outside contract as a rule, or some of it, and it takes an extremely long time.

Mr. Woollam.

424. The actual printing staff here therefore will have certain security clearances . . . ?—Indeed.

425. —which would not necessarily obtain even in certain other Government departments who otherwise might be able to print certain things for you?—I cannot answer that, but it certainly applies here.

Mr. Harold Gurden.

426. Would it be possible for you, having got all this set-up of this machinery, to cover Bracknell as well?—They are pretty hard pressed at the present time. I should have thought not. Bracknell do from time to time borrow our précis and we print some for them. It is not on a very large scale though. (Brigadier Stanton.) In fact we do quite a lot now. For instance, normally each Staff College sponsors one joint exercise; that is to say, they do not necessarily write it, but in fact the Bracknell sponsored one gets printed here because we have got better facilities. The other day we issued a lot of Royal Navy précis. They said they liked our précis, and could they have our copies. So in fact they had ours. Most of the joint work is done here because we have better facilities.

Chairman.

427. Is this printing equipment fairly new?—(Colonel MacWilliam.) Some of it is new. We are due to get some extra machines this year and one more operator.

428. What steps are being taken to see what you get is the most economic equipment for this purpose? Do you go to O. and M.?—We are advised by the War Office. They come and inspect it from time to time and recommend what we should have. It is not necessarily for me to decide.

429. You have civilian students here sometimes, do you?—No. (Major-General Worsley.) No.

430. And no War Office staff?—No. (Brigadier Stanton.) We have one female student here, a W.R.A.C.

431. I do not know whether this is a fair question to ask you, but have you any observations on the comparative value of the Staff Qualified system and

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the Staff College system for recruiting senior officers?—(Major-General *Worsley*.) I am not really sure that I ought to express a view on that, ought I, because it is really a question of policy which I think is outside my sphere as Commandant?

432. If you feel you would rather not answer, may I put it round this way; is there any way whereby the views of the College are consulted about the proportion of the two?—The proportion of people who become qualified by coming here and the proportion who become qualified by experience? No. As far as we are concerned here, we are told to accept a certain number of officers for training, British and otherwise, and it is our responsibility to train them, and we have no say in the actual numbers. This is an Adjutant-General/Military Secretary's problem, the numbers required in the British Army as a whole, and not ours. And the numbers to be qualified by coming here and the numbers to be qualified by any other method is again an Adjutant-General's department problem and not ours here. So I do not honestly think I can sensibly express a view on that.

433. We were very interested to see the Alanbrooke Hall; we admired its modern equipment and so on. How far is it in use?—I think there is hardly a day in the year when the Alanbrooke Hall is not being used to present something. Is that an overstatement? (Colonel *MacWilliam*.) It varies slightly. We are in an intense period at the moment; the summer tends to tail off. (Major-General *Worsley*.) Then there are other days when it is used two or three times. (Colonel *MacWilliam*.) At this time 80 per cent. of the days in the month would see the Alanbrooke Hall used, 60 per cent. in the summer, either for actual demonstration or rehearsal. (Major-General *Worsley*.) Absolutely; it is in very constant use. (Colonel *MacWilliam*.) For previews or something similar.

Sir John Langford-Holt.

434. May I ask a question about these syndicate rooms which for what apparently is their duty seem very unimpressive places, I must say? First, there is the telephone exercise which I think either General *Worsley* or

Brigadier *Stanton* said was one of the best ways of teaching. But he also said the equipment is archaic and you have to call from time to time on outside help?—(Brigadier *Stanton*.) What I meant was that the telephones are all wired up to a manual exchange and that means we have got to have soldiers from outside to operate the exchange. Now it is quite a considerable number. How many do we have from outside? (Lieut.-Colonel *Dowden*.) The total number can be up to 60. (Brigadier *Stanton*.) What is needed is the whole thing rewired and an automatic exchange so there is nobody wanted on it at all. In other words, if you are B.M. of a Brigade and you want to get through on the wireless or telephone to a division, you just dial or press a button and you are through.

Sir John Langford-Holt.

435. This is being installed by the Post Office almost daily in business firms. Is yours a specialised one?—It is not specialised. We are hoping to be able to ask for this, but of course it is not cheap because it means a lot of rewiring and an altered exchange. But it will save a tremendous lot of outside assistance and much more important from our point of view is that before we do a telephone battle the staff would not have to spend something like two days beforehand putting the telephones in and getting everything set up. What we want is at the flick of a switch for the Commandant to be able to say, "Let's have a quick exercise on that" and we just get straight on.

436. How long have those desks been in existence in those rooms?—(Colonel *MacWilliam*.) The little tables? They have been there from my own knowledge ten years at least—about ten years.

437. They are quite unsuitable for the job?—Not particularly.

438. They are all right, are they?—(Major-General *Worsley*.) I would agree. As I said, I think the whole standard of everything in that building and in these syndicate rooms is not really quite good enough. I would absolutely agree with that.

Chairman.

439. Have you compared it with some comparable ones in other countries?

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—(Brigadier *Stanton*.) I have been to America and seen Fort Leavenworth. Of course it is not a fair comparison, they do not work to the syndicate system. They have very big rooms with 40 people and the master comes in and instructs and the master then walks out and that is that.

Sir *John Langford-Holt*.

440. Can you say anything about failures? Do you get failures, and if so what percentage and what causes these failures?—(Major-General *Worsley*.) In fact we had none this last year. There were three the year before and right back to 1956, 1957, 1958, 1959, 1960, 1961, no failures so it is pretty small. Just occasionally by mistake somehow somebody seems to slip through the net. You have heard about the selection procedure, the fact that he has got to be recommended by the C.O., endorsed by the Brigadier, endorsed by the General; he has then got to pass the examination; he has then got to do sufficiently well to be selected to come here. In spite of all this, somehow just occasionally a chap does slip through the net and is not quite up to it, and if he is not we feel it is our business to say this chap must not be launched on to the Army with p.s.c. after his name, indicating that he is a trained Staff Officer. But in fact I think we regard it very much as our business to see that we do get the chap trained up to the standard required and, by and large, as you can see by those figures, we do succeed.

441. I have one housekeeping question. What is the heating system of the Staff College? It seems to me you are spread out. Is it a centralised system?—(Colonel *MacWilliam*.) There is one central boiler.

442. There must be an enormous amount of heat lost underground?—(Lieut.-Colonel *Dowden*.) The Alanbrooke is gas-heated. That is a separate thing. (Major-General *Worsley*.) The central boiler is oil-fired. (Brigadier *Stanton*.) May I correct something on the question of people getting here? I think the G.1 Coord. did say earlier on that 20 places could be taken on a competitive basis. This is a true statement of fact—20 places are open. In

fact, because of the percentage they have to get, there are never more than three or four. The 20 places is the maximum that can be allotted to those getting over 65 per cent. in the examination.

Mr. *Woollam*.

443. I wanted to ask about the Alanbrooke Hall (and this may be information given in evidence on an earlier occasion). I wondered whether the whole capital expense of the Alanbrooke Hall and the running expenses of it are entirely on your Vote, because I understand others benefit from the existence of that hall?—(Mr. *Tallboys*.) The building costs were borne by the Army Vote, and the running costs also are. We would not for the purposes of inter-service work with the Air Force or the Navy expect to charge the Air Force or the Navy. If for any reason it were loaned to someone completely outside we would arrange a hire charge. (Brigadier *Stanton*.) Could I make one point about the Alanbrooke? You were talking about how much it was used in general. I would like the Sub-Committee to remember that when we put on a presentation there, say for an hour, there are at least three full rehearsals beforehand. So that for each thing put on there four times the actual performance time is spent in the Alanbrooke.

Mr. *W. A. Wilkins*.

444. Could I just return to the printing department? The Chairman raised the point about the economic nature of it. Would you be able to put up a case for its economic use or becoming more economic if it was in one centralised department? Would that effect economies? Is there any loss of economy because of the spread of the distribution?—(Major-General *Worsley*.) I would have said we would not be able to cut down on the number of people we employ. I think it would be the same number but they would work much more efficiently and quickly and get less cross with each other. I do not honestly believe there would be a saving of manpower if we could put it all in one place. But it would work, it seems to me, much more smoothly and efficiently.

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445. How far apart are the departments now?—(Brigadier Stanton.) You saw where reproduction was; all that paper has to be carried physically by hand from there back into this building. (Major-General Worsley.) From where it is pinned up and got together and eventually distributed. That is the sort of waste of energy and effort that goes on.

Sir John Langford-Holt.

446. From there it has to go even further to Minley?—Everything happens here. But of course all the reproduction, all the printing, all the distribution is done from here, so that does have to go to Minley.

447. The purpose of Minley having changed since it was opened first, it now is in fact wasteful in a sense, insofar as it divides the college up. There is no reason why it should be separate, apart from the fact you would have to have another building?—Except for the fact that we are required to have 180 students and we cannot get them all in here, and Minley exists and will house them both from the point of view of housing the bachelors and from the point of view of mess accommodation and providing reasonable syndicate room accommodation and that sort of thing. Otherwise of course it is obviously a waste.

Chairman.

448. Are there any other points you would like to put to us that you think we have missed?—No, I do not honestly think there is anything you have not covered most adequately. I think if I wanted to emphasise anything which we have discussed this afternoon I would like to emphasise again that I really do believe it would be a great mistake for anyone to try and get officers at this stage in their careers to do more Joint Staff training than we are now aiming to achieve. I really do honestly believe that we would be making a mistake to go beyond that 20 per cent.

Mr. Woollam.

449. At this level of officer with whom you are dealing?—That is it. The rest of it comes along later when they have gained more practical experience. I think the other one which I would want to feel you went away with is the fact that anything which forced us to change in any way our system of instruction here, the whole basis of the way we try and handle affairs, the syndicate being the basis of it all, I think would be a very great pity and would greatly reduce the value of this place to the students who come here and therefore to the Army as a whole.

Chairman.

450. I suppose that is one of the reasons for the high staffing ratio?—Absolutely. If I could as a matter of interest say this, I had dining with me the other night a schoolmaster who is now the head of one of the departments at Sandhurst and he was actually pulling my leg after dinner and saying, "You are most frightfully tough. No headmaster would ever think of getting anything like the work that you insist on getting out of your directing staff. No don at any university would think of trying to work as hard as you make your people work". And I believe this is absolutely true. While they are here the hours that they spend on preparing for next day's discussions, the hours that they spend on rehearsing, as we have just been hearing, the hours that they spend actually in syndicate discussing things and then the hours they spend actually correcting and making helpful comments on students' work is something very peculiar to this place. It is a standard which I honestly do not think is produced anywhere else and I think we would be wrong to drop that standard if we can possibly help it. I think it achieves results which really are worth while and we should spoil the ship terribly if we reduced that standard.

Chairman.] Thank you.

WEDNESDAY, 5TH FEBRUARY, 1964.

Members present:

Mr. James McColl, in the Chair.

Mr. Harold Gurden.
Sir John Langford-Holt.

Mr. Anthony Royle.
Mr. W. A. Wilkins.

Memorandum submitted by the Admiralty.

ROYAL NAVAL COLLEGE, GREENWICH

The buildings at Greenwich date from the 17th and 18th centuries. The Royal Naval College was transferred from Portsmouth and established at Greenwich in 1873.

2. The Royal Naval College provides advanced instruction to Naval and Royal Marine Officers and Admiralty civilians in all branches of study bearing upon their profession. There are eight departments, each headed by a professor: Mathematics, Physics and Electrical Engineering, Chemistry and Metallurgy, Applied Mechanics, Humane studies, Naval Architecture, Naval Engineering, and Nuclear Science and Technology.

3. Most of the courses are almost entirely scientific or technical in content. They include those for specialists in torpedo and anti-submarine, communications and engineering (Marine, Weapons and Electrical Engineering), and for Instructor Officers and Ordnance Inspection Officers. There are three-year courses for civilian Naval Constructors and Electrical Engineers who are trained for posts in the design departments and the Royal Dockyards.

4. Some fundamental and applied research is undertaken by the staff. Much of the practical work of advanced students is in the form of applied research.

5. The Royal Naval College, Greenwich also embodies under the superintendence of the Admiral President the following organisations, each being controlled by its own Director or Senior Officer:—

- (a) The Royal Naval War College.—The aim of the Senior Officers War Course is to study the strategic and technical aspects of war, and the prevention of war in the light of current developments in the political, military, technical, scientific and economic fields, with a view to fitting the students for higher command or senior staff duties. The course lasts about six months and two are held annually.
- (b) The Royal Naval Staff College.—The aim of the R.N. Staff Course is to give staff training and higher Service education, including a study of the other Services and world affairs, to selected officers who may be required to fill the more important staff appointments. Before 1963 there were two staff courses a year each of six months duration; one course every two years was open to foreign and Commonwealth personnel. In 1963 the course was extended to one year. A limited number of foreign and Commonwealth personnel now attend each course.
- (c) The W.R.N.S. Officers course.—This course is for cadets qualifying for the rank of third officer in the W.R.N.S.

5 February, 1964.]

[Continued.]

Student numbers and establishment

6. Courses at Greenwich vary in length from a few weeks to several years. The only practicable method of calculating the average total number of students at Greenwich is therefore to express the number on each course in terms of student-years as follows:—

<i>Course</i>	<i>1961-2</i>	<i>1962-3</i>	<i>1963-4</i>
(length of course shown in brackets)			
Naval Architecture (3 years)	33	27	21
Electrical Engineering Degree Course (3 years) ...	56	40	36
Staff Course (1 year)	46	35	51
Senior Officers War Course (6 months)	23	19	18
Lieutenants (Greenwich) Course (3 months)	39	33	30
Special Duties List Officers (6 weeks)	24	27	31
Advanced Marine and Ordnance Engineering (2 years)	11	13	12
Nuclear Courses (from 2 weeks to 3 terms)	11	15	31
W.R.N.S. officer cadets (1 term)	12	11	14
Supply and Secretariat Officers Advanced Course* (1 term)	9	9	—
Naval Ordnance Inspecting Officers Courses (2-3 terms)	5	3	4
Seaman Specialist Officer Advanced Courses (2-3 terms)	1	7	9
Instructor Officers (new entry) (1 term)	5	12	7
Miscellaneous Courses	17	3	13
	292	254	277

These average total numbers each include an average of 33 overseas student-years.

7. The establishment over the last three years was:—

	<i>1962-62</i>	<i>1962-63</i>	<i>1963-64</i>
Naval			
Rear Admiral	1	1	1
Captains	8	7	6
Commanders	18	18	18
Other Officers	32	32	30
Ratings	3	3	3
Civilian			
Scientific and Professional	39	39	41
Executive	4	4	5
Technical Classes	7	7	13
Drawing Office Classes	5	5	5
Clerical and Typing... ..	24	25	30
Other Civilians	251	260	256
TOTAL	392	401	408

*At Chatham 1963-64 onwards.

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[Continued.]

8. Costs

	1961-62	1962-63	1963-64
Personnel			
Officers	156,100	155,200	160,000
Ratings	3,500	3,800	4,000
Civilian Non-Industrial	124,900	125,100	143,000
Civilian Industrial	156,300	155,000	153,000
Stores, Furniture etc.	10,460	8,600	10,000
Maintenance and Repair			
Machinery and Equipment	4,500	8,500	9,000
Buildings and Works	84,900	77,500	68,600
Utilities			
Electricity, Gas, Water, Fuel (excluding M/T)	13,900	16,400	15,000
Motor and other Transport (P.O.L.)	600	900	1,000
Miscellaneous			
Rent	18,300	18,800	18,800
Contributions in lieu of rates	12,500	13,700	14,000
Telecommunications, Stationery, Postage	6,800	5,400	6,000
Lecture Fees	2,800	2,900	3,000
TOTAL	595,560	591,800	605,400

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[Continued.]

ROYAL NAVAL STAFF COLLEGE, R.N. COLLEGE, GREENWICH

The Staff College was set up at R.N. College, Greenwich in 1919. The aim of the course is to give staff training and higher service education, including a study of the other services and of world affairs, to selected officers who may be required to fill the more important staff appointments.

2. Before 1963 there were two staff courses a year each of six months duration; one course every two years was open to foreign and Commonwealth personnel. In 1963 the course was extended to one year because of the need to achieve uniformity with the staff courses of the other two services and so to permit an increase in the joint staff training content of the course. This is achieved by an exchange of visits with the other staff colleges and by joint exercises.

3. The Staff College occupies a part of the first floor and the whole of the second floor of the Queen Anne Building at Greenwich. It is administered by the Admiral President, R.N. College, Greenwich; the Director of the Staff College is a Captain R.N.

4. Number of students and establishment

The numbers of candidates who have attended Staff courses in the last three years are as follows:—

Course No.	R.N.	R.M.	Ad- miralty Civilians	British Army	R.A.F.	Com- mon- wealth	Foreign	Total
31. (20/3/61— 18/8/61) (3rd Inter- national)	20	1	1	1	1	6	14	44
32. (25/9/61— 25/2/62)	29	1	1	2	2	5	1 (U.S.A.)	41
33. (12/3/62— 10/8/62)	26	2	2	2	2	5	2 (U.S.A.)	41
34. (14/1/63— end 63)	30	2	2	2	2	6	8	52
35. (13/1/64— end 64)	27	1	2	2	2	7	6	47

5. There is no separate establishment of staff allocated to the College. The staff employed in the Staff College, including an assessed proportion of the administrative staff of R.N. College, Greenwich as a whole, was:—

	1961-62	1962-63	1963-64
Naval			
Captains	2	2	2
Commanders	8	10	10
Civilian			
Executive	1	1	1
Drawing Office Classes	1	1	1
Clerical and Typing... ..	8	8	8
Other Civilians	36	33	35
TOTAL	56	55	57

5 February, 1964.]

[Continued.]

6. Costs

The assessed proportion of the cost of R.N. College, Greenwich attributable to the R.N. Staff College over the last three years is:—

	1961-62	1962-63	1963-64
	£	£	£
Personnel			
Officers	33,320	37,260	38,000
Ratings	—	—	—
Civilian—Non-Industrial	8,170	9,770	10,000
Industrial	22,960	20,520	21,000
Stores, Furniture etc.	1,750	1,630	1,700
Maintenance and Repair Machinery and Equipment	690	1,260	1,200
Buildings and Works	13,250	10,290	10,000
Utilities			
Electricity, gas, water, fuel (excluding M.T.) ...	2,150	2,150	2,400
Motor and other transport (P.O.L.)	100	130	150
Miscellaneous			
Rent	2,860	2,570	2,600
Contribution in lieu of rates	1,950	1,870	1,900
Telecommunications, stationery and postage ...	1,060	730	850
Lecture fees	440	400	400
TOTAL	88,700	88,580	90,200

ADMIRALTY, S.W.1
29th January, 1964

Examination of Witnesses

Rear-Admiral J. M. D. GRAY, C.B., O.B.E., Director General of Training, Instr.
Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E., Director, Naval
Education Service, Mr. E. A. SHILLITO, C.B., Under Secretary, Naval Personnel,
and Mr. W. R. WILLIAMS, General Finance Branch I, the Admiralty, called in
and further examined.

Chairman.

451. We shall take what in our references are M.3 and M.4 dealing with the Royal Naval College and the Royal Naval Staff College. You tell us at the beginning of M.3 about the long history of the buildings of Greenwich. Are they suitable for the job?—(Rear-Admiral Gray.) I think there is not a quick answer to that. If you asked whether, if we started again, we should build something like a historical monument to house some of these courses, I think probably the answer would be no; but in as far as they are or can be and have been adapted to do the job, the answer is yes.

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452. Do you have the full use of the building or are you in a part of it only?—The Navy has full use of all the building.

453. Is it reasonably accessible from the point of view of people going out on courses and visits?—I think the very great advantage of Greenwich is its proximity to London. It is very well situated, yes.

454. When it is a question of visits for professional training, would you go to Chatham normally?—Are we talking now particularly about the Staff College?

455. I am just trying to get a picture of the set-up?—I think as far as the

C

5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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Staff College is concerned, the proximity to London is more important than the proximity to a naval port. Certainly from the point of view of distinguished people going to Greenwich, it is far better that it should be in proximity to London. The same really can be said of the Senior Officers War Course, although in the latter case they do visit the Portsmouth area and the schools.

Mr. Gurden.

456. Is this geographical situation terribly important in the joint activities you have with the other service colleges? Does it affect the situation?—It does not affect the situation inasmuch as from the joint point of view, of course, the proximity to London is not so important. In fact, of course, when they do joint exercises they all get together in Camberley. It is about 20 per cent. joint work, as I think you know, that the staff colleges do.

457. It is an inconvenient journey to Camberley, is it not?—I do not think it is particularly inconvenient. Obviously if you have a joint exercise or joint discussion—and these are carefully co-ordinated, of course, into the syllabus—then it is better to have it in one place, and normally Camberley can take it all.

Chairman.

458. You have eight departments, each headed by a professor. Is that professor paid as a civil servant or would he get the salary of a holder of a Chair in a university, or what sort of status has he?—(Rear-Admiral *Darlington*.) The salaries of professors, Sir, are negotiated with the Civil Service, but they are on the same plane. I do not think the pay of professors in Greenwich is any different from that of those ashore.

459. In civilian life?—Yes. (Mr. *Shillito*.) Professors at the College are definitely civil servants. (Rear-Admiral *Darlington*.) But they are paid comparably with a civilian professor in, say, any other university.

460. The numbers in their departments probably would be smaller?—Yes, in some departments; it depends.

461. In paragraph 4 you tell us about the research, and you say that the practical work of advanced students is in the

form of applied research. Could you give us some idea as to how the research fits in firstly with research in other places; and secondly, whether it is done by the same people who are doing the teaching?—Yes, Sir. As in any establishment of higher learning, the staff does engage in research. This is one way of keeping abreast of their subject, of course. The actual research effort is not very large because the numbers themselves are not large, but the Admiralty does provide a sum each year to further it. "Applied research" means that the students, for example, in the advanced course, fourth year, engage in experiments of an advanced kind; similarly, with the constructors, it is special design work and they each do a project. The long marine engineering so-called "dagger" course is engaged in specialised activities and in that sense they do research.

462. I think you said a sum is provided by the Admiralty to meet the cost?—Yes.

463. Is that based on an assessment of the actual cost, or is it just a grant in aid?—The sum voted, Sir, is and has been for the last two or three years £10,000 a year and I think probably you will find when you go to Greenwich next week you will be provided with details of that. I have it here, but I think you will be given a document which details it.

464. What I am working round to asking you is whether it is possible to deduct the research burden of the College?—That is a very difficult operation because you would have to cost the time spent on research as well as the actual equipment used. I think any college or any university of any pretensions at all expects its staff to engage in research and this is what they do at Greenwich. In fact, the contact hours, the amount of lecturing any professor or lecturer does in an outside university, are based on the assumption he is also engaged in some research of his own and this is the case at Greenwich.

Mr. *Anthony Royle*.

465. How many hours per month or per week would be applied to research by the professors?—I should not like to hazard a guess on individuals at all.

5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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466. What is the length of the vacations during the year which take place during the courses? Does much research go on during these vacations?—I should think probably not a great deal.

467. Do we know the length of the vacations?—Yes, we do.

468. Can we have the details?—I have not the exact term dates.

Chairman.

469. We shall probably get that next week?—You certainly will. I have not the exact dates, but it is normal university type time except that the Greenwich terms are longer than Oxford and Cambridge. In fact, from memory, the leave periods are three weeks, three weeks, then in the summer from July to mid-September which, of course, is much longer. However, as the Chairman says, I think the details will be given to you exactly next week.

470. What I am not quite clear about is whether the research is done there because it is thought it is desirable to keep the staff alive and interested in their subject; or whether it is fulfilling a need for the Admiralty?—Both sides, Sir. For example, let me say at once I think if you said, when you were advertising for staff, that no research was done at Greenwich you would get nobody of any calibre. After all Greenwich does have to compete for its civilian staff with other organisations of similar calibre and it is a recognised fact that anybody at that level is expected—not only is expected, but expects—to do research. The research done is certainly of interest to the Admiralty. If you look at the memorandum that you will be given to you next week, you will see a detailed list of the topics in which they are engaged and which are being done at the moment.

Sir John Langford-Holt.

471. What contact do you have with civilian firms? I am thinking of research at the moment. Do you have any liaison contacts with civilian establishments and firms?—I do not, but certainly the professors do, as any other normal professor would.

472. Do you have any system of cross-coursing with officers going to civilian
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firms for courses in the way of learning what is going on outside?—Certainly. One of the assistant professors, for example, has just spent a year in the Massachusetts Institute of Technology doing a special year. We also, of course, have very close contacts with civilian firms who engage in contacts with the Admiralty.

473. On the naval architecture side?—Yes, but there are a number of civilians from Rolls-Royce who are taking nuclear courses at Greenwich at this moment for obvious reasons.

Chairman.

474. The estimates show an expenditure on equipment and materials for research of about £17½ million for the whole Admiralty. What sort of part of that would be attributable to activities at Greenwich?—Quite a small part. (Mr. Williams.) You are looking at Vote 4, are you?

475. I am looking at something called "O" in Vote 6?—The answer is that none of this is for Greenwich. The £10,000 about which Rear-Admiral Darlington spoke is an amount under Greenwich estimates. It refers only to our research and development establishments.

476. Taking these general estimates with Greenwich, it would be fair to say that a very small part of the total Admiralty effort is involved?—(Rear-Admiral Darlington.) Very small, yes. I have the breakdown here of the allocation for research in the various departments: for example, physics, £2,500; naval engineering, £2,000 and sums like that. Again, you will get all this. There is a list of the sort of topics which are being studied, work initiated in water lubricated gearings and that sort of thing which is obviously of interest to the Navy; fatigue in metals and acoustic effects, all of which is obviously related to the interests we have.

477. Coming to the next paragraph, you divide the College into its three different parts. The Royal Naval War College has no comparable college in the other services?—(Rear-Admiral Gray.) No, Sir, that is true. It is the only course of its sort for all three services.

478. At what stage do students go to the War College?—In the Navy, shortly

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5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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after an officer is promoted to junior captain level; in the Army, at about the same seniority. Sometimes the Army will rank up to brigadier and, indeed, the Navy sometimes send Flag Officers.

Mr. Gurden.

479. Does age enter into this?—Only inasmuch as if you are very bright, you are promoted earlier, of course. But it is done on rank, not age.

480. And academic qualifications?—No, not as far as the services are concerned. Once you are in the Navy, your academic qualification does not necessarily get you into the War College.

Chairman.

481. Is it something peculiar about the Navy which makes this extra tier in the structure necessary, or is it just that you think it is better?—How do you mean, Sir, "extra tier"?

482. If you take the Army, you have the entry at Sandhurst; then you have the keener young officers going to the Staff College; then, as I understand it, the more mature officers go either to the I.D.C. or to Latimer for joint courses. As I understand it, you have Dartmouth as the equivalent to Sandhurst; you have the Greenwich Staff College equivalent to Camberley?—And this course is equivalent to the I.D.C. and will take people from the Army and the Air Force. The difference between us and the I.D.C. is the security grading; the war course has a higher security grading than the I.D.C. and it is only six months as opposed to a year. A naval officer might be appointed to the I.D.C. or, if the Navy had not got as much allocation as they would like to send people to this type of course, he would go on the War Course.

Mr. Anthony Royle.

483. Does this mean you do not have Commonwealth officers on the War Course, but they go to the I.D.C.?—That is correct.

Chairman.

484. Is your proportion of places at the I.D.C. less than a third?—I do not know the actual allocation, but there is no doubt that the War Course is a very good way of getting more officers into this type of strategic thought. It is used by the other services as well, of course.

485. Equally, or just for a few? At Camberley, one gathered there were a few officers from the other services, but basically it was Army. Is that true for the War Course?—The War Course has more Navy than it does Army or Air Force. The I.D.C. has, I should say, perhaps rather more Army than Navy, but I do not believe it has more in proportion to the number of officers it has in the services. I think there is a proportion depending on the number of officers there are in each service. But it is true to say the War Course has more naval officers than Army or Air Force.

486. Is the course as much inter-service as the I.D.C.?—Yes, it is.

487. It is not specifically a naval course?—No, it is very much inter-service, although naval professional subjects are also studied.

488. By the Army and Air Force?—Yes.

Sir John Langford-Holt.

489. Can you give me a rough estimate of what percentage of the war course is naval?—(Mr. Shillito.) I think we had better give you a note about that, Sir.

490. I see that at the War College you study strategic and technical aspects of war; I see in paragraph 2 of your memorandum the subjects which you study and I see in paragraph 3 the specialists for whom you cater. I do not see any mention, with the exception of ordnance inspection officers, of gunnery. That presumably is because it goes on at Whale Island?—(Rear-Admiral Gray.) Gunnery does take place at Whale Island, but there are advanced gunnery courses, or what are known as "dagger" courses, which do take place at Greenwich. (Rear-Admiral Darlington.) There are two courses concerned with gunnery: advanced ordnance engineering officers and advanced gunnery officers. These consist of quite a small number of officers each year.

491. Can you really separate gunnery, for example, in the context of war from torpedo and anti-submarine communications?—(Rear-Admiral Gray.) No, you cannot, but you will see if you look to the next page of the memorandum, seaman specialist officer, advanced courses and that includes gunnery, communications, and Torpedo Anti-Submarine.

5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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492. The other conspicuous omission, for which there may be a perfectly good reason, is that I do not see any mention of air officers or Fleet Air Arm at all in this memorandum. How is the staff side of Fleet Air Arm officers' activities catered for?—A Fleet Air Arm General List officer is a General List officer; that is to say, his career is planned so that he flies and can command ships and he does a certain amount of general service time. You would find a Fleet Air Arm officer as a senior officer attending the War College; and you would find a Fleet Air Arm officer as a commander, say, attending the Royal Naval Staff College; and you would find a junior Fleet Air Arm pilot, say, attending the lieutenants' (Greenwich) course.

493. What happens to the others who are not naval officers who are doing Fleet Air Arm duties?—Supplementary List?

494. Yes?—A Supplementary List officer is entered on a short service commission to fly aeroplanes. That is his job.

495. He does not go to Greenwich at any time in his career at all?—Not normally.

496. Is there any way in which he can?—He could transfer to the General List if he is selected, in which case he would then come into the normal stream.

497. What about the study of air subjects which would be very relevant to naval warfare?—This is, of course, very much studied in the Staff College and is, indeed, studied in the War College in the context of overall maritime/air subjects.

498. Torpedo I see, and anti-submarine; where does that leave, for example, H.M.S. Vernon?—Vernon is the Torpedo Anti-Submarine school and it is there where the basic courses are taught and, of course, the long TAS course still runs at Vernon.

499. Is Vernon today on exactly the same basis as Whale Island?—Yes, indeed.

500. What is the air equivalent of those two, if any?—I suppose the nearest air equivalent to Vernon and Whale Island would be Yeovilton, Lossiemouth and Culdrose from where

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the various types of aircraft are operated.

Chairman.

501. On the Staff College, you tell us the course was originally one of six months, and you give two reasons for extending it. One is that it fitted in then with the other services; the other is that in order to provide the inter-service training, it was necessary to extend it. Which is really the dominant reason?—I think the predominant one was that it was decided that the staff courses of the three services should be of the same length and should be of the same comparable importance. This was a Ministry of Defence ruling and we came into line with the other two services. That, I should say, is the predominant one. Of course, one of the reasons for that was so that more inter-service staff study could take place.

502. We are interested in this from the point of view of economy. It is a startling argument to say you are prepared to double your costs, because that is in fact what you do if you have one course a year instead of two, just in order to be tidy. If you say in answer to that, "Well, it was desirable because of the growth of awareness of inter-service problems",—I do not want to put words into your mouth . . . ?—You are not going to, Sir, and I am not going to say them. I give you what I understand were the reasons.

503. If you went back to the six-monthly course, would you lose much?—We should lose the inter-service content, yes, undoubtedly.

504. But the thought of that does not keep you awake at night?—Not actually. I think it would be a pity if the inter-service content of the staff course, with the growing importance of inter-service operations, was in any way reduced. I believe there would be no going back now and I believe we are right to do what we are doing.

505. Could you get any inter-service training into a six-monthly course?—Yes, but it would have to be of a very superficial nature. (Rear-Admiral *Darlington.*) It is true to say, Sir, that since the changeover to one year, there is a larger number of officers on the staff course than there was in the past. (Rear-Admiral *Gray.*) That is true.

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5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
Mr. E. A. SHILLITO, C.B. and Mr. W. R. WILLIAMS.

506. In looking at the figures in paragraph 6, which deals with the number of people taking each course, there is a slight discrepancy that puzzled me. If one looks at the electrical engineering degree course for 1963/64, you give a figure of 36?—Yes.

507. I should have given you the 1962/63 figure, 40, which is comparable with the figure I am going to quote: the Civil Lord gave an answer to a question here in about the summer of 1963, which would be the 1962/63 year, of 33. I do not know whether you can help us to reconcile those two figures?—(Mr. *Shillito*.) The first point to make on this is that the figure here is an average figure throughout the year. Could I ask Mr. Williams if he knows anything more about this? (Mr. *Williams*.) This is an average figure for the whole year and during this period there was a change—I think Rear-Admiral Darlington can tell you more about this—in the course. There was a three-year course going out on the electrical side which made it difficult to average. It is impossible to compare this figure with the numbers at any one point during the year because of the variations during the year.

508. But could you apply to this 40 the same measure of the number in each year which was given in the answer to the question? You would have to use the 33 for that purpose and take it at a moment in time?—(Rear-Admiral *Darlington*.) I think if you average over the financial year, as you know, Sir, that differs from the academic year. The number of officers was reduced at Greenwich because, as you know—I think we mentioned this at our last meeting—the uniformed naval contingent now do their degree course at Manadon. Therefore, the numbers on the engineering course at the moment are all civilians. I cannot explain the exact reason for the discrepancy, but if you would like, I think we can get it. (Mr. *Shillito*.) I am sure we could give you a note on that.

509. I do not know it matters very much except that 40 was more in your favour than 33 so far as the number of unfilled places was concerned?—(Rear-Admiral *Darlington*.) I think perhaps the Civil Lord was giving the

amount at a given moment rather than the average over the year.

510. He also gave the distribution between the years: 2 for the first year, 11 for the second and 20 for the third which implied there is a very drastic tapering off?—Would you like to hear the story of this, Sir?

511. Yes?—The decision was taken that all naval uniformed officers, as I have already said, should do their engineering degree courses at Manadon. It has always been the case that in addition to those at Greenwich who were in uniform were the people called P.A.E.E.s, Probationary Assistant Electrical Engineers, who were, in fact, people from the dockyards who were going to enter the Admiralty civilian Engineering service; and also one or two additions which I shall come to in a moment were in the group. Therefore, when the uniformed party disappeared in the first year there were only two of these P.A.E.E.s. We recognised that this was a bad thing and we could not let it go on, so we have taken steps since to increase the number of people in the first year and in fact the number at this moment is 11. The first year you were talking about as having two is now the second year and the number in the present first year is 11.

512. The number in the second year then was 11, so that would be the third year?—Yes, two or three chaps in fact did not succeed, so they have gone round the buoy. There are actually 15 in the third year at the moment. So the numbers at the moment are, 15 in the third year, two in the second and 11 in the first.

513. It has gone up, not down?—Up, yes, and we have been endeavouring to do this.

514. It has gone up in the third year, because the figure here was 11 for the second year, and it is not the people that failed?—The people who came back from the third year that has passed out have been put back; one or two have gone round the buoy again or, rather, have been put back.

515. So that you could fill up the complement, what would be the maximum you could take on the degree course in the year?—The optimum number with the present staff is 16 in each year.

5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
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516. Which is slightly under the maximum that you have achieved?—It is slightly under, but we are making considerable efforts to improve this situation. To begin with, the Ministry of Public Building and Works has, I think, three students in the first year at the moment. The Royal Naval Scientific Service has either one or two. Also you may know, at Shrivenham there is a scholarship scheme whereby Government civilians can be offered scholarships and this has now been extended to Greenwich. There are also Ministry of Defence bursaries which can be granted to people within the service, to assistant experimental officers and experimental officers. By all means, we are doing our best to fill up the course and I think we shall probably succeed.

517. If you increased the number, would that mean a very substantial increase in staff?—We can take up to 16, Sir, without making any change in the staff at all.

518. If you wanted to double to 30?—This would raise a very nice point. If the additional students were what I might call “pure” civilians, then, of course, the Board of Admiralty would have to consider whether to increase the naval vote to pay for lecturers to take in “pure” civilians. But what we should prefer to do, Sir, is to fill up our course with what you might call Government civilians, namely, those in the Ministry of Public Building and Works, the Royal Naval Scientific Service and so on. This is what we hope to do and what we are trying to do now with some success.

519. Have you thought at all about including fee-paying civilians?—We have, yes. Again, Shrivenham has recently offered places, I believe, to boys who have no connection with the Government service. They have agreed these boys should be able to use their grants and Shrivenham are going to require no fees. We are a little concerned about the security aspect of Greenwich because a great deal goes on which has a security content. As I have already said, we should prefer to fill up with civilians who can be vetted rather than with civilians who have no allegiance whatever to the Government service, and therefore there might be some difficulty

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in security. We are at the moment exploring this possibility.

520. Is there any limit below which you will not let a course go?—In the courses which we have mentioned already, such as the advanced gunnery course, the advanced communications course and the advanced marine engineering course, the numbers will always be two or three or four or something of that order simply because larger numbers of officers are not required in that particular group. On the other hand, if you say, “Ought we therefore to stop the course?” the answer is no, we could not, because we must have these people. There is nowhere else in the country where we could train them because we dovetail the course to suit ourselves, therefore, although the numbers are small, from the naval point of view it is both essential and well worthwhile.

521. How many does it take to train two? Is this a part-time job for a number of specialists who are also doing other instruction; or is it a whole-time job for even more specialist people than these specialists?—What are we talking about, Sir?

522. Advanced gunnery where you can only hope to have about two?—Or three: you have one expert who is in charge of them, but he does not concentrate only on that. He can be used in other courses. Of course, the main departments—for example, mathematics, physics, electrical engineering, applied mechanics and so on—are used across the board in all courses. For example, the advanced ordnance engineering course has six sessions a week from applied mechanics, four from metallurgy, nine from naval architecture, six from electrical engineering and so on. I think there is one advanced man on the staff, but he does other things.

523. Would it be possible—maybe it will be in this document we are going to get next week—to have an analysis of the staff showing the number of teaching hours they do?—I have it here, Sir, but you can have it next week, I am sure. The analysis shows the actual number of periods taken by each department of the College and to whom they do the teaching.

Chairman.] I think the Committee would find that very helpful.

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5 February, 1964.] Rear-Admiral J. M. D. GRAY, [Continued.
C.B., O.B.E., Instr. Rear-Admiral C. R. DARLINGTON, B.Sc., A.M.Brit.I.R.E.,
Mr. E. A. SHILLITO, C.B. and Mr. W. R. WILLIAMS.

Mr. Anthony Royle.

524. Would that include time for research or will we get that next week?—Time for research is obviously not included. That is what a chap does in the time when he is not teaching.

Chairman.

525. Could you tell us what is done in the course on naval architecture? That rather interested me because we spent quite a happy time in the dockyards not very long ago and we saw then a lot of naval construction?—Of course, the naval architecture course is the Constructors' course; the two are synonymous. One calls the chaps who are learning Constructors; and one calls the chap who trains them the professor of naval architecture, which is the same thing.

526. Where are these going eventually? They are not going into the dockyards?—There are two main functions of the Naval Constructors. One is to design ships, and I think—I should not like to be specific here—quite a number are in the central organisation at Bath. Others work in the dockyards. (Mr. Williams.) They are interchangeable. (Rear-Admiral Darlington.) Yes, I think about 50/50 is the actual distribution of the course. The Constructors' course at Greenwich has lectures from the applied mechanics department, the mathematics departments, the naval architecture department, the naval engineering department and the metallurgy department; in other words, spread across the board, as you might expect.

Sir John Langford-Holt.

527. Have you one of those experimental tanks?—Not at Greenwich.

528. Is it possible to study naval architecture without one?—There is a very large naval tank at Haslar, as you probably know. I believe it has been the dream of the man who runs the course to have one, but it has never been achieved.

529. Do you use the National Physical Laboratory?—I think Haslar does, but I should not like to make more than a guess on that because I do not know.

Chairman.

530. Is there direct entry for graduates into the Navy apart from Greenwich?—Yes, Sir, there is. If you looked

at the *Observer* or *The Times* about three weeks ago, you would have seen quite a large announcement about graduate entry into the Seaman branch. There is also direct entry into the engineering branch. It is quite small.

531. These are people who have taken a degree in engineering without entering the Navy at all who then subsequently decide they would like to join the Navy?—There is an avenue, Sir, yes.

532. How are they fed in with the people who are coming up the hard way?—They would enter with a degree, which is the way we get a chap who comes in normally where we hope to get him at the end of about three or four years; then he would do what we call application courses in marine or aeronautical or ordnance or weapons or radio engineering. He would join up with the other chaps who had done their degrees and do the application course. He would first of all do a short course of general naval indoctrination, I think, would he not? (Rear-Admiral Gray.) Yes. I think there are two separate things, Sir. There is the graduate entry into the Seaman branch for a man who is going to become an executive officer, and here we shall try to get him to sea as soon as we can; then we should bring him back, in fact, to Greenwich for a term. Then he would go to the schools where he would learn the technical side of the seaman trade. The engineer would do the application course, most of which is done at the Portsmouth school, and we should give him a period of indoctrination into naval traditions, customs and the like. That would be done probably at Portsmouth in this case.

533. If you could choose and could get everybody you wanted by direct graduate entry, would that on the whole be a cheaper way of doing it?—I do not know it would be a cheaper way of doing it. Of course, we are becoming more and more interested in the post-graduate entry, what with the Robbins Report and the tendency for everybody who can to try to get a degree. But we still regard, and I think should regard for some time, the entry of the 18-year old as the main way into the Navy. We believe that this gives the best overall naval training still.

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534. It might well be, in fact, if you had got the finished product you would not have the cost of paying for him in these small groups?—(Rear-Admiral *Darlington*.) The main body of naval training, of course, as you know, Sir, is done in pretty large groups. We are talking here about the post-graduate training really. (Rear-Admiral *Gray*.) Yes.

535. What I was trying to compare was someone brought to degree level at somebody else's expense—possibly public funds not on your vote—and someone who has come right through from 18?—It would be cheaper from that point of view, yes.

536. Is the electrical engineering degree course you do at Greenwich a straightforward degree course? It is the London degree, is it?—(Rear-Admiral *Darlington*.) Yes, external.

537. Does it have a special naval bias to it?—Certainly the civilian element which is now the one that remains at Greenwich is usually very bright, and they do more during the three years than they would be required to do for the degree. They do particularly additions in subjects like radio. They also stay for a fourth year post-graduate course at Greenwich, and there are at the moment seven on that course.

538. Not doing research, but doing what?—Doing, if you like, applied research in the sense that they are doing additional courses of an M.Sc. standard which are specifically aimed at naval equipment and processes and procedures.

539. You told us, for example, that in the third year some have to go round the buoy again?—There are the naval uniformed people.

540. Not the civilians?—No, because, after all, if a chap had done his three years at Greenwich, although the naval section is moved to Manadon, nevertheless if he had to do something about it, it would clearly be better to do it again at Greenwich than move off and do it at Manadon. This is an effect which is now cleared up.

541. He would have gone on normally to Manadon?—For the application course.

542. Are those quite separable as regards staff?—The Manadon course, Sir—we have not talked about Manadon

at all—consists of three years' straightforward degree course, or equivalent, then application courses which are entirely naval. Whether a man goes to Cambridge or to Greenwich or to Manadon, he always does his basic application courses at Manadon.

543. After he has done his degree course?—Yes.

544. Is there not a case for having one place for the Manadon and Greenwich people together. That is what is happening now?—With the naval uniformed contingent who all go to Manadon, Sir, yes, *in toto*.

Mr. *Gurden*.

545. If you took university people in, would you not assess the loss in quality of naval training from the age of 18 as considerable?—(Rear-Admiral *Gray*.) On the Seaman side, I think there would be a loss, yes, we recognise this. But we are dealing with a more mature mind and we should hope that he would be able to absorb more in a quicker time. We have no experience of this yet. We have not yet got our first graduate into the Seaman side. But I do agree that we have to compress his professional naval training as against his 18-year old opposite number so that he will not suffer for promotion as he goes up the tree. Here is a balance which we have to strike; we hope that we have struck the right one, but we may have to amend it as a result of experience.

546. But you would not like to go to a very heavy proportion of graduates?—I think we want to keep the proportion comparatively small to start with and then I think it may well increase.

Chairman.

547. I see you have an Instructors' course of one term. There are seven Instructors. If that is seven for a year, that is 2½ each term?—(Rear-Admiral *Darlington*.) No, Sir, the Instructors' course lasts for one term.

548. This is an Instructors' term average, is it not?—Yes, but as a matter of fact, the number there, seven, is small. There is a new course every term.

549. If there is a new course every term, then that means there are only 2½ each term?—No, seven or more a term.

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550. This is seven students a year? —(Mr. Williams.) It could be 21 for one term and none for the other two terms, an average of seven. (Rear-Admiral Darlington.) This varies. In one term, in fact, there was no course last year. It depends on the type of entry. Again, we have altered the entry type training of Instructor Officers because last May we began sending the majority of them for one term to Dartmouth. I think we mentioned that. This changeover occurred then. We only send to Greenwich those Instructor Officers whom we think require a particular course before they go out and do specialised jobs. There are eight on course at the moment this term. That seven may actually be an underestimate. If there are seven each term, Sir, then the average over the year would be seven because it is the average at any one time. If you count up the total number of officers who went through last year, the answer is 647, the number of actual individual bodies who went through.

551. You divide by three to get the number over the year?—No, if there are seven this term, seven last term and seven the term before, the average number per term is seven.

552. Are these people drawing their instruction entirely from people who are otherwise occupied?—The Instructor Officers mentioned here are Instructor Branch of the Royal Navy and they are pupils for this time, yes.

553. But they have not got their own special little group of teachers who are training them?—No, they have one chap who is responsible for them, but he does other things as well.

554. I am trying to feel my way towards seeing how far all these odd little things going on are, in fact, being wasteful in terms of staff?—I understand that, Sir. There is an officer who is responsible for the Instructor Officers' training. He is known as the course officer. He also lectures on other things.

555. Do you use the degree courses of the other services at all?—We send one or two people to Shrivenham, but not for the degree course; we send them to Shrivenham for the guided weapons course. We do not send anyone to

Henlow at all, but one or two specialist air engineer officers are sent to the College of Aeronautics at Cranfield. That is all we use the other services for.

556. In paragraph 7, you give the establishment. I should like to ask you if it is possible to analyse these between those who are actually engaged in the work of instructing and those who are doing other duties in Greenwich?—Again, Sir, when you get to Greenwich next week you will be given a piece of paper showing what everybody does in detail. It is about five pages long.

557. I hope it will be duplicated? —This is included in the piece of paper you are going to be given.

558. Can you tell us when the college was last inspected for establishment purposes by the Admiralty?—I cannot tell you when the last one was; I can tell you the Commander-in-Chief, Portsmouth, who is the responsible Commander in Chief, is going to inspect Greenwich in March.

559. Is that a thorough inspection, going into work analysis and work study?—He will inspect the purely naval side as opposed to the academic side; by "naval side", I mean the war course, the lieutenants' course and so on. (Rear-Admiral Gray.) This is something which has been going on for about two years, Sir, and it is, in fact, called a training efficiency inspection and it looks particularly at the sort of staff/student ratio, number of hours and that kind of thing.

Sir John Langford-Holt.

560. He brings people with him presumably who do this?—Yes, he does have a staff, and the training organisation always provides somebody as adviser as well.

Chairman.

561. Is there any comparable exercise for the instructing side?—(Rear-Admiral Darlington.) No. There is one very powerful governing factor, of course, and that is the naval vote; we are very anxious to keep the cost down and I am responsible for the academic side and people. Before we allow any alterations in staff or increases in staff, we look very closely indeed at the load

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so from that point of view I think you can say the teaching load and the staff to provide it is under continual review all the time.

562. Do you draw at all on the experience of the comparable colleges either in other services or outside?—Yes, Sir. There is something called the Naval Education Advisory Committee whose chairman is Sir John Baker, who is the Professor of Engineering at Cambridge, and the total number on the Committee is about 11. There is a sub-committee for each of the three colleges. The sub-committee for Greenwich is headed by Sir Willis Jackson, who is Professor of Engineering at Imperial College; Sir Arnold Plant, who is the Professor of Business Administration at the London School of Economics; and Professor Diamond, who is Professor of Engineering at Manchester. They visit the College, and, in fact, the other sub-committee for each of the three colleges, committees, the details of which I can give you if you wish, also visit the other colleges and we have meetings in the Admiralty to discuss this. Admiral Gray and I are ex-officio members of this Naval Education Advisory Committee, and we do get most valuable advice from them on our relations with outside organisations and so on.

563. What about the residential side? Do you look at all at the sort of proportions of staff and so on in civilian colleges?—Residential, Sir?

564. You have people living at the College. You have dealt with the professional training, with the academic instructing and the third arm presumably of a residential College of this sort is the whole living problem: accommodation, food, cleaning staff and so on. Do you pick the brains of people who are doing this in training colleges?—I should not say we do to the same extent. (Rear-Admiral Gray.) Also, I think we are bound by the fact that this College is an Ancient Monument which does not make it very easy, having compared, to do much about it. This I think you will see when you go down there.

565. Of course, there are colleges which have all the disadvantages of being Ancient Monuments?—(Rear-Admiral Darlington.) Cambridge is full of Ancient Monuments. (Rear-Admiral

Gray.) I think it is very difficult to compare Ancient Monuments.

566. Do you think it is the maintenance or the fact that the building is badly designed?—(Rear-Admiral Darlington.) To start with Sir, the walls are several feet thick in places. If you want to move anything, it is a very considerable engineering operation. We are at the moment, as you will see when you come, engaged in increasing the size of the nuclear department because of the very large increase in the number of students who will be going there and are going there. This is quite a problem.

567. Are maintenance and repairs done on the spot?—No, it is done by the Ministry of Public Building and Works.

568. Do they keep a permanent staff there or bring in people?—I think they have one residential man, but I am not sure about that.

569. I notice that your transport costs are lower than they are at Dartmouth. Is that because your travelling is done more individually on the underground, or does that cover the cost of taking people out on visits and inspections?—(Mr. Williams.) I think generally there is less travelling from Greenwich than there is from Dartmouth. You do not get the problem of moving stores, for example, at Greenwich so much.

570. Are the lecture fees which you mention of £3,000 for odd visiting lectures, or is it university staff coming down to help out on special classes?—(Rear-Admiral Darlington.) These are special visitors, Sir, of various sorts who do lectures.

Sir John Langford-Holt.

571. In paragraph 7, can you explain why it is that the naval element has gone down since 1961/62 from 62 to 61, then down to 58? What is the explanation of that?—The academic staff are composed partly of civilians and partly of naval Instructor Officers, and the proportions vary from time to time. I do not think that is very significant one way or the other.

572. Why, during the same period, has the civilian staff gone up then?—(Rear-Admiral Gray.) I think for that

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reason: you have a civilian chap instead of an Instructor Officer. (Mr. Shillito.) I do not think there is any particular significance to that.

573. The naval element has gone down from 62 to 58, that is four; whereas the civilian has gone up at the rate of 10 a year. If you cut out Other Civilians, which for all I know might be manual workers, you are left with a rise from 79 in 1961/62 to 94 in 1963/64?—I can explain six of those straight away. Three are due to civilianisation of posts and three are telephonists whose status was changed from industrials to non-industrials so they come into a different category. But I cannot give you any detailed explanation for the rest. (Rear-Admiral Darlington.) I can tell you: the reason partly for the rise in civilians is the great increase in the nuclear department which has required more experimental officers and scientific assistants to man the laboratories and, of course, the Jason Reactor: this is a live reactor down in Greenwich which requires one or two people to look after it pretty carefully. The answer is that in addition to what Mr. Shillito said, there are rather more scientific assistants than there were. As regards the naval officers' reduction, I can only suppose we have been very economical.

574. I think Admiral Gray mentioned the matter of course officers and other instructing officers. When we were down at Camberley, the commandant told us that the course officer, or the equivalent to a course officer, changes about every two years, and he expressed the personal view that that was certainly long enough, because they were worked so hard, which one can perfectly readily believe having seen what they had to do. How long are your course officers at Greenwich and how long are the other instructing officers there?—(Rear-Admiral Gray.) The course officers for such things as the war course, the staff course, the lieutenants' course and the S.D. officers' course would not be regarded in any different light from any other appointment normally. I should say on an average it is 2½ years for instructing officers and those who take the advanced courses. (Rear-Admiral Darlington.) The officers who

teach the advanced scientific courses stay longer as a rule. For example, the nuclear course has been building up very sharply in the last three years and there are people on the staff there who have been there three years or more.

575. I am not trying to suggest, of course, that your officers do not work as hard as the Army officers do at Camberley?—(Rear-Admiral Gray.) I think there is a nice balance here: continuity, but not flogging the man till he is no good.

576. I was a little surprised, I must say, when the commandant said two years was, in his view, enough. I am a little concerned about this question of what one might call a proliferation of courses going on everywhere and I am wondering whether we can say in point of fact we have looked into the staff colleges so far as the Navy is concerned leaving out places like Excellent, Whale Island, Yeovilton and Lossiemouth?—I should like to get this quite clear. The Staff College here compares exactly really with Camberley for the Army and Bracknell for the Air Force. The other schools you mentioned really have no exact comparison, I think, in the other services. I suppose you can say Bovington, where they teach people to drive tanks, might in some way be the same as Yeovilton where they teach people to fly aeroplanes, but I do not think there is an exact comparison. There is an exact comparison in the staff colleges. The difference here is that we are being more economical, if you like, because we include the Staff College in an establishment which has a proliferation, as you say, of different courses. Therefore, of course, we can make use of the common services for the Staff College which covers all the rest of the activities. This is very economical for us.

577. On the subject of buildings, we got the impression certainly at Sandhurst and Camberley that these institutions were bulging at the seams and working under difficult conditions. Reading through your memorandum, one does not get quite the same impression?—I think an advantage of Greenwich as such is that the Staff College is not quite so bursting at the seams; mind you, our number is much smaller. The Staff College, in fact, as

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you will see when you go down there, really fills up one floor with syndicate rooms and lecture rooms, but things like the dining rooms, of course, are shared with all the rest of the College activities. This, we think, is very economic.

Chairman.

578. And the second floor of the Queen Anne Building?—Yes.

Chairman.

579. You mentioned that these three were comparable. That, therefore, leads me to ask how far you do, in fact, go in step with the other services in the staff colleges. Do you keep in touch with them?—Very much so. There is this joint service training, of course; and they are now starting, I think I am right in saying, in April a joint service manual so that staff work in the future is going to be on a joint basis. But on top of that, of course, the staff colleges learn their own profession and here naturally enough there must be separate parts, because they have to become professional naval staff officers, professional Army staff officers and professional air staff officers. However, there is a great deal of inter-service co-operation and a great deal which is now—and becoming more and more so—standardised between the services: I mean such things as even the way you write a letter or the fact that the Army talk about 1800 hours and

we used to leave out the “hours”. That type of thing is becoming standardised.

580. What about new problems of a strategic kind or whatever they may be which are suddenly created for you, and you have to get that filtered down to the work of the staff? Do you discuss with your opposite numbers the way in which this should be done and compare syllabuses of training?—I did not quite get the question?

581. I was thinking of any problem which will affect the sort of work you are doing at the Staff College level, the changing situations which arise and experience of operations? How do those filter down to the work of the Staff College itself?—Of course, the directing staff are in touch with their own Ministry and outside lecturers come from their own Ministry and from other Ministries as well, so they would get this sort of information first-hand, so to speak. (Rear-Admiral *Darlington*.) Also I think the directors and the directing staff of the Staff College are changing quite rapidly, so they bring new thoughts with them. (Rear-Admiral *Gray*.) Yes, within their own sphere, but I think they keep pretty well up to date.

582. Thank you very much, and we look forward to seeing Greenwich next week?—I hope you enjoy yourselves, Sir.

WEDNESDAY, 12TH FEBRUARY, 1964.

[*The Sub-Committee met at the Royal Naval College, Greenwich.*]

Members present:

Mr. James MacColl, in the Chair.

Mr. Anthony Royle.

Mr. W. A. Wilkins.

Rear-Admiral M. C. MORGAN GILES, D.S.O., O.B.E., G.M., Admiral President, Captain D. K. BUCHANAN-DUNLOP, D.S.C., R.N., Captain of the College, Instructor Captain V. LAMB, B.Sc., Dean of the College, Captain A. W. F. SUTTON, D.S.C., Director of the Staff College, Captain H. C. J. SHAND, D.S.C., Director of the War College, and Mr. H. F. GROVES, Secretary of the College, called in and examined.

Chairman.

583. Admiral, perhaps you would introduce your colleagues to the Sub-Committee.—(Rear-Admiral *Giles*.) I

am ultimately responsible for what goes on here in all respects and I have a slightly special relationship with the War College in that I am appointed as President of the Royal Naval College and

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also President specifically of the Naval War College which has had a slightly autonomous constitution from its very foundation in 1901. Captain Buchanan-Dunlop is responsible in the same way specifically for the Lieutenants' Course and the Special Duties Officers' Course. Captain Lamb is Dean of all the Academic Departments. Then we have with us Captain Sutton, Director of the Staff College; Captain Shand, Director of the War College; and Mr. Groves who is the College Secretary and responsible for the civil establishment side in particular.

584. Thank you very much. I ought perhaps to say this is a Select Committee of the House and therefore you are protected by Parliamentary privilege before us. Everything that is said is taken down; you will get a copy of the proof of evidence and if there is anything you think is wrong you can draw attention to in the proof. If there is something that you would rather not have published on security grounds or for other reasons, you can sideline it, and if the Sub-Committee agrees, it will not appear in the public copy. We would rather you spoke quite frankly than be inhibited by the fact that a note is taken.—Thank you very much.

585. Thank you for this document which you passed round; we are very glad to have the statistical information at the back. We have not been able to absorb it but we will look at it later on. I wonder if you could begin by telling us exactly what your relationship here is with the rest of the site at Greenwich? Do you have a tenancy of the whole of it or is there a clear defined area that you occupy?—This is of course negotiated by the Admiralty and not by the College as such. On the map (*indicating*) we go right down to the River Thames. Our boundary on the east is Park Row, except that we have Trident Hall which you have not seen, and Trafalgar Quarters which is the senior officers' accommodation. We also have *that* block *there*.

586. Has that got a name?—It is the Applied Mechanics Laboratory to be built there; that is to replace the old Applied Mechanics Laboratory which is now outmoded and that was down *there*.

587. Just north of the hospital?—Yes, that is right. When we have the

new Applied Mechanics block there, *this* we will be able to use as additional classrooms. These huts will be pulled down, they are an eyesore; there is no intention to leave them, they are a hang-over from the war.

588. Do you have any difficulty in doing your extra building and does the fact that this a scheduled site affect your building?—It would, because this is a scheduled ancient monument.

589. In fact, you have been able to do more building, though?—Not actually on this site. *This* is outside our radius, you see.

590. What is your total acreage?—I am afraid I do not know; I will let you know that.

591. What sort of proportion of it is occupied by your buildings?—As shown on the diagram, the buildings occupy it completely, do they not?

592. Yes. Is the maintenance entirely a matter for the Ministry of Public Building and Works?—It is entirely done by them. They are responsible for the appearance and the condition of the fabric, the outside, and if we want work done internally as tenants, the Admiralty can requisition them to do it.

593. As far as you can see the future of the College, have you got enough sites for any further building that is required? You mentioned one or two immediate programmes?—I think the site where the Applied Mechanics Laboratory is going to be built is the last site that we have available to us at present. We could of course pull down Trafalgar Quarters and build a new one there, I suppose. All these would have to be with the agreement of the Greenwich Hospital Estates who are the landowners. I think we should be inhibited from building anywhere in the main site because of the aesthetic considerations of maintaining this block of buildings, which has sometimes been described as the finest block of buildings as such in Europe.

594. What was the effect of Manadon upon your accommodation problems?—It eased our accommodation problems to some extent in that a number of our Electrical Engineering classes in particular were moved away to Manadon

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so that the Electrical Engineers and Marine Engineers should be trained under one roof down there.

595. What has happened to the accommodation they have released here?—There is a small amount of single officers' living accommodation vacant. The figures are on the note at the foot of page 3. How many are there living in now? I shall have to ask the Warden. The total number we can conveniently accommodate is 282, and if we double up to the maximum acceptable we can increase that to 317. There are in fact in the College at the moment 304 students, but that does not mean that all the living accommodation is absolutely full because a number of married officers live out.

596. Married students?—Married students, and married staff, of course.

597. Do they have to find their own accommodation if they are living out?—Yes, they do, entirely.

598. Is that easy in this part of the world?—No, it is a great difficulty. It is very difficult to find suitable married accommodation for officers within the allowances for hirings which the Admiralty grant to officers. There is no married accommodation as such at my disposal for students or staff except for the handful of staff who live actually in Greenwich College.

599. Is there any machinery for helping students to find accommodation? Is there a lodgings bureau?—There is an unofficial lodgings bureau run by the College, yes; and to a large extent officers hand on the accommodation they have got to the next ones who follow on the next Staff Course. A man has a flat for a year and he tends to hand it on to the one who comes the following year. But it is not entirely satisfactory or, I think, sometimes particularly easy for the foreign officers to find suitable accommodation when they come to the country, sometimes with their families; they have a good deal of difficulty sometimes in getting a suitable place.

600. Do some of them have a long way to travel to get here?—Some do.

601. If they can get here by car is there somewhere to park the cars?—Yes, we

can park the cars within the building; it is a bit of a tight squeeze but we have no outstanding difficulties at the present time.

602. How do you find the Greenwich site in regard to contact with other Naval Stations where you are going to make visits and so on, and also the other Services? Are you remote or well placed?—The overriding factor here is the advantage of being close to London. This, as we have explained to you, is largely an establishment for theoretical studies; we have very little actual engineering equipment as such which we need to use, and I think of our outside lecturers the great majority come from London. So overall it is predominantly advantageous for us to be so close to the Metropolis.

603. What about your relations with the other Services? Does it make for difficulties in the way of joint activities with the other Services?—The only area in which this is a difficulty is in the case of the Staff College which by direction has to do 20 per cent. of Joint Staff work. But even here the predominant advantage to the Staff College is to be near London.

604. If you were nearer Camberley, for example, would you be noticeably much further from London?—Do you mean the whole College or the Staff College?

605. The Staff College?—I think here you come up against the fundamental task of the Staff College. The Staff College takes the middle seniority officers to turn them into competent Staff Officers, and first and foremost a Staff Officer has to be able to speak with conviction and assurance and detailed knowledge of all aspects of his own Service. There are, for example, Naval aviators here in the Staff College who have been in carriers all their time and know nothing about minesweepers; and you might get destroyer officers who do not know one Fleet aircraft from another, so to speak. I think it is certainly true of the Naval Staff College and I would suggest of the other two Staff Colleges as well, that our first job is to teach our officers to become experts and thoroughly knowledgeable in all aspects of their own Service first. The 20 per cent. Joint Staff work is a bonus

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of general knowledge which has to be applied, and in that context there are tremendous advantages in having the Staff College here in a Naval establishment and in a Naval atmosphere. I for one consider the balance of advantage is very much in favour of it being here rather than at Camberley.

Mr. Anthony Royle.

606. What are the advantages in fact? Can you spell them out?—Yes. The point I have made about knowing about one's own Service, first is the predominant one, I think. A great deal of a Naval officer's general knowledge comes from general and perhaps unofficial contact with other officers in his Service, and here or in any Naval establishment he will get that Naval contact. He will here have the advantage of contact with senior officers of the War College, for instance, and technical officers who are doing other courses, and it is a fact that the majority of the lecturers for the Staff College come from London. Captain Sutton, the Director of the Staff College, will tell you what proportion of his lecturers are actually based on London. (Captain Sutton.) It is very large, something like 80 per cent. If you take the lecturers from the College itself, what we call the professorial staff, it is about 90 per cent.

607. They could presumably come to Camberley as easily as they come to Greenwich?—Yes. As long as we are within easy reach of London they would probably come. We have got to be within about three-quarters of an hour of their offices; they are high Service officers and so on. But you would not get the use of professorial staff from here if you went over to Camberley. We do a considerable amount of studies, strategy, Naval history and things like that for which we call upon the College generally.

Chairman.

608. You mean not from the Staff College but from the other sections?—The Staff College make use of the College generally. (Rear-Admiral Giles.) There is an imponderable here or an intangible which is rather important, I think. The Navy in past years has consisted of a large number of different branches of technical officers who

wore coloured stripes between their rings and so on, and this led I think to a good deal of frustration in the non-technical branches who by and large were deprived of responsibility. There is a very conscious effort by the Admiralty to produce a Navy which is "all of one company" and where all branches pull together in a common effort. I think that if the Staff College were divorced and sent away from a Naval establishment a good deal of the intangible benefits of being in a Naval establishment with other officers perhaps more senior to themselves would be lost; and although it is intangible, it is a matter to which I know the Admiralty attach very much importance. It is not too much to say that there are inhibitions and frustrations which have got to be grown out of in the course of a generation in this respect.

609. Would that apply to the War College as well?—Yes.

610. How much inter-relationship is there between the three levels, the War College, the Staff College and the general student body?—There is a lot. They share the same lecturers and facilities here, of course, to a considerable extent, and there is a great deal of unofficial contact by virtue of living in the same establishment.

611. There is a wide difference presumably in age and seniority?—Yes, of course.

612. Does that not make for difficulties?—No, it is an advantage, I think. I think it enables the senior officer to know what the young ones think and one hopes it enables the younger ones to benefit from senior officers.

613. Presumably the accommodation provided for persons at the War College is a good deal better than the accommodation available for an ordinary student?—It is, yes. I am afraid that the accommodation provided for the senior officer students in the War College is not up to the senior standards one would like to see. It is one of the respects in which our accommodation is very much out of date.

614. Does each officer get a bed-sitter?—Each officer only gets a cabin with a desk in it.

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615. Larger than the one we saw?
 —Not very much. He has running water.

616. Are his leave arrangements different from those of the juniors?—
 Yes. There are no restrictions really on officers' leave overnight. (Captain *Buchanan-Dunlop*.) The Midshipmen we keep an eye on but I have not yet made any orders restricting their leave in any way. It is only this term that we have had such junior officers once again and they seem to be rather more sensible than I was at their age.

617. So that generally any officer can come in and out of the building as he likes?—(Rear-Admiral *Giles*.) Yes. This is really a post-graduate establishment and when people say "Royal Naval College" they tend to think of having hordes of young officers, but you have seen already this morning that is not really so. It used to be and in those days leave was restricted, but that is not the case now.

Mr. *Anthony Royle*.

618. The War College is something which is only provided by the Royal Navy?—Yes.

619. The Army provide Sandhurst for the cadets, the Navy Dartmouth, the Air Force Cranwell. Then the Navy provide the Greenwich Staff College and the Army provide Camberley, the Air Force their college at Bracknell. But the Navy have a special arrangement whereby they have a War College which seems to parallel the I.D.C. except that your officers attending it are slightly junior in rank to those that would attend the I.D.C.?—That is not the predominant difference. The predominant difference is that this level of instruction here is top secret and the I.D.C., because of the presence of foreigners, are very restricted in their curriculum.

620. That is the only real difference?
 —That is the principal difference.

Chairman.

621. Is it a matter of chance as to which any particular officer would go, whether he would go to the I.D.C. or come here?—I think there is nothing to stop one doing both if one's appointments come out that way. But, as you understand, this really has become

through the years a three-Service thing, having originated as purely a sort of course of advanced studies for senior Naval officers; and in the context of the present day emphasis on inter-dependent Services we have of course all three Services on it and occasionally certain civilians. In fact, on the last course the Army and R.A.F. students exactly equalled in numbers the Naval students.

Mr. *Anthony Royle*.

622. In other words, am I right in understanding that there were 50 per cent. Navy, 25 per cent. Army and 25 per cent. R.A.F.?—Approximately, yes.

623. So there is a bias in favour of Naval officers?—Yes.

Chairman.

624. The group we met this morning were one course?—Yes, they were one course.

625. They were a mixture, as we saw?—Yes. And the directing staff of course are Naval, Army and Air Force also.

Mr. *Anthony Royle*.

626. There was no one this morning there above the rank of Captain R.N. or the equivalent in the other Services?
 —That is so.

627. Is it not correct that in the I.D.C. the ranks are Brigadier or Commodore or Air Commodore?—Yes, there are also Captains and Colonels and Group Captains. The scatter and age group is approximately the same. We have not had a Flag Officer on the Senior Officers' War Course recently but there is no reason why we should not have one.

Chairman.

628. Does this security difference affect the Staff College as well as the War College?—No, because the Staff College have foreign students as well.

629. How do you overcome the problem at the Staff College?—It is a problem for the Director of the Staff College and one must weigh the obvious advantages on the two sides. But my own opinion on this is that the advantage of being able to have foreign students over here and hope to influence them

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to our way of thinking outweighs anything which we could teach our own people. I feel that very strongly and I conclude that this is the way the Admiralty think about it too, because certainly it is the case that now every Staff Course contains foreign officers, whereas in the past when the Staff Courses were shorter, perhaps one in three or one in four would have foreign students on it.

630. I understand at Camberley the security features of the course are grouped at the end. Is that possible here?—It is very difficult to achieve here, although Captain Sutton has given some consideration to this. (Captain Sutton.) We have a secret tailpiece to the course; in the last month of the course we do more security tri-service exercises in the Staff Colleges and then go on to a top secret tailpiece—really being told the future of the Service and the higher policy by our own senior officers and so on. So that the Staff Course is brought up to date right at the very end, the foreigners having left in the last month.

631. Could that not be done at the War College as well?—(Rear-Admiral Giles.) Less easily, because it is only a six months' course. (Captain Sutton.) That sort of instruction is done to a certain extent during the course. On the other hand, as the Admiral said, you have the great advantage that you are training alongside foreign officers for a whole year and eventually one hopes to persuade them to want further training in this country and come to us for orders for warships and that sort of thing.

* * *

632. We saw the reactor which is of great interest, and we were told it was being used to some extent by people who were requiring knowledge in this field to obtain Government contracts and so on. Is the use of the reactor a full one; is it kept working hard?—(Rear Admiral Giles.) Yes, it is kept working very hard. It is true to say it is our busiest department. (Captain Lamb.) Yes, it is. For its size it is certainly the busiest, but it is not the largest from the lecturing staff point of view. Physics and Electrical Engineering has the largest lecturing staff; and from the instruction load point of view Physics and Electrical Engineering does more work per week,

as it were, has more students, than Nuclear Science. But for the size of it it is hard working.

633. What are the financial arrangements behind its use by outsiders?—(Rear-Admiral Giles.) These are made direct with the Admiralty and do not really affect us. We are just asked to take those students. I think we know in general terms what they are but it is for the Admiralty to negotiate, not for us.

Mr. Anthony Royle.

634. May I come back to the living out allowance for married officers. I seemed to detect from your answer that the maintenance allowance is much too small at the moment. Is hardship being caused to your officers by the small amount of living out allowance?—I would say that a great many of them have to supplement the allowance, which is presumably intended to provide them with an inclusive quarter.

635. When was it last increased?—In the last month.

636. It has not been increased enough?—I do not think so. Inevitably it is a difficult thing to speak about precisely because what some chaps think all right for a flat others do not. But I have been most concerned about this and I know a lot of officers with children and so on have found it very difficult to find what you would call satisfactory officer's accommodation in this part of London.

Chairman.

637. Is this allowance a fixed allowance covering the whole Service?—No, it just covers the rent of the accommodation and nothing else.

638. Is it fixed by the Treasury?—It is fixed by the Admiralty, presumably in agreement with the Treasury.

639. Have you made representations about it?—Yes.

640. To go back to the building, I was interested to see that you had central heating here. I wondered how that worked out in a scattered site such as this. Does each block have its own plant?—Yes. There is a very diverse collection of boilers, but I am glad to say that there is now a district heating scheme which accounts for that huge trench across the College; and now the

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thousands of gallons of boiling water which have been poured into the Thames from the power station next door have been diverted to the College and we shall shortly be able to obtain all our domestic heating from this which will be a tremendous saving. (This is an aside: it is an unusually pleasant example of the Treasury spending capital instead of income.)

641. You think there will be a saving in the fuel costs or in labour costs as well?—Both—enormously.

Mr. Anthony Royle.

642. When will that come into effect?—I think it is being filled in now. I am not absolutely certain when we shall see the benefits. There may be engineering to be done to connect each building. (Captain Buchanan-Dunlop.) Next winter.

Chairman.

643. Are the students here in their non-studying life run as a college? Do they have their own organisation for recreation?—(Rear-Admiral Giles.) Certainly, yes. There is of course the Officers' Mess under the presidency of the Captain which has a constitutional autonomy of its own, as any officers' mess does. There are societies, there are cultural societies, dramatic societies and so on. I think our daily chapel service and the chapel service on Sunday are very much one of the features of the College life. There are playing fields, there are excellent tennis courts, there are squash courts, and there are of course College teams in all these sports. There is no swimming bath but we are able to use the Army bath at Woolwich by arrangement.

644. Are the squash courts used entirely by the people here or by outsiders?—No, they are used entirely by officers.

645. Are they fully used?—Yes, they are very fully used. There are two, are there not?—(Captain Buchanan-Dunlop.) Yes. There are also Navy home matches very often going on; and the Navy also uses the College tennis courts for its home matches.

646. Do you know when they were built?—I can only say they were there in the late 'twenties. (Mr. Groves.)

They were built originally as racquets courts. I think they go back to the early 1800's. They have been converted to squash courts.

647. And the tennis courts are also in full use?—(Rear-Admiral Giles.) Yes. The Captain is the President of the Royal Navy Tennis Association. (Captain Buchanan-Dunlop.) The tennis courts are fully used by the Navy's team and the W.R.N.S.

648. This is a Service use apart from the College?—Yes. But the College use is very heavy and wives and families are also allowed to use the tennis courts.

649. Is there a professional in charge of them?—(Rear-Admiral Giles.) Yes.

650. And who pays for him?—The Mess, does it? (Captain Buchanan-Dunlop.) Most unfortunately we lost our professional at the end of January. He was an assistant groundsman (industrial).

651. And you have no professional now?—We have of course been quite unable to engage a suitable man at the assistant groundsman's basic wage.

652. Are you hoping to get somebody or are you hoping to get an established post?—We have advertised for one but the chances of getting a man of the right calibre without the Mess having to put its hand in its pocket seem to me to be remote.

653. Taking the recreational facilities as a whole, are they fully used by existing arrangements or could they be used by outsiders?—(Rear-Admiral Giles.) They are fully used. I think the question really would be whether we could use more, particularly football grounds. But we are able to make use of the Army's at Woolwich.

654. You have how many football pitches?—We have one rugger, one hockey and one soccer. They are about ten minutes' drive away at Shooters Hill.

655. Taking the number of students, do you think that the number is rather lower than you need?—It just about works out because the student population are largely away at weekends, on Sundays and so on. I think we have an arrangement with a school. (Captain Buchanan-Dunlop.) Yes, we can borrow pitches on a Wednesday which is our heavy day of use and our pitches are sometimes borrowed by other people on

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Saturdays when our use tends to be smaller.

656. In the schedule of staff you have a column which is headed "Seniority"; is that seniority in the Service or seniority in the College staff?—(Rear-Admiral *Giles*.) That would be seniority in the Service.

657. That is no evidence of how long people have been here?—Not at all.

658. In fact what is the tour of duty for the Naval staff?—For the Naval instructors it would be normally a two year tour. (Captain *Lamb*.) Two to three years. (Rear-Admiral *Giles*.) There are exceptions to that. The nuclear people who are rather specialised might stay three. (Captain *Lamb*.) It is usual for the Naval officers on the nuclear staff to stay for three or four years. (Rear-Admiral *Giles*.) And your people stay two years? (Captain *Sutton*.) Two years or more. (Rear-Admiral *Giles*.) The students of course may be here for anything from a fortnight up to two or three years.

Mr. *Anthony Royle*.

659. What about the administrative staff under the Captain?—(Captain *Buchanan-Dunlop*.) I have a Commander, a First Lieutenant, a Principal Medical Officer who is a Surgeon Commander, and a Chaplain.

660. What sort of tour do they do normally?—Two years.

Chairman.

661. Including the Chaplain? He then goes to another Naval Chaplaincy?—Yes.

Mr. *Anthony Royle*.

662. I understand that the present Lieutenant Commander is not in fact on a two year tour of duty?—No. He is on the promotion list to Commander and he becomes a Commander in June.

663. How long will he have been here when he goes?—About five months.

664. Is this exceptional or has it happened before?—This is bound to happen from time to time. The job is considered so important that only up and coming officers are sent to it and both the Commander of the College and the First Lieutenant of the College are officers of such calibre.

Chairman.

665. I think it would be helpful to run through the different groups of courses. The War College we have dealt with. There you say the course is limited to 24. We saw 16—I counted round?—(Rear-Admiral *Giles*.) Yes. I think this one started at 18 or 19. (Captain *Shand*.) It started at 20.

666. Do you normally have a wastage of that sort of proportion?—The high calibre of officers that come to that course do sometimes get whisked away. Two Air Force men have gone, one to command in Singapore and one to command in Cyprus, and I think the three Naval officers had to go on a special committee to Washington. This is bound to happen, I am afraid.

667. Do they then come back and take another course or have they had it?—It depends. I have never known an officer come back and do another course.

668. Might they go on to another one—the I.D.C. course, for instance?—I suppose they might.

669. Perhaps this is a foolish question but I do not know the answer: Can you become a sort of professional course-taker, or does normally one get one chance in a lifetime?—(Rear-Admiral *Giles*.) Yes, it would be one chance in a lifetime for a course like this and of course by no means every officer will do it.

670. That is the War Course?—Yes; or the Staff Course.

671. But the War Course man would have been to the Staff College?—Not by any means necessarily.

Mr. *W. A. Wilkins*.

672. Is this done by selection?—Yes.

673. Or invitation?—No, by a selective process by the Director of Officers' Appointments in the Admiralty. They try to study a man's career factor and if he is appropriate for the Staff College, he can apply for the Staff College. It does not mean to say he will get it but he can apply for it and if he is passed and wishes to do that, he is sent.

Chairman.

674. Does attendance at the Staff College not count as much in a man's career in the Navy as in the Army?—Not at

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all. It is quite a different thing. It is obviously an advantage to have done it, both for the qualification and one hopes he is a better officer for having done it. But equally he can go forward without having done it.

Mr. *Anthony Royle*.

675. Does one presume that anyone who has gone to the Naval War College is there because he is being groomed for stardom and for senior command in one of the three Services?—No; I would say you get a balance of officers of all categories.

676. Is it not rather a waste of time to send a man there who is not going to go to senior command?—Well, of course, it will not necessarily be known what job he is going to if he does go there, and I do not think it is a waste of anyone's time to do it because it is such an exceptionally widening experience.

Mr. *Wilkins*.] Would anyone come to the War College above the rank of Sub-Lieutenant?

Chairman.

677. The War College is the top one?—(Rear-Admiral *Giles*.) The War College is the one we sat in this morning.

Mr. *Wilkins*.

678. What rank are they when they come to the Staff College? Are they just Sub-Lieutenants, not higher?—If I can get this quite clear, the War College students are the senior ones and they would be in the 45-plus bracket of age. The Staff College is for the middle seniority, Commanders and Lieutenant Commanders. They would be in the 35-plus age bracket. (Captain *Sutton*.) They would be pretty young, about 32 now, probably. (Rear-Admiral *Giles*.) And the Lieutenants' Course would be right down in the 24-25's.

Chairman.

679. We have dealt with the Staff College and we come to the Lieutenants' Greenwich Course. Is this again a special course for selected people? How does that compare with anything in any of the other Services?—The majority of Lieutenants do take the Lieutenants' Greenwich Course. It is definitely a pattern of their career that having done

a commission or two at sea they should come and take the Lieutenants' Course. You might say it is a sort of general education course to widen the outlook of a Lieutenant as he becomes more senior, and there is a very great element of this idea of "all of one company" which I mentioned to you before, because they are Lieutenants of all branches who may have not have been trained together originally but they come together at that stage.

680. I see that they use the Humane Studies Department and the Nuclear Science Department?—They do.

681. Do they have an examination at the end?—No.

682. Has the academic level got any objective determination of what it is trying to do?—What we are trying to do is in paragraph 10 of the Note. To put this in its context, a young Lieutenant finds himself on a busy ship; he may have a particular job and he may be expert in a particular facet of a thing and one wants to have a man with a broader outlook than he may have the opportunity of if he is in a certain branch of the Fleet, and so this gives him a chance really to lift his nose from the grindstone and survey a broader scene.

Mr. *Anthony Royle*.

683. This seems to be an excellent course. The other Services do not do this at all?—Not in quite the same form. (Captain *Sutton*.) The Air Force have a Junior Staff and Command course which does this to a certain extent at about the same sort of age. The Army do not. The Army do their Staff Course at a younger age and therefore they combine this sort of work with their training in all arms at Camberley. (Rear-Admiral *Giles*.) The history, broadly speaking, of this course is that in pre-war times and after the war also, Midshipmen leaving the Fleet and being promoted Sub-Lieutenant used to come to Greenwich for two terms of this type of work and then go on and do their specialist courses. Under the new Dartmouth scheme they did not have their time at Greenwich, their general education, mind-stretching time; and this was put in at a slightly later stage, the idea being they would benefit

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for having seen something more of the detailed work of the Fleet. That of course is one term instead of two.

Chairman.

684. How does the Special Duties Officers' Greenwich Course compare with the intake at Dartmouth from the other ranks?—Quite differently, because these Special Duties Officers are the old Warrant Officers; they are what would have been called Warrant Officers in previous generations and nowadays are called Special Duties Officers. These people are promoted from the lower deck and their first duty as officers is to come to this sort of general education course for six weeks.

685. What age are they?—It would vary very widely between branches but they are quite seasoned men.

Mr. Wilkins.

686. Do they have to have any special lower deck rating?—They have to go through a very long process, yes. I could get you the exact regulations for this. It varies very much between branches but I would say you would not find many of them under 30 and they are seasoned, experienced men.

687. They would have reached the rank of Chief?—(Mr. Groves.) Yes, Chief. (Rear-Admiral Giles.) Petty Officers, not really Chiefs. Their position vis-à-vis those men on the lower deck depends on their being clearly recognisable as seasoned, experienced men. They are not the brighter sparks who become General List Officers through Dartmouth. There is a distinction between what are called Upper Yardmen, that is the very bright young ratings who are turned into General List Officers in their twenties, and these seasoned men who deserve officer status and win officer status and they have to go through a long process to achieve this. But it is no good getting these men at a very young age because, as I have explained, their position vis-à-vis the lower deck depends on their experience.

688. But there is nothing to preclude a comparatively young man who is discovered after he comes into the Service to have had a reasonably good education and may even be smart? What sort of encouragement is there for him?—Every possible encouragement.

689. He has not necessarily to wait?—He would go into a different scheme. That is called the Upper Yardmen's Scheme and they are hived off to Dartmouth and join in with the cadet entries.

690. Although they had in fact joined the Navy as ratings?—Exactly. (Captain Lamb.) And the Admiralty has now reduced the upper age limit so that there is next to no difference in age between the ex-Upper Yardmen and the youngsters who have joined from school as cadets. When he is a Midshipman he will be within an age bracket of twelve months. The age limit has now gone down to 21 so that selection is taking place much earlier than it used to do. (Rear-Admiral Giles.) To make it quite clear, those men would go to Dartmouth, do their Midshipmen's time and would first appear here in the Lieutenants' Course. They would not be distinguishable from the cadet entry officers. (Captain Lamb.) The basic education requirement is that the Upper Yardman must get or possess five O levels. He gets them often in the Service. In the case of these Special Duty Officers, they do not necessarily get five O levels but they get five of the same subjects in the Naval H.E.T. examination which, shall we say, is the School Certificate Examination, rather than O level. (Rear-Admiral Giles.) If you understand the concept of the old Warrant Officer, that is what these people are.

691. Yes, the chap who used to have three buttons on his sleeve?—That was the Chief Petty Officer. They used to have a thin stripe.

692. Oh yes?—And the Special Duties Officers are the successors to that scheme.

Chairman.

693. Are all the W.R.N.S. who are going to be officers on the W.R.N.S. Officers' Training Course? Is this the main channel for them?—Yes.

694. Is their work entirely separate from that of the rest of the College? I appreciate it is the same department but they are not doing the same sort of subjects?—No, they are not. It is entirely their own curriculum. They have two officers in charge of them.

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They do of course get history lectures and so on from some of the general faculties at the College.

695. Is their work mainly in the non-technical field? Are there scientific people?—No; all branches: secretarial or ratings' quarters officers.

696. They would not have people who were using technical equipment?—No, they would not. If they wanted to become meteorologists they would do that at a later stage; they would not do it here. This is purely a conversion course from ratings to officers, one term only. (Captain Lamb.) Some of them could go to meteorological jobs later but they all go through the routine of doing an administrative job as an officer first.

697. At the other end do they ever come back into contact with the male officers in the senior ranks? Do they have any courses in common with them?—(Rear-Admiral Giles.) Not courses, as far as I know. (Captain Lamb.) We have had odd ones. (Captain Sutton.) There have been W.R.N.S. on the Staff Course in the past, some years ago. I do not think we have had one for about ten years. We have had fairly senior W.R.N.S. officers at one time. (Captain Lamb.) That was when the Staff Course was six months. (Rear-Admiral Giles.) That is a hare; there is nothing in it.

698. New Entry Instructor Officers: presumably their numbers are limited, are they, to the demand?—I will ask the Dean to speak about that. (Captain Lamb.) The numbers do vary, of course, according to the type of officer which is entered each year, and in the last 18 months we have had 18 in one course which was too many, shall we say, but it was the only way to fit them in. This time they just happened to be slightly below par.

699. Too many because of accommodation?—No; for the type of course an ideal number is twelve; fifteen should be regarded as a maximum for the course.

700. Because it is intensive?—It is intensive and because of the type of work all to be done in one term. They have to practise lecturing to one another to get their teaching practice. Eighteen would be too many on the course in one

term, but it was done twelve months last autumn term because they happened to be able to enter the number of graduates. The number is down at the moment. Two have been taken away because of staff shortages to fill complement billets in other establishments; one is helping out in our own Physics Department at the moment, doing his teaching practice in this College.

701. How is what he is doing comparing with what happens at Beaconsfield? Is it the same sort of thing?—Yes; it is essentially an instruction technique course, on voice and manner, presentation, classroom techniques, examination techniques, and so on, for people who, as stated in the paper, have not obtained, or have not stayed on at university for, a Teachers' Certificate.

702. Will some of them have done some teaching before they come here?—Yes, some of them may have been either in teaching appointments or in industry. It just happens with these they have not been in teaching appointments. Some have got industrial experience. They do get a little seniority nowadays for the time spent in the teaching profession before they come.

703. Might some of them be fairly mature men who have done some teaching?—No; their age would be 25 to 30.

704. They would be older than the average student in a training college?—Yes.

705. They would be nearer the age of the war emergency teachers?—Yes.

706. Now you mentioned about the Academic Departments and the civilian staff. Perhaps you could tell us something about the recruitment: how do you recruit your senior academic people and what inter-relationship do you have with outside engineering works?—The civilian academic staff of the College is made up of two sections, one established and one unestablished. The established complement is one which is regarded by the Admiralty as an element which could be continued in a college where numbers may fluctuate, so that if numbers went down this staff could still be retained in the college; if numbers go up and we could not get the staff required quickly,

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then generally speaking officers of the Instructors' Branch do get appointed here to make up the marginal appointments. They are recruited in the established positions through the agency of the Civil Service Commission. If recruitment were made on a temporary basis, and it has occurred in recent years, it could be done by the Admiralty but in order to become established the candidate would at some stage still have to go before the Civil Service Commission. The professors are ranked for salary purposes as Deputy Chief Scientific Officers of the Scientific Civil Service and down the scale through the lecturing scale.

707. Do many of them go back into civilian academic work after they have been here?—This varies according to the subject. There is a certain movement on the Physics and Electrical Engineering side, in particular in the middle seniority appointments. This is linked with shortages of staff in technical colleges in general perhaps, rather than universities, and also it is linked with the reputation of this College in that department within the Colleges of Advanced Technology in the London area.

708. Do you mean some departments may have a better reputation and therefore it is easier for people to go into them?—It would be easier for people to move on the Electrical Engineering side. There is a certain tendency perhaps in various departments for people to be waiting for dead men's shoes for promotion purposes.

709. Are some of the courses run exclusively by civilians or do all of them have a mixture of civilian and Services staff?—Each Academic Department has a mixture of civilian and Service, except the Naval Architecture Department which is a very small one and is staffed with two senior members who are members of the Royal Corps of Naval Constructors and therefore could be regarded as Admiralty civilians. I should add to that the Naval Engineering Department which is staffed by Naval Engineering officers. Of the 8 Academic Departments, 5 of the professors are civilians; one is a Royal Naval Scientific Service Officer on loan—that is the Professor of Nuclear Science and Technology; one is a member of the Royal Corps of Naval Constructors and one

is a Naval Engineering officer, making the 8 Academic Departments.

710. In paragraph 17 you say there are 154 students from Sub-Lieutenant to Captain. You said just now there were Midshipmen. Do they come into these courses or are they on a special course?—The Midshipmen element occurs in the Supplementary List (Electrical) Officers' Course where, according to age, they are Midshipmen or Sub-Lieutenants. They automatically become Sub-Lieutenants on becoming 21 years of age. It just happens five or six were under 21 when they came to this College. (Captain *Buchanan-Dunlop*.) I have now the draft regulations for the young officers' leave. I see that they may only sleep ashore from Monday to Thursday with my permission and they may not leave the College after midnight. That is officers of Sub-Lieutenant rank and below.

711. That in fact would be the people at the courses but would not include the two Colleges; the Staff and the War Colleges' students would be over those ranks?—They would be at least the rank of Lieutenant.

712. I wonder if you could clear up a point. I get very confused about the changes that have taken place since Manadon started. As I understand it, we met somebody today who is a Naval officer finishing off his degree course; now on his course are they all civilians?—(Rear-Admiral *Giles*.) No. This is really the decision that the Electrical Engineering and Marine Engineering Branches of the Navy should be merged and they will be known all as Engineering Specialists, either (L) or (M). In order to cement this marriage, the idea is that all specialists for the new combined Engineering Branch shall be trained at Manadon. Previously all the Marine Engineers were trained at Manadon and the Electrical Engineers were trained mostly here. Under the terms of transformation the training has all been moved to Manadon and all that has happened is that the classes have been hived off from here and moved to Manadon. The classes who had already started here were left here, and after a certain date the Electricals went to Manadon instead of coming here. The

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chap you happened to meet this morning was just one of the left-overs finishing his last year. (Captain Lamb.) They are the last ones.

713. There are 18 courses going on in Science, is that right?—(Rear-Admiral Giles.) Yes.—(Captain Lamb.) Eighteen Science courses, yes.

714. How many degree courses are there now?—There is a degree course in Electrical Engineering for the B.Sc. (Engineering) of London University; and there is a degree course in Mechanical Engineering for the B.Sc. with the Mechanical Engineering option.

715. Why is that not at Manadon?—It is Admiralty policy that the degree course should be maintained here for the Admiralty civilian element and the present first year of 11 contains six members of the Admiralty Engineering Service who on completion of their courses here will go into the dockyards at home or abroad, or the Admiralty Technical Branch as civilians. The Ministry of Public Building and Works has also sent three members and the Royal Naval Scientific Service has sent one member.

716. Is that going to continue?—It is intended that this should continue.

Mr. Anthony Royle.

717. Why should they not go to Manadon? Apart from Admiralty policy, do you see any reason why Manadon should not handle this as they are handling all the Electrical Engineering and indeed the Marine Engineering?—The Department must continue in this College and it may well be that the Admiralty are influenced by congestion at Manadon. I understand there are difficulties in accommodation at Manadon where they are now just training officers, and where the numbers are building up consequent upon the interim changes in the Naval training system.

Chairman.

718. Would it be an advantage to be nearer a dockyard?—(Rear-Admiral Giles.) Not at the theoretical stage of their studies, I think. (Captain Lamb.) There is no advantage in that.

719. These people do not pay visits to dockyards?—No; they are literally doing the degree course of London University and this College is approved as

a teaching institution of London University for that purpose for a degree in Electrical and Mechanical Engineering.

720. I am very much out of my depth in this field but do not civilians who are taking an Engineering degree get any practical work—or is that an unfair question?—The facilities in the laboratories of Electrical Engineering, the department which you did not go through today, are fully approved by London University and the College is also approved from the laboratory point of view in the Mechanical Engineering Department, although the University last time it visited did make recommendations which will be fully met when the new Applied Mechanics laboratory is constructed.

721. Are those laboratories now pretty well fully occupied?—They are fully occupied; and possibly this point is related to a previous question in that the services provided by those laboratories do go to other courses which already exist in this College. Even if the degree course were not done here, the laboratories would be required for the other courses which go on, in the Ordnance Engineering and Advanced Marine Engineering courses in particular.

Mr. Anthony Royle.

722. How many are there on this Electrical degree course at the moment?—Thirty-five.

723. And they are practically entirely civilians or from the Admiralty?—(Rear-Admiral Giles.) There is a Supplementary List (Electrical). (Captain Lamb.) No, that is not a degree course, Sir. That is the Brit.I.R.E. Diploma course. Of the 35 taking the various parts, one, two and three, of the degree examinations currently, there are no civilians as such; they are all what I would call Government Department civilians or Naval officers, the Naval officer element being in the third year and no longer from September, 1964, will be on course here.

724. What I am getting at is, what proportion of Admiralty employed civilians as opposed to uniformed Service, Royal Navy officers, are on this course; do you know, roughly?—You mean at the moment?

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725. Yes?—Two-thirds civilian, one-third Naval. From next September it will be 100 per cent. Government civilian.

Chairman.

726. Perhaps we could clear up these figures. What we had handed over to us last week was 15 in the third year, two in the second, 11 in the first, which is 28. You say 35?—I am sorry; I have included the fourth year which is a post-graduate course, so there are 28 taking the degree examinations; there are 35 in the department as a whole. There is a post-graduate year of seven who are doing either research or various projects. They have all got degrees already. Three of them, by the way, have First Class Honours Degrees obtained in this College. London University only awarded six First Class Honours Degrees in Electrical Engineering last year and three of those were obtained from this College.

Mr. Anthony Royle.

727. As far as you know, there is no room for any more students at Manadon? I appreciate of course you have not got the figures?—I am not in a position to say that, but I understand that is so. (Rear-Admiral Giles.) It is a fact that the Supplementary List (Electrical) are trained here because of difficulties at Manadon. Theoretically they should be trained under one roof with the others but they are not, they are sent to us. (Captain Lamb.) The Supplementary List (L) is an entry into the Navy which is, shall we say, a five O level but only one A level, an entry just below university entry requirements, and it is an attempt by the Admiralty to get professionally trained people to meet shortages in electrical specialisation; they are to get full training here in light electrics and the Brit.I.R.E. qualification. They will not do heavy electrics. (Rear-Admiral Giles.) In a word, they are what we call short service officers.

Chairman.

728. You have told us you use outside lecturers to come and fill in gaps in your work here by invitation. Do you have occasion at all to use extra-mural facilities in the university? Do

you occasionally get a student who has a particular interest in which he would like to obtain a degree?—(Captain Lamb.) He would not do it at that stage here. It is a fact that the Admiralty would appoint officers at various stages for various specialist courses for certain items at universities throughout the country but those would be small numbers for specialist purposes. We do send staff from this College for refresher courses or specialist courses to various universities so that they can keep in touch with up to date developments. This is true with the civil and the Naval staff.

729. I do not know enough about the curriculum nor do I understand what I know. If I could take an analogy, an Arts degree: if you took somebody who wanted to take a particularly obscure subject in history, some peculiar period you obviously could not cope with, then what would happen?—(Rear-Admiral Giles.) You would not get it at this stage. Chaps attached to Naval Attachés in Arabic countries go to the Centre for Arab Studies. That is the sort of thing. You get special requirements for special appointments—one chap.

730. But you would not get your degree students wanting that kind of specialisation?—(Captain Lamb.) No. By and large it would be fair to say that the students come to this College to obtain qualifications which the Admiralty desire them to obtain for part of their professional career. On the special subjects side it perhaps is just relevant to mention (it is not my part of the ship) in the Humane Studies contribution to the Lieutenants' Greenwich Course, for instance, they do, as was stated in the paper, a special subject. Now a special subject might vary; one last time did playing the chapel organ as his special subject, or someone might be studying a geographical region. It happens at the moment there are 14 students doing eight different languages as their special subject two afternoons a week. There we have a visiting lecturer come in for the Russian because this Russian language crops up as a continuous arrangement. With the others we have funds for humane studies subjects and we send the officers two afternoons a week to the Berlitz School

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of Languages. One officer is doing Malay, two Italian, three German, French, Norwegian, Portuguese—I am one short, I think: it is eight different languages.

731. Could it happen—this is perhaps outside your responsibility—that one of your students developed such a flair academically, like First Class Honours people, that it was wise for him to go on to Cambridge for a more advanced course? Has that ever happened?—Not at the stage that he is in his career when he is at this College. In the fourth year on the Electrical Engineering side he is doing research, or special projects perhaps would be a better phrase, under the supervision of the professor, and I think it would be unfair to the professor to cream off his talented people and send them elsewhere when this helps to keep the life of the College going and the activity of the particular department. The Admiralty recognises this by making small funds available for research purposes in each department.

732. To take your group who got First Class Honours, would they ever go on and do a Ph.D. at a university?—No, Sir. They would leave here automatically and go into an Admiralty appointment to get on with their job, as it were.

733. So that if their interest was so much in academic work or in research, the answer would be they should not be in the Navy?—(Rear-Admiral Giles.) If the Navy wants them as practical people as well as theorists, I think it always tries to alternate practice with theory. I think if a chap was as bright as that he would have to get his sea-time in. It could occur, I suppose, that a chap would then become an expert in solar systems or something like that and might find himself sent off on some particular project. (Captain Lamb.) They are qualifying to start their career, as it were, and I think the normal thing, it is fair to say, would be that the Admiralty have given them an opportunity to develop their talents in this fourth year and the students themselves are anxious to get into various dockyard departments to start their career. The only arrangements at the moment in this College for Ph.D. are certain members of the staff are registered with London

University doing theses for Ph.D., either under their own professor or some sponsoring professor in another college of the London University. Those are civilian members of staff.

734. We were told when hearing evidence last week about the Naval Education Advisory Committee. I believe you have a Sub-Committee?—Yes.

735. Could you tell us something about the kind of impact that has on the College?—(Rear-Admiral Giles.) I think they come and they see what the College is doing; they visited once last year and they make recommendations directly to the Admiralty which take account of the Director General of Training rather than directly steering the College; otherwise we would be working for two masters, so to speak. Their function is, of course as the title implies, purely an advisory one.

736. Do you find in fact they inject new ideas?—They are very interesting to discuss our problems with.

737. Going back to the Staff College, could we be told something about the inter-relationship with the other Staff Colleges, how you keep the work being done in the different colleges in phasing, as it were?—(Captain Sutton.) The first part of the Staff Course at all the Staff Colleges is concentrating on your own staff work and on administration, government and so on. But about the seventh month you start working with the other Staff Colleges on a single Service basis, having already visited the other Services. You start working on problems of Staff Colleges in common. We at the moment are working out the detailed programme for 1965. We have almost entirely finalised the programme for 1965, and it takes in all these combined exercises of the three Staff Colleges. Some of the exercises are between this College and Bracknell, this College and Camberley, and some are all three Colleges together. We have the Deputy Commandants and my Deputy Director of the three Colleges as a committee who sort this out.

738. What is the machinery whereby you become aware of what are the acute Service problems, the new developments in weapons or whatever it may be?

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How does it get down to you?—I think only by the appointment of the Director and specialist officers on the Staff. I report to the Director General of Training what I am doing and he can guide me if necessary, if I am not doing what is right. For instance, I have had as my job the task of transforming the Staff Course from a short Staff Course of 5 months or so to a year's course. I have injected considerable amounts of new training, history studies, more warfare study, into it and I have told the Director General what I am doing. I expect that is why a senior Captain is appointed, of course, to vet the thing. The Captain looks at the whole syllabus and decides if it is up to date and is overseen by the Director General.

Mr. Anthony Royle.

739. We heard earlier on that there were in fact very definite differences between the courses in Bracknell and Camberley, particularly Camberley, and here, both in the seniority of officers attending and the type of syllabus. Does it not make this extremely difficult to work together as you are suggesting you do every year?—It made it extremely difficult during the first year. Now we have got the first year over and we have got our committee working. In fact we are a year and a half ahead the whole time; we have now got 1965 planned and we are starting on 1966. Now we have got this going it is not difficult. We find that the three Staff Colleges have to be planned together; in fact, I have brought over a diagram to show you. Underneath in my planning diary I have the outlines of the Camberley course and the Bracknell course, so one is able to see what stage they have got to and if necessary each Staff College has to juggle to fit into the other Staff Colleges. This is what we are doing and it is working quite well. Last year it was a little difficult, this year it is working quite well, next year it will be working well. (Rear-Admiral Giles.) I think, to put this into perspective, we must not forget the Joint Services Staff College which is really where the officers of middle seniority go to get their "jointmanship". I think it is necessary to emphasise that the Staff Colleges are principally to make people competent staff officers within their own Services.

Chairman.

740. In that case, does the advantage of this extra joint work justify the extra six months?—I suppose it does, but it is not a stage in the officer's career in which "jointmanship", except a generally broad outlook, is particularly required.

741. We are charged with looking at economy; therefore we ask ourselves, is it worth it? You double the cost automatically if you extend the course by six months?—I think it is no secret that in fact the Navy had a six months Staff course. And we were satisfied with it. But in the course of getting phased with the other Services we were, I think, the odd man out in coming up to the year.

Mr. Anthony Royle.

742. In spite of the fact that your course is totally different from the others and the ranks are different?—Not totally different. The ranks are similar. There might be a little difference in the age. But it is at a similar stage in a man's career. And it is wrong to say the syllabus is totally different. (Captain Sutton.) If I may explain that, our syllabus is very much that of the R.A.F. Staff College. In fact we could work in parallel very well with the R.A.F. Staff College. It is the Army Staff College which if anything is slightly out of step with us because they take the officer at a slightly younger age, four to five years younger, and they teach the officer staff work and co-ordination of all arms and command. In fact it is very largely a tactical course combined with a staff course.

743. By "difference" I meant between your course here and Camberley; I was not including Bracknell?—We are a good deal closer to Bracknell than to Camberley. The Naval and R.A.F. Staff Colleges have very similar syllabuses. (Rear-Admiral Giles.) We tend to oversimplify it sometimes but we think the Staff College in the Army is attempting to produce Commanding Officers (I am putting words into the Army's mouth a little bit there).

Chairman.

744. You do not regard your Staff College course as being essential for the officer?—That is correct.

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745. But you have in fact presumably half the number of people getting through the course or have you increased the number?—We have increased the number somewhat. (Captain Sutton.) We have increased the size of the College to 56; the total number previously was 49. The number trained per year has certainly gone down; and it is not only the size of the College, it is also the shortage of officers, we cannot find the officers of sufficient calibre to spare for a whole year. We are very short of officers still.

Mr. Anthony Royle.

746. Is it possible for a Naval officer to go to the Joint Services Staff College without having been here at the Staff College?—It is possible, yes.

Mr. Wilkins.

747. Does the fact that you had to extend this from 6 months to 12 months mean you are training less officers and if that is so, how does that fit in with Naval requirements?—(Rear-Admiral Giles.) We have, as Captain Sutton has pointed out, somewhat less officers in the course of a year but the Staff College is not regarded as an essential qualification and that is part of the price we have had to pay for having the rather longer course.

Chairman.

748. Does that mean there is a gap of vacancies for Staff Officers which you cannot fill with people who have been to the College, a widening gap?—I suppose so, in theory. But in fact people with a good general knowledge can fill Staff appointments reasonably satisfactorily, perhaps not as satisfactorily, but I do not think this effect has yet been apparent.

749. If someone does not come to the Staff College is there any other way he gets marked as being a Staff Officer or is it just open to any officer to be appointed?—We do not really draw a great distinction between Staff Officers and others. A chap can be a First Lieutenant of a destroyer one moment and a Staff Officer at the Admiralty next and then perhaps a Commander after that.

750. Covering a wider issue, as to establishment, you have an establishment inspection?—Yes, by the Commander in Chief. You mean the establishment of civilians?

751. No, generally?—Yes, we do, by the Commander in Chief, Portsmouth, and that would be in mid-March.

752. We are much interested in how you keep a check on the sort of standards in staff, a cross-check with other organisations doing similar work. Is there any way between the inspections in which you can make certain you are not over-supplied with staff? Do you compare yourself with training colleges?—In numbers of staff?

753. In numbers of staff, not only the teaching staff but also the people who are doing domestic work?—We have a scheme of complement, so to speak, for the College which is laid down by the Admiralty. It is under constant review.

754. They come and inspect you fairly often?—They do not come and inspect us but they know whom we have got. (Captain Lamb.) There is an annual staff estimate every July. (Rear-Admiral Giles.) Yes, that is for the civilian staff. (Mr. Groves.) The numbers are reviewed very critically each year by the Civil Establishments Branch and of course the Finance Committee, and all the complement are kept constantly under review and subject to joint Civil Establishments and Treasury inspection.

755. Do you compare yourselves with Shrivenham?—We do not compare ourselves. (Rear-Admiral Giles.) No, the Admiralty would compare us; perhaps even the Estimates Committee.

756. If you think we have missed the boat or there are any points you would like to put to us, would you do so now?—I think I should like to emphasise this point about the Navy being “of one company”. It is a little difficult for outsiders to understand. It is a relatively small organisation and it is changing with time, and to keep all branches fully interested, fully employed and fully up to date, there is a tremendous sort of interchange at all levels, between all ranks, between all branches and, broadly speaking, we like to ensure that all officers certainly, and to some extent

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ratings also, know as much as they can about other people's jobs. It is very necessary in a ship where you have a 24 hours' duty seven days a week and to a large extent the branches have to overlap and help each other out; and when we have a large number of men living in close company like that they have to make continual allowances for the activities of each other. Therefore we think there is a tremendous overall advantage, which is rather difficult to pinpoint, in having all these various activities drawn together, so to speak, under one roof at a College like this, which is a Naval establishment run on Naval lines by the Navy for the Navy. These Instructor Officers come in here. It would not be any good taking them away to a separate place and giving them a course in instruction technique which is what they are really learning. They must come and know the general pattern and background and get the feeling of the Navy, partly for their own interest and also because they have got to have general knowledge to keep themselves one jump ahead of the very intelligent ratings whom we are presently and increasingly employing in the Navy today. When we are asked questions, as we are quite a lot, why could not these be moved there, why could they not be moved there, there is very often an element of this intangible, which I referred to for want of a better phrase as "one company", which affects it.

757. Thank you very much?—
(Captain *Buchanan-Dunlop*.) You asked about how many cabins were occupied. On today's date there are 156 single cabins and 48 double cabins occupied, giving a total number of officers occupying cabins of 252.

758. Thank you. That is instead of the 282 you gave as being the total?—

We could accommodate 282 and we are accommodating 252.

759. Might I just ask whether we settled the point at the beginning about the number of periods in each department?—(Captain *Lamb*.) May I suggest that the College supplies the current loading of each Academic Department and also supplies a list of the number of staff in each department with the Admiralty scales which are used for complementing purposes. For instance, a Principal Lecturer is supposed to do 13 periods of lectures a week. (Rear-Admiral *Giles*.) In fact, it would be a tabular statement.

760. If it is possible to give any idea of the amount of time taken in research it would be helpful?—(Captain *Lamb*.) Yes. (Captain *Sutton*.) I have discovered one further figure. You asked earlier about the number of lecturers who come from the London area to the Staff College: 90 per cent. live in the London area.* (Captain *Shand*.) Might I say one very quick word? I did detect a slight note of feeling in the beginning about students at the War College joining up with some lectures of the Staff College. The point is that students at the War College are plunged immediately they arrive into a defence tactic exercise which demands that I and the directing staff are in constant touch with the Admiralty, Air Ministry and War Office and in fact look at the Chiefs of Staff papers so the whole thing is top secret from the outset and one simply could not in any way combine it with the others.

Chairman.] Thank you.

* *Note by Witness*: 10% of these are professorial staff at Greenwich.

WEDNESDAY, 19TH FEBRUARY, 1964

Members present:

Mr. James MacColl, in the Chair

Mr. Anthony Royle.
Mr. W. A. Wilkins.

Mr. John Woollam.

Air Vice-Marshal Sir JOHN G. W. WESTON, K.B.E., C.B., Director-General of Manning, Air Vice-Marshal M. K. D. PORTER, C.B., C.B.E., Director-General of Ground Training, Air Vice-Marshal E. KNOWLES, C.B.E., Director of Educational Services, Mr. T. A. G. CHARLTON, Assistant Under-Secretary of State, Personnel, and Mr. J. H. FRANCIS, R.A.F. Establishments Finance Division, Air Ministry, called in and examined.

Chairman.

761. You probably know that the discussion is taken down but you get a copy of the proof and if there is any verbal alteration you want to make you are at liberty to do that; also, if there is anything in it which, from the point of view of security or for other reasons ought not to be published in your view, then if that is side-lined and if the Sub-Committee agree with your view, it will not be published?—(Mr. Charlton.) Thank you, Sir.

762. In other words, we would rather you talked frankly than felt inhibited by the record. Now if we could turn to Cranwell first (which is at paragraph 15 of the Ministry of Defence document), you point out that only 20 per cent. of the annual intake attend the college. Could you tell us what happens to the others?—(Air Vice-Marshal Sir John Weston.) The entry into Cranwell is about 110 General Duties cadets a year and that represents 20 per cent., roughly, of the number of General Duties officers we take into the Royal Air Force each year. The balance is made up of direct entry candidates. The reason for that is that we regard Cranwell as the hard core of officers who are being trained ultimately to fill the highest ranks and all of them, of course, serve on full career permanent commissions in the R.A.F.

763. So that the total number is approximately five times the 110?—That is right, for the whole annual intake of officers into the General Duties Branch.

764. How do the others come in?—They are direct entry officers who come in taking a Supplementary List commission which is normally for 16 years' ser-

vice or until their 38th birthday, whichever is the longer, although there are opportunities for them to take a release from the commission at an earlier stage, 12 years and 8 years.

765. If they develop interests or capacities which indicate that they would be suitable for higher positions can they transfer?—Yes, indeed; they can transfer from the Supplementary List to the General List and we do that annually generally at a competition which is held of all the officers who are so recommended from their Commands and officers who themselves wish to apply to become General List permanent officers; and those who meet the qualifications and are within the numbers we require are selected and transferred to the General List.

766. How do you deal with the other entry—Equipment, Secretarial and R.A.F. Regiment?—A similar thing happens there. Some ground officers in the Equipment, Secretarial and R.A.F. Regiment branches come into the R.A.F. through Cranwell. The bulk of them however come in in exactly the same way as the General Duties Branch, that is, through the Supplementary List, and there are similar opportunities for them to transfer to the General List permanent commission in their Branch as are given to the General Duties officers.

767. Are they included in the 110?—No. It is 110 General Duties cadets and a further 10 for the Ground Branches, making a total entry each year for Cranwell of 120.

768. Are these figures, as far as you can tell, likely to be stable? Is this an estimate projected fairly far ahead for what you require?—Yes, that is the figure on which we generally base our estimates for permanent list officers

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coming in this way. There is no intention at the moment to increase the overall numbers of cadets going into Cranwell on any one entry.

769. If there were sudden expansions or contractions would they first of all be felt in the other methods of entry?—Yes. We would adjust, I think, any sudden increase—in fact I think that is what we should have to do—by increasing our direct entry officers; and similarly if there was any rapid contraction we would adjust on a downward intake of direct entry officers rather than touch the hard core of permanent list officers.

770. What about recruitment from the ranks as it applies to cadets, let us say the entry into Cranwell?—On average in recent years about 10 per cent. of the entry has been from the apprentice schools.

771. Are there other provisions for becoming officers?—From the ranks?

772. Yes.—Yes, indeed. We do commission quite a large number of Airmen each year into the various branches of the Royal Air Force. Over the past 10 years or so it has been averaging out that about 30 per cent. of the newly commissioned officers each year are in fact commissioned from the ranks.

773. What is the education qualification for the ordinary entry?—The ordinary entry to Cranwell has to have five G.C.E.s including two acceptable A levels. That is the normal requirement.

774. Is there any system of securing your entry young (such as the Navy have with the Dartmouth cadets) by paid scholarships at school?—Yes, we have a scholarship scheme. It covers the allotment of up to 75 scholarships a year. The scholarships are tenable for six terms and they apply to boys between the ages of 15 years 8 months and 18 years. The value of them is £160 a year scholastically and we also in certain cases are prepared to give boys a maintenance grant if that is needed.

775. £160 a year is for paying fees?—Yes.

776. Does that mean it is confined to fee paying schools?—No, it is not. The scholarship is open to anybody and in fact the value of it of course depends

a great deal on whether the boy is at a boarding school or a day school. But the £160 a year is the maximum.

777. I see. In other words, if he is at a non fee-paying day school, the cheapest, he would get nothing?—I think I am right in saying he gets nothing at all in terms of fees. (Mr. Charlton.) If no fees are payable he does not get anything like £160. He would get a maintenance grant if he was in such a position as to require one very badly in order to carry on up to the normal school leaving age.

778. Are these awarded after G.C.E. on the basis of G.C.E.? You mentioned 15½, a rather critical age.—(Air Vice-Marshal Sir John Weston.) They are awarded probably about the time that most of them are taking their G.C.E.; and in awarding these scholarships we look very much at the report we get from the headmaster who forecasts the boy's likely achievements at O levels and indeed at A levels. If he has got five O levels then we look at that stage at his prospects of getting his A levels. But if at the age he comes up, 15 years 8 months, he has not got all his O levels but the headmaster's report forecasts that he is likely to get them, then we take that as having covered the educational requirements.*

779. Is there any machinery whereby he can get any missed O levels at Cranwell?—Not really. The qualification is two A levels to get in. But we do in certain exceptional circumstances have a loophole procedure in the case of a boy who gets one A level and a very narrow miss at his second A level but is otherwise perfectly acceptable to us; we then write to his headmaster and get his personal opinion as to whether he thinks the boy will academically compete with the others at Cranwell, and if the headmaster gives a good report and says in his opinion the boy will and recommends that we do take him, and if he is in all other respects qualified, we do. But we do not let anyone in who has not sat his A level or equivalent examination and allow him to qualify for it subsequently.

* Note by witness: By the time Scholarships are finally awarded by the Board the great majority of boys have obtained the necessary O levels.

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780. Have you a breakdown of your entry between different types of schools?

—Yes, I have. (Mr. Charlton.) Perhaps I could answer that question. The direct entrants to Cranwell during the last six entries, that is to say from 1961 onwards, were 26 per cent. from independent schools, and 74 per cent. from State aided and direct grant schools. Those are the direct entrants to Cranwell. Of the scholarship entrants, which might be also interesting, during the same period 32 per cent. were from the independent schools and 68 per cent. from State aided and direct grant schools. The other interesting figure perhaps is that, of the 10 per cent. Sir John Weston mentioned from the apprentice schools, 7 per cent. were from independent schools and 93 per cent. from State aided schools.

781. They are people who have come in at 16?—That is right, or thereabouts, as Air Force Apprentices.

782. Normally without G.C.E.?—(Air Vice-Marshal Porter.) About G.C.E. level standard. We have either a competitive examination or they are accepted if they have got four O' levels in specified subjects.

783. After their competitive examination, before they move from the apprentice school to Cranwell, they would take a further educational test, as it were?—Yes, they do three years' apprenticeship where they learn a trade and do education as well. For selection for Cranwell they either have to get an Ordinary National Certificate of Engineering, or they are educationally passed at the Apprentice School as a Class A pass which we reckon is about the same level as the two A levels. If need be thereafter we give them up to six months' academic lead-in training to make it easier for them to take the course.

784. What machinery have you for advertising yourselves to potential customers?—(Air Vice-Marshal Sir John Weston.) We have a fairly extensive Press advertising campaign running through the whole year which covers the national daily Press, the Sunday Press, and certain selected periodicals. We also advertise in school magazines and university magazines. We also have a number of schools liaison officers who are constantly visiting all the schools

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and indeed universities as well. We also have schemes for headmasters and boys to visit the cadet colleges. We also take parties of boys and headmasters and indeed headmistresses on visits to Royal Air Force stations at home and abroad. Those are our general instruments for putting ourselves across in this way.

785. Do you get reasonable access to schools?—Yes. By and large I think we have very good access to schools through our liaison officer organisation.

Mr. John Woollam.

786. I just wanted to ask one question because one part of the evidence interests me very much indeed. In the proportion between the independent schools and the State aided and direct grant schools, the percentages seem to be very different from what one would find in the other two Services. I just wondered whether that split between the independent schools and State aided schools has been changing in these post-war years to its present division and to what you would ascribe the difference in the intake of the Air Force compared to the other Forces, in the high proportion you are taking from State aided schools. Is there some educational factor that explains it?—I think the situation has changed in as much as I think between the years 1954 to 1962—that is the years just previous to the figures for the years quoted by Mr. Charlton—the independent schools then were supplying Cranwell with 43 per cent. of its intake as opposed to about 26 per cent. now. I think this is due to the fact that we have cast our net very much wider in more recent years and the extra coverage which our schools liaison officers give to a very large number of schools and I think the impact of the wider advertising in the Press and various periodicals for officers has contributed to not necessarily a reduction in the number of people who come from the independent schools but an increase in the numbers that come from the others.

787. During that period which you describe to us has the education standard of that intake remained the same or has it in fact been rising in so far as you can judge from the examination successes of those boys who came in before?—(Air Vice-Marshal Knowles.)

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I would say the level of education on entry is better with each entry. Mr. Charlton was only saying this morning this last entry that came in last September in fact is quite the best academic entry we have ever had.

Mr. W. A. Wilkins.

788. We are really comparing, are we not, Cranwell with, say, Sandhurst?—(Air Vice-Marshal Sir John Weston.) Yes.

789. We are not thinking in any terms whatsoever of looking at people from the Staff College point of view at this point of time?—No.

790. So there is no oral examination for these entries at Cranwell? You just accept the academic qualifications?—(Air Vice-Marshal Porter.) No. (Air Vice-Marshal Sir John Weston.) There is no oral examination except that of course during the selection process they do exercises, take part in discussions, and are interviewed, so that oral work comes into it at that stage.

Chairman.

791. Is there a special selection centre?—Yes. We have at the moment two selection centres. We have one at Biggin Hill which is where the Part I of our selection procedure is done for all officers and cadets who are intending to enter. So far as the cadets are concerned, the second part of the procedure takes place at Cranwell, the Selection Board there. But shortly these two centres are going to combine and we shall then have the one centre at Biggin Hill for everybody.

Mr. Anthony Royle.

792. Reverting back to the entry, the Royal Air Force is a highly technical service and provides officers to fly in Bomber Command and Fighter Command where they have to have great technical ability and fly these very expensive machines. To what extent would you say the drop in your entry from independent schools is caused by the very much higher technical qualifications at the final out-turn of your cadet from Cranwell? The days of the independent schoolboy who came in before the war, did a short course and flew an aeroplane made of string and canvas, are gone. You have now got to have

a highly technically qualified man. Does this add any reason to this change in percentage or not?—(Air Vice-Marshal Porter.) I suggest the answer to this is that, as Sir John said, the selection net is wider. It is competitive and it just so happens that in selecting you take the best man on his academic ability and it turns out at this percentage. There is no bias either way. The chap with the best qualifications gets in.

Mr. Wilkins.

793. Are you in fact able to be selective? Is this an over-subscribed thing?—Very much so.

Mr. Anthony Royle.

794. Are you choosing officers who are going to be leaders of men as such or are you choosing officers who can fly aeroplanes with a much higher technical degree than ever was necessary before?—Both. We insist on this two A level qualification or as near as acceptable, which demonstrates that the boy has the ability to undergo the instruction to make him understand the technicalities.

795. Are you satisfied, following on from that, that in 20 to 25 years ahead, these boys which are coming out from Cranwell today will be of the same calibre and quality for the leadership of the entire Royal Air Force as you have today and as you have had in the past years at the head of the Service?—I would say very much, yes. (Air Vice-Marshal Sir John Weston.) Yes. I think we are satisfied that is so. (Air Vice-Marshal Porter.) We have of course just revised the Cranwell syllabus in order to ensure that the academic instruction, the technical instruction, mathematics, physics, will meet this particular requirement.

Chairman.

796. Do you get people from Welbeck coming to you?—(Air Vice-Marshal Sir John Weston.) Not to us, no. Welbeck, as far as I know, entirely supplies young cadets in the technical arms for the Army.

797. I was wondering, if someone was at Welbeck because of its interesting technical side of the Services and later decided that his vocation was nearer

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the Air Force than the Army, whether there was any means of transferring?—(Air Vice-Marshal *Porter*.) I think we would take him if he offered himself. I do not think in fact we know of a case that has done so. (Air Vice-Marshal Sir *John Weston*.) I have never known of one happening but there is no reason why we should not take him.

798. It is not for you to say whether he would be allowed to offer himself?—No.

Mr. *Anthony Royle*.

799. Are your medical standards at Cranwell for new entries similar to those for the Royal Navy for pilots going to the Fleet Air Arm?—As far as I know the level of standard is the same for both.

800. Would it be the same for helicopters as well as for fixed wing aircraft?—Yes. I do not think we would make any difference between the two.

801. What I am getting at is, if for some reason you turned a boy down for coming into Cranwell, is it not possible that there might be a career for him in the Fleet Air Arm or in the Navy side at all; or are your standards identical?—From the medical point of view I would say our standards are such that if he was turned down for flying with us he would be turned down for flying with them and vice versa.

Chairman.

802. Coming to the details of the training, how is it divided between academic and professional work?—(Air Vice-Marshal *Knowles*.) At the moment we are on a syllabus where the academic work is divided into three. 75 per cent. of cadets go on the general stream, the other 25 per cent. divide between taking a degree, an Arts degree such as a B.A., or they can take a Royal Aeronautical Society examination. That takes something like a third of the time. We are in the process of revising this at the moment and this will come into operation in October this year when, roughly speaking, half the time will be spent on flying and the remainder will be spent on professional officer training, including academics. We shall bring everyone up to a standard whereby they can assimilate the technicalities of the Royal Air Force.

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803. When they have finished at Cranwell are they trained officers, or do they then have to go on to further professional training?—At the moment they have to do another course, another advanced flying course. Under the new syllabus in October they will be completely trained officers other than for operational conversion.

804. Did I mis-hear you? Will this be the same period?—Three years.

805. Still the same three years?—I am sorry; at the present time they do three years at Cranwell and then do something like six months at the Advanced Flying School. Under the new syllabus they will be completely trained to advanced flying standard in three years.

806. That is what I thought. Then the people who go to Henlow are different people altogether, or do some of the Cranwell people go to Henlow?—(Air Vice-Marshal *Porter*.) They are different people. They are people who want to become technical officers. They have a more restricted entrance qualification inasmuch as the A levels that they have to hold are the scientific A levels and mathematics A levels which will enable them to complete a Diploma in Technology course. It is in fact the entrance standard for a Diploma in Technology course in the same way as it is in civil life.

807. Presumably Henlow has more complicated equipment than Cranwell?—Yes. They are trained on the Diploma in Technology course which is three years as cadets and the last one year and two terms as officers; but it is one complete course right through, and at the end of that time they are posted direct to units as productive officers. They have in that time either specialised as mechanical engineers or electrical engineers and they will have been taught a very wide range of equipment, aircraft, engines, to fit them for their job on the stations.

808. Then what I was wondering was whether there would be complicated and expensive equipment at Cranwell being used by people who might use similar equipment if they were at Henlow?—There will in a minor way be some duplication, though there is of course a

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far greater range of equipment at Henlow, necessarily. But the General Duties officers must necessarily be taught about technical equipment to some depth, and with effect from October, 1965, the technical college at Henlow is being moved to Cranwell where it will become one cadet training and technical officers' training establishment so that there will then be common use of equipment for all forms of training.

Mr. Wilkins.

809. Will this transfer be effected without any additional building at Cranwell?—(Mr. Charlton.) No, Sir. The position was that we had to build both at Cranwell and at Henlow if the two colleges had remained separate, for a variety of reasons. It was decided that the best solution of this problem was to concentrate the two colleges at Cranwell and do all the new building at Cranwell. This in fact is being done and Henlow will cease to be a cadet college. Of course, Henlow at the moment also contains other units apart from the Cadet College and the Radio Engineering Unit. * * *

Chairman.

810. Is the flying training you are doing at present done on the spot or do students go to a flying station?—(Air Vice-Marshal Knowles.) It is on the spot at Cranwell. (Air Vice-Marshal Sir John Weston.) Basic flying training is done at Cranwell. At the present time they then go on to another school to complete their advanced flying training.

811. So that the on-site training they are doing is interspersed with the rest of the training?—Yes.

812. Then they have a specialised addendum to the training?—Yes. But under the new scheme with the new syllabus that has been mentioned the advanced flying will also be done at Cranwell in future. (Air Vice-Marshal Porter.) Then it will be followed by operational conversion unit flying which splits into Coastal Command, Bomber Command, Fighter Command, etc.

813. Is this going to save much of the cost of the training?—(Mr. Charlton.) We think it will. It is difficult to work out exactly but as far as we

can see it should save roughly 100 staff net on the two colleges. There will of course be some capital works but those were inevitable in any case. The running costs should definitely go down.

814. Is Cranwell full in the sense of its existing buildings and staff?—It could take a bit more at the moment. (Air Vice-Marshal Sir John Weston.) At the moment it is about 96 per cent. full in terms of cadets. So there is room for a few more cadets if we can get them.

815. Is the site extendable? Have you got a site that will take more buildings?—At Cranwell?

816. Yes?—Oh yes; we can extend Cranwell easily. (Air Vice-Marshal Knowles.) The problem there is air space—how many aeroplanes you can fly.

Mr. Anthony Royle.

817. How is aircrew recruiting generally going? Is it going well?—(Air Vice-Marshal Sir John Weston.) For the past couple of years and this year the general level of aircrew recruiting has been good. We have just about been getting what we require.

818. There was a conference at Cranwell in early 1962 attended by headmasters and trade unions and people from all over the country, arranged by the Secretary of State at the time. Did that have the effect of producing more high quality candidates which was the thing that was worrying you at that moment? Was it worth having this conference?—Yes, I think that conference has contributed to the larger entries we have had in the past two entries for Cranwell and I think, as Air Vice-Marshal Knowles has said, to the higher quality and standard of boy we have got in this last entry at Cranwell.

Chairman.

819. You say in paragraph 17, giving us the number of students, there are 10 non-R.A.F. students. Is that 10 every year?—(Mr. Charlton.) It is not every year. It is in residence at the time.

820. That is a normal number in residence at any one time, is it?—That is what it works out at or has done. (Air Vice-Marshal Sir John

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Weston.) It is about the average, yes. Over the years it has just about worked out at that number.

821. What are they?—They are mostly from Commonwealth countries. I have a list here of those who are there now, if you would like to have them. We have cadets from Jordan, Ceylon, Malaya, New Zealand, Pakistan, Australia, Southern Rhodesia, Malta and Kenya.

822. Do they pay fees to be there?—They do, yes.

823. What is the fee?—(Mr. *Charlton.*) The fee is actually based on what we describe as extra costs, that is to say the additional cost mainly of things like rations and consumables, plus any additional instructional staffs specifically required because we are taking in these extra students. We do not charge anything for the normal overheads which we would have to incur in any event ourselves.

Mr. Anthony Royle.

824. What is the cost of educating a cadet from the time he arrives to the time he leaves?—It depends whether he is a flyer or non-flyer.

825. For a flyer?—It is over £10,000, I know. May I check that up and answer it later? I have got a note of that somewhere.

Chairman.

826. Do you know the total amount that is paid in fees?—No, I am afraid I have not got that with me.

827. Possibly you could give us a note, would you?—Yes, if I may.

828. In getting these overseas students, do you do it in consultation with the C.R.O. and the Foreign Office?—(Air Vice-Marshal *Knowles.*) The overseas students generally speaking come through the C.R.O.

829. Is there any reverse movement: do you send any over to Commonwealth or American cadet colleges?—(Air Vice-Marshal Sir *John Weston.*) Not to their cadet colleges. We do send officers to other staff colleges.

830. Now if we could look at paragraph 18 which gives us your establishment, is the drop shown in "Service"

due to a movement towards using the civilian people—I see they have dropped as well—or is it just a general drop?—(Mr. *Francis.*) No, the drop is not a very large one. It is mainly due to the various establishment reviews that take place of all our establishments. We had a review in 1961 and again in 1963 and that resulted in a reduction both in the number of airmen and civilians.

831. Is the drop of one in Group Captains and Wing Commanders fortuitous or is it that it happens to be a different rank doing the job?—I ought to make the general observation that Cranwell is primarily concerned with producing flyers. 90 per cent. are trained as flyers and in consequence most of the establishment at Cranwell is of course for flying. So that the total establishment of Cranwell is something of the order of 1,440. Now what we have been asked to do here is to produce figures of the establishment appropriate to the ground element of Cranwell, so that we have had to do a number of statistical exercises calculating how much of the backing we consider appropriate to the ground element and how much to the flying element. As we review the establishment and perhaps adjust the backing to the college as a whole, this has an effect on the number of officers, airmen and civilians that we consider appropriate to the ground instruction. With a reduction in the total establishment this has had a marginal effect on the number of officers apportioned to ground instruction and has reduced the figure for Group Captains and Wing Commanders from 10 to 9. So it is really a statistical reduction rather than a specific elimination of any particular post connected with ground instruction.

832. This is not a comment that we generally make in the Estimates Committee but it seems to me the number of scientific and professional staff in proportion to the work you said they were doing is very low?—The main reason for that is that at Cranwell most of our instruction is given by officers of the Education Branch which is a Service Branch. They are not civilian lecturers, they are uniformed members of the R.A.F. Education Branch and

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we only have two civilian instructors plus the Director of Studies who are professional civilian instructors.

833. They would be Squadron Leaders and below?—Mainly Squadron Leaders and below but there are also some senior specialist teachers of higher rank; as a matter of fact I think there are five Wing Commanders.

834. Do the Education Branch do the ordinary tour of duty?—No. They do in fact at Cranwell do a longer tour than the normal and I think the Director of Educational Services aims to keep them there for on average five years, whereas the normal tour is about half that length.

835. What is the advantage of having them doing it as opposed to specialised civilians?—It is our general Air Ministry policy to have education in its wider sense carried out by a uniformed Education Branch. As part of the total education requirement we do also employ a certain proportion of civilian teachers. I think at the moment we employ a total something of the order of 200. But we consider that Cranwell and Henlow, which are our prime Service colleges to produce officers of the highest rank not only academically qualified but also professionally qualified, are the establishments in particular where we ought to send our uniformed Education Branch instructors. (Air Vice-Marshal Porter.) Could I add to that, as far as Henlow is concerned this in fact is very much in line with a recommendation recently made by the National Council for Technological Awards where their Industrial Training Panel recommended that there should be much closer ties between industry and academic training in the Colleges of Advanced Technology. By having these uniformed Education officers, who go into the Service and serve in units and at headquarters, you do get this very close tie-up that you need on a Diploma of Technology course between practice and academics and so it is a very great advantage.

836. They are not doing the practice themselves?—Many of the Education officers in fact we do give technical training to as part of their training, because we find it is very important in

our particular technical field. I do not know what the proportion would be, but it is most of them. (Air Vice-Marshal Knowles.) We introduced a scheme in 1959 whereby you take good, well-qualified, Education officers and give them further technical training outside the Service and they move round in the Service for a bit. Part of their service will be at Cranwell where they will bring to bear on the training at Cranwell their experience out of the Service.

837. Will the civilian then be concentrating on the degree course people?—At the moment there are only two at Cranwell; one is a language specialist who teaches Russian and French and the other one is a specialist in low level aero-dynamics. Most of the degree work is done by the uniformed specialists.

838. They are people who have come into the Service with degrees, or have they done civilian teaching?—They may or may not. The qualification for entry—certainly for a man who goes to Cranwell—is that he must be a graduate, preferably an honours graduate with teacher training if possible and he will not go to Cranwell until he has had quite a deal of training in the Service; and if he is not trained when he comes, we train him.

839. When you say “teacher training” you mean civilian teacher training?—That is right.

840. Will he come in normally as a young graduate, a man who is starting his career, or would he come in having perhaps done one or two jobs in schools?—We are recruiting quite a number of graduates straight from university but we have recently attracted many more men who have done one tour out in industry or taught in a school before they come to us.

841. You told us that the reduction in establishment was as a result of an establishment review. Is that done as a periodic inspection?—(Mr. Francis.) Yes, Sir. We normally aim to review all Service establishments once every 18 months and the last review which we carried out at Cranwell was carried out in May, 1963. For the station as a whole it produced a net reduction of 39. At that review incidentally we did have a Treasury representative and from time

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 and Mr. J. H. FRANCIS.

to time Treasury representatives do come around with our Establishment Committees.

842. Do these committees have O. and M. experience?—Not necessarily. It might so happen that the Finance member might in fact have served in the Organisation and Methods Division of the Air Ministry but normally this would not be so. The committee comprises the Finance member and a Service member or one or more Service members with technical and professional experience; but the Finance member would be a civilian with pretty wide general experience of the Air Ministry and the Air Ministry's general organisation.

843. Do you look at the residential side of Cranwell in the sense of seeing whether you are getting the most efficient use of domestic staff?—Oh, most certainly. Our reviews are absolutely comprehensive and cover every single officer, airman or civilian on the unit; this applies to mess staff just as much as to the instructional staff.

844. Do you get any contact at all with civilian colleges or residential educational establishments to see the kind of standards they have?—We do not normally get that experience direct, although from time to time we do in fact get in touch with the Ministry of Education inspectors and, for example, we did this when we were considering the amalgamation of Cranwell and Henlow and what facilities would be required at the combined college. But we do normally invite advice from our own specialist Educational Directorate and we frequently take from the Air Ministry a Group Captain of the Directorate of Education who is himself very closely in touch with the educational world. (Air Vice-Marshal Porter.) As far as Henlow is concerned, which is where the examinations are moderated by an outside body consisting of a Professor of Nottingham University and two Professors from Cranfield, they also monitor us to see that the facilities under which we teach are within set standards.

845. What kind of civilian establishment do you try to compare yourselves with, asking yourselves the question: Is this operating fully effectively?—(Mr.

39126

Francis.) This is a difficult problem because the instruction and the task of a place like Cranwell has no equal in civil life. Cranwell is producing officers as well as professional qualified men, and the instruction is very largely mixed. We have ground instruction, physical training instruction, officer training, and all of this is mixed up with the academic training proper.

846. You have said that the Establishment Committee did not necessarily have O. and M. representation on it though you might have O. and M. experience. Have you ever had O. and M. inspections as such?—(Air Vice-Marshal Porter.) We have a Work Study team in every Command. Cranwell is within Flying Training Command and the C-in-C. Flying Training Command has a Work Study team which operates within his Command and operates at Cranwell as at other stations. Henlow is within Technical Training Command and the same thing applies.

Mr. Woollam.

847. Would the two Work Study teams in the two different Commands ever compare notes as to what they were doing in each case with some perhaps comparable element in it?—I would have thought there was rather less than one would think. Henlow is very comparable with a College of Advanced Technology except that you have added on to it the officer training, and there it is much easier to make a comparison because you have something similar in civil life, and it is moderated by an outside moderating body; it is inspected pretty frequently in this way. It really presents a much easier problem, I think. But at Cranwell, where you have flying, which is quite unlike anything else, it is much more difficult. So it is difficult to compare Cranwell with any outside institution. All R.A.F. Work Study reports in fact come to the Air Ministry and all are compared. I am on the Central Committee which examines all these.

Chairman.

848. I think you were talking to us earlier on about re-organising the distribution of work as between Henlow and Cranwell. Is the arrangement given here one that is likely to alter?—Yes.

D 4

19 February, 1964.] Air Vice-Marshal Sir JOHN G. W. [Continued.
 WESTON, K.B.E., C.B., Air Vice-Marshal M. K. D. PORTER, C.B., C.B.E.,
 Air Vice-Marshal E. KNOWLES, C.B.E., Mr. T. A. G. CHARLTON,
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At the moment we train all our technical cadets and technical officers at Henlow, whereas at Cranwell we train the General Duties cadets and a very small number of Secretarial, R.A.F. Regiment and Equipment cadets. In October, 1965, we amalgamate the two at Cranwell and we shall then do all our cadet training plus our post-graduate and direct entry technical officer training at Cranwell.

849. What will happen at Henlow?
 —At Henlow one unit which is there at the moment, the Radio Engineering Unit, remains. * * *

850. And go out of our Vote, will it? Could you tell us about the university cadets?—(Mr. Charlton.) Do you mean the Henlow ones? There are two types of university cadets. First of all, there are university cadetships of which 75 can be held at any one time. They are given to individuals who have been able to obtain their own place at university. They have to satisfy the university authorities that they are worth a place on their own merits. Those particular cadetships then take the form of commissioning the individual while at university and paying him as a member of the Royal Air Force. He joins the University Air Squadron of the university concerned, assuming there is one and there are in most of the big universities now, and at the end of three years he then joins the Royal Air Force either as a Technical officer or as a G.D. officer. Those are the university cadetships which we introduced this summer. We have only had one go at them so far. We gave 22 for this current academic year, and we shall be holding the second year's competition in May.

851. So you have not had any in the Service?—There is none in the Service. (Mr. Charlton.) What we have had are the university entrants who up to now have been of two types. We have had the individual who has gone up to the university and then with an honours degree has applied to join the Royal Air Force direct, who has very often and probably been a member of a University Air Squadron while he has been up there. He comes in then to the Service as a university entrant under special terms. He is normally about a year older than the average entrant from

Cranwell. He catches up with the Cranwell entrant by a system of ante-dates when he reaches the rank of Flight Lieutenant. Those are what we call the university entrants, pure and simple. Then you have the Henlow ones and I will ask Air Vice-Marshal Porter to describe those because they are something special. (Air Vice-Marshal Porter.) This is a scheme which we have now discontinued. The boy came to Henlow for what was called a university cadetship. He did a year at Henlow and we then found him a place at a university where he did his three years' training and then he came back to us in the same way as any other university direct entrant for six months' training before going out into the Service. We have discontinued this in favour of the university cadetship scheme. (Mr. Charlton.) We still have some Henlow cadets going through university.

852. Do they come in as long service men?—(Air Vice-Marshal Porter.) Yes, generally speaking.

853. At what stage are they selected for the University Cadetship?—Either before they go up—if they already have a place they can enter the competition—or they may enter the competition up to their second year at university. (Air Vice-Marshal Sir John Weston.) That is correct.

854. So that they are eligible from any university?—(Mr. Charlton.) Yes.

855. Would that be only United Kingdom universities or would that cover Commonwealth universities?—Only United Kingdom, because our jurisdiction does not run outside this country. We have not yet tried, anyhow, to see if we can fix up anything special in Canada or Australia.

856. What were the main considerations which led to this change? Are they financial or is it in the interests of the Service itself?—(Air Vice-Marshal Porter.) I think perhaps I should explain this. We had, until we introduced this scheme, only the university cadetship scheme for Henlow. At Cranwell we had the arrangements whereby some of the brighter boys could read for a degree at Cranwell but in fact we were asking rather a lot of them because in three

19 February, 1964.] Air Vice-Marshal Sir JOHN G. W. [Continued.
 WESTON, K.B.E., C.B., Air Vice-Marshal M. K. D. PORTER, C.B., C.B.E.,
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years they had to learn to fly, they had to learn to be officers, they had to do a lot of extraneous subjects and read for a degree which a normal undergraduate reads in the same time, three years. So very small numbers in fact were able to obtain a degree. At the same time we thought that the system at Henlow was not altogether ideal because it took us four years and six months to produce a technical officer by taking the year at Henlow, three years at university, followed by six months' technical training; whereas if we took him direct from university he did three years followed by six months. We saved one year's training which was a useful thing. It also meant that we could widen the field and get a boy whom we knew already had a place and was therefore acceptable to the university. Because we were going to move the Henlow Technical College to Cranwell, we thought that we should have a scheme which was common to both G.D. and Technical, otherwise when the Technical cadets arrived the position would look rather unfavourable to the G.D. entrant to cadetship. So we applied this one scheme to both sides so that both G.D. and Technical could get a university cadetship and enter the Air Force that way. I am sorry, that is rather long but it is rather complicated.

857. It is very interesting indeed. Do you direct what degree he takes?—If he is coming in for a Technical commission we select the applicants with the right degree. If he were going to the G.D. Branch I think we would not be concerned what degree he had. (Air Vice-Marshal Sir *John Weston*.) No, we are not restrictive on the General Duties side. (Air Vice-Marshal *Porter*.) It would have to be a science or engineering degree for the Technical Branch necessarily.

858. On the General Duties side could it be an Arts degree?—(Air Vice-Marshal Sir *John Weston*.) Yes. (Air Vice-Marshal *Knowles*.) I have discussed this with the tutors at various universities

and we try and select something which is going to be more closely related to his work but we do not insist on it.

859. What is the position of someone who at the end of his university course finds his vocation is elsewhere?—(Air Vice-Marshal *Porter*.) He has signed an indemnity, I think, has he not? (Mr. *Charlton*.) Yes.

860. So in law he is under obligation to return?—To refund the money he has had.

Mr. *Woollam*,

861. With or without interest?—Without interest.

Chairman.

862. Has the union at Cranwell been influenced by the cadetships or the other way round?—(Air Vice-Marshal *Porter*.) No, Sir. This has been looked at by the Air Ministry a number of times, originally soon after the war. We were always rather keen to put all cadets together, all our General List officers, so they should be educated together as R.A.F. officers and so that we did not breed competition between two sorts of branches. We had been hampered by lack of accommodation directly after the war, so we had to set up Henlow and it was the fact that we had to build at both places anyway and therefore we could do it at one place rather than two, that made it possible for us to do it.

863. Are the two colleges administered directly by the Air Ministry or are they taken up within the Command?—At the moment Cranwell is administered directly by Flying Training Command. Henlow is administered directly by Technical Training Command, although for Henlow I do in fact deal directly with them on academic and technical instruction.

Chairman.] Thank you very much indeed.

WEDNESDAY, 26TH FEBRUARY, 1964

Members present:

Mr. James MacColl in the Chair.

Mr. Harold Gurden.
Sir John Langford-Holt.
Mr. Anthony Royle.

Mr. W. A. Wilkins.
Mr. John Woollam.

ROYAL AIR FORCE STAFF COLLEGES

Memorandum submitted on behalf of the Secretary of State for Air

1. There are two Royal Air Force Staff Colleges. They are located at Bracknell and Andover. Both have the same aim, which is to afford a higher Service education to selected officers, thereby enabling them, in addition to understanding the duties of their own Branch, to understand the problems concerning the Service as a whole. Andover specialises in the training of foreign students. Students at both Colleges are normally of the rank of Squadron Leader.

Syllabus

2. The syllabus of each College is designed to give students the opportunity to develop their ability to think clearly, to speak and write logically and effectively and to study the under-mentioned subjects:—

- (a) the application of air power and problems of air warfare;
- (b) the operational policies of the three Services, including studies of joint service problems;
- (c) the trends of scientific progress likely to affect the future of air warfare;
- (d) the problem of Commonwealth and NATO Air Forces and the effect on the Royal Air Force of international alliances;
- (e) Air Force responsibility in "cold war" conditions;
- (f) the problem of Air Force organisation and logistics.

3. Both courses start on the second Monday in January and end on the second Friday in December of each year.

4. There were 96 students at Bracknell in each of the three years 1961–62 to 1963–64. At Andover there were 41 students in 1961–62 and 1962–63 and 42 students in 1963–64. These figures include about 20 non-R.A.F. students at each College.

Bracknell

5. Average establishments of staff from 1961–62 to 1963–64 are:—

	<i>Service</i>	1961–62	1962–63	1963–64
Air Vice-Marshal	1	1	1
Air Commodore	1	1	1
Group Captains and Wing Commanders	22	23	23
Squadron Leaders and below	6	7	7
Airmen	28	25	27

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[Continued.]

	<i>Civilian</i>	1961-62	1962-63	1963-64
Administrative		—	—	
Scientific and Professional		1	1	1
Executive		4	3	2
Retired Officers		—	—	1
Technical Classes		2	2	2
Survey and Drawing Office Classes		7	7	7
Clerical and Typing		26	27	32
Other Civilians (industrial)		131	137	135
		<u>229</u>	<u>234</u>	<u>239</u>

6. Annual costs from 1961-62 to 1963-64 are:—

	1961-62	1962-63	1963-64 (Estimated)
<i>Personnel</i>	£	£	£
Officers	81,850	89,650	92,850
Airmen	21,400	21,350	24,300
Civilian Non-Industrials	29,900	30,900	35,800
Civilian Industrials	71,900	80,400	85,300
<i>Stores and Furniture (estimated)</i>	5,000	5,500	5,500
<i>Maintenance and Repair</i>			
Machinery and Equipment	500	500	550
Buildings and Works	21,250	25,300	23,000
<i>Utilities</i>			
Electricity, gas, fuel (excluding MT)	8,100	9,500	9,900
Water	1,100	1,000	1,000
Transport	2,100	2,000	2,000
<i>Miscellaneous</i>			
Contributions in lieu of rates	7,300	10,750	13,350
Telecommunications, postage and stationery	4,550	5,500	5,600
	<u>254,950</u>	<u>282,350</u>	<u>299,150</u>

Andover

7. Average establishments of staff from 1961-62 to 1963-64 are:—

	1961-62	1962-63	1963-64
<i>Service</i>			
Air Commodore	1	1	1
Group Captains and Wing Commanders	9	10	10
Squadron Leaders and below	1	1	1
Airmen	3	3	3

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[Continued.]

	<i>Civilian</i>	1961-62	1962-63	1963-64
Administrative		—	—	—
Scientific and Professional		1	1	1
Executive		2	2	2
Retired Officers		—	—	—
Technical Classes		—	—	—
Survey and Drawing Office Classes		3	3	3
Clerical and Typing		18	18	18
Other Civilians (industrial)		45	45	46
		<u>83</u>	<u>84</u>	<u>85</u>

8. Annual costs from 1961-62 to 1963-64 are:—

	1961-62	1962-63	1963-64 (Estimated)
<i>Personnel</i>	£	£	£
Officers	29,850	33,550	34,700
Airmen	3,100	3,300	3,550
Civilian Non-Industrials	19,250	19,850	20,600
Civilian Industrials	24,700	26,400	29,050
<i>Stores and Furniture</i> (estimated)	1,900	2,100	2,200
<i>Maintenance and Repair</i>			
Machinery and Equipment	300	400	400
Buildings and Works	7,250	8,500	8,000
<i>Utilities</i>			
Electricity, gas, fuel (excluding MT)	2,300	2,800	3,000
Water	400	400	450
Transport	950	950	950
<i>Miscellaneous</i>			
Contributions in lieu of rates	2,800	3,050	3,000
Telecommunications, postage and stationery	1,450	1,750	1,750
	<u>94,250</u>	<u>103,050</u>	<u>107,650</u>

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[Continued.]

Examination of Witness.

Air Vice-Marshal M. K. D. PORTER, C.B., C.B.E., Director-General of Ground Training, Mr. T. A. G. CHARLTON, Assistant Under-Secretary of State, Personnel Division, and Mr. J. H. FRANCIS, R.A.F. Establishments Finance Division, Air Ministry, called in and further examined.

Chairman.

864. If we could turn straight away to Bracknell and Andover, could you tell us why there are the two colleges?

—(Mr. Charlton.) There are a number of reasons for this. It is partly historical. It goes back, really, to a period during the war and immediately after the war, when the staff college which had been at Andover before the war had been moved to a place called Bulstrode Park near Gerrards Cross. It was then split; one part went to Bracknell whilst the part which handled the Allied Air Forces as they were then remained at Bulstrode Park. This was a requisitioned building. Subsequently it was decided to transfer the rump which dealt with the foreign Air Force students from Bulstrode Park back to the original home of the Royal Air Force staff college at Andover. That has been the position ever since. There was not enough room to cater for the entire student population at Bracknell, and there were various other reasons which made it difficult to mix all types of Royal Air Force students with all types of overseas students. That position has obtained ever since the end of the war. We have from time to time considered the possibility of amalgamating the two but so far it has been felt that the balance of advantage has lain in keeping the two staff colleges. There are three main factors. One is the bricks and mortar factor; there was not enough room at Bracknell to house the two staff colleges and all those students. The second factor is the content of the staff college course itself; in the case of some of the overseas representatives the security classification is not as high as that of some countries, and we have had to exclude from the Andover course a part of the syllabus of the staff college which contains a lot of top secret material. The third reason is that our experience with the overseas students who have been at Andover—those who do not belong to Commonwealth countries but who come from such countries as Iraq, Iran, Indonesia, the Sudan, and Yugoslavia—is that, partly owing to language difficulties and partly

owing to other reasons, they have to be treated slightly differently and taken at rather a different tempo from the tempo we can keep up at Bracknell. Those are the three main factors. It might be helpful if I said we have not got completely closed minds on this particular point. There are obvious potential advantages in having one staff college—economy in overheads and that sort of thing—but we have got to look at the capital cost of housing the two staff colleges at Bracknell. The question of transferring Bracknell to Andover would not arise. That is a non-starter. We have, as I say, got to look at the capital costs involved and also at this very awkward problem of security grading which is common also both to the Army and to the Royal Navy.

Mr. Wilkins.

865. My recollection is that at Camberley the staff college encountered precisely this same security difficulty so far as the end of the course was concerned, but they seem to have surmounted it by arranging during the last two or three weeks other occupational environment for the students whom they regard as probably not to be trusted with top security secrets?—That is perfectly true. That is the solution they have found for it. Whether they are altogether happy about it I do not know.

866. They seemed to be?—They did? (Air Vice-Marshal Porter.) I would not say they are happy. It is a solution they have had to find. About two years ago when the three Commandants of the staff colleges were directed to examine the means of putting more joint Services training into the syllabi, they recommended that there should be an investigation to find out whether all the foreigners could not be separated from the staff colleges.

867. Is it justifiable to keep two separate institutions simply for this one reason? Is there some particularly valid reason for it?—There is a slight difference. It is very difficult, unfortunately, with Air Force subjects to divorce them from security. A great deal of secret

26 February, 1964.] Air Vice-Marshal M. K. D. PORTER, [Continued.
C.B., C.B.E., Mr. T. A. G. CHARLTON, and Mr. J. H. FRANCIS.

information is spread across the whole course, so if you put it in at the end of the course you would find it became impossible. The only possible way of surmounting this difficulty, we think, would be to make every third course quite a different one with foreigners on it. But they would not like this awfully because it would not fit in with their career structures and so on.

Chairman.

868. Are the two colleges quite separate in direction or do they have a shared staff?—They come directly under the Air Ministry and I give them the policy on behalf of A.M.P. Although they are quite separately looked after, the two Commandants in fact keep in step. The two staff keep in step and the syllabi, as far as they can be, are the same. They use common exercises when there is no security restriction and they take part in the joint Services training exercises when there is no restriction on security grounds.

869. They do not share specialist lectures?—No.

Sir John Langford-Holt.

870. In giving your reasons for two separate staff colleges, the first reason you gave was bricks and mortar. Is there any conscious policy of developing or extending one of the colleges or do you carry out these extensions on one or other of them as the requirement arises? It occurs to me that unless you do consciously divert to one particular college you are going to make this a more difficult problem as the years go on. You are going to divert them in two main directions which will make any single solution impossible in the future?—(Mr. Charlton.) I would like to answer that question in two parts. Andover consists largely of hutted accommodation. It is in an adequate condition; I would not put it much higher than that. It is a lodger unit on our big Royal Air Force Station, Andover, which contains, apart from the staff college, the headquarters and maintenance command and also an airfield. As I have said, the buildings there are hutted accommodation—pre-war except for some repairs which were carried out because of bomb damage, after the war. Otherwise there are no modern buildings there at all. Bracknell is quite a different

thing. Bracknell is a permanent building. Originally it was a big private house. Various wings, in permanent construction, have since been added to it. It is fair to say that if we were considering or found possible the combination of the two staff colleges, we would obviously select Bracknell and, equally obviously, we would do no work at Andover. I have said we have not shut our minds on this particular point. In fact, we are due to have another complete look at this possibility in the course of this year. It is a task we have in front of us. I think we have some idea of the economies which would result. (Mr. Francis.) I am concerned with the establishment implications. Because the Royal Air Force college at Andover is only a small proportion of the total establishment of the unit, there would not be any significant staff economies if this unit were to be added to Bracknell. In fact, as far as officers are concerned, we estimate there would only be a net saving of three officers—the Commandant, the Assistant Commandant and one other officer. There might be a small number of civilians who would be saved. Therefore, the total staff saving would not be very large because they are not two separate, self-contained units.

Mr. Wilkins.

871. Have you room for expansion at Bracknell?—Yes. This has been looked into and it would be possible to accommodate the two colleges there. (Mr. Charlton.) The main shortage is in tutorial accommodation.

Sir John Langford-Holt.

872. Is any money being spent at Andover?—(Air Vice-Marshal Porter.) No, no money is being spent on the staff college at Andover other than keeping the old buildings in repair.

Mr. Wilkins.

873. But Andover is not a place which could be disposed of if you developed Bracknell?—No, because it contains the headquarters of Maintenance Command. The Andover staff college establishment is about 10 per cent. of the total establishment of the unit.

Mr. Anthony Royle.

874. Reverting to the overseas students problem which we were talking about earlier, you said the overseas students

26 February, 1964.] Air Vice-Marshal M. K. D. PORTER, [Continued.
C.B., C.B.E., Mr. T. A. G. CHARLTON, and Mr. J. H. FRANCIS.

are at Andover, but in the brief we were given I see the figures of students at both colleges include 20 non-Royal Air Force students. Could you explain this to me?—Mr. Charlton did say Commonwealth students go to Bracknell, together with some Americans and some civil servants. We have at Bracknell three Naval, four Army, and three civil service students; two Commonwealth defence scientists; and four United States Air Force, one United States Navy and eight Commonwealth students. At Andover we take Commonwealth and foreign students (we are asked to take them) together with one Army student, one Navy student and a United States Air Force officer or officers.

Mr. Wilkins.

875. This is the usual reciprocation?
—Yes, there is reciprocation.

Chairman.

876. How is it decided whether a person goes to Andover or to Bracknell?—The selection board at the Air Ministry selects students at the same time for both. They try and get into both colleges a coverage of different branches and different experience in order to get the maximum value from the student relationship. We tend to put an officer into Andover if he has had some particular experience of a foreign country which is useful.

877. Balancing that, it must be bad luck in a way if you get an emasculated course, and that is all you do get in the way of staff college training?—You gain in some respects and lose in others. You gain, of course, from this relationship with foreign students. This is quite valuable. For example, since the war 10 future Chiefs of Air Staff of foreign air forces have been trained at Andover, and this has proved extremely beneficial. We make no differentiation at all between which staff college the officer happens to go to; for example, the Deputy Commandant at Bracknell at the moment was trained at Andover. A lot of the D.S. at Bracknell are from Andover and vice versa.

878. But will the men who have been with the foreign students subsequently find that they are handicapped compared with their colleagues who have been to

the other college if they reach important positions in the Service?—We would say no.

879. But you do not go on to say "We might as well have the same course at both"?—No. In a modern air force it is, for economic reasons, sensible to base a person in Bomber, Coastal or Transport Command and allow him to serve in that Command with the longest possible flying life straight off, because he costs a great deal to train for something else. The result is that he does not know a great deal about the other Commands. If, in the course of your lectures, you can give him information which has a secret or top secret security classification, this is very helpful to him. It is a slight disadvantage if you do not do this, so if you can it is obviously worth doing. You lose something by not doing it. The actual mechanics of writing, thinking and that sort of instruction are the same in both places.

880. What about their exercises? Are their exercises in common with the other Services and would they be affected by the security classification?—Yes. I think there are at the moment five joint exercises between Camberley, Greenwich and Bracknell. Andover participates in three of those. Two of them have too high a security classification, so they cannot join in.

881. Are the students about the same age as those in the other Services?—No. I cannot speak for the Navy because I am not sure about the Navy, but I think they are older than the Army.

Mr. John Woollam.] I want it to be quite clear in my mind that the factor of training foreign students is the only reason why two separate staff colleges are still maintained.

Sir John Langford-Holt.

882. Could I ask you about the number of students? Does the number of students you take bear any relationship to the size of the Service, to the Air Force, or to the capacity of the colleges?—It is governed by the size of the Service. This was last decided in 1959 and was based on an endeavour to ensure that all officers who reached Group Captain rank should have gone through the staff college.

26 February, 1964.] Air Vice-Marshal M. K. D. PORTER, [Continued.
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Chairman.

883. Is there any alternative way of achieving a position like that of the Army?—We, I am afraid, are very different from the Army in the way of staff. The advantage of going to the staff college to the Air Force is that it gives one tuition from which it is expected one will benefit. This will show up in the confidential report. But it is no bar to promotion not to have been to the staff college. You may be posted to a job on the basis of your confidential reports and your ability without ever going to the staff college. You might reach the highest rank without having done that. It is not normal, but the occasional officer does this. We have had officers reach Air Marshal rank without going to the staff college.

884. You say you are different from the Navy in this respect?—Not from the Navy. I think the Navy situation is that by no means all the officers who reach high rank go through the staff college. We aim to get and do get them through, but the fact that you had not been through the staff college would be no bar to promotion.

Mr. Anthony Royle.

885. In the Army you have got to go through the staff college in order to attain high rank?—Yes. Therefore, they have a special arrangement for the officer who does not go through.

Chairman.

886. Can you tell us something about the Junior Command and Staff School? Is that part of Bracknell?—No, it is quite a separate unit. All officers in the general list are supposed to attend the Junior Command and Staff School.

887. Is there one for the whole country or is there one for each area?—There is one for the Air Force. It is to prepare officers who have attained the rank of Lieutenant and Flight Lieutenant for junior Command posts and to give them tuition in speaking and in the more simple forms of writing—operational orders, letters and so on. It is designed to fit them for junior staff posts. We regard it as a useful lead into the staff college course itself. I can answer your question on ages now. The minimum age of entry into the staff college in the Royal Air Force is 28. The maximum age in the case of

the General Duties branch is 34. For the remainder of the branches it is 38.

888. Do the Junior Command people share staff with the staff college?—No, they are two completely separate institutions.

889. Is it a year's course?—No, it is eight weeks.

890. Has the staff college course always been a year?—It was a year before the war—I think probably from its inception. When it was opened up again during the war, in 1941, it was, I think, three months. At the end of the war it was initially three months because we had large numbers of people to get through the course. It then became six months, and it went from six months to a year once we had got rid of the backlog.

891. Do you think a year is the optimum time for it?—I think this is the best compromise. In many respects we would like it to be longer. On the other hand, from a financial point of view we cannot really afford to make it longer. We now have to include in all the staff colleges 20 per cent. joint Services work which we did not have to include before. We then had rather less, I should think more of the order of 5 or 10 per cent. This increase has been at the expense of single Service subjects. It is quite hard work to get through in a year. The student finds it very hard going, and equally, I think, the directing staff.

892. Does that 20 per cent. mean the tempo of the rest of the work has been quickened, or is it eliminated?—On the whole it has increased the tempo of the work.

893. Do you think it is worth it?—Yes. I think you have got to have joint Services work. I think this is an essential part of a modern staff officer's duty. One deals very much more today with the other Services than was usual before the war. I do not think you can afford to do longer than a year. We spend our time trying to keep these courses down to a minimum because they are very expensive for these large numbers of officers.

894. You have nothing equivalent to the Naval College at Greenwich for those above the level of Squadron Leaders, the more senior officers?—I cannot speak with authority about this

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because I have no responsibility for it, but there is a flying college at Manby for general duties officers, and for no other branch where they pursue advanced flying subjects. (Mr. Charlton.) They also have their quota at the Joint Services Staff College at Latimer and the Imperial Defence College.

Sir John Langford-Holt.

895. You said your directing staff find it hard going. How long do your directing staff stay at these colleges?—(Air Vice-Marshal Porter.) On average I would say about three years.

896. That is considerably more than at Camberley where they usually stay two years. The Commandant there said he thought that two to two-and-a-half years was about enough at the pace they have to go?— $2\frac{1}{2}$ years is the standard tour. Some people do three, some a little less.

897. I appreciate that the Services are not in any way the same. Three years you say is about the length of time your directing staff stay. Do you think it would be better if it were longer or shorter?—It is very useful to be at it for a long time, from the point of view of tuition, but it is not a good thing for the officer himself and also from the course point of view. It is an advantage to keep bringing in new blood. We are changing some of the directing staff all the time.

898. You do not have a course officer in each course, an officer who takes them through the majority of their course?—Normally you would find that a change of D.S. occurs at the end of the course.

899. You run it rather more as a school than as an extended discussion group, which is what appeared to be the practice at the other colleges?—No, I would not say that.

900. You would not?—No. It is run in the form of lectures and written exercises. I would say the directing staff are really more akin to tutors at universities.

Mr. Anthony Royle.

901. Roughly how many outside lecturers do you have attending per year?—I cannot answer that. The number would be very large. (Mr. Francis.) It is between 70 and 80.

902. Is there any difficulty in getting them to come down to Bracknell from London and from other parts of the country?—No.

903. Therefore the distance Bracknell is from London does not have any detrimental effect upon obtaining the best type of lecturers and the best type of people to talk to your students?—(Air Vice-Marshal Porter.) No, I would say definitely not.

Chairman.

904. Does your staff include people surplus to requirements so that they can do research work and prepare courses?—We have what we call a planning staff. (Mr. Francis.) We have, for example, at Bracknell three group directors who control a total of 16 directing staff. In addition to those we have six officers in the planning cell, including three Wing Commanders in the exercise planning cell. So there are a number of officers who are concerned with other than direct control of the work syndicates.

905. They are quite separate people? You do not have a sabbatical period?—(Air Vice-Marshal Porter.) Yes. In fact, the tendency is for an officer not to be posted straight off to be a planner. He would start as a member of the directing staff or as a group director. Then for part of his tour, perhaps for the last year of it, he would move over to the planning staff.

Mr. Harold Gurden.

906. When you liken this procedure to university practice I presume it ends there. There is no freedom of choice for the students as there is at universities, is there?—No.

907. You used the term "lecturers"?—Yes, lecturers and tutors.

Chairman.

908. Do your people before they come to Bracknell have a pre-conditioning course of any sort? Do they come straight out of active service into the college?—Yes. They have first to pass an examination for which they have had to prepare. We arrange, finally, suitable lectures and short, three-day courses at universities in particular which they attend. Then they are selected by a selection board on the results of their examination and on their confidential reports.

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Mr. Harold Gurden.

909. What sort of an examination is this?—It is a written examination to test in part how well they write and are able to express themselves and also to test their general Service knowledge. It is not a specialist paper. It is common to all branches. They all take it. They answer foreign affairs questions and questions on the colonies and the Commonwealth in order to test their breadth of knowledge.*

Chairman.

910. I believe that for Camberley there is a preparatory period. There is no equivalent to that in your case?—No, this is very different. I think I am right in saying that in the case of the Army part of the course at Shrivenham is concerned with science and technology. The bulk of our students are either general duties or technical officers, and part of the normal training of a general duties officer is in technology and science. Therefore, we do not have the same problem. We do nothing for the relatively small number of secretarial, medical and other small branches.

Mr. Anthony Royle.

911. Do the Royal Air Force Regiment attend Bracknell or Andover?—Yes. We allot vacancies in relation to the number of Group Captain posts in each branch, which seems to be a reasonably fair allocation. If we have a particularly bright chap we would put him in, anyway.

Chairman.

912. Has the development of this extra Services work at the college brought you into closer touch with your colleagues in the other Services?—Me personally?

913. Or the rest of your colleagues?—Certainly I think at staff college level the Assistant Commandants meet very much more frequently now, probably once a fortnight, and the Commandants probably once a month. In my particular case I should say it has not made a great deal of difference. There always has been liaison between the staff.

914. What is the channel through which the latest ideas in the different

* *Note by witness:* There are three papers: current British and International affairs, problems of strategy and employment of air-power and a précis.

Services percolate into the actual teaching of the colleges?—I would say it is done in two ways. First, the directing staff are very carefully chosen so as to feed in those people with the latest and most up-to-date operational techniques of the various Commands. Secondly, the college has direct access to all the Air Ministry directorates; they are continually visiting the Air Ministry, reading the documents and being briefed so that the whole course is up to date. The planning staff write the exercises after consultation with the appropriate directorate in the Air Ministry.

915. There is a joint training committee between the Services?—Between the Directors-General, yes.

916. Has that had much effect on the quality of the work?—I would have thought not a great deal on the staff colleges, because the three Assistant Commandants who meet together are the important people in the matter of the staff college form of tuition. However, as far as the relations at Air Ministry, War Office and Admiralty level are concerned, although this committee has not been in being very long I think it promises to be extremely useful. (Mr. Francis.) We do have attached to the directing staff officers of the other Services. We have one Commander from the Navy and one Lieutenant-Colonel from the Army who are attached to the directing staff. (Air Vice-Marshal Porter.) And amongst the students we have Army, Navy and American Air Force people, so they are also spreading the knowledge.

917. And you have comparable arrangements at the other staff colleges?—Yes.

Sir John Langford-Holt.

918. You have 20 per cent. joint studies with the other Services. Was this a figure arrived at arbitrarily some years ago, or is it one which is constantly being kept under review? Thirdly, if that is so is there any desire on the part of anyone either to increase or reduce it—"anyone" being either of the other two Services or your Service?—The answer to your first question is that the three Commandants three years ago were directed by the Chiefs of Staff to form a committee and meet together to see what was the maximum amount of joint Services staff works study which could be injected into the course with-

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out detriment to the normal individual staff training for a particular Service. They concluded that 20 per cent. was the maximum without detriment to the rest of the course. So far as I am aware, none of the three Services is pressing for more, certainly at the moment, because the prime purpose of each Service staff college is to train its staff officers for its own Service. Almost every year there is more that you want to inject. It is under review primarily because the three Commandants are constantly getting together; and the various Air Ministry directorates and the directorates in the other two Services are constantly looking at it. There is also an Assistant Chief of Defence Staff (Joint Warfare) in the Ministry of Defence, with an inter-Service staff. They have been directed to keep in touch with the staff colleges so as to ensure that their joint Service training is kept up to date and to make recommendations through the three Ministries for any alterations which they think are needed to keep it up to date.

919. It appears that the wish of the staff directorate committee was that 20 per cent. should be the maximum, and 20 per cent. is still the maximum?—I would say certainly yes.

920. Once you have assimilated one 20 per cent. there is the possibility you might say "We could go a bit further"?—That is unlikely. It is difficult to keep to the 20 per cent. There is a Joint Services Staff College particularly for this at a later stage.

Chairman.

921. Comparing 5 and 7 which deal with the establishment of the two colleges, can you divide your total establishment between those who are actually doing the administrative work in the head office, those who are actually in contact with the training of the students and those who are doing ancillary work, like staff catering and domestic?—(Mr. Francis.) Yes, Sir. Taking Bracknell first, we have a total of 33 who are concerned with administration; 11 of these are officers, including the Commandant, the Assistant Commandant, the planning staff, the college secretary and so on. The remainder, mostly civilians, total 22; they are clerks and typists.

922. You say they are mostly civilians?—Yes, mostly civilians.

923. Have you got the actual split?—Yes—three airmen and 19 civilians. These are wholly clerks and typists supporting the administrative officers. As far as instruction is concerned, we have the three Group Directors, who are Group Captains, and 16 directing staff, either of the rank of Wing Commander or Group Captain.

924. Does that include the planning officers?—No; those I have included in the general administration.

925. Can you give us a figure?—Yes, six. As regards the supporting services, I have divided the staff between mess staff and others. The former total 101, and they are almost 100 per cent. civilians. It contains a very sizeable element of batmen. The rest of the supporting staff total 86, including two officers, 22 airmen and 62 civilians. These represent the staffing for the library, the drawing office, equipment, accounting cells, medical, M.T. and so on. As far as Andover is concerned, the administrative staff, again on the same basis, comprise four officers, two airmen and ten civilians, a total of 16. The instructional staff comprise eight officers. The supporting services include 31 for messing and batmen and a total of 30 (of whom 29 are civilians) for equipment, medical, library, drawing office and similar services.

Chairman.] I notice, comparing the two, that the proportion of Service to civilians is rather larger at Bracknell than it is at Andover. Is there any particular reason for that?

Mr. Harold Gurden.

926. Before we go to that, could we check the overall figure, because the student ratio of the colleges is right out of proportion to the total in both colleges. There are 42 students at one college involving a total of 85. In the other there are 96 students, involving a total of 239. I thought that before the breakdown we could, perhaps, have that information. That applies also to the money spent. Could we have some elucidation of that?—We are dealing with two quite separate types of unit. In the one case, at Bracknell, we have a completely self-contained unit. It is a unit on its own, with all its supporting services. However, at Andover it is a very small unit, a small unit in a much bigger formation. It represents only 10 per cent. of the total establishment.

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Therefore, Andover tends to be rather cheaper in supporting staff than Bracknell which has to be completely self-contained. The instructional staff, you will notice, is roughly the same for both colleges. The difference is in the supporting staff.

Mr. Anthony Royle.

927. Could you let us have overall figures, comparing the cost of running Bracknell for the number of students involved with the cost of running Andover?—Yes, we could let you have that information. (Mr. Charlton.) The total cost for 1963/64 at Bracknell was £299,150 for a student population of 96. At Andover it was £107,650 for a student population of 42. (Mr. Francis.) In one case it is just over £3,000 per student and in the other it is something of the order of £2,500. (Mr. Charlton.) The difference is in the supporting staff, not in the instructional staff.

Chairman.

928. As far as we can work it out, it appears from our arithmetic that that is a good deal higher than Camberley and Greenwich. Have you ever had occasion to compare your figures with theirs?—We have not had occasion to compare our figures, and in that sort of comparison it is always very difficult to know whether you are comparing like with like. We do not know to what extent supporting services, which we include in our figures for a unit like Bracknell which is entirely self-supporting, can be compared with Camberley which may have some services provided by a nearby Army unit. We just do not know. But apart from that, one of the differences is that the rank levels at our staff colleges are higher because of the fact that the average age and rank of our students are higher. That means, similarly, that the average rank level of the directing staff is higher. This gives rise to an increased overall capitation rate. Also amongst our staff are general duties officers, and again the emoluments of a general duties officer are rather higher, because they include flying pay, than the pay of the officer of another branch.

Mr. Harold Gurden.] It does not seem to run at all in the same proportion. The water consumed and transport seems to be in step but some of the other things—electricity, gas and fuel—are way out. This is rather difficult to

understand, quite apart from the number of staff which you have explained.

Mr. John Woollam.

929. Is it a mathematical conclusion, from the explanation you have given as to why the figures for Andover should be lower than they are for Bracknell, that as far as possible one should always place a teaching establishment or staff college as a unit on a Command headquarters and airfield because then you do not have to have this overheads structure? I know it sounds slightly facetious, but there is some justification for this comparison of figures here?—(Mr. Francis.) It only means, really, that the larger the unit you are dealing with the lower tend to be the average costs of the administrative services per head.

Chairman.

930. You did say that you had to have more expensive officers at your colleges because the rank of your students is higher, but how, in actual fact, does it compare? What is the difference in rank between your students and those of Camberley?—(Mr. Charlton.) The Royal Air Force is one rank up on the Army. The average rank of the Royal Air Force staff college students is Squadron Leader. At Camberley it is Captain. Incidentally, there is another minor point on costs which also arises on account of rank. Mr. Francis mentioned that at Bracknell and Andover the supporting staff includes quite a proportion of batmen. The more senior your rank of officer the more your entitlement to batmen or, rather, your entitlement to a share of batmen goes up; and there is a difference between a Squadron Leader and a Flight Lieutenant in that respect. The flying pay element is quite considerable on the instructional side. It is about £400 a year for each member of the directing staff as compared with the Army. (Mr. Francis.) We have 23 officers of the rank of Wing Commander or Group Captain, whereas there are five of comparable rank in the case of Camberley. This is for the reasons we have already mentioned.

Chairman.

931. Do you know what the comparison of batmen is as between Camberley and you?—No. This ought to be on the same basis because batmen scales are common scales.

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However, the actual number of batmen can vary very considerably according to the accommodation of the officers. It could well be that at Camberley a large proportion of married officers are living in their own private accommodation, whereas at Bracknell in particular we have got our full entitlement to married quarters and hirings. In consequence, all those officers are entitled to their full quota of batmen.

Mr. Anthony Royle.

932. There is no problem about married accommodation at Bracknell?—No.

933. What about at Andover?—At Andover there is not much of a problem because 50 per cent. of the students are foreigners. They, generally speaking, live in mess as single officers. The balance represent a very small number only, so there is no real problem. (Air Vice-Marshal Porter.) Even for those foreigners who want to live out we can find accommodation with which they are fairly happy. (Mr. Charlton.) Bracknell has an entire married quarters colony.

Chairman.

934. Could I take up Mr. Gurden's point that, if you take Andover, you heat about 40 students for £3,000 whereas at Bracknell you heat slightly more than twice as many students for £9,900?—(Air Vice-Marshal Porter.) is that quite fair? We heat 85 people as opposed to 239. (Mr. Charlton.) No, you heat all the people there. Your 239 and 85 exclude the students. What you want to look at are the totals in each place. (Air Vice-Marshal Porter.) It is 239 plus 92 and 85 plus 42.

Mr. Harold Gurden.

935. There is something in the point, or is my arithmetic wrong?—(Mr. Francis.) It comes back to the point I was making before. At Andover it is 10 per cent. of the whole establishment, whereas Bracknell is entirely self-contained.

Chairman.

936. When we tried to compare the increase in your fuel costs with those in the other Services, the increase appeared to be very high as well as the total amount. If you compare 1961-62 with 1963-64 the increase there is about a fifth?—(Mr. Charlton.) £1,800 on £8,100.

Chairman.] It is about a fifth, which is much higher than the figures we had from either the Army or the Navy.

Mr. Harold Gurden.

937. Might it not be on account of the type of fuel you use? You are using perhaps a different type of fuel?—I do not know. The increase does not surprise me, bearing in mind my own fuel bills. (Air Vice-Marshal Porter.) So far as I know, there has been no change in the heating system at Andover for many years. It is centrally heated from a central point.

Mr. John Woollam.

938. At Andover there is a heating plant covering the whole range of activities and there is some imputed cost to this particular unit, whereas at Bracknell there would not be a heating unit there if you were not there?—That is so.

939. But there are discrepancies which may be of importance. There are the contributions in lieu of rates. At Andover there has been the most marginal of increases over the years, whereas at Bracknell we find you have doubled your contributions in lieu of rates. That is not within your control, but it is quite a substantial figure both absolutely and relatively?—We have a married quarters wing at Bracknell and over the past two or three years we have developed quite a large housing estate. That itself represents a big increase in the land we have at Bracknell and results in this increased figure for rates.

Chairman.

940. Do both colleges use the same kind of heating and use the same sort of fuel?—As far as I know, both are centrally heated.

941. By oil or by—?—I am afraid I could not say. (Mr. Charlton.) I do not know, either. (Air Vice-Marshal Porter.) I suspect that at Andover it is probably by coke, unless they have changed it in recent years.

Chairman.] And telecommunications has also risen quite substantially, about 20 per cent.

Mr. Harold Gurden.] There are several discrepancies. Would it be fair to return to this at a later meeting if we are to compare these two things?

Mr. John Woollam.] What would help me would be if we could have a note

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which in some way assessed the increased costs which Bracknell has to bear by reason of the fact that it has this large self-contained married quarters section. This obviously spreads through all your costs and expenses. It would also be useful to know how far that is not true of the comparable colleges of the other Services. Then one could isolate that non-recurring factor as far as Bracknell is concerned.

Mr. Harold Gurden.

942. Yes. That would help?—(Mr. Charlton.) Yes, we could have a shot at it. At Bracknell there is no argument but that it is self-contained and you have total costs, whereas at Andover it is an imputed percentage of the total cost of a very much bigger station; and you could argue plus or minus percentages on this until you were blue in the face.

Mr. Wilkins.

943. Are these colleges run as a joint undertaking and the costs then apportioned, or do you identify them separately for every year? Do you run these two places as one unit and apportion the costs?—(Air Vice-Marshal Porter.) No, quite separately.

Chairman.

944. What are the financial arrangements between the colleges and the Ministry? Do you generally approve estimates or is specific control exercised over every item of expenditure?—(Mr. Charlton.) The manpower control is vested entirely in the Air Ministry. That is far and away the largest element. (Mr. Francis.) The control in the case of Andover college is exactly the same as Air Ministry control over expenditure for any Air Force activity. It is not split down unit by unit but rather as regards the type of service. For example, works services as such would be controlled as a whole. Service establishments would be controlled as a whole from the Air Ministry, so we would not look at Andover by itself and say we control the full cost of Andover, with all its different component parts, and agree to an increase here or an increase there. The whole thing is separately controlled from the Air Ministry, whether it is manpower, works services, food or whatever it may be.

945. If you were looking at fuel and had occasion to think your figures were surprising, would you make a special check and compare it with what was happening in other similar colleges?—(Air Vice-Marshal Porter.) I think not so much in similar colleges but certainly against the normal consumption within the Service, taking into account the buildings, layout and so on.

946. Is the establishment inspection a periodic thing or something which is going on continuously?—(Mr. Francis.) Establishment inspection, inspection of the personnel, is something we aim to carry out in every unit once every 18 months. We have reviewed both units, both Bracknell and Andover, within the last two years.

Mr. John Woollam.

947. Regarding the civilian industrials who are employed at Bracknell and comparing them with the civilian industrials employed at Camberley, will they be on the same rates of pay? Is this a national scale or not? The reason I ask is that if you take Camberley you will see their employment of civilian industrials fell over a comparable period from 194 to 188, a net decline of only six, and that their wage bill only rose from £113,000 to £118,000. When you turn to Bracknell you see that the total rose from 131 to 135, a net increase of only four, and yet your wages increase for those same people went up 20 per cent. I was wondering whether there was some reason for the quite different rise in the wages bill for your civilian industrials as compared with the staff college at Camberley. I would have thought they would all be on a similar national rate, and yet one cannot square it with the figures?—(Mr. Charlton.) I do not think you can answer that unless you split up the various civilian industrials into their various types. It covers mess staff, probably, in both cases. I imagine those would be similar.

948. But among these civilians are there some trained and skilled craftspeople who are on very much higher rates of pay than the ordinary type of civilian industrial who is employed at Camberley?—(Mr. Francis.) We have fitters, M.T. drivers, a carpenter and a large number of batmen. We

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have not got any highly skilled craftsmen. (Mr. Charlton.) Not among the industrials.

Mr. John Woollam.] On the face of it, it is something you cannot explain. You cannot explain why there should be that difference.

Chairman.

949. Could you give us a note on it?—Yes, My understanding of these figures is that the increase both at Bracknell and Andover represents actual civilian pay increases over the period, but if I am wrong I will look at it again.

Mr. John Woollam.

950. If that is so, I do not understand why it does not happen also at Camberley?—I do not know. It does look out of proportion at first sight.

Mr. Wilkins.

951. In the case of the Admiralty they have some negotiating body which meets the Civil Lord every two months to deal with the pay increases and so on of the industrials. Is there any comparable representative organisation in the Air Ministry?—I am afraid I do not know.

952. I have a feeling that some of it is accounted for by wage increases of some sort. I was trying to get at the root of this, and in the Admiralty there is a proper negotiating body?—There is a body.

953. I know that it includes trade union officers and people like that who meet the Civil Lord once every two months?—Yes, there is a body. I am trying to remember its title . . . No, I am afraid I cannot. There is a body which negotiates.

Chairman.

954. You have told us about the inspections. Are there different teams which inspect from the point of view of establishment and from the point of view of works study, or is it all done by the same group?—(Mr. Francis.) No. The staff establishment reviews are carried out by joint Service and civilian establishment committees. They are primarily concerned with staff inspection. In addition to that, we do have works study teams allocated to each Command, and these teams operate under the general direction of both the Commander in

Chief and the Director of Works Study in the Air Ministry. The committees and sub-committees go out once every 18 months to review the establishment as a whole. If in any particular case they find an area which they consider could profitably be work studied they would report this back and we would take it up with the Director of Works Study; or, quite independently, the Commander in Chief can quite properly use his works study teams to undertake works study examinations on his own account. The two organisations are separate, although at top level in the Air Ministry both of the Directors operate together on a joint committee.

955. Do the Treasury come in at any stage or is this quite independent of the Treasury?—The Treasury also have a team of establishment inspectors who go out from time to time with the Service establishment committees. They pick and choose. Their main object is not to carry out the same sort of inspection as our committees but to see how the Service departments operate their establishment machinery.

956. Going to a different subject, when we were at Camberley we saw the arrangements for printing the training exercises. We understood that to some extent some work was done there for Bracknell. Is that right?—(Air Vice-Marshal Porter.) I am unable to answer whether they do or not. I am sure if Camberley have facilities which Bracknell are able to use they take advantage of them.

957. I think we were told you use contractors more than they do. How do you do your printing?—(Mr. Charlton.) There is a printing section at Bracknell. (Air Vice-Marshal Porter.) But that is mainly Roneo-type printing. I am not able to answer. (Mr. Charlton.) I think it is a question you might like to pursue when you go down to Bracknell.

958. Do Bracknell cover Andover as well?—(Air Vice-Marshal Porter.) There are some common exercises. Andover make use of Bracknell exercises whenever they can, or take the exercises and amend them, so the planning staff at Bracknell help the Andover staff and keep the size down at Andover.

Chairman.] Thank you very much. We hope to visit Bracknell.

WEDNESDAY, 4TH MARCH, 1964.

(The Sub-Committee met at the Royal Air Force College, Cranwell.)

Members present:

Mr. James MacColl, in the Chair.

Sir John Langford-Holt.
Mr. W. A. Wilkins.

Mr. John Woollam.

Air Commodore M. D. LYNE, A.F.C., Commandant, Group Captain A. C. DEERE, D.S.O., O.B.E., D.F.C., A.D.C., Assistant Commandant, Group Captain D. C. LOWE, D.F.C., A.F.C., Station Commander, and Mr. J. A. BOYES, M.A., Director of Studies, Royal Air Force College, Cranwell, called in and examined; Mr. B. M. DAY, Central Finance Division, Air Ministry, called in and examined.

Chairman.

959. May I first of all thank you very much indeed for your kindness in giving us a morning to show us round; may I also say how much we appreciate the way you have shown us the work of the College and how much we have enjoyed our visit. I ought to explain we are a Committee of the House. You are therefore protected by Parliamentary privilege in anything you say. Perhaps more importantly, everything said is being taken down. You will get a copy of the draft verbatim report, and if there is anything in it you want to alter you can do so. Similarly, if there is anything which, for security or other reasons, you think it would be unwise to have published perhaps you would sideline it and, if the Committee agree with you, it need not be published. We would rather you spoke frankly to us than that you should feel inhibited by the fact that a record is being taken. I wonder whether you could tell us, first of all, what difference you think the proposed merger with Henlow is going to make to your work here?—(Air Commodore Lyne.) The difference from the point of view of the ground cadets who are already here and the general duties cadets who also are already here will lie in access to improved laboratory facilities and, indeed, to the presence of the very highly qualified specialists who are going to be brought by Henlow here. That is the difference on the instructional side. The difference from the broad Royal Air Force point of view is that we will all be growing up together; all the branches

will be understanding one another's problems in a more intimate way than is possible with the two colleges being some 80 miles apart.

960. Will the two colleges remain quite distinct from each other, or will there be one college?—No. The plan is that the cadets will be just like other ground branch cadets. The technical cadets will enter the squadrons and will take their part in squadron life in the normal way.

961. The work will all be under one supervision?—The supervision of the cadet training will be single, but the instructional facilities which are provided for numbers of different kinds of people will have to be under some form of supervision which, as far as I know, has not been completely cleared up. This is a matter which is dealt with at Air Ministry level. But as we see it at the moment there is no argument about the fact that the cadets will be under a single command.

962. You mentioned that the effect will be to make available for the existing cadets some of the facilities which are being brought by the technical people. Will their arrival increase the use which is being made of existing facilities here?—In some sense, yes. For example, the present tutorial block which you saw this morning will be used not only by the flight cadets and technical flight cadets whom we already have here but also by the student officers of what, for want of a better term at the moment, we call the Institute of Technology. I do not know what, ultimately, it will be called, but the student officers

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who will be coming up here from Henlow will also use this facility which at the moment is only used by Cranwell flight cadets. So there is going to be much more use made of it. As far as I can see, other things will also be more intensively employed. For example, this college will carry a larger cadet population and therefore we shall be fuller all round than we are just now.

963. Perhaps this was a superficial impression, but when we went round the tutorial block there did not seem to be a great deal of use being made of the facilities. Was that a matter of chance?—(Mr. Boyes.) This may well have been a coincidence of the timetable. You will appreciate that there are certain entries of cadets who will be out flying; certain entries will be on officer training and certain others will be in the tutorial wing. It may have happened at that particular period that more than usual were engaged on other branches of training than academic. I would also say you only walked down one corridor. It is true there was no one in the physics laboratories and no one in aerodynamics, but the electronics corridor upstairs might have been more fully occupied and also the humanities department.

964. Is measurement made of the proportion of teaching hours in which equipment is in use? Do you calculate that?—No. Laboratories of necessity can never be occupied full time. For instance, in the subject of physics some time is spent in the lecture room and some time is spent in the laboratories. You can never keep the laboratories always full. (Air Commodore Lyne.) There is one consideration at this particular moment which is abnormal. Owing to our change to the new syllabus and to the new term structure, as a result of which we are going to bring new entries in in April, we are running at the moment one entry of 60 cadets light, so it is not entirely a typical situation. Normally we have 60 cadets on ground study during this term, but owing to the change this one entry of 60 cadets has, in fact, slipped a term.

Mr. Wilkins.

965. This is the change of syllabus foreshadowed in the House last even-

ing?—Yes; instead of having an entry in January we are waiting for our entry.

966. So you are 60 light?—Yes, who would have been on ground training of various sorts. Whether this would have affected it I do not know, but it is a consideration.

967. When the transfer from Henlow takes place I take it that there will be some subjects which you will have to take under your wing and that people will be transferred from Henlow to here?—Yes.

968. How is this going to affect the accommodation available?—(Mr. Boyes.) Our present block over here in which we do all our academic studies is to be handed over to certain branches of study in the amalgamated college. That is to say, mathematics, physics and humanities will be done in our block by everyone. In the new Institute of Technology what we call applied subjects— aerodynamics, thermodynamics and electronics—will be done by everyone.

969. Additional accommodation or additional facilities will not have to be provided? You will be able to accommodate the whole of the requirement here, in which case an economy would be effected?—Yes. Apart from the new building you have seen, there is to be no further accommodation. (Air Commodore Lyne.) There is to be accommodation which will be associated with that—the aero- and thermodynamics centre. There is the block which you have seen; there is also to be a block, the construction of which has not yet started, which will provide certain facilities for testing engines. This is an offshoot of the Institute but it is in a different place. Therefore, it would be dead accurate for the record to say the Institute of Technology building you saw is not the only new building connected with the merger. There will also be a mess for the student officers themselves which will provide sleeping and living accommodation. That is connected with the merger as well, so there is a complex of buildings.

Chairman.

970. Regarding the work study experiments we saw at the beginning of our tour, is that entirely confined to the

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station?—That is confined to the airmen who work on the technical wing servicing aircraft, and it may also extend to motor transport. (Group Captain Lowe.) It extends to all the technical aspects of the station and covers work study at Air Ministry level and the instructions on this which have been passed out in order form. We merely follow those orders. Work study is done at Air Ministry level rather than at station level.

971. Is it possible that eventually it might extend to the college?—(Air Commodore Lyne.) Do you mean work study of the tutorial facilities or the administration?

972. We are talking about the use of laboratories. Here is a possible case of wondering whether one could make better use of them?—Present forecasts are that this is likely to come under a high degree of control. This is because they are experimenting at Henlow (and they will be particularly pleased to describe this to you) with a computer to ensure the most efficient programming of laboratories, lecture rooms and instructional time. It is a computer problem now. As soon as Henlow come up here it will be almost beyond human ingenuity to devise a programme which will make efficient use of rather economically provided facilities.

Mr. Wilkins.

973. Is the computer to be transferred as well?—Yes. It is not, I believe, provided except for instructional purposes but it is not in use on instructional problems the whole time. Therefore it is an instructional computer they hope to be able to programme into this line of work.

Chairman.

974. Will that come under the command of works study here, or will it be separate?—No. It will come under the head of the Institute of Technology, but of course time on it would be made available for as many problems as possible.

975. What was your last intake here?—The last intake which arrived added 71, and it was the 89th entry.

976. What was the last passing out?—The last passing out was 34, I think. It was a small entry.

977. Why was it so small?—It was partly because at the time when that entry was being recruited the selection board was not able to find a sufficiently large number of people with the aptitudes and standards required and did not, therefore, take in a full entry. There is always a wastage in these courses for various reasons, predominantly the inability to fly. (Group Capt. Deere.) The even entries in the past which have come in in January have always been the smallest entries because they are usually those cadets who were left over from the September entry. This is another reason for introducing the April intake as opposed to the January one. Then those cadets who sit for their G.C.E. A levels and fail when their results come out in August or September can re-sit their examination externally. They will know their results in January and can then come in in April. This was the reason in the past for the big entry in September and the small one in January.

978. These are the people subject to two A levels as a minimum?—Yes.

979. In the Defence White Paper we have recently seen it is anticipated there will be a reduction in the total size of the Royal Air Force. Does that affect your work here? Are you sensitive to that kind of change?—(Air Commodore Lyne.) As far as we can judge from the size and quality of the most recent entries, certainly schoolboys do not seem to be sensitive to it. We at Cranwell are insulated from fluctuations in the commissioned population of the Royal Air Force by the fact that the cuts are made elsewhere. But this is something upon which the Ministry no doubt could declare its policy. Certainly we do not notice short-term fluctuations very much at Cranwell, except that if there is a loss of confidence among schools it tends to be reflected in the quality of the recruits. Our last entry was the exact opposite to that situation. It was a big entry of high quality.

Sir John Langford-Holt.

980. You mentioned that the main point on which people are thrown out

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at some stage is their inability to fly. What percentage does that represent?—It is a fluctuating percentage. If in giving a percentage you think I am being vague it is not because of evasiveness but because statistically it is not very sound. However, it is of the order of 28 to 35 per cent. who have to be re-allocated. This does not mean they are lost to the Royal Air Force or to the college, because one of the other advantages of having other branches here is that quite often a person will accept a different form of commission and we can either move him into the navigator or ground branch.

981. Does the inability to fly usually manifest itself fairly early?—Not automatically.

982. If it does, have you, in order to use your facilities to the best advantage, any replacement system? Can you offer up someone else?—That has not proved practicable once a man has got so far into the course that he is flying properly. It is possible that we can develop in some way, but I think this is rather a theoretical consideration.

983. When a student comes here is it virtually the first time he has seen an aeroplane as a pilot?—No, that does not apply. There is the flying scholarship scheme.

984. I am trying to get at the ones who are rejected because of their inability to fly?—Yes.

985. Is there any test of flying of any sort which is carried out before a student comes here?—There is an aptitude test, based on many years of experience, which is conducted at Biggin Hill with ground apparatus and which tests a person's reflexes, reactions and response. Also quite a high proportion of our entrants have gained a Royal Air Force flying scholarship as schoolboys. They are to some extent already initiated. Those who have access to Royal Air Force statistics will be able to calculate that scholarship candidates have a very low wastage rate as compared with the *ab initio* entrant.

986. There is no way of doing away with the wastage?—No, not completely because even men with good aptitudes sometimes do fail; but it can be reduced in various ways, and flying

scholarships and people who have got a private pilot's licence is one way of obtaining a fairly low wastage rate.

Mr. John Woollam.

987. Is the wastage rate one which has tended to rise because of the higher physical and mental standards you are having to ask nowadays of pilots in the Royal Air Force?—I would not say it has tended to rise, historically speaking. I think, in fact, it might even be that with more attention now being paid to the techniques of training and selection it has, if anything, probably fallen.

988. To put the question the other way round, because of the exceedingly high standards which have to be reached by the cadets it means that there is bound to be a wastage rate; what they have to learn is that much more complex and that much more exacting?—There is bound to be a wastage rate in flying and there is bound to be a wastage rate in other aspects of the course. Indeed, recent studies in universities all over the world have shown that there is a wastage in any form of advanced training, but in flying it tends to be a bit higher than in other forms of training.

989. Is flying a greater contributory factor than the academic factor?—Yes, the flying is absolutely the dominant factor. Insisting upon two A level entrants usually helps us to achieve our academic results. We have had academic suspensions, but very few. (Mr. Boyes.) Yes, very few.

Chairman.

990. Could you tell us something about your recruitment from the apprentice schools? How are they chosen and how do they fit in?—The apprentice entrants are nowadays chosen, as I understand it (and I am speaking rather from hearsay) by their results in the apprentice schools. They are proposed by the commandants of the apprentice schools concerned. Then they are selected by selection boards later on. They have to pass the same kind of aptitude tests as everyone else. However, this being quite a different form of training, they may be excused the formalities of the two A levels

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and judged academically upon their performance in the subjects they have pursued at apprentice school.

991. Is the figure of 10 per cent. fixed arbitrarily or is it a rough estimate?—The 10 per cent. figure is not fixed arbitrarily. They come in for consideration and we always seem to select very happily a certain proportion of them. It is eight point something per cent. (Group Captain *Deere*.) About 9 per cent. of our total flight cadet population at the moment is ex-apprentice. I think we probably take 80 per cent. of those put forward by the commandants of the respective schools. The commandant has the right to put them forward or not. Finally they are selected by the Air Ministry selection board. Normally only about one in three or four gets turned down by the selection board, because these people have been pretty well sifted through three years before that.

992. Once they are here do you notice much difference between them and the other cadets who emerge?—(Air Commodore *Lyne*.) They obviously have a flying start on the aeronautics side as trainees, because they have had all that before. (Group Captain *Deere*.) They are very valuable in that when they first come here they have already found their feet in the Service, and down in the South Brick Lines they are the leading lights, at least for the first term, in that they know all the tricks. They are very valuable to us and are usually jolly good material. They do very well here.

993. It has occurred to me that because of the increase in university cadetships and of the increase in university education generally in the country, you might be more dependent on people coming from apprenticeships in the future than you are at present. Is that a reasonable assumption?—(Air Commodore *Lyne*.) The whole question is rather obscure. One does not know how youth is going to react and how many university places are going to be called for in the future. So it is a bit theoretical and we are not clear how that will affect us. I do not think we would draw very many more than we do now from the apprentice schools because the commandants are already only putting forward something like 13 to

15 per cent. of our requirements, some of whom we consider at the moment are not suitable; so we come out at 9 or 10 per cent. I do not think that would be an important contribution in the future. (Group Captain *Deere*.) There is also the question of the academic standard. Generally speaking an apprentice is not up to the two A levels standard. Therefore, when he gets here he has a bit of a struggle academically.

994. It may be very difficult to get people here as university education stands at present on account of your rather high academic standards?—(Air Commodore *Lyne*.) Yes. I think that is a very fair point which we have got very much in mind. We do not know what is going to happen to the universities as a result of the expansion. Some say it will mean degradation. If the prestige of many of the universities sinks and we manage to hold a firm standard, we might find young people would still prefer to come here with two A levels.

995. But your recent entry has been well up to standard?—Our recent entry has been as high a standard as we have seen here since 1938 when the proximity of the war made competition very high indeed.

996. Do many of your entrants arrive with more than two A levels?—(Mr. *Boyes*.) Yes, that is true. I think probably over 35 per cent. of our 89th entry have three A levels at least.

Mr. *John Woollam*.

997. Regarding this requirement of two A levels, is it a requirement in order to sort out and cream off the best of the many applicants you have, or is it a fairly reliable indicator of the mental calibre of the cadet you have got to have if he is to do any good on the course?—I think the latter is rather the predominant factor.

998. Therefore if university expansion began to produce some of the problems the Chairman has mentioned, it could not be a solution for you to lower your academic standards because your course would presumably by then be more complex and intensive rather than less?—I do not know, but I would say there would be great reluctance to lower

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our standards in the future. I do not think any institution likes to lower its standards at any time.

Mr. Wilkins.

999. They have to pass an entrance examination?—No, not an academic one. (Air Commodore Lyne.) The selection board, in effect, contains various forms of tests, including intellectual ones.

1000. What was the entrance examination referred to in the debate yesterday? It was said that they had to pass an entrance examination at 17. Then came a question as to whether at 17 years of age you could be satisfied that you had suitable officer material?—I think the scholarship competition occurs at an earlier age than 17.

1001. It was said that they have to pass an entrance examination at 17 and then it was asked whether it was thought by the Air Ministry that they could judge their officer material at that age?—It sounds to me as if the word "examination", which is a word we do not normally use, was referring to the selection board which considers intellect, reasoning ability, manual abilities, aptitudes, health and personal qualities. They are all thrown into it and it is that, I think, which is considered because the two A levels are the academic qualification.

Chairman.

1002. Is all the selection board interviewing done here?—Very soon it will all be done at Biggin Hill. At the moment half the selection board work for Cranwell and Henlow is done here. The half which deals with personal qualities and with the things that do not need apparatus to measure them—health and manual abilities checks—is done at Biggin Hill at the moment. From April I believe the boarding and interviewing will be conducted at Biggin Hill. At the moment the boarding and interviewing is done here. When I say "here" I should explain that it is a separate organisation which answers directly to the Air Ministry and only to me for purely administrative purposes.

1003. It is not fair to ask you about the selection board if you are not responsible for that, but is it done by

Service people or is it mixture of Service people and teachers?—The president is a regular Air Force General Duties Group Captain and he is himself an old Cranwellian. He is assisted by a headmaster. Normally headmasters come from schools for a short period of duty on the boards. This is distributed over a large number of schools. (Mr. Boyes.) It is, indeed. (Air Commodore Lyne.) He is also assisted by a staff of Wing Commanders and Squadron Leaders who conduct the boards and run the tests of these small parties of candidates.

1004. We were told by the Air Ministry that the proportion of candidates coming from independent schools had dropped from 1962. Is there any particular reason for that?—It is hard to say but there was a certain point at which we moved over to the two A levels, and many of the independent schools which had provided us with recruits had been doing it by means of a Services class which was aimed at the particular examination. Now it is open to question but it may be that they have not quite adjusted themselves in their schools to the two A levels. I do not know. There may have been other factors at work. It is a very theoretical field. We ourselves may have affected it by casting our net rather more widely and by applying very objective tests to our candidates so that there was no barrier in the way of, say, a naval man getting in.

1005. Your proportions are different from the other Services?—Yes.

1006. So it is purely a question of whether the academic standards are very high or whether other reasons are involved?—One thing occurs to me. If you have an absolute objective standard in certain things from which you will not budge you automatically eliminate a lot of candidates. In every other respect they are acceptable. In that way you broaden your field of search because you cannot fill up from a limited section of the public. You have got to spread your net over the entire populace so as to find men with these very special abilities and skills.

1007. In other words, you are not scraping the barrel to get your numbers? You are setting higher standards and you

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are finding there is much competition in spite of those higher standards?—I would like to think so. We believe at Cranwell that we benefit from having what we call a mix. It is a mix both from the community and from various parts of the country and, indeed, from the Commonwealth, if we can get it. We also believe in having a mix of the human qualities and interests. We are by no means averse to people with arts interests in the right proportions mixing with men having scientific and technical interests. We believe they are all valuable to one another.

1008. Do you take any special steps to fuse the different streams?—Do you mean in the academic field?

1009. When you get people coming in from a wide range of schools and countries do you take any particular steps to merge them?—The first important step taken towards merging them in the personal qualities respect is during the initial period they spend living in groups of five in dormitory huts and working under very high pressure; this makes them very much dependent for their comforts in life on mutual help within this small community of five. That, we believe, strips off all the superficial veneer which may have been acquired by any man and brings out his basic qualities, qualities which are recognised by his fellows. That is usually a blending process, although occasionally it can involve a rejection process. (Group Captain *Deere*.) When the cadets first arrive we carefully sort them into groups in which there will be differences of background. Therefore, in those huts you saw this morning there may be one Etonian, one secondary modern and one grammar school boy. We purposely do this, and it is quite interesting to see how they match up in size at the end of the term.

Mr. John Woollam.

1010. Have you any information or evidence from headmasters or schools to suggest that the fact that you maintain such a high standard of entry is helping you to recruit, in that entry into Cranwell gives prestige and evidence of success in life quite early on and, therefore, boys react to it by saying, "I will try to get into Cranwell because it is a test and if I get there I will have

achieved something"?—(Air Commodore *Lyne*.) I think you are right. I think it is a very valuable factor and it is based on something real; it would not be valuable unless it were real. We are asking for certain qualities which are not found in every boy, and I think people now know it.

Chairman.

1011. This again is, perhaps, a little outside your realm of responsibility but, at the other end of the story, when their time comes to leave the Service is it necessary that the boy should feel he has got a civilian career ahead of him or can he feel he will remain in the Service long enough to fulfil his potential?—You do sometimes get a new cadet asking about pension prospects at the age of 17 but those of us who have grown up with the Royal Air Force sometimes think you are lucky to get to pension age. However, I think this question of a career in the Royal Air Force normally does not worry the people who come to Cranwell too much because in many cases a Royal Air Force officer's life goes on until 55 and the young entrant would normally look on that as being a reasonable life span of work.

1012. I was not thinking so much of pension prospects as of the fact that someone who had got these great qualities and academic standards would want to feel that in his late fifties he had got some future life ahead of him?—This does weigh with some people. One would like to think that what has gone into him at Cranwell and what he has learned in his Service life would be useful to him on leaving the Service, but we must admit that it is not everyone who understands what they are getting—that they are getting a successful Cranwell graduate. There is a weakness on leaving the Service in an officer not being able to hold some piece of paper in his hand. It is a pity but that is the way it is.

Sir John Langford-Holt.

1013. Can we turn our attention to the overseas students? Basically you have got three types of overseas student: old Commonwealth student, new Commonwealth student and foreign student. I see from the memorandum

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which was submitted to us by the Air Ministry that the cost of a complete training course for a pilot is £12,850. I think it was the Secretary of State who yesterday was talking about the cost of training pilots, and he used a V-bomber pilot as an example. He said that pre-war it cost £10,000 whilst today it costs £100,000. Is it possible that £88,000 are outstanding?—(Mr. Day.) This was an Air Ministry memorandum. The point about these charges for overseas students is that they are based purely on the marginal extra costs incurred in taking in these overseas students. Therefore the figures before you in this memorandum by no means represent the full cost.

Chairman.

1014. We have a figure of £1,690 as the average cost?—The Ministry of Defence memorandum shows the cost of ground training. It does not include flying training.

Chairman.] It is a good deal larger than the other Services.

Sir John Langford-Holt.

1015. Do you find that these overseas students—and I have already divided them into three categories—have something to contribute to Cranwell as well as Cranwell contributing something to them?—(Air Commodore Lyne.) I think so, as long as we do not get too many from any given national group.

1016. You would not include old Commonwealth people—Canadians and Australians, for example—in that category?—Unfortunately we do not get them. They have their own colleges.

1017. They do not send them just as a matter of keeping in touch?—No, that does not occur at cadet level. Regrettably the number of countries which send cadets here is becoming more and more of a declining factor. They are starting their own colleges or are making arrangements closer to home. Therefore we are seeing fewer and fewer.

1018. “Regrettably” is a word you put in consciously?—I was referring back to what I said about how much we value the mix in bringing on our British students. In a sense you might say this was a bonus we got from the Commonwealth.

1019. Would you say the word “regrettably” applies to old Commonwealth students more than to new Commonwealth students and to Commonwealth students more than to foreign students?—No. I think that is too heavily loaded. I would like to say it depends on the personality of the people concerned. To take the group which is the strongest in the college at the moment, the Pakistani cadets, they bring valuable qualities into our training and, indeed, their very presence and the way they tackle their problems sets the British students thinking about the problems of those sort of people. The old Commonwealth cadets have the advantage of being even more at home with our language and with our customs. Even they, however, sometimes give us a perceptive sidelight on our own progress.

Mr. Wilkins.

1020. On the question of wastage, how soon in the first term do you decide that a student is not going to make the grade? Again thinking of the figures which were quoted in the House last evening, ultimately out of 100 applicants only 75 will reach an operational unit. At what point in this cadet training do you decide that a chap is not going to make the grade?—We do not try to be too hasty in the first term because we recognise it is a sharp change for a lot of people, particularly those who have not lived away from home before. The losses in the first term tend to be voluntary losses, those who feel that this is not the life for them. (Group Captain Deere.) We do not suspend, in terms of saying a cadet is not suitable, in the first term; we only do so if it is a disciplinary matter, something which we cannot stomach. Generally speaking we have a very small voluntary suspension rate in the first term. So far as our decision is concerned, that does not normally come until about the end of the first year because it takes a fairish time for these young men to settle down to a formal life. They have not been accustomed to it. They are therefore not seriously considered for suspension within the first year. It is done on the basis of, “You are not doing well enough; pull your socks up”; then the cadet is told he

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is being put on a special report and is being watched. It is done fairly gradually.

Mr. Woollam.

1021. At what point does the wastage stop? If a cadet gets through the second year and founders later on would he complete his course because so much has been invested in him?—(Air Commodore Lyne.) He could be expected to have a high chance of success from a certain point in the flying course. By then he has passed certain important tests about which the Station Commander could say more. The situation in flying training is such that at no point, really, can you absolutely guarantee that a man will not show some weakness which cannot be tolerated or will not develop some physical defect. Therefore I am afraid that we have even had cases of men in their last term who could not go on to further training; but this is a very small number. However, it is one of the facts of life in Air Force training.

Chairman.

1022. The Air Ministry gave us the figure of 10 as being the average number of overseas students. Are they all overseas?—Do you mean the average number of Commonwealth students?

1023. I was wondering whether it was the same?—Non-Royal Air Force students?

1024. Yes?—They are all overseas students, but whether they belong to overseas air forces or not is a more difficult question. Some of them come here with a view to continuing in the Royal Air Force, although they were born abroad, but the Pakistanis, for example, are members of the Pakistan Air Force and will return to it. New Zealanders sometimes come into the Royal Air Force and sometimes return to their own. (Group Captain Deere.) The figure of ten could be broken down. There are five Commonwealth Air Force cadets (that is, four Pakistani Air Force and one New Zealand Air Force cadets) and five others (either from Rhodesia, New Zealand or somewhere else in the Commonwealth) who are actually joining the Royal Air Force.

1025. If we could turn to the course itself, about one-quarter are taking a

degree course?—(Mr. Boyes.) It is a little less than that. It is between 15 and 20 per cent. at the moment.

1026. Are they actually taking an external degree?—It depends whether they are arts or science specialists. We have two specialist streams, one for arts and one for science. The arts specialists take the external London general degree and the science specialists the examination for associate fellowship of the Royal Aeronautical Society. This you can count as a pass degree level, but it is a professional qualification rather than a degree.

1027. Is this contact with external degrees the main means you have of testing the academic efficiency of your work here?—Yes; it sets certain standards and I think we benefit greatly from that.

1028. So any other tests are internal tests. You would not have external moderation?—No. The general stream sit our examinations and are marked and either passed or failed by our own staff. At the moment we have no external moderation for the general stream although we are thinking that in future we should have it and will be taking steps about it.

1029. Do you have any contact, either formal or informal, with your opposite numbers at Dartmouth and Sandhurst about the pass standard?—We have a considerable amount of informal contact with them. There is no mechanism for formal consultation between the colleges but there is a great deal of informal contact which takes the form of frequent meetings and discussions.

1030. Do you receive reports from the external examiners about the work your candidates do?—Yes. We get pretty detailed reports from the London people on the external B.A. candidates and we get similar reports from the Royal Aeronautical Society on our science specialists.

1031. Can you plough that back into your work?—Yes, and I think we do. We have learned a great deal in the last four years since this system has been running. I think we have accumulated a certain amount of experience in this way.

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1032. Do you have any contact at all with the Ministry of Education either on standards of equipment or on standards of teaching?—We have had Ministry inspections in the past. The last was in 1958 and there was an earlier one. These are the formal inspections which I imagine are carried out at the invitation of the Air Ministry.

1033. Is that comparable with an independent school inspection?—Yes, it is exactly the same. Apart from that we have no regular contact with the Ministry. There is such a thing as the Education Advisory Committee of the Air Ministry. They are called in from time to time to give opinions upon our syllabus problems. (Air Commodore Lyne.) On this subject I should say in connection with the merger that during the early stages of the committee discussions on the merger Mr. English of the Ministry of Education was not only present but also made important suggestions and interventions which were taken note of and, indeed, acted on, so we are not quite as detached from the Ministry of Education as we might seem. Also, in connection with the building of the Institute of Technology a great deal of attention has been paid to various recommendations, some of which have come from the Ministry of Education, as to how the instructional facilities should be designed.

1034. Will the degree course go on after the merger?—Our new syllabus is really a separate issue from the merger. The degree course will not be possible under the new syllabus. There is to be a slightly different concept. We felt that the pressure on those who were reading for degrees, particularly taking into account the continuing increase in the amount of purely professional aviation work that has to be done, was all the time increasing and we could see a point at which it would become intolerable. Therefore we have with some regret had to make a syllabus which does not envisage reading for a degree.

1035. Will that serve to handicap the Cranwell graduate who is in competition with a university cadet in 15 years time?—It would handicap him on leaving the Service, I think it is fair to say; whether it would handicap him or not in

his work throughout his period of service is more difficult to say. It depends upon the effectiveness of the course we will be giving under the new syllabus. This is still being written and various questions on the new syllabus are still under consideration between the Air Ministry and Cranwell. We hope that some of the absolute essentials of education, including specialist work in depth on a single important aspect, will be saved and that ex-cadets will, indeed, know how to study a subject properly and in depth, which is the difference between a university graduate and a man who has had a rather wide but shallow course.

1036. What sort of numbers are we talking about? How many of your cadets now hope to get a degree?—(Mr. Boyes.) We have at the moment 38 cadets in residence in the two specialist streams. This is about 17 per cent. of the total.

1037. Do they have a reasonable prospect of gaining a degree?—Yes.

1038. An Honours degree?—No. The London degree is their general degree which does not count as an Honours course. The Royal Aeronautical Society's qualification is similar, I suppose, to membership of the Institute of Mechanical Engineers or of the Institute of Electrical Engineers.

1039. If this link with the outside world goes because no longer will you be getting reports from the external examiners, do you think it means there ought to be some other external test for your work?—Yes, we do think this and we have discussed it. We have not come yet to a decision because it is only in the planning stage and we will not do so until our new syllabus is prepared, but we have discussed it and feel that external moderation of our own college examinations will be most important. We have already discussed various plans in order to put this into effect.

Mr. John Woollam.

1040. Regarding the holding of an external degree or the fellowship of the Royal Aeronautical Society, those two qualifications are not recognised by the Air Force for promotional or pay reasons?—No, they are not.

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1041. What was the original reason for setting up this method in the college? Was it purely the need to have some external check?—No, I do not think it was. I think the original motive behind these external qualifications was purely to offer the more intelligent cadet (the minority of outstandingly gifted academic ones) a course that would stretch his abilities to the limit. It was felt the ordinary syllabus we run for the average cadet would not sufficiently stretch the exceptionally gifted ones and that therefore they should be offered something more testing. I think that was the motive in the first instance. I dare say there was also the feeling that it would be a recruiting aid to some extent, but this was a secondary consideration.

1042. In your new syllabus will there be something which will stretch the minds of the most gifted ones?—Yes, indeed. We are hoping to construct a syllabus which will contain a provision for stretching the gifted ones. I emphasise this is in the planning stage. We are hoping to have a selected subject phase in the syllabus and it will be in the latter part of the course. The cadets will be encouraged to undertake projects of various sorts, either on the arts or science side, and they will be able to go in depth and under tuition into some subject. We hope this will take the place of the degree course for the exceptional cadet.

1043. Is the Royal Aeronautical Society a body to which the Royal Air Force makes a contribution in terms of talent and research? In other words, in years to come will it matter that the membership of that Society will consist of a declining number of Royal Air Force Officers?—No, I do not think it will matter at all. There is no organic connection between the Royal Air Force and the Royal Aeronautical Society. There is necessarily a great deal of shared ground between them but it exists entirely independently of the Royal Air Force. Its heart really lies in the aircraft industry.

Mr. Wilkins.

1044. Who is writing the new syllabus? Is it a joint effort between the Air Ministry and the college?—Yes, it is a joint effort and it is under discussion at the moment.

1045. Do you agree that it needs to be weighted more on the flying side? Again there was a criticism that some of the boys when they leave Cranwell find themselves at a disadvantage with regard to flying training when compared with boys who failed at Cranwell but who, because of their postings, have obtained greater flying experience. Is this true?—(Air Commodore Lyne.) Regarding the present flying course at Cranwell, even during the last month I have received from two separate station commanders of units to which Cranwellians have gone letters written quite voluntarily by them in which they have said how delighted they are with the standard of the people we have sent on to them; so I do not think there is any question of low quality but rather the opposite. The quality of these young men, as young officers and trainee aviators and navigators, is very well thought of now and we think we have now got our course about right. I do not think there is a disadvantage. Whether there is a disadvantage on the seniority side I do not know: a man gets through so much more quickly on the other side. I think the Air Ministry would know more about that than I do.

Chairman.

1046. One of the features of the college here in sharp distinction to the other Services is the proportion of officers who are teaching as opposed to civilian staff. Is there any reason for this?—As far as we are concerned this is Air Ministry policy, it has been so for many years and we have never had any reason to consider that it is an unacceptable policy in any way. But perhaps the Director would say a bit more about that. (Mr. Boyes.) We had a civilian lecturing staff before the war but it was Air Ministry policy after the war to staff the college academically with the Education Branch apart from my own post and apart from one or two rather specialist academic posts which are still filled by civilians. My own view is that it has been a wise policy. We tend here and at Henlow to get a concentration of the best talent in the Education Branch, and we get better academically qualified lecturers than we would do on the open civilian market.

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1047. Why should that be different from the other Services?—I may be on hypothetical ground, but I think the reason is partly geographical. I think civilian people do not naturally tend to come and live from choice in such a remote part of the world as Lincolnshire. I think this has a lot to do with it.

Mr. Woollam.

1048. Are you also of the opinion that the Royal Air Force Education Branch is better staffed in terms of qualified people than the others?—I would not like to stick my neck out on that!

Chairman.

1049. They are all graduates?—Yes, We have 37 teaching members on the staff, excluding four attached officers. As far as their qualifications are concerned, 6 have first class Honours degrees, 19 have seconds, 3 have thirds and 9 general or pass degrees. This, I think, probably bears comparison with the staff at comparable institutions.

1050. What do they go on to after they have been here? They are only here for a tour of duty?—The normal thing is for the education officers to spend a double tour here, which is five years. This is by agreement, and we do not expect them to do less than that. Some spend a great deal longer than that with us. They would then be posted wherever the Education Branch wished to send them, either to an administrative job, or to Henlow or to one of the other training establishments in the Air Force.

1051. Are they people who decide to make a career in the Royal Air Force Education Branch or are they people who join the Royal Air Force Education Branch because they are interested in the sort of job Cranwell offers them?—I think they join the Royal Air Force with a preference to be posted here but they cannot choose to come to Cranwell. They are posted here. They may express a preference to be posted here but they cannot expect to be. Some join the Education Branch fresh from university at the beginning of their career whilst others come into it later on from other teaching fields.

1052. Regarding the Senior Specialist Teachers, do they have any special entry?

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—No. On the whole they are all men who have come up through the Education Branch.

1053. Do you not find that people who have made a success of teaching work here and who have found something they enjoy doing at the academic level at which they want to operate rather resist having to pack up and go on to other work?—Yes, this is perfectly true. I think one would probably find that the best qualified people in the Education Branch and those who have received the best confidential reports on their teaching ability tend to be concentrated at Henlow and Cranwell, but here I am open to correction. I am not sure of my ground. However, that is my impression.

1054. Do some go to Henlow from here?—Yes, they do. We have pretty frequent interchange between the two colleges on the science side. There is very little humanities teaching at Henlow.

Mr. Wilkins.

1055. No outside lecturers are brought in?—Yes, on a casual basis. Each term we arrange two or three main outside lectures and these take place on Monday evenings for the whole college. We also invite visitors from the educational field to the tutorial wing to lecture to specific groups of cadets on specific subjects, particularly in relation to the B.A. course at London. We ask perhaps two or three members of the lecturing staff of London University to come down each term to talk both to the staff and to the cadets.

Chairman.

1056. Do you find the same difficulty about remoteness in getting people to come down?—I dare say it would be easier to get people if we were closer geographically to the centre of things, but our rail connections are not too bad. It is only two hours from here to London by rail and this makes things a lot easier. (Air Commodore Lyne.) The senior staff here have to be prepared to do very much more accommodating and entertaining than they would have to do in a place closer to London because an evening lecture inevitably means the spending of a night here. But that is something which we absorb and, perhaps,

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by being far from London we are spared some of the more casual visitor traffic that we would otherwise have.

1057. And I suppose that from a flying point of view it is better to have plenty of flying space?—It is a good thing to have quiet air space. We have not wholly achieved that because there are fairly active airfields around us, but it is better than in the South of England. It would be intolerable for the Station Commander to be in the South of England.

1058. And the college must be linked with the station?—The college and the station are one, in the sense that the station exists only because the college is here. We have only got the college as a unit at this place and the station provides the backing. It is called a station but it is, in effect, the college's administrative backing.

1059. To turn to the actual details of the new buildings, those are something you do not directly have much to do

with, do you?—No. This is handled by the Ministry of Public Building and Works, and the Air Ministry controls a large part of the policy and details. Henlow, I believe, have been invited to play quite a part in the detailed criticism of the internal design of the Institute of Technology. However, it does not fall into our day-to-day province.

1060. If there is anything we, have missed or if you think we have missed the boat would you tell us what you think are the salient points we should bear in mind when considering your evidence?—I am subject to correction by my staff. Unless they can think of anything, you have covered the points we have in our minds very thoroughly. (Mr. Boyes.) I do not think you have got hold of the wrong end of the stick as far as the particular subject which has been touched upon is concerned. I think you are very clear about that.

1061. Thank you very much?—(Air Commodore Lyne.) Thank you very much.

THURSDAY, 5TH MARCH, 1964.

(The Sub-Committee met at the Royal Air Force Technical College, Henlow.)

Members present:

Mr. W. A. Wilkins, in the Chair.

Mr. Harold Gurden.

Mr. A. V. Hilton.

Air Commodore E. M. T. HOWELL, C.B.E., Commandant, Group Captain C. E. P. SUTTLE, O.B.E., Director of Studies, Wing Commander W. H. TEW, Wing Commander (Plans) and Squadron Leader J. H. BISHOP, College Administration Officer, Royal Air Force Technical College, Henlow, called in and examined.

Chairman.

1062. We are a sub-committee of the Estimates Committee of the House of Commons. We are privileged and so are you, which means that we would like you to speak quite freely and frankly to us. You will have sent to you a proof of all the evidence and you may correct anything which you think has been recorded incorrectly. If

you feel after you have seen the minutes of evidence that any part of it should not be published on security grounds perhaps you would sideline it and submit it to us. If the committee agree with you, which invariably they will if it is on security grounds, it will be omitted from the published text. Therefore we invite you to talk to us freely and we will, if we have the time, give you an

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opportunity to say anything to us you may wish at the end of our deliberations. First we want to ask you some questions about the entrants and the qualifications for entry into the technical college at Henlow. We understand that the courses provided at Henlow will be transferred to Cranwell in 1965 after the extensions have been completed there. We are told that this will probably save about 100 staff. We would like to know whether you were consulted both in the early stages and throughout the preparation of the plans for this new building at Cranwell as to the advisability of this plan and the possibility of providing advanced scientific training in what would then become a dual college, since it is a cadet training college as well. Can you tell us whether you have been fully consulted all the way through?—(Air Commodore Howell.) As far as the building is concerned, we have been taken into consultation throughout.

1063. But not on administration?—Do you mean by that the organisation?

1064. Yes?—We have put forward what we think the organisation should be and I have no doubt Cranwell has done the same. However, up to the present there has been no indication from Air Ministry of what the long term establishment of the combined colleges is going to be, so we have to work on the basis that our original suggestions are roughly correct.

1065. I do not know whether this is a question for you or whether we ought to ask it of the Air Ministry. What sort of investigations have been carried out with regard to the transfer? Do you have any idea at all what the cost of this transfer will be, or do you think it is something we ought to ask the Air Ministry?—(Wing Commander Tew.) I think you ought to ask the Air Ministry. If I gave a figure it would be based on snippets of information and it could easily be wrong. (Air Commodore Howell.) We have, in fact, planned this move down to the minutest detail. The move of every machine, tool and cupboard full of equipment is planned, scheduled and timetabled so that it will be as smooth as possible, bearing in mind our training commitments over the period. The actual paying of the bills for our move is not

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our business, but we have tried to plan it in the most economical way possible.

1066. Were any other arrangements considered apart from this change which is now going to be effected? What I have in mind is, for instance, the concentration of all general officer training at Cranwell, with the retention of Henlow as a centre for scientific training comparable with the use of Shrivenham by the Army?—Do you mean will Henlow after the move be used as a technical college?

1067. No. Was there any alternative suggestion?—To, say, amalgamate Henlow with another college?

1068. Yes?—No, not to my knowledge. (Wing Commander Tew.) Would it help if I gave a little of the history behind this? As you have seen this morning, the mechanical engineering wing is spread over a vast area and is using accommodation which was built during and since the 1914-18 war. Much of this accommodation is unsuitable for the training which is now being given. Going back four or five years, preliminary plans were made for the redevelopment of the mechanical engineering wing at Henlow and for a new building to be constructed and, at the same time, for the whole of the domestic arrangements at Henlow also to be redeveloped. As I understand it, the planned cost of this redevelopment was to be in the region of £1½ million. At about this time a working party was set up to examine the cadet training at Henlow. The working party was asked to look into the suitability of moving the technical cadets to Cranwell in order that all R.A.F. cadets should work and grow up together. Subsequently the Secretary of State announced that this merger of the two colleges was to take place, and a good deal more detailed planning went on after that time. It became obvious fairly quickly that if the technical cadets were to move to Cranwell and the technical officers were to remain at Henlow the cost involved in duplicating training equipment at Cranwell and Henlow would be prohibitive. Therefore the further decision was made that the whole of the technical college should move from Henlow to Cranwell. Not only will the technical cadets be trained alongside the other cadets who are already at

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Cranwell, but in order to economise in the use of instructors and training equipment student technical officers will also move to Cranwell.

1069. Where is the saving in staff expected to be made? We have been told it will save 100 staff. What sort of staff would that be?—We have not seen these figures. They are still at Air Ministry. I do not think we are in a position to comment on them. (Air Commodore Howell.) I could hazard a guess that it is expected the saving of 100 staff will result from the combined faculties of the two places because the teaching staff at Cranwell is at the moment covering ground which the teaching staff here could cover. At the same time the reverse is also correct, that teaching staff here could be dispensed with if we had the teaching staff at Cranwell to give the necessary instruction. But I personally doubt whether the number rises to anything like 100.

Mr. Gurden.

1070. Could it include other employees?—I do not know whether you are considering administrative overheads, such as the station administration here. This involves quite a large number of people. When we vacate Henlow this would come down, at a rough guess, by a half.

Chairman.

1071. Did the working party consider the alternative of separating the technical training from all officer training? Did they consider that at all?—(Wing Commander Tew.) Not to my knowledge.

1072. We were told in the Air Ministry evidence that only a proportion of the general duties and other ground branch cadets are trained at Cranwell. I think the figures given were about one-fifth. Does the same hold good in the technical branch? Is Henlow the only centre for technical training?—(Air Commodore Howell.) Yes. You said general duties cadets?

1073. Yes?—Do you mean officers?

1074. Officers being trained for General Duties?—All cadets, except the technical cadets, are trained at Cranwell now. That is to say, general duties, equipment, secretarial and R.A.F. regiment cadets are trained at Cranwell. Others go into those branches of the Air

Force not as cadets but as direct entry people and they are trained outside Cranwell. In the Technical Branch all cadets are trained here, and all direct entry technical officers are also trained here, so we cover a wider spectrum in the Technical Branch than Cranwell does in the other branches.

1075. What provision, apart from Technical Cadetships and graduate entry into the Technical Branch, exists for recruiting officers into the Technical Branch? What numbers of boys from the apprentice schools and of Airmen become Technical Branch officers, and how are they brought in and trained? If you have not got the numbers you can let the committee have them later?—I have. In the case of entries 1 to 8 we have had 40 apprentices. That is 40 out of 349 and it is about one-eighth.

1076. Can you tell us how many Airmen are included in that figure?—That would be it. This is for cadet training and it is quite different from direct entry. Quite a large proportion of the direct entry technical officer courses are manned by commissioned Airmen.

1077. What opportunities are open to Airmen wishing to take commissions in this branch? Is it an increasing number? How can they take advantage of the opportunities which are offered?—They apply under various Air Ministry orders for a commission. They are then boarded through the Royal Air Force selection board. If they pass that they are appointed to the officer cadet training unit now at Feltwell and do their course there. Subject to passing it satisfactorily they are granted a commission, in the Technical Branch in this instance, but the same applies to Airmen who may apply or be recommended for commissions in the non-technical branches.

1078. Do you think it will be any disincentive to cadets coming into the Technical Branch when they see that their course is taking so much longer than in the General Duties branch?—It will be one year and two terms longer.

1079. Do you think it will be a disincentive to them to come into this branch?—I think if they have a technical bent the fact that their course lasts this length of time is not likely to be a disincentive, unless they feel after having

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joined the combined college (which is, I think, what you are thinking about) that the pressure of work upon them will be considerably harder than it will be on their colleagues who are not in the technical stream.

1080. We find from the evidence so far given to us that the educational requirements for a cadet entry to Henlow are higher than those required at Cranwell. Six General Certificate of Education subjects, so we have been informed, must be passed, of which two, mathematics and physics, must be at A level?—(Group Capt. *Suttle*.) Yes.

1081. And those subjects must also include English Language and chemistry?—Yes.

1082. Does the college have difficulty in attracting sufficient applicants with these qualifications? Are you in any trouble about it? Your numbers are rather lower than we thought when we read the original documents we had on this?—The number applying exceeds the number of places which we have. There is a strong measure of selection. To be selected for a cadetship here not only does a candidate have to possess these academic qualifications or their equivalent but also he has to have potential officer qualities. If he falls down on one or the other he will not be admitted. It is interesting, for example, to note that of this present No. 12 entry which should have been at full strength 15 failed to get their A level qualifications and, therefore, we could not take them.

Mr. Gorden.

1083. What has just been said is that the entry qualifications are not so high in the case of Cranwell. When this move is made what will the qualification for entry be?—(Air Commodore *Howell*.) It will be the same for this particular branch. The statement that the Cranwell course is going to be less demanding in future only applies to the General Duties Branch and does not apply to our people. That was the difference I was referring to earlier, which might tend to affect the weaker brethren when they see their colleagues coming in and having an easier time than they are.

1084. Coming back to the question of the move, it was said that some saving in personnel may be obtained because of

the duplication of the courses, some of which are the same here as there. That means, then, that it would have been possible to increase the capacity here had you been staying in terms of the teacher-pupil ratio. The capacity of this place is therefore controlled by other factors. Is that right?—You have heard of the Air Ministry Establishments Committee which goes round on a periodic basis reviewing the establishment of units. They have a fairly strict formula which they apply to all training establishments and our manning is governed by this formula. The only way in which I can visualise the pupil population here being increased without increasing the instructional staff would be by an amendment of the formula or by capacity filling of all the courses. Some of the courses, as you have discovered, are not operating at full capacity. The establishment of training staff—that is, the instructors—is based on the established load.

Chairman.

1085. Do you find you get many cadets with more than two A levels? (Group Capt. *Suttle*.) I have not seen any in my relatively short time here. They normally have the requisite number. Some have higher grades in those A levels than others, but by and large they have what is prescribed.

Mr. Hilton.

1086. The course itself is a pretty long one, four years and two terms?—Yes.

1087. Is there any evidence that the actual length of the course has proved a disincentive to candidates?—(Air Commodore *Howell*.) No, I do not think it has. You must bear in mind that the No. 9 entry which was commissioned last summer at the end of its third year is still with us. The idea is still quite a new one. There has only been one entry since the Dip.Tech. scheme was introduced but there are more in the latest entry than there have been in any previous one. Therefore, if this is any indication it would seem the length of the Dip.Tech. course is proving no disincentive at all—rather the opposite.

1088. Have you any evidence of the actual wastage of cadets who start but who, for some reason or other, either themselves find they cannot carry on with the course or you find they are

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totally unsuitable? Have you any percentage evidence of this wastage?—(Group Captain *Suttle*.) I have a fairly detailed analysis of these apprentices who came into cadet training. To give you a typical instance, we took in 40 over entries 1 to 8, and 70 per cent. of those apprentices obtained either the H.N.D. or a degree. Five of those 40 were good enough to go to a university. Therefore, 70 per cent. obtained a professional qualification. Of the others the wastage figures go like this: two of them survived to the end of the H.N.D. course but failed to pass the examination; two were suspended earlier than that on academic grounds; two reverted to their basic trades at their own request; two reverted to their basic trades on our recommendation because we did not think their officer qualities were good enough; two withdrew from training at their own request and two were withdrawn for medical reasons.

Chairman.

1089. Could you put in a note on wastage among cadets at a later date?—(Air Commodore *Howell*.) Irrespective of their background?

1090. Yes?—Yes.

Mr. Gurden.

1091. So far as you know, when the 70 per cent. leave here they go on and do the job?—Yes, they are permanent commissioned officers. (Group Captain *Suttle*.) I have worked out the overall wastage in entries 1 to 8; that is to say, it includes the university chaps as well. The overall pass rate was 81 per cent.

Chairman.

1092. May we come to the figures you submitted to us in the memorandum? The figure for students for 1963-64 is 283, estimated?—(Air Commodore *Howell*.) The number of students?

1093. Yes, the number of students. The overall student strength, including 40 non-Royal Air Force students, for 1963-64 is estimated at 283. I think you said there are 100 students. Does this foreshadow intakes to come?—No. The present strength as at the 2nd March is 108 cadets and 215 officers, of whom 16 are non Royal Air Force. (Wing Commander *Tew*.)

And they are all under training. We have officer students and cadet students, and that figure quoted there is the sum of the two. As you can understand, because we work a normal academic year here we have three training terms. We have different intakes in each course and we have people coming in at the beginning of each term; similarly, we have people leaving at the end of each term. Therefore, the number under training is going to vary during the year. That is an estimate of the average number of students who would be here during a year.

1094. Can you give us figures showing the proportions in which your last intake of technical cadets came from independent schools, local authority and direct grant schools?—(Group Captain *Suttle*.) Yes, I have a graph here. (*Handed in.*) That shows you the total number of young men in any given entry broken down into various kinds of schools, together with a percentage figure. We have referred to some public schools as well-known ones and less well-known. We agreed this Schedule with Cranwell.

1095. Thank you very much?—You will find it will give you the distinction made between the public schools. You will also notice the proportion from grammar schools is high.

1096. Yes, it is particularly high?—Yes.

(*Chairman.*) The next highest come from public schools.

Mr. Hilton.

1097. I would like to come back briefly to the physical moving of everything from here to Cranwell. This is going to be some operation. I quite appreciate that your equipment, models and that sort of thing must be moved by outside contractors?—(Wing Commander *Tew*.) No, that is not true. So far as is possible we will move it with Royal Air Force vehicles. If at any time during the move we require more vehicles than the Royal Air Force can provide then it may be decided to let a contract to a civilian contractor.

1098. I understood when we were in one of the buildings which housed a certain type of machinery that it would

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rather be beyond the powers of the Royal Air Force personnel to move it?—You are talking about one or two odd instances. The equipment we have got to take from here to Cranwell can be divided into three groups. There is the equipment supplied to us by the Ministry of Public Building and Works; this they will arrange to move themselves. What their arrangements for doing so will be we do not know and we are not very interested. Then there is all the equipment supplied through normal Air Ministry channels. This in general the Air Ministry will move with Air Ministry vehicles. Then there is a number of special items which are not available from either of these two main sources and which are purchased specially for the college. The sort of item I have in mind is one of the low speed wind tunnels. This had to be purchased by us and then it was delivered and assembled by the firm that made it. When it comes to be dismantled it will have to be dismantled also by that specialist firm. It is made of timber, it has been in a warm atmosphere now for many years, the timber will spring when the bolts are taken out and it will be a specialist task to dismantle, remove and reinstall it at Cranwell. This, therefore, we expect to be done by a specialist company.

1099. I asked the question there and I stupidly assumed this would apply to all the other equipment. I did not ask this question in each department?—We have very few items which fall into this category.

1100. So you will be able to move the majority of the equipment with Royal Air Force vehicles?—That is the intention.

Chairman.

1101. Can I turn for a moment to paragraph 35 of the note you sent on the technical college at Henlow? We notice from this paragraph that a course is provided on guided weapons and we have seen the set-up for this. Does it bear any comparison with Shrivenham? What sort of relationship is there?—(Group Capt. *Suttle.*) I have not examined the Shrivenham advanced weapons course in detail, but I would say our facilities compare very, very closely indeed with those at Shrivenham.

1102. We have been trying to discover in each case what liaison there is between the various training colleges of the three different Services and, frankly, to what extent it may be that the same equipment could be used by each different branch?—There is close liaison.

1103. You would not send personnel to Shrivenham?—We send student officers to Shrivenham. There is one at Shrivenham at the moment and we are negotiating to send one member of our staff to Shrivenham.

1104. In that case, do officers come to Henlow for courses from other Services?—Yes. (Wing Commander *Tew.*) We have one Army man here at the moment on the advanced weapons course. I think there are three Australians. (Air Commodore *Howell.*) Two on one course and one on the other. (Wing Commander *Tew.*) And there is a small interchange not only between the Services of this country but also between other Services.

1105. You train your own education officers in electrical engineering for tutorial purposes?—Yes.

1106. Would it be possible for an Army education officer to come here for a course? Does that ever happen? It would be possible?—(Group Capt. *Suttle.*) It would be possible. We have not had an Army education officer but we have had officers from the fighting arms of the Army. (Wing Commander *Tew.*) There is no reason why it should not happen. If the Army thought it would benefit them they would ask us to accept some of their officers. Likewise if we thought it would be to our benefit to ask them to accept some of our officers we would do the same.

1107. We have in our minds the full utilisation of whatever facilities may be available in any of the Services to another Service?—Yes.

Mr. Gurden.

1108. You are saying that the demand upon you at the moment is a little greater than you can meet. You are full?—(Air Commodore *Howell.*) No.

1109. It is the reverse?—We are not full, no.

1110. Can I ask, then, what the proportion of foreign students is?—(Wing

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Commander *Tew*.) This fluctuates enormously. It depends to a large extent on the political situation in the countries which send us students. For example, when Syria broke away from the United Arab Republic she suddenly found herself with no training ground for her officers, and for the next year or two we received large numbers of Syrian students on our foreign officer course. This is the type of thing which goes on and which affects the number of students that come here at any one time.

1111. You have got nothing to do with the charging up of the costs of training these foreign students?—No. (Air Commodore *Howell*.) We have something like 15 at present. (Squadron Leader *Bishop*.) We are planned for an overall peak student population of 553. Of those we reckon that the planning allows for 32 non Royal Air Force officers. That is against an established total of 465, of which the established peak is 36 non Royal Air Force officers. Particularly lately the number of officers they have sent us has exceeded more often than not the number for which we are established, so the proportion works out at slightly higher than that would indicate.*

1112. What will happen when you move to Cranwell?—Normally we take in foreign officers twice a year. However, we are taking in an exceptionally large intake this coming Easter in order that we need not take any of them in in September. This will mean that those people coming in this Easter will go out in Easter, 1965, and then we shall have none of these gentlemen with us during the move. Whether we† resume taking them after we get to Cranwell has yet to be decided. (Air Commodore *Howell*.) This is with Air

* *Note by witness:* The planned peak student population is based on the intakes needed to meet service requirements. In practice the student population tends to vary from the planned figure. The established peak, which is used in fixing establishments of staff, etc., is based on actual student populations over a period, and this allows for variations from the planned figure.

† *Note by witness:* i.e. the R.A.F. Technical College. The point at issue is whether overseas students should continue to attend the R.A.F. Technical College after its move to Cranwell, or whether their training should be undertaken elsewhere.

Ministry for consideration. (Wing Commander *Tew*.) It was felt by Air Ministry and ourselves it would be unfair to charge these students for instruction which may be less than the best while the move is going on.

Mr. *Hilton*.

1113. Have you so far been able to take in all the overseas applicants or do you receive more applications than you are able to cater for?—(Squadron Leader *Bishop*.) We have been able to take them, subject to two things. The first is accommodation. This we manage to achieve by taking up otherwise disused accommodation and quickly bringing it up to a reasonable standard. Secondly, we have to take into consideration the number of hours of teaching their presence here imposes on the staff. The Air Ministry help us out by giving us extra teaching officers to see us through any peaks or humps of a long-term nature. That will be the position when at Easter we take in 56 foreign officers all in one go as against the normal figure of 32.

1114. So you have been able to meet the requirement?—Yes, by borrowing officers on a short-term basis to help us out with the teaching. (Air Commodore *Howell*.) Then their knowledge of English tends to vary. This is a very important factor.

Chairman.

1115. Can we turn for a moment to university courses? We would like to know what the extent of your contact is with the civilian College of Aeronautics at Cranfield. That is a college run by the Ministry of Education. What links do you have with them?—(Group Captain *Suttle*.) We have officers attending advanced training courses at Cranfield whose training we supervise from here. We have a link with Cranfield which is on an unofficial basis, whereby two expert staff go to Cranfield and contribute a lecture every week. They also assist with tutorial work but that is in connection with our own advanced students. By the same token Cranfield have offered to give training to one of our officers in a field in which he was to be employed in the Air Force but for which he was not particularly prepared

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while he was doing his advanced training at Henlow. In other words, we have a very happy *quid pro quo* relationship with that institution.

1116. Are you able to give us a breakdown of the number of officers who attend these courses at Cranfield and Southampton?—Yes. The number of Royal Air Force officers on postgraduate training at Cranfield at the moment is 15; at Southampton university it is 10 and at Cambridge university it is 1.

1117. Do any of these institutions impose an upper limit to the number of Royal Air Force officers they are prepared to take at any one time?—These institutions impose no limit. I think the limit is imposed by the Air Ministry and the Treasury and by their ability to man the Technical Branch with the number of officers who require this advanced training.

1118. What proportion obtain these qualifications for which they have been training there?—During the 13 months I have been here everyone has obtained his qualification except one. One officer at Southampton just failed to qualify and he is resitting it this year.

Mr. Gurden.

1119. Are there students who could go and would go if this limit imposed by higher authority were not there?—I would think so, Sir. Would you agree, Sir? (Air Commodore Howell.) Yes. Every year there is a competition administered by Henlow for advanced specialist training. As a result of it certain recommendations are put before the Air Ministry as to which form of advanced specialist training those entering the competition should be channelled into. As a result of our recommendations and such other considerations as the Air Ministry may have to take into account (mostly financial, I assume) they amend our recommendation list and notify the officers concerned where they are going to do their specialisation.

1120. Do they limit it downwards?—No, not necessarily. (Group Captain Suttle.) I think it is a fairly constant number. There has been no downward tendency but this is beyond our control.

1121. Quite. I am only wondering if, in fact, more people could go for specialised training?—More could go than do

go. That is true to say. (Air Commodore Howell.) There is another consideration apart from this. The courses at Cranfield and Southampton do not necessarily fit officers for all R. & D. posts and higher staff posts for which advanced specialist training has been introduced as a matter of principle. The advanced weapons course here covers a broader field and is considered, certainly by this college, as being a better introduction to R. & D. posts and higher posts on the Operational Requirements and Ministry of Aviation staff where most of these graduates will be going. It covers a broader field than do either the Cranfield or Southampton courses. It would not necessarily be sensible to replace all the advanced weapons training done at Henlow by either Cranfield or Southampton because those courses tend to be in very specialised fields which do not necessarily fit their graduates for the broad range of posts for which the advanced weapons course fits them.

1122. Do you think that by and large there is no overall Service advantage in sending more of these chaps to Cranfield and Southampton, or would you rather not answer that?—My personal opinion would be that the numbers which are sent there probably represent the foreseen intake of graduates with these specialist qualifications into the research and development machinery; if the Air Ministry foresaw an increase in the amount of work to be done by graduates with these specialisations they would wish to increase the intake at the universities, and that would probably be at the expense of the advanced weapons course here.

Chairman.

1123. I think it was said at some time that you are now running the last of the Henlow/University courses?—Yes, that is correct.

1124. Were there any other considerations, besides the desire to provide a uniform scheme both for General Duties and Technical Branch cadets, which led to the abandonment of this course? Was there any other consideration apart from that which has been responsible for the abandonment of the course?—(Group Captain Suttle.) The first we knew of this scheme was when

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we read about it when it was published. We were not involved in consultations on this.

1125. Very well. We do not want to embarrass you over this if we can get the information from some other source. Can you tell us how satisfactory were the examination results which you obtained in the 1963 finals? What proportion passed the university examinations and what sort of passes did they obtain?—(Squadron Leader *Bishop*.) I have the breakdown here of the 117 cadets who graduated from the universities under the old scheme. Of those 117, 7 got first class Honours, 46 second class, 34 third class, 3 fourth class and 27 pass degrees; 70 of those were electrical and 47 mechanical specialists. In addition to those 117, 33 left the Service whilst at university.

1126. Were there any failures?—There were 21 academic failures, five for lack of officer qualities, three for medical reasons, three at their own request and one as a result of disciplinary action. Thirty-two are still at universities and eleven here at Henlow will be going to universities in October.

1127. Is it possible for you to tell us which universities they go to?—(Group Captain *Suttle*.) Birmingham, Bristol, Cambridge, Glasgow, Liverpool, London, Manchester, Nottingham, Oxford and Southampton. (Squadron Leader *Bishop*.) Cambridge took at least twice more than any other university.

1128. Is any provision made for a cadet to attend a university of his own choice, even at his own expense, if necessary, or would it lead to loss of pay and seniority if he did so?—(Group Captain *Suttle*.) Your first question is whether he has a choice. The answer is that under the Universities Central Council for Admissions scheme each university cadet puts down three choices in order of preference; that then goes to this central body and eventually he gets tentative offers from universities, usually after an interview. So much depends on the students. We have not yet got all of our 11 university entry chaps placed but they have all had offers. So they do have a chance to state their preference. It does happen, too, that when they have been interviewed some change their minds. One young man had the chance of going either to Manchester or Notting-

ham and, after visiting Nottingham, he preferred to make Nottingham his first choice whereas previously he thought Manchester was the place he would go to.

1129. We understand the new university cadetship scheme provides annually for up to 25 cadetships in the General Duties and Technical Branches whereas at present there are only 20 available?—The Air Ministry selected 22 in the first competition; this means the total number at universities will be our 32 plus 22 which is 54. Gradually that 54 will become 75, which is the ceiling.

1130. Do you expect the Technical Branch will retain the majority of the places available?—No. The plan is that eventually it will be a 50-50 basis. At the moment the Technical Branch cadets are in the majority but that will even out over the years.

1131. You are satisfied that under the new scheme the cadets will get sufficient training for their commission?—Yes. These young men will have to do a thirteen weeks' course at Feltwell after taking their degrees and before coming to us for their two-term orientation course training.

1132. There is going to be a year saved?—There is certainly going to be a saving. They will be at university for three years, then at O.C.T.U. for thirteen weeks and then with us for two terms—eight months. So it is less than our current four years and two terms.

1133. One is then led to ask whether this year was necessary at all. Was it?—(Wing Commander *Tew*.) Many of the cadets we have here under training are not sufficiently strong academically to have found themselves places in universities and we try to bring them up to the required standard.

1134. Perhaps we could turn to establishments. The committee would like to know first of all when the college was last inspected. Our numbers of staff show a few fluctuations; there was a decrease from 27 to 23 in the number of scientific and professional civilians employed. Was this as a result of an Air Ministry inspection?—Our last establishment review for officers was in October 1963, and for all other categories of staff in December 1963.

1135. While we were at Cranwell yesterday we were very interested indeed

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in something they appear to have initiated themselves, a works study of the hours, particularly the diversionary hours. Have you seen this scheme?—(Air Commodore Howell.) Yes.

1136. They are working this out by graph, transferring from one graph to another and appraising how they might best utilise their hours. Have you done anything like that here?—(Group Captain Suttle.) No. A large part of the task at Cranwell now is their flying commitments and as a result they have a large number of ground tradesmen. Here our prime task is to train technical cadets or officers and practically the whole of our staff is directed towards achieving this aim. Therefore our officer staff is almost entirely either executive or instructional and the N.C.O.s and civilians we employ are employed directly in support of the training which goes on. The problems are rather different.

1137. Does the college prefer civilian instructors as against Education Branch officers?—(Air Commodore Howell.) That is a very leading question!

1138. It arises out of the comparison, if I may say so?—(Group Captain Suttle.) We have four civilian education officers here out of a total strength of 62. These civilians are satisfactory. It is a difficult question for us to answer. The reason why we have a uniformed Education Branch is due to a working party which sat, I think, in 1945. It was chaired by Air Marshal Sir Grahame Donald and he was assisted by Sir Graham Savage, at that time chief education officer for the London County Council. There was a comprehensive review of all the work done by the Air Force, both technical (e.g. here, at Henlow) and general. That working party made a report to the Air Council, as a result of which we became a uniformed branch. They must have put forward a number of powerful factors to persuade the Air Council to make that change. This was formerly a civilian branch. I joined in 1935 as a civilian.

1139. Have you any views about it now?—From the instructional point of view, if these men are well qualified they do a satisfactory job. However, one has to look at it a bit more broadly than that. The serving officer makes a substantial contribution

to Service life apart from his teaching. He does his share of orderly officer and pay officer duties; he can act as officer in charge of the N.A.A.F.I. building and so on. And those are duties which civilians cannot be given. The serving chap tends to play a bigger part in assisting with games and activities of that sort. He is a much more integral part of a uniformed Service than a civilian would be.

1140. Do you use the services of specialist lecturers?—Civilian?

1141. Yes?—Not civilian. We have one civilian who is on a slightly higher grade than the others because he is doing higher grade work.

1142. What about the Director of Studies? Is that a civilian post?—No. I am a Senior Specialist Teacher of the Education Branch and I am the Director of Studies.

Mr. Gurden.

1143. How long have these gentlemen been here?—I have been here 13 months. (Air Commodore Howell.) Nine months. (Wing Commander Tew.) 25 months. (Squadron Leader Bishop.) 14 months. Would it be useful to tell you what tours are expected of us?

1144. Yes?—The normally expected period for the ordinary officer in the Service is 2½ to 3 years. This is true here of all branches except the Education Branch or Technical Branch officers who are in teaching posts. In the case of the Technical Branch officers in teaching posts it is an absolute minimum of three years and in the case of the Education Branch officers it is five years. But I would stress this is normally reckoned to be the minimum. We have had some people here for 10 or 12 years—not many, but I can think of three offhand whose tours run into double figures.

1145. So there is no rigidity about this?—No. The move of an officer only takes place if it is dictated by his career pattern requirements.

1146. Surely his career pattern requirements would tend to interfere with the efficiency of the college, would it not? If, for instance, the man following was not as efficient as his predecessor in a certain educational aspect it would interfere with your efficiency?—Every time it is suggested a man should be

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moved out we have a great deal of consultation about who is to come in his place and when this is to be timed.

Chairman.

1147. Do these Senior Specialist Teachers do a long tour?—(Group Capt. *Suttle*.) Normally they do four to five years.

1148. Could you give us an analysis of the instructing and supporting staff in terms of Service and civilian side respectively who are engaged on headquarters duties? Could you supply us with that information?—Yes.

1149. We would like to know who is being used for what?—(Air Commodore *Howell*.) Could you explain exactly what it is you wish from us?

1150. Yes. We want to try and get a breakdown of the staff in terms of Service people and civilians who are engaged on headquarters duties?—Teaching duties?

1151. And instructing and supporting services?—In other words, you would like a breakdown of all duties.

1152. We do not want that information now. Perhaps you would let us have it later?—Yes.

1153. Now I want to turn to what is the most important question. We see from your memorandum which gives us the overall staff establishment that the total staff is 617 and that the students, including the officers, number 283. We find when we start to compare notes that this compares with 423 staff for 383 students at Manadon which is also a technical college. In particular we would like to know how the employment of 249 Airmen here is justified?—(Squadron Leader *Bishop*.) What figures do you have there?

1154. These are your own figures. The staff numbers 617 and the figure for students and personnel is 283. I suppose what you say is that the 283 are not all students?—(Air Commodore *Howell*.) The 283 are all students. In fact, today's figure is 323.

1155. That is today's figure, is it?—Yes.

1156. Is there any further intake to come?—In April we will lose some that are here and we will gain more. The trend will be upwards.

Mr. Hilton.

1157. How far will it be up?—It will go up to about 340. (Wing Commander *Tew*.) We are anticipating an increase of something like 70. (Squadron Leader *Bishop*.) We will reach nearly 400.

Chairman.

1158. If we compare you with Manadon (whether that is a fair comparison is another matter) it does seem to be a very high ratio of staff to students?—(Group Capt. *Suttle*.) Our non Royal Air Force training is pretty uneconomical. For example, we have one course which is two strong. They are two non Royal Air Force officers. Then the electrical instrument course is four strong, whilst the armaments syndicate is six and the engineering syndicate eight strong. We could cope with twice those numbers if they came but they do not. Nevertheless, we have to provide staff for that sort of thing. It is also true that even where we have small intakes of technical cadets these have to be split into electrical and mechanical syndicates because they specialise in electrical and mechanical aspects. For example, the No. 10 Henlow mechanical entry is four strong; that is, there are four in the syndicate. We could cope with 14 if the chaps were here. When these people come we have to divide them in this way and it tends to produce small syndicates. (Air Commodore *Howell*.) Another aspect is the large number of different training syllabi we have to work to in order to provide a variety of training for both cadets and all technical officers who come into the Air Force. Not only do we give all the basic training to the people but also we provide postgraduate training, and that always tends to be expensive in terms of staff.

Chairman.] There is a tendency for you to use more Service personnel here on what I would call domestic duties than appears to be the case in some of the other colleges. From the point of view of the committee it is significant that the personnel expenses of airmen have increased 18 per cent. in two years whilst those of the civilian industrials have increased only 16 per cent. in two years.

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Mr. Gurden.

1159. Have any comparisons been made with the other colleges? I would have thought this was a comparable field?—Not at our level. We have a close liaison with both of them. However, this figure of 249 airmen is probably where the big disparity lies, and I rather feel the work done by these airmen is work which does not bear comparison with either Shrivenham or Manadon because they do not have aircraft for a start; a lot of them are servicing aircraft. Certain jobs we use airmen for where they might use civilians. (Squadon Leader *Bishop*.) We offer administrative service in some degree to another unit, and it is very difficult to distinguish the one from the other.

1160. Which unit is that?—The Radio Engineering Unit; the Signals Command Unit, although autonomous, is dependent upon us for messing, pay and things like that.

Chairman.

1161. Have you any established staff at all on the teaching side?—(Group Captain *Suttle*.) No. The four civilians, who are unestablished in a sense, are subject to three months' notice either way.

1162. We are thinking of people who could be called in in case of an emergency. Do you have an inspection by Command headquarters? Does the Command work study team come here?—(Air Commodore *Howell*.) Yes, they come here. There is an annual A.O.C.'s inspection.

1163. Do they only come when you ask them?—(Group Captain *Suttle*.) No. They come annually and they could come more often if the need arose. It might arise from either end. (Air Commodore *Howell*.) Staff officers from Command come down to Henlow at quite frequent intervals.

1164. What about the Command work study team? Do they come here at all?—Yes, they come and go, just as any other member of the Command staff can.

1165. But not very often?—(Squadron Leader *Bishop*.) I think Command

work study teams as a whole throughout the Service work on the principle that jobs are offered to a Command by the stations in the Command as being worthy of work study. The area officer who runs the team then works up a programme for the year which his team can do; the tasks they are called upon to carry out are always in excess of their capacity. Therefore, if you do not offer them a job they rarely have the time to go looking for work. If they thought a job was worthy of study they would come.

1166. Has that been done?—Yes, in our printing and drawing office at our request.

1167. May I now briefly ask a couple of questions on the all-important item of costs? We find it costs £2,917 a year to train a cadet at Henlow. This excludes the cost of those at universities. That has to be compared with £1,217* at Shrivenham and £1,290 at Manadon. There is no flying training here?—(Group Captain *Suttle*.) Yes, there is.

1168. We do not seem to have had that included in the memorandum. We presumed there was no flying training included here?—(Air Commodore *Howell*.) Are you referring to the Air Ministry memorandum for those charges?

1169. Yes?—Those are charges for overseas students and do not represent the full cost of training any given student. They are charges based on extra costs.

1170. No. I am advised it is not that. This is the cost per student?—(Wing Commander *Tew*.) Could you repeat those costs?

1171. Yes—£2,917 to train a cadet at Henlow, which excludes the costs of those at universities and compares with £1,217 at Shrivenham and £1,290 at Manadon?—(Squadron Leader *Bishop*.) In the case of Shrivenham the students who go there are already commissioned. Therefore there is no element of officer training in the Shrivenham costs. This is similarly true of Manadon.

1172. We are trying to relate this to the cost of the Service staff?—At Shrivenham you would have to add the

* Subsequently calculated at £2,871.

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Sandhurst costs in order to get a fair comparison, and at Manadon you would have to add the Dartmouth costs.

1173. This has been worked out on the 290 basis, whereas it should be 300 odd, so there is a slight difference there?—Yes.

1174. Finally we would like to ask you whether, in view of the forthcoming transfer to Cranwell from here you are embarking on any further substantial maintenance costs, or are you more or less closing down now?—(Air Commodore Howell.) No, we are not embarking on any maintenance costs other than those which are strictly necessary to keep the rain out and those which the future user may wish to have done that he himself will require.

1175. Do you know who the future user is to be?—Yes. We do not know officially * * *. Approaches have been made and there has been an inspection of the buildings. Therefore we would not embark on any large-scale work on any building unless it was in order to meet their requirements as well as our own.

1176. Is there anything you would like to ask us?—(Wing Commander

Tew.) Yes—how you arrive at this cost for a student at Shrivenham. According to my arithmetic, and taking this memorandum as the basis for these costs, the cost comes out exactly the same as the cost of a student at Henlow.

1177. Which page is it?—Shrivenham is on page 9. There it says the average student strength in 1963-64 is 386. I assume that the information in your document and ours is the same?

Mr. Gurden.

1178. It should be?—I hope it is.

Chairman.

1179. The Chairman worked it out and passed it to me?—(Air Commodore Howell.) It is £1 million odd divided by 386, which comes to £2,900 per annum for Shrivenham.

1180. I am only too delighted if you can correct us and it is something we can check up. We will do this and let you have a note. Are there any other matters you would like to raise?—No, except that we are very happy to have had you here and hope you have had an interesting time.

Chairman.] Thank you very much.

WEDNESDAY, 11TH MARCH, 1964.

(The Sub-Committee met at the Royal Air Force Staff College, Bracknell.)

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Sir John Langford-Holt.

Mr. W. A. Wilkins.

Mr. John Woollam.

Air Vice-Marshal D. J. P. LEE, C.B., C.B.E., Commandant, R.A.F. Staff College, Bracknell, Air Commodore C. V. D. WILLIS, D.S.O., O.B.E., D.F.C., Commandant, R.A.F. Staff College, Andover, Wing Commander L. G. P. MARTIN, Plans 1, R.A.F. Staff College, Bracknell, Squadron Leader G. A. CATLING, A.F.C., Officer Commanding R.A.F. Staff College (Unit), Bracknell, Group Captain E. A. JACKSON, O.B.E., R.A.F. (Ret.), Secretary, R.A.F. Staff College, Bracknell, Wing Commander A. J. WHITLOCK, Plans, R.A.F. Staff College, Andover, and Mr. B. M. DAY, Central Finance Division 1, Air Ministry, called in and examined.

Chairman.

1181. May I begin by thanking you most warmly for the very kind hospitality you have given us and for the patience with which you have shown us round the college. We have very much enjoyed the visit and have found

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it most useful. I ought, perhaps, to tell you that you are protected by Parliamentary privilege with regard to anything which may be said here. Everything said will be taken down but you will receive a copy of the proof of evidence and you may correct any obvious verbal errors. If there is anything in it which you feel should not be published, either because it is confidential or for security reasons, perhaps you would sideline it and let the clerk have it and, if we agree, it need not be published. We would much rather you talked quite frankly and sidelined anything you do not feel it wise to publish rather than that you should feel inhibited by the fact that we are making a record. First, could you tell us something about the number of people you have on the course and the sort of ranks from which they are drawn?—(Air Vice-Marshal Lee.) If I may speak for Bracknell first, we have a total population of 96 students. As far as the Royal Air Force content is concerned, they are Squadron Leaders, with a few exceptions on either side of that, but very few. Of the 96 students, approximately 80 are Royal Air Force. In addition we have a variable number from Commonwealth Air Forces, four from the British Army, three (including a Royal Marine) from the Navy, four United States Air Force officers and one United States naval aviator. Then we have a maximum of three civil servants. The number varies but it is a maximum of three.

1182. Do they come from one department or different departments?—The civil servants?

1183. Yes?—If there are three, there is one from the Air Ministry, one from the Ministry of Public Building and Works and one from the Ministry of Aviation. That is the usual pattern.

1184. How many Commonwealth students do you normally take?—Normally it would be two each from Canada, Australia, New Zealand and Rhodesia; so it is a maximum of eight. On this present course we have no Rhodesians and no New Zealanders. That is purely, I gather, on account of certain personnel changes which are going on in New Zealand, whilst Rhodesia is hav-

ing its own problems at the moment and has not been able to send any this year.

1185. How do they compare in seniority with the other staff colleges? Do you know?—We are senior to Camberley by, broadly, speaking, one rank and probably three years, or something like that. The difference in the case of Greenwich is not quite as great. I have the impression that we are slightly senior to Greenwich but not very much. (Air Commodore Willis.) In the case of Andover we are exactly the same in rank. We have 42 students. We aim at having 21 Royal Air Force students and the remaining 21 are made up of Commonwealth and foreign Air Forces. Since 1946 we have had an average of 16 Commonwealth and foreign students on the course and this is 40 per cent. of the course intake. On our present course we have 27 Royal Air Force students, 13 Commonwealth and foreign, one Royal Navy and one Army. The foreign countries are Finland, Germany, Greece, India, Iran, Israel, Italy, Norway, the Philippines, Thailand and the United States of America. We do not have any civilians on our course.

1186. Do these foreign countries vary? Might other foreign countries be represented on the next course?—Yes, that could well be. Over the past 19 years we have had 40 different countries represented at Andover. They have sent a total of 359 officers.

1187. You have told us the rank. What is the minimum age of entry?—(Air Vice-Marshal Lee.) It varies. The general duties branch of the Royal Air Force ranges from 28 to 34 or 35. The other ground branches—technical, supply, secretarial and so on—go up to a maximum age of 39 at the moment. That is the age structure. Broadly speaking, the officers from other Services are within that bracket, although we have on occasion had officers of over 40, particularly from the United States.

1188. Do many come to Bracknell at 28?—No, very few. In fact, on the selection board upon which we both sit we tend quite deliberately to defer officers who are qualified but who are 28 because, in general, they need to be kept on their professional job for as long as possible today. They may have

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qualified and passed the qualifying examination but we tend to defer them until they are about 31 or 32. If you are interested, the average age of the present course is 33½.

1189. And you do the 20 per cent. joint staff work that the other colleges do?—Yes, that is the policy. We have a directive to do 20 per cent. of our work together, and we achieved that last year. We shall certainly achieve it this year and, I think, more profitably this year. But we have achieved it now for two years.

1190. Does Bracknell do more joint work than Andover?—(Air Commodore Willis.) We have only just come into phase with Camberley and Bracknell on the course year. Previously we started in April and finished in March. This is the first time we have started in January and finished in December with the other two colleges. It is the first year in which we have really got together with the other colleges on joint training work through our syllabus. We reckon we have got up to about 18 per cent. joint training in this particular year. It may not be that we do the same exercises as Camberley and Bracknell but, overall, 18 per cent. is the figure of our joint training.

1191. Are you satisfied with the proportion of joint training? Is it about right?—(Air Vice-Marshal Lee.) I believe it is about correct at the moment. I would personally resist any pressure to increase it at the moment because our students come here so highly specialised, as required by the Air Force, that we have to spend a considerable amount of our time upon making them experts in a broader way in their own Service before we can possibly begin to teach them about the other Services. Overall I think 20 per cent. joint training is about the maximum which is profitable at the moment.

Sir John Langford-Holt.

1192. Does this 20 per cent. of their time which is spent with all three Services working together work out at 10 per cent. with the Army and 10 per cent. with the Navy, or is it 20 per cent. with each separately?—(Wing Commander Martin.) It is 20 per cent. as a whole, taking into account the work we do,

which is devoted to the further education of the students in Army or Navy matters. For example, we ourselves visit Army units, or we do so together with the other two colleges.

1193. It is 20 per cent. of your time?—Of our syllabus time, yes.

Mr. Woollam.

1194. When you say you think 20 per cent. is more or less the right figure at the present time, what are the factors which you are thinking of which could change and which, therefore, might alter the 20 per cent.? Is it the length of the course?—(Air Vice-Marshal Lee.) No. When I said that, I was referring to the fact that we now have this central defence organisation which is beginning to get going, and one of the things that it is clearly going to look into is the possibility of amalgamating more parts of the three Services. If that is achieved, then clearly it will be reflected here in the greater amount of joint work we might be able to do in those particular fields.

Chairman.

1195. Is it your impression that 20 per cent. is assessed by similar methods in the three Services?—It is, indeed, because we do this together. We have a very close policy committee consisting of the Assistant Commandants of all four colleges and we are now working our programme out together. Therefore we are on the same basis.

1196. Is that a committee which meets regularly or for a particular period when syllabuses are being formulated?—(Wing Commander Martin.) The committee of Assistant Commandants meets about once a month. However, there is a sub-committee, which consists of the planners from each of the colleges, which meets more frequently. I am one member of that sub-committee. We meet and discuss the details of the agendas our Assistant Commandants will discuss when they meet. A lot of the working details are done by this sub-committee before they come to the Assistant Commandants' attention.

1197. Is there any formal association at your level, Commandant?—(Air Vice-Marshal Lee.) Yes, indeed, Sir.

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The 20 per cent. about which we have been talking originally came from the recommendations made by the Commandants sitting together in committee and reporting to the Chiefs of Staff. Our recommendations were accepted and our directive from the Chiefs of Staff emerged as a result of that committee. That was one formal occasion. We get together whenever there is anything to be decided or agreed, upon which our Assistants have been working. They form the working level committee.

1198. On average is this a monthly or quarterly affair?—No, it is not a regular one at all.

1199. It may meet more often in the case of some particular problem that arises?—Yes. We take advantage of the many occasions during the year when we are together, anyway, for exercise purposes, particularly at Camberley. We take advantage of those occasions to meet and we do so at any other time when our Assistants need us to arbitrate on some point or another.

Mr. Gurden.

1200. Regarding the time which the students spend with the other Services, do they simply join in with the Army at Camberley or with the Navy at their establishment, or do you have a special period for all three Services to get together?—If I can give you an example, when we have an exercise involving all three colleges we run it simultaneously at Camberley, at Minley and here. We form syndicates made up of balanced numbers of soldiers, sailors and airmen. We get together in the Alanbrooke Hall as the exercise requires and when we all need to be together on account of some particular aspect of it. That is the general pattern.

1201. This joint training consists mainly of exercises?—Yes.

1202. You mentioned there are civil servant students here?—Yes.

1203. Do they go through in exactly the same way?—Yes.

1204. They take part in all the activities and exercises?—Yes, in exactly the same way.

Sir John Langford-Holt.

1205. Who does the sorting out of foreign students? I understood Air Commodore Willis to say Andover has one Israeli student and an Iranian. Is any political sorting out done?—(Air Commodore Willis.) No. It is not done at our level but at Air Ministry level and I think they deal direct either with the Foreign Office or with the Commonwealth Relations Office.

1206. But a conscious effort is made to ensure foreign students from countries which are inimical towards one another do not mix on these courses, is it not?—I would not know. On this particular course we have got this Israeli student. There was an Iraqi student but for some unknown reason (we were not told why) he was withdrawn at short notice. (Wing Commander Whitlock.) He did not actually arrive.

Chairman.

1207. Do you have any difficulties of that kind?—(Air Commodore Willis.) No. We have Pakistanis and Indians. They get up and argue with each other on the lecture floor but you find they are the best of friends and get on well with each other. Again that is half the joy of coming to Andover, and we go out of our way to encourage it.

Mr. Gurden.

1208. What safeguard is there that they have the necessary qualifications to join in on training of this standard?—In the letter which is sent out to the various foreign countries minimum requirements of rank, age, and ability to speak and write good English are given. Whether they fulfil those requirements we do not know. We have no say.

Chairman.

1209. Do you find foreign student places are filled up with makeweights, people who are not up to the standard but who come to Andover in order to fill up a reserved vacancy?—I have no idea what the standards are of the chaps at home they have left behind.

1210. I was thinking of the general standard of the course?—I would say not. They obviously find the course much more difficult because they are

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dealing with a foreign tongue and their ability to write and speak English varies tremendously. For instance, the people we get from Norway can write and speak as well as we can. (Air Vice-Marshal *Lee*.) If I could add to that, during our Royal Air Force selection board we always select 15 to 20 reserves. They are used not only to fill vacancies if a Royal Air Force officer falls out but also to fill vacancies if any of the Commonwealth or foreign students fail to appear. The course is, in fact, always full.

1211. We saw with great interest the Alanbrooke Hall. I do not know whether this happened in your time, but was there any consultation at the time the Alanbrooke Hall was being built to make certain you were complementary to each other?—The Alanbrooke Hall was built by the Army in order to house the big inter-Service exercises during the years in which the Army were responsible for them. That is why it was built of such a size and in such a way. When the Royal Air Force is called upon to sponsor these inter-Service exercises it normally does so at Cranwell where the accommodation exists. Therefore, when this new lecture hall here was built the requirement was only to house our own staff college course, plus the additions we have from time to time during our joint training. Therefore there is no comparison between the two in that respect.

1212. But it takes more than just your own people?—Yes, it takes more than our own but it only takes the number we have when we are doing these joint exercises; then we do have as many as 60 additional students here from Greenwich. I should make it clear that joint staff work is never done at Greenwich because of the geographical location of Greenwich. It is too difficult. Whenever we do joint staff work with the three colleges Greenwich always comes out here and its students are shared between Bracknell and Camberley. Under those circumstances, therefore, we always have quite an influx here and that hall will cope with our total joint numbers on those occasions.

1213. Do you go to the Alanbrooke Hall often?—I would say six times a year and those visits, I think, will increase. (Wing Commander *Martin*.) If anything we will possibly go there more frequently. A total of 42 hours is spent on joint Service lectures alone, and there are presentations of one sort or another at Camberley.

1214. I think no-one could be anything but struck by the contrast between your new buildings and the accommodation in the tutorial block which has survived from the past. Could you tell us whether there are any rebuilding proposals?—(Air Vice-Marshal *Lee*.) Yes, there are, but they are very tentative. We are in the position at the moment that we have been instructed to put up a sketch plan and sketch estimates for a tutorial site. (Group Captain *Jackson*.) We are at the moment preparing an outline plan covering the accommodation which we feel is needed if the tutorial block is to be rebuilt; all the syndicate rooms, directing staff officers and so on will, instead of being housed in this conglomeration of little buildings, be brought into one building. We have got to the stage where we have stated our requirement; the works people are producing a sketch plan which we shall submit to Flying Training Command with a covering letter explaining our reasons for the size of the rooms and the size of the building. That will then go up to the Air Ministry where it will be considered by the Air Ministry and, subsequently, by the finance side. We hope it will get on to the priority list. At this very moment we are awaiting the sketch plan.

1215. You are basing your requirements on the present number of students?—Yes, the present number of students, plus the estimated number that we have to accommodate during joint Service studies.

1216. Yes. Now, Air Commodore Willis, we were told by the Air Ministry that your accommodation is tolerable and not much more. Would that be fair?—(Air Commodore *Willis*.) I think it would be very fair!

1217. Have you rebuilding proposals at Andover?—As far as the college is

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concerned I would say no. I think there is a tentative plan to rebuild the Andover station mess, of which the college is one wing. Whether that plan includes a new college or a new wing for the college I do not know but the college buildings, as you say, are just tolerable. However, that is, in fact, in line with the rest of the station accommodation at Andover and I think there is a general rebuilding programme going on. That is the best I can say.

1218. We were also told by the Air Ministry that if there was to be any development of the college work it should take place here rather than at Andover. Is that a view which you would accept as being reasonable, or is your view coloured by your loyalties?—It does not affect me. In that respect you would then have to go into the policy of the two colleges. Whether they would have foreign students at Bracknell or not I am not in a position to say.

1219. Taking it stage by stage and assuming there was going to be a combined college, do you think it would be here or at Andover?—Here, Sir. There is no doubt whatsoever about that. I am sure this is the right place.

1220. Is that your view?—(Air Vice-Marshal Lee.) Yes, because in spite of all our temporary buildings this is still a more permanent station than Andover.

1221. Do we understand you are more established, in spite of not having common services which you can share with each other?—Yes, that is perfectly true.

1222. But you do not think you would gain substantially by becoming tenants of or by sharing a larger site?—No. It depends entirely where the site is, but Bracknell is admirably situated for the staff college in relation to the work we have to do. There is no rooted objection to the college being a lodger unit on a larger station but its location is important, particularly from the point of view of our very large number of lecturers, most of whom come from the London area. Our proximity to Camberley is extremely important and our proximity to Salisbury Plain and

Portsmouth are also important. This particular location (and, indeed, that of Andover which is not very far away) does minimise our travelling problems, our problems of working with the other Services and our problems of getting the essential lecturers. So I think this is an ideal location from that point of view.

Mr. Gurden.

1223. If 20 per cent. of the time is spent on joint training that is a major factor, is it not?—Yes, it is. You can see the importance of this at Greenwich. Greenwich is very badly placed. We have to take account of this in planning our joint work because we cannot bring the whole of Greenwich out here for half a day or one day. We really have to try and do it in such a way that it becomes a worth-while journey for Greenwich to make in order to join us. It is a very important factor which does have to be taken into consideration.

1224. You are saying if there was a move to an inconvenient geographical position it would be more difficult to achieve that 20 per cent.?—Yes.

Chairman.

1225. You would not want to go to Cranwell?—No, I would not. It would be most inconvenient. One's 20 per cent. joint staff training would then become a really major headache.

1226. What sort of saving would there be on accommodation? There would not, I suppose, be a great saving of directorate staff because under the syndicate system you would have to have roughly the same number of directing staff whether it was one college or two?—You would save a Commandant. (Air Commodore Willis.) Yes. There is no doubt about the fact that there would be a saving. You would save my post and you would probably save one or two Wing Commanders: a planner and the "floater" we have got. Whether Bracknell would need an extra one to cope with the 42 students from Andover I do not know. You would also save another officer and an adjutant. You would not save the Group Captain, Assistant Commandant, posting because you would have to have

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an extra D.G. to look after the thing. You would save a number of civilian posts; taking the typists as an example (all those people churning out exercises) a number of people could be saved there.

Mr. *Gurden*.

1227. Can you think of any great disadvantage in that?—(Air Vice-Marshal *Lee*.) Not if they built more accommodation. (Air Commodore *Willis*.) The big thing is that you have got to get over the security side. I think the foreign students would be the losers.

1228. What would they be losing?—If you put their small number into Bracknell I think they would be lost and outnumbered. They would not have exactly the same treatment unless the whole of the Bracknell course is made unrestricted. If you had to take them off the course earlier, as at Camberley, I think they would lose something.

1229. Could they be confined to other Air Force colleges and leave this one out altogether?—There are no other Air Force staff colleges.

Mr. *Wilkins*.] If we are trying to see what the possible saving is, the only way in which you can make a comparison is by setting off the overheads against the capital outlay. It is almost impossible to say what the advantages are because your memorandum to us does say that both colleges have the same aim. It appears to me that the only difference which has been suggested is the security aspect.

Chairman.] And the pastoral aspect.

Mr. *Wilkins*.] Yes. I am still puzzling about the possible capital costs.

Chairman.

1230. I was working on the premise that you are going to rebuild in both cases. Therefore it seems to be alarming that the Air Ministry may commit themselves to building plans based on separation when eventually both are going to have to combine, anyway?—(Air Vice-Marshal *Lee*.) They will certainly have to rebuild if they stay in their present locations. I think the Air Ministry would say they have not closed

their minds on this because, with the contraction of the Royal Air Force, there are quite a number of quite well built permanent stations becoming available. To take one example, the amalgamation of Henlow and Cranwell is throwing up accommodation at Henlow, so it is almost impossible to foresee the future at the moment. There are possibly many ways and means of shifting, say, Andover to a more permanent station which already exists, so it is not necessarily true to say we would have to build both here and at Andover.

1231. But you want to build, anyway, whatever happens?—Yes. We wish to finish our building programme which is now half-way through.

1232. To take a small illustration which is probably not of major importance, you are going to build a library, anyway?—Yes.

1233. And you hope to do that as quickly as you can. Andover has a library and, I presume, a librarian. To build another storey on to this library which you are going to build might be more economical than having two separate libraries. That is what I meant from the point of view of the importance of cost?—Yes. One cannot deny that at all.

1234. Would you tell us a bit about the planning and draughtsman's department? I had understood that Andover uses a good deal of the exercises available here and therefore, presumably, indirectly uses the drafting equipment here?—(Air Commodore *Willis*.) Yes. We make as much use as possible of the drawing office here. There are much better facilities at Bracknell. We do the simpler diagrams—the drops you have seen this morning, for instance—but in the case of anything more complicated we give what we require to the drawing office here or elsewhere and they get it done. We go to Boscombe Down for the slides for our projectors because it is right next door and they can do that for us. We do not let anything out to civilian contract. We use either Bracknell or other local Service facilities.

1235. Is there a full-time planning job to be done at Andover if so much of the work is done here?—Yes.

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These drawings are going on all the time in preparation for lectures. The directing staff and students are going into the drawing office all the time and telling the staff what to do, how they want it done and how they are to amend these things. If the exercises and charts which you can see at the back of the room have to be changed they have to be done by the D.S. on the spot or by the students. If we had one drawing office only at Bracknell it would mean that the Wing Commander supposed to be looking after the students would be travelling backwards and forwards all the time, and I think the staff at Bracknell would also have to come down to Andover quite a lot.

1236. Would it be correct to say that but for the security aspect you could use all the exercises here?—Yes. I would say some of them we might have to modify; I do not know because I have not been through the latest Bracknell exercises. Some of them may be too difficult for some of the foreigners. That is the only reservation I would make. By and large, if there were no security restriction I would say yes.

1237. Do you know what the cost of your separate drawing office at Andover is?—No, Sir.

1238. Could Mr. Day let us have a note on it?—(Mr. Day.) Yes.

Mr. Gurden.

1239. Should such a change come about and Andover is brought here, what are the possibilities of having an Andover and a Bracknell college within this area?—(Air Commodore Willis.) Do you mean two separate colleges at Bracknell?

1240. Yes?—(Air Vice-Marshal Lee.) I would say it would be quite impracticable from the point of view of the feelings of the individual students. I think they would then feel a very definite sense of segregation which would be most undesirable. (Air Commodore Willis.) That would be my opinion, too.

Sir John Langford-Holt.

1241. Bearing in mind that these colleges are primarily Royal Air Force colleges for the benefit of Royal Air Force officers and that what we are

talking about are the interests of the foreign students, what contribution do the foreign students make to the effectiveness of the staff college?—I think the British students living alongside the foreigners for a year certainly find out a great deal about various countries. The foreign students give student lectures on their own countries, on their own Air Force and on anything they like about their own countries. We are mixing with them and getting as much as we can from them all the time; similarly, they are mixing with us and getting as much as they can from us all the time. I think one of the great assets of Andover is this interchange of opinion between the British and foreign students. It is most enjoyable and every student, without exception, when he leaves the colleges makes a great point of saying to me that one of the things he has enjoyed at Andover is this interchange of ideas between the countries.

1242. Switching now to the other staff college, do you consciously miss this interchange between foreign and British students? It may be a difficult question for you to answer?—(Air Vice-Marshal Lee.) As we do not have it, it is very difficult to say what it is we miss. No, I do not think we do miss it. Clearly I cannot answer it because we do not have it.

Mr. Woollam.

1243. Are you arguing that in this way you are building up a fund of goodwill throughout the air forces of the world? Although you cannot quantify it, is it thought in the Air Force that the present method is the most effective way of creating this goodwill and that if the units were merged in some form this particular goodwill would suffer?—(Air Commodore Willis.) I could not agree more. On paper you can prove that by combining Andover and Bracknell there would undoubtedly be economies which could be worked out in pounds, shillings and pence; but what the amount of goodwill is one cannot say and it is not for us to say. It is up to someone else to say that. (Air Vice-Marshal Lee.) I think we have already proved over many years the value of this staff college training for foreigners. It has spread round the

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world and into a very large number of air forces in the same way that our system of flying instruction at the Central Flying School has also spread round the world and is in universal use. This has already been proved and I do not think we have to prove it again.

1244. Could it be said that in organisations such as N.A.T.O., C.E.N.T.O. and S.E.A.T.O. there are already apparent improvements in the working of those bodies because you are dealing with staff officers of other nations who already understand your methods and have been trained with you? Can specific benefits be pointed to? Is it merely intangible goodwill or is it more than that?—(Air Commodore Willis.) I would say I agree with you entirely. I gave figures just now of 359 officers of 40 nations. Out of those we have on our books 10 Chiefs of Staff of foreign air forces. I think that is terribly important.

Sir John Langford-Holt.

1245. Are these contacts maintained after they leave the staff college?—Yes. Last year we had an Andover reunion in London. I could not go myself but it was better attended by members of foreign air forces who came from overseas to London than by the British. They think very, very highly of it indeed.

Chairman.

1246. I do not know whether you can answer this question but we would be grateful for your advice if you can. In the wider field of N.A.T.O. co-operation is there likely to be development in the direction of international staff work?—(Air Vice-Marshal Lee.) Already there is the N.A.T.O. staff college in Paris to which we send, as do other N.A.T.O. nations, representatives. However, as in the case of joint training so in the case of Allied training I think you can only carry it so far. You have got to make an officer an expert not only in his own Service but in his own country's military affairs; then he can certainly spend a certain amount of time with others on Allied studies. I think that for producing N.A.T.O. staff officers the N.A.T.O. staff college is fine but I also think there is a distinct limit to it. After all, we speak different languages

and we only have a small amount of standardisation in our techniques. I believe there is a very distinct limit to the amount of Allied staff work you can do.

Sir John Langford-Holt.

1247. Would I be right in assuming the N.A.T.O. staff college takes its students at a later age than you do?—(Air Commodore Willis.) I think they do.

1248. It would seem to be so?—I think it is Wing Commander or above level. I think it is a slightly higher level.

1249. Do they work in groups or does it correspond to the American system?—(Wing Commander Whitlock.) I believe it is a six months' course, that it is centred on three problems of an international nature and that they argue those problems out in syndicates. But I know very little about that.

Chairman.

1250. Now I want to turn to a rather more mundane question. Will these new rebuilding plans affect your heating methods here?—(Air Vice-Marshal Lee.) I hope so! (Squadron Leader Catling.) At the moment we are heated by three or four boiler houses plus a number of individual coke stoves. The main boiler house at the foot of the camp serves the centre block of the officers' mess, all the new buildings over there and nothing else. The two wings of the officers' mess are served by individual coke-fired boilers and the tutorial site is served by yet another boiler house. The three coke-fired boiler houses are fed by two different types of coke; the ones in the mess wings accept only a small grade whilst the other boiler house only accepts a larger grade. This inevitably pushes up our heating costs because we cannot place contracts for large consignments of a particular type of fuel. There are plans afoot to connect the whole college to the central boiler house and to instal a third oil storage tank, but the Ministry of Public Building and Works will only be able to achieve part of the scheme during the non-heating season next year. They cannot do all the work during the few months available to them to cut off the heat.

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1251. This is something which could be done without waiting for rebuilding? —Yes, that is true. It was projected last year but I believe it was dropped through lack of funds. It has been projected again this year and I am told by the Ministry of Public Building and Works that it will go through this year.

Mr. Gurden.

1252. When you said it is going to be done next year, do I understand you to mean 1965?—No, during this coming year, during the financial year commencing 1st April.

Chairman.

1253. This is a matter which you negotiate directly with the Ministry of Public Building and Works?—No, not in this particular instance. The provision of this type of service for us is their responsibility. We find out about such things because now we are having to budget for the buying of coke for the winter of 1964-65. We go to them for estimates of the amount of coke they will require to feed through their boilers and the Royal Air Force equipment stores procure it. We go and ask them what coke they will need next year and they tell us that the tutorial site and also this block will be connected to the main boiler house.

1254. "They" being — ? — the Ministry of Public Building and Works in the form of No. 5 Works Area at Shippon.

1255. They are the people to whom you make your obviously deeply-felt complaints?—Yes.

1256. Is it possible to expect from the work done that there will be an improvement in costs?—Yes, there must be, because we will be using one type of fuel only. We will buy larger quantities of that type of fuel and marginal benefits through buying those larger quantities will follow. Whether we shall gain in efficiency in the tutorial site I do not know because there are exposed pipes all over the place which it is impracticable to lag.

1257. What is the position at Andover? —Is that as bad?—(Air Commodore Willis.) I cannot speak of the size of

coke, but the mess of which we are a part is centrally heated. That is a hand-fired coke boiler. The rest of the Andover station is a combination of small central heating plants and, in the case of officers in individual rooms, ordinary coal fires. There are coal fires in each room in the living quarters of the mess. The Headquarters, Maintenance Command building is centrally heated throughout. Whether it is a coke- or oil-fired boiler I am not certain.

1258. Are your estimates going up? —I do not think so, no.

Mr. Gurden.

1259. You have reached the stage at which you have eliminated three boiler houses at Bracknell. You were going to tell us about the fourth?—(Squadron Leader Catling.) Two are in the wings at either extremity of the mess. The third is serving the tutorial site; you probably noticed those piles of coke outside. The fourth is the oil-fired boiler house at the main gate.

1260. Which of the three will go out for the new one?—All three will eventually go out for the new one but we shall only be able to take two out this year because there will not be enough time during the coming non-heating season to take all three out.

1261. Will this reduce considerably the piping which carries the heat to the buildings and the consequential heat loss? —I should think not. It will be a matter of taking the ducting up to the building and connecting into the existing system. In this financial year we have bought £4,000 worth of coke and £1,100 odd worth of oil. Oil is, presumably, far more efficient as a heating agent than coke, particularly in these rather old boilers that we have now. If the price of oil does not go up we will buy more oil and have a greater degree of efficiency.

Mr. Woollam.

1262. Putting aside the thermal efficiency of new and different boilers, what you are by implication saying is that their ultimate efficiency, the prevention of loss of heat, must await any rebuilding?—Yes. Certainly on the tutorial site that is true.

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Chairman.

1263. Going back to Andover, the figure we were given, which may not be one you know of, for 1961-62 was £2,300 for fuel (that includes electricity, gas and everything else) whilst the estimate of £3,000 for this year is a fairly substantial increase. However, it may be that that is taken from a more general figure for the whole station?—(Wing Commander *Whitlock.*) Yes. We have no separate heating. We use the station services and have central heating in our buildings. We have no control over the heating system.

1264. Possibly Mr. Day can again let us have a note on that?—(Wing Commander *Whitlock.*) This is a proportion of the total station costs. This is all they can do. (Mr. *Day.*) Yes. This is a statistical figure. We have establishment and backing staff figures which give the statistical proportion of the staff college to the remainder at Andover, and we had to do the same sort of exercise for electricity, gas and fuel.

Mr. Gurden.

1265. The houses which we have seen are not heated by this plant? They are heated separately and I presume the tenants pay for their own heating costs?—(Air Vice-Marshal *Lee.*) Yes.

Chairman.

1266. Do you have a printing press here?—No, we have no printing press. (Wing Commander *Martin.*) We have small printing facilities. We have an "Invincible" copier which prints tracings similar to those diagrams at the back of the room. We also have a lithoprinter, a rotaprinter and an Adana handprinter which takes small-sized paper, 4½ in. × 7 in. This is apart from the Gestetner. These together make up our complete printing facilities. They are black and white only.

1267. Is this printing operation, which we also saw going on on an even larger scale at Camberley, an essential part of the work? There seems to be a lot of printing being produced and a lot of duplication in the different colleges, and I am wondering whether there is any possibility of saving on it?—(Air Vice-Marshal *Lee.*) Our tuition is largely

based on paper exercises. Towards the end of the year and in our joint staff work these exercises do become very comprehensive. However, one exercise may last for a considerable number of years; one does not retype the whole thing every year by any manner of means. Only parts of it have to be changed. As that is the basis of our tuition at the three staff colleges the need for visual aids such as diagrams and charts is ever-increasing. That is the modern type of display, and I do not see any way of cutting this down substantially without altering completely the character of the tuition. (Wing Commander *Martin.*) It is a rule at Bracknell that all exercises are handed back. The students do not take them away, so any which we can use again we do.

1268. Is there any possibility, as you are fairly near together, of sharing some of the burden of drafting and printing with the other colleges?—(Air Vice-Marshal *Lee.*) We do so already in the case of the exercises we do together. In some cases Camberley will take on the printing and production of a complete exercise whilst in other cases we will do it. These exercises are normally written and prepared by two or three officers, one from each college, working together. Then the work of producing it in printed form is shared between us according to our facilities, so we already do a substantial amount of work for one another. The work which we do entirely for ourselves is entirely single-Service type of work. It is more appropriately done in our own factory because some of it is highly specialised material. Some of the Air Force diagrams and charts are highly technical Air Force matters which I think Camberley, for example, would find quite difficult to do for us. They have not got the know-how for it.

Mr. Gurden.

1269. Is it your printing staff who have the know-how or the officers?—No. The printing staff only produces what it is asked to produce. The detailed technical content of a diagram or chart is given to it by the expert in D.S., and the drawing office simply reproduce what they are given.

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1270. That same material could be given to the printing staff at some other college, could it not?—(Wing Commander *Martin*.) With great difficulty. (Air Vice-Marshal *Lee*.) It could be, yes. (Wing Commander *Martin*.) The printing facilities we have here are relatively simple; they are not very complicated. We do not have a special printing staff. The drawing office staff themselves operate these things whenever it is necessary to do so. If we passed all our printing to Camberley, for example, it would mean there would be one, two, possibly three or possibly a dozen Wing Commanders in transit to and from Camberley doing print correction, redrawing, proof correction, reading, re-reading, correcting, amending and so on. It would be very uneconomical for the very small capital cost of the printing facilities we have got here. (Air Vice-Marshal *Lee*.) A lot of the work which is done is work of an original nature. The officer who has commissioned this work will probably wish to keep in touch with the production of it throughout because of its being original work. It is not quite as easy as drawing a chart and sending it away to be reproduced. He is in and out of the drawing office to make sure it is coming out correctly because things like graphs can give a totally wrong impression if they are not done exactly as they are wanted. They can be most misleading. Most of this work is original work which it is better to have done here.

Chairman.

1271. Could you tell us about the houses which are used by the married students? Could you tell us something about their cost and the lending arrangements? Is that within your remit?—(Squadron Leader *Catling*.) Rent is according to rank and is based on the marriage allowance. Type 3 accommodation is provided at Bracknell. I occupy Type 3 housing although, as Squadron Leader, I am entitled to Type 4. However, in either type of house I would pay exactly the same rent. I pay £180 a year rent which includes the furniture. When we get the marriage allowance increase on 1st April my rent

will automatically go up to £225 a year and will absorb that increase. A similar pattern exists in the other ranks of the Service occupying married accommodation.

1272. Does the difference between the cost of the house and the rent obtained go on your Vote, or is that a general charge?—I could not tell you, I am afraid. (Mr. *Day*.) Rentals are paid into Air Votes as appropriations in aid.

1273. Looking at what are the possible causes of the fairly high costs of the college, one wonders whether it is partly due to the fact that this accommodation at Bracknell would probably not be available elsewhere. A higher standard of accommodation for students is provided than one would expect to find in most residential places and I am not sure whether that is part of the Vote?—(Squadron Leader *Catling*.) They are built strictly according to a synopsis scale and this is based on the establishment. For every officer above the rank of Squadron Leader you can build 85 per cent. of houses and for every junior officer you can build 72 per cent. of houses. Therefore, on our establishment of 123 senior officers, Squadron Leader and above, we are entitled to 104½ houses.

1274. And those houses would be the same at any station?—Yes. (Air Vice-Marshal *Lee*.) When this college started and, indeed, when I first came here about twelve years ago there were no married quarters here at all. It has been a deliberate Air Ministry policy to provide quarters for these officers although they are only here for a year, because it is clearly considered to be a thoroughly worth-while investment. Many of them come from overseas; the value of the opportunity for them to come here with their families for a year and really to settle down to this academic year is undoubtedly great. When I was here before all the students lived within a radius of 20 miles, and I can see a very distinct improvement in the seriousness and determination with which they get down to their work here compared with what it was when everyone scattered each night all over the south of England. I think that policy

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was firmly in people's minds when these quarters were provided.

1275. What is the position at Andover?—(Air Commodore Willis.) On the station itself there are 118 married quarters, of which the college have 26. The station has a total of 34 hirings (these are houses outside taken over by the Air Ministry) and the college has 14 of those; 41 people live out privately at Andover, of whom 4 are from the college; 36 live in the mess and 10 of those are from the college.

Mr. Gurden.

1276. Have you sufficient accommodation at Bracknell for all those who require it?—(Air Vice-Marshal Lee.) Yes, we have sufficient at Bracknell.

Chairman.

1277. What is the tour of duty of the directing staff?—Ours is based on two years and two terms—in other words, two years and eight months. That is our basis except for the officers of the other Services. We have a Royal Navy directing staff officer, an Army one, and an American and a Canadian. They are here for two years and follow the arrangements in their own Services. Ours is two years and eight months, and occasionally it is more than that.

1278. So on average every man does two courses, plus a little extra?—Yes.

1279. Is that about the right number to do to get the benefit of his know-how and experience?—Yes. I think, first of all, he needs to be here a reasonable length of time because it is a slightly unusual job to pick up in the first place. On the other hand, he does not need to be here too long because then his knowledge of developments tends to become out of date and he is, of course, required to put over completely up-to-date instruction all the time. On balance we find it is a satisfactory time. It does not result in too much turbulence. Directing staff officers are changed only at the end of terms, never in the middle. This gives a fairly constant and not too heavy turnover of directing staff.

Mr. Gurden.

1280. How do you determine the teaching ability of an officer before he comes

here?—We have a number of tests. First of all, every student on completion of the course here is recommended, or not, as a directing staff officer of the future. The Air Secretary's department in the Air Ministry knows very accurately the requirement here and always gives us a certain say about an officer and whether he is to be posted here. We check up on his background. We look up his record to find out how he did on his own course and whether he was recommended. We put all these factors together and, in that way, get the right person. We are given high priority by the Air Ministry for these posts.

Chairman.

1281. Is there a danger that a student who fails to get a directing staff officer recommendation but who may do very well after he leaves Bracknell will be unfairly prejudiced?—Our system is this. We have three groups at Bracknell with a Group Captain at the top of each group. Each student remains in the same group during his year but he is in three different syndicates during that year. There are two reasons for this: first, to give him a change of directing staff officer and secondly to change the experience within his syndicate. There are six different syndicates and he will therefore have worked with three lots of 6 different students during the course of his year. Each syndicate is matched in experience. There is a general duties officer, a technical officer, a secretarial officer and one of the attached officers in each syndicate, so there is a good level of experience throughout.

1282. Is there anything you would like to add to that?—(Air Commodore Willis.) No, nothing at all. We are the same except that we do not have the groups, as we only have seven syndicates; we do three terms; the D.S. tour is the same, and we share with Bracknell the American, the Army and the Royal Navy D.S. We have none of those at our college. They come and give lectures to us as required and liaise with us as required. Otherwise we are exactly the same as Bracknell.

1283. I think that is all we have to ask you. Are there any points you

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would like to put to us which you think we may have missed? We are anxious that you should feel we have got to the root of this?—(Air Vice-Marshal Lee.) No, Sir. For my part I have nothing to add. I feel they were very good questions which we have tried to answer as fairly and accurately as we can. (Mr. Day.) Reverting to the question you asked about married quarters, the maintenance costs for buildings and works and the staff costs in our costings do cover married quarters in so far as they

need maintenance and in so far as any Air Ministry staff are involved in their administration. These costs here do not take account of the rentals paid. In other words, these are gross and not net costs.

1284. Thank you very much?—(Air Vice-Marshal Lee.) I would like to say in conclusion what a pleasure it has been to have you here. I am glad it has been such a pleasant day and I hope you have enjoyed the visit.

WEDNESDAY, 18TH MARCH, 1964.

(The Sub-Committee met at the Royal Naval Engineering College, Manadon.)

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Mr. W. A. Wilkins.

Captain W. T. C. RIDLEY, O.B.E., in Command, Instructor Captain D. E. MANNERING, B.A., Dean, Commander B. P. McCONNELL, O.B.E., Commander, Commander C. P. H. GIBBON, Director of Engineering, Royal Naval Engineering College, Manadon, and Mr. T. F. RONAYNE, General Finance Branch I, Admiralty, called in and examined.

Chairman.

1285. May I begin by thanking you most warmly for your kindness in giving up so much of your time in showing us round. We have enjoyed it very much and also appreciate very much your efforts to explain everything to us?—(Captain Ridley.) We love showing people round. It is a pride to us.

1286. I should explain we are a Select Committee of the House and therefore you are protected by Parliamentary privilege in regard to anything you say to us. Everything said is taken down but you will get a copy of the transcript. If there is anything in it which is wrong verbally or which you would rather not have reported for security or other reasons perhaps you would sideline it and, if we agree with you, it need not be reported. Therefore we would rather you felt free to talk quite frankly than that you should be inhibited

by the written record. I would like to begin by asking you about the move here from Keyham. What were the main advantages of the move?—The overriding advantage was that there just was not room at Keyham for the numbers that were foreseen even so long ago as 1937-38. Another advantage is that a new place, built for the purpose, tends always to be slightly better than a building built for the purpose but as long ago as 1880 and which is, therefore, completely out of date.

1287. What really determines the siting of the college? Could you have gone anywhere in the country?—I am afraid I do not know the answer to this. Undoubtedly in the days when Keyham was founded it was inevitable that the college should be close to a dockyard. I do not mean by this that that is no longer desirable, but in those days it could not have been anywhere else,

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under any circumstances, I think, because the students largely started their lives in the dockyard and the bulk of the equipment they used came from the dockyards. Therefore, when Keyham was founded it could have been either here or at Portsmouth. Indeed, the predecessor to Keyham, which was H.M.S. Marlborough, was at Portsmouth. Why Devonport was chosen I do not know.

1288. Are there disadvantages in being so far away from London?—It depends which way you look at it. I think the students would say there are grave disadvantages. On the other hand, I think the management would say there is every advantage in not being near London.

1289. Do you have difficulty in getting outside lecturers to come and visit you?—No, Sir. We get people from Exeter University and from Bristol. We also get people from Portsmouth without very much difficulty. This is one of our main Service sources of outside lecturers. I would say that the disadvantage, in so far as there is any, to the good administration of the college is that there is a tendency for the rest of the Navy (by this I mean the Admiralty, the Portsmouth schools and so on) not to know what is happening here. We are taking special steps to make sure that this situation is improved. For instance, at the end of next term we are having a symposium to which we are inviting all the Service engineering officers so as to show them what we are doing, what the college is like and how we are progressing.

1290. We have learned from the Royal Air Force that Henlow is going to join with Cranwell. Is there a case for saying that there should be a closer link between Dartmouth and Manadon?—I would say not. By this I do not mean there would be any disadvantage in building the colleges together if we were starting from scratch, but in a sense I think the establishment which would result if they were together would be unwieldy and would contain over 1,000 students of different ages doing utterly different sorts of courses. My purely personal view is that being as close to Dartmouth as we are is a very good thing, particularly now that our first year students and the Dartmouth third

year students are contemporaries and enter the Navy together. We play them at all games and so on. But from the instructional point of view I think there would be no advantage at all.

1291. Could you explain to us the essential differences between the new Murray scheme and the 1955 scheme?—The main difference to the young cadet is that he has to have a higher academic standard on entry under the Murray scheme than he did under the old 1955 scheme. The other main difference is that instead of doing 2½ or 2 years plus at Dartmouth he does a year, and instead of doing up to 18 months at sea after leaving Dartmouth he does a year. The net result of this is that he arrives here two years earlier in his life than he did before.

1292. The Murray Committee produced an Admiralty report?—It was a committee set up by the Admiralty.

1293. I do not know how much we can ask you about it because it is not immediately your concern?—All I can say is that it was set up by the Admiralty.

1294. Is it a report you yourself have studied?—Yes. It is quite a lengthy report and I have certainly studied the recommendations quite a bit.

1295. What I was wondering was whether you could help us by saying what the motive behind it was. Was it to increase the standard of entry?—Yes. There is no doubt that at the back of the committee's mind was the feeling that an increased standard of entry is necessary because the modern Navy requires at least a proportion of graduates—B.Sc.s or people of that standard. I would say myself that this is true but that one of the main advantages of the increased standard of entry leading to a degree here is recruiting. If you want a good engineer today you have got to offer him the chance of gaining a degree or something like it during his training.

1296. Has this report been published?—(Mr. Ronayne.) No. Its general conclusions have been reported but I do not think it was brought out as a Blue Book or anything of that kind.

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Mr. *Wilkins*.

1297. It has not been mentioned in any evidence so far, has it?—No, Sir.

1298. It has not been mentioned to us as a Committee?—(Captain *Ridley*.) This is not unnatural because it was known as the Dartmouth Review Committee, in fact, and was set up to study the scheme of training at Dartmouth. Out of that study came a lot of recommendations which affected other places. However, it was primarily Dartmouth which was at the root of it.

Chairman.

1299. As I understand it there are really now three types of engineering graduate. There is the Cambridge graduate, the London graduate from Manadon and the Manadon Diplomat. Is that correct?—That is correct, with the one small correction that this is not the case at the moment. This is what will be the case in two or three years' time.

1300. The end product has not yet emerged?—No, it has not yet emerged.

1301. There are still the survivors of the Long Course going through the college?—Yes.

1302. But by the time the first new entry has emerged there will be just these three types, and of those the Cambridge graduates and the London graduates are obviously competitive in the sense that they are gaining their degrees in a contest with outside civilians. Is there any test of the effectiveness of the diploma course?—Yes. The Institutions of Mechanical and Electrical Engineers watch closely the syllabus and the results. They are jealously guarding their rights in this matter, in as much as it will continue to be our business to satisfy them that the diploma course meets their standards.

1303. Would you care to express an opinion upon what you think should be the rough proportions between these three types of officer?—I am afraid that this is an impossible question to answer. The ideal is to have 100 per cent. degree candidates. However, it will inevitably be the case that we shall always fall below this and the amount by which we fall below it will be a matter

of the standard of the individual years' entries. However, it will never, as long as the present system continues, be planned to produce "X" per cent. graduates and "Y" per cent. diplomates.

1304. What is the percentage as between Cambridge and London?—My personal view is that we could do with up to 15 to 20 per cent. of people at Cambridge. I think it is unlikely that this will ever be a regular percentage, simply because it is up to the individual student to have qualified himself to go to Cambridge and, in a general way, to have gained the promise of a place at college before he goes to Dartmouth. The numbers recently have been dropping, not going up. This does not mean that they might not go up again. However, I would say we do not want an enormous number of Cambridge graduates. If we did we might do well to shut Manadon down. I am, perhaps, answering another question.

1305. A very interesting question?—Yes, which is: why Manadon? This I feel very strongly about. While here the students continue their naval training and when they leave they are naval officers as well as reasonably qualified engineers. The idea of having a number of people who are trained differently from the main stream is, I think, a good one. It tends to broaden the base of engineering in the Navy and increase the number of people who have done their initial training under different circumstances. But I do not think one wants to go to the extent of having the majority of people trained outside the Navy and the minority, or none at all, trained inside.

1306. What proportion of the total number of officers coming into the Navy are engineering officers?—Between 40 and 50 per cent.

Mr. *Wilkins*.

1307. Is that a figure which is likely to grow? Is the balance likely to shift in their favour?—(Commander *Gibbon*.) I think this is a question concerning the Supplementary and General List entries, and certainly it is up to the Admiralty to decide at any one moment which branch needs the numbers most.

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Mr. Gurden.

1308. I think you class radio, electrical and all other people as engineers?—(Captain Ridley.) Yes, they are all engineers.

Mr. Wilkins.

1309. Is the bias going to be more and more in that direction in the future?—I think this is an impossible question for us to answer. (Captain Mannering.) We have no evidence on this. (Captain Ridley.) We have no way of knowing.

Chairman.

1310. We are not pressing you because you cannot go beyond your remit, but you know more about it than we do and we are interested in picking your brains. It might appear to us as laymen that the development of the Service is in the direction of greater and greater technical complication. When we went round you showed us these things. That is true of the Air Force as well. It might be that the result of this will be that the weighting of scientific and technical training compared with naval training will increase?—I think that is probably fair. As I said this morning, if one is thinking about 25 years ahead we are trying to get ourselves into the position where everything works automatically: where, to exaggerate it, there are no people at all in ships. Therefore the trend, if there is a trend, of change is almost bound to be in the direction of an increased number of technically trained officers, professionally trained officers. However, I think it depends on defence policy. It depends upon what the warships of the future are going to look like. It depends upon so many imponderables that one cannot say.

1311. My next question is, perhaps, rather unfair but do you know, as a result of any discussions you have had about this, why Cambridge should be the only university which comes into it?—May I say this is not so. It is the only university to which the cadet entered person is sent at the moment other than Manadon, but there is a method of entry into engineering specialisation which is open to graduates in a wide variety of subjects from any university. We have none here this year but we had two last year. We

have, I believe, one coming next year. (Commander Gibbon.) Yes.

1312. Do the London degree people you have here take an Honours degree in engineering or a general degree? (Captain Mannering.) It is a degree in which they get First or Second Class Honours or a pass. It is the normal London external degree.

1313. Do they get a Second Class degree on average?—The numbers which have been submitted up to now have been very small. They have been hand-picked volunteers from the 1955 entry. We have had about 10 or 12 in each year and the scheme has only been running for two years. In the first year we had one First Class and in the second year we had two. (Captain Ridley.) In the first year we had one First Class, eleven Seconds and one pass. In the second year we had two First Class, three Seconds and five passes.

1314. I think we were told that no attempt is made to do research work here. It is purely an instructional place is it? (Captain Mannering.) Yes, that is broadly true. The amount of research we carry on is very small indeed. (Captain Ridley.) I would like to be quite sure what we are talking about. In the case of a university when one talks about research work one is talking either about the staff or about postgraduate research, or probably both. At this moment there is no attempt here by the staff to do any research work and there is no postgraduate research work in the sense that that goes on at a university; but there is a certain degree of flexibility in the last year, the application course, during which people can undertake to some extent original work. This varies widely between individuals and between the various specialisations but it is our aim, in fact, eventually to ensure that as many as possible of the students do some original work during their last year. This is a very modest amount. It is nothing like a year's postgraduate work at a university because they have a lot to learn during this last year as well as undertaking original work.

1315. When we were exploring the matter of staff at Greenwich we were told the staffing there is higher because

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they claim to be doing a certain amount of research work and the estimates allow for a certain number of research projects. That would not apply here?—No.

1316. But you hope it might develop. Did I hear you aright?—My feeling (and I speak subject to correction by the Dean) is that when the degree course has really settled down and we have done four to five years of it it will be impossible to stop the staff doing a bit of research work on their own. (Captain *Manning*.) They could do a little bit by working very long hours but whether, in fact, the staff ratio would ever allow of this is an entirely different matter. (Captain *Ridley*.) I agree.

1317. Presumably if you did do it you would want to have a special Vote for it and, therefore, carry extra staff?—No. What I meant was that during the last four years or so the staff has been built up and they have had their work cut out to prepare, get under way and institute the first degree course. They have all worked extremely long hours and have sacrificed a lot of their spare time. I am referring both to the academic and to the professional staff who have been preparing not only the degree course but the application course afterwards. When, one hopes, they have settled down just to running the courses they will undoubtedly start, as the Dean said, doing some research work in their spare time. But I do not think it would ever be the intention that Manadon should become a university, in the sense that it would undertake large research projects and be staffed to do so.

1318. Is that because of the difficulty of finding outlets for the research? I am feeling my way because I do not want to find myself suggesting you should have an increased Vote! On the other hand, I put forward that point of view as a cock-shy, so that it can be knocked down. Might it not make for a more adult institution if, in fact, your senior members of staff were doing research work and felt they were in touch with research and development?—Absolutely. (Captain *Manning*.) I am sure we would like to see that. (Captain *Ridley*.) I am sorry. I did not mean to suggest we did not want to do

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it, but I cannot believe we should ever be allowed to. If, indeed, we were given our own way we would very much like to be given buildings, facilities and staff to do it.

Mr. *Wilkins*.

1319. Is it not the intention for the Greenwich side of this to be transferred to Manadon? I thought I understood them to say the technical work at Greenwich had already been transferred. Is not the ultimate aim that it should all come here?—I cannot answer that question. As far as I am aware that is not so. This is Admiralty policy.

Chairman.

1320. The electrical engineering is going to come here?—The training of the engineering (L) officer is being transferred here. Indeed, that has already been done, apart from the few people remaining at Greenwich who were left over from the old scheme. However, this is quite a separate thing, I think, from the research side of Greenwich.

1321. When we were examining the Admiralty witnesses they were asked this question. "Why should they not go to Manadon? Apart from Admiralty policy, do you see any reason why Manadon should not handle this as they are handling all the Electrical Engineering and indeed the Marine Engineering?". Their answer was, "The Department must continue in this College and it may well be that the Admiralty are influenced by congestion at Manadon. I understand there are difficulties in accommodation at Manadon where they are now just training officers, and where the numbers are building up consequent upon the interim changes in the Naval training system". Is that congestion still to be found at Manadon?—Very much so, Sir, but we hope in a few years' time when both stages of the mess are completed that we shall be less congested as far as accommodation is concerned. We shall never have enough classroom and laboratory accommodation. We are always going to be hoping for some more, even under the present system. You heard the head of the radio communications section this morning say he was hoping to have another laboratory built on the other side of the corridor,

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in that quadrangle. This is going to be the sort of thing which will go on all the time.

1322. Is there site room for expansion?—Yes, Sir.

1323. So it is just a question of the capital cost?—Yes.

1324. In contrast with both Greenwich and Dartmouth the proportion of civilian instructors here is lower. Is there any reason for that?—Yes, Sir. The reason is that every time it has been looked at (and it has been examined pretty regularly by various committees) the decision has been reached, in my view correctly, that there is no point in changing.

1325. An outsider might think that a man who is a specialist in this work and syllabus and who has been doing it over a long period of years would be better qualified to do it effectively than people who are coming in and having to learn the syllabus on the job and who, as soon as they have learned it, find it is time to go?—(Captain *Mannering*.) They tend to stay very much longer than they used to do. The appointments of Instructor Officers are four to five years, in some cases even more, and a large number of them have gone away from here and then come back for second or even third commissions. So we get continuity in that way. They are all specialists. They are very well qualified and many of them before coming here either do post-graduate courses or periods in industry or research to qualify them for their particular appointments and to bring them up to date.

1326. Looking at it not from the point of view of the career structure but from the point of view of efficiency, would it not be better to have men on the teaching staff who specialised and who knew exactly what was required on the degree course?—(Captain *Ridley*.) I do not believe that if we had civilians here of the standard we have now we could get them to stay at Manadon any longer than the Instructor Officers do as a whole. I cannot swear to this, but my impression is that except in certain top posts in the academic world the turnover is no less rapid than it is here in the case of the Instructor Officers.

(Captain *Mannering*.) It would be extremely difficult to get high quality civilian staff here who would remain. It would certainly involve very considerable facilities for research.

Mr. *Wilkins*.

1327. I thought something was said at one of our previous investigations about this. Preceding the passage the Chairman called attention to just now about the difficulties of accommodation and so on at Manadon, Admiral Giles said, "This is really the decision that the Electrical Engineering and Marine Engineering Branches of the Navy should be merged and they will be known all as Engineering Specialists, either (L) or (M)". He went on to say, and this is what I had in mind in my previous question, "In order to cement this marriage, the idea is that all specialists for the new combined Engineering Branch shall be trained at Manadon", which I thought envisaged the transfer of the whole of these specialists from Greenwich to Manadon. In due course one would then suppose there would be the possibility of research?—(Capt. *Ridley*.) No, Sir. I think you misunderstand what Admiral Giles meant. He was referring then only to a small part of the training which is being done at Greenwich or which has been done in the past at Greenwich. It is the training of the old-style electrical engineer which has been transferred to Manadon and it is for this reason that you find today as you go round both mechanical and electrical engineers. I would like to say that the counterpart of the electrical engineer in the Navy is not the marine engineer but the mechanical engineer. The mechanical engineer becomes a marine engineer but the electrical engineer becomes weapons and radio or something else.

Mr. *Wilkins*.] Is there any reason why it should not be transferred? Would you be able to accommodate them here?

Chairman.

1328. Would there be any accommodation difficulties about transferring it?—This has already been done.

Mr. *Wilkins*.

1329. But what about the rest of the mechanical side?—I am sorry. I am foxed!

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Mr. *Wilkins*.] What I have in mind is this. There appears to be under-usage of Greenwich already. That is how it appears superficially, at any rate, and I was wondering whether such part of the training, whether electrical, marine or anything like that, as was transferred here—

Chairman.] All that were left were the people who were doing the course again.

Mr. *Wilkins*.

1330. There is no training at Greenwich?—The only naval training of a technical nature that will be done at Greenwich after next year will be the postgraduate work but at the moment I cannot even say whether there will be any such work. I am speaking now specifically of the training of naval engineer officers. Plenty of other people are trained at Greenwich—for instance, civilian electrical and mechanical and instructor engineers. As to the possible transfer of any of these to Manadon, I am afraid I cannot say very much. At the moment we certainly have no room.

Chairman.

1331. Going back to the question of civilian instructors, at Shrivenham they do most of the work through civilian instructors. Is there any particular problem here which is not to be found at Shrivenham?—(Captain *Mannering*.) I have not been to Shrivenham and I do not know exactly what they do there. (Captain *Ridley*.) Speaking as the Captain I believe the likelihood is that there are problems at Shrivenham that we do not have here.

1332. You mean over movement of staff?—Movement of staff and control of staff generally. At Shrivenham, I believe, there is no attempt to inculcate any military training. Perhaps I am wrong, in the sense that the problems I envisage would be the ones that arise here where we are definitely trying to introduce a naval flavour into the training all the time. I think it is certainly easier to deal on the administrative side with naval officers. It is certainly a help to the student to see naval officers round him all the time and to learn how the Navy works. Just hearing the old sea

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daddy's stories the naval officers tell is of help to the student in teaching him to be a naval officer.

1333. We went over the workshops this morning and I understood you to say practical training takes place during the course of the ordinary academic syllabus?—Yes.

1334. What is the reason for doing that here rather than by sending students out for a sandwich period in outside industry?—May I say first of all that I do not know on what basis this was originally done, but it was traditionally done at Keyham when the workshops were in the dockyard and this tradition was carried on at Manadon during the war. My own belief is that it is an infinitely preferable way of learning workshop practice rather than doing a solid wage of it for seven weeks a year.

1335. Did Keyham use the dockyards' or did they have their own shops?—They had their own section of the dockyard. It was in the dockyard but it was a section which belonged to Keyham.

1336. It struck me that at the dockyard at Devonport which we visited some time ago there was a tremendous amount of complicated work going on at a very high level of industrial competence and there was a very good apprentice school which specialised in initiating young men into industrial life. Would not that kind of atmosphere be of advantage to the student here rather than having their own workshop which is removed from the industrial battle?—You must remember we are talking about only three months or so out of three years. I suppose one month out of those three is spent by the student officers in the dockyard. When you add it up a lot of their time is spent not in learning to use their tools (which they do in the workshop) but in learning first of all modern engineering practice of all sorts in the yards and, secondly, quite a lot about management and how the yard is run and also, of course, about any ships which are being refitted in the dockyard. So you have touched on one point which I feel quite strongly about in a way. We never actually finished answering your question about proximity to the dockyard. Indeed it

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is a disadvantage in my view even to be as far away from Devonport dockyard as we are here. We are trying very hard to overcome this and are, I think, to some extent succeeding in getting together with the dockyard officers and arranging for the students to learn more about the dockyard than they have done during the last few years since we left Keyham.

1337. I suppose quite a number of the students here may expect to be in the dockyard at some stage in their career?—Yes.

1338. So from that point of view it is not merely a piece of frill to see the dockyard. It is an essential part of their career?—Yes.

Mr. Wilkins.

1339. It is just as important as the Royal Air Force officer being on the aerodrome at Cranwell, is it not?—Yes. It is true that the dockyard apprentices come to Manadon and use our facilities. There is interchange of this nature, but I think when you are dealing with what amounts in a large measure to craft training in the workshops there is not a great deal of advantage in doing this in an unacademic atmosphere. The chap is trying to learn to use his hands and his tools, and having a great big press going bang, bang, bang on one side of him and people hammering with pneumatic drills on the other does not help him to do this. It is a good thing that he should be introduced into this atmosphere but I do not think it is necessary to mix the two.

Chairman.

1340. He does not get a long enough vacation to do any work of this sort?—He already works a good deal during the vacation on other things.

1341. Does he get university vacations?—No, Sir. We have 13 weeks each year, roughly split into three weeks at Christmas, three weeks at Easter, six weeks in the summer and one week in the middle of the long autumn term. This arrangement of the academic year is forced on us by the fact that London University examinations are in June. Our academic year is 39 weeks whilst the university academic year is 30.

(Captain *Manning*.) About 30. (Captain *Ridley*.) May I say that during these 13 weeks the student spends quite a lot of time on official courses of one sort or another, particularly during his second and third years here.

1342. The number of students we were given as being at Manadon was 383?—(Commander *Gibbon*.) It is 416 now. (Captain *Ridley*.) That is the average over the year.

1343. It is an estimated average of 383 over the year?—It is slightly greater now because we have the Special Duties officers here at the moment. They come and spend the spring and summer terms with us. Therefore, our numbers are always at their maximum during the spring term.

1344. Are those numbers likely to increase next year?—(Captain *Manning*.) Yes. (Captain *Ridley*.) At the end of this year we estimate there will be 460 students here and that this time next year there will be 478. I believe this might be a little high. (Commander *Gibbon*.) No, Sir. If anything it is low. (Captain *Ridley*.) We shall be round about 50 up. (Commander *McConnell*.) Two years from now we estimate the number will be 529.

Mr. Wilkins.

1345. I would like to know the reason for the increase from, in 1961-62, 224 and, in 1962-63, 291 to a 1963-64 figure of 416. Is this affected by the accommodation?—(Capt. *Ridley*.) I did explain this morning that we now have a four year instead of a three year course and that we have the electrical engineers training here as well as the mechanical engineers. This all adds up to more than doubling the numbers.

1346. Is there any maximum?—No. This depends on the naval recruiting figures. One is always going to get bumps in the numbers here, simply because there are bumps in the naval recruiting figures and, all too often, depressions. The number we would steady down at would be about 500, plus the Special Duties officers.

Mr. Gurden.

1347. Can you accommodate them?—Not now. We could not accommodate 500 at this moment. We would

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never need to accommodate the full number because a certain number are married. We have a picture here. I do not know whether we are allowed to introduce this as evidence but it will help you to understand it. It shows the total number of officers, including staff, we expect to be unmarried and requiring accommodation. It also shows the total number of full standard accommodation units, and the difference between the two can sometimes at the moment be made up by the use of huts. I say "sometimes" deliberately because we tend to fall short of the total numbers required.

1348. Is the teaching accommodation reckoned in there?—We are talking entirely about beds. (Commander *McConnell*.) One of our other problems is eating and drinking. We could go on adding cabins as long as we had the ground on which to build the things. The Great Hall is designed for 350 officers.

1349. Could I ask, then, about the teaching accommodation?—(Captain *Manning*.) I think even with the additional accommodation we are expecting during this coming financial year we would have a job to get more than 500 in, but we do not foresee any very great shortage at the moment. (Captain *Ridley*.) The actual increase in numbers does not necessarily mean additional classrooms will be required. What determines the provision of additional classrooms is the number of classes. You could add 10 per cent. to the number in each class quite easily but you might get two extra people who require a new classroom to do a brand new course. That is the point.

Mr. *Wilkins*.

1350. How do you manage about these short-term courses you told us about? You sent us a memorandum originally in which you said that miscellaneous short engineering courses range in length from a few days to several weeks. Do they come in for day training or do you have to try and accommodate them?—We try to do so. Sometimes we get H.M.S. "Drake" to accommodate them. In future we hope always to be able to accommodate them. In general we would do this in some of the hatted accommodation—not in the huts you

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saw this morning but in the recreation block and in some of the better huts which I hope we shall keep.

1351. What is the object of this training if they only come for a few days? Is it a refresher course?—Some are refresher courses. Others (such as, for instance, the course for the third year Dartmouth Seaman and Supply officers, the acting sub-lieutenants) are designed to give them an insight into the training of engineer officers who are their contemporaries and into the sort of things which are going on in the engineering world.

Chairman.

1352. How do these courses compare with Greenwich? Greenwich does a certain amount of short-term courses?—They are quite different in nature from the sort of things that are done at Manadon. Nearly all of these short courses use predominantly the professional training facilities and not the academic training facilities here. This is the only place, in fact, where we have these facilities. (Commander *Gibbon*.) The biggest single groups consist of the officers who are at Cambridge and who are doing their workshop training here. There are Royal Naval Reserve refresher courses, and a number of Cambridge and Cranfield academic courses take place before Greenwich reconvenes for the autumn term. There are Seaman sub-lieutenants' courses and there is a ship management course, which is held for senior marine engineers or radio officers immediately before they take up an appointment at sea in a ship so as to bring them up to date on latest practices.

1353. What is your playing field accommodation? How many acres, roughly, have you?—The chart is behind you. There are at the moment two hockey pitches, two soccer pitches, an athletics track and a rugger pitch *here*. In addition we have one rugger pitch and one hockey pitch *here*. They used to be the only playing fields for Keyham.

1354. That is enough for 500?—Provided we can get the levelling-off done we shall be happy. At the moment

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we really have only one playable rugger pitch. That is the one at Keyham. *This* one has got too much of a slope to ask a first-class rugger team to play on it.

1355. Could you tell us something about your association with the Naval Education Advisory Committee?—(Captain *Manning*.) There is a Manadon sub-committee of the Naval Education Advisory Committee and it consists of three professors, one of electrical engineering, one of mechanical engineering and one of liberal studies. They are Professor Greig, King's College, London, Professor Black, University of Southampton, and Professor Allen, also of London University. They pay occasional visits and advise us. We can consult them if we have any particular problems.

1356. Do they compare your standard with that of outside education? Do they see the other Service colleges?—I do not think they have any connection with the other Service colleges. They help us to keep our standards in line with those at universities, Professor Greig is going to be one of the moderators for the diploma course. We hope Professor Black will be the other moderator for the mechanical diploma course.

1357. Do they only look at the syllabus or do they look also at the provision of equipment?—At both.

1358. Through them are you able to make some comparison between the amount of teaching work your staff are expected to do and the workload you can reasonably get out of a man?—Yes, they will help us over any problems of that kind.

1359. They will help you?—Yes.

1360. Do you have any direct contact with the Ministry of Education?—No.

1301. There never has been?—No, none at all.

1362. Her Majesty's Inspectors have never visited you?—No. We are inspected by London University from time to time. (Captain *Ridley*.) Every five years.

1363. Do you have any close contacts with the neighbouring universities?—(Captain *Manning*.) We have contact with Exeter University in the field of liberal studies. We have a very good contact with the Bristol College of

Science and Technology. We send quite a number of officers there on short courses. We endeavour to send officers to any suitable courses which may be arranged at other universities. (Captain *Ridley*.) Glasgow is one. (Captain *Manning*.) And Sheffield another.

Chairman.] Is the Bristol college a new one?

Mr. Wilkins.

1364. No, it is a very old-established technical college. Is it not a C.A.T.?—Yes.

Chairman.

1365. When you are seeking the advice of the Advisory Committee about equipment, do they make a recommendation which strengthens your case to the Admiralty?—I have only been here for three weeks, but I understand this has been done and I am sure it will be done.

1366. We have here a breakdown of the costs which were given to us by the Admiralty. There is a substantial jump in electricity costs between 1961-62 and 1962-63. Is that linked to the horrific story you told us about the huts and the problem of heating them in the winter? The costs rose from £16,200 to £20,800?—(Captain *Ridley*.) I would not be in the least surprised, although I could not swear to it. In fact, my own electricity bill last winter was exactly twice what it was this winter.

1367. The increase in fuel costs is not so marked. It shows an increase of £500 which is not a very remarkable one, but the previous one was £4,000?—(Captain *Manning*.) I think that is just about in proportion to the increase in the number of students. (Commander *McConnell*.) In the first year you mentioned the huts were almost all empty. (Captain *Ridley*.) And in the second year not only were they all full but we also had that hideous winter.

1368. I see. We saw the boilers of the main heating block. You are satisfied that those are reasonably efficient?—Yes, very satisfactory.

Mr. Gurden.

1369. In the case of telecommunications, stationery and postage there has been an increase of something like 60 per cent. in the costs. They rose from

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£4,100 to £6,500. Have you any idea why it is such a big increase?—Between those two years?

1370. Yes?—I would say this is a direct result of more students and more courses. When I say “more courses” I mean more different sorts of courses. During these last two years in particular we have been expanding physically very fast, particularly as far as the instructional block work which you saw is concerned. Telecommunications and things like that take up a lot of local time. I would say this is partly due to the expansion of the college and to the work which has been going on, which is, as it were, outside work. Perhaps I could mention, too, that the administrative and general maintenance staff—officers, ratings, civilian non-industrials and civilian industrials—did not rise at all. The rise was in the instructional staff.

1371. Is that true?—Yes.

1372. So there is a policy of economy here, taking into account all this extra work?—Indeed. The other staff had been built up to some extent in advance. (Commander *McConnell*.) There was difficulty in recruiting, too. (Captain *Ridley*.) I do not think this reflects that. These are estimates. (Commander *McConnell*.) Our allowance on the domestic industrial staff side went up because of the increase in the number of student officers, but we could not get them and take them on. (Captain *Ridley*.) There is bound in a place like this to be a reduction in overheads per student as the number of students goes up.

1373. That is how it appears here?—It may sometimes look a bit surprising.

1374. What I would like to go on to ask is whether there could be a shock in store in the following year when you will be taking in the balance and obtaining your staff?—The instructional staff will increase but I do not think there is much chance of the other staff increasing.

1375. Administration seems to have remained fairly steady?—There should be some increase in the civilian industrials (stewards and so on) because of the increased numbers of students.

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Chairman.

1376. The ratings have gone down. Does that mean there was a transfer?—I think that is entirely fortuitous. (Commander *Gibbon*.) Yes. Our complement has remained substantially the same. Occasionally we get a shipwright sent to us for compassionate reasons and who needs a draft to this area. There are very few shore billets for such ratings in the Navy.

Mr. Wilkins.

1377. The increase in the establishment shows a total plus of 64 from 1961 until now?—(Captain *Ridley*.) This is the total increase in staff?

Mr. Wilkins.] It has risen from 359 to 423. We know there has been this shift from Greenwich to Manadon but there is a substantial difference between the 1961-62 figures and those at the present time. The number of officers has increased by 19. Which figure is it that has changed?

Chairman.

1378. There is an increase of 47 in “Other Civilians”?—And 11 technical.

Chairman.] It is partly on the technical classes and partly on “other civilians”.

Mr. Wilkins.

1379. The figures we have here make it look as if there is an increase, in the number of officers, of 19 and, in the number of other civilians, of 47. It has shifted the balance of the thing?—I think relatively you will find it is about the same.

1380. If you compare it with the costs afterwards it appears to work out reasonably enough because of the increased number of students?—(Commander *Gibbon*.) The increased number of civilian officers is predominantly in the new laboratories as demonstrators and in the workshops as civilian instructors.

1381. A plus of 47 is fairly substantial?—Yes. Those are industrials. (Captain *Ridley*.) 47 is the total plus. (Commander *Gibbon*.) Of course, industrials cover a tremendously wide field in the college. These will mainly be domestics.

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Chairman.

1382. Are those mainly domestics who are looking after the sleeping arrangements?—(Captain *Ridley*.) And feeding; the whole lot. Some people do both jobs.

1383. Do the stewards in the huts also wait at table?—Yes, but the cleaner class, not in the huts but in the mess who clean the lavatories, bathrooms and corridors, is quite separate.

1384. Will the new building which is going on entail a lot of extra heating plant or will the present boilers cover them?—The present boilers will cover them, we hope, adequately. What we would like to do would be to get a smaller boiler for use during the summer. I do not know whether this is going to happen. The matter is being raised with the Ministry of Public Building and Works. Those two boilers are too big for the summer, and if we could have a half-sized boiler we should be able in the sort of weather we had last year to steam $1\frac{1}{2}$.

1385. And eventually the special electrical radiators in the huts will disappear? — Yes. (Commander *McConnell*.) The huts will disappear as well.

Mr. Wilkins.

1386. Is there any date set for the extinction of the huts?—(Captain *Ridley*.) No forward date has been given for the completion of Stage 3, although we have written down here the end of 1966. To the best of my belief it has not yet been approved financially. It has been approved in principle but not actually for work to start. (Commander *McConnell*.) It is only on the basis of starting on completion of Stage 2.

1387. Then what is being lost if Stage 3 is not completed? You will need to keep the huts in existence and there will also be the cost of heating them?—Yes.

1388. Does it affect the extra people you are expecting?—(Captain *Ridley*.) Stage 3 contains rather more beds than the huts. If we are only just up to full when Stage 3 is completed we shall be short of accommodation before it is completed. This picture again shows you what we hope will be the state

in 1966. We shall still be below our expected requirement for single cabins throughout. Some of the cabins in *this* block will have to be doubled.

Mr. Gurden.

1389. How many of the huts have been removed as a result of completing the new block?—None yet.

Chairman.

1390. None yet?—None of the brick huts have been removed. (Commander *McConnell*.) Some of the Nissen huts have gone. (Captain *Ridley*.) Yes, as a result of this building, but as a result of *this* extension we shall lose none.

1391. Going back to the start, could you give us the breakdown of the instructor and professional staff?—(Captain *Manning*.) The number of instructor staff is 45 and professionals 23.

1392. Is that a fairly stable distribution?—I think the proportion will probably remain about the same. We shall certainly need extra staff. I hope to have another ten Instructor Officers by the beginning of the next academic year. (Captain *Ridley*.) This is not quite so. We are not likely to get or, indeed, to require many more professional staff because we are already doing a full whack of application courses. We are not yet doing a full whack of degree courses because they are only in their first two years, so the number of Instructor Officers will need to go up because the number under academic instruction will increase.

1393. Is your estimate of the number of extra staff you require on a fixed teaching ratio?—(Captain *Manning*.) Yes. It is worked out on the basis of 15 classes a week for each staff officer except for the heads of the sections who do 10. This is in a week consisting of 35 hourly periods.

1394. Will some classes be duplicated?—Yes. We tend to group them together where we can for lectures. Two or three classes are grouped together for lectures but for tutorials they have to be separated and, therefore, there is duplication.

1395. If there are so many extra classes you have to have so many extra instructors?—Yes.

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1396. Could you increase the number of instructors by doubling up?—Only for lectures. You cannot double up for tutorial or laboratory work.

1397. Are your units of instruction at present complete? There are no gaps which you could fill in?—I think there are few, if any, gaps at present.

1398. I understand that an Instructor Officer is a professional teacher in the sense that that is his job. He will move from teaching job to teaching job, whereas the professional is the chap with all the techniques in the particular field in which he is operating?—(Commander *Gibbon*.) That is correct.

1399. So he may not do any teaching after he leaves here?—Yes, that is true.

1400. Or before he comes here?—That is so.

1401. Does that mean the quality of instruction could suffer on the professional side because a man is neither qualified nor interested in the actual instructing side of the work?—(Captain *Ridley*.) As I said this morning you have to strike a balance between making sure you get up-to-date knowledge on the professional side, which requires a very constant turnover of people who have previously done the right sort of jobs and have got the right sort of experience to come here and disseminate it, and accepting people who may not be absolutely ideal as instructors. (Commander *Gibbon*.) The professional officers are employed predominantly on the application course subjects which are predominantly specialist and suited to their experience. (Captain *Ridley*.) Could I add that those professional officers normally undergo a short course in instructional technique to improve their teaching abilities.

1402. Is there enough work for the highly qualified Instructor to do elsewhere than here?—(Captain *Manning*.) A lot of the electrical Instructor Officers will go from here to H.M.S. Collingwood and, having been there, come back here. There is also a certain number of administrative appointments to which they can go. They do tend to spend longer here than the time of the normal naval commission. They tend to stay here for five years or even longer.

1403. I am harping back to this question of civilian people. A man must obviously be extremely highly qualified to be conducting a degree course here. Is there a risk that he will spend a large part of his Service career instructing illiterates?—No, less and less. If I thought there was any truth in a suggestion like that I should be on to the Admiralty jolly quickly. More and more officers are tending to specialise in one particular field.

1404. And there is enough work for them to do in that particular field?—I think so, allowing for a certain number of opportunities for going to sea and into administration so that they can get some sort of overall picture of what is required in their particular branch. (Commander *Gibbon*.) The standard in the weapon and radio field of instruction at Portsmouth—on H.M.S. Dolphin, H.M.S. Collingwood, H.M.S. Ariel, H.M.S. Excellent and H.M.S. Vernon—is, and I am sure will remain in the future, very high indeed and will demand a very high standard of officer.

1405. How do the top of the branch opportunities for senior promotions compare with those of the General List officers?—(Captain *Manning*.) The head of our branch is a Rear Admiral. That is as far as we can go at the moment so we are not able to go quite as far as senior engineer officers.

1406. Out of every 100 in the Instructor entry or in the ordinary executive entry how many become Rear Admirals?—I have not got the figures at my fingertips, Sir.

1407. It is not really a fair question to ask you. What I am getting at is whether there are enough opportunities for senior employment so as to make a graduate with a First Class Honours degree feel it is a field to get into, or is there a tendency to get out of it after some years and into more suitable employment in civilian teaching?—An Admiralty working party some two years ago looked into this matter with a view to improving the prospects in this branch.

1408. Were they carried out?—Not entirely.

Mr. *Wilkins*.

1409. It was an Admiralty working party?—Yes.

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 Instructor Captain D. E. MANNERING, B.A.,
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Chairman.

1410. Are there any questions you think we ought to have asked you? If you think we have missed the boat we would be very grateful if you would put to us any points you think we ought to bear in mind?—(Captain Ridley.) On this last subject you have been pursuing, although we have not got the file dealing with our large degree courses here we have got the results of the first year's Part I. The proportion of passes was quite a bit higher than the national average so I think you can rest assured that the Instructor Officers are well capable of teaching to degree standard and are doing better than the national average.

1411. What sort of proportion is it?—Our proportion is about 70 per cent. and the national average is about two-thirds. It is quite substantial. It is only once a year. Nevertheless, it suggests our Instructor Officers are well able to handle these largish numbers. (Commander Gibbon.) And this is after working with some people whose initial qualifications are rather below those required of people entering universities.

1412. It has always been questionable in my mind whether the period for which officers are seconded for this work is long enough. It seems to work out at 2 to 2½ years. Is this long enough to be really effective? It takes six months or so to settle down and do something. It seems to me they are becoming useful at the point at which they are beginning to think they are going to be moved somewhere else?—(Captain Ridley.) If you are referring to Instructor Officers they stay here for up to five years.

1413. This is rather unusual. It is about the longest we have come across?—If you are talking about the General List officers, the average length of appointment is between 2½ to 3 years here. This does not apply, unfortunately, to the Captain.

Mr. Wilkins.

1414. You think they want to go after they have done their 2½ to 3 years?—No. I say this does not, unfortunately, apply to the Captain. I would like to stay longer than I am going to.

Chairman.

1415. Thank you very much indeed, Captain?—Thank you, Sir.

THURSDAY, 19TH MARCH, 1964

(The Sub-Committee met at Britannia Royal Naval College, Dartmouth.)

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

Mr. W. A. Wilkins.

Captain J. E. L. MARTIN, D.S.C., in Command, Mr. G. W. E. GHEY, M.B.E., M.A., A.M.I.E.E., Director of Studies, Commander J. M. FORBES, Executive Officer, Commander A. F. R. WEIR, Training Commander, Commander A. M. J. CUMMING, A.M.I.Mech.E., Engineer Officer, and Lieut.-Commander M. J. F. WELD, Deputy Supply Officer, Britannia Royal Naval College, Dartmouth, called in and examined.

Chairman.

1416. May I first of all give you our very warm and sincere thanks for the great kindness with which you have entertained us during the all too short time we have been here and for the unlimited way in which you have put

yourselves at our disposal. We very much appreciate it. I should explain that this is a Select Committee of the House. Therefore anything you say is protected by Parliamentary privilege. It is being taken down and is normally published, but if there is anything you

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want to say which for security or other reasons you think it would be unwise to publish perhaps you would sideline it and, if we agree with you, then it will be excluded from the published minutes. You will get a copy of the proof and you can correct any verbal errors in it which you want to correct. The history of the college booklet, copies of which you very kindly gave us, refers to the abandonment of the 1955 scheme and to the setting up of a committee under Sir Keith Murray to inquire into the system of entry and training of officers. I wonder if you could tell us something about that committee and about the main grounds of its recommendation for changes?—(Captain *Martin*.) It was, I think, composed of Sir Keith Murray who was the leader of the committee and of naval officers and civilians, including Admiralty civilians. It was looking as much at the training at the time as at the training required for the future naval officer. I think the feeling was that the training, as given up to 1955, fell short of the requirements of the Fleet. It fell short, perhaps, in two ways. First, the individual going out to join the Fleet whilst adequately trained had not had enough practical training. It fell short in another respect. The training given, which was a combination of both professional and academic training, was unsatisfactory in that not sufficient weight was put upon academic work. This led to the new scheme which, of course, involves a year of professional training, a year of practical training in the Fleet, followed by a year of academic training in the college. The Director of Studies was here whilst the committee sat and he might be able to add something to what I have said. (Mr. *Ghey*.) Very little, I think. The present First Sea Lord was a member of the committee. Professor Sir Willis Jackson, an electrical engineer, who is now the head of the Imperial College of Science was also a member of the committee. In addition there was a historian and Sir Keith Murray himself. They were the actual members of the committee.

1417. Do you think on the whole that the change has worked out as expected or is it too early to say?—(Captain *Martin*.) The scheme has only been running for three years. In other words,

the first batch has not yet gone through because it is a four-year scheme. However, the reports which we have received from the Fleet (which is, I think, the important place) have all said how much better a scheme this is than the previous one. What we have yet to receive are the reports from the Fleet on the finally trained officer going out to it at the end of the fourth year.

1418. The fourth year do not come here?—No.

1419. They are all scattered at places of specialised training?—Yes, at Portsmouth and elsewhere.

1420. Do you know whether there is any definite proposal to review its work?—No, not that I know of, but within the college here we do review it almost the whole time. For instance, after the first year of academic training was completed we changed part of the humanities teaching simply because we did not find it was doing what we hoped it would do. I think at the end of this year we shall probably have a look at the scientific training to see that we have got that correct. We will have to wait for a year here because we want to see how the third year training goes down with the fourth year training. When that year is completed we will have a look at it again.

1421. We are told in this booklet that the Admiralty said when the 1955 scheme was introduced that there was going to be a formal review. This seems to indicate that they had misgivings about it as compared with the present scheme?—As far as I am aware there is no intention of holding any formal further review at the moment, but that would be Admiralty policy.

Mr. *Gurden*.

1422. Has anyone read the report?—I have. I do not know whether you have? (Mr. *Ghey*.) Yes, we have read it here.

Chairman.

1423. On the whole you think it is the best solution of the problem?—It was not adopted in its entirety. One recommendation was that the third year of service for engineers, which is the first year of their degree course, should take place in this college and that only the second and third years of the degree course should

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take place at Manadon. I think matters like that were not in the end adopted.

1424. You gave us this morning a general description of the network of courses and the different types of people making up the college. My first question on that is whether you think it is possible to keep a balanced community in the college within this context or whether there is such a confusion of entries that the college has no clearly defined purpose?—(Captain *Martin*.) I think I would answer that question by saying that provided the sub-lieutenants' third academic year is at Dartmouth there are two fairly clearly defined tasks for the college. First, there is the first year. This is a new entry training establishment task, the task of changing civilians who have come from a very wide area of the population into naval officers in a pretty short space of time. The second task, which is that of the sub-lieutenant and which is quite clear, is an advanced educational course. If those two tasks are kept clear in our minds then we will not become unbalanced, bearing in mind that the majority of the shorter courses come in during that first year, i.e. the new entry training year. The third academic year is not really impinged on very much except in the case of one course, the new Commonwealth course.

1425. When it is all taken into account and worked out, what effect does it have on the actual occupancy of the college? To what extent are the beds filled?—I think the best way to answer that is to try and give you some figures which I will ask the Training Commander to do. But before he starts may I say that the target figures for entry have increased in the past three years. These target figures are laid down by the Admiralty and not by us. What we actually get is dependent upon the number of applicants and upon the number of successful applicants. We anticipate being slightly short of our target figures. Despite this, by 1967 the college will be absolutely full. (Commander *Weir*.) The normal capacity of beds available in the college is 763 for officers under training. The present capacity for feeding officers under training is 700. In fact, by doubling up in all the present single cabins and fitting in as many beds as could be fitted in we could get 825

beds into the college, but this would be destroying the accommodation from the value point of view. The number of O.U.T.s we have in the college is steadily increasing, with one small fall. The following is the annual average. In 1959-60 it was about 480; in 1960-61 it was 550; in 1961-62 it was 575. We then had a fall while there were no sub-lieutenants in the college to 540. That was in 1962-63. In 1963-64 it was 575. Again that was the annual average. I must emphasise that the following are estimated figures because we do not know exactly how many will be coming into the college. In 1964-65 the estimate is 675, in 1965-66 it is 715, in 1966-67 it is 740, and, in 1967-68, 750. (Captain *Martin*.) May I add to that that in the case of those average figures there are peaks. The peaks occur in the autumn term when we have the largest numbers here. (Commander *Weir*.) In 1964-65 the estimated peak is 710, in 1965-66 the estimated peak is 755, in 1966-67 the estimated peak is 770, and, in 1967-68, 799.

1426. What determines the peak?—The numbers of cadets in the college. We have more Supplementaries entering in September than at other times, added to which in the September term we have Instructor Officers under training in larger numbers, postgraduate entries and Supplementary List (L) officers who come for one term only.

1427. Is it possible to manipulate the Supplementary entries to get a smoother distribution?—From the intake into the college point of view yes, Sir, but so far as getting them into the Service is concerned it is Admiralty policy that they should come here as soon as possible after the educational examinations.

Mr. *Gurden*.

1428. What determines the first lot of figures you gave us?—(Captain *Martin*.) First, the requirement for officers in the Fleet has gone up. Secondly, as each group of sub-lieutenants comes back it is automatically, because of the target, that much bigger than the group of sub-lieutenants that was previously here. It will in time level off at an average figure of about 750.

Mr. *Wilkins*.

1429. When you say that you envisage that these figures will rise, you

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mean you envisage this from the advice you have received from the Admiralty because you are not responsible for this?—(Commander *Weir*.) Yes. Up to 1964-65 we know the numbers of cadets to be expected from the annual target. Up to this time the numbers of sub-lieutenants coming back for the third year have depended on back entries, and they are increasing in size as the cadet entry increases. However, it is delayed by two years.

1430. In 1965-66 and 1966-67 you have said your estimated peaks are 755 and 770. Is this an increase in the student population at the college which is foreshadowed without any consideration being given to increasing the sleeping accommodation? In other words, are you going to be compelled to double up and to do this and that? You may be able to accommodate them but is that envisaged with or without development?—(Captain *Martin*.) No. I should say here that the Admiralty provide us with these target figures. We have nothing to do here, naturally, with how many officers are entered. That is an Admiralty decision. But because of these numbers we are now having to look into the catering effects. I think we are able now to feed 700 but we will have to see how we can increase the facilities so as to feed more. This can probably be done in one of two ways. There could either be a reorganisation using the present space (that is to say, two lunches as opposed to one and staggered mealtimes) or some small structural alterations to "D" block, which is the block where the cadets live.

1431. I was thinking more in terms of sleeping these chaps because you have said you double up in the dormitories we have seen. I do not think this is all that desirable?—It is not all that desirable, we agree, but the view of the medical authorities (and we have to accept their view) is that we can fit this number of people in without the medical officers of health becoming worried about it.

1432. Is there any suggestion of increasing the accommodation?—Not at the moment, no.

Mr. Gurden.

1433. Because you are increasing the numbers here it does not necessarily

mean there will be a larger Navy?—I am afraid I cannot say what Admiralty policy is on that, but as far as we are aware that is not so.

Chairman.

1434. You are giving us target figures?—Yes.

1435. Does your experience lead you to believe these are going to be reached?—Experience up to date really shows that they are not normally reached. The shortfall is terribly dependent on the number of people who put themselves forward for selection as naval officers, and it is very difficult to forecast anything. But up to last year there had always been a shortfall in the General List cadet. There was, indeed, a shortfall last year of some 20. The target figure was 230 and the total number entered was 199. The target figure this year is 250 and one assumes there will be a shortfall, but one does not know. We may get 250.

Mr. Gurden.

1436. Do you know whether or not the percentage of foreign students will go up?—Knowing our capacity, we are usually asked whether we have got room for a certain number of foreign or new Commonwealth cadets. For instance, there are 12 Libyan cadets coming to the college in January of next year. We were asked whether we could accommodate these officers before it was agreed to take them, and I imagine it would be Admiralty policy to do so.

Chairman.

1437. Is the shortfall confined to the General List?—No, it is not. It is apparent in both the Supplementary List, Seamen, and in the Supplementary List, Air. However, when I talk of a shortfall I should add that sometimes one enters more than the target figures, which allows for the shortfall on a previous targets. This is what happens, I imagine, because in the autumn of 1963, for instance, the target figure for the Supplementary List, Seaman, was 28 and yet we entered 48. They were British only. It shows how a target figure can alter. But, having said that, the number who entered the Supplementary List, Seaman, in January of this year was smaller than the target figure of 16.

1438. It is not possible to transfer some of the best Supplementary List

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people to the General List in order to fill up?—Admiralty policy as given to us is that a General List Officer must have five passes in G.C.E., two at "A" level. If you accept this as the standard of entry then the Supplementary List, Seaman, must also, if he is transferred to the General List, have reached that standard. The Admiralty, however, have agreed that within the first year one outstanding Supplementary List Officer will be allowed to transfer to the General List and, in the six to nine year gap, 15 per cent. of the Supplementary List will, if they are suitable, be allowed to transfer to the General List.

1439. Do you have any difficulties over the Scottish academic certificates?—I think really we ought to fall back on the Admiralty on that because we have to accept what we are given. This is really an Admiralty policy question.

1440. As I understand the position as regards engineers, if you are an outstanding potential engineering cadet you can go to Manadon and gain an Honours degree. Then there is also the direct entry of cadets from universities. Is there any comparable opportunity for a seaman cadet who is outstanding academically to gain a comparable qualification?—No, Sir. There is no opportunity for the Seaman cadet coming through on the General List to obtain a degree in such a fashion. There is, however, a new postgraduate entry scheme which is being introduced in September of this year when university graduates will be accepted as Seaman officers.

1441. But they will have to have the sense to hold back their enthusiasm until they have got their degrees rather than come straight into the Service?—Yes, although there is another way of looking at it. They take their degrees and cannot find anything better to do than the Navy!

Mr. Gurden.

1442. Am I right in saying that these Supplementary List students only sign on for ten years?—(Commander Weir.) The Supplementary List, Seaman, sign on for ten years initially. That is ten years from their date of entry.

1443. Then they could go on from here to Manadon and there would not be a lot of time left?—No, Sir. They

are Supplementary Seamen. They are not going to be engineers. They are all Seaman officers.

1444. Supplementary List engineers are signed on for ten years, are they not?—No, Sir. There is no entry for them at the moment.

1445. The Supplementary List provides only Seamen?—Yes, as far as we are concerned. (Captain Martin.) It provides seamen, electrical officers and airmen.

1446. But they could go on from here to other training at another college?—The Supplementary List electrical officer goes on from here to Greenwich for training as a radio electronics officer.

1447. It appears to me that quite a large part of his ten years can be spent in training at a pretty high cost overall and that he is not a very economic being?—I would say that basically the Supplementary List, Seaman, training is as follows. One year is spent at Dartmouth. Then they go to the Fleet as midshipmen where, admittedly, they are still under training although frequently they fill complement billets. They then become qualified officers and join the Fleet. Therefore you can say one year out of their ten is spent in training or, if you include their midshipmen's time, two years out of ten are spent in training. (Commander Weir.) Can I qualify that? This applies to the Supplementary seamen only. The Supplementary air cadets enters for 16 or 12 years or, if he is under 22, until the age of 38. The Supplementary electrical officer enters for 16 years.

1448. How many years would it take them to complete their training?—The Supplementary Air training varies according to whether the cadet is going to be a fixed wing pilot, a helicopter pilot or an observer in the Fleet Air Arm. However, it is approximately two years. So he does two years and two months of training. The Supplementary electrical officer does one term here, two years plus a term at Greenwich and then a year of application at H.M.S. Collingwood. So he does 3½ years' training out of his 16 years.

Chairman.

1449. What is going to happen once the electrical and mechanical engineering are joined?—(Captain Martin.) I

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think we must again fall back on Admiralty policy because down here we do not know what that is. Again we are training to a specific number and entry.

1450. The Director of Studies was telling us earlier on about the tutorial system. Are the tutors part of the civilian teaching staff?—(Mr. Ghey.) Yes. About 80 to 90 per cent. of the civilian teaching staff are tutors. That is to say, as well as lecturing they each have what is known as a tutor set—25 cadets and sub-lieutenants or upper yardmen—which goes to these tutors with some regularity. The tutors cause reports to be written about their training and progress. They get to know these people well.

1451. Is this confined to the General List cadets?—No. It also includes Supplementary List, Seaman, cadets, Supplementary List, Air, cadets and the upper yardmen. It does not include the Supplementary List, Electrical, cadets or the Instructor Officers under training.

1452. Is there any reason for that? Is it because of the work they do or because of their age?—I think it is really because the electrical cadets and Instructor Officers under training are only here for one term and have no contact with the civilian staff on the academic side. They are not taught academics in any classroom.

1453. I wonder whether you could say something about the academic third year. Could you tell something about its value and its timing? Is it right that someone should, as I understand it, after he has ceased his academic work altogether spend one year in professional training and one year at sea and then be plunged back again into the discipline of the academic work he has forgotten since he left school? Is that not wasteful of his capacities?—(Captain Martin.) I think the way we should look at it is that it is essential a young officer coming into any Service should first learn to be an officer of that Arm and in our case he must, therefore, become a professional seaman as soon as he can. This applies to all of those in the General List. We have found that experience in the Fleet is absolutely invaluable and that that experience must be at a stage when the embryo officer is still recognised by the ratings as being a man who is not fully an officer. The rating

who sees a young man with a midshipman's tabs on his shoulders will help and teach him far more; and the midshipman himself will gain far more than he would if he went to sea as a sub-lieutenant with stripes round his arm, when the rating recognises him as a commissioned officer and expects him to be fully trained. Therefore we start off with a year of professional training and then give him a year of practical experience. We then bring him back here for an academic year. Admittedly we do find that they are rusty in their first half term but they have not really been sufficiently long away from their academic studies to lose very much. We have no experience at the moment, other than one year, of it to judge how far this academic study is going and whether, indeed, it should go further.

1454. Our impression from the evidence we heard in the gunroom is that attitudes towards it are mixed. Is it correct that many of the sub-lieutenants feel they are being asked to do academic work which is not going to be immediately relevant to their Service career?—I think it is very difficult for a young man who has not seen, as most of us have, the incredible complications of equipment that there are in the Fleet today to form a correct opinion. These young men have probably seen one old frigate. They have no idea of what is in store for them in the engine rooms, operations rooms and missile direction rooms of a modern frigate, a modern carrier and a modern submarine. We are trying to put this right by getting it across to them and trying to show them how necessary it will be in their future careers that they should have this background. It may be we have not put it across strongly enough to them. I think this is possibly so, because I sensed myself at the beginning of this term that they were not completely sold on the third year concept.

1455. If you are going to extend his knowledge of calculus would it not be easier for him if he went straight from sixth form mathematics and did it in his first year?—Undoubtedly it would, but at the same time one must come back to the fact that this man first and foremost is to be a naval officer.

1456. But does that "first and foremost" necessarily mean for 100 per cent. of his time? I am wondering whether

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it is not possible to have such an element of academic work in his first year that he could have more time available for other things in his third year when he is beginning to feel he is a fully fledged officer?—This was tried in the 1955 scheme and was a partial cause of the failure of that scheme. There is so much to teach a young man if he is to get any benefit from his first year at sea as a midshipman that there is no time to put academic training into that first year.

1457. Do you think the balance here between the academic and the professional staff is about right?—The complement is very carefully worked out. Taking the professional side first, the complement is worked out from the number of officers required actually to act as divisional officers and from the number of officers required actually to carry a physical lecturing load. That is on the professional Seaman side. On the lecturers' side a very careful study has been carried out very recently of the number of lecturers required related to the number of students in the third year and related to the normal number of lectures that a lecturer would be required to give at a comparable establishment.

Mr. Gurden.

1458. Do both sides think the balance is about right?—This is not a question of balance but a question of strict requirement. We must have so many officers for divisional work and we must have so many lecturers if we are not to wear the lecturers out. Therefore the balance is not easy to achieve other than strictly according to the complement.

1459. Apart from the requirements and the results, is there some advantage in the student meeting a fair number of men who have had this long experience?—I think there is a great advantage, particularly in the case of their divisional officers who are some 10 to 12 years older than they are and who have had wide experience in the Fleet. Having said that, it is also a great advantage for them to have a lecturer beside them who is a man of great academic experience and who can help them on subjects outside the Navy which, possibly, the naval officer could not deal with so easily.

1460. So it is generally thought that the requirements turn out to be very well balanced?—Yes. (Mr. Ghey.) Yes, I think so, Sir.

Chairman.

1461. Are the lecturers chosen from people who have on the whole had contact with other educational institutions or do they usually come here straight from university?—On the whole they have had previous teaching experience. I am not averse to having people straight from university, but it so happens that the applicants are more usually people from other establishments than from university. The first year's salary scale for an entry straight from university would be pretty low. Actually, it would be lower than Burnham.

1462. Do you have any say in the appointment of the staff?—I do, Sir. I serve as one member of the Civil Service Commission panel which selects them.

Mr. Gurden.

1463. Are you saying there is a salary disincentive in choosing Dartmouth?—I think that would militate against a man coming straight from university without previous experience. If he has previous experience that will count as far as his initial salary here is concerned.

1464. What about pension?—It is a Civil Service scheme now, Sir, and a newcomer is on quite a good pension wicket.

1465. What about those who have been in the job for some time?—Their position is not so good. The superannuation payable for years of service at Dartmouth before 1951 was fixed in the year 1906 and was never changed. Therefore, because of the change in the value of money the people who served a lot of their time before 1951 are on a very bad wicket as regards superannuation. In 1951 they became Ministry of Education teachers and then civil servants, so the years since then are all right; but the amount of superannuation the man who is here now and the man who has left will get is fixed, for the earlier years, by the value of money in 1906.

1466. Are you on the panel of the Civil Service Commission for Dartmouth only or generally?—Only for the

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Dartmouth selection. They invited me to go and sit on that selection panel for the Dartmouth applicants.

1467. Are the other members academic people?—The Director of the Naval Education Service has a representative on the panel, the Civil Service Commissioners have one and the Civil Establishments Branch of the Admiralty has one. The chairman is usually an outside member. Last time he was a retired headmaster. One usually is an outside expert on the particular subject that the candidate offers.

1468. Are they appointed to the staff here or to the Civil Service as a whole?—To the Civil Service as a whole. They used to be appointed to the staff here permanently but, in the words of the brochure, it is unlikely that they will be required to serve anywhere else.

1469. You naturally assume it would be a disaster if they served anywhere else, but supposing they wanted to move would they be able to do so?—I think so. They would have to apply. A man who wants to serve elsewhere in the Civil Service would, just as if he wanted to leave the Civil Service and teach in a university, have to put in an application for permission to retire.

1470. If you are proposing to fill a vacancy here you do not first of all look at the market of available people in the teaching departments of the Civil Service?—No, we advertise in the Press.

1471. What sort of degree do you hope to get?—We hope to get First or Second Class Honours degrees or a Diploma of Technology. That is coming in this time.

1472. Are the opportunities for getting back into other academic work sufficient to encourage a young man to come into this service?—I think so. For instance, at the end of this term one lecturer is leaving to go to the College of Advanced Technology in Bristol and another is leaving this Easter to become the headmaster of a school in Kent. So these promotions, if one can call them that, from Dartmouth do occur but, of course, in both cases these are outside the civil service.

1473. Do you want to add anything to that?—(Captain *Martin*.) No.

1474. In one sense Dartmouth is different from any of the other Naval teaching institutions because of the emphasis it places on civilian teachers. At Manadon we found none, and it seems odd that at Manadon which is doing university work it is being done entirely by Naval officers whereas here, where the work is below that level, it is being done by highly qualified civilian lecturers?—I think I should fall back upon saying that Dartmouth has, ever since it came into existence (in other words, by tradition), been staffed by civilian lecturers. This was looked at some years ago (I am afraid I do not know when) and it was decided that the services of civilian lecturers should continue. In my view they fill at Dartmouth a very valuable role. It is that a tutor gets to know his cadet very well and, two years later when he returns, that cadet who is by then a sub-lieutenant goes back to the same tutor. This provides very good continuity.

1475. You do not think it is necessary, as part of his intensive professional training to which you have referred, that the balance should be more on the Service side?—No, I do not. I think it is extremely valuable to have a civilian atmosphere in the teaching of a naval officer, particularly in the teaching of a seaman officer who, in later life, is going to have to sit on many occasions upon committees and so on with civilians, particularly with colonial or other Commonwealth Relations and civil service people. It is very important he should see civilian life right from the word go.

1476. At the other extreme the professional instructor is primarily a naval officer and not an instructor. Does he have either enough knowledge of or interest in the problems of teaching to do the job?—These officers are very specially selected by the Admiralty. They all do a short course to help them in their instruction. It is called an instructional technique course. They have to do that course and we insist that they do it before they are permitted to teach professional subjects.

1477. We saw today a man engaged upon instructing a small group of overseas students with a thin knowledge of English. One must be highly skilled to

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do that job effectively. Does the professional naval officer who has to do it have enough professional know-how to tackle what is essentially a teaching rather than a professional job?—He has enough professional know-how in terms of his profession. He finds it difficult to get it across to the new Commonwealth or to the foreign officers whose English is not very good, but we are overcoming this problem with the aid of view graphs which we did not show you on your tour this morning. These show slides, pictures and so on, all of which are of great help, particularly in teaching the new Commonwealth and foreign officers.

Mr. Gurden.

1478. I thought that was just to get over the right uses of this equipment and was not so much a matter of teaching English?—No. The professional officer does not teach English at all. He is teaching essentially professional seamen subjects but, because some of the new Commonwealth and some of the foreign cadets are not very good English speakers, the officer finds it difficult sometimes to get across to them what he is trying to teach them. It is purely a matter of language.

1479. That applies right through the establishment, surely?—Yes.

Chairman.

1480. But the officer who has had this quick training in teaching techniques is then going off to another post where he may not be teaching at all?—Yes, this is true, but the instructional technique course is a very good one indeed. Not only is it that but also we are inspected by our own Instructor Branch which comes to see that the instructional technique that is being applied by our professional officers is up to standard. That inspector will inform me if it is not, and at that stage I should have to take action and would have either to obtain another officer or to give the officer concerned a further course. I think the proof of the pudding is in the eating. I have never been asked to do this yet.

1481. But would it not be more economical if, in the case of a skilled man who has had this experience and training, he did, say, a double tour?—I think, Sir,

that what you say is absolutely right, but the man who is giving this instruction is a naval officer and he must be allowed to go back. If he is to be a successful senior officer he must go out and gain experience in his Service and two years is as much as any professional officer can really allow out of his career in a teaching job without going to sea and picking up his own training or his own career again. I think that is the reason why they do not stay longer. It is a matter of the man's individual career.

1482. But if he was in the Instructor Branch that would not be so necessary?—It would not be necessary but, of course, the instructor could not teach what the professional man is teaching without the experience that the professional man has already gained in the Fleet.

1483. But we are dealing with a not very high level of instruction. In other words, this is very basic instruction and these are basic skills. Is there not a case for saying that a skilled instructor could pass on that kind of training more effectively, perhaps, than an experienced professional who has not got his experience as an instructor?—No, Sir. I am afraid I would not agree with you. It is because it is such basic instruction that the professional can, in fact, do it so easily. It does not require a highly professional teacher to get this across. It requires an ordinary, plain, straightforward, good naval officer.

1484. Could you tell us something about the academic work here? As I understand it, some of it is directed towards A level G.C.E. and, therefore, you have a test. What test is there of the efficiency of the other academic work?—(Mr. Ghey.) The Advanced level work is for the Upper Yardman. For the sub-lieutenants we have an examination at the end of the third year. It is moderated by external moderators. Two of those are members of the Naval Education Advisory Committee for this college. That Naval Education Advisory Committee comes down at least once a term and sees what is going on here. We hold discussions and they give advice. And they, I have no doubt, discuss the education given here with the Naval Education Service in the

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Admiralty. By that means and by visits to external educational establishments and to the development institutions in the Fleet the staff here see quite a lot of what is going on outside their own nest. Four lecturers are going to Harwell this coming leave for a week's course. One more is going in September to a course on modern physics at Oxford. We do try and remain aware of what is going on outside. Going back to the examinations, they are for the most part drafted here in the first place. Drafts are made of questions and these are sent to the moderator for his comments and, after agreement between us when the comments come back, the papers are printed. The moderator, who is probably a member of the Naval Education Advisory Committee, looks at the scripts and decides whether or not he agrees with our marking. He is present when the final order for the promotion time gained is made.

1485. This is confined undoubtedly to the academic work?—This is for the third year, yes. For the Supplementary List work that we do, the examinations are set and marked internally.

1486. Do you have any contact with the Ministry of Education Inspectors?—No, none at all except on a friendly basis. Occasionally one may come because he is a friend of a member of the staff, but there is no official contact.

1487. When this was a school were there full inspections?—We had every seven or eight years a full inspection.

1488. There has been no inspection since?—Not by the Ministry of Education, no, Sir.

1489. Coming on to a very much more mundane subject, I was very interested in the water supply which we saw down at the bottom by the harbour. Why does the college need to have its own water supply?—(Commander *Cumming*.) The water supply is provided primarily by the South West Devon Water Board, but we have a spring in the college which supplies feed water for the boilers which comprise the central heating plant for all the buildings. When the spring is in full flood we then supplement the reservoir of the South Devon Water Board and, therefore, save some money.

Mr. *Gurden*.

1490. There is a water shortage in the area?—Not in this particular area. The shortage is, I think, in North Devon. There is plenty of water in this area.

Chairman.

1491. It is part of your responsibility to supervise this?—The water supply from the South Devon Water Board is their ordinary supply.

1492. I meant the plant?—Yes. We are responsible for the operation of the plant, but the maintenance of the plant—that is to say, all the domestic machinery—is the responsibility of the Ministry of Public Building and Works.

1493. They have skilled people who specialise in water engineering and who supervise the maintenance work?—Yes, they do. They have got a nucleus staff attached to the college, but their main headquarters are at Devonport.

1494. Turning now to laundry, I think I understood you to say that laundry goes out to contract?—(Captain *Martin*.) Each cadet is allowed free laundry up to so many pieces of clothing in a bundle per week. Those bundles are sent to a particular local laundry here under an Admiralty contract. The sub-lieutenant has to pay for all his laundry.

1495. Consideration has never been given to the question of whether it would be economic to have your own laundry?—Not that I know of.

1496. Is the contract put out to tender?—(Lieut.-Commander *Weld*.) Yes, Sir, it is, by the Director of Admiralty Contracts. We have no say at all in this.

1497. Do you have any opportunity to criticise it?—Yes. Every year the Director of Admiralty Contracts asks our opinion of the laundry and we let him know how it is working.

1498. How often does it go out to tender?—I honestly do not know, Sir. I know that it has happened very recently. We have kept the present contract.

1499. On the chart which you showed us there were the I.O.U.T.s and I understood you to say they come here for Service conditions training. Do they come here before they go to Greenwich

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or is that a different lot which goes to Greenwich?—Those who go to Greenwich are a different variety. They are older men than the men who come here. We take Instructor Officers under training up to about the age of 25 and give them this one term of training. Those above the age of 25 go either to Greenwich or to Collingwood for their new entry training.

1500. What is happening in the way of joint Service co-operation?—Two things, really. First, the three colleges—that is to say, Britannia Royal Naval College, Cranwell and Sandhurst—exchange visits both between the Commandants and the Directors of Studies and between the officers who normally go up with sports teams and who use that opportunity to exchange views and see how things go on at the other two colleges. Secondly, we have on the staff a flight lieutenant from the Royal Air Force and a major from the Army who are an integral part of our staff and who join in fully here with the professional instruction, including professional instruction in their own two Arms.

1501. What particular work do they do?—The Royal Air Force officer gives lectures on the Royal Air Force and also takes part of the lecturing load in the navigation department because he is a navigator. The Army officer gives lectures on the Army and also takes a share of the lecturing in the communications department in which he has had experience. He also is in charge of the expedition training and internal security training of all cadets. Both of these officers are affiliated to divisions and take their part in divisional activities.

1502. Could you tell us something about the Caspar John Hall which we saw?—This hall was completed in July, 1963. I understand that it had been asked for by the college for a number of years, and it was finally decided to go ahead with building it because (a) the college wanted it and (b) the last combined Chiefs of Staff exercise was to be held at the Royal Naval College and did, in fact, take place here in September, 1963. The hall itself is built as a lecture hall and not as a theatre. It seats some 450 and is used every single day, partially by the English department but quite largely by outside lecturers for lectures to groups of people

and also for such activities as classical concerts and light reviews. (Mr. Ghey.) We also use it as an examination hall for the passing-out examination at the end of the year.

1503. Does it accommodate all the students?—It does during the Easter and summer terms. At the moment we could just fit in all the officers under training but in the autumn term we could not fit them all in to the hall.

1504. I suppose you were not consulted. It was just decided to build it?—No, Sir, I am afraid I was not.

1505. We saw the repair work that was being done both in the engineering shop and in the boatbuilding section. Is that an economic way of providing that service to the college?—(Captain Martin.) To take the boats, we can, in fact, do large damage repairs to our boats at what appears to be a cheaper cost to us than if the boats are sent round to the dockyard. That is not to say that the dockyard is uneconomic. We have a large number of boats which are constantly being damaged, as one would expect, by men under training and the volume of maintenance and repair work is such that the staff employed on this work is fully occupied. To send boats round to the dockyard would incur the additional cost of transportation. If we did not have some sort of repairing facility here we would soon run out of boats because every one would have to be transported round to the dockyard for repair and fitted into the dockyard programme of work for ships and other establishments with inevitable delays. Transportation to the dockyard is difficult by road and by sea is dependent upon the vagaries of the weather.

1506. Are the men who are working here civilians?—The men working down at Sandquay are all civilians.

1507. Has that sort of work always been done by the college, or has it ever been let out to private contract?—As far as I know it has always been done by the college. However, individual boats are sent round to the dockyard for a really major overhaul. This particularly applies to one picket boat per year and also to one or two of the yachts, the sail training craft, per year so that they get a complete overhaul which we cannot do here.

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1508. These are not your figures but figures given to us by the Admiralty. They show that the cost of the buildings and works increased substantially between 1961-62 and 1963-64. It increased from £32,300 in 1961-62 to £40,500 in 1963-64. Is that due to new work or to an increase in repairs?—(Lieut.-Commander *Weld*.) We cannot give the answer. We do not know how these figures are worked out by the Admiralty. It would be pure guesswork.

1509. The work is done by the Ministry of Public Building and Works, is it?—Yes.

1510. And the costings are done by the Admiralty, so you have no real check on it?—No.

1511. Has there been any general inspection by the Admiralty of the whole institution as opposed to specific educational or general staffing inspections?—(Captain *Martin*.) Under normal naval practice the college is inspected once every two years by the Commander-in-Chief, Plymouth, on behalf of the Admiralty. That is an inspection not only of the instruction of the cadets but also of the entire running of the college. We have also had two inspections through the Admiralty on specific items. One was an O. & M. inspection of the library and of the clerical staff required to deal with the book store and the C.B. store. The other was a recent investigation into the number of lecturers required in the college. This was due to the fact that we feel we need more lecturers in September. A board came down to investigate this requirement and to make recommendations.

1512. Are these specific investigations made at your request?—They are usually made either because we want to change the organisation ourselves or because, as in the case of the lecturers, we realised a heavier load was coming in September next and that therefore we wanted a staff increase. We carry out our own work study inspections which we do ask for ourselves. For instance, we are carrying out at this moment a work study investigation into the operation of the whole of the boating system down at Sandquay because we feel that the area there is far too crowded, and we want to see if we can find some better way of maintaining the boats which will give us more space for other

operations down there. Secondly, we are carrying out our own very minor work study of cadets' spare time to find out, in fact, what exactly they are doing, because we have been accused of overworking them at times and we wish to make quite certain what they are doing. (Lieut.-Commander *Weld*.) There is another minor one of our own. (Captain *Martin*.) At the moment we are also carrying out one other work study. That work study group is looking into the kitting-up of cadets at the beginning of the autumn term when we have to kit up something like 350 cadets. We feel that the present system we are using will not stand up to this particular problem.

1513. By whom are these work studies done?—In the case of the Sandquay work study it is being done by the Command work study team who operate under the Commander-in-Chief, Plymouth. In the case of the cadets it is our own local work study team, a group of officers who are not specifically trained but who are doing this under my direction. The work study of the clothing is being done by a team of work study experts who operate under the Director of Victualling. The civilian investigations are normally done by the Admiralty C.E. branch who use their own O. & M. personnel.

1514. Did you say whether you had asked for more lecturers?—(Mr. *Ghey*.) Yes. That was in the middle of last year for this coming September they sent down a team to investigate. They duly reported and an additional lecturer has been granted for the science department.

1516. For the next academic year?—Beginning next September, yes.

1517. Are you satisfied that the response to these kinds of requests is reasonably quick? In other words, can you get authority to do it within a reasonable space of time but missing the market when you advertise?—That is a sore point because in the recent past it has taken a very, very long time not only to get the request approved but also when the men have been seen to get them appointed. Because of the present security regulations and one thing and another it takes an extraordinarily long time, once a man has been decided upon, to get him formally appointed and to notify him that he is

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coming here so that he in turn can make his own arrangements.

1518. I must not give evidence, but such experience as I have had of civilian schools is that headmasters usually complain that in order to get a good person on their staff they have to move like a hawk as soon as they see him?—Yes.

1519. Then it must be much more difficult for you to get good people here?—Yes.

1520. Do you think that the present arrangements do handicap you in getting a good field for your recruitment?—I cannot see how they can do other than handicap the college, but they are part of the whole big machine of which we, too, are a part.

1521. That leads me on to a question which I will not blame the Captain for ducking if he wants to do so! Can I put it in this way. In a civilian school or college you have a continuous staff and a governing body who look at the whole place and who stay on the job for, probably, a fair time. You have here a Director of Studies and he is a permanent member of the staff. It seems to me that in any Service education establishment there is no one except the Director of Studies who takes an overall view for long enough. In other words, even in the Admiralty the Director General of Training will not be there all the time. Is there not a risk that the main strategic problems of development and so on get neglected because of the fact that on one is there long enough to give them consideration? If you want to duck that one, as I say, you are welcome to. On the other hand, you have immense experience in this field and your help would be very welcome?—(Captain *Martin*.) I think, Sir, I would say this. If this were an ordinary school as such the continuity of a board of directors or of a governing board and Director of Studies would be very necessary, but this is essentially a new entry training establishment, and the training of naval officers in this primary stage has followed a very, very even pattern for a very, very long time. That is to say, the actual professional training follows a fairly even policy. Each individual specialist officer who comes here will in his own field look at the syllabus which is laid down and will check with his parent training estab-

lishment (that is to say, his specialist training school) to see whether that syllabus needs alteration in the light of present or future developments, and he will advise the Captain accordingly. Therefore, from a professional point of view I am satisfied that two years is, in fact, an adequate period for a man to be in college. Whether the Captain himself requires to be there a shade longer because of the system of training—that is to say, a period of three years, one of which is spent away—I cannot really answer yet because I have not been here long enough to get that experience. But again I feel that a great many naval officers are intensely interested in the training of the officers, no matter what the scheme is, and we are always looking for new methods of training and a new policy for training. I do not think the fact that the Captain is only here for two years really matters in that context. The Admiralty lay down a policy for him. The Admiralty is the governing body of this establishment and the policy comes from them. How we administer that policy here is really the crux of the matter. One takes over from the previous Captain here whose experience is probably as much as one's own. Perhaps things are changed as individual Captains go through but we are very careful before a change does take place.

1522. Thank you very much. Is there anything you think we have missed? We have come here, unhappily, for a very short time indeed and have seen all the things you are doing, and we do not want to go away with the feeling that we have missed the boat altogether. If there are any points you think we should have asked I would be most grateful if you would bring them to our attention?—I do not really think we have any. You did not, of course, see very much of the cadets because there was not time for you to do so, but you did see the sub-lieutenant who has done two years' training. We would have liked you to have seen the cadet so that you could have seen the difference between the young man who has just entered the Service and the young man who has been in the Service for two years. We, I think, are favourably impressed by the standard that comes back to the college from the Fleet as a result

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of two years' training, having seen the original entrant. We are sometimes astonished by the difference.

Chairman.] That is one of the great satisfactions of the profession, is it not?

Mr. Gurden.

1523. If I could mention the foreign students, it was said at the other colleges that their knowledge of English is not as good as one would like upon entering a college of that sort. I am wondering to what extent that applies to other educational standards. Is it thought that this is a difficulty both for the student and for the college? Secondly, would it probably be better if these students went somewhere else for some ordinary educational training before coming into a specialised college?—(Mr. Ghey.) There is a very big range in the academic abilities of these new Commonwealth and foreign students. One cadet, for instance, has, I think, four Advanced levels already. He is a great exception, may I quickly say. It goes from that standard down to the very weak person who does have very great difficulty in following not only the English but also the ideas behind it. They are supposed to have a good knowledge of English before they join here and in some cases they are sent to an establishment in England before they do come.

Chairman.

1524. Is it a Service establishment?—No. Exeter University is the place I have in mind, or some establishment in Exeter which teaches them English. However, it is mainly over the technical terms that the difficulty comes in. As far as the syllabus is concerned, the particular Navy Boards of the countries concerned are told what our syllabus is (whether they understand it or not I do not know) so that they can decide whether their chaps are likely to succeed here. (Captain Martin.) I should like to add that the foreign students who do go to Exeter University still find great difficulty when they come here, despite the training they have had in English at Exeter University. This is not the fault of the university but because of the fact that we use, as I am

sure you must be fully aware, so many technical naval terms.

Mr. Wilkins.

1525. This is not the policy of the college but the policy of the Admiralty and this is where I think we ought to be chasing this up, not here?—(Commander Weir.) Could I say that it is not Exeter University which is involved but the International School of English at Exeter.

Mr. Gurden.

1526. What I am trying to get at is whether this language problem is a great difficulty. We saw these students who had been separated in order to get this special instruction. Is this the regular practice of the college? Has it always taken place?—No. About a year ago we asked for Admiralty permission to separate the overseas students from the British students for professional instruction so far as we could, because the instructor is then able to go at a pace they can understand. It was found that where there was a mixed British and overseas class the British boys were being held up by the instructor's having to go at a pace at which the overseas cadets could understand the English. It was not so much a question of understanding the content of the syllabus but understanding the English, and their notetaking was very much slower. Therefore we have split them up. There was the danger that there might be some black versus white feeling about it but this has not occurred at all, and the overseas class has benefited enormously by being separated because it has been able to go at a slower pace and has learned more as a result.

Chairman.

1527. Do all the foreign students take a special course? They are not part of the general course?—The first year course is exactly the same for British and overseas students.

1528. It is the same General List course, is it?—The General List overseas cadet gets exactly the same course as the General List British cadet. The overseas sub-lieutenant does not. He has a specially combined academic and

19 March, 1964.] Captain J. E. L. MARTIN, D.S.C., [Continued.
 Mr. G. W. E. GHEY, M.B.E., M.A., Commander J. M. FORBES,
 Commander A. F. R. WEIR, Commander A. M. J. CUMMING
 and Lieut.-Commander M. J. F. WELD.

professional year as opposed to the third academic year and fourth professional year that the British sub-lieutenant spends at Portsmouth. The main reason for that is security.

1529. By the time he reaches the third year does his knowledge of English enable him to hold his own with the others?—Yes. His English is very good by then as a general rule.

Chairman.] Thank you very much.

TUESDAY, 24TH MARCH, 1964.

(*The Sub-Committee met at the Imperial Defence College, London.*)

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.
 Mr. Anthony Royle.

Mr. W. A. Wilkins.

Memorandum submitted on behalf of the Minister of Defence

IMPERIAL DEFENCE COLLEGE

Background and Function of the College

The Imperial Defence College was established in January 1927 following a decision of the Committee of Imperial Defence. It was originally situated in Buckingham Gate and administered by the Admiralty. The College was closed in 1939 on the outbreak of war, and was re-opened in April 1946 on its present site in Belgrave Square, which is now held on a 58½ year lease from 1961 by the Ministry of Public Building and Works. The administration of the College passed to the Ministry of Defence in 1947 and the supervision of the College for professional purposes is vested in the Chiefs of Staff.

2. The function of the College is to train selected members of the armed forces and civil services of the United Kingdom and Commonwealth in the broadest aspects of policy and strategy, including the study of existing and potential threats to world peace and Commonwealth interests; of the means of preventing war; and of the roles, organisation and functions of the armed forces in peace and in different types of warfare. The course is also attended by officers of the United States armed forces and civil service. Students are 1-star rank or near. The names of the Commandant and Senior Directing Staff are shown at Annex "A".

3. The College is non-residential, although it has a Mess. Students have to make their own arrangements for living out, on which a certain amount of information is available from the College. There is a flat available for occupation by the Commandant, but this has to be leased by him from the Ministry of Public Building and Works at a normal rent.

Establishment—Service and Civilian Personnel

4. The day-to-day administration of the College is undertaken by the Commandant, with his Service and Civil Directing Staff, who are supported by a civilian staff. Service

24 March, 1964.]

[Continued.]

Departments are reimbursed for personnel, including the Directing Staff, on the basis of a capitation rate. Details of the authorised establishment are as follows:

	1961-62	1962-63	1963-64
4-star Officer	1	1	1
2-star Officers	3	3	3
Commander, R.N., or equivalent	3	3	3
Other Ranks	1	1	2
Administrative Grades	2	2	2
Retired Officer	1	1	1
Executive Grades	2	2	2
Clerical Grades and Typists	13	13	12
Draughtsman	1	1	1
Messengers, Cleaners, etc.	13	14	13
Industrial	5	5	5
TOTAL	45	46	45

Course and Students

5. The length of the Imperial Defence College course is one calendar year. The details of students attending the course over the years 1961, 1962 and 1963 are as follows:

Calendar Years	Royal Navy	Army	Royal Air Force	United Kingdom Civil Service	Commonwealth	United States	Total
1961 ...	10	10	10	11	22	4	67
1962 ...	10	10	10	11	21	4	66
1963 ...	10	10	10	11	19	4	64

6. In addition to the normal academic and syndicate training, instructional tours are undertaken as an integral part of the course. In 1963, for example, students were formed into a number of teams accompanied by Directing Staff, and visits were paid to Canada, United States, Australia, Europe, Africa and the Far East. In addition, the whole College spent three days in Rheindahlen and Berlin. For about a week in each course, tours are arranged to industrial establishments. These are designed to give students the opportunity of gaining first hand knowledge of the capacity, effort and problems of the main economic regions of the United Kingdom.

7. The current tuition fee for Commonwealth students attending the College is £100 per annum. This fee is waived for Canadian and United States students, as are instructional tour costs, under a reciprocal arrangement whereby similar facilities are provided for United Kingdom students in those countries. No fee is payable in respect of United Kingdom students. The present fee was initiated in 1947, was last reviewed in consultation with the Treasury in 1957, and is shortly to be reviewed again. It is recognised that the fee is low, but this enables the poorest member of the Commonwealth to take advantage of the course, having regard also to the fact that overseas students' living expenses in the United Kingdom, together with their passage costs to and from this country and their instructional tour costs, are borne by their parent Governments. It was always intended that the presence of Commonwealth students should be an essential feature of the College, and the availability of the course at a moderate fee allows the United Kingdom to promote understanding and collaboration through the attendance of Commonwealth senior officers.

Costs

8. Details of expenditure on the Imperial Defence College are shown at Annex "B".

24 March, 1964.]

[Continued.

ANNEX "A"

IMPERIAL DEFENCE COLLEGE: DIRECTING STAFF

Commandant

Air Chief Marshal Sir Hugh Constantine, K.B.E., C.B., D.S.O.

Senior Directing Staff

Rear-Admiral G. T. S. Gray, D.S.C.

Major-General D. S. Gordon, C.B., C.B.E., D.S.O.

Air Vice-Marshal Gordon Jones, C.B., C.B.E., D.S.O., D.F.C., R.A.F.

M. N. F. Stewart, C.M.G., O.B.E. (Under Secretary)

Secretary

Brigadier F. N. W. Gore, C.B.E. (Ret'd.)

ANNEX "B"

IMPERIAL DEFENCE COLLEGE: COSTS

	1961-62	1962-63	1963-64
	Cost £	Cost £	Cost (Estimated) £
<i>Administration and General Maintenance:</i>			
<i>Personnel:</i>			
<i>Service Pay and Allowances:</i>			
Officers	27,115	27,177	30,000
Other Ranks	760	786	2,000
<i>Civilian Salaries and Wages:</i>			
Non-Industrial	29,913	27,826	29,000
Industrial	2,224	2,347	3,200
<i>Travel Costs</i>	11,307	17,065	15,600
<i>Stores and Furniture</i>	575	3,875	1,600
<i>Maintenance and Repair</i>	5,535	9,933	8,500
<i>Utilities:</i>			
Water	109	124	177
Electricity	1,577	919	1,200
Gas	98	109	110
Fuel	469	513	550
<i>Miscellaneous:</i>			
Lease of building (including contributions in lieu of rates and average capital expenditure on new works)	6,656	6,819	8,331
Custodian services	1,755	1,875	1,950
Telephone Charges	683	585	750
Other Charges	473	322	435
TOTAL	89,249	101,175	103,403

Ministry of Defence, S.W.1.

16th March, 1964.

24 March, 1964.]

[Continued.]

Air Chief Marshal Sir HUGH CONSTANTINE, K.B.E., C.B., D.S.O., Commandant, Rear-Admiral G. T. S. GRAY, D.S.C., Major General D. S. GORDON, C.B., C.B.E., D.S.O., Air Vice-Marshal GORDON JONES, C.B., C.B.E., D.S.O., D.F.C., Mr. M. N. F. STEWART, C.M.G., O.B.E., Senior Directing Staff, Brigadier F. N. W. GORE, C.B.E. (Ret'd), Secretary, Imperial Defence College, and Mr. R. A. DEVEREUX, Ministry of Defence, called in and examined.

Chairman.

1530. May I begin by thanking you very much for your very kind hospitality and for giving us the chance not only to meet the staff but also the students?—(Air Chief Marshal Sir *Hugh Constantine*.) We are delighted to have you with us.

1531. Perhaps I should explain to you we are a Select Committee and that you are protected by Parliamentary privilege. What is said is taken down and you will get a copy of the minutes of evidence. If there is anything which is verbally wrong perhaps you will correct it. Similarly, if there is anything which, for security or other reasons, you think should not be published perhaps you would sideline it and let the clerk have it. If the Committee agree it will be excluded from the published report, so we would much rather you spoke to us quite frankly than that you should feel inhibited by the fact that we are taking a note of the evidence?—Thank you.

1532. We have had a memorandum telling us about the college. It was established in 1927. Was it then very much the same as it is now in the work that it did?—No, it is a little different now. In those days it was smaller. Then there were 28 to 30 people. There were fewer people from the Commonwealth and very few civilians. In those days the brief was to train officers in the art of war and the syllabus was very much more direct defence than it is today. There were 9 to 10 defence exercises during the year. Since the war it has doubled in size. There are now more civilians (25 per cent. are civilians) and more Commonwealth students. Today the syllabus is divided into 14 studies, of which only 4 are directly military. The aim of the course nowadays is to enable these specially selected men of the average age of 45 to look at the world in the broadest political, economic and military sense and, having had a look at it, in the latter part of the course to fine it down to our particular defence problems.

1533. Does the fact that it is called the Imperial Defence College mean it was always intended to include a lot

of people from the Empire?—That was definitely the intention but there were not as many before the war as there are now.

1534. Is the present percentage about what you hope to have?—I think it is a matter of balance as we move forward. It is a British college, looking at problems from the British viewpoint. Therefore there is a point below which we should not allow the British complement to go. That is a matter one is always discussing and which I have mentioned in my final report. There are 18 members of the Commonwealth now and by the end of the year there will possibly be 21, so the question is whether we are going to get too many applications. The strange thing is that when I came in 1961 12 members of the Commonwealth were represented whilst during the last two years only 8 have been represented. The reason is that the newer members are finding they cannot spare key men of quality for a year at this stage.

1535. Is that an argument for having a shorter course, or is it, in general, a course which is about right for most students?—I would say it is about right. We often argue about whether the particular timing of the course is right but I think basically a year is the right answer. There have been people who have said it could be done in half the time. On the other hand, people have been asking to do a second year. I think on balance it is right, in that it gives them time to think, re-assess, look at particular problems and read as much as they can. It is a university atmosphere rather than a course one would do when a younger officer.

1536. Has it always been a year?—Yes, it has always been a year.

1537. This is a very beautiful building. However, it does not always follow that a building which is beautiful is a convenient one in which to work. Is it convenient for your purposes?—It is almost ideal. We want to be in the centre of London because we rely entirely on outside lecturers. If we were in some remote spot we would not get the great men in politics, professors and

24 March, 1964.] Air Chief Marshal Sir HUGH CONSTANTINE, [Continued.
 K.B.E., C.B., D.S.O., Rear-Admiral G. T. S. GRAY, D.S.C.,
 Major-General D. S. GORDON, C.B., C.B.E., D.S.O.,
 Air Vice-Marshal GORDON JONES, C.B., C.B.E., D.S.O., D.F.C.,
 Mr. M. N. F. STEWART, C.M.G., O.B.E., Brigadier F. N. W. GORE, C.B.E. (Ret'd)
 and Mr. R. A. DEVEREUX.

ambassadors to travel down to us because of the time-wasting that that involves. I would say that for a non-residential college it is ideal both in position and in size. I would not like to see it grow very much bigger because then it would lose its intimacy, and I think it would also tend to lose quality.

1538. What is the maximum number you can take?—72.

1539. Have you ever been up to 72?—Never; 67 or 68 is the maximum.

1540. Is that because people withdraw after having been accepted by the college or because they are not accepted in the first place?—From the Services point of view (and I think normally from the civilians' point of view) you are not in a position to withdraw. Of course, that does not apply if a new appointment is suddenly found for someone at the last moment. That happened this year in the case of a brigadier who, after having done the first week of the course, was seconded to N.A.T.O. The War Office found a colonel to take his place. I did mention at lunch one particular civilian who was selected. He declined because it was going to be too expensive to move his family.

1541. Was he in Government service?—Yes.

1542. Do you know what the normal arrangements are for people? Do they get their existing salary, plus an allowance for coming to London?—From the Services point of view there is a London allowance. It is the same allowance as if one were serving at the Air Ministry, the War Office or the Admiralty. (Mr. Stewart.) Civilians do not get an allowance, as far as I know, and usually they have to find their own accommodation. That is frequently difficult. We had an Admiralty civilian seconded to us last year. He had set up house in Scotland. He had to come down and leave his wife in Scotland, so he used to go backwards and forwards between London and Scotland. That was rather an expensive arrangement. I think it is likely that the civilian members of this course are financially penalised.

1543. But it would make no difference to the Service member whether he

was posted here or to any other posting in the country?—(Air Chief Marshal Sir *Hugh Constantine*.) Basically that is so. The Service man is more used to moving around than is the civilian.

1544. He is less likely to have a permanent home?—Yes, he is less likely to have a permanent home. He is moved every 2½ years. The civilian tends more often to be able to live in his own home than the Service man. Mr. Michael Stewart is our Foreign Office representative. Before he arrived here he was our *Chargé-d'Affaires* in Peking.

1545. Foreign Office people would be more used to being posted?—It would not apply to them. (Mr. Stewart.) No.

Mr. Royle.

1546. According to our memorandum, there are eleven civilians on the present course. Can you tell me where they would come from? How many of these are Foreign Office people?—(Air Chief Marshal Sir *Hugh Constantine*.) I would say it is divided into the academic side and the administrative side. On the academic side, which consists of the directing staff who are not instructors but who co-ordinate and guide the syllabus, the only civilian is Mr. Michael Stewart from the Foreign Office. His No. 2 is Shilliday from the J.I.B. Then the Secretary is at the head of the administrative side.

1547. I was thinking more of the students. You have got 11 civil service students here?—(Mr. Stewart.) Yes. They are Mr. Bacon, War Office, Mr. Burrough, G.C.H.Q., Mr. Chapman, Board of Trade, Mr. Jefferies, Ministry of Aviation, Mr. Nash, Admiralty, Mr. Scott, Commonwealth Relations Office, Mr. Stewart, Ministry of Aviation, Mr. Warner, Foreign Office, Mr. Webber, Colonial Office, Mr. Wiggin, Foreign Office and Mr. Wright, War Office.

Air Chief Marshal Sir *Hugh Constantine*.] Two are scientists: Mr. Bacon and Mr. Stewart.

Mr. Stewart.] Most of them live outside.

Mr. Gurden.

1548. Do you not concern yourselves at all with the living accommodation of these people?—(Air Chief Marshal Sir

24 March, 1964.] Air Chief Marshal Sir HUGH CONSTANTINE, [Continued.
 K.B.E., C.B., D.S.O., Rear-Admiral G. T. S. GRAY, D.S.C.,
 Major-General D. S. GORDON, C.B., C.B.E., D.S.O.,
 Air Vice-Marshal GORDON JONES, C.B., C.B.E., D.S.O., D.F.C.,
 Mr. M. N. F. STEWART, C.M.G., O.B.E., Brigadier F. N. W. GORE, C.B.E. (Ret'd)
 and Mr. R. A. DEVEREUX.

Hugh Constantine.) We are not primarily concerned with that. It is a matter of moral responsibility for us to do what we can, but the responsibility in the case of anyone coming from overseas is that of their own ambassador or high commissioner.

1549. They pay all their own outside expenses but this £100 fee is charged, is it?—That is a matter for their Government and our Government.

1550. It has got nothing to do with the college?—No, it has nothing to do with the college. The financial side, other than our own messing arrangements, is handled almost entirely by the Ministry of Defence. Even that is dovetailed into the Ministry of Defence machine.

Chairman.

1551. We are told in the memorandum that the course is attended by students of 1-star rank or near. Could you explain what that means?—The 1-star rank means a brigadier, the 2-star a major-general and the 3-star a lieutenant-general. The average age of the course is 45. The course comprises mainly officers of the armed forces of the rank of brigadier or its equivalent. As a matter of interest, all the Naval people on this year's course are senior captains. In the case of the Army there are six brigadiers and four colonels and, in the case of the Royal Air Force, there are six air commodores and four group captains. In the case of the Commonwealth there is one major-general. And that, for some reason, is normally so. He is a major-general from Pakistan called Sarfaraz Khan. The rest are mainly brigadiers or colonels from the Commonwealth and one or two civilians. Broadly, they range from the rank of major-general down to colonel. The average age, as I say, is 45. The oldest member on the course is 52 and the youngest 32.

Mr. Gurden.

1552. Is this a fixed rule? Can people come here with fewer qualifications and at a younger age?—I would deprecate it, but it is up to the Service departments themselves to select officers whom they feel have a reasonable chance of making the grade of major-general, if not higher. The same thing applies to the civil

servants. As you have been told, a meeting is held when we look at the civilians, and the Commandant of the day is a member of the board. So it is a matter of selection. We are entirely in the hands of the Commonwealth because they select their own people. It is rather difficult, if we feel there is a weak member, to do very much about it other than tell our representative in the Commonwealth Relations department who then tactfully says, "Send someone better next time".

1553. Does this happen?—Yes.

Chairman.

1554. Is the age of the Commonwealth students about the same?—No, it varies. The two Nigerians on the course are the youngest. They are both aged 32. The oldest is a Canadian North-West Mounted Policeman of 52. I would rather have someone from the Canadian External Affairs Department, as we have had in the past, because I feel a man of 52 or 54 cannot serve his own Service for very long before he retires and he does not necessarily contribute so much.

1555. What in the civil service is the equivalent of the 1-star rank?—(Mr. Stewart.) An assistant secretary.

1556. Are they all assistant secretaries?—The Foreign Office people are counsellors.

1557. Is that normally kept to fairly carefully?—I think so. We get some scientists. I am not sure what their civil service classification is. They have not had the training that an ordinary, straightforward civil servant would have had although, of course, they are trained in their own field.

1558. Have there been any civilians above the rank of assistant secretary recently?—(Air Chief Marshal Sir *Hugh Constantine.*) As far as I know, no. The trouble with civilians is that they do not have their rank in front of their names. (Mr. Stewart.) Foreign Office and Commonwealth Relations Office people are usually senior and junior counsellors.

1559. Are the civil servants meant to be people who are directly concerned with defence?—(Air Chief Marshal

24 March, 1964.] Air Chief Marshal Sir HUGH CONSTANTINE, [Continued.
 K.B.E., C.B., D.S.O., Rear-Admiral G. T. S. GRAY, D.S.C.,
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 and Mr. R. A. DEVEREUX.

Sir *Hugh Constantine*.) No, because, although defence is the main thing in the end, politics, economics and the value of knowing about the world may well help any civil servant in his career.

1560. Does he benefit as much from seeing the inside of the defence world as the defence student benefits from seeing the inside of the civilian world? —I think the benefit is, indeed, mutual and it is very valuable in the syndicate work on each study. We have these studies and each student is issued with a paper outlining the problem. This, for instance, is the one on Europe. They each get their turn at being syndicate leader. This happens, as I say, to be the one on Europe and it is split into eight syndicates in that fashion. One of the directing staff is in charge of co-ordinating those syndicates. We wind up the study either with an inter-syndicate discussion or with a central discussion. This is typical of the questions on Europe which they are studying and shows you what the object of the study is. They have to produce a syndicate paper which is discussed. It is put in broad terms, so there is not what we might call a directing staff solution to most of these problems. They can argue and discuss, which is the object of the exercise. When we study economics we try and bring in a member of the Treasury, as none of us is an economist. We had along Mr. Cairncross to wind up our discussion on the last occasion. Even though the economists do not agree it is as well to have an expert on the subject.

1561. I gather from the list of departments you have given us that apart from the Board of Trade they are diplomatic? —No. In the course I attended in 1947 there was someone from the Post Office and someone else from Scotland Yard. We were shown the inside of Scotland Yard. I would say the other departments are less in number. Places are reserved for the Foreign Office and the Commonwealth Relations Office as a "must", and places are semi-reserved for the Service departments.

1562. Taking the number from the Board of Trade, is that a matter of chance on this particular course or is it because of their overseas interest in inter-

national trade?—Each department nominates students and then they are sorted out. Out of nine nominated five people were selected. From those nine we really selected to fill those five places the five that we thought would best contribute to the course and get value from it. Therefore you cannot necessarily say one department or another will get places. It is a matter of selection. We like to have a member of the Treasury here although we have not had one for some time. The Treasury is always getting a kick in the heels throughout the course and it is nice to have someone to answer back for them in syndicate discussion.

Mr. *Wilkins*.

1563. There are no students from foreign countries. They are either Commonwealth or United States students? —Yes. This is something which we think is very important. We think it is very important to get a viewpoint from the leaders of the West. Indeed, we would not mind having another one from the State Department as well as the three Services. They are usually well selected and it is most important to have their viewpoint throughout the course.

Mr. *Anthony Royle*.

1564. How do you tackle the security aspects when you have Commonwealth and American students?—The actual security aspect as such is complicated. Inside the building security is up to "Secret". The Commandant may use his discretion to include in the syllabus information of U.K. origin up to "Secret". Top secret information can under certain circumstances be discussed at the discretion of the Commandant but no documents of this classification can be issued to students without the permission of the Exchange of Military Information Sub-committee. Therefore it is a complicated one. A tradition has been established within the college, particularly so far as lecturers are concerned, that nothing which is said within the walls of the lecture room is to be discussed outside. In order to help discussions and to get maximum information we rely very much on the discretion of the lecturers. Up to now I am glad to say they have all liked coming because it is a fairly stimulating audience and any

24 March, 1964.] Air Chief Marshal Sir HUGH CONSTANTINE, [Continued.
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 Mr. M. N. F. STEWART, C.M.G., O.B.E., Brigadier F. N. W. GORE, C.B.E. (Ret'd)
 and Mr. R. A. DEVEREUX.

indiscretions have always been kept secret. When we make visits outside the college and tour industrial firms we are only allowed to see confidential information. So the security side is rather complicated. However, we are dealing with very broad subjects and we do not find it interferes unduly with the value of the course. I do not know whether that answers your question?

Chairman.

1565. It has answered it in a paradoxical way. It seems odd that at the highest of all levels the security leads are less?—Yes. We are bound by the rules of the Exchange of Military Information Policy Committee. All the Commonwealth students are, as far as I know, subject to variations in the political scene. That is the complication if, indeed, we are going to have Ghanaians, Nigerians and so on here. We had our first Jamaican this year.

1566. But you do not make any attempt to segregate any particular section of the course?—No. We are briefed very clearly that they are to be treated in identically the same way. Whether they are major-generals or colonels they are treated in exactly the same way, and that applies equally as far as race and colour is concerned.

1567. You think that if you had closed sessions for United Kingdom people it would spoil the atmosphere?—It would be the worst possible thing as far as our relationships with the Commonwealth and United States are concerned. Again, how would you know whether to bring the United States in and leave the Commonwealth out? It would be an impossible situation.

1568. Does the United States always send people?—Always.

1569. From the very early days?—Since the end of the war but not before the war. After the emergence of the United States as the leader of the West they began to arrive here and, I think, very wisely.

1570. We were told in the memorandum that the college is under the supervision of the Chiefs of Staff. Do they have a very close personal link with the college?—No, it is decentralised to the

Commandant. They appoint a man of 4-star rank with sufficient experience and a key staff to support him. I am issued with a directive as to how to run this college. The C.D.S. is my direct link: I am responsible to Admiral of the Fleet Earl Mountbatten of Burma. On the financial and administrative side I am responsible to the Permanent Secretary, Sir Henry Hardman, of the Ministry of Defence. Therefore we are left very much to ourselves. We take a fairly critical look at ourselves. We are always arguing and discussing whether we are running the college correctly and efficiently. There is frank appraisal and criticism from these elderly gentlemen at the end of the course, and out of those criticisms we are able to take a fair look at ourselves and alter and adjust the syllabus from year to year. That is going on continuously. The syllabus is different this year from last year, for reasons we have discussed among ourselves. But we are left very much to our own devices.

1571. Do you submit your syllabus to anyone to look at or do you discuss it with the C.D.S.?—No. I have just written a report for the C.D.S., sent him a copy of the syllabus and told him one or two things about the course and about one or two other things which might be altered or adjusted. I can go and see him at any time on any issue, of course, but I do not think I can be told to get the syllabus changed or altered or be attacked by anyone.

1572. Are the movements of staff phased so that there is continuity?—Continuity is a problem. We definitely do rotate. The normal tour for the Commandant and for both the senior and junior directing staff is two years. We arrange it so that we come and go throughout the year. For instance, Air Vice-Marshal Gordon Jones arrived in September. I am the next one to go. I retire and hand over in May to an admiral, Admiral Sir Deric Holland-Martin. Mr. Michael Stewart is due to go in June or July and the Admiral here will be going at the end of the year. It is done like that, so continuity is something which, in a way, we lack a little. I have been here for nearly three years and am the longest Commandant ever. I have seen four courses.

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I think there is a certain advantage in that, but if they had wanted me for another job I could have been pulled out. As it happens I am retiring. The Admiral is in Malta and they could not release him, so I am leaving at the end of the first term whereas it would be more convenient for the Commandant to take over at the beginning of the year. The Secretary is the man on the administrative side who provides the continuity and the Librarian has a lot to say about the reading material and the syllabus. The last Secretary was a sailor and he was here for twelve years.

Mr. Gurden.

1573. Do you know whether the incoming Commandant is going to retire? —You never know until their Lordships and the people upstairs finally decide. The Admiral will be 58 when he comes and I would think it is likely to be his last job. I am retiring at 55. My predecessor, Sir Robert Scott, was the first civilian Commandant. He was pulled out to be the Permanent Secretary of the Ministry of Defence, so he went into another job afterwards. In the case of General Bourne he was retired. Either you do one more job after this or you retire. If you are appointed here as a 4-star officer you are getting towards the end of your career on the active list.

Chairman.

1574. We have heard all the way through the argument that you cannot interfere with the career structure of the Services by doing longer tours. If this is the apex of a man's career surely this argument is not so strong? —No, it is not quite so strong. The difficulty is that if you are planning careers between three Services you have to plan them about two years ahead. Someone now is working out who the soldier is to be who will take over from Admiral Sir Deric Holland-Martin, although he is not arriving until April. There are so many inter-Service appointments that it is complicated to get going except with long term planning on that basis.

1575. If people did a double tour of about six instead of three years do you think it would be a great advantage? —As Commandant or senior directing staff?

1576. I am taking them one by one? —No. The senior directing staff people could never do more than two years because it is at a very crucial time in their career. The normal tour is two to three years if a man is going to obtain the necessary experience to gain higher rank. If you asked someone to do more than a few months over two years it would be interfering with his future career. This is a little bit academic. If you are going on to be a commander either in the Army, the Navy or the Air Force I think you cannot be too long away from your Service. It is very broad political, economic and defence stuff here.

1577. What about the Commandant? —I would have thought the Commandant in certain circumstances could have done three years. I used to think when I first came here that the subject matter would be very much the same each year, but listening even to the same lecturers you get a different slant and the questions are different. Therefore I think that the tour for the Commandant could be a maximum of three years, if it fitted in with the plans of the Defence Secretary. If you look at that board you will find, going back, that certain people have done two years, certain people less than two years and certain other people more. In my case I shall have done two years and eight months because it was convenient for me to do so and because the Admiralty were unable to release the Admiral from his appointment in Malta. These things are bound to be flexible. I do not think it matters very much.

1578. Are the ranks adjusted in such a way that the directing staff, wherever they come from, are about the same age? —It can vary a bit, according to whether a major-general is sent here on his first appointment as major-general or his second. (Major-General Gordon.) I am in my second appointment here as major-general. I think it varies amongst the Services. I do not think the Army have ever sent a major-general here as a first appointment. Normally it is his second appointment. (Rear-Admiral Gray.) It is traditional in the case of the Admiral on the directing staff that it should be a first appointment

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job. Certainly the last four who have come here have held first appointments. (Air Chief Marshal Sir *Hugh Constantine*.) In the case of the Air Vice-Marshal here he is on his second appointment.

1579. And the Foreign Office?—(Mr. *Stewart*.) It is usually a second appointment.

1580. It is not likely to be a difference of more than two or three years?—(Air Chief Marshal Sir *Hugh Constantine*.) It is a maximum of three year's difference, I think.

1581. Coming on to a rather more mundane point, we are told you have a flat here?—That is not quite accurate. My predecessor but one, General Bourne, said he wanted a house. I think every predecessor of mine has said the same thing: that the Commandant of a senior college should, as in the case of all other Commandants, be given a house. The Treasury has fought it valiantly for 15 years and the Commandant has not got a house. It was therefore arranged by one of my predecessors that he would pay a fair rent direct to the Ministry of Public Building and Works for a flat at the back, a flat which was originally occupied by Sir Winston Churchill's chauffeur; so it happened that the flat of Sir Winston Churchill's chauffeur became the flat of a 4-star Commandant. It was agreed voluntarily at the time that that flat would be offered to each incoming Commandant if he wanted it. I know my predecessor was offered it and did not take it. I was, but I did not take it because I wanted to get my own house in London, so General Sir Geoffrey Bourne is still there. My successor wants it and is moving in in two months.

1582. The rent is fixed?—It is not a Service quarter and is not a Service residence. It is a direct arrangement between the Ministry of Defence on behalf of the Commandant and the Ministry of Public Building and Works. He does not pay the rent he would pay for a Service quarter but a good deal more.

1583. It is supposed to be on a cost basis?—Yes, on a cost basis. Indeed, the rates have gone up recently and he has to pay the extra rates.

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1584. Could you tell us about the tours?—The tours are the most important part of the syllabus. The course is divided into three terms. At the end of the spring term we break for three weeks. Then there is a break for eight weeks in the summer. During the Easter break we spend a week, organised by the Board of Trade into seven parties, visiting industry. The Board of Trade have organised it in Scotland, the Midlands, South Wales, Oxford and Cambridge, Ireland and North Wales this year. The programme includes visits to various factories and meetings with various mayors, chambers of commerce and trade union officials. This is very useful after our month's study of the theoretical side of economics, during which we have had business men talking to us and also Treasury officials, professors and experts. We then go out into industry and see for ourselves. People like us to visit them because we ask sensible questions and tell these business men how to run their affairs, which they take easily and gently! It is an experience to go out and see industry at work and it is a very valuable week. We send directing staff out with each party of students. The summer tours are another very important aspect. We study the world regionally in the summer term. For instance, next term after finishing with the United States we will go for a run round the Near and Middle East and then South-East Asia and Latin America. In the last term we turn to defence policy. Then we split into five parties, again headed by the Commandant and directing staff, and go off on a tour of the United States and Canada for a month, of Africa for a month, of Europe for a month, and of Australia, New Zealand, Singapore, Malaysia, India and Pakistan for a month or five weeks. These tours vary slightly in length each year. As I say, we split up into five parties and are kept at it pretty hard. We are taught about the country, meet the people of the country and learn about their political, economic and defence problems. Again they like seeing us and we enjoy it. Various ambassadors and high commissioners write and say it was a very useful visit. We go round with a mixed bag of people from this country and the Commonwealth. When we get

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back at the end of these tours each party presents to the remainder of the course the highlights and the main points they have learned so that the others benefit from it.

Mr. Wilkins.

1585. How are they financed?—
 From public money.

Chairman.

1586. Are there reciprocal hospitality arrangements?—The reciprocal arrangements vary. Until recently the U.S.A.F. have flown us round America and similarly the Canadian Air Force have flown us round Canada. Recently, however, America has said she will not do it any more. To get to various other places in the world we use R.A.F. planes or B.O.A.C. We go across the Atlantic by B.O.A.C. We go by the cheapest method. To go round Africa and visit Ghana, Nigeria, the French Congo, South Africa, Rhodesia and Kenya we would have to get an aeroplane from the Royal Air Force which would take us all the way. It varies according to the place we are visiting. We use the ordinary routes wherever possible but if we cannot we get an aircraft to go all the way with us.

Mr. Anthony Royle.

1587. The travelling costs vary tremendously. In 1961-62 they were £11,307 and in 1962-63 £17,065. Then in 1963-64 they dropped back to £15,600. Is there a great difference each year?—It is more costly to go to Australia and New Zealand. We did this for the first time last year. I was the instigator of it, in that we are meant to have a link with the Commonwealth and I inquired why we never went there, particularly as the American and Canadian War Colleges had been there. The Australians, too, were interested in why it was the I.D.C. had never been and they said so when we got there. That was a more costly trip. We went to Japan and Hong Kong another year. The cost varies according to where you go and according to whether the length of the trip is four or five weeks. We have asked at times to go to certain places and have been told we cannot go because it is too expensive.

Mr. Wilkins.

1588. Do we cover the cost of the Commonwealth students as well?—
 They contribute towards it.

1589. Perhaps you could put in a note. It is said in paragraph 7 that the tuition fee is £100 per annum. That is obviously not in any way going to cover the travelling costs of the students during their tour?—It does not cover that cost.

1590. So it must come from somewhere?—I understand that they pay a proportion of the travelling costs. Canada and the United States have reciprocal agreements whereby they pay nothing. Each Commonwealth country is treated on its merits and according to the agreement each individual country has with us. But as that is handled by the Ministry of Defence I would rather not answer that question.

Mr. Anthony Royle.

1591. We are told in paragraph 7 that the instructional tour costs are paid for by the Commonwealth countries?—
 Yes, but when it comes down to how much I am afraid I could not tell you. We leave the financial side to the Ministry of Defence. I feel my responsibility is more on the academic side.

Mr. Wilkins.

1592. Have these tours always been included in the curriculum? How far back do they go?—They did not happen in 1946. I did the course in 1947 and in those days only two tours were arranged. One was to Germany and the other was round the Middle East. I had just got back from Germany so I opted out of that one and as I had spent most of my career in the Middle East I did not do that one, either. Only 50 per cent. of the course went on tour. It built up the following year and has gradually built up since so that during the last ten years it has been broadly on the basis that it is on now.

Chairman.

1593. Possibly we could also have a note upon whether the estimate given of £15,000 is the net cost. Do you submit to the Ministry an estimate when, say, you go to Australia? The Treasury do not give you complete freedom, do they?

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—We do not deal with the Treasury at all. Our agents are the Ministry of Defence. I, in conjunction with the staff, put up each year tour proposals. (Rear-Admiral Gray.) We write at the end of one year to the Ministry of Defence making the Commandant's proposals for the tours for the following year. When we get approval in principle from the Ministry of Defence they ask for estimates of the cost. They then look these over and finally approve the tours. We next write to the Foreign Office, the Colonial Office and the Commonwealth Relations Office and begin to work out the itineraries for the tours.

Mr. Anthony Royle.

1594. These tours are an excellent idea. Do you do enough foreign travelling? What percentage of the year is spent in foreign countries?—(Air Chief Marshal Sir Hugh Constantine.) It is awfully difficult to adjust the syllabus very much. Some of the students complain that right in the middle of the holidays when they are at home with their families they are whipped away for five weeks. I do not think you could really do any more. We do do the odd trip to Rheindahlen and Berlin in the middle of next term, and we visit various military establishments in this country. That is the maximum we can do so as to get a balanced course, plus, of course, the question of cost. In order to do this we have to put the pressure on and very often we are told we cannot do it.

Mr. Gurden.

1595. Are you saying you confine this tour to five weeks?—They vary between 29 and 35 days, according to what we want to fit in. The shortest tour is 29 days (this is Europe) and the longest 35 days.

Chairman.

1596. When you go to Germany are there reciprocal arrangements when you stay with the Services?—When we go to Rheindahlen they do not have to, but they usually put us up in various houses. However, it is very difficult to do this for 75 people. When we go to Berlin we have to put up in hotels at our own expense and draw an allowance for being away for two days. Mayor

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Brandt usually addresses us. It is a most interesting and valuable visit.

1597. Looking again at Annex "B" I notice that the cost of the other ranks has taken a sudden jump. Is that due to an increase in numbers or to an increase in emoluments?—I think this is as a result of emoluments in the case of my personal assistant who is a Royal Air Force sergeant. The Ministry of Defence were unable to find me one when I got here. I got a little bit tired of waiting and therefore asked whether I could attach one of my own Service people here. That is, therefore, something which has occurred during my time. Other ranks have gone up by one. £2,000 should be covering two people.

1598. The clerical grade has gone down by one?—That is right. In other words, instead of a civilian a Service man has been attached. When I go he goes.

1599. Unfortunately, there does not seem to be a reduction in cost. There never is?—(Mr. Devereux.) There is a reduction of one under clerical grades and typists.

Chairman.] I am looking at the costs. The non-industrial cost was £28,000 odd in 1962-63.

Mr. Anthony Royle.

1600. The total cost of maintenance and repair on Annex "B" seems to be very high. In 1961-62 the cost was £5,535, in 1962-63 it was £9,933 and the estimated cost for 1963-64 is £8,500. Is it because of the age of the building that it runs at this high level?—The reason is that it is a very ancient building. I was pressing, as my predecessors were, for many things to be done to bring the building up to the status required for this college. The Ministry of Public Building and Works in their wisdom refused to take action until such time as a new lease was negotiated. This was negotiated in 1961. There was then an inrush of outstanding works which consisted of taking out all the old coal fires, putting in central heating and a new lift and redecorating. The dining room was made out of the old telephone exchange. Various other things were done, too. Before then it was something of which we were not very proud.

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During those three years these expenses have been considerably high. I expect there will be a drop to a normal maintenance figure next year.

1601. Is the new equipment going to make any difference to your power consumption?—It will be the difference between what we used to pay for coal and the effort of humping coal around and the cost of oil. It is rather a difficult balance. Our electricity bill is nearly as high as before. It is down a bit.

1602. Where in this total does the cost of your external lecturers appear?—It does not. We get things on the cheap here, really. Professors and other lecturers who would normally get £60 to £80 from the B.B.C. or anyone else are given £10 by us. We had a letter from someone the other day, a woman, who was a bit hurt about it but who then said she would come for £10. Luckily, people like coming because, as I said, I think it is a really stimulating audience from which they get reaction. Question periods go on for an hour and a quarter at times. Any lecturer likes to be challenged and to have an argument, so once people have been they are always prepared to come again for £10. (Mr. Stewart.) More than 50 per cent. do not get a fee of any kind. A lot of people just come because it is regarded as a privilege to lecture to the I.D.C.

Chairman.

1603. Do you mean the costs are negligible?—(Air Chief Marshal Sir Hugh Constantine.) This is really a Ministry of Defence question. All I know is that they get £10. The Secretary arranges this where appropriate. That does not apply to foreigners. If we are studying Europe we try and get Europeans who have to come across the water. (Mr. Devereux.) I assume it comes in under "Other Charges" at the bottom of the table. (Air Chief Marshal Sir Hugh Constantine.) May I ask you to raise that question with the Ministry of Defence because the financial side is essentially theirs? I know the broad details but do not have a finger on the pulse of it.

1604. Yes. May I probe another matter which you may also feel is best left to the Ministry of Defence? It is catering.

In the Defence Estimates there is a special entry for the Imperial Defence College. There is an estimate of £5,000 for catering. There is an appropriation in aid of £7,500, so you made a profit. Is that right?—Messing is an awful problem here. We regard the mess as a most important part of our business. Talk goes on throughout lunch. It keeps students in so that when the afternoon comes along they go up to their syndicate rooms and carry on talking. However, we cannot run a mess. It is supposed to be a canteen. Certain money comes to us from public funds and it is the most highly complicated thing I have ever come across. The Ministry of Aviation are the contractors who do the messing. The college breaks for nearly three months every year and during that time the place closes. It is only run as a luncheon club. We pay for the messing. The contractors take all the bar profits so we get nothing, but it is the only way to do it. We are trying to get the Ministry of Defence to pay more towards catering staff. They try to explain to the Treasury the need for it but we have not got very far. (Brigadier Gore.) It is only open for eight months out of twelve. Therefore it is not an economic proposition to have staff here all that time. N.A.A.F.I. tried to run it but failed. Then the Ministry of Defence approached the Ministry of Aviation who have a big catering directorate and put it to them that they could run the thing for us and employ the staff during the breaks, relieving us of that expense. Therefore the Ministry of Aviation took it over on a no-cost basis. In addition, we have to contribute up to £400 a year out of our funds towards a mess book-keeper. The difficulty is that without putting up charges (resulting in people going elsewhere because they can get a cheaper lunch outside) we cannot afford to pay decent wages. Apart from the mess manageress, whose salary, which we have to pay, is about £1,150 a year, we have to go to the Ministry of Labour. In actual fact, the Ministry of Aviation do it for us. We can only afford to pay very low wages and therefore we do not get the best people the Ministry of Labour have to offer. So we have asked the Ministry of Defence to take on the

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managereess at this salary and the book-keeper; this would enable us to engage an established chef (whom the Ministry of Aviation could provide for us if we could pay for his services) and to pay decent wages.

1605. Do you look after the financial side?—We do not run an account. The Ministry of Defence run an account; all the mess bills are paid into that account and they are responsible to the Treasury for it. They have to make sure it does not run into debt.

1606. Why is the appropriation in aid higher?—(Mr. Devereux.) The difference between the appropriation in aid and the provisioning is £2,500. It is accounted for by a broad assessment of the charge for mess staff salaries which are borne on the Ministry of Defence Vote. The difference is between £5,000, which is the provisioning, and £7,500, which is the appropriation in aid.

1607. What contribution do you make?—(Brigadier Gore.) We pay all the salaries and wages.

Mr. Anthony Royle.

1608. There is nothing which could be added to the Ministry of Aviation Vote?—No. (Air Chief Marshal Sir Hugh Constantine.) They do it out of kindness to us. N.A.A.F.I. did it before. They are really doing it to help us.

1609. Do the Ministry of Aviation do it very well?—(Brigadier Gore.) Very well. They are extremely good. We have all their resources behind us when we have to entertain. They bring in their special staff. Our problem is to get adequate staff at the wages we can afford. If we could be relieved of even one of these salaries it would be a great help.

Chairman.

1610. When did these arrangements begin?—They have been going for four or five years. As wages go up so it becomes more and more difficult for us to find the money to meet the bill without putting our charges up so high that the students go out for lunch. (Air Chief Marshal Sir Hugh Constantine.) The financial side is dealt with by the Ministry of Defence. It is very compli-

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cated. I have never met anything so complicated in my life. I think the man dealing with it at the Ministry of Defence would give you the detailed answer. Perhaps I can put it in this way. One of my main worries is to keep the mess going at what I call a satisfactory standard, bearing in mind that we have got this entertaining to do when various colleges visit us and when we hold cocktail parties.

Mr. Gurden.

1611. You say it is only a luncheon club?—Yes, it is a luncheon club and we also hold evening cocktail parties. When we go on visits we are looked after really well and we try and do the same here. For some of these things we are given a grant out of public funds. (Brigadier Gore.) We do coffee in the morning and a bar and teas in the afternoon.

Chairman.

1612. Can I tempt you into saying something about what you foresee the future of the college to be?—(Air Chief Marshal Sir Hugh Constantine.) The college has what I regard as a most important function in life. There are 1,500 ex-students who now are holding responsible positions in various countries and this has created an awful lot of goodwill and understanding both in the political, the economic and the defence fields. The fact that you have friends in various places is of inestimable value when trouble arises. I foresee the college running in a very similar way in the years ahead. We are always looking at the syllabus and adjusting it according to the situation at the time, and this, I think, will go on. Its composition may vary. We may get more nominations from the new Commonwealth countries, but I do not think they will come very rapidly because they need their key men at home and very few can spare them. The first Jamaican, for instance, we have had who is on the course this year will probably eventually head their small but, nevertheless, important army. I do not foresee any great change in our organisation. I am always looking for more continuity on the directing staff. My only suggestion is that it might help if the Commandant stayed here for three years. I

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do not think a longer stay would be wise in the case of the directing staff. The Secretary is a most important man as far as continuity is concerned. I would have thought that the United Kingdom element should never drop below 60 per cent. If in the future we take more Commonwealth students the maximum should be 40 per cent. It is, after all, a British college and we are looking at the problems from a British viewpoint. I think it will go on along very much the same lines.

1613. It is largely a historical accident that defence began this interdepartmental work. There is much more realisation of its importance now. Is there really any reason why this should be a defence college rather than a general college covering both the civilian and military services?—I think defence is its main theme. As you get older and wiser you realise you cannot look at defence within its narrow bounds: that it branches out into politics, economics and everything else. Defence takes £2,000 million of public money every year, and it is essential that the people inside the Services who are going to direct should know about the world and its affairs and about how the Services fit into it. I do not foresee it altering very much. Possibly there will be a few more civilians but only a small proportion. I would like you to have another view on this. We often argue about these things. (Major-General Gordon.) The number of Service officers coming here as students has been fairly constant. It is possible that number may alter a bit. I do not think there need be rigidity in the numbers which come here from the Army, the Navy and the Air Force. I think they could vary. In our informal discussions we have sometimes wondered whether the college would benefit if we were able to introduce one or two civilians from outside the civil service as, I think, the French do. On the other hand, there are complications in that suggestion because it would be difficult for industry to spare a man for as long as a year. One can, perhaps, foresee in the years to come increased Commonwealth representation as these newly emergent countries begin to be able to spare individuals whom, as the

Commandant has said, they find difficulty in sparing at the moment. Obviously, too, there is a limit to the number you can have here in this building.

1614. I gather that applies not only to this building but generally, too. In other words, would you agree that you do not want more even if you had the room?—I do not think we do, no. I think the present numbers are about right for the purposes of this college. I do not think we want to go over 70, which in my opinion is the absolute maximum, but I think its composition in the years to come might vary a bit more than it does now. (Air Chief Marshal Sir Hugh Constantine.) If you try and do everything in one college you do not do anything very well. The present directive is fairly clear about what we are trying to do. Basically it is defence. But you cannot understand the implications of defence until you look at the world and at how every country "ticks" in the political and economic fields. If you wanted to bring in more civilians or wanted to enlarge it, you would have to do what the Americans have done. You would have to start a second college with a different directive.

1615. Has any effort been made to obtain the views of outside industry?—No, because we have not seen a practical way of doing it. You said at lunch that it would be nice if a few Members of Parliament could do this course and also a few merchant bankers and business men. My feeling is that you might bring in half a dozen for a proportion of the course. Essentially this would be at the beginning of the year when we study world Communism and foreign policy in order to find out what we are trying to do in the world, who the enemy is and how he works. Then we look at the Commonwealth and next at economics. That covers a period of 2½ months. It might be a practicable proposition to bring in half a dozen business men, a merchant banker and a Member of Parliament to make up the course to 70 for a short period if, indeed, that would be any use. I am sure they would all say, "My goodness, I wish I could stay to the end of the year and finish it off" but no Member

24 March, 1964.] Air Chief Marshal Sir HUGH CONSTANTINE, [Continued.
 K.B.E., C.B., D.S.O., Rear-Admiral G. T. S. GRAY, D.S.C.,
 Major-General D. S. GORDON, C.B., C.B.E., D.S.O.,
 Air Vice-Marshal GORDON JONES, C.B., C.B.E., D.S.O., D.F.C.,
 Mr. M. N. F. STEWART, C.M.G., O.B.E., Brigadier F. N. W. GORE, C.B.E. (Ret'd)
 and Mr. R. A. DEVEREUX.

of Parliament could spare a year. Similarly very few business men could let their staff off for a year and very few bankers could come for a year, either.

Mr. Gurden.

1616. Are you saying that the accent must remain upon defence or else you will change the whole nature of the course?—Yes. It is the Imperial Defence College. I did say the studies are less military than you might have thought. You might, therefore say we are wrong about that. Consequently, we should look at the overall plan of the course. If you are dealing with a man of 45 who is starting on the next step up the ladder and who will in his future career have to direct, think and get the right answers in life, you have to get him out of the narrow field before he can look at the broad defence questions. That is the way we see it.

Chairman.

1617. Do you have much contact with the other staff colleges in the Service?—Not a great deal. We know each other, of course. I go and see Rear Admiral Morgan Giles occasionally and he comes here. When you are running a course you are dealing with that course the whole time. If I attend every lecture every day I do not have a great deal of time to move about. We go on tour with students at Easter and in the summer. I have visited the Joint Services Staff College a couple of times, because it is the only one which is directly under the Ministry of Defence, to see whether they were getting anything I am not getting and to compare notes. I think the age group there is different, and this course is nothing like it. There is nothing with which to compare it.

1618. This again is a question which, perhaps, it is unfair to ask you, but you are in a unique position to answer it. Do you think that the number of inter-Service studies at the colleges is going to increase in the future?—I think we have probably got the right balance, provided we do start teaching in each individual college sufficient "jointery" at an early stage. In other words, all the colleges vary slightly in the amount of joint work they do. First of all, you

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have got to train an officer in his own Service. When do you make it joint? It may be done a little earlier and steps have recently been taken to produce more "jointery" in the various staff colleges. My own view is that here we need not stress "jointery". It has been going on here for years. I have served in the Navy. I also served with the Army for 2½ years and literally became a soldier. Many of the others have done the same thing. The formation of a unified Defence Ministry is an excellent thing. We have got to see the courses are balanced and that there is some connection between them. I think the training side of the Ministry of Defence has already started to do that and it will go on doing it.

1619. By adding 20 per cent. "jointery" will you make it up to 30 per cent., or will there be a complete change in the constitution of the college?—No. My own feeling is that it will be a process of evolution and not a complete change because you have to teach an officer his own trade to start with. Even in this college when someone says, "Let's include this in the syllabus" you look at it and ask, "Then what are you going to leave out?" and it is difficult to know what to take out of a year's course. We introduced for the first time the United States into the syllabus this year. We had to adjust the syllabus but we felt it was important that we should have it. I think you will find the other Service colleges will find it very difficult to introduce more "jointery" without leaving out something which, in their opinion, is essential for training an officer in his own Service. Quite a lot more has come in during the last year as a result of the committee's recommendations. It is difficult to know whether you can start trying to understand both the Army, the Navy and the Air Force at a pretty young age. It is usually more than the young officer can take.

1620. What committee was that?—It was a committee which looked into the question of whether we could increase the amount of "jointery". It did not affect us but the staff colleges. Each Commandant found it was awfully difficult to fit in more "jointery" without leaving out something that they regarded

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24 March, 1964.] Air Chief Marshal Sir HUGH CONSTANTINE, [Continued.
 K.B.E., C.B., D.S.O., Rear-Admiral G. T. S. GRAY, D.S.C.,
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as essential. There was a battle and they increased "jointery" to a limited degree. However, if it were sought to introduce more "jointery" the course would have to be lengthened and then there would be all kinds of difficulties. (Mr. Stewart.) Eleven out of fourteen studies are civilian studies.

Mr. Anthony Royle.

1621. The War College at Greenwich provides a similar course to the one provided here. Their security arrangements are different. Do you think it is providing a really important and worthwhile course for the three Services? Is it really necessary?—(Air Chief Marshal Sir Hugh Constantine.) My answer to that is that I do not really know. I gather it is a six months' course and I think they cover similar subjects. However, I do not know enough about it to give you a straight answer. You could say that they are doing on a shorter course certain things that we are doing here.

Chairman.

1622. Do you have any contact with the N.A.T.O. staff college?—We have had visits from the N.A.T.O. staff college. I was with N.A.T.O. for three years in Paris and I know them very well. I know the last two Commandants. They come here for briefings and we meet socially. (Mr. Stewart.) We exchange syllabuses. We communicate with each other on programme arrangements and also on lecturers but there is no formal liaison. It is a matter of convenience so that we know what they are talking about and who they are getting to lecture. We get some of their people and they, in turn, get some of ours.

1623. Is that another direction in which people are going to move? We know that that is an inter-Service college. Is this international staff college going to be another direction in which people are

going to move?—(Air Chief Marshal Sir Hugh Constantine.) I have lectured at that college and so has Mr. Stewart. It is a bilingual college and is most valuable. It helps N.A.T.O. and I am a believer in it. There are so many courses going today that I wonder whether there is much room for further expansion. If you work out the number of courses people can do they have got to do either the N.A.T.O. Staff College or the I.D.C. but not both.

1624. Thank you very much. Is there anything you would like to add which you feel we have missed?—I do not think there is anything. It has been a great pleasure to have you here. It is a unique place and we love people to come and see us. I have tried to be as frank as I can. (Air Vice-Marshal Gordon Jones.) As far as the Service students are concerned, there is a certain number in the Service at any one time of this rank, experience and age whom you want to put through the course so as to fit them for higher rank. This will dictate the number of people coming from the fighting Services who you want to go through this course. I think the number is about right now. (Air Chief Marshal Sir Hugh Constantine.) I think it is a manoeuvrable number and there is room for change. If it were eight instead of ten airmen it would not make any difference to the course. I put quality as the most important thing. If they are high quality officers they learn from each other, and high quality lecturers are at the root of the thing. They learn to make friends so that later on in their lives they know they can cut through the red tape and get on with the business. And we seem to meet each other in later life around the world. After having been here for 2½ years I feel it is a very cheap price that is being paid for the benefit we get from it on the defence side.

1625. Thank you very much?—Thank you very much indeed.

WEDNESDAY, 25TH MARCH, 1964.

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.
Sir John Langford-Holt.
Mr. Anthony Royle.

Mr. W. A. Wilkins.
Mr. John Woollam.

Memorandum submitted by the Witness

THE ROYAL NAVAL COLLEGE, GREENWICH

Anyone who visits the Royal Naval College at Greenwich cannot help but be struck by the apparently deserted atmosphere. It is hardly surprising when one realises that in the Summer Term 1963 only 316* students (35 of them being Naval Officers from countries other than the United Kingdom) used the premises. Of these, however, only about 250 were in the Royal Naval College proper, the remainder being officers attending the S.S.A.C. and Staff College courses. But at no time were there 250 students in the College at any one moment as over 60 of them took courses of less than six weeks' duration.

The main courses for which the College is well equipped are as follows:—

- (1) Qualifying Course Royal Corps of Naval Architects of Honours Degree standard in which 25 students were enrolled for the Summer Term 1963. These are civilians mainly from the Naval Dockyards given temporary Naval rank whilst taking the three-year course.
- (2) Advanced Electrical Course—this is a one-year course at post-graduate level and there were 2 students during the Summer Term 1963.
- (3) B.Sc. Degree Course in Electrical Engineering—this is the principal course run by the Electrical Engineering Department and during the Summer Term 1963 had 2 students in their First Year, 11 in their Second and 20 in their Third, a total of 33. About a dozen additional students could have been accepted for this course each year without overstraining the facilities available.†
- (4) Advanced Marine Engineering Course—a two-year course at post-graduate level with 6 students in each year during the Summer Term 1963.
- (5) Advanced Ordnance Engineering Course—a two-year course at post-graduate level with 6 students in the First Year and none in the Second Year during the Summer Term 1963.
- (6) Advanced Gunnery Course—a highly specialised one-year course with 3 students in the Summer Term 1963.
- (7) Advanced Communications Course—the course, which covers two terms, is highly specialised and had 2 students enrolled in the Summer Term 1963.
- (8) Advanced Ordnance Inspection Course—a highly specialised two-term course with 4 students enrolled in the Summer Term 1963.
- (9) Advanced Nuclear Course—a one-year course of post-graduate diploma standard with 10 students enrolled in the Summer Term 1963.
- (10) Ordnance Inspection Course—a one-year course with 5 students enrolled in the Summer Term 1963.
- (11) Nuclear Reactor Course—a post-graduate diploma course which covers two terms and had 6 students enrolled in the Summer Term 1963.
- (12) Other courses are held for short periods of up to one term.

* All figures on student numbers are taken from estimates given to me by the Civil Lord on 25th May, 1962 and from answers to Parliamentary questions.

† As a result of continued Parliamentary questions a small number of civilian Government employees have now been admitted to this course but this is probably an operation which cannot be repeated.

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[Continued.]

This small number of officers and civilians is using premises which cover a large site with a considerable number of lecture and practical rooms, a nuclear reactor, two digital computers, three analogue computers and two libraries. In addition they share the use of about sixteen tennis courts, four squash courts, a gymnasium, a theatre, croquet and bowls lawns, sports ground and pavilion with Rugby and Association Football and hockey pitches, an indoor rifle range, ten billiards tables and two skittle alleys. There is also a resident tennis and squash professional.

Basically the courses at Greenwich fall into two groups—technical and non-technical, the former requiring laboratory facilities and university type staff and the latter employing largely Naval officers as instructors and needing only somewhere to sit by day and somewhere to sleep at night.

The technical courses are attended by Naval Officers and also by civilians (mainly for the Naval Architectural Course) although these often wear Naval uniform while on the courses.

Many of the technical facilities at Greenwich have been duplicated at the Royal Naval Engineering College, Manadon. The number of Naval students at Greenwich has dropped since the Manadon College was opened.

Of the non-technical courses only the Staff College Course and the Senior Officers War Course last longer than twelve weeks. During these two courses officers spend many weeks out of Greenwich on visits to other service establishments though nominally they are on the Greenwich roll. Even when they are in the College most of their living accommodation is occupied only four nights a week. The average age and rank of officers on these courses is considerably higher than those on the technical courses and their presence makes it difficult to achieve anything approaching a normal university atmosphere. The fact that these senior officers only work a 4½-day week is in itself unsettling to the younger officers expected to do a full week's study. These non-technical military courses do not require the laboratory and technical facilities available at Greenwich and the rank of the officers attending makes it necessary to give them a large slice of the residential accommodation.

The Staff College and War College Courses could be provided in any Naval establishment which has facilities for a few lecture rooms and wardroom accommodation. The presence of these senior officers has led to a demand for more social facilities in the building and in recent years part of the Mathematics Department has been adapted, presumably because there was no academic need for it, into a bar and lounge for lady visitors for which there was apparently a greater need.

A few years ago the Royal Navy built a new college at Manadon where some of the courses at Greenwich are duplicated. Since the Spring Term 1962 there have never, so far as I can see, been more than 180 students at the Royal Naval College, Greenwich who need the technical facilities available there. I believe that the existing technical facilities and academic staff are capable of providing degree or equivalent standard courses for about 300 students and that with increases in the academic staff up to 500 students could be admitted.

In June 1962, when I first learnt of the under-use of these facilities I questioned the Civil Lord on the possibility of admitting civilian students. I believe that about eight such students have since been admitted. On further examining the matter I suggested in questions and debates that the following action be taken:—

- (1) That alternative accommodation be found in other Naval establishments for those non-technical courses such as the Lieutenants ; S.D.O.'s ; S.S.A.C., Staff College and War College courses which average about 130 officers and have no real connection with the academic work of the College.
- (2) That technical courses of a purely Naval character such as Ordnance and Gunnery be transferred to the new college at Manadon.
- (3) That those courses, such as the Electrical Engineering Degree course at present duplicated at Greenwich and Manadon be concentrated at Manadon or that Naval Officers be admitted to similar courses at Shrivenham.

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[Continued.]

- (4) That the owners of the Royal Naval College, Greenwich (The Greenwich Hospital Foundation) be encouraged to lease the property to a new civilian university to be founded at Greenwich and that the civilian academic staff be allowed to transfer to the new university or to other service colleges. I believe that such a new university could immediately admit some 400 students to read for Arts, Science and Engineering degrees. Such a university could expand to absorb a student population of about 1,000 (500 residential) within three years in the existing buildings and eventually to 5,000 with the erection of additional buildings on Crown and other land within two miles of the college.
- (5) That any such new university should have a Naval bias, continuing the Naval Architects' Course and giving priority to any Naval officers requiring degree courses not available at service colleges.

I would hope that the Estimates Committee would investigate such of the above suggestions as are within their terms of reference.

Examination of Witnesses

Mr. G. W. REYNOLDS, a Member of the House, examined.

Chairman.

1626. Mr. Reynolds, we very much appreciate your courtesy in coming along to help us in this inquiry. Everything said is being taken down and will be published. You will get a copy of the proof and if you want to make any verbal corrections you can do so. Similarly, if there is anything in it which, either for security reasons or because it is confidential, you feel should not be published perhaps you would sideline it and let the Clerk have it. If we agree with you it will be omitted from the published report. I need hardly tell you that you are protected by Parliamentary privilege. We have been to Greenwich since you visited it and we have had evidence about it both from the people on the spot and from Admiralty headquarters. The first point I want to take is the numbers. There is very little difference between your figures and those given to us officially. In most cases there is a slight decrease. The total number of students has fallen from 316 in the summer term to 304 in January. If all the classes were filled 400 would be the maximum number which the Admiralty estimate could be taken. However, they say that would be extravagant, in the sense that there are not people of that number requiring the classes and it would simply be a matter of bringing in people just to occupy places. Have you any comment to make about that?—There are only minor differences in the figures. The figures I received officially from the Civil Lord for the summer term of 1963 total 325, plus the W.R.N.S. The figures

the Civil Lord gave me in Standing Committee on the 17th December were 275, including the W.R.N.S. I was concerned about the under-occupation in June 1962, and raised it in the House several times. The figures appear to have dropped by about 60 since June 1962.

1627. Have you yourself any view about what is a reasonable staffing ratio? In other words, if you can take a total of 500 you can expect to have classrooms and laboratories always occupied. Have you any measure of what is a reasonable use?—I could only relate it to the time I visited the college on the first occasion in June 1962, and to the ability of the existing staff to deal with pupils. I questioned some of the academic staff during that visit and found that many of them felt they could take a considerable number of extra pupils without extra staff having to be engaged. After having looked at the accommodation I formed the view, later confirmed by looking into various matters, that the number which could be accommodated is considerably in excess of 400.

1628. We were given a figure of 282 for residential students and staff which could be increased to 317 by doubling up?—I do not accept this. I believe more could be accommodated. Until 1958 there was a junior officers' course at Greenwich with 100 junior officers attending it. They were found accommodation. Now that course has finished, and I believe the Admiralty

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[Continued.]

could find suitable accommodation for more than the numbers which are there at the present time.

1629. There is no particular part of the building to which you could point as being underoccupied?—No, I am afraid I cannot. I was shown round the building by the Admiral President. We went through one floor in one block and through another floor in another block. However, I can only refer to the generally deserted atmosphere of the place on all the occasions I have visited it and to the fact that some years ago it had considerably more students than at the present time.

Mr. Anthony Royle.

1630. When did you last visit it?—The last occasion was an evening visit two months ago but I toured the premises in June 1962.

Mr. Woollam.

1631. Can you give us any background information about the housing situation in the locality, having regard to the fact that boarding out has to be done to a large extent in the case both of those on the course and of members of the staff, and whether that situation may have changed over the last few years?—I would not have thought it has changed so far as the staff is concerned, most of whom want their own houses. That part of London is no different from any other part. The cost of houses has gone up. There is an overall shortage of housing accommodation in the London area. I have no reason to believe the situation in that part is worse than elsewhere.

1632. Nor have you reason to believe that the position has deteriorated in the last few years?—No. If the Admiralty wanted to provide accommodation there is Admiralty-owned vacant land. I have a plan here which shows there is Admiralty-owned land within a few hundred yards of the college.

Chairman.

1633. Is it within the curtilage of the college?—No, but it is within a few hundred yards of the college. The land, in fact, does not belong to the Admiralty or to the college. The Greenwich Hospital and Travers' Foundation appears to own the land upon which the college stands and also certain land surrounding the college.

Mr. Anthony Royle.

1634. There appear to be four main blocks, and these we saw when we went round the college. They are the King Charles block, the Queen Anne block, the King William block and the Queen Mary block. There are also the Trafalgar Quarters?—Yes.

1635. In the case of the buildings we saw it did not appear to be in any way thought that more people could be provided with residential cabins?—Yes, but at the moment there is a number of senior officers there—group captains, colonels, commanders and captains. I think I am correct in saying their living accommodation is considerably in excess of what one would normally expect for junior officers. Because those officers are there one has to give them better accommodation than one would give to a sub-lieutenant.

Chairman.

1636. We took this up with the Admiral and he said they had one cabin, which is equal to not more than a bed-sitter. He said it was not up to the standard they would expect in other naval establishments. It is, of course, higher than the standard provided for the junior people?—Yes.

Sir John Langford-Holt.

1637. Do you accept that Greenwich, being in the first place a national monument and, secondly, having a naval tradition, should be developed or used as a Service establishment? You are not suggesting it could be better used in a civilian capacity, are you?—I am suggesting it could be better used in a civilian capacity, yes. I am not suggesting such a building should not be kept in being and, if possible, used, nor am I suggesting that any development should take place on the site which would detract from the building itself. However, after having visited Greenwich in June 1962, from a naval point of view and no other, and looked round it I came to the conclusion that it is under-used. I questioned members of the academic staff and found their services were under-used and that they could take considerably more pupils without additional staff and equipment. I raised with the Civil Lord the question of why, since there is a terrific shortage of university places generally, the equivalent of university places are remaining unfilled

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[Continued.]

at Greenwich. He admitted to me both in a letter and in a debate in the House that the electrical engineering degree course could take 12 more people using the existing staff and equipment. I pressed the Civil Lord to make these places available to civilian students as there was not a naval requirement for them, and security difficulties were then raised. I said there was less of a security problem in having English undergraduates at Greenwich than in having fully trained foreign naval officers, one of whom had attended a course at the Moscow Naval Academy before coming to Greenwich. Because of the pressure I brought to bear, I think three or four civilians have been admitted to the electrical engineering degree course, but there is still under-use of that course.

Chairman.

1638. The actual figure we were given of civilians finishing off the course was 11?—Yes. The letter I received from the Civil Lord (who was then Mr. Orr-Ewing) dated 11th March 1963, mentioned that the extra number of students needed to provide the optimum loading in the electrical engineering degree course is about a dozen a year.

1639. This is the current academic year. They are mostly in their first year and the Service people are finishing off?—In 1961 the position was reached in the electrical engineering degree course that there were no naval officers at all available to take the course. Two naval civilians were taken in in 1962, and that was the only entry in that year.

1640. There might be difficulties over the Vote if it were turned into a civilian college. However, your view is that that is what should be done?—Yes, that it should be turned into a civilian college. I am saying this because Greenwich is the only Service college I know. I have not visited the others. My real argument is that the Service does not need these separate colleges. If the Service education of these men could be concentrated in one of the colleges, Greenwich could be made available for civilian purposes.

Mr. Anthony Royle.

1641. Have you discussed this with the Member for Greenwich? What are his views?—I asked him if he would join me in an approach to the University Grants Committee, but he has decided that at this stage he would rather not become involved.

Sir John Langford-Holt.

1642. What brought you to be interested in Greenwich or in this problem as a whole?—My interest in Greenwich is simply a naval interest as I usually wind up for the Opposition on naval debates.

Mr. Wilkins.

1643. I am trying to recollect your memorandum. I believe you had it in mind that on the technical side it would probably be possible to accommodate all the people who require electrical engineering training at Manadon. That is the inference?—All the naval personnel, certainly.

1644. Do you have any views about what would happen to the other officers? There are some sub-lieutenants who are training at Greenwich other than in the technical branches?—Yes.

1645. Are you suggesting where they might be looked after?—The courses provided at Greenwich at the present moment fall into two separate sections. There are, first, technical and academic courses which need university-type facilities. I am arguing that there is not a sufficient number to make full use of the existing facilities and that the naval officers could be accommodated at Manadon or, possibly, at Shrivenham. The non-university type courses (the conversion course for men from the lower deck who are becoming officers, the W.R.N.S. officer course, the War College course and the Staff College course which do not need the university technical facilities which are available at Greenwich) are taking up accommodation which could be used by people who could make better use of the technical facilities at Greenwich.

Chairman.

1646. You would keep the technical facilities at Greenwich?—I think they should be fully used.

Mr. Wilkins.

1647. Do you mean fully used by civilians?—If the Navy could fully use them I should never have raised the point. However, I have discovered by visiting Greenwich, by speaking to people and by raising about 70 questions with the Civil Lord in the House during the last two years that the Navy cannot fill all the vacancies at Greenwich. He

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[Continued.]

has admitted to me in the House and in debate that that cannot be done. It has been mentioned to me in correspondence as well, and he has promised to examine the possibility of admitting civilians. I raised a very large number of questions in 1962/63. There was a debate on the Travers' Foundation Report and in Standing Committee on the Defence (Transfer of Functions) Bill.

1648. You have visited Greenwich in this connection?—It was as a result of a visit that I first raised these matters.

Mr. Anthony Royle.

1648A. You last visited Greenwich in the middle of 1962?—During the daytime, yes.

1649. You have not done a complete tour since the middle of 1962?—No.

1650. As this is early 1964, would it be worth having another look at the situation as it is today and doing another tour of the college?—Yes. There are now 60 students less than when I was there in 1962, so I anticipate my case would be even stronger.

Sir John Langford-Holt.

1651. Do you envisage an end being made to the Service use of Greenwich?—I do not know whether the facilities at Shrivenham and Manadon are used to their full extent. The Navy assured the Public Accounts Committee a few years ago that Manadon could take up to 450 students without any increase in staff. Now the Civil Lord is saying Manadon cannot take more than 375 without an increase in staff. However, the Public Accounts Committee investigated some aspects of Manadon and were assured the numbers could be increased to 450 without any increase at all either in staff or facilities. Now the story seems to have changed: they cannot take any more students without an increase in staff and there are not enough facilities. This is different from the story the Navy told the Public Accounts Committee a year or two ago.*

Chairman.

1652. You are not inhibited, as we are, by policy. We cannot look at that as it is beyond our remit. Could I say that you look forward to the day when

* Third Report from the Committee of Public Accounts, 1960-61.

there will be a single Services educational establishment? The Services resist this on the ground that it is important a man should not only technically be efficient but also should be a fully trained member of his own Service and that therefore it is important he should do his training in a Service atmosphere. I do not know whether you have any comment to make on that?—I think some of the other Services, particularly the Royal Air Force, make greater use of existing university facilities.

1653. But they all have to undergo an intensive reconditioning period?—This is the way I argue it should be done: a man should receive his academic education at an academic institution, whether this is run by the Services or whether places are reserved in civilian colleges, and should receive his Service indoctrination in a Service establishment, preferably one in which Service men are doing normal Service work rather than one in which Service men are doing academic work. This is a different atmosphere altogether.

Chairman.

1654. You have said the War Course officers who are more senior than the others are rather out of place in the atmosphere at Greenwich?—Yes.

1655. We were told two things: first, that they had the advantage of talking to other officers who were doing other work there and that, as a small group, they could not have carried the overheads of a separate college and, secondly, that they did meet, get on quite well with and join in this stimulating atmosphere of staff people and people below staff level. I do not know whether you have any comment to make on that?—I accept it in part, but there are two separate wardrooms, one for senior and one for junior officers. I am not impressed by the fact that it is said they mix as much as all that. A very large proportion of the senior officers on the War Course and the slightly less senior ones on the Staff Course have families and homes and live in Hampshire. The vast majority disappear at three o'clock on Friday afternoons and return to Greenwich at nine or ten o'clock on Monday morning. I do not believe it is a good atmosphere in which to try to persuade young sub-lieutenants that they have

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[Continued.]

got to work hard for three years so as to gain a university degree when they see all the senior officers disappearing for long weekends every weekend.

1656. We were told there was a common mess?—There is a common dining room and, underneath the Painted Hall, there are two large ward-rooms. One is reserved for senior officers. The other is for all the officers. However, as I say, one is reserved for senior officers. The civilian staff use them as well.

Mr. Gurden.

1657. Can I come back to this point of having academic institutions specifically for this purpose? Are you aware that other work goes on at the same time as the academic work, that this is directly connected with the particular Service and general life of the Service man and that this would not be done by him if he went into a civilian university?—This is probably true but one has got to look at the breakdown of the Service men who are there. On the Staff College and War College courses are senior officers who have been steeped in Service life for years. It is not necessary to imbue them with a Service atmosphere. In the case of the people taking university-type courses, some of them are reasonably senior officers who have done several tours of duty and who have come to Greenwich to do specialist gunnery and other courses. The younger men are doing degree and naval architects' courses and the majority of them are, in fact, civilians. The biggest one at Greenwich is the naval architects' course. There are 35 students on that course and, although they have one stripe round their arm, they are all civilians. None are naval officers. Dockyard workers are given a temporary naval commission whilst at Greenwich.

Chairman.

1658. But they are not the general public?—Most of the dockyard apprentices and others have already gained degrees at an ordinary university and come to Greenwich to do the naval architects' course. However, they are all civilians and they comprise the largest single group of men at Greenwich. They are 35 civilians wearing naval uniforms. Then there is another group of foreign and Commonwealth naval officers from all over the world. Their average number is 35 to 40. I would have thought,

because of the numbers of Army, Air Force and civilians, plus a large civilian staff, it must have been a battle to maintain a naval tradition at Greenwich. But they do, in my view, seem to manage to do so.

Mr. Anthony Royle.

1659. These civilians, with a stripe round their arm, are members of the Corps of Naval Constructors, are they not?—Yes.

1660. That is a semi-naval corps. They join the corps, have a career in the corps but they are not subject to naval discipline?—No.

Chairman.

1661. They are cleared from the security point of view?—Yes. They are employed for several years in Her Majesty's dockyards.

1662. You are suggesting going further than that and making it open to civilian technical students who could use these facilities. Do you think there would be security difficulties?—I do not believe there would be any that could not easily be got over. There are security problems at the present moment. The electrical engineering department allow foreign naval officers to join the course. Sometimes a lecture is to be given on an aspect which involves security and the foreign naval officer has to be discreetly told he can have the next morning off.

Mr. Wilkins.

1663. Are you thinking in terms of a mixed-manned force and of having naval officers and civilians there at the same time? I have got the impression that you are suggesting this college would be better used as a civilian institution?—The conclusion I came to in the end was that it could be better used as a civilian institution.

1664. But you would compromise on a mixed-manned force?—Yes. That was my first idea. If the Navy want to maintain it as a college (and I understand it is their desire to do so) I think provision should be made for civilians to fill any vacancies that cannot be filled by the Navy. At the moment there are admitted vacancies and yet there are youngsters in this country who today are unable to gain admittance to universities.

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Mr. G. W. REYNOLDS, M.P.

[Continued.]

1665. Is this the only college you have visited? Have you been to Dartmouth or Manadon?—No.

Sir John Langford-Holt.

1666. Perhaps it could be filled by giving the Navy first priority and the two other Services second priority. Do you think it could be used by the other two Services and would this be acceptable as an alternative to a civilian university?—My main point is that all the degree places which are available should be filled. I do not think we can afford to waste places at what is, in effect, a university or at any of the other Service colleges.

1667. Have you assessed the quality of the staff at Greenwich? Do you think they are of university quality?—There is a professor and the normal university staff in all the various departments. I have no means of assessing how they compare with the professors and other staff at an ordinary university. However, I believe these are posts which, when they become vacant, are advertised in the normal way, and I see no reason why the standard should be lower than at a normal university. However, I am not really qualified to judge.

1668. Is there anything else you would like to say to us? Would you like to draw our attention to any points we have missed?—No, I do not think so. The reference to the Public Accounts Committee minutes is 1960/61, paragraph 2977. I started on this with

a view to getting vacant places filled and was met by the security argument. Having discussed this particular matter with various people I have come to the conclusion that the Services as a whole could probably make do with one less college than they have got at the present moment. Because I knew Greenwich I said, "Well, Greenwich could be turned into a civilian university". If I saw Manadon and Shrivensham I might say one of those could be better turned into a civilian university.

Mr. Wilkins.

1669. This is the difficulty. Greenwich is the only one you have seen. Therefore it is the only one you can think of which might be converted in this way?—From talks I have had with some of my colleagues who have visited the other colleges I have gained the impression from them that the view of the civilian academic staff of these institutions seems to be rather different from that of the Services staff. The civilian staff take the view that they are under-worked and could have more students.

1670. This is at Greenwich?—Yes. I have no doubt about that at all, and it is admitted by the Civil Lord who has said that in one course ten or twelve more people could be taken. They are in the same position in the engineering department, but I have not followed that up in great detail.

Chairman.] Thank you very much.

Rear-Admiral J. M. D. GRAY, C.B., O.B.E., Director General of Training, Instructor Rear-Admiral C. R. DARLINGTON, A.M.Brit.I.R.E., Director, Naval Education Service and Mr. E. A. SHILLITO, C.B., Under-Secretary, Naval Personnel, the Admiralty, called in and further examined.

Chairman.

1670A. Since we last saw you we have had a very enjoyable visit to Dartmouth and Manadon where, I need hardly tell you, we were most warmly entertained and given every possible facility to see the work being done there. We do very much appreciate that and thank everyone who was concerned with our comfort. One fairly small point was raised at Dartmouth upon which we would like to have your opinion. It concerned the appointment of civilian teaching staff. We were told that as

they had to become civil servants they had to be interviewed by the Civil Service Commission and that the Director of Studies was co-opted for the purpose. We were further told that that made for delays. Those who, like myself, have had fairly long experience of the governing bodies of grammar schools know how difficult it is for civilian headmasters to make appointments quickly, particularly in the fields of mathematics and science. I was, therefore, impressed by this and thought there was something in that point of view. I do not know whether you could help us?—(Instructor Rear-

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Admiral *Darlington*.) It does have first of all to go through the Civil Establishments branch of the Admiralty which deals with the complement side. That has to be agreed. We also have to agree the increase in the teaching load. When that has been agreed we ask the Civil Service Commission to put out advertisements, which they do. That takes a long time. Mr. Ghey, the Director of Studies, was particularly anxious about his staffing situation and, in fact, it did take rather longer than usual. I do not know whether I ought to say the delay arose this time because the Civil Service Commission were altering the format of their advertisements. They took about six weeks to do it.

1671. Is it a Treasury rule or an Admiralty rule that they must be appointed to the civil service rather than to the staff of the college and that this machinery must be gone through?—(Mr. *Shillito*.) If we are recruiting civilian established staff of any kind we have to bring in the Civil Service Commission, and they have to conduct whatever selection or appointment procedure is necessary. This is normal procedure in recruiting any form of established pensionable staff. Frankly, it does take a long time just as indeed (as I think you rather suggested) it takes rather a long time in other walks of life to appoint permanent pensionable staff.

Sir John Langford-Holt.

1672. This only applies to established staff?—I think so. (Instructor Rear-Admiral *Darlington*.) The arrangement we have in the case of the Dartmouth civilian staff is that I provide, if necessary, a small number of uniformed Instructor Officers to fill the gap between the number which is fully required and the number which may be required. What I mean is that you cannot exactly gauge the total number of staff. If, for instance, you established everyone and the number of students at Dartmouth fell you would have surplus staff. The safety valve is a small number of Instructor Officers. In fact, if Mr. Ghey is right up against it, which sometimes has occurred, then I can always provide an Instructor Officer to fill the gap. This is a very good arrangement.

1673. Then you are considering whether a person is pensionable rather

than the suitability of that person?—It would be both.

1674. When it is a question of loaning someone to fill a post and he is not established, a different procedure is followed?—The loan I am talking about is the loan of a uniformed Instructor Officer to fill a gap. They are permanent officers serving in the Royal Navy with suitable qualifications. This safety valve is very useful. There are two Instructor Officers at the moment on Mr. Ghey's staff.

Chairman.

1675. Would you agree there is a slight bias in the teaching profession against Dartmouth simply because it is outside the main academic career structure?—I think there is something in what you say, Sir, because Dartmouth is somewhat off the main line. The courses run at Dartmouth are different from the ones run at schools and colleges. Therefore there may be some slight difficulty in that direction.

1676. And it is likely to be even more difficult for Dartmouth to recruit its teaching staff than for a school?—I would not agree altogether with that because there are advantages in teaching at Dartmouth. It is in a beautiful position. The conditions of service are good. I think it depends on the individual. I think some people would regard Dartmouth as being an absolutely first-class appointment.

Mr. Wilkins.

1677. Some people describe it as being out on a limb?—Out on a limb, yes, as far as the main professional streams are concerned, but I do not think limbs are necessarily always bad places on which to sit.

1678. If you are the sort of person who is looking for a limb on which to sit for 30 years Dartmouth is very pleasant?—Yes, indeed.

Chairman.

1679. We do not need to tell the Services the importance of a career structure; we have been told so often that these people can only stay in one place for so long because of their career structure. In direct competition between, say, a grammar school and Dartmouth for an arts or science specialist, it is

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going to be slightly more difficult for Dartmouth?—I agree, Sir, yes.

1680. It certainly used to be the case and I think it still is the case that it is extraordinarily difficult to get a good man for a grammar school, unless you can jump quickly as soon as you hear about him. Therefore this Civil Service Commission machinery is likely to create a poorer quality staff?—It is a rather more lengthy process than it is in the case of a school whose board of governors can meet at any time and act very quickly. (Mr. *Shillito*.) I was going to say it would be a lengthy process. Perhaps some recent events have upset the Director of Studies in this respect. I do not know whether they are normal and characteristic. One would have to inquire of the experts, and I am afraid I do not know what the answer would be. (Instructor Rear-Admiral *Darlington*.) One member of his staff was killed in a motor accident and another had a breakdown. It is the sort of thing which can happen at any school, I agree, but it is very unfortunate that these should have occurred at the same time.

Mr. *Gurden*.

1681. Could you spotlight the specific instance you are talking about and how long it has taken to make these appointments?—One of the staff additions was wanted at Easter but will now occur in September next, so there has been a delay of one term. In the meantime Mr. Ghey has taken on to the staff an Instructor Officer who is very well qualified indeed and who happens to be living quite close. This is quite a good arrangement.

1682. So far as you know, this is the worst case?—I think the combination of circumstances during the last few months has been unusual, yes.

Chairman.

1683. We went to two places, one of which was employing practically entirely naval teaching staff whilst the other was employing practically entirely civilian teaching staff. Both were strongly convinced that theirs was the right practice. Is there any logical distinction to be drawn between the two methods?—(Rear-Admiral *Gray*.) Both of these establishments have grown up in this way. Manadon has always had uni-

formed Instructor Officers by tradition and Dartmouth has always had civilian teachers by tradition. Dartmouth, of course, used to take boys from the age of 13 until the age of 17 and I think it was entirely logical at that stage that civilians were the right choice. I also think it is logical to back a good horse in both establishments. The alternative is to have the complete opposite. Uniformed Instructor Officers at Dartmouth would cause a major upset of a very happy tradition and would not really produce any very great compensation. I believe that at Manadon one could say the same except, perhaps, that at Manadon it would be extremely difficult to get Honours degree civilians for the university courses. We can, though, get them from the uniformed Instructor branch. That is, basically, one set of reasons why this has grown up. I think there are other reasons upon which other people can comment.

Mr. *Woollam*.

1684. Over a span of years any method evolves its own justification?—Yes, and I believe this to be a sound and logical argument. Why upset a thing for the sake of upsetting a thing unless you can prove you are going to get a very much better answer the other way round? I do not think you could or would.

Mr. *Wilkins*.

1685. I thought Manadon was originally part of the dockyard?—The Naval Engineering College was originally at Keyham. (Instructor Rear-Admiral *Darlington*.) It was originally in the dockyard.

Mr. *Gurden*.

1686. There is such a vast difference between the two colleges?—(Rear-Admiral *Gray*.) There is a vast difference, inasmuch as one trains engineers to degree standard at Manadon whereas at Dartmouth although first year degree work is done during the cadets' third year at the college no degree is gained at the end of the course.

Chairman.

1687. The hidden assumption underneath your question, "Why interfere?" is that the two are equally expensive. It is extraordinarily difficult for an outside committee ever to compare Service

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and civilian staff. We found that was so in other inquiries, particularly in the case of the dockyards because of the complexity of the emoluments. Have you made any clear costing assessment of the advantages of civilian and Service staff?—There was an investigation into this in the Admiralty before any of us were in our particular jobs. I am sure that the financial aspect was looked at then.

1688. Could you give us a paper on that?—(Mr. *Shillito*.) It would have to be rather broad because, as you yourself have pointed out, it is not always easy to make a straight comparison between civilian emoluments and those of a uniformed officer which vary according to the uniformed officer's particular circumstances. But we will certainly give you a note on this.

1689. You will no doubt agree it is a matter which we ought to look at if, as you say, it is largely fortuitous which type of person is to be found in the different colleges. We ought to look at the question of the comparative costs?—(Rear-Admiral *Gray*.) I agree that economy is one of the many facets.

1689A. Assuming that both are equally efficient, another facet is that you stir up trouble if you start interfering too quickly?—Yes, if it is change for change's sake.

Mr. *Wilkins*.

1690. And rank would have something to do with it?—(Instructor Rear-Admiral *Darlington*.) No. There is a very strict hierarchy. On the academic side there is the Dean, who is a Captain, and seven or so Commanders, Lieutenant-Commanders and Lieutenants. The Naval Manpower side takes a very keen interest in this, and if I said "I will appoint six more commanders" I assure you this would not happen.

1691. I was thinking of making a comparison of the costs?—Yes, you are quite right.

1692. The type of appointment is a fairly constant factor, so it would be comparable?—Yes, the Dean corresponding to the Director of Studies and so on down the line. (Mr. *Shillito*.) We will certainly give you a note on that.

Chairman.

1693. At Manadon we saw the workshops and we also saw the equipment

in the workshops. We were told the workshops were there to give practical training in the use of tools to men who ultimately will be taking up positions of responsibility over craftsmen. I understand that my colleagues who went to Henlow were there told they were sending their men out for a sandwich course. Is there any reason why that should not be done at Manadon?—(Rear-Admiral *Gray*.) You are suggesting they might go to the dockyard?

1694. That is the obvious place. We have looked at the dockyards very carefully and we were impressed by what is done there?—I think one difficulty would be the loading on the dockyard workshops. They are not geared up, except in a comparatively small way, as training workshops. They are there to repair and build ships.

1695. They have a first-class technical school?—Yes. I said in a small way; they do train their own technical apprentices. However, I think to land on the dockyard a large number of sub-lieutenants—say, 200 or 300—to do basic workshop training would require a large expansion of the dockyard training facilities. I do not think it would be nearly as efficient as having the workshops in the establishment.

1696. Presumably you could scatter them over the dockyards. After all, Henlow have not got, as you have, ten factories available and, secondly, you have the particular problem that many of the Manadon people will presumably be going into the dockyards?—No, not immediately. They will go as trained engineers into ships.

1697. Maybe not immediately, but in the course of their career they are the sort of people who will land up in the dockyards?—I agree they would arrive in managerial posts in the dockyards but they would not arrive in the workshops.

1698. Yes. They would arrive in managerial posts in the dockyards, which strengthens the argument that they ought to get some idea of what life in the dockyard is like. The civilian apprentice rubs shoulders with the men he is ultimately going to supervise; so also do the superintendents of the dockyards. Therefore there is a case for saying that the young naval engineer who is going to do the same sort of work should, by means of

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a sandwich course, see what life is like in the dockyards in much the same way as you make him see what life is like in a ship by sending him to sea?—I take your point, but the technical officer in a ship does rub shoulders very closely with the dockyard. He does this when his ship comes in for repairs, refitting and the like. He works very closely with the dockyard and knows exactly what goes on in it. There is no question of there being any separation; they work absolutely hand in glove.

Sir John Langford-Holt.

1699. Perhaps "they work absolutely hand in glove" is an overstatement?—No, I do not think so. They work hand in glove with the dockyard throughout the refitting—very much so.

1700. Is it not usually a state of unarmed combat?—No. I think you have got the wrong impression. It is not a state of unarmed combat between the ship which is being refitted and the dockyard. In fact, the ship does a lot of the work. The dockyard will apportion, when a ship is being refitted, certain work to be done by the ship's staff, and it is very closely co-ordinated.

Chairman.

1701. Coming to Greenwich, we wondered whether any consideration had been given to moving the War College rather nearer to the other staff colleges?—The War College?

1702. Yes, and possibly the Staff College as well. They are both rather a long way away from the other Service colleges?—I think I can say quite clearly there has been no question ever of moving the War College. The question of moving the Staff College nearer, say, to Camberley and Bracknell has on many occasions been looked at but the difficulties of moving (for instance, the capital cost involved) outweigh the obvious advantages of having it near London in a naval establishment. I do not think there has been any formal investigation other than inter-Service discussions.

1703. We have been struck by the fact that the War Course takes a different age group from that in any of the other Service colleges, and we wondered what, really, is the justification for keeping it?—I think the main justification for the War Course is that there is an increasing

requirement for the senior ranks in all three Services—and I stress all three Services—to examine and study higher strategical and tactical thought and weapon performance. I am quite sure that this is a growing need in all three Services. The War Course is, I believe, very well suited for this job and I foresee a greater inter-Service use being made of it.

Mr. Woollam.

1704. With a diminishing role for the other forms of training?—There is no other form. The nearest approach to the War Course is the Imperial Defence College. Its concept is very different but it does take officers of the same rank. It is no closer than that.

Mr. Wilkins.

1705. Would you care to express your opinion upon whether the War Course could be accommodated within the I.D.C.?—I do not think it could, for two reasons. One is that it is a six months' course only and the I.D.C. holds a twelve months' course. It is a higher security grading and that, in itself, would make it difficult.

1706. The I.D.C.?—No, the war course, and it is mostly confined to serving officers in the armed forces. It does not take any people from the new Commonwealth. The I.D.C. is rightly taking a growing number of new Commonwealth people. We do, of course, take old Commonwealth countries.

1707. There would have to be some change of user in order to accommodate the additional students if it were decided to telescope the two?—The I.D.C. is running to maximum capacity. I do not think even if practical considerations only were involved the I.D.C. could take another 24 students twice a year. I do not think it could accommodate them, nor, I believe, would the I.D.C. wish to extend the numbers on the course.

1708. Could we put it this way and leave it to you whether you answer it or not? I think some of us have felt concern about the numbers of Commonwealth students who are involved in all the colleges, whichever Service it may be?—We are talking about the new Commonwealth rather than about Australians, New Zealanders and Canadians?

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1709. We are talking about all of them because it appears that the numbers are greater in some colleges than in others. We have been thinking quite a bit about this as we have gone round and I know I speak for some of my colleagues when I say we would really like to hear greater justification for this programme. This is a policy question and I am wondering whether it is fair to ask you to express a view or not. We have been told the intermixing of our people with theirs is a great advantage?—I think the Ministry to which this question should really be put is the Foreign Office and the Commonwealth Relations Office.

1710. Because the representations come from them?—Because, generally speaking, we are asked by the Foreign Office or by the Commonwealth Relations Office whether we can take so many people on a particular course. We examine the matter and try very hard to accommodate these people because I think it must be a good thing from the country's point of view to encourage new Commonwealth and emergent countries to think our way. Having said that, I do not want to get too involved. I will add, though, that my organisation is in the process of putting the whole question of Commonwealth and foreign training before the Board of Admiralty as a statement of some of the difficulties which arise in this sort of training. As I say, I would not like to get too involved in this.

1711. No. What we are seeking to do is to discover the right place to make these inquiries?—We are definitely examining this within our own Service and I believe (because I have heard this from the Ministry of Defence) that the other Services are also doing the same.

1712. In one or two instances the numbers are fairly substantial?—Yes, they are.

Mr. Woollam.

1713. If these demands were not made upon you by the Foreign Office and the Commonwealth Relations Office the economics of the whole of this level of training would look different, at least in your Service?—In so far as we would not be required to do this training, yes, but it is fair to say we try not to employ additional instructors or officers purely for these people but try

to absorb them into our existing organisation.

Mr. Gurden.

1714. Surely the figures have reached such proportions now that the number of staff and accommodation is pretty seriously affected?—That is why we are examining the problem at this moment in detail so as to satisfy ourselves we can absorb them and are not running into difficulties as a result of doing what we have been asked to do. But it is a complex question.

Chairman.

1715. At Dartmouth there is a third year which consists of overseas sub-lieutenants only?—(Mr. Shillito.) It is a combined third and fourth year. (Rear-Admiral Gray.) A special course is run for them.

1716. Does that not mean calling upon more instructors?—(Instructor Rear-Admiral Darlington.) There are 17 at the moment. (Rear-Admiral Gray.) We have not made any allowance for extra Instructor Officers at Dartmouth solely for foreign or Commonwealth training purposes.

1717. If you are saying this is really a diplomatic question and, therefore, one that the Foreign Office and the Commonwealth Relations Office together could give guidance on that is one thing, but the argument has been raised that in the modern world a Service officer inevitably is rubbing shoulders with officers from other Services, from N.A.T.O. and from the Commonwealth and that therefore the more cosmopolitan the environment in which he is brought up the better the officer he is going to be in the future. Do you discount that?—No, I do not discount it. I think it is a very good byproduct of training students from other countries. However, I believe that basically this is a foreign policy question or a Commonwealth policy question. I do think, though, there are many advantages, in the same way as there are obviously disadvantages in undertaking this training.

Mr. Wilkins.

1718. I think what we are really trying to discover are the positive advantages we are getting as a country out of the time, the effort and the money we are spending?—I think this is a ques-

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tion which could best be put to the Ministry of Defence. It affects all three Services.

Mr. Gurden.

1719. Recognising what has just been said about where the responsibility lies, do you feel you are fully aware of the problems which are created, particularly by the difference in the qualifications of the incoming overseas students? They seem to be very much less than those of our own students. This again seems to be unfair and also creates difficulties within the colleges?—I am fully aware of all the difficulties and we are, at this very moment, assessing the whole training, which we are going to present to the Board as a statement of fact.

Mr. Woollam.

1720. Are you assessing it as a matter of policy or merely as a factual review of the year?—It will not be of the year; it will be a review of the training as it has built up. I would not like to prejudge what the final paper will look like but it will go into all facets of Commonwealth and foreign training.

1721. Perhaps I could re-phrase the question. This is not an assessment you make each year. You are therefore making the assessment for a special reason?—Yes, for a special reason; these difficulties and problems arise from so many different sources that it is, in our opinion, time we reviewed the whole situation.

1722. To that extent it might end up in a policy review?—Yes. (Mr. Shillito.) I think it would be premature to suggest it is going to finish up in a policy review. What is happening at the moment is that we are carrying out an internal review for the Board of Admiralty. We are looking into the difficulties that are being encountered, primarily in order that we may know how we may deal with increasing demands upon us for this type of training. It may very well be merged later into a wider policy review. However, I think it is too soon to say that. In any case, once we get on to this aspect in real depth we would be bound to suggest that you question the Ministry of Defence about it because it concerns all three Services.

Mr. Wilkins.

1723. What steps are taken to ascertain the academic levels of the overseas students? Is it done from this end or from their own end? We saw one class at least which one might almost say could be compared with a primary class being prepared to go into the higher realms?—(Rear-Admiral Gray.) We get in touch with the country concerned, usually through the London office of the High Commissioner, and basically we ask three things: (i) that we shall know in plenty of time who is coming; (ii) that they shall have a general educational standard as near to our own requirements as possible and, perhaps most important of all, (iii) that they shall be able to talk English. Having said this is what we set out to do, we do not always manage to get people who measure up to all three requirements.

Mr. Woollam.

1724. Do you have the power to recommend that particular pupils should return home if it is quite clear they cannot get the best out of the course?—We have done so.

Mr. Gurden.

1725. You are aware, no doubt, that some students have had to be sent off to ordinary schooling before they can begin training?—(Mr. Shillito.) Yes.

1726. Secondly, you used the word "increasing". This fits in with the impression I got that this problem is an increasing one. Is that so?—Yes, and there is an increasing demand for this training. (Rear-Admiral Gray.) There is bound to be. To take Africa alone, as each part of Africa emerges from under British rule it generally speaking needs to build up its own armed forces, and I think it rightly turns to us for help.

Chairman.

1727. Mr. Gurden was, I think, asking you whether what one might term the language deficiency proportion is increasing or whether, as the total number is increasing, there are more who are having difficulties with the language?—I do not think I quite follow the question. Are you asking whether the difficulties are increasing or whether the numbers are increasing? I believe this is an expanding

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market. The emergent countries and, perhaps, foreign countries are coming to us for training and we help to train their navies. That is what I meant by "increasing".

1728. The question was whether the proportion of students who do not have an elementary grasp of English is increasing or whether the total intake of overseas students is also increasing?—It is difficult to be specific. (Instructor Rear-Admiral *Darlington*.) It depends on the batches who arrive.

1729. Does it?—Yes.

Mr. *Woollam*.

1730. If you have a student from an existing British colonial territory how do you classify him? Do you classify him as old Commonwealth, new Commonwealth or Royal Navy? How is it done?—(Rear-Admiral *Gray*.) The old Commonwealth is the Royal Australian Navy, the Royal New Zealand Navy and the Royal Canadian Navy. The new Commonwealth countries are those who have gained independence—Pakistan, India, Ghana, etc.

1731. How do you classify a student who arrives from an existing British colonial territory which is not old or new because, by definition, it is not independent? How far is this increasing demand being made on you by new Commonwealth territories a reflection of the fact that these territories in the past could not make demands on you because they were colonial territories? Do these statistics produce a slight deception because of the fact that the status of these areas has been changing?—(Mr. *Shillito*.) There are certain facilities (I could not give details without notice) for colonial, in the old sense of the word, young men to get into the Royal Navy proper. (Rear-Admiral *Gray*.) I can tell you of one. I had in my last ship a St. Helenan steward. He is a member of the Royal Navy.

1732. What this suggests to my mind is that, broadly speaking, so far as the new Commonwealth (in the sense of recently independent former colonial territories) is concerned, this is largely a new demand created by the fact of their newly gained independence?—Yes.

1733. Whilst the colonies are still not sending many to be trained and just the odd one or two are being recruited?—Yes, this is true.

Chairman.

1734. At Greenwich we saw two civilians in the electrical engineering course and two civilians at Manadon. Is the introduction of civilians likely to increase?—(Instructor Rear-Admiral *Darlington*.) At Manadon?

1735. Generally. I was quoting those as two examples of the Navy giving educational facilities to civilians. I was wondering whether that was a trend which was beginning to emerge?—The people you saw at Manadon would be constructors. Manadon will be totally confined to the Royal Navy except for the constructor course which has been going on for a long time. The answer in the case of Greenwich is that there will be an increase in the number of civilians. This is the old question, which you know well, of the transfer of uniformed naval people from Greenwich to Manadon. We are endeavouring to put more people into the mechanical engineering and electrical engineering degree courses. Also the number of civilians at Greenwich taking a nuclear course has increased very sharply in the last year and will continue to increase. In fact, there are something like 30 civilians doing the nuclear course at this moment. They have come from Rolls-Royce and other contractors who are dealing with the Polaris programme. So the answer is certainly yes, Sir, at Greenwich and no at Manadon.

Chairman.] Thank you very much.

WEDNESDAY, 8TH APRIL, 1964.

Members present :

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.
Sir John Langford-Holt.

Mr. W. A. Wilkins.

Mr. S. BARRACLOUGH, Defence Material Division, Mr. P. F. CLIFTON, Defence and Overseas Personnel Division, and Mr. J. E. HERBECQ, Defence and Overseas Personnel Division, Treasury, called in and examined.

Chairman.

1736. I would like to thank you for coming along this afternoon. We did not give you very long warning that we were going to hold this meeting and we very much appreciate the fact that you have been able to make yourselves available today. We want to have a general discussion on some of the problems we have picked up in our inquiry. The first I would like to raise, a very familiar one to this sub-committee, is the problem of staffing and the comparative advantages of civilian and Service staff. Whilst I recognise that there is no special virtue in standardisation for its own sake, could you tell us what inquiries have been made to compare the effectiveness of civilian lecturers and teachers and Service lecturers?—(Mr. *Herbecq.*) Effectiveness, in terms of the quality of the training at the colleges, is a matter which we in the Treasury would leave very largely to the Service departments themselves. We have no special expert knowledge which would enable us to exercise a very useful independent judgment on that aspect of the work of the colleges.

1737. What about the comparative costs?—We have an interest in that aspect, certainly. The conclusion one comes to depends a little on the basis upon which one makes the comparisons, but by and large there is not, in fact, a great deal of difference, so far as we can see, in the cost of Service teachers as opposed to civilian teachers.

Mr. Wilkins.

1738. Are you able to make a comparison between the costs of Service and civilian teachers if you are not also interested in the quality of the teaching? You would not be able to draw a comparison then, would you?—I think we

can certainly make an assessment of the grade of Service instructor used and the equivalent level of civilian instructor who would be needed. Whether the individual instructor in one case or the other is a better teacher and a more efficient instructor is a matter which we would not feel ourselves able to assess. In other words, we would feel ourselves able to assess the correct grading of the post but we would not concern ourselves greatly with the quality of the individual put into the post, as it is this aspect upon which we are not equipped to express an independent view.

Chairman.

1739. We were told by the Admiralty that a paper had been prepared upon this matter some time ago although they said it was not during their time. Are you aware of that inquiry?—I beg your pardon. A paper on which aspect of this?

1740. On the comparative costs of civilian and Service staff?—I am not aware of the Admiralty's paper. We have looked at some figures of comparative costs which have led us to the view that the difference is fairly marginal one way or the other.

1741. That takes into account emoluments, such as married quarters?—We have taken into account such questions as lodging allowances, marriage allowances and so on. We have not looked at basic salaries in each case.

Mr. Gurden.

1742. The picture has changed considerably, I gather, and is, in fact, ever changing. The scale of pay of Servicemen has been rising rapidly. Could you tell us when your comparisons are made? Are they made at certain

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intervals or when appointments are made?—Within the last day or two I have had another look at this and have made a comparison between the Royal Air Force rates of pay at Henlow (these are the latest rates of pay, including the new figures which has just come into effect) and the rates of pay recommended recently by the National Incomes Commission for the staff of Colleges of Advanced Technology. Without necessarily being committed to the view that the salaries recommended for the Colleges of Advanced Technology would be exactly right for Henlow if it were to be civilianised, we have found that there is a very close equivalent. Indeed, at the moment the C.A.T. rates are slightly higher than the Service rates.

Chairman.

1743. Would you regard the question of whether a man gathers more experience as a result of being on a long term contract rather than on a short tour of duty as a question which is within your sphere of knowledge, or is that a matter you would leave to the department concerned?—It is a matter in which we take some interest, but on the whole we would not place a lot of pressure on one of the Service departments to act against its own better judgment. I believe the Service departments have different views on this very point and are not themselves entirely of one mind. We believe that there are pros and cons on both sides. We would not attempt to press a particular point of view on the Service departments since, as I say, we see no decisive financial advantage one way or the other.

1744. Could you tell us something about the part the Treasury plays in the inspection of colleges?—The Service departments have their own staff inspecting machinery and carry out staff inspections according to their own programmes. In my division there are four staff inspectors to cover the whole field of the new Ministry of Defence. We receive copies of the programmes of the Service departments and we decide which of their inspections we would like to join in on. We are also quite free to make separate proposals of our own if there is a field where we feel there would be an advantage in carrying out an inspection. We also arrange, where necessary, *ad hoc* inspections of specific posts where there is a doubt about the

grading of those posts, where there is a proposal for an increase, or where we feel there might be some room for economy.

1745. Have you intervened in any of the institutions with which we are concerned?—We have made a number of Treasury inspections over the past few years at several of the colleges, yes, Sir.

1746. Were they directed to any particular matters or generally in regard to standards of grading?—I think both, Sir. We have made one or two general inspections and I believe we have also made inspections of particular posts. (Mr. Clifton.) Yes. We have joint routine staff inspections. We send a staff inspector along to join the team at a particular college. I myself have been to Dartmouth and Sandhurst to review the number and cost of the academic staff. I went to Shrivenham in 1962 on the same sort of job.

1747. When you looked at the number of staff did you have available to you the experience in civilian colleges?—No, Sir, except in the case of Shrivenham. The staff inspector who was leading the team there was Professor Pryce, the Wills Professor of Physics at Bristol University and Chairman of the Advisory Council. He was making an inspection of the academic staff and I joined him.

Mr. Gurden.

1748. On whose behalf was he carrying out that inspection?—He had been invited to do so by the War Office.

1749. Do you feel that there is value in the Treasury or other departments joining in these investigations as compared with inquiries instituted purely by the War Office?—There is always value in the cross-fertilisation of standards and gradings. There are practical difficulties, I think, in arranging a straightforward staff inspection to run concurrently with an inspection of the quality of the teaching. The two types of inspection are so different that it would be difficult to have them running concurrently.

Chairman.

1750. Have you looked at the use made of equipment such as laboratories and expensive scientific equipment?—(Mr. Herbecq.) Yes, Sir. We look at this particularly in the context of proposals to provide new buildings or to

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replace existing buildings. When proposals of this sort come along we certainly have a pretty close look at the use which is being made of the existing facilities in order to satisfy ourselves that there is a case for any further additional provision to be made.

1751. We had some difficulty in satisfying ourselves, for example, of how far the use of workshops or laboratories conformed with what would be expected in a C.A.T. or technical college doing similar work. Have you been able to look at that?—We rely a great deal on advice from the Ministry of Education on this sort of thing. When we receive new proposals either we ourselves obtain the advice of the Ministry of Education or we ensure that the department putting the proposal to us has first submitted it to the Ministry of Education for their advice.

1752. And what impression have you obtained from those consultations about the degree of use which is being made?—I think we have found this a helpful exercise. I am not aware that we have been able to refuse the construction of a new building on the strength of advice received from the Ministry of Education, but it has certainly helped us (and, I think, the Service departments as well) to establish good standards.

1753. Of course that would give you a picture of the situation when the cup is full and would tell you whether it is going to overflow or not but it would not tell you when the cup is half full. Cases where they are under-using their equipment would probably not come to your notice because it would be recognised that they have not got much of a case. We are really concerned about the extent to which expensive equipment or space is under-used because of the small numbers doing particular courses in some of the colleges?—I think once the equipment has been provided and is there it is, perhaps, a little difficult to do much about it which would really be effective. That is why we tend in the Treasury to concentrate upon examining proposals for new facilities; this is the point at which we feel we can make some control "bite". The maintenance of existing buildings and equipment is a matter which we have found it right very largely to delegate to the responsibility of the departments.

1754. We discovered at Henlow that an attempt is being made to analyse the use of laboratories, and at Cranwell we saw the mechanism they have for keeping control over flying time, which interested us very much. But there did not seem to be any comparable work being done in the other colleges and I wondered whether that was likely to develop?—As you say, Sir, they have been doing some new work at Henlow in this field. We in the Treasury would certainly hope to see this spread, and we hope that the establishment of the new Ministry of Defence, with the whole organisation under central control, will facilitate this.

1755. Do you have any direct connection with O. & M. teams at Command level?—Not a direct connection, no. The Treasury O. & M. branch is available to departments to advise them on new techniques, to train their staff and to assist them upon request. However, apart from that we leave the departments to run their own O. & M. machine.

1756. Are you satisfied that they are used enough, that they are brought in enough and that their work is effective when they are brought in?—We are certainly anxious to see them used to the fullest practicable and profitable extent. We certainly are anxious to see that their standards of work are high. We have no reason to think they do not maintain good standards of work. There is close liaison between departmental O. & M. branches and our central branch in the Treasury.

1757. What about the Command branches? I understand there are three levels: your level, the departmental level and the Command level?—Yes, that is so. I believe that there is less direct contact between the Command O. & M. people and the Treasury. They are, nevertheless, in touch with our central services, in that they are aware of what advice we can offer and what help we can give.

1758. Are they entirely dependent upon invitation before they can make an inquiry?—Within their own organisation?

1759. Before a Command O. & M. team can move into a college to look at some particular aspect of the work does it have to be invited by the people at the college to do so?—I understand that within the Commands there is a

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steering committee which decides the programme for the Command O. & M. teams and that on this committee there are representatives from the O. & M. branch as well as from the Command. So the O. & M. branch is free to make suggestions and has some influence in determining what the programme is to be. The formal position, therefore, is yes, they do go in upon invitation; but this, I understand, should not be taken to mean that they have no influence at all on the programme of work which they are asked to carry out.

Sir John Langford-Holt.

1760. You mentioned earlier that when there are certain proposals which come within the educational sphere you consult the Ministry of Education. Therefore, the situation is that the college consults both you and the Ministry of Education. Would it not be more sensible if the Ministry of Education consulted direct with the college in the first place?—I think I said we consult with the Ministry of Education or ensure that the department have done so. In point of fact, it is now very common practice for the department to do this before they come to us.

Mr. Gurden.

1761. The number of hours put in in Service colleges seems to me to be much greater than in the civilian field. When we were talking about the use of equipment we did not mention buildings, but this applies to them also. Have you looked at this question of productivity?—We have not gone into this in any detail, no. Our understanding is that there are difficulties in the colleges, in the sense that they have to run a fair variety of courses, often with not a large number of students on any one course, and considerations of this sort make it difficult for them to achieve the standards which one might find in some of the civil educational establishments.

1762. The number of hours put in appears to me to be very high. Have you any views on the charges made for foreign students and the subsidy given to them?—The system upon which charges for foreign students are based is known as extra costs. The general principle underlying it is that the department should recover its out-of-pocket

expenses for having these students but should not seek a contribution towards its overheads.

Chairman.

1763. If you compare Bracknell and Camberley, which are very similar institutions, there is a very great difference in the average costs per head of running each?—Yes.

1764. But from the point of view of the charges made it is a standardised charge?—I have had a look at these figures, and I think this may be based on a misunderstanding. According to the inquiries we have made of the Service departments, I think the charge is £600 for overseas students. At Camberley this is an inclusive charge—there is no separate charge for the maintenance of the students—whereas at Bracknell, in addition to the £600, a charge of £300 is made for the student's maintenance. Therefore the two strictly comparable figures would be £600 for Camberley and £900 for Bracknell. I think this is in proportion to the estimated total cost per student at the two colleges.

Mr. Gurden.

1765. Do you know whether the intake of foreign students is being deliberately extended? I saw in the Press a day or so ago something which led me to think that, at any rate, this policy is deliberately being extended and foreign students are being invited to come for some other courses which are being put in. Do you know anything about this?—I am not aware of any new policy which has been adopted with the deliberate purpose of increasing the number of foreign students at these courses. This has not come to my notice.

Mr. Wilkins.

1766. Does the Treasury have any influence at all over the policy of inviting foreign students, or does this reside within the Foreign Office? Does the Treasury have any say?—It is a matter in which we necessarily take an interest because matters of finance are involved here. We are concerned not only that the charging system should be right but also with any proposal, say, to expand a college so as to provide additional accommodation for overseas students. Regarding the broad case for taking foreign students at all, this requires a wider political view in which

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the Foreign Office would take a close interest and also the Service departments themselves who welcome a proportion of foreign students in their colleges.

1767. But in one case I believe the proportion was quite high. It was not an overwhelming proportion but I believe in one case there were 80 foreign students?—The proportions vary quite considerably from college to college.

1768. The Treasury never makes any observations about this or questions the colleges?—We would have no objection, unless there were some major financial proposal which arose as a direct result of the admission of foreign students to these colleges.

Chairman.

1769. But the negative aspect of that would be whether there might be a possibility of economies. You have dealt with how you would look at this problem if you were considering an extension. Is it not arguable that the staff college at Andover, for example, could be closed but for the presence there of foreign students?—We are interested in the position at Andover and I think we are aware of the circumstances there. We know that 50 per cent. of the students at Andover are overseas students. The policy of the Air Ministry has been to separate some of the overseas students and train them at Andover. The accommodation at Andover is old. It is a small college which is run in close conjunction with a larger Air Force unit, so its overheads are relatively small. At the moment we are not convinced that there would be any striking economies to be achieved by the immediate amalgamation of Andover with another college. If it were to be closed the first thing we should hear about it would almost certainly be a demand for new buildings elsewhere to house the students and instructors who are at Andover. If a proposal were put to us to provide new buildings at Andover in order to enable the college to continue there this would be another matter and we should want to look at it very carefully indeed. We should need a great deal of persuading that there is a case for maintaining a separate college at Andover and certainly a great deal of persuading that a separate college should be maintained there

solely in order to enable the training of overseas students to continue.

1770. If a proposal were submitted to you for further building at Bracknell, would you consider whether it might be more economical to include Andover in the extended Bracknell?—We have got an eye on this one. We are inclined to the view that at some stage, sooner or later, the right course would be to amalgamate Andover and Bracknell. It is a matter, I think, very much of timing. If a new building were to be put up at Bracknell that might be the opportunity to raise this question and consider whether some economies could be achieved by bringing Andover in and making use of the new building.

Mr. Wilkins.

1771. Are the Treasury interested in whether there is any overlapping as between two colleges like Bracknell and Andover? Is this a matter of interest to the Treasury?—Indeed, Sir, yes. We are aware that to a considerable degree Andover and Bracknell are doing the same sort of thing, and this is where the case for amalgamation lies.

Chairman.

1772. Looking at Bracknell and Camberley as, apparently to the outsider, two comparable institutions, when we asked why the costs should be very much greater at Bracknell per head of student than at Camberley we were told it might be due to differences in rank and, therefore, to higher standards for the students in the way of food, accommodation, services and so on. Do you know whether that is the main reason for it?—We understand this is one of the main reasons, yes, Sir. The students at Bracknell are normally a rank higher than the students at Camberley. They tend to go to Bracknell at about squadron leader level, whereas they go to Camberley at about captain level. This reflects on the rank of the instructing staff and it also affects to some extent the number of supporting personnel required. I think there are one or two other factors which also affect this difference in cost. For example, there is a smaller student population at Bracknell than at Camberley; and Bracknell are fully self-supporting whereas Camberley have certain services provided for them from Sandhurst. These seem to us to be the main factors which lead to the higher student costs at Bracknell.

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1773. We have been told that there is this difference in rank and yet, in trying to compare ages as opposed to rank, it is very difficult to find a difference in the average age between the people in the different staff colleges. Are you really satisfied that there is a substantial difference? It appears to be accepted that the age of the Army students is much lower than the age of either the Navy or the Air Force students, but when we looked at the figures and reviewed the situation we did not find very much difference?—I confess that we have not looked at the ages. The Army have told us that their normal rank for posting to Camberley is captain and the Air Force have told us that theirs is squadron leader. We have not pursued the matter beyond that.

1774. The age at Camberley is 31 to 34. I think we were given an average age for Bracknell?—I am looking at the paper on Service Pay and Pensions to see whether it gives assistance on this matter but I do not think it does.

1775. We were told at Bracknell that they tend to defer their entry until they are about 31 or 32 and that the average age of the present course is 33½, which is exactly the same as Camberley, and we were left in a state of some bewilderment as to what exactly this difference is?—We, I confess, have looked at the point of rank but not age. If there is a difference in rank it would make some difference to the costs.

1776. Is that an argument for saying the age at the other staff colleges should come down to the Camberley level?—I think we should have to leave it very much to the judgment of the Ministry of Defence as to the right age and rank for sending people to staff colleges. There may well be good reasons for having some slight difference between the Services in this matter.

1777. When the decision was taken to move Henlow to Cranwell someone must have done a lot of sums; they must have measured the comparative costs, the advantage of moving and so on. Have similar exercises been carried out with regard to Greenwich, Manadon and Shrivenham in connection with their costs?—We have looked at the costs of the individual colleges and compared them. We did an exercise on this two or three years ago. I do not think that we have done an exercise to establish

what economies would be achieved if, for example, one were to contemplate amalgamating two colleges of different Services. Shrivenham and Manadon were the ones you mentioned.

1778. Or Greenwich and Manadon?—I do not think we have looked at this. (Mr. Clifton.) We have not done this exercise. (Mr. Herbecq.) The one amalgamation we have taken some interest in, because we think there are possibilities in it, is the amalgamation of Andover and Bracknell.

1779. Do you think that this question of getting over the Service boundaries by providing technical education of the Manadon and Shrivenham type is something which is likely to come into the picture with the new Ministry of Defence?—I think it is possible, Sir, yes.

1780. When we were at Dartmouth we found a good deal of complaint about the appointment of civilian staff?—Yes.

1781. Is it a matter of absolute policy that the teaching staff at these institutions should be members of the civil service appointed by the Commission?—They are, in the main, established posts in the civil service. This being so, permanent appointments to them must be made through the Civil Service Commission. The establishment has a certain amount of discretion to make temporary appointments without going through the Civil Service Commission.

1782. Looking for a moment at the temporary appointments, have you considered whether it is better to appoint civilians on a temporary basis or to make up the numbers by bringing in Service instructors? Both, I gather are done?—We have looked at this. (Mr. Clifton.) When we went to Dartmouth the Admiralty representatives included a representative of the Director of the Naval Education Service. The point about this is that they find it very much easier to post an instructor officer to fill quickly a gap at Dartmouth rather than to recruit a civil servant temporarily. That takes some time. They have, for their own convenience, filled one or two gaps with instructor officers.

1783. They do both at Greenwich. They have some unestablished civil servants and some Service instructors?—Yes. It is normally our policy to keep a small temporary fringe. We

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establish up to the maximum foreseeable limit but we rarely have 100 per cent. establishment, in order to reduce the possibility of having spare people on our hands if redundancy occurs.

1784. Have you views as to which it should be: whether it should be Service or whether it should be unestablished civilians?—Once the decision has been taken that academic services should be provided by civilians I think it would be better to stick to manning entirely on a civilian basis, but we do accept that in emergencies they can post quickly a Service officer who can cater for those needs.

1785. What is the advantage to the civilian lecturer if he is established in the civil service as opposed to having some kind of appointment to the college?—(Mr. *Herbecq.*) As an established civil servant he comes within the terms of the Superannuation Acts and is, therefore, qualified to receive a pension at the end of his service. He also has greater security of tenure in the event of redundancy. Temporary staff are the first to be dismissed before one contemplates the termination of the appointments of permanent staff. In general we ourselves prefer not to engage temporary staff for appointments which are long term or indefinite, since when we have temporary staff with long periods of service behind them they inevitably feel that they have some entitlement to establishment as their superannuation depends on this.

1786. It does not enable them to have any greater confidence in gaining promotion within the civil service. When recruiting for senior jobs at Dartmouth, for example, I gather that they go to the open market and not necessarily to the people who are in other posts in the civil service?—I am not aware of the situation at Dartmouth in particular, but the normal practice in the civil service would be to look to your existing staff in the first place to fill a vacancy in a more senior grade and to turn to the open market only if you felt you had no-one immediately available on your staff who was fully qualified to fill that vacancy. It may be there are special reasons of which I am not aware at Dartmouth for making a more common practice of recruiting direct from outside for the senior posts.

Sir John Langford-Holt.

1787. When you said what the advantages are in appointing established civil servants as against temporary staff, the reasons you gave were the advantages to the individuals concerned. Are there advantages also to the college concerned? I must confess I cannot see any, but there may be some?—The college may feel it wishes to retain staff on more than a short-term basis, in which case it might prefer to fill a vacancy with a career man who is on its books rather than with someone who is going to look outside for further employment after a relatively short period.

1788. Assuming that the college, with your agreement, appoints someone who is, in fact, temporary, is there any method whereby that person at a fairly advanced stage in his career, having come temporarily and wishing to stay permanently, can become established, with a view to staying in the civil service?—If we assume he had the correct academic qualifications for the job and so on he would be eligible to enter any competition for established appointments which the Civil Service Commission might run. It would not be unknown for someone to take a temporary appointment and then subsequently to apply to the Civil Service Commission for an established appointment when the Commission run a competition.

1789. You appear to be implying that that occurs when he wishes to change his appointment. I am assuming he wishes to remain in his appointment?—He could do this if a competition were to be run to fill vacancies at the college in which he is serving.

1790. But if he is already there there would be no vacancies?—His own post would not be vacant, of course, but there might be vacancies in other similar posts. At Dartmouth he might be one of a number of instructors doing similar sorts of things.

1791. What you are saying is that even if you have a most advanced and experienced instructor who happens to be labelled as temporary, the only way in which he can become established is by going in for a competitive examination, perhaps with people by a long way his inferior as instructors and even in qualification?—This is, in general, true and it stems from the system of recruitment we have to the civil service which

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lays down that any permanent appointment must be filled following open competition. If he clearly is the most suitable candidate then he will get the appointment.

Chairman.

1792. It does make it difficult when you are in competition with other schools and colleges, particularly in the technical field which is very much a sellers' market, to have the complicated procedure of going to the Civil Service Commission. Can you suggest how that could be overcome without any injustice to the men being appointed?—We are very conscious of this difficulty. I think that whatever one does it is bound to take quite a considerable time to make a permanent appointment, given that the Civil Service Commission must advertise the vacancy, allow time for the applications to come in, mount the selection board and make the necessary inquiries into character, health, security and so on before the man is finally appointed. Having said this, however, I should add that we in the Treasury have recently looked at our part in this. It is a small part; nevertheless, it contributes to the amount of time taken. We have been able to streamline our own procedure and reduce to some extent the time we take. The Civil Service Commission are looking at their procedure and we have, at their request, a Treasury O. & M. team in the Civil Service Commission to find out whether the amount of time it takes to make established appointments cannot be reduced.

Mr. Gurden.

1793. Do you think, in view of all we have been saying, that this contributes to the view that it is wise to keep a large number of Service men on the staff?—You have heard some complaints at Dartmouth. There always are complaints about the difficulty of getting good, well-qualified staff in a market where they are scarce, but in general we are not aware of a really major problem in the Service colleges finding satisfactory civilian staff. There are occasional problems but we have not been made aware of a major and continuing one.

Mr. Wilkins.

1794. Could I return again to Manadon and Greenwich? You are aware, of

course, that there has been a transfer of electronics students from Greenwich to Manadon in fairly substantial numbers, and I believe it is a continuing process. I would like to ask whose responsibility it would be to examine the possible under-use of the facilities at Greenwich and even the possible merger of the remaining students at Greenwich with some other Service college. I am asking this particularly in view of the developments in the Ministry of Defence. It seems to us that Greenwich will possibly become under-used, and it is a fairly vast building which could be made available for some other useful purpose. Who would be responsible for assessing whether, in fact, the accommodation there is now being under-used as a result of these transfers?—In the first instance the responsible department would, of course, be the Ministry of Defence whose duty it would be to see that the courses which are continuing at Greenwich are run on an economical basis.

Chairman.

1795. Is one part of the general Ministry of Defence specialising in this field, or is it still at the level of the Navy Department?—I doubt whether they have yet reached the position in which they have got a central organisation dealing with this. (Mr. Clifton.) They have set up a division to make studies and find out whether economies can be achieved through the integration of the Services. They have not yet got down to looking at the Service colleges. This is a vast field and they have only just started to look at it. A division was set up with this purpose in mind.

Mr. Wilkins.

1796. It would not be for the Treasury to examine this and make any recommendation unless they were called in?—(Mr. Herbecq.) I think this is a matter in which we are entitled to take an interest and to put questions to departments to see whether economies can be achieved in this way. We have not, in fact, done so hitherto in this field.

Mr. Gurden.

1797. You said a division had been set up to look at this. Was there such an organisation previously?—(Mr. Clifton.) No, not previously in the old Ministry of Defence.

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1798. We were told that the different Services were awarding scholarships to enable boys to remain at school until they come into the Services. Have you looked into the question of whether the arrangements for those scholarships are similar in the different Services and how they compare with what local authorities do in the way of maintenance grants for sixth form work?—(Mr. *Herbecq.*) They are on an identical basis between the three Services. We have not made any extensive comparison of these scholarships and local authority grants. Indeed, they are aimed at a rather different purpose from local authority grants. However, our impression is that local authority grants are probably a little more generous in the case of parents with low incomes. Our scholarship schemes in the Services are rather more generous at the higher income levels. I think this would be a reasonable generalisation.

1799. Have they been on a similar scale in the different Services for some time or is this a recent change?—I believe they were last revised in 1961.

1800. From then on they have always been similar?—Since 1961 they have been similar between the three Services, yes, Sir.

1801. Are you satisfied with the administration of these scholarships? Is it run as economically as it can be?—We think it is a reasonable scheme yes, Sir. We think the level of the awards is reasonable.

1802. One of the things which would lead, possibly, to greater economies in the costs per head generally, the costs per head not of the staff colleges but of the others, would be the introduction of civilian students. This has already begun at Greenwich. Have you considered whether it would be possible to bring in civilians who are not officially attached to the civil service?—I believe this is already done at Shrivenham where there is an arrangement that a certain number of places is made available to people who hold local authority grants, and there is no requirement that the students should in any way be attached to the civil service. The question of extending it elsewhere is a matter which we have discussed, particularly with the Admiralty. They have hitherto been quite anxious in

principle to admit civilian students at Greenwich but they have foreseen some security difficulties about this. However, I am now told that they have found a solution to these difficulties and they are considering how best they can go ahead and get some civilian students into Greenwich.

1803. Is there any substantial reason why Greenwich should be different from Shrivenham?—The only difficulty was the security aspect. They have now found a way of dealing with this. We know of no other obstacle. However, this is quite a recent development. They have not yet had time actually to admit civilian students but we understand the way is now clear for it.

1804. Have you looked at all at the financial implications of the recruitment of graduates into the Services and at the different methods which are used at present? In some cases there is the recruitment of people already at university, in some cases people are sent to university, and in some cases they are given a university course within the Service?—I think there is no doubt that it is more expensive to give them a university course within the Service than to recruit them, as it were, already trained or already partly trained.

1805. Is that only because you are shifting it on to someone else's Vote or absolutely?—Certainly if one considers it solely in relation to the Service Votes there could be no question but that it would be cheaper to get someone else to do the training for one; but in absolute terms, as well as in these comparative terms, our impression is that a university type course in one of the Service colleges would cost more than the equivalent course at a university.

1806. Civilians are trained by going to evening classes at Birkbeck and by doing evening work at other colleges. In that way you spread the load on your equipment in the technical colleges and reduce the costs to the employer of post-entry training. Is there any future of that sort in the Services?—The Services put their people through a pretty intensive course of full-time training. If they were to do part-time training it would, I think, stretch it out over a much longer period. This would reduce the effective life of the officer, and I imagine that the Services would find

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this unattractive from the point of view of its effect upon recruitment.

Mr. *Gurden*.

1807. Would you have any doubt about whether the two are comparable? From what I have seen I would have thought there are certain additional advantages in taking the course at a Service college as against at a university?—There are certainly offsetting advantages. The student at a Service college has to do more than merely pursue his academic studies. He has to learn his profession as an officer. This cannot be done at the university. Further, many of the students at the Service colleges lack qualifications to enter a university but, nevertheless, make good officers.

Chairman.

1808. We saw the different assembly halls—the Alanbrooke Hall at Camberley, the Caspar John Hall at Dartmouth and also the one at Bracknell—and we were struck by the great differences in size. The Alanbrooke Hall was very much bigger than the immediate requirements of the staff college. On the other hand, the Caspar John Hall is not big enough to take all the students at Dartmouth during the peak load period of the year. Can you tell us upon what kind of basis the size of the halls and the costing of them is decided?—At Camberley it was put to us that the hall was required not merely to house their own students but also to provide accommodation for a number of inter-Service meetings and conferences which take place there from time to time. This was the main ground upon which we agreed to a hall which seats, I think, nearly 400. At Dartmouth the same requirement did not arise. That hall is required solely for Dartmouth's own requirements. In that case, as you say, the hall is not large enough to meet the peak load, or only with difficulty can they get everyone in. They were satisfied to have the hall at the size it is, which is rather below the peak requirement. On financial grounds they felt they could not justify building it to house the entire college when they would not on many occasions need to get the entire college at its peak load in there, anyhow. On this basis we agreed that the Dartmouth college should have a capacity of about 500 as against a possible peak requirement of about 700.

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1809. We were told that, like the Alanbrooke Hall, it was built with the Joint Chiefs of Staff exercise in mind?—The Dartmouth hall?

1810. Yes?—Not, I think, with that in mind. Our understanding is that it was built to meet a long term requirement at Dartmouth. The Joint Chiefs of Staff exercise was coming along; special efforts were made to complete the hall in time for that exercise and it was, indeed, extremely useful for that exercise. But the exercise did not, in itself, have any influence on the size of the hall or the scale of provision.

1811. How did the costing of the Caspar John and Alanbrooke Halls compare?—(Mr. *Barracough*.) The cost of the Alanbrooke Hall was about £270 per seat and the cost of the Dartmouth hall was about £136 per seat.

1812. Is that the estimated cost or the actual cost?—The actual cost.

1813. In each case?—In each case.

1814. You multiply those figures in one case by 400 and in the other by 450?—Yes, 500 at Dartmouth.

1815. We were told 450?—The total cost of the Dartmouth hall was £68,000 and the total cost of the Alanbrooke Hall was £110,000, plus the equipment.

1816. Is a comparable hall for the Air Force going to be built?—There is a hall at Bracknell, as you mentioned. I have not heard of any other proposals.

1817. The Bracknell hall is not used by the joint Services?—(Mr. *Herbecq*.) No. I believe Cranwell already have a hall and there is no proposal to provide a new hall there.

1818. We can take it that the hall exercise is more or less finished?—We are not aware of any proposals which are in the offing for the construction of halls at any other Service colleges, no, Sir.

1819. Does the figure of £68,000 compare with the figure of £110,000? The equipment was extra in both cases?—(Mr. *Barracough*.) That is so.

1820. What was the cost of the equipment?—The cost of the equipment at the Alanbrooke Hall was £50,000. I am afraid I have not got the figure for the cost of the equipment at Dartmouth, but it was rather less, I gather.

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1821. Going back again to the overseas students, are you keeping in mind the need to revise the charges made to these students?—(Mr. Herbecq.) Yes, it is not a fixed charge which is allowed to continue for years on end without being revised. (Mr. Barracough.) The departments are expected to revise the charges at appropriate intervals—when ever their costs change.

Mr. Gurden.

1822. Do you think the same principle which you mentioned would still be retained—that of leaving out overheads?—(Mr. Herbecq.) We would consider it right, I think, given the political advantages of providing training and the advantages which the Services themselves see in having overseas students at their colleges, to charge on the basis of extra costs rather than full costs, yes, Sir.

1823. You have just said something I am not quite sure I have heard said before—advantages to the colleges themselves. I would have thought there were more disadvantages than advantages?—The Service departments have given us to understand that they believe it is a useful thing to have overseas students on the courses to meet the cadet officers from our own country; it gives them experience in co-operating

and working with overseas students and that sort of thing. They do not regard it as a burden.

1824. But did they not mention there were some disadvantages, in that the overseas students are very often not of the academic level required on entry?—I believe on occasions there can be difficulties of this sort, but our understanding is that on balance the Service departments are well content to have a number of students from abroad at their colleges.

Chairman.

1825. Have you had any discussions with the Air Ministry, as it was, about whether the present numbers of overseas students at Andover are about right?—We have not discussed the actual numbers at Andover with the Air Ministry, no, Sir. The department and the Ministry of Defence, as it now is, are aware of our views on Andover.

1826. Is there any other point you would like to draw to our attention in this field?—I do not think there is any point I have in mind, thank you, Sir.

1827. Your colleagues have no points to make?—(Mr. Barracough.) No. (Mr. Clifton.) No thank you.

Chairman.] Thank you very much indeed for your help.

WEDNESDAY, 22ND APRIL, 1964.

(The Sub-Committee met at the Royal Military College of Science, Shrivenham)

Members present:

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.

| Mr. W. A. Wilkins.

Major-General R. W. EWBANK, C.B., C.B.E., D.S.O., M.A., Commandant, Sir DONALD BAILEY, O.B.E., D.Eng., M.I.Struct.E., A.M.I.C.E., J.P., Dean, Brigadier J. B. BIRKETT, O.B.E., Deputy Commandant, and Mr. D. J. CHAPMAN, B.A., Registrar, Royal Military College of Science, Shrivenham, called in and examined.

Chairman.

1828. May I begin, Gentlemen, by thanking you most warmly for the very warm and kind welcome you have

given us and for the way you have shown us round. We have very much appreciated what we have seen. I should tell you that you are protected

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by Parliamentary privilege in anything you may say in these discussions. It is all being taken down. You will get a copy of the minutes of evidence in draft and you can correct any verbal mistakes that there are. If there is any point which you feel, on grounds of security or for other reasons, should not be published perhaps you would sideline it and let the clerk have it. If the Committee agree with you it will be excised from the published minutes?—(Major-General Ewbank.) Yes.

1829. I wonder if you could begin by telling us something about the history of the college and how it ever got here?—The college was originally formed at Woolwich for the study of advanced artillery problems. It was almost entirely a Royal Artillery preserve. In the war it was dispersed, because of the vulnerability of Woolwich, to two or three centres. After the war they looked round for a suitable site upon which to set the college up again and they found this place which had been occupied by the Americans in the war. It belonged to what was then the War Department so they decided to bring the college here. That coincided with a considerable extension of the college's charter and the beginning of the degree work we were telling you about this morning. Since then the students have not necessarily been artillery officers.

1830. Do you think it was a wise decision to come here?—Personally I think it was a very wise one indeed. I think that these buildings and the estate generally have adapted remarkably well for our purposes. You saw this morning a mixed bag of what we have to offer. Some of it is very bad—Rutherford, for example.

1831. That was where we saw the nuclear work?—Yes. We have a new building planned in our building programme. However, the other buildings, although only adapted for their present purposes (the library, for instance), have adapted extraordinarily well. As regards the actual location of Shrivenham compared with other places the college might have gone to, I cannot think of a more ideal location for a college of this nature. We run it like a university, and I am a great believer in a university being a little way away from the lights and influence of a city. We want to per-

suade these young men to do a lot of work in the evenings. We want them to not have the attractions of a city to go out to but the quiet of a countryside like this. At the same time, however, we are quite near Oxford—it is only 30 to 35 minutes up to Oxford—so we are in touch with one of the great educational centres of the country. There is a lot of coming and going between this college and Oxford. We have no difficulty in getting officers, particularly senior officers from the Army Department, to come down from London and give a lecture or to have a look at the college. So far we have not experienced any difficulty over that. There may be a question of juggling dates because an officer is not free on a certain day. The distance you yourselves came this morning was not a vast distance; and it is quite a comfortable journey. A senior officer using a helicopter can be down here in a few minutes. We had the Secretary of State down here recently. But I think it is an almost ideal situation for a place of this kind. I do not know whether the Dean would agree with me? (Sir Donald Bailey.) Yes. It is reasonably isolated without being too distant from anywhere. It is convenient not only for Oxford but also for Bristol where there is another big university centre. There has been some talk of a University of Wessex in the Swindon area, so that may be a further reason for its convenience. (Brigadier Birkett.) We are also quite near Salisbury Plain and the schools of Artillery and Infantry, and Bovington. Furthermore, we are only 55 miles from Camberley.

1832. Very few of the specific buildings have been built for the purpose?—(Major-General Ewbank.) Practically none. (Sir Donald Bailey.) Unless you count Rutherford. (Major-General Ewbank.) Most of these buildings are old gunshops and Hore-Belisha barracks built as ordinary barrack blocks. Had we been able to show you the living accommodation I think you would have been amazed how well it has been adapted for the purpose. The students live in three large halls at the other end of the College which you have not seen. Two of them are joined whilst the third is separate. Each student has a separate bed-sitting-room and each hall

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has a great big dining-room. Two of these halls are joined together side by side. For a big guest night, therefore, we can move aside the partition between the two dining-rooms. We can have as big a guest night as you could have anywhere in the Army today.

1833. How many halls of residence are there?—There are four halls of residence. There are the three red-brick Hore-Belisha buildings at the top where the officers both live and feed in the same hall. There are 40 students living in the house where you had lunch. Because of the very small amount of sleeping accommodation in the old country house they sleep at the end of the block where the library is situated. As we drove away from the library towards the house where you had lunch you passed the end of the block where those students sleep.

1834. We had lunch in Beckett Hall?—Yes.

1835. And the three others are—?—Kitchener, Allenby and Roberts which we did not have time to show you.

Mr. Gurden.

1836. What disadvantage to the Service would there be if a few hundred acres of this land were disposed of?—The estate is just under 750 acres and we only use 464 of those; 89 acres are let out to a tenant farmer. They are Army Department property but are let out to a tenant farmer. So there is spare land, actually, here which presumably up to now the Army Department have wanted to keep and farm out rather than sell.

Chairman.

1837. Apart from the land let to the tenant farmer, is the other land used for sports facilities?—The college occupies and uses 464 acres; 74 acres are woodlands looked after by the War Department's land agent. You will have seen there are woodlands round the estate.

1838. Those are not remunerative, or do they bring in a crop of timber?—(Mr. Chapman.) I think the timber brings in remuneration.

Mr. Gurden.

1839. You say you use them?—(Major-General Ewbank.) Only as an amenity; they are an amenity to the estate.

1840. They are not used for exercises?—No; they just add greatly to the amenities of the estate. The woods are rather nice round here. We ourselves farm 109 acres and we pay a farmer to farm it. The War Department does not do that. We pay for him out of the profits of the farm.

Chairman.

1841. What is the total acreage?—The total estate comprises 736 acres.

1842. Of that, the amount built on comprises how many square feet of space?—(Mr. Chapman.) I would say about 150 acres. (Major-General Ewbank.) With the married quarters it is a bit more, in the neighbourhood of 200 to 250 acres. There are three large groups of married quarters, in addition to the quarters in the park itself. (Mr. Chapman.) There are 60 acres of playing fields.

1843. I think we were told that the average increase of students was from 355 to 386. Can you confirm that figure?—(Major-General Ewbank.) By that do you mean the increase from the lowest figure in the year to the highest?

1844. The average student strength, I thought, for the year 1963/64 was 386?—That is the average for the year, but the figure varies quite a lot during the year.

1845. Then what is the maximum?—At the moment I would say we are at the bottom of the trough because we have just lost a course about 70 strong. At the moment we have 305 students, just about the lowest we can have in a year. Then in the Michaelmas term, October to December, we rise to 500 plus. I cannot give an exact figure because it depends on the size of the general staff science course. Therefore we have this fluctuating load throughout the year.

1846. What steps are taken to ease out the peaks and the troughs?—The following steps help. First of all, the Army Department have put their Army work study school here. Not only do their permanent staff who are bachelors live with us in our halls but also their officer students live in our halls whilst the other ranks live in their respective messes. That school has been told to cut down as much as possible in

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the Michaelmas term when our peak load is here, so that tends to ease it off a bit. In addition to that, there is another unit called the Army Air Supply Organisation which is at Watchfield. This is an air supply and experimental unit. A large number of Royal Army Service Corps officers attend courses there and again we put them up in our halls. Once again, too, they are told they have got to keep away from this place during October, November and December when we have our peak load. By these two devices, therefore, the Army Department have tended to get away from this difficulty of the troughs and peaks which inevitably occur because of the pattern of the courses we run here.

1847. Am I right in saying that the two main courses are the degree course and the technical staff course?—Yes.

1848. Are the numbers coming to those courses fixed by the amount of space available for them or is there an objective required by the Army?—Taking the technical staff course first, a detailed assessment is made each year of the number required for staff training at Shrivenham and Camberley. That number has recently been under review in the Army Department and there is going to be a drop in the overall figure in the next few years. Up to this precise moment that number is worked out pretty accurately in the Army Department. There is a demand for so many officers to be trained on that course at Shrivenham. They juggle with the figures, depending upon how many degree holders there are and upon how many are eligible to come here for the 2½ year course. Therefore there is a little give and take as between those doing the full 2½ year course and those who are going to do the second half of the course. That will vary a bit from year to year. In the case of the degree course we have been given a figure that, for practical purposes, is really just a figure to work on.

1849. Could you give us the figure?—70. (Sir Donald Bailey.) On the 18th degree course there are 80. (Major-General Ewbank.) The point is that this number has tended gradually to increase. It is chiefly for this reason: Sappers, Signals and R.E.M.E. are trying

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now to get more officers with science or engineering degrees and over the last 7 or 8 years infantrymen, gunners and so on have been creeping in. If we were able to give you a detailed explanation of the new system of staff training you would see there is going to be a great demand in the future for officers of the non-technical arms with degrees. Therefore they have said the new system of staff training for degree holders only shall not be a technical officers' course only but that infantrymen, cavalrymen and gunners should come on it, too. Therefore you start off at the beginning of the pipeline and try to interest officers at Sandhurst who will be going into those arms in getting a science degree either here or at Cambridge. That accounts for the way the numbers on the degree course have tended to creep up just recently. Added to that, as I explained earlier, the number of civilian scholars has been increased from a ceiling of ten to fifteen a year. We have not yet got our full 15 but the ceiling has been increased. Now we are allowed to take 15 a year instead of 10, there is a tendency for the degree course to increase in size.

1850. Is that tendency likely to continue?—Now I must bring in the complication of the gap between Sandhurst and Shrivenham. Two or three years ago these young officers used to come here straight from Sandhurst for a degree course. When I first came here I felt very strongly indeed that it was desirable that there should be a gap of regimental duty where they could mix with soldiers and discover what they are in the Army for. R.E.M.E. and Signals accepted that and the Army Department straight away introduced this gap. They were convinced then and they are even more convinced now that they have seen the examination results. During that period the numbers went through a trough because the boys went to regimental duty before coming here. Now the numbers are out of that trough in the case of R.E.M.E. and Signals. The Sappers have now agreed that they, too, shall have that gap. That has been accepted by the Army Department. It is more difficult for them because of the numbers they send to Cambridge and they do not want to treat the Cambridge people differently from the Shrivenham people. However, they

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have now agreed to a gap between Sandhurst and Shrivenham, so for the next year or two there will be a trough in the number of Sappers coming here for degrees. That will tend to counteract this increase, due to the increase in civilian scholars. It looks as if we will keep at, roughly, 80-ish. (Sir *Donald Bailey*.) Yes, I think so. You did not mention the county awards which account for an additional 10 students. (Major-General *Ewbank*.) We will come back to that in a second. It looks as if we will level off now at 80 although that number could creep up slightly when the gap in the case of the Sappers has ended. In addition to that there are two further schemes which have just been devised by the Army Department and which affect these figures. I will ask the Dean to explain just what those are. (Sir *Donald Bailey*.) These are the short service and the county major scholarship awards. The civilian scholars (as the Commandant has said we are allowed to take up to 15 a year) are paid for by the Army Department. They receive an allowance of £345 a year to pay for their fees and living expenses here. There is a moral although not a strict legal commitment to join the scientific civil service. It is not insisted upon and only a reasonable proportion do so; quite a number do not. To increase the numbers the Treasury have recently given permission for us to recruit the county major scholarships people. These will be paid for by the Ministry of Education, not by the War Department, so as far as this college is concerned they are no extra expense. They will live in exactly the same way as the others and will be treated in exactly the same way while they are here. They will therefore be indistinguishable.

1851. Cutting out for the moment the civilian entry, is it possible to have an estimate of what the maximum number of Service officers for whom the Shrivenham course will be desired is? —(Major-General *Ewbank*.) I have not seen a figure, but my feeling is that it will even off at about 70.

1852. At 70 a year?—Yes. (Mr. *Chapman*.) I think that is a reasonable figure, Sir. (Major-General *Ewbank*.) They already send about 20 a year to Cambridge and now they are sending

14 to Oxford, Cambridge and other universities to read for arts degrees. Totalling those three, my hunch is that 100 will be just about what they want, what they can do and what they have got the material for.

1853. What is the maximum number you could take on a degree course without increasing, first of all, staff?—Leaving accommodation right out of the picture, I would have thought 150. This would mostly be on the general and special science side both of which are very undersubscribed. The engineering side is just about full; we could not take more students without having more staff and more facilities. My feeling is that we could take about 150. I am talking now in terms of staff only, not about accommodation.

1854. I was going to ask you about accommodation. If you were up to 150 what would you then need to do about accommodation?—We have got another building here called Borgard Hall. There are four halls but we only use three as halls of the college. However, there are four buildings, in two pairs. *These* two are occupied by the students and one of *those* is occupied by the students. When I came here three years ago the fourth was occupied by all the privates as a barrack block; they provided all the batmen, waiters and so on throughout the college and there were 300 or so of them. To tie up soldiers in a place like this is not a good way to employ them, so we started civilianising these posts and we have got on remarkably well with this process of civilianisation. Now you will find all the waiters and waitresses are civilians. The ones who waited on you at lunch were civilians and this applies in all the halls. Therefore we have been able to run down the number of soldiers from 300 to about 70.

1855. We were given a figure of 316 for 1956?—Yes. We have been able to have that big run-down. As a result of that there is this big building which has basically the same shell as the other three halls and which has not got a lot of people in it. We have moved various parts of the college into it, but if, in a real emergency, that were wanted for extra student accommodation and if the money were forthcoming to convert

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it, that building could be converted and could provide accommodation for, in round figures, another 70. It would not cost a fabulous sum of money because the shell is there, and the heating and so on.

1856. Is that 210 altogether or 70 altogether?—No, 70.

1857. It would be just under 25 each year?—Yes, that is right. It would be over a three-year period.

Mr. Gurden.

1858. You were telling us you have some overseas students. From which countries do they come? You said this morning Canada was one?—It depends on which course you are talking about. Going down the board and starting first of all at the top with the degree course, we tend on this course to get officers from young Commonwealth countries who have not got their own facilities for obtaining a good degree. We get one or two boys from Ghana and one or two from Nigeria. We also have one or two foreigners on the degree course. In all cases they are boys who have been to Sandhurst. Our government has then been asked if they can stay on in England and make use of the facilities here for getting a degree.

1859. You say they have all been to Sandhurst?—Yes, all the Commonwealth ones. At the moment we have got one Thailander and one boy from Abyssinia.

1860. Would you say their entry standards are good enough?—They have to be of London University entry standard, otherwise they are not allowed to sit for an external degree. Unless they reach the standard laid down by London University they are not allowed to do it.

1861. The majority are Canadians?—No, not on the degree course. The Canadians do their own degree work in Canada. The degree boys are from the new Commonwealth countries with no facilities for their own degrees: from Ghana and Nigeria, for instance. Coming to the next strata there is the technical staff course and here the officers are mostly from Canada. On each course there are also three or four from Australia and normally three or four from India and Pakistan. * * * *

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1862. Here again are the entry standards satisfactory?—The entry standard of the Indians and Pakistanis is usually very high indeed. They are usually very good indeed on the academic side and obtain a very high order of marks, but they do not necessarily do so well on the practical side of the course. The Canadians are quite mixed. You cannot differentiate between their standard and that of the British. (Brigadier Birkett.) Except that the majority of the Canadians have degrees. (Major-General Ewbank.) Yes. Most of the Canadians do the second half of the course because they have got their degree at Kingston.

Chairman.

1863. Where is that?—Kingston, Canada, combines Sandhurst, Cranwell, Dartmouth and our Imperial Defence College. Those are all in the same set-up at Kingston. They are different colleges within the same grounds.

1864. Is their degree their own degree?—At Kingston it is their own degree, just as it is at West Point. It is a four-year course at West Point. Kingston is exactly the same as West Point in the United States. You probably know that a West Point degree is thought of very highly in the States. At Oxford University just now there are at least a dozen American Army officers—all Rhodes scholars—with West Point degrees, and we see something of them while they are at Oxford.

1865. I am not asking you to give expert evidence about what is done in the States, but are their degrees scientific and engineering degrees or do they have general degrees as well?—I am almost certain they have general degrees as well. I know an American Rhodes scholar who is at Oxford now and he told me he read for a history degree at West Point, so I think I can say that is so.

1866. You do not know about Kingston?—No, but we have a Canadian officer here who could help you on that.

Mr. Gurden.

1867. Do you know why the civilian students are allowed to come here?—Yes; there are one or two reasons. The first reason is that it is a recruiting ground for the scientific civil service. There is no legal obligation to go into

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the scientific civil service but there is a moral obligation to do so. Most of them do try to do so, if they can. However, I think a more important reason than that is that it was felt there was spare capacity here. We have very high-class teachers here, teachers of high standing in the education world, and it was felt (I think rightly) that it is not right to have any spare capacity university-wise, particularly in the case of engineering and science, today. Therefore one of the objects was that they should take up our spare capacity to a certain extent. The third reason is to make a running for the young officers who come here. You have to bear in mind that in the case of quite a high percentage of the young men who go to Sandhurst their academic achievement is not the main object in their lives; they want an active life in the Army and that is why they go there. Of those at Sandhurst the cream is taken by Cambridge University. They take 20 a year which is quite a lot. We tend to get the next strata of the cake. Therefore you can see we are getting not brilliant material academically, and the lower strata. The lower strata of young officers who come here today would have had difficulty, I believe, in getting a university place when they left school. They would not have been good enough to do so.

Chairman.

1868. What proportion do get a degree when they finish?—It is a difficult figure to assess because the results have been improving. (Sir Donald Bailey.) The average over the last ten years has been, approximately, a 41 per cent. failure. (Major-General Ewbank.) We have got graphs to show the results over the last two years have been improving. Therefore there is bound to be an improvement in this figure. An improvement is going on the whole time. (Sir Donald Bailey.) Last year the examination results at all stages in the degree examinations showed a pass rate of 83 per cent. (Major-General Ewbank.) That means out of every 100 officers who went into the examination hall last June to take Parts 1, 2, and 3, 83 per cent. of them passed. We have graphs comparing our results in Parts 1, 2, and 3 with those of London University. For instance, the

London University external pass rate for Part 1 was about 42 per cent. whereas our pass rate was about 78 per cent. This was way up above the London University average.

1869. I cannot compare that with the 41 per cent. you quoted?—(Sir Donald Bailey.) This was the average over a ten-year period.

1870. I see?—(Major-General Ewbank.) If you have 83 per cent. passing every year, after a three-year course the total percentage who pass at the end of those three years will be down to the high 60s. Let us imagine 100 officers come here on the first day of the course and let us say, for the sake of argument, that 10 per cent. fail. Then there would be only 90. If, then, in the next year 10 per cent. again fail nine more would leave.

1871. They drop out?—Yes. We have a very complicated system of allowing some of them when they fail to continue working on their own once they are back in their regiments and to re-take the examination. A number of them do that every year and then they are allowed to come back again to do the next year of the course. Each case is considered on its merits. Therefore they are not definitely lost to us when they fail. Quite a number each year work away in Germany, or wherever it may be, take the examination under their own steam and, if they pass it, nearly always the Army Department will allow them back to do the next year here and complete the course. However, there is no guarantee that they will be allowed to do that. That is why it is so difficult to go on percentages; you are dealing with a three-year course and there is a dropping-off each year. But these graphs show we are some way above the London University average now.

1872. That is externals?—Yes.

1873. What about internals?—Unfortunately they do not quote figures. This is the only figure we have been able to get from the university.

1874. Do you think some of that wastage could be avoided if some of the lower stream took another course instead of a degree course?—If you were to lop off the lower strata you would increase your pass rate, although,

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of course, it is not always the men in the lower strata who are the ones who fail. It is not just the bottom 10 who come here who fail. Surprising things happen. One boy works hard and seems to develop whilst another boy who should have passed is idle. It is a very difficult thing. But the higher we raise our sights at Sandhurst the better our pass results will be. In the past three years the hurdle at Sandhurst has been raised and we are beginning to reap the benefit of that now.

1875. What I was wondering was not so much whether the lower stream should be thrown out but whether or not they would be better taking some other qualification lower than a degree?—(Sir Donald Bailey.) I do not think there is any great call for this. To take the infantry people, for example, it has been said they should have a degree, if possible, and a proportion is encouraged to get a degree. If they do not get a degree they are sent back to their units to act as soldiers once again. Therefore there would not be any call for lower standards for the Infantry. So far as the Sappers are concerned, the same thing applies. There is a much stronger need to get a degree in the Sappers than in the Infantry. However, if they do not get a degree the Engineer in Chief likes them to go back to their units. R.E.M.E. is a special case. There again the Director of Electrical and Mechanical Equipment asks his officers to have a degree, but if they fail at the first hurdle, Part 1, a proportion are then sent to Reading where they read for a Higher National Diploma. But this is rather a special case. They are the only ones who have a call for something lower than a degree. I think that is a fair statement.

1876. I think I am right in saying that at Henlow they do a Dip.Tech. course as well as a degree course?—(Major-General Ewbank.) No, they do a Dip. Tech. instead of a degree course.

1877. Yes, because they have a higher graduate intake than the Army has?—Yes.

1878. Is there a case for saying there should be a Dip.Tech. course for the lower streams of the Army?—The trouble about the Dip.Tech. is that there would be considerable difficulty in doing it at the same place as a degree course.

I think you would have staff problems; the staff would be trying to run two different streams. In addition, it would be very wasteful. Up to now the Army Department has put it through on what it calls a proper educational basis as opposed to vocational training and has gone all out to get the maximum number with a degree. (Sir Donald Bailey.) Yes. This would cause some staffing difficulty but the main thing is that the Dip.Tech. is not going to go on very much longer. It is to be cancelled.

1879. Because of the C.A.T.s?—(Mr. Chapman.) They will give their own degrees and the Dip.Tech. will cease to exist.

Mr. Gurden.

1880. Do you think it would be a good thing to raise what you have called the Sandhurst hurdle again?—(Major-General Ewbank.) No, I do not. Our last entry was the first entry in which we had quite a considerable number of those who had crossed this higher hurdle. Our Part 1 results last year were so good that I would say it is much too early to think of raising the hurdle again. You have got to set your sights at such a line that you get a bit of wastage. If there is no wastage I think you have got your sights too low. And it is not really wastage; a man may be here for a year, fail Part 1 and go back to his regiment but he is not necessarily any the worse for that. (Mr. Chapman.) There is wastage in higher education outside; the average figure given in the Robbins Report was something like 20 per cent. (Major-General Ewbank.) Our figures are now comparable with those of any university.

Chairman.

1881. Can you tell us what steps are taken to advertise your civilian activities?—(Mr. Chapman.) Do you mean the civilian scholarships or the county award system?

1882. Both?—The civilian scholarships are advertised in the Press each year. In addition, I write personally to all grammar schools and to a selection of public schools and research and development establishments in the country. I do the same thing in the case of the county award system. That has borne fruit and has resulted in a large number

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of contacts with civilian educational establishments.

Mr. Wilkins.

1883. Perhaps you anticipated before we toured the buildings that we might ask certain questions, and you told us you would be pleased to enlarge upon why it is that you have civilian students here?—(Major-General *Ewbank*.) I do not think I can really expand on the reasons I have already mentioned: that is, filling up the spare capacity and giving a running, in a pacemaking form, to the soldiers who are not quite so brilliant. (Mr. *Chapman*.) And it helps to create the university atmosphere which we have been seeking. (Major-General *Ewbank*.) Those are the main reasons.

1884. Do you ever get any civilians who want to join the Army after being here?—Yes. At the moment we have one civilian here who wants to become a Sapper. He has been away and passed his board. Now he is over the last hurdle and will become a Sapper.

Chairman.

1885. Will he go to Sandhurst?—No. I think he has to do a short course, and he will be treated very much like an entrant from a university. He does not have to go to Sandhurst but he will be given quite a short course so as to enable him to join officers of his own age who will have been to Sandhurst.

1886. Are you finding there is a small group of schools which is feeding you?—This is true of the civilian scholarship scheme; in the case of the county award scheme it is too early to say. In the case of the civilian scholarship scheme I am pleased to say certain schools are competing every year. (Major-General *Ewbank*.) More than 50 per cent. of our degree students are not from public schools. (Mr. *Chapman*.) The overall percentage is one-third public schools and two-thirds State schools. This applies to the officers, but in the case of the civilian scholarships and the county awards 95 per cent. come from the State schools. There are only one or two public schoolboys.

1887. What about the Universities Clearing House?—No. They have rebuffed us very smartly on this one.

They will deal only with the normal universities, who obtain money from the University Grants Committee.

1888. Presumably that would also apply to a C.A.T.?—Yes, but I think they have made very strong representations about it. Up to the moment I have had no success in that direction, nor have a number of similar institutions. It is rather unfortunate, but there it is.

1889. Do you have any direct contact with the Ministry of Education about grants?—No, very little at the moment. We have almost nothing to do with the Ministry of Education. The local county award people get their money locally and I have dealt mainly with the local education authorities. When this scheme was being negotiated contacts with the Ministry of Education were made by the Army Department and not by the college. (Sir *Donald Bailey*.) There is one other reason why civilian scholars are useful here. It is that a proportion of them do go on for higher degrees and thus enable our staff here to teach up to postgraduate level. Very few Army officers do this, for obvious reasons. They have not got the time to do it. But a proportion of the civilian scholars do so and they are one of the main sources for the postgraduate training given at Shrivenham. (Mr. *Chapman*.) And they are a source of recruitment to the college. They often stay on here as demonstrators; these people are very hard to get and they are going to provide in future a very important source of recruitment.

1890. Can you tell us something about the top level Service people? We have discussed some of the more difficult cases. Do some of your Service officers get first-class Honours?—Major-General *Ewbank*.) Yes.

1891. And some do postgraduate work?—Yes, I would think on average about one a year. We could give postgraduate training to more but the Army does not want to spare more than one, or possibly two, a year because they will then be away from soldiering for so long.

1892. Do you attach importance to this postgraduate work? I gather from the Dean that you do and that the supervision of postgraduate work is not a

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waste of staff time?—(Sir *Donald Bailey*.) No. One must follow the general recommendations which Robbins highlighted: that to maintain a high-quality staff you must do a reasonable amount of postgraduate work. Robbins mentioned 20 per cent. We are miles below that but we would like to increase it a little if we could. It would have a great effect upon the recruitment of staff and upon the maintenance of their morale and their general "on-the-ballness", if you can put it that way.

1893. Is there any reason for the drop in numbers on the nuclear science and technology course? You mentioned they were dropping because they had changed from annual to bi-annual. One would have thought emphasis would have been placed on that course now?—(Major-General *Ewbank*.) No. One reason is that quite a considerable number of officers have been through that course and we find that the demand is not so great now. Also we have another nuclear course at a lower level which takes place annually. (Brigadier *Birkett*.) There has also been a reduction in the number of Service appointments at Aldermaston on the Army side. (Major-General *Ewbank*.) The course which is now going to take place bi-annually is a pretty advanced one. I do not know whether there is anything in the change of opinion as to the likelihood of a nuclear war; I think myself that that must have had something to do psychologically with this. Four to five years ago nuclear war was regarded as likely whereas now I think it is regarded as generally unlikely. That must colour the attendance at a very high-powered nuclear course.

1894. Is there any limit to the number of civilian students you can take, apart from the limit imposed by accommodation and teachers?—Yes. I feel we do not want to go above a certain percentage of civilian students, otherwise the character of this place as a military college of science would tend to be lost. Although we treat all the young officers as undergraduates and although they wear mufti it is quite definitely a military college of science and if there were too great a proportion of civilians the whole feeling of the place could change. I have

not been asked that question before and it does not arise at the moment. At the moment it is 15 per cent. and that percentage is not worrying us at all; but I have a feeling that we could not afford to go much over 20 to 25 per cent. without looking at this very carefully from the point of view of officer morale. (Sir *Donald Bailey*.) I agree. One has to remember that the smaller the place is the more it is going to cost per student. Therefore, from that point of view there is a case for increasing the number but I agree with the Commandant entirely about the need to maintain the general form and spirit. (Mr. *Chapman*.) Too great an increase would be resented by the young military officers.

Mr. *Gurden*.

1895. They think you have probably reached the limit now?—(Major-General *Ewbank*.) No, I do not think they do. I do not think there has been any resentment caused by the rise to 15 per cent. They get on remarkably well together. There are communities of interest. Some of them move in the amateur dramatic world. They tend to move in these communities of interest rather than to go round together as a group of civilians.

Chairman.

1896. Do they all accept the same rules and regulations?—Yes. Those are kept to an absolute minimum. It is not like Sandhurst, for instance, where they are called out on parade at certain times. It is much more like a university; they are treated more much like ordinary undergraduates at university except that there are certain standards of dress with which they have to conform. Take, for instance, the guest night last night. Any civilian there last night had to wear a dinner jacket. He could not have gone in an ordinary suit. In the same way they have to wear jackets in their halls. They cannot go to their evening meal wearing a pullover. However, I have sensed no resentment over this. (Mr. *Chapman*.) What we do is to make this sort of thing clear to them before they come here. A general letter is sent to their parents in which we set out very clearly that although Shrivenham is like a university we expect certain standards of behaviour from the students, that they should have a bank

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account, should possess a dinner jacket and so on. Having done this they are then aware of everything before they come to Shrivenham.

Mr. Gurden.

1897. In spite of what you have said I do not think there is quite the same freedom here as there is at some places. For instance, students run into trouble at Oxford and Cambridge over sex matters?—(Major-General *Ewbank*.) No. These chaps are living in halls and not in digs in the villages round Shrivenham. Each hall has a hall commander who keeps a pretty good watch on them. On the other hand, in some respects they have more freedom than an undergraduate at Oxford or Cambridge. They do not have to sleep a certain number of nights each term in college. If no work is programmed for the weekend, and there almost never is, they can go away. It is only if they are lagging behind in their work that their hall commanders say to them, "Look here; I want to see you here for the next two weekends doing a bit of work". But normally at weekends they can go where they like. Therefore for practical purposes they have more freedom than the undergraduate at Oxford or Cambridge.

Chairman.

1898. I was puzzled when you said one of the civilian students would be going to Oxford after leaving here?—He is taking his first degree here and then he is going on to Oxford for a higher degree.

Mr. Gurden.

1899. Do you think you have the right balance of military as against civilian staff? I would have thought it was controlled by the different colours on that chart?—I would say the balance is about right and this is in order to meet a particular requirement. The academic do considerably outnumber the military staff but I do not see any objection to that. (Brigadier *Birkett*.) I think the reason is that half the college at least are taking degree courses and all the degree officers' instruction is done by the academics. Then postgraduate courses or technical staff courses and the like account for the other half of the college, upon which courses the military have

a say as well as the academics. That would be the reason for there being more academics than military. (Mr. *Chapman*.) The bulk of the teaching is academic; one has to accept that. (Brigadier *Birkett*.) You said it would level out at 70 degree officers but one ought also to mention the new entry scheme. (Major-General *Ewbank*.) Yes. It has got off to a very slow start. It is a scheme to encourage boys to go direct from school either to Shrivenham or to a university of their choice with a probationary commission. If they get their degree that is converted into a permanent commission. In other words, they short-circuit Sandhurst. Each year ten are going to be allowed to go to Shrivenham and ten to the university of their choice. It is a new scheme and only two or three so far have applied to come here next October. It needs to be publicised well so as to become better known.

Chairman.

1900. Do you have difficulty in getting civilian staff? Do you attend the Civil Service Commission when they are appointed?—(Sir *Donald Bailey*.) The civil service appointment interviews are held in this very room. The chairman is from the Civil Service Commission and he is assisted by suitable representatives of the staff here for the particular discipline for which we are recruiting. We first of all advertise in the public Press, a short list is drawn up and the interviewing is then done here. They are recruited first of all on a temporary basis but the fact that the Civil Service Commission chairman is there makes it possible for them to be transferred to the permanent staff should a vacancy arise.

1901. So all your new staff come on a temporary basis?—On a non-established basis.

1902. That means you can appoint them virtually immediately?—Yes.

1903. And you can offer them the job across the table?—Yes.

1904. Do you find people hesitate to accept an appointment of that sort because they do not become established straight away?—No. I think generally they understand there is a probationary period to start with. In some cases they may actually be recruited

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for a temporary job but in any case they understand there is a temporary period.

1905. If there is a crisis—illness or a sudden movement of staff away from Shrivenham—do you recruit civilians on a temporary basis or bring in Service officers?—I do not think this has ever occurred. (Mr. Chapman.) Normally I think we would try to get a suitable Army replacement if it is only to be for a short period. If, though, it is to be for a long period we are allowed to recruit in the normal way and hope that wastage will take care of it.

1906. I think you said earlier that you believe the two years spent in the unit between Sandhurst and Shrivenham is of value?—(Major - General Ewbank.) Yes.

1907. Do you not think that that is an unfortunate break in their academic discipline, although it may be a good thing for their military discipline, and makes their academic work a bit poorer when they come back?—They are rusty during their first few weeks after they have been away for two years. However, when National Service was going on I think I am right in saying the universities almost unanimously welcomed the break from school while the boy was in the Army; they reckoned his greater maturity and wider outlook on life more than made up for his getting rusty during those two years. I have talked to many people in universities about this and they all tell me that they would like to go back to the days when the boy was away for two years on National Service before going to them. The same applies to these boys, but even more so because they have been to Sandhurst and have their sights set on being an officer. If they are in Sappers, R.E.M.E. or Signals they may be directed to Shrivenham or Cambridge. They may not want to come here but they happen to be in an Arm that demands a degree as part of their training. Our experience of people coming straight from Sandhurst is that often they are immature and fed up with academic work, whereas boys who have been away for two years and who, perhaps, have been overseas, in Germany or the Far East, are much more mature and seem to know what they are here for. And the examination results do tend to con-

firm this. The boys who have been away do tend to do better in their examinations than the boys who have come straight from Sandhurst.

Mr. Wilkins.

1908. Could I ask one question about the student population? I do not think we have asked how many foreign students are at Shrivenham. We have asked about Commonwealth students?—At the moment there are only two foreigners in the college. They are both on degree courses. One is from Thailand and the other is from Ethiopia. Both went to Sandhurst. Had they not gone to Sandhurst they would not be here. There they heard about the facilities at Shrivenham for getting an engineering or science degree, then they approached their respective governments and aroused their interest, gained the necessary London University entrance qualifications and finally got permission to come here. Presumably their governments are paying for the education we are giving them. However, that does not concern us here but Whitehall. I do not know what they are charged.

Chairman.

1909. Could you tell us about the new staff course?—At the moment in the Army there are two distinct staffs: what is known as the general staff who have been trained at Camberley and for three months here and, secondly, the technical staff who have done their training solely on the technical side here. This course is being brought in for one or two reasons. The main one is in order to get away from the division of the staff into two distinct parts. The Army Department have decided that in future they are going to have one staff only, not two staffs, and that all officers will be trained first at Shrivenham and then at Camberley. The Shrivenham ones are going to be divided into three streams. Starting from the top, there are, first, the degree holders, and by that I mean the degree holder in science or engineering. An officer might have a degree in an arts subject but he will not be on that list. The degree holders will come here for one year and then they will all go on to Camberley for one year. In passing, I would like to point out that at the moment some officers go to Camberley who have good degrees in

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engineering or science; they do not get the benefit of this course, as they are only here for three months, and we feel that full use is not being made of their abilities. However, under the new system any officer with a degree in engineering or science will be directed to this course. The second stream consists of those with two A levels, again in mathematics and science subjects. They will do a year here but that will be quite a different year from the year the degree holders spend here because the starting level for them will be much lower. Then they will do a year at Camberley and afterwards they will be posted. The third stream contains those without A levels. They will do a three months' course here which will be almost identical with what they do now and then they will go on to Camberley. They will all be at Camberley together. There will not be three streams at Camberley, only one, and they will all at the end of their course at Camberley go out either into general staff, administrative staff or quartermaster-general staff appointments or, indeed, into a new appointment which is going to be called a weapons staff officer appointment. In the case of the weapons staff officers there will be a whole spectrum of appointments, some very technical and some hardly technical at all. The tendency will be for the degree holders to get the most technical jobs. So they will do that course here and they will all be part of one staff. There will not be the streamlining which take place now between the two staffs.

1910. Will that mean a good deal of alteration to your curriculum?—It will mean an almost completely new planning of the course. That planning is going on now and the new course will eventually take the place of the technical staff course.

1911. Will it mean that you will have, instead of one or two standardised courses, three different courses?—There will be three different courses.

1912. Does that mean a lot of different specialist courses will be run which will put more work on the teaching staff?—No. Within those three streams we are hoping to have minimum specialisation. We have not finished working out these syllabuses; we are

working on them now. We are thinking that all the people in the top stream will work all the time on the same syllabus, whereas during the second year of the course that goes on now they specialise and divide into three different streams—electronics, weapons and vehicles. We have been asked to try and cut down this specialisation as much as possible and to try and turn out an officer who is trained to a lower depth but in a wider field.

1913. Comparing this with the staff schemes in the other Services, it would be fair to say they have more of a general education element in their courses and deal with the problem of ability to communicate and good English?—Yes.

1914. Is there any need for that here?—This question should be answered by Camberley because this would come into the Camberley part of the syllabus. We take care of the technical and scientific part. However, speaking simply as an officer who has in the past taught at Camberley, my experience was that the standard of written English in the days I was there was not frightfully high. (Brigadier *Birkett*.) On the course we do now we do have twelve weeks of what could be called a potted Camberley course. (Major-General *Ewbank*.) But that does not have a great deal of English in it. (Brigadier *Birkett*.) Certainly it is not a basic English course but it includes military writing. (Sir *Donald Bailey*.) 10 days management studies will be included in the new staff courses. This is going to be rather widely interpreted.

1915. Will you have the staff to do it or will you have to bring in specialists?—(Major-General *Ewbank*.) No. We think we can do that and we hope to make use of the Army work study school which is on our doorstep to help us out.

1916. Could you tell us about the Advisory Council?—Yes. The Advisory Council is a very high level body which advises the Army Department on matters of high policy concerning this college. It is chaired by an academic of great distinction. He is nearly always a Fellow of the Royal Society. It used to be Professor Temple; now it is Professor Pryce of Bristol University who

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is going over to America, unfortunately, in the next few months. He is supported by academics of the highest standing from the various universities and also by a senior officer from the Navy Department and from the Air Force Department. Then there is the Chief Scientist and one or two other senior officers from the Army Department: the Deputy Master-General of the Ordnance and the Director of Army Education. But the chairman is definitely an academic of high standing. This is a most valuable body because it is aloof from the college and is not involved in the internal politics of the college. It meets alternately in London and at Shrivenham. Up to now it has met twice a year, once in London and once, at the beginning of the academic year, at Shrivenham. In future it is likely to meet only once a year, at Shrivenham. Normally they have a look round the college, followed by dinner and then a long meeting the next morning. Questions concerning tutoring—should we adopt the Cambridge system of tutoring, for instance—and recruitment for our civilian scholarship schemes come up before this body, and they give very valuable advice to the Army Department.

1917. That is only for Shrivenham?—Yes, only for Shrivenham. To give you an example, it was as a result of the Director General of Naval Training sitting on this council that he got the idea of sending civilian scholars to Greenwich. This is where he first heard of the scheme and he was so taken with the idea that civilian scholars are now to go to Greenwich. We are going to recruit in future both for Greenwich and Shrivenham. Some will go to Greenwich and some will come here.

1918. This was decided at a recent meeting?—Yes, quite recently. (Mr. Chapman.) It was last September. (Major-General Ewbank.) It was a by-product of this advisory council meeting in London.

1919. I would like to ask you again about your policy of getting as far as possible a university atmosphere here?—Yes.

1920. Could it not be argued that in a Service where people are starting

on a Service career you tend to over-civilianise them from the point of view of being soldiers?—I can only speak from my own experience. I went as a Sapper to Cambridge. I was treated there as an undergraduate the whole time and I do not think it had any adverse effect upon me as a soldier. Furthermore, quite a number of very senior officers in the Army today came into the Army from Oxford, Cambridge or one of the other universities. For instance, General Sir Richard Hull never went to Sandhurst but came into the Army from Cambridge. Lieutenant-General Sir John Hackett was never at Sandhurst, either, but came from Oxford, and the Military Secretary came from Oxford. I say it is not essential while you are doing your university training to have a military discipline superimposed, otherwise those officers could not have risen to the highest ranks in the Army. What you want to do is to try to assess your main objective and then to concentrate upon it and not to do two things at once.

1921. If that is so, is there any reason why Shrivenham should be peculiarly Army?—No. There are certain parts of the Shrivenham training which do need to be peculiarly Army. That is to say, a certain part of the training of these senior officers is directed towards meeting an Army requirement which might well not fit in with the Navy or Air Force requirements.

1922. You accept that at this level there ought to be single Service staff training?—No, I would not commit myself on that. I never have had to think this out. If I were Director General of Army Training I would have been giving a great deal of thought to this; but I would not like to commit myself because I do not know what the requirements of the two other Services are and I am not in a position to comment. But from the degree work point of view I am absolutely convinced it ought to be joint Services training. In our degree work we suffer from inbreeding. All our officers read engineering or science, whereas when I was at Cambridge I was working alongside people reading history, Greek, medicine and everything else. We greatly suffer from that inbreeding here. I believe you would largely get over that

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difficulty if all the degree work (there is no military training whatever in that) were done on a joint Services basis ; then there would be the great advantage of officers of the three Services living together during a very formative part of their life—in other words, during three years of their educational life. I personally would welcome that and if the bricks and mortar situation allowed I would go absolutely all out for it.

1923. It would be better in some ways if you could have some non-engineering and scientific work going on as well?—Yes. (Sir Donald Bailey.) If we were in a position to work to our own syllabus we could introduce more of the things like communication methods and allied subjects than we have now. Now we are bound by the London University syllabus and we cannot go outside it. (Major-General Ewbank.) One point I did not make is that in the long vacations these young officers go back to the Army. It does not mean they are away from the Army for three years. As I went back to the Sappers from Cambridge so these young men go back to the Army during part of each long vacation.

1924. Can they do something worth doing just as casuals?—Yes. The Sappers can go to Chatham or to the Military School of Survey and put in time at courses they have got to do at some time during their training, thus shortening the total length of their training.

1925. Do the engineers get practical work which is comparable with what a civilian engineering student can get in the long vacations in industry?—The bias is much more towards the Army requirements. Signals go on attachments to the B.B.C. in London and the Sappers can do a bridging course at Chatham. This would be much more military bridging than wider experience. (Sir Donald Bailey.) The civilians get attachments to research and development establishments and a certain number go into a suitable type of industrial establishment.

1926. If you think we have missed the boat please would you tell us what we have missed or, if there is anything you would like to add to complete the picture, we should be very pleased if you would do so?—No, I cannot think of anything. We have covered the degree work in great detail and the civilian side of that, the extent to which we could use civilians, and the joint Services aspect which is more a subject for the people in Whitehall to comment on. They are giving much thought to it. They have been down here and have been talking to us about it. We have talked about the present system of technical training and what it is going to lead to in the future. (Sir Donald Bailey.) We have not touched on the problems associated with teaching and we have not compared Shrivenham with the universities. This is a very long tale which would take a long time to tell.

1927. Do you think that in general you compare reasonably well? I have not neglected this matter. I asked one or two questions on the way round and my impression is that on the whole you are not out of step?—I think on average this is true. We are slightly more lushly staffed in certain parts judged on staff:student ratios, than some other establishments. We are definitely so on the science side. On the engineering side we are more hardly pressed. There the staff:student ratio is 1:11. (Major-General Ewbank.) We do not compare exactly with any other establishment we know of.

1928. You have never looked at Loughborough and compared your costs with their?—No. (Mr. Chapman.) We have looked at Cranfield and theirs are even greater than ours.

1929. That is why I suggested Loughborough?—(Sir Donald Bailey.) But one has to remember there are, in fact, 29 separate classes which have to be taught all at one time in the Lent term. It varies a bit throughout the year but 29 is a fair average. It requires quite a lot of staff to do this.

Chairman.] Thank you very much indeed.

WEDNESDAY, 29TH APRIL, 1964.

Mr. James MacColl, in the Chair.

Mr. Harold Gurden.
Sir John Langford-Holt.

Mr. W. A. Wilkins.
Mr. John Woollam.

Lt.-General Sir GEORGE GORDON LENNOX, K.B.E., C.B., C.V.O., D.S.O., Director General of Army Training, Ministry of Defence (Army Department), called in and further examined. Mr. N. G. MORRISON, Assistant Under Secretary of State (General Staff), and Colonel J. R. M. CURLING, Inspectorate of Establishments, Ministry of Defence (Army Department), called in and examined.

Chairman.

1930. Since we saw you last time we have had the opportunity of visiting the different establishments. I need hardly say we were treated with very great kindness and courtesy and learned a very great deal. We very much appreciate the trouble taken to put us in the picture. There is one point which is not directly relevant to our inquiry. That is the provenance of the officer cadets. However, it is relevant in so far as we are concerned with the question whether quality is being maintained and whether sufficiently wide opportunities for choosing good ones are provided. Some figures were given to us for the schools entry and the Army entry to courses. We find that the proportion of Headmasters' Conference schools is 51 per cent. and that that has fallen from 67 per cent. in 1958. That is the figure quoted in the Grigg Report. This is a good deal higher proportion than in the Royal Air Force although it is lower than in the Navy. The question is whether you think that on account of the growing standards and qualifications, in academic terms, expected from the recruits, you need to draw from a wider field than you are at present?—(Lt.-General Sir *George Gordon Lennox.*) Do you mean at Sandhurst?

1931. Yes?—This is quite fortuitous; we do not organise it. At Sandhurst, where there are something like 840 British cadets, there are still today over 300 schools represented. It is difficult to think you could diversify an intake of only 800 cadets more than that. In brief, we think that the overall intake comes from a very wide band.

1932. But what proportion of that band sends a substantial number of recruits? The Grigg figure suggested that 21 schools send a very high proportion, about one-third, of the total

number which is coming in. I quite see you may be getting people coming from a wide area but what I am wondering is whether you are going to find, as a result of the heightening of the standard, you will have to look further?—First, we have not really heightened the standard. All we have said is that we have done away with the Civil Service Commission examination. At the same time we have said that boys with two or even one A level will, all other things being equal, have a better chance of being accepted for Sandhurst than those who have not got an A level. We have no intention of reducing our numbers below our requirement. If we do not make up the numbers with boys possessing A levels we shall still accept the others, although the emphasis has been placed on the desirability of boys presenting themselves with one or two A levels. Therefore the standard has only been altered in emphasis. We took this opportunity to do that because we were getting more and more boys with one, two or more A levels, and it seemed the right moment to emphasise, through headmasters, that that was what we were going for. Regarding the number of A levels related to those we actually require, there is still a big disparity. Basically, however, we have not really altered the standard. As far as getting boys from a wider range of the population is concerned, we can only deal with those who present themselves to be soldiers. To give you one instance, Wellington College has always produced more than any other school in relation to its strength because it is traditionally a military school, although they do not like to be told so. This is not unnatural since it was founded almost for that purposes and it has kept it up ever since.

1933. I think we were more or less told by the Royal Air Force that the

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result of their insisting upon two A levels has been to some extent to put the Headmasters' Conference schools rather at a disadvantage because they cannot so quickly be geared to G.C.E. and all it stands for. As a result they have found they have drawn a substantial number from maintained county schools. I wondered whether you had thought that was likely to arise when you were wanting more highly qualified people?—It is a question of numbers. The Cranwell intake is very much smaller than the Sandhurst one. We felt if we insisted on two A levels we should not get the numbers and we did not dare take the chance. It had not got anything to do with diversifying the intake.

Mr. Gurden.

1934. I was impressed with the point you made about supply and demand in schools which traditionally have this tendency to opt for the Services?—Yes.

1935. I suppose you would say this does not apply so much to the Air Force, that being a newer Service?—I think that is marginally true.

1936. You say there is this tendency for boys from particular schools to demand Sandhurst training. I suppose this tradition does not apply to all types of schools but more to public schools?—We made very great efforts some years ago to get boys from schools in the North of England. Headmasters' conferences took place both at Greenwich, on an inter-Service basis, and now at Sandhurst. When they started the object very largely was to try and get boys from Yorkshire, which traditionally is not a very good officer-producing area, and the North of England generally. It was not frightfully successful. We have improved on that. We have our schools liaison officers in every Command. They go and badger maintained schools as well as public schools all the time. Twice a year the schools receive circulars from the War Department asking for candidates and telling them about the conditions and so on. This applies to all schools, to maintained schools as well as to public schools. (Mr. Morrison.) Our publicity is directed as much to the local education authority schools as to the public schools. One cannot, of course, determine the response one will get from different quarters, but there is no ques-

tion of our favouring any particular group of schools.

Mr. Woollam.

1937. Is it the case that for many reasons the Army as a career, especially for officers, has not got the same appeal as, say, the Air Force for the typical sixth form grammar school boy? Is this the nub of the matter?—I think it is very difficult to determine the precise reasons which make people join one Service rather than another or take up one particular career rather than another.

Mr. Woollam.] The evidence would seem to be that the Air Force does not lack appeal in the case of that very group and has not only recruited well but has recruited increasingly well from that very group of sixth form grammar school boys.

Chairman.] The General said the numbers are very much smaller and that absolutely the numbers being trained are not so different.

Mr. Woollam.

1938. I heard that and I have got it in mind. It is only a qualification, I think. It perhaps does not go to the substance of the matter?—(Lt.-General Sir George Gordon Lennox.) We are very ready to take them from any source. It is just a question of who comes along.

Chairman.

1939. Can I ask you about Welbeck which was designed to attract people from the north? That was one of the reasons for its being placed where it was. It is looking north geographically, to some extent?—I think that was one of several reasons. I am not sure it was even the most important one. It was designed to recruit officers for the technical corps; industry being then, in the Midlands and the North, it was a fairly sensible place to position it. Welbeck was inaugurated under the then Secretary of State, Mr. Head. Also it is right in the centre of England. It was selected for all those reasons.

1940. Have you considered whether it should continue to be a "tied house"? As I understand it, it is exclusively for the Army. I can understand that the Army value the recruits they get from Welbeck but what is the position of a boy who goes to Welbeck because of his

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technical interests and then develops in the direction of the technical side of one of the other Services? Is it easy for him to change or is he more or less under pledge to go to the Army?—He is more or less under pledge to go to the Army, yes. I do not think he can transfer. I do not think it arises; I think that is, in fact, an academic situation. What we have done there is to give greater scope for the Welbeck boys to go to Arms other than those for which Welbeck was originally designed. Originally it was designed for R.E.M.E. and the Royal Corps of Signals. Now the Gunners and Sappers take boys from Welbeck. The Sappers take a few, the Gunners take some and the Royal Army Service Corps, as it still is, take some, too.

1941. One of the problems we have considered and discussed is the problem of the distribution of a new entry between those who are going to go to university and those who are not?—Yes.

1942. We have heard about the different practices in the different Services and about the new ideas which are being introduced. I was wondering whether you had reached any clear conclusions about the merits of recruiting people who have been to university and of sending people to university or Shrivenham to get a degree. I was also wondering what proportion those different methods are going to assume in the future?—I think the first basic thing to say about that is that if the Army is to be efficient it must be an amalgam; you want some of all sorts. Either you insist that every boy has a degree—probably an engineering degree or a science degree—or you accept an amalgam as being an efficient aim. If you accept an amalgam as being a proper target, the Army can absorb straight from universities a certain percentage of its young officers. It could not absorb all its young officers from universities without any military training at all because the machine would not work when they got to the other end. Therefore we have always aimed at about 10 per cent. of direct entrants from universities as being a leavening and a figure which the Army can absorb and rather specially teach when they get to their regiments, corps and so on. We have never achieved 10 per cent. or anything

like it. Therefore I do not think one can assess a priority as between one type of entrant and another. You want both. If it were decided that every officer should have a degree of some sort for the sake of the Army, then you would be faced with the very serious problem of probably insisting that the main training machine, which is Sandhurst, should be a degree-giving one. That would raise terrible problems both of finance and of numbers. We think at the moment that is not justified. Incidentally, if you did it suddenly you would have no officers coming into the Army for two years because you would be lengthening the syllabus at Sandhurst from two to four years. You could not get away with three years, as at the universities, because at the end of three years they would have had no military training. Therefore, to answer your question, we would say we want both types and as many of both types as we can get.

1943. At present you are rather creaming off at Sandhurst and sending the second class people to Shrivenham to get degrees. Is the present apportionment as between Oxford and Cambridge on the one hand and Shrivenham on the other what you would contemplate in the future?—That is a separate problem from the one we are discussing.

1944. No. I gave you three possibilities: direct entry from university, going to Shrivenham to get a degree or not going there at all but to a university?—I was talking about direct university entrants, people going straight from school to university. Those are the ones of which we can take about 10 per cent. but we never have got that percentage and are not likely to do so. To get the best of both worlds a boy should first go to Sandhurst, then to regimental duty and after that to university. That serves the Army best. Incidentally, it probably serves the individual best because he does much better at university if he has been out in the world a bit between school and university. I believe it also suits the universities.

1945. Do you know what the practice in Canada and the United States is?—Yes, I do. In the United States they go to West Point. They also have other means of entry—for instance,

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straight from university. They go there for four years and get an engineering or science degree. Their method of entry is so different from ours that it is hardly worth discussing it. It is based upon Congressional nomination: two from every State of the Union. They lead a monastic existence for four years. They are not bound to join the Army. There is no legal obligation upon them to do so at the end of the course and they can opt out of the course at any time. It is part of the national system of education. However, most of them do join the Army. There is, however, quite a high wastage rate, about 27 per cent. That is what I was told when I was there last. At one time West Point served the Air Force, the Army Air Arm as it was called, as well as the Army. That they found unsatisfactory and they have now peeled off the Air Force element to Colorado Springs where they have set up a separate institution similar to the one we have got at Cranwell. In Canada they have, again, a totally different system. Kingston is a four-year course, at the end of which they aim to get a degree. They have preliminary Service institutions to which boys go for two years before they reach the age of 18. Then they are sent to Kingston. It is an inter-Service organisation; it serves all three Services. They go there for four years and then they get a degree. After that they go into one of the three Services. At Kingston, as well as Australia, the problem is that of distance. The business of collecting boys from all over Canada for short periods is very considerable. Again this military inter-Service institution is part of their national system of education. It was started up at the end of the war with great reluctance; the government of the time was rather against it. It was only started up on an experimental basis although it had been running before the war. I do not believe it will fail to become permanent now. I hope it will not, for it is a very fine place.

1946. When we were at Shrivenham we were told about the work of the advisory committee there. Is there any comparable committee for Sandhurst?—There is the Sandhurst main committee. This meets under my chairmanship twice a year. The educational representative on behalf of the Army

Council is Mr. Peterson of Oxford. (Mr. Morrison.) He is the Chairman of the Army Education Advisory Board. (Lt.-General Sir George Gordon Lennox.) He sits in on that and advises us, sometimes very effectively. For instance, he entered the fray very forcibly when we were discussing whether to do away with the Civil Service Commission examination and what standards should be set for Sandhurst. It was very largely as a result of his advice that we worded our new entry qualifications in the way we did.

1947. Is the Army Education Advisory Board's main function non-Sandhurst? In other words, is it general education for the ranks?—(Mr. Morrison.) That is right. This is simply an extra job we asked the chairman to do. His normal functions are connected with the activities of the Royal Army Educational Corps. The Director of Army Education also sits on the committee to which the General has referred. (Lt.-General Sir George Gordon Lennox.) Yes.

1948. I do not know whether you can answer this question straight off. If not, can you clear it up on paper for us? I am confused about the acreage at Shrivenham. We understood that so much is being farmed, so much is woodland which is maintained by the War Department, so much is playing fields and so much is buildings. However, I found some difficulty in getting the figures we were given to add up rightly. Do you know what the distribution is?—(Mr. Morrison.) I think we had better let you have a note on that. I am afraid I have not got the figures.

1949. Very well. We also discussed the recruitment for Shrivenham and the new proposals for the county awards in relation to the Shrivenham scholars. Can you tell us what the future proportion with regard to the numbers coming in will be?—The position is that for some years we have had what are known as the Shrivenham scholars attending the college. The number used to be ten but that has recently been increased to 15.

1950. Is that per entry?—Yes.

1951. Per course?—Yes, per year. We have every intention of continuing the Shrivenham scholarship scheme, the primary object of which is to obtain scientists for the Scientific Civil Service. In addition, we are starting a new scheme, as from the beginning of the

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next academic year, for taking in ten ordinary civilians who have been given county awards by their local education authority. This is a new idea. We shall have to see how it works out before we decide whether or not we should extend it and take in more in future years. At the moment we have limited it to ten to see how we get on, but this is not necessarily the limit once we have had it going for a bit.

1952. Then the Service requirements in the case of the degree course are on average?—about 70 a year. (Lt.-General Sir *George Gordon Lennox*.) There are 210 at any one time. On top of that there is a new scheme which will add to that number.

1953. That is, roughly, a course of about 100. Is that it?—(Mr. *Morrison*.) Yes: 70 soldiers, plus 15 Shrivenham scholars, plus 10 county scholars—95.

1954. I was adding a little on for the new scheme?—Yes. (Lt.-General Sir *George Gordon Lennox*.) It will be more than that.

1955. You say it will be more than that?—Yes.

Mr. Gurden.

1956. Going back one question, so far as capacity is concerned is it thought that there is surplus land at Shrivenham, or is the idea to use up this huge area by extending the college?—Without prejudice to any note we give you, I think about 60 acres are farmed by the college whilst a further acreage is let to tenant farmers. I do not know what that acreage is.

1957. Could this be included in the note?—(Mr. *Morrison*.) Yes. We can cover this point in the note.

Chairman.

1958. Could you tell us about the new scheme and give us some idea of what the increase is going to be as a result of it?—(Lt.-General Sir *George Gordon Lennox*.) In order to increase our numbers and our university entrants the new scheme, which is due to start next October, divides itself into three parts. The first part is for undergraduates who have got themselves places at any university to read for a science or an engineering degree. Under that scheme we are

allowed by the Treasury to subsidise ten per year. It is the exact equivalent of the Royal Air Force cadetship scheme which you have seen advertised in the papers. The second part of this new scheme is to accept at Shrivenham each year ten direct entrants straight from civilian life as ordinary undergraduates. There is a further variation of that scheme. This is a system whereby officers who have a short service commission (not a regular commission) are allowed to apply to take a degree course at Shrivenham. This will be up to a total of 20 per year. Those three schemes have been authorised, will shortly be publicised and can come into operation next October. What response we will get to any of the three we do not know.

1959. As I understand it, when you say undergraduates will come direct to Shrivenham you do not mean civilians but potential officers?—Yes, people who have gone through the regular commissions board and have been found to be acceptable as officers.

1960. They would get their Service indoctrination later on?—Yes, later on, broadly speaking, but they will do a certain amount while at Shrivenham during the long vacation. If there is a gap between leaving school and going to Shrivenham they will go to a short Mons course of five months.

Mr. Gurden.

1961. They are committed to the Service?—Yes.

Chairman.

1962. Can you give me a rough figure to add to my 95?—I do not think for a moment it will be fully subscribed. However, if it were fully subscribed the annual intake would be 40: 20 on the short service scheme, 10 on the direct scheme and 10 not at Shrivenham but paid for by the Treasury at other universities.

1963. So there would be 30 at Shrivenham?—Yes; that is per year.

1964. Which makes the figure about 125?—Yes.

1965. What do you think is the potential at Shrivenham which you could take if you had a full load?—You asked this question before, and since then you have been down there.

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I am afraid I do not know what the Commandant said but I would think the maximum is between 400 and 500, in all. (Mr. Morrison.) I think so. I think that with all these extra people we should be pretty well full up. (Lt.-General Sir George Gordon Lennox.) You have to multiply 125 by 3 for a three-year course. It puts us well over the 400 mark.

1966. Is there to be a new hall at Shrivenham?—A new assembly hall?

1967. Yes?—I believe there is.

1968. Has that been approved or is it just in the process of being approved?—(Mr. Morrison.) I think at the moment it is being planned by the Ministry of Public Building and Works who are consulting the University Grants Committee about the design.

1969. It has not got into the Estimates?—It is being provided for, but that is, strictly speaking, a question for the Ministry of Public Building and Works now. We do not carry out our own works services.

1970. You have ordered it, I presume?—Yes, we have ordered it.

1971. For what number?—I am afraid we would have to let you have a note on that.

1972. Going over to the staff rather than the degree course, we were also told there will be a new integration of technical staff and general staff?—(Lt.-General Sir George Gordon Lennox.) Yes.

1973. And that that would lead to a reduction in the total staff requirement?—No, it is not the integration that leads to a reduction in the staff requirement; it is the fact that certain other schemes have impinged on the staff establishments. For instance, there is a staff qualified system now whereby an officer can become staff qualified without going to Camberley or to Shrivenham. The "careers to 55" decision has also taken up certain staff appointments which need not necessarily be filled by staff trained officers. A third scheme, the establishment of a special lieutenant-colonel's list, has also impinged on the staff requirement. Those are the matters which have reduced the overall numbers requiring staff training at Shrivenham

or Camberley. The fact that we have decided to have, instead of a general staff and a technical staff, one staff has not really affected the numbers but has merely affected the system of training.

1974. But, adding all these things together, will it affect the numbers at Camberley at any one time?—It will slightly reduce them. They will, roughly speaking, go down by about 40.

1975. When we went to Camberley we were told some of the accommodation was pretty poor, the kitchens in particular. Is there a rebuilding proposal?—Might I reconsider that last answer I gave you? The reduction was to have been 40. We have now found a method of moving officers of a certain category who go to Shrivenham for 18 months to Camberley; they will join their contemporaries at Camberley after their special 18 months of technical training. So the actual numbers at Camberley will be about the same as they are now. The present technical staff officers course, which spends all its time at Shrivenham now, is to be changed and those officers are going to go to Camberley for the last ten months of their staff training. Therefore the overall numbers at Camberley will be about the same.

1976. I was asking you about accommodation and whether there is going to be a rebuilding scheme at Camberley?—No, there is not because we do not propose to increase the numbers there. There is no major rebuilding scheme although there are certain relatively minor schemes which have already been put in hand. (Mr. Morrison.) Yes. The position with regard to the building scheme is that we are asking the Ministry of Public Building and Works to provide for a scheme of about £50,000 for improvements to the kitchens and also for a scheme of about £100,000 for improvements to the instructional facilities.

Mr. Wilkins.

1977. You are not considering the cadet accommodation in nissen huts?—I was talking about the Staff College. There is a major rebuilding scheme in hand at Sandhurst.

Chairman.

1978. When you say improvements to the instructional facilities do you mean the syndicate rooms at Camberley?—

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Yes. We are asking the Ministry to provide £100,000 for improving the instructional facilities; it would be used for the replacement of these syndicate rooms.

Mr. *Wilkins*.] But there was dormitory accommodation in nissen huts there.

Chairman.] No.

Mr. *Wilkins*.

1979. That was at Sandhurst, was it?—There is a major rebuilding programme in hand at Sandhurst but not at the staff college.

Sir *John Langford-Holt*.

1980. Can you tell us about these improvements in the instructional facilities? My recollection is that Brigadier Stanton mentioned that one of the greatest instructional aids they had were these telephone battles. But they have got the most archaic system of telephones down there. I brought this out at the time, and nothing I have heard since has led me to believe I am wrong in thinking that the whole telephone system there could be improved at comparatively small cost. Bearing in mind that they get more use out of this than probably anything else, is anything going to be done in that direction? It is no part of our job to propose expenditure but it seems wasteful that they have to bring in 60 people every time they have a telephone battle. Certainly they have to call in large numbers of people every time they want to carry out one of these exercises?—(Mr. *Morrison*.) I imagine the sum we are proposing for the improvement of instructional facilities generally will have taken care of that. (Lt.-General Sir *George Gordon Lennox*.) It includes automatic exchanges and things like that.

1981. Automatic exchanges are provided by the post office in businesses up and down the country almost every day, and I cannot for the life of me see why this has not been done at Camberley. It would have saved a lot of money, I should have thought?—I can think of several reasons why it has not been done.

Mr. *Woollam*.

1982. Can we know whether that sum includes the modernisation of the switchboard arrangements for instructional purposes?—I am sure it does, but we will confirm it.

Chairman.

1983. We asked while we were at Shrivenham, after having been to Bracknell, whether any emphasis was laid on training officers in communication and in the use of language—English and so on. We asked whether that was part of the training of an Army officer. We were told it would apply to Camberley but that Shrivenham did not do that side of the staff training. Does that play a prominent part in the work of Camberley?—The writing of English?

1984. Basic communication and the ability to speak and write correctly?—It plays a considerable part in their training because they do a considerable number of test papers. Those papers are corrected not only as regards their staff duties—their tactical and technical correctness—but also as regards their English. A certain amount of positive training in English is done, but where it is really being tackled is at Sandhurst. That is the better age, the age of 18, at which to tackle it.

1985. I think the implication of my question were that by the time a man is 30 he has lost his undergraduate fluency and requires more of it. That is what we were told while we were at Bracknell. Is it fair to say that is taught at Camberley and that you find tuition of that sort is needed there?—Is the question, is the writing of English taught at Camberley?

1986. Yes. I am not thinking just of the writing of précis and prose but of the question of getting across to people, either by the written word or in other ways, clearly and succinctly what you mean?—Yes, clarity in one's speech as well as on paper. I think a certain amount is done, although I think we could do more. Perhaps you would like a note on this?

1987. No; it was just to tidy it up, having raised the matter at Shrivenham?—We have become very conscious in the last decade of the fact that we are very indifferent at writing English. We have made some efforts in the last few years to improve this position.

1988. Is the intention that Camberley will continue to be divided between Minley and Camberley?—It is the present intention, simply for accommodation reasons. That was why I nearly

29 April, 1964.] Lt.-General Sir GEORGE GORDON LENNOX, [Continued.
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mised you on the numbers. The overall numbers are not going to change at Camberley. Therefore, so long as they do not change and so long as there is no major building done at the staff college we shall have to keep Minley.

1989. Is it a happy arrangement or would it be better to have them all under one roof?—There are advantages on both sides. We should be very loth to give up Minley. It is a very useful place for reasons other than staff train-

ing. The C.I.G.S. conference always takes place there. It means you can do things in the breaks, especially over public holidays, and still manage to shut down the staff college. That happens every year, sometimes twice a year with conferences. I suppose if you were to introduce a really major building project at Camberley it would be more convenient to have them closer together.

Chairman.] Thank you very much.

The witnesses withdrew.

Air Vice-Marshal W. F. BECKWITH, Director General of Ground Training, Ministry of Defence (Royal Air Force Department), called in and examined. Mr. T. A. G. CHARLTON, Assistant Under Secretary of State, Personnel, Air Vice-Marshal E. KNOWLES, C.B.E., Director of Educational Services, and Mr. J. H. FRANCIS, Royal Air Force Establishments Finance Division, Ministry of Defence (Royal Air Force Department), called in and further examined.

1990. Since we saw you last we have paid our visits and were very delighted at the care taken in showing us everything. We enjoyed and learned a lot from those visits. One of the major questions we discussed before and which we discussed wherever we went is the attitude of the different Services to uniformed staff and civilian staff. We found that the Army more or less entirely have civilian staff doing the non-professional work. The Navy is rather divided because Manadon have Service staff whilst Dartmouth and Greenwich have a largely civilian staff. But in the Royal Air Force you are completely Service except that you have a civilian director at Cranwell, which seems a little inconsistent with what you had been saying about the desirability of having Service staff. Naturally we are interested in the problem of which is the best. We agree you do not necessarily have to have uniformity but we would like to explore this with you and would be glad if you could express your views about it?—(Air Vice-Marshal Knowles.) Could I say, first, that Cranwell, for example, is a vocational training institution. It is a complete training institution in itself. The officer quality training, the academic training and the professional training are all integrated into one programme. Secondly, the academic side is a vocationally directed course. The particular nature of the course and the integration of the training syllabuses is, we think, strengthened

by and reflected in the appointment of Service education officers to the education staff. We are much more concerned not with aerodynamics as an intellectual subject but with applied aerodynamics to a specific aircraft type. It means, therefore, the number of posts which have a direct counterpart in civilian life is few and would not really merit a separate career for civilians. Nevertheless, we do from time to time try to appoint civilians for such things as basic mathematics at Henlow or Cranwell. We have not had much success in the past. The people who have been appointed have come and gone much more quickly than our Service education officers have done. Moreover, we have taken the view that our colleges should be staffed by members of our own education branch. The prospect of service in the colleges is a strong recruiting point and tends to improve the standard of entry into the branch as a whole. Consequently, there is a great improvement in the training given in other fields. The final point is that when Cranwell was formed initially we did make specific civilian staff appointments to do the academics. However, in 1937 a team of His Majesty's Inspectors went to Cranwell and reported very critically on the work going on there. As a result of this we removed the specially appointed civilians and put members of our own then civilian education service (which subsequently formed the nucleus of our uniformed Royal Air Force education

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branch) there. In 1958 we had another inspection by Her Majesty's Inspectors and their reports were extraordinarily reassuring. The only major criticism they made was that the turnover of staff, because of the fact that they were uniformed personnel, was greater than in comparable civilian institutions. With greater stability in the Forces, with better recruiting and with the introduction of the Senior Specialist Teacher scheme I think we have met that criticism and it no longer holds. I think that is the broad pattern and the reason why we have uniformed education officers at our teaching establishments.

1991. There was a working party in 1945?—No. There was one in 1944 which was set up to determine whether the then education service should be embodied in the Royal Air Force and become a Royal Air Force Education Branch. It was a working party chaired by Sir Grahame Donald and it reported in favour of setting up an Education Branch.

1992. Is there any particular reason why you should have a civilian director of studies at Cranwell?—It is partly traditional. It is a rather long and detailed argument as to what the pros and cons of having a civilian director of studies are. We were very fortunate when Cranwell reopened after the war in getting an absolutely first-class chap, and we have carried on that tradition.

1993. But you do not have one at Henlow?—No, because when we came to replace this particular person, Patrick Johnson, we found that the attraction of the post at Cranwell was small; the number of applicants was few and their quality was not very good. We therefore felt we had not got a chance at all of getting a man in the scientific or technical field. As we had a number of very good education officers who had been employed for a very long time on similar work, we decided to appoint one of those as director of studies.

1994. Would you agree it is a gamble whether you can maintain the quality of your Education Branch in the face of growing competition on account of the development of technological education, from civilian alternative posts?—Yes, but we have more chance of maintaining the standard of our own education staff than of recruiting civilians

on an opportunity basis. There is, really, no career structure for them.

1995. I do not want to be disrespectful, but why should it be more attractive to be in a uniform to do more or less the same job?—There are wider opportunities for service in a variety of institutions, and the career structure of the Senior Specialist Teacher is virtually fixed up to the rank of wing commander.

1996. How does the rank of wing commander compare with a senior professorial position, say, at Greenwich or Shrivenham?—Do you mean in salary?

1997. Yes?—We were only looking at this a little time ago. We should have to recruit from C.A.T.s or universities. In view of the recent awards to university staff we came to the conclusion that the difference between the two is not very great. I would not like to state this as a firm fact. It is very difficult to equate the two conditions.

1998. It does have the effect that you might not get as much research done at Henlow as at either Shrivenham or Greenwich?—We would tend much more at Henlow, for example, to do development work rather than research. We would tend to take something which is being produced in the outside world and see whether it could be developed for Service purposes. I would say we would not do straight scientific research. Perhaps the Director General of Ground Training would agree with that. (Air Vice-Marshal *Beckwith*.) I think that is true, but I feel quite a lot of work which has been done at Henlow in the last year has been on the borderline of research and development. I think it is probably near enough research to satisfy people like the National Council for Technological Awards and, by virtue of the fact that it is tied up with things happening in the Service, it is in a way of more use to the student.

1999. Is it not going to be difficult to attract people of first-class calibre if they have less opportunity for research?—(Air Vice-Marshal *Knowles*.) It does not seem to be working out that way at the moment.

2000. Robbins tells us it is important to have facilities for research in technological education but that there is difficulty in obtaining the standards. One of the arguments at Shrivenham for having civilian staff was that because there

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was more postgraduate work done there it resulted in a higher quality of general work. But you are out on a limb on this. That is the point of my question about this being a gamble; is it not going to be a precarious future for you?—It does not seem so at the moment. The other thing is that we take our Senior Specialist Teachers and give them special training. A number go off each year to Cranfield and they do something like research there as well.

Mr. Woollam.

2001. Could we compare the uniformed members of the Branch with civilian appointments from the point of view of the notice either of them would have to give as and when they wanted to leave the service? The point I am getting at is whether the uniformed member is definitely tied to the service for a longer minimum time. If, therefore, you have a uniformed service you have a built-in stability you could not look for if you had one purely by way of civilian appointment, with a turnover such as always goes with a civilian appointments service. I wonder whether there is anything in that point?—I made the point initially that the civilians we have appointed have turned over a good deal faster than our own people. When our education officers come in they have the option after 16 years or when they are 38, whichever is the later, to retire if they so wish, so we have got them for 16 years. A number will retire then but a proportion go on, as promotion shows up, to the higher appointments, and we therefore get fairly reasonable stability. We get the infusion of new ideas by moving our own people round in various spheres of employment so that they gain more experience. And, if needs be, they return to Henlow or Cranwell. Another important point in this connection is that if a gap occurs in an institution for any reason we have the whole pool of the Education Branch to fall back on. There is rarely little more than a fortnight to a month's gap before a post is filled. If they were civilian posts it might take a good deal longer.

Chairman.

2002. Mr. Day kindly sent us a letter with details of the sandwich courses at Henlow. Could you tell us how in prac-

tice that operates? Does the college exercise supervision over the choice of places?—(Air Vice-Marshal Beckwith.)

Yes. In respect of Henlow the college makes arrangements with a series of aircraft firms or firms in the aircraft and allied industries. There are three specific attachments in the fourth, eighth and thirteenth terms of twelve to fourteen weeks in a fourteen-term course. The first two are done in civil industry and the third is done in the Royal Air Force. The first two attachments are arranged for all courses by Henlow who visit the firms and explain the aims of the training. These are to give operative experience in the first attachment and junior supervisory experience in the second one. The aims and the means of implementing them are explained when Henlow visit the firms. Normally the training manager of the firm or the senior personnel member of the firm is appointed as supervisor for the bunch of students; normally there are about four of them. During these attachments Henlow visit the firms periodically. They also arrange for the provision of work sheets for the students to do on one afternoon each week which is left free for that purpose. The purposes of these is to keep them in train with their academic studies. I think that, more or less, is the picture in the case of the Henlow cadet. Are you interested in the university cadet, too?

2003. Yes. The next question was going to be how that compares with the university cadet?—The arrangements are on rather similar lines. The difference basically is that the attachments are shorter. For a Royal Air Force university cadet, under the present scheme two attachments are arranged for the two summer vacations in his three-year course at university. Henlow make arrangements with the same firms in a very similar way. The only real difference is that for reasons of time the courses are shorter and Henlow do not actually visit the firms. However, the firms themselves appoint a supervisor for each group of students. I think that really covers it.

2004. Is that much the same as what other non-Service degree students do at a university? Are the courses comparable or is this something specially

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designed for Service students?—It is specially for Service people. Certain universities—Oxford, Cambridge, London and Nottingham, for instance—require their students to undergo practical instruction in their summer vacations. This, I believe, they arrange for them. However, in the case of the Royal Air Force undergraduates they leave that to the Air Force, primarily, I think, because there are the conflicting demands of the university air squadron and the special tuition on academic subjects which Henlow give to university students during the vacation. I presume, also, they are satisfied with our arrangements.

2005. When Henlow goes to Cranwell will the Dip.Tech. course continue?—Yes, it will. (Air Vice-Marshal Knowles.) Yes. We shall need to seek new recognition from whatever the National Council for Technological Awards then is. We have been reassured that there is little doubt it will continue to receive this recognition.

2006. If eventually the C.A.T.s become degree-giving institutions, will that affect your work?—Not the work, but we do not know what will happen to the Dip.Tech. at this stage.

2007. Nothing is decided on that yet?—No. We are keeping our ear very close to the ground and trying to find out something about it.

2008. A certain amount of building took place at Henlow fairly recently. Was that before the decision was taken to move to Cranwell?—(Mr. Charlton.) Yes. I think the big building is the new cadet mess. That finally received Treasury approval in 1958; this was 2½ years before the merger was approved in principle. By that time work was very far advanced and was finished very soon afterwards. I do not think any particular harm has been done because this particular cadet mess will be of considerable use * * * A number of other schemes for building at Henlow had not come to fruition before discussions on the merger started, and those were stopped. We did not proceed with those.

2009. I did not go to Henlow but my colleagues were interested there, and I was interested at Cranwell, in the work

which is being done in controlling the use of staff, the flying staff in the case of Cranwell. They are using computers for controlling the use of laboratories and equipment at Henlow?—(Air Vice-Marshal Knowles.) They hope to.

2010. Is this going to be a useful development?—(Air Vice-Marshal Beckwith.) I think it may well be. At present they plan it with a “human computer”; there is a human planning cell which does a lot of work on the utilisation of classrooms, laboratories and equipment and which also attempts to adjust programmes so as to allow, with the minimum of disruption, for the vagaries of the weather, for flying visits and for other changes. I think that will go on when they go to Cranwell. They have attempted to use the old computer for that purpose but I understand it is not of a form which can be suitably programmed. We are at present considering the possibility of a different form of computer for entirely other reasons. If that is provided, the intention is to use it for classroom, facilities and programme computing.

2011. Is the difficulty to give it enough use? Who computes for the computer to find out whether it is being fully used?—Do you mean what are the difficulties with the present computer?

2012. No, after you go to Cranwell?—The difficulties are more cost difficulties than anything. It is a question of judging which type of computer we should buy to supersede the present old-fashioned one.

2013. The question is whether you could spread the overheads by providing a service for the other Services which have the same problem?—I would think that might be practical, Sir, yes.

2014. They would say you will be too far away. I anticipate it would be easier at Henlow?—Yes. I think it might be of more use for the long-term planning of classroom utilisation and of much less use for day-to-day or week-to-week adjustments, for obvious reasons.

2015. Could you give a fairly clear figure for the saving after the move? We had different estimates. This is

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Question 1069?—I think we gave 100. (Mr. Francis.) Perhaps I could explain what the saving is likely to amount to. The Commandant at Henlow when first talking of a figure of 100 was thinking in terms of the instructional staff, but you will see, from his reply to the succeeding question, that he went on to deal with the possible savings on the administrative backing. The figure of 100 is related to the saving in respect of the establishment as a whole. It is mainly in respect of the administrative staff. There is very little in that figure for a saving in respect of instructional staff.

2016. What is the figure we could reasonably take as being fairest?—I think that a figure of 100 for the combined station as a whole is probably a reasonably conservative figure. The total establishment is likely to be of the order of 2,000.

2017. That is largely through the saving in certain types of instructional staff by spreading the work?—At this stage it is very difficult to assess precisely what the savings are going to amount to. This amalgamation is not going to take place until the end of next year and a lot of preliminary work has to be done in connection with reassessing the syllabuses on both sides and the extent of the integration which may be possible. We have just decided to set up an establishment sub-committee to examine in detail what the establishments are likely to amount to. However, our provisional assessments are that this figure of 100 is quite a reasonable estimate for the saving in respect of the backing in the messes, the accounts section, the medical section and so on. But so far as the instructional staff is concerned we are not estimating that the saving will be very significant because, since we first decided on this amalgamation, there have been a large number of changes in policy as regards the type of course both for the Technical and General Duties students. These courses are now being assessed in detail.

2018. The Henlow entry has never reached its optimum. Is that right?—(Mr. Charlton.) The numbers reporting have never been up to establishment. The trouble at Henlow last year when it reached its peak was that although

we had selected a greater number of candidates than the normal quota there was rather a major disaster on the A levels. The net result was that about 15 of the selected candidates came unstuck on their A levels. The results were not announced until the end of August and, therefore, they could not come to Henlow. This is a very difficult exercise. We have fluctuated between 15 falling down last year and nil falling down.

2019. What I wondered was whether those places were completely wasted or whether there was not a waiting list from which you could draw people quickly who had got their A levels?—No, we have not. We had a waiting list but last year not even our waiting list saved us. (Air Vice-Marshal Knowles.) We have already this year selected nearly 20 more people than we would normally take in but because of the shortfalls we think we could cope should they all pass their A levels.

2020. This is Henlow, not Cranwell?—Yes, Henlow only.

2021. So there is not likely to be a saving of staff through a cut in the expected entry?—No. It would be difficult to save staff because the entry eventually, for Service reasons, is divided into four different streams. The numbers in each stream would vary so little that it would not really alter the number of staff required to teach them.

2022. I want to ask one or two questions about the staff colleges. We have had a good deal of discussion about whether Bracknell and Andover should continue as separate colleges. What I was wondering was whether, before the rebuilding which is necessary at Bracknell is started, the possibility of closing Andover and carrying on at Bracknell is going to be looked at?—(Mr. Charlton.) Yes, it certainly is. This is the tutorial block, I take it?

2023. The tutorial block, yes, and we also looked at the library which, compared with some of those we have seen, is rather poor. Then you could put up a larger one for both Bracknell and Andover?—Yes.

2024. Do you know what proportion of the Royal Air Force officers who go to Latimer have been either at Andover or at Bracknell?—We have got some

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figures on that, yes. Over the last three years—that is to say, from February, 1961 to February, 1964—87 Royal Air Force officers went to Latimer. Of those, 33 were ex-Bracknell, 19 were ex-Andover and 10 had formerly been at other staff colleges. Of those ten, six

had been at Greenwich, three had been at Camberley and one had been at Toronto. This gives one a total of 62 out of 87. The remainder had not previously been to any of the staff colleges.

Chairman.] Thank you very much.

WEDNESDAY, 6TH MAY, 1964.

Members present:

Mr. James MacColl in the Chair.

Mr. Harold Gurden.
Sir John Langford-Holt.
Mr. Anthony Royle.

Mr. W. A. Wilkins.
Mr. John Woollam.

Mr. F. WOOD, C.B., Deputy Under-Secretary of State (Administration), Air Chief Marshal Sir ALFRED EARLE, K.B.E., C.B., Vice-Chief of the Defence Staff, and Mr. J. T. WILLIAMS, Assistant Secretary (Establishment Secretariat Division D.S.16), Ministry of Defence (Central), called in and examined.

Chairman.

2025. We are now really getting to the end of our inquiry which, as you know, has covered all three Services at all the different levels, from the cadet entry up to the I.D.C. We would like to discuss with you some of the broader issues which have come out of this. The first obvious one is the effect which the new organisation is going to have on the future of what might generally be called education in the Services, and I was wondering if you could tell us whether it is intended to have any kind of department or person responsible for looking at the whole field of education? —(Mr. Wood.) Yes, Sir. As you know from the White Paper, a Second Permanent Under-Secretary of State (Defence Secretariat) and a Deputy Chief of the Defence Staff (Personnel and Logistics) have been appointed to the Ministry, and in paragraph 68 of the White Paper they are stated to be responsible for the closer co-ordination of management policies and procedures, both in the further development of the internal organisation of the new Ministry and in the administration of the Services. Broadly speaking, they are trying to find areas of Service administration where measures of rationalisation may be possible. In the field of training, two inquiries are in train. Firstly, an interdepartmental committee under the chairmanship of a Deputy Chief of Defence Staff

(Personnel and Logistics) and including the Directors of Training from the Army, Navy and Air Force Departments, all of whom, I understand, have appeared before you, are looking at the whole field of Service training with the idea of identifying common requirements and considering any possibilities there may be of extending the practice by which one Service provides training on behalf of another Service or on behalf of all three Services. Secondly, we are setting in train an inter-Service study of the effects of the major educational developments which are likely to flow from the Robbins Report and the Newsom Report which will clearly have implications on the types of people the Services will want and equally the types of people they may be able to recruit and, hence, the kind of training they will have to give these people in the Services. We think this study may throw up further possibilities of integrated training in the longer term.

2026. One of the things which have struck me during the course of our inquiry is that we have had many intelligent and forceful defences of the existing position, all of which lead me to question whether the Services are not employing an undue share of scarce resources in the field of highly technical equipment and very skilled teaching staff, and, although it may be a very good training arrangement, whether you are

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[Continued.]

going to look at the problem of ensuring that you are getting the maximum out of those very scarce resources?—This is the whole object of the two inquiries I have outlined to you. As you will appreciate, it is not an easy matter. The three Services each have specialised requirements arising from the different environments in which they operate. But certainly the whole object is to consider the question you have raised.

2027. As a piece of homework, I have been trying to take at random a comparable C.A.T. and compare the use being made and the costs being incurred with some of those elsewhere. If you take Loughborough, for example, where there is not the problem of part-time students but where there is the residential complication, I think one thing we should like to know is whether there is any reason why a Service establishment should be costing more per place than an ordinary civilian residential technical college doing fairly high level work. Is that the sort of problem you are going to look at?—Obviously one of the main considerations one has in mind when considering the possibility of one Service centralising various types of Service training is the cost factor.

2028. The impression one gets is that the number of students is very small. There may be very good reasons for that, and no one wants extravagant training simply for the sake of increasing numbers; but, as compared with a civilian technical institution, the numbers are very small. We were extremely interested in what the R.A.F. were doing at Henlow, where we saw the beginning of an attempt to assess the load on laboratory space and teaching staff. Is that a field in which you think there might be a possibility of having centralised cost control, as it were?—I am not terribly familiar with the work at Henlow in this context, but I know the other two Departments are interested in it. If it is successful, no doubt they will be applying similar forms of work study to their own establishments. But I rather doubt whether it would be of any advantage to have this sort of work done centrally.

2029. Of course, it might enable you to use more expensive equipment. If you have to use an expensive computer, for example, it is better to do it for everyone than try to do it for one particular Service?—Yes.

2030. We have of course picked up a little knowledge of this from all the Services, and we learned that the Navy did have a central Advisory Committee looking at all the different educational activities, with special sub-committees?—Yes.

2031. There does not seem to be anything comparable in the other Services?—I think there is something comparable in both the other Services, though in neither case are they organised in precisely the same way as the naval Committee. But both the Army and the Air Force Departments have education advisory committees. The Chairman of the Army Board is Mr. Peterson, the Director of the Department of Education at Oxford, and the Chairman of the Air Force Committee is Mr. Williams of Rhodes House. The Army has a separate Advisory Committee for Shrivenham and a largely internal committee dealing with Sandhurst which is linked with the main Army Education Advisory Board by virtue of the fact that Mr. Peterson is a member of it.

Sir John Langford-Holt.

2032. In parenthesis, is that A. D. C. Peterson?—Yes. The Air Force has a similar committee. This does not have separate sub-committees who take a particular parental interest in the separate colleges, but the main Committee does naturally cover the affairs of Cranwell and Henlow, and a number of specific problems relating to both places have been referred to them. So both the Army and Air Force Departments do in fact have Education Advisory committees which are broadly comparable to the naval one.

Chairman.

2033. Have you had time to think whether it is better to have a specialist advisory committee concentrating on one institution, or to have one which can cross-fertilise the ideas of all institutions, as with the Navy?—The Navy get the best of both worlds. They have a single large Education Advisory Committee which is composed of small groups of people who deal with the affairs of Manadon, Greenwich and Dartmouth. Frankly, I have not any views on whether this is a better organisation than the one operating in the Army and Air Force Departments.

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[Continued.]

Sir John Langford-Holt.

2034. What was the title of the Under-Secretary in charge of seeing whether closer co-ordination was possible of the higher educational services of the three separate branches of the Services?—There is and has been for many years, practically ever since the Ministry of Defence began in 1946, a body called the Educational Services Co-ordinating Committee, which is presided over by an Under-Secretary called the Under-Secretary General in the Defence Secretariat, who sits with the three Directors of the Educational Services.

2035. I wanted to go a bit closer. You have had the co-ordinating committee. You now have an Under-Secretary, who appears to investigate closer co-ordination. Has he any executive power, and has he any direct responsibility, bearing in mind that the history of the Ministry of Defence goes back some years? You had a Minister for the co-ordination of Defence, which probably was not a startling success, and I am wondering whether you would care to pass any comment on the position of the person who is to investigate the possibilities of co-ordination?—It is more than the possibilities of co-ordination. "Co-ordination", I think, was the watchword under the old dispensation; it meant very largely recognising that the three Services would operate separately, but doing one's best to make sure there was no overlap and duplication.

2036. Is it hoped that he will have executive power in this field?—I do not see how he can have, except that some of these administrative functions might be run centrally instead of by one of the Service Departments on an agency basis. If any of these functions did seem appropriate for central administration, he might have executive power in relation to it.

Mr. Woollam.

2037. May I ask some questions about the cost control inquiries taking place at Henlow and Cranwell, where we were told that it was doubtful whether central costing of this sort would be possible? I was wondering what power you had in the new Defence set-up to ensure that the other Services are in fact utilising as rapidly as possible the products of research like this that one of the Services may be pioneering, and, if

it was done centrally, might it not give you more power to ensure that these things are done?—I think we have all the power we want to enforce cross-fertilisation of this kind through the existence of a single Minister responsible for all aspects of policy and administration in the Department. I am sure if there were any reluctance on the part of any of the Services—and I am sure there is not—then the Secretary of State would have no hesitation in enforcing any cross-fertilisation that might be required.

Chairman.

2038. I gather that the Ministers of the individual Departments may have what might be called "across the board" responsibilities as well. Will one of those be answerable for this field of co-ordination of training?—This has not been suggested so far. It is conceivable, I suppose, that out of these investigations into the possibilities of rationalisation in the training field, some such arrangement might emerge. Quite probably it would emerge that more could be done in the way of one Service taking on common training functions for the others, in which case the Minister of Defence for that Service would automatically become responsible administratively for it.

2039. That would include not only looking at things at the top, but also the actual working institutions and the constitution of the work at the separate institutions; in other words, your central department would be looking at and have some control over what was being done on the ground?—I was thinking more of a case in which a particular type of training is done by one Service for another; for example, basic training for the Fleet Air Arm which is now undertaken by the Air Force. The Minister of Defence for the Air Force is, for this reason, responsible for basic flying training for the Navy. I was thinking more in this sphere.

2040. Supposing it was some question of having a common examination board in place of the present Diploma in Technology to cover all three Services: is that the kind of thing that could be done by someone at the Ministry, to get that working?—I imagine so, yes; but I do not think we have really got far enough with these investigations to forecast what may emerge from them.

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2041. You mentioned Robbins just now, and it would be interesting to hear what effect you think the extension of university education will have on the recruitment of officers, or what effect it will have on the proportion of people who come into the Services as graduates and the proportion who become graduates from within the Services?—This is very difficult. Perhaps I should tell you how we approach this. We have had some discussions with the Department of Education and Science about the possible effects of the implementation of both the Robbins and Newsom Reports on the types of people who will be available for recruiting into the Services. On the basis of these discussions, the three Services are now intensively thinking about the implications in terms of the kind of people they may want and, having got them, the type of education they will have to give them inside the Services. At a fairly early stage, we are hoping to set in train a fairly high level inter-departmental inquiry which will include representatives of the other Departments concerned such as the Ministry of Labour and the Department of Education and Science, in order to look at precisely the kind of question you have asked me. Therefore it is difficult for me, in advance of this study, to answer your question. What I think I can say is that the implications of Robbins on the officer entry availability are such that not only will there be considerable expansion in the graduate output but also in the kind of people from whom we recruit the bulk of our officers now—typified by the man with two A levels, but slightly below university entry standard. It is worth remembering that the Robbins Report does not envisage lowering the university entry standard, so that by 1980 there will be more than double the number of people at the age of 18 with two A levels who will not proceed to higher education. However, even though there will be more graduates, there are advantages in the 18-year old entry. I do not think we can attract a hundred per cent. graduate entry, and certainly there will be a large field from which we can continue to recruit the 18-year old entry with the same qualifications as they have now.

2042. What is the advantage of the 18-year old as opposed to the 21-year old entrant?—There are two, I think.

One relates to requirement and the other to availability. From the requirement point of view, we think that there are great advantages in taking a boy of 18 and training him fairly rapidly, with a considerable Service background to his training, to become a junior officer. There is a much shorter period of training involved: we get him into the Service more quickly. Secondly, we doubt whether there is really any need for a hundred per cent. graduate entry. Thirdly, and perhaps equally important, we are doubtful whether we can in fact attract a hundred per cent. graduate entry into the Services.

Mr. Wilkins.

2043. When you say there will be more graduates, do you mean a higher percentage?—Both more numerically and as a percentage of the relevant age-group.

Chairman.

2044. From the point of view of cost, I think there is no doubt that the 21-year old is a cheaper buy than an 18-year old, certainly if the 18-year old goes on to get a degree. Would you therefore envisage that you would not expect your 18-plus entry to be people who would be degree potential?—I would expect the same sort of 18-year old entry as now. On the technical side, they would be people we would take in the Services either to diploma or, in a minority of cases, to degree standard. On the General Duties, professional side, we do not in general educate them to degree standard. We might have to do more in future if the competition from universities becomes stronger.

2045. I understand the R.A.F. are moving more towards a university cadet recruit. They are not setting out to train. The Henlow people are not degree standard?—(Air Chief Marshal Sir Alfred Earle.) Largely speaking from knowledge gained in my last job, which was Commander-in-Chief of Technical Training Command, where Henlow was one of my units, in fact it is not so much that the Air Force is setting out to get or train more university entrants. We have changed the system of training our university entrants. Instead of taking them to Henlow for one year and then sending them on to university, we are selecting boys who either are already at

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university or who have got themselves places and are then, after a very short indoctrination, forced on us by the short length of time between G.C.E. examination and university entrance—they are going up to university and coming back for an O.C.T.U. course afterwards. That is a considerable improvement, I think, on the Henlow scheme, where they went for a year, you lost a large proportion of your entry and some of the best of your entry at the end of that year who went on to university and did not come back for a further three years. The total number of places at the moment is 25 a year, and that covers all branches. It is not limited to the Technical Branch, as the Henlow scheme was.

2046. Will General Duties people get a degree, or will they come with a degree?—They will come in exactly the same way as the technical boys. They will be selected and, after a short course, will go up to university, get their degrees, and come back for purely Service training.

2047. That is a more economical method, it would seem, than the Army method. In the first place, you have a wider choice of universities, rather than having Cambridge places reserved for Sandhurst; it means you have the whole field, a rapidly increasing field, of universities available for people. Secondly, you are getting the training done for you, as opposed to having to do it yourself. On the whole, it seems the R.A.F.'s is the better way of doing it, from the purely economical point of view?—I think it probably is. Under the old scheme, we were still getting the training done for us. The cadet still went from Henlow and did his university course. But we get them trained more quickly under this scheme.

2048. I think it would help us if you could give us some guidance about what you think is the justification for having both a university cadet entry and running your own universities, as it were, as well. I can see the case for saying you want to give technical training to people wanting a more specialised training below degree standard, but to be providing degree courses when at the same time you can buy the finished product seems a little odd?—I think there are two compelling reasons. In the first

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place, there is only a limited amount of graduate material prepared to join the Services. In the second place, we only want a limited proportion of graduate officers. So far as concerns the bulk of the technical officers that we require, it is not necessary to have them to graduate standard. At the moment, the brighter of the Henlow boys qualify through Dip. Tech., but a high proportion only qualify to H.N.D. They are perfectly satisfactory and in fact extremely good technical officers. It is only for a small number of highly technical posts that you need graduates.

2049. Do you think the proportions will remain roughly what they are now?—(Mr. Wood.) My impression would be that there will be a tendency for the requirement for graduates and, equally, the possibility of recruiting graduates, to increase. (Air Chief Marshal Sir Alfred Earle.) I would agree with you on the first; I am not sure I do on the second.

Chairman.

2050. Might we look for a moment at the problem of the overseas student, which we have met at every level? We have found that where overseas students come in straight from their country of origin, there are language difficulties and sometimes age difficulties in the case of staff officers, as well as difficulty in getting them to fit in to the ordinary work, though after they have been in, going to the second stage, they seem to settle down to do very good work. Is it possible to improve on the class of officer coming over? It seems to be wasting the resources of the countries sending them, as well as the time of the people training them, if they are not getting much out of it?—(Mr. Wood.) I think we would have doubted whether the problem is a major one. It is true there are difficulties with some students from some of the new Commonwealth countries, but not, I think, major difficulties so far as I have been able to discover. We are in fact and so are the Service Departments very much impressed with the advantages of accepting overseas students both politically and from the point of view of the value our students get from mixing with these overseas people on the courses. We are not therefore terribly anxious to impose any handicaps on their coming. But we are able from time to time to influence the quality of the people who

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come. Some of our Missions in these countries are consulted on candidates, and occasionally we do make diplomatic representations to some of these countries to the effect that some of the students are not quite capable of getting the full value from the courses. At the present moment, I do not think we would want to go further.

Mr. Royle.

2051. What arrangements have you for arranging interviews both for people of officer calibre and, even more, for people of apprentice calibre, in overseas and Commonwealth countries, including Colonial territories? Can you interview people in those countries?—You mean interview people from their own Armed Forces whom they want to send to our training colleges and institutions?

2052. That is one point?—I think none, except in so far as the country concerned might ask our people serving with them to advise them on the sort of people they should send.

2053. Supposing there is some civilian young man who is keen to join the Royal Air Force or the Army or Navy: he might be of N.C.O. calibre or he might be of officer calibre. Do you have arrangements for that young man to be interviewed in his own country?—I am afraid I do not know the answer to that.

2054. It is brought in with the other problem, in that there are no arrangements for interviewing these people in the countries overseas?—(Air Chief Marshal Sir *Alfred Earle*.) Are there not two problems here? The case you refer to is the young man who wants to join the Royal Air Force, and he poses quite a different problem from that of a man sent over from Ghana, say, as a student to the I.D.C., who has no intention of joining the Royal Air Force. I am pretty sure there are arrangements so far as concerns youngsters overseas who wish to join as apprentices.

2055. But the two issues are very much tied up together, are they not? If you had arrangements whereby you could interview people coming from the Armed Forces of an overseas or Commonwealth country, at the same time you ought to make arrangements whereby young men wishing to join our Forces could be interviewed. I wonder if you

could let us have a paper on the up-to-date situation?—(Mr. *Wood*.) Yes, certainly we can do that.

Sir John Langford-Holt.

2056. Who assesses the political advantages in having people from Commonwealth and overseas countries? Is it the Ministry of Defence or the Foreign Office? It cannot be the Treasury. By whom and how are they assessed?—I was speaking in general. There obviously are political advantages in having promising people from the Armed Forces of those countries over here to absorb our methods and get trained in our ways. (Air Chief Marshal Sir *Alfred Earle*.) I think one might add to that that the Chiefs of Staff are constantly under pressure from the Commonwealth Relations Office to accept Commonwealth students on the various courses.

2057. Yes. I should have included the Commonwealth Relations Office?—That is probably the best way in which we could estimate the political advantages.

Mr. *Wilkins*.

2058. This is another suggestion to be added to the ones already made to us as we have been probing this subject; we have tried to discover why it is you said, Mr. Wood, you are impressed with the value of this arrangement. We have been trying to discover exactly what the value was to us here at home of these Commonwealth students, because in some cases they are substantial in number and they are costly to maintain. We have been told, "The selection of these people is nothing to do with us?" We have asked, "Then whose concern is it?", and we are told, "The Foreign Office." Now we are told we might have looked at the Commonwealth Relations Office. We have had less clarification on this point than on any of those we have tried to probe. It may be that you are not able to tell us what is the value, but perhaps we could still be told who might authoritatively inform us exactly what the value of those students is to this country?—(Mr. *Wood*.) I really cannot add to what I have said about the value.

2059. You have used the phrase, "We are impressed with the value". We have been told this almost everywhere we have gone, but no one seems able to tell us what that value is in terms?—

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I should have thought there was obvious value in terms of our relations with the countries providing the students and relations between our Forces and their Forces in taking their students and training them with ours here.

Chairman.

2060. Do you think it has any potential "sales" value if they are trained on British equipment, in that when they are in positions of responsibility they are more likely to buy equipment from us?—I would not overstress this, but it has some, I think.

Sir John Langford-Holt.

2061. I accept completely that there are obviously advantages in this, but I should like to know, if possible, what has happened over the last ten years in their careers. What has happened to these students who have come from overseas territories when they have got back to their own countries? Is there any way in which one can assess what has happened to those people, and who would be able to provide us with the information?—I think it is extremely difficult.

2062. I think it is the core of the problem?—(Air Chief Marshal Sir Alfred Earle.) If you are referring to Commonwealth countries, I can give you my own experience from the I.D.C. Shortly after I completed the I.D.C., I went out to Australia. My Australian colleague was Commandant of their Army Staff College; I was Commandant of the Australian Air Force College. My Australian Air Force officer who was there with me was Deputy Chief of their Air Staff, the sailor was commanding their Fleet, and both the airman and the sailor subsequently became Chiefs of Air Staff and Naval Staff respectively. The Canadian sailor who was with me became Chief of their Naval Staff, and the Canadian soldier became Vice-Chief of their General Staff. I do not know if that is the sort of thing you are after.

Mr. Woollam.

2063. From a Service point of view, do you not regard those factors as being Service advantages which would justify this course of action and the amount of expense which is involved, quite distinct from the political and diplomatic values which may appeal to the Foreign Office and the C.R.O. and which presumably a Service Department is not necessarily

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there to judge?—In so far as good inter-Service liaison is concerned, I would say undoubtedly.

Mr. Royle.

2064. Would it not also be true to say that one of the advantages you gain from having overseas students over here is that when they reach high rank in their own Services, which they often do at great speed, they are immediately on friendly and very close terms with many officers in our Services, which is of tremendous help in the years ahead?—Certainly.

Mr. Gurden.

2065. Do you see any justification for accepting a lower standard of student entry than we have ourselves? I think the Chairman raised this subject earlier, and your reply was that there did not appear to be serious difficulties. But is there not in fact segregation of some students because their English is not good enough? That would appear to me to be a serious difficulty?—It depends very much on the type of course. To take the I.D.C., for example, if you are going to insist on the same standards for Commonwealth countries, you are virtually excluding officers from newly emergent Commonwealth countries. I think that is certainly true. To my knowledge, there have been a number of cases where we have had to run special courses for foreign officers who have come over for technical training. I imagine that is what you are referring to. The great difficulty there is that a number of these courses have not necessarily been for Commonwealth students. I am thinking of * * * where, for political reasons, we have taken a number of their officers to train. Their ideas of a good knowledge of English and our own have been, unfortunately, quite different. We have had to lay on special courses for them and often had to precede those by courses in the English language.

Mr. Wilkins.

2066. But you still say it is worthwhile?—These were * * * officers who paid for their training, but obviously for political reasons we were prepared to undertake it.

Chairman.

2067. On the one hand, there are more new Commonwealth countries every year, and therefore present trends

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are upwards. On the other hand, presumably as the new countries settle down, they will be providing more of their own facilities. What do you think of the future?—I think the difference it will make to our senior courses—the I.D.C. is a good example—is marginal. India and Canada have their own comparable courses, but they still send the same quotas to the I.D.C. As regards a newly emergent country, it would be obviously uneconomic for them to form such a college. They could not support it with their very small forces, even if they could provide the facilities. There is still a prestige value in these countries in a man having been trained at one of our colleges. I do not think it will make a great difference.

Mr. Gurden.

2068. In view of the considerable subsidy from our Exchequer and the capacity of our colleges, do you think it would be advisable to spend considerable sums on extensions to those colleges, or would you prefer to cut down on this poorer quality of student to make provision for increases which are likely to occur?—(Mr. Wood.) I think the Air Chief Marshal said he was doubtful whether increases would occur. I think our general opinion is that the demand will continue roughly at its present level.

2069. I understood there was to be capital expenditure at some of the colleges to maintain the present intake or to cope with the increases?—(Air Chief Marshal Sir Alfred Earle.) I think you are in fact talking about the Joint Services Staff College.

Chairman.

2070. Or Andover?—I had not heard about Andover. At the Joint Services Staff College, I know there has been a suggestion that they should make room for some of the new Commonwealth countries to send students. That can only be done either by cutting down our own numbers, those of the old Commonwealth countries and Americans who already go, or by building. Building for that, so far as I am aware, is only to allow for another syndicate of some eight or ten.

Mr. Gurden.

2071. If we did not build, we should in fact be taking the students of poorer quality and keeping back some of our

own who would like to go into the colleges?—If we are going to take these people, we have to make additional room for them or keep back our own people who want to go.

Chairman.

2072. You said you thought it would make no difference at Staff level, but what about the cadet entry level?—(Mr. Wood.) Here again, we would say the same things apply. There are two points, I think. First of all, there is the difficulty of some of these smaller countries providing facilities of comparable quality to our own. Secondly, there is the prestige value which they attach to training in this country. For both reasons, we would not think there would be any difference in the number of applications for places in our institutions.

2073. Recently it came to my notice that a Joint Services Cadet College had just been opened in Northern Nigeria. Is that not the sort of thing that will happen? Just as there is prestige value in a country having its own university, will not the same apply to a cadet college?—It may be so, but the numbers they send to our cadet colleges, the Joint Services Staff College and the Imperial Defence College are, country by country, very small. I imagine they will continue to send their people to this country for training.

Mr. Gurden.

2074. Who has to make the decision about the fees to be charged to those overseas students?—This is something which we work out broadly on the basis of extra costs, with the Treasury and with the sponsoring Department here.

2075. Are the Treasury satisfied to carry on this subsidy?—I do not think there is a subsidy, is there? Broadly speaking, we charge these countries (the I.D.C. is a small exception) what we regard as a fee which covers the extra cost incurred by us in taking their students.

2076. The figures show there is a considerable subsidy, anyway?—If you speak in terms of what it costs per student, dividing the whole cost of the college by the number of students in it, then the cost works out at more than we charge them. But if as is usual in these matters, we simply charge them the extra cost we reckon to incur by having their students in the college,

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my understanding is that the fees they pay cover this.

Mr. Woollam.

2077. This is revenue account?—
Certainly.

Chairman.

2078. The Greenwich Staff College is rather removed from the others and, although it is accessible to London, it is not very easily situated for joint activities. Do you think its future remains at Greenwich, or is it likely to be more closely integrated with the others?—(Air Chief Marshal Sir Alfred Earle.) This is a problem which was in fact looked at by a committee set up by the Chiefs of Staff some three years ago. The advantages of having all three Service Staff Colleges together are obvious, but, when you got down to the practicability of housing the three Staff Colleges together, the conclusion was that the difficulty of doing it would not justify the expense involved. In fact, of course, all three Staff Colleges do work closely together. They visit one another and have an essential minimum of, I think, some 20 per cent. of inter-service study contained in the syllabus of each.

2079. When you say they visit one another, as far as I know they do not visit Greenwich, do they?—I myself, doing the Air Force Staff College course before the war, spent an enjoyable week at Greenwich. That still does go on. A number of students from Bracknell go to Greenwich and are replaced by students from Greenwich. To my knowledge, that is going on to this day.

2080. The joint exercises do not take place at Greenwich, but at Camberley or Bracknell?—At all three.

Mr. Royle.

2081. I wonder if you would care to comment on a proposal I am going to suggest. Would it be a practicable proposition to transfer all the courses which are at present at Greenwich to either Manadon or Dartmouth or one of the other Service colleges, to create instead at Greenwich a new Maritime University of the Commonwealth which would be staffed to begin with by the Royal Navy, and have there perhaps a Chair of Hydrography or a Chair of Oceanography? Do you think that is practicable?—(Mr. Wood.) It is much too large a proposal for me to comment on

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at this stage. I have no idea about the practicabilities or desirabilities.

Mr. Wilkins.

2082. It has never been discussed at all?—Not to my knowledge?—
(Air Chief Marshal Sir Alfred Earle.) I have never heard of it before.

Chairman.

2083. The impression Greenwich makes on one is that there is a whole mixture of odd activities going on there which are spasmodically grouped together, any one of which you can justify; but when you begin to look at it, you wonder whether there is any justification for keeping the unit there. An obvious example is that you are bringing in civilians on to the degree course, which is only kept going because the staff are there, whereas Manadon also provides a degree course. I am wondering whether anyone has looked at the future of Greenwich as a national institution?—(Mr. Wood.) No one has, as far as I know. As to the redistribution of the rather mixed bag of courses there at the moment, I imagine this would be looked at in the context of the two inquiries I referred to earlier.

Mr. Royle.

2084. They have already been looked at?—No, they will be, in one of the investigations I referred to earlier.

Mr. Woollam.

2085. Apart from the Admiralty, there would not be anyone else who would judge it their particular responsibility to think of any wider, imaginative or more national use of the place?—No.

2086. Which is why, presumably, there never has been consideration of the sorts of ideas we have been putting forward?—I think that is true.

Chairman.

2087. Coming to Latimer, is the J.S.S.C. considered essential for officers destined for higher command?—(Air Chief Marshal Sir Alfred Earle.) It is almost impossible to answer this question yes or no. There is considerable competition for vacancies at the J.S.S.C. The net result is that the best officers and the officers most likely to go to high rank do in fact go there, in the same way as officers go to their own single Service Staff College. To that extent, you would expect the majority of

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officers who go to higher ranking posts to have done a course. But there is no bar to an officer who, for some reason or other, has not gone to the J.S.S.C. going on to higher rank. So it cannot be said to be an absolute requirement.

2088. No, but is the trend going to be that the man who really has got the field marshal's baton in his knapsack will go through Latimer?—I think one can say yes, because he is the man who would be selected for that course, if he has shown that tendency at that stage in his career.

2089. Is it now about the right size for the needs of the combined Services, or is there going to be an increasing demand in the future, or less demand?—Again, I would say that at the moment the Joint Services Staff College does meet the requirement for officers with that background. I see no reason why it should get any greater in the future.

2090. If the demand did increase, would it be wise to expand Latimer, or start a separate college somewhere else?—I do not think one can answer that question without studying it as a specific problem. As a matter of principle, I think it would be better to have one slightly larger college, because I cannot see there would be any need to double it or anything of that sort, rather than having another college as an offshoot.

2091. This is not, I think, altogether remote and academic. We understand there are in fact alterations being planned at the moment, and therefore it is relevant to ask if they are being planned with a view to a possible increase, or is it taken that the numbers will remain roughly as they are now?—The plan under consideration at the moment is to cater for a small increase. It has been suggested that certain temporary accommodation should be replaced; but there is an examination going on at the same time into the possibility of finding another home for the Joint Services Staff College which might prove to be more practicable than rebuilding at Latimer. That examination is still in train.

2092. Might we now come on to the I.D.C.? I do not think anyone would challenge the value of the I.D.C. as training—certainly I would not from what I saw of it—but it occurs to me that you

are spending roughly £100,000 on the I.D.C., and it is very valuable, but that it would be equally valuable for all sorts of people to have the advantage of this kind of experience, including ourselves. Are you really justified in spending public money at this sort of level on this kind of concentration on a comparatively narrow range of people? I do not know whether I have put my point to you clearly?—I would have thought the answer was undoubtedly yes, Sir. Admittedly an I.D.C. course would do an awful lot of people good, but you have only a limited number of officers in the three Services who are going on to the top in those Services and on whom you might say you are justified in spending that amount of money to give them the training. But I would have thought, certainly from my own experience, the I.D.C. is absolutely invaluable. However, there would really be little object in giving an officer an I.D.C. course who had only another two years in the Service, even though he would benefit immensely from it.

2093. Does the expectation of life of a student at the I.D.C. justify the money? He is going there at about the age of 45, and I imagine the proportion of officers who continue in active work after 55 is small, in comparison with other professions. For example, we are just beginning at 55. If someone is to go round the world at public expense, why should it not be us rather than serving officers?—(Mr. Wood.) These people are specially selected, and therefore one anticipates they will have another 10 years' service. On that basis and on the basis that they are mostly going very high in responsible rank in the Services, we think the expense is well justified.

2094. This again is perhaps going a bit beyond your concern, but I put it to the Commandant there and he rejected the idea. It is a pure historical accident that the I.D.C. has become linked with the Defence Services. They got in first with the idea and have developed this very fine method of adult education. But is there not a case for saying that it ought to be a college for the Civil Service and possibly outside industries, as well as for the defence Services?—(Air Chief Marshal Sir Alfred Earle.) To some extent, it is a college for the Civil Service at the

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moment. There are a number of civil servants on each course. One of the great points about the I.D.C., I think, is its limited size. Every Commandant I have heard on the subject has always stressed his belief that it would be a great mistake to increase the size of the student body. One of the great advantages of the I.D.C. is that you do get to know everyone there with you very well.

2095. Could you increase the proportion of civilians?—(Mr. Wood.) Not without reducing the Service content, which we should not want to do. The course, although it is broadly based, is directed towards the requirements of high command and administration in the Forces. I do not think we want to blur this object by altering the proportions in favour of the Civil Service. The sorts of civil servants who go there are reasonably closely associated with the Services, and I think the proportions are about right. Certainly the Government Departments have difficulty in sparing people for the Civil Service vacancies. (Air Chief Marshal Sir Alfred Earle.) But it is a Defence College.

Mr. Royle.

2096. Granted that; but I think many of us who have had experience of the Treasury complain about the lack of imagination of some of the regulars in the service of the Treasury. If members of the Foreign Office can attend this course, they are surely no closer to Service life and the difficulties and problems of Service life than people in the Treasury, who the whole time are passing, accepting, and in many cases turning down applications from Service Departments to spend more money or expand Service commitments in many parts of the world. Surely there is a case therefore, for Treasury officials attending this course?—They do in fact attend. There has been pressure from time to time from Commandants on the Treasury to nominate more people to attend the course.

2097. You do agree it would be a good thing if more Treasury people in fact attended this course?—Absolutely.

Chairman.

2098. At Question 1562 we were told, "We like to have a member of the
39126

Treasury here although we have not had one for some time. The Treasury is always getting a kick in the heels throughout the course and it is nice to have someone to answer back for them in syndicate discussion." I think we were told the same at Latimer?—(Mr. Wood.) That is true. We are continually pressing the Treasury to provide people for the I.D.C. and, to a less extent, the J.S.S.C. As you know, they are a hard worked Department, and they find it difficult to spare people. There has been Treasury representation at the I.D.C. in 1955, 1957 and 1961.

Mr. Royle.

2099. How many representatives?—One in each of those years.

2100. So there have been three people there in the last nine years?—Yes.

Chairman.

2101. When we were there, I think we were told that only four of the studies done there were Service studies, and that the other ten were civilian studies. Is that about the proportion?—(Air Chief Marshal Sir Alfred Earle.) If you take it in terms of purely Service and purely civilian, yes, Sir. But I think the point is that in these days, particularly in the higher ranks, you cannot escape from economics or politics.

2102. Yes, I agree, but the converse applies, that politicians, administrators in all Departments and business people cannot escape from Defence problems in the wider sense?—There is a point there, that we have all had a pretty good grounding in the rather more narrow Service matters before we get to the I.D.C. People will certainly have done their own Staff College and probably the Joint Services Staff College before they get to the I.D.C.

2103. This leads on to the question of the War College, where the age group is comparable but where, I imagine, the future employment is not so clear. Would you apply the same points to the War College?—May I answer that question rather a long way round? I think the War College certainly does produce very well worth-while results. The number of people who can go to the I.D.C. is pretty limited, and, as was pointed out earlier on, there is a tremendous advantage in a wider number of people, particularly serving officers

I 4

6 May, 1964.]

Mr. F. WOOD, C.B.,

[Continued.

Air Marshal Sir ALFRED EARLE, K.B.E., C.B., and Mr. J. T. WILLIAMS.

going into the medium level command appointments, having a wider knowledge. The War College does enable that desideratum to be met to some extent. Whether in the long term there is a place in the whole scale of military courses for the War College and whether it should be given a definite charter, a definite place in the system of courses in the long term, are matters which have already been referred to the committee which Mr. Wood mentioned in answer to your first question, under the D.C.D.S. (P. & L.).

2104. The same argument that was raised earlier can be applied here: no one necessarily challenges that it is a good education for them and that they are better men for it, but the public would want to know whether it is a justifiable expenditure of public money, as compared with spending it on another group of middle-aged men who would like to widen their interests?—Those are exactly the feelings that have prompted the fact that this matter is now being looked into. It is no doubt a jolly good little course, but we have to determine whether it is worth-while keeping.

Mr. Woollam.

2105. On this controversy we have been having, I think it can be argued the other way. If the people who go to the I.D.C. are almost by definition those who will pass on to very high levels of command and responsibility, they are presumably people of a certain mental calibre, grasp and range and therefore capable of doing their own broadening of their minds without expenditure of the taxpayer's money?—Well, from my own point of view, I could never under my own steam have got anything like the broadening in outlook and general advantage that I got out of a year at the I.D.C. It is not only the lectures you go to. The real value is that you have a number of people who think and enjoy thinking, and you do discuss and exchange views with a very wide number of people with very differing points of view. That is something you can never do under your own steam.

Chairman.

2106. The examination of the War College will include looking at the balance of the curriculum—the balance

between naval and other Service subjects?—Yes, certainly.

2107. Will one of the things looked at be whether it should become a Defence College, if it does continue to exist?—I am not sure what you mean by that. If you mean a course open to all three Services and possibly civilians, yes.

2108. It is open to all three now?—Yes, but whether there should be a set proportion of each, including a proportion of civilians: perhaps that is one of the points.

2109. And a shuffling of Commandants? I think at the present moment the Commandant is always a sea captain?—Yes, that is another point to be examined.

2110. Now, are there any points you would like to put to us?—(Mr. Wood.) I do not think there are any. (Mr. Williams.) On the subject of Commonwealth students, from my own experience of the J.S.S.C., I should like to reaffirm how valuable it was to have views from Malaysians, Australians, etc., about problems that could be looked at in different ways. One example that springs to mind is the position of China. These Commonwealth students do include civilians, as well as Service members. So that one hears not only differing views from other parts of the world, but in different contexts—civilian and Service.

Mr. Gurden.

2111. The countries you name do represent a very small part of the total overseas intake of students?—Yes, they do, indeed.

Chairman.

2112. Among the things we want to look at are some of these general wide problems we have been mentioning about the long term effects of changes in universities and so on. Although we are limited to the Estimates, these are essentially forward-looking rather than backwards-looking. Is there anything you would like to say to guide us as to what should be the general shape of this organisation in the future?—(Mr. Wood.) No, Sir, I think I have said as much as I want to and can say on this point.

Chairman.] Thank you very much.

APPENDIX 1

JOINT SERVICES STAFF COLLEGE

Memorandum submitted on behalf of the Secretary of State for Defence

Background and Function of the College

The Joint Services Staff College was established in 1947. Initially, the College was administered by the War Office, but in April, 1948, control was assumed by the Ministry of Defence. The supervision of the College for professional purposes is vested in the Chiefs of Staff.

2. The function of the College is to train selected members of the armed forces and civil services of the United Kingdom and Commonwealth in all aspects of joint Service co-operation. It aims to train serving officers to fill joint Command and Staff appointments by studying modern war on a joint Service basis, and to help both military and civilian officers to develop team work between the three Services, and between serving officers and civilians who are concerned with the political and scientific elements of military problems. The course is also attended by officers of the United States armed forces. Students are broadly of the rank of Commander, R.N., or equivalent. There are no civilian members of the Directing Staff. The names of the Commandant and Senior Directing Staff are shown at Annex "A".

3. The College is residential, although students can live out if they wish. A certain amount of information on outside accommodation is available from the College.

Establishment—Service and Civilian Personnel

4. The day-to-day administration of the College is undertaken by the Commandant and his Service Directing Staff, supported by civilian officers and other ranks. Departments are reimbursed on a capitation rate basis for Service personnel, including the Directing Staff, who staff the College. The establishment of Service and civilian personnel for the financial years 1961-62, 1962-63 and 1963-64 is given in the table below:—

	1961-62	1962-63	1963-64
2-Star Officer	1	1	1
Captain, R.N., or equivalent	3	3	3
Commander, R.N., or equivalent	14	14	14
Lieutenant-Colonel	1	1	1
W.R.A.C. Officer	1	1	1
Retired Officers	2	2	2
Other Ranks/W.R.A.C.	105	102	86
Executive Grades	2	2	3
Clerical Grades and Typists	20	26	30
Draughtsmen	2	3	3
Messengers, Cleaners, etc.	6	8	22
Industrial			
TOTAL	157	163	166

Course and Students

5. The length of the J.S.S.C. course is approximately six months. The details of students attending the 25th, 26th, 27th and 28th courses between October, 1961 and February 1964 are:

Course	R.N.	Army	R.A.F.	U.K. Civil Service	Common- wealth	U.S.	Total
No. 25 ...	16	23	18	4	14	4	79
No. 26 ...	19	23	18	4	16	4	84
No. 27 ...	16	23	17	4	17	4	81
No. 28 ...	15	22	18	4	14	4	77

6. No course fees are payable in respect of U.K./U.S. students, but fees are charged for Commonwealth students at the rate of £13 13s. 0d. a week. Maintenance costs are payable in addition at the rate of 13s. 6d. a day (living in) and 1s. a day (living out). The fees and maintenance charges are agreed with Treasury and are subject to review. The current rates were put into effect from 27th February 1961.

7. Apart from the classroom and syndicate training, students undertake certain instructional tours. These mainly deal with Service operational and training establishments in the United Kingdom. The only overseas visit by students is to B.A.O.R., where they are able to obtain a greater insight into British Army operations than is possible in the U.K. Officers of the Directing Staff, however, pay visits, between courses, to various N.A.T.O. Military H.Q. in Europe, U.K. Commands overseas and U.S. Defence Establishments. Such visits are considered essential for the proper preparation of lectures and exercises.

Costs

8. Details of expenditure on the J.S.S.C. are shown at Annex "B".

ANNEX "A"

JOINT SERVICES STAFF COLLEGE

SENIOR DIRECTING STAFF

Commandant

Major General C. M. F. Deakin, C.B., C.B.E.

Senior Directing Staff

(Navy) Captain J. M. Townley, R.N.

(Army) Colonel C. Blair, O.B.E., M.C.

(Air) Group Captain K. P. Smales, D.S.O., D.F.C.

ANNEX "B"

COSTS

	1961-62	1962-63	1963-64
	Cost £	Cost £	Cost £ (Estimated)
ADMINISTRATION AND GENERAL MAINTENANCE			
PERSONNEL			
Service Pay and Allowances	111,183	115,677	110,000
Civilian Salaries and Wages	28,450	36,971	40,000
TRAVEL COSTS	7,000	7,427	9,000
STORES AND FURNITURE	6,510	9,942	6,200
MAINTENANCE AND REPAIR	36,924	44,920	40,000
UTILITIES			
Water	509	572	600
Electricity	4,332	5,560	5,850
Gas	—	—	—
Fuel	9,540	8,107	8,200
MISCELLANEOUS			
Rent (including Contribution in lieu of rates and average costs of new works)	8,874	9,346	9,660
Telephone Charges	1,360	1,822	2,000
Other Charges	125	125	125
	214,807	240,469	231,635

8th April, 1964.

APPENDIX 2

R.A.F. STAFF COLLEGES

Letter to the Clerk to the Sub-Committee

MINISTRY OF DEFENCE,
WHITEHALL,
LONDON S.W.1.
2nd April, 1964

When the Sub-Committee visited Bracknell, they were assured that the geographical location of the Staff College was no bar to obtaining visiting lecturers. You subsequently asked me to give examples of Ministers, Chiefs of Staff, etc., who visit the College to give lectures.

Lectures are given regularly by the Minister of Defence for the Royal Air Force, all Service members of the Air Council including the Chief of the Air Staff, and senior Service and civilian staff from the Air Force Department. Other speakers include the Chief of the Defence Staff, the Commanders-in-Chief of all R.A.F. Commands in the United Kingdom and some from abroad, the Deputy Chief of the Naval Staff and the Vice Chief of the General Staff. Recent lectures have also been given by the South African Ambassador in London, the Nigerian High Commissioner, the Head of the Royal Australian Air Force Mission in London, Mr. George Woodcock and a number of University Professors and businessmen.

Yours sincerely,
D. E. YOUNG.

APPENDIX 3

SANDWICH COURSES

Letter to the Clerk to the Sub-Committee

MINISTRY OF DEFENCE,
WHITEHALL, LONDON, S.W.1.
15 April, 1964.

I understand that the Sub-Committee would like a note on sandwich courses at the R.A.F. Technical College, Henlow.

The Diploma in Technology course and the Higher National Diploma course are both of four years and two terms duration, i.e. fourteen terms. On both of these courses one term is spent in on-the-job training at an R.A.F. unit and two are spent with an industrial firm.

The Technical College seek vacancies in a large number of firms which do work of value to the cadets' training. Generally speaking the firms are very co-operative. In the current year the following firms are participating in the sandwich scheme:—

British Aircraft Corporation
Sperry Gyroscope.
Mullard Radio.
Rotax.
Hawker-Siddeley.
Bristol-Siddeley.
Standard Telephone & Cable Co.
Ferranti.

The Henlow cadets studying at Universities pay visits to industries during their vacations as part of their University courses.

Yours sincerely,
B. M. DAY.

APPENDIX 4

NAVAL EDUCATION ADVISORY COMMITTEE

Memorandum submitted on behalf of the Secretary of State for Defence

The composition of the Committee is as follows:—

Chairman :

Prof. Sir John Baker	...	...	Head of Engineering Department, University of Cambridge.
Mr. L. R. Missen	...	...	Local Government Commission (late Chief Education Officer for Suffolk).

Greenwich sub-Committee :

Prof. Sir Willis Jackson	...	...	Professor of Electrical Engineering, Imperial College.
Prof. J. Diamond	...	...	Professor of Mechanical Engineering, Manchester University.
Prof. Sir Arnold Plant	...	...	Cassel Professor of Business Adminis- tration, London School of Econo- mics.

Dartmouth sub-Committee :

Dr. F. A. Vick	...	...	U.K. Atomic Energy Authority.
Prof. N. H. Gibbs	...	...	Chichele Professor of the History of War, All Souls' College, Oxford.
Mr. C. H. Christie	...	...	Headmaster of Brighton College.

Manadon sub-Committee :

Prof. J. Greig	...	...	Siemens' Professor of Electrical En- gineering, King's College, London.
Prof. A. N. Black	...	...	Professor of Mechanical Engineering, Southampton University.
Prof. H. C. Allen	...	...	Commonwealth Fund Professor (American History), University College, London.

Ex-officio members of the full Committee and of the sub-Committees :

Instructor Rear Admiral C. R. Darlington	...	...	Director, Naval Education Service.
Rear Admiral J. M. D. Gray	...	...	Director General of Naval Training.

Members are appointed for a four-year term, but may be asked to extend their tenure to maintain continuity. They are not normally asked to serve more than two four-year terms in all. When a member leaves the Committee, D.N.E.S. consults the Chairman and other members on a suitable successor, having regard to the balance of the sub-Committee to which he is to be appointed. D.N.E.S. then makes an informal approach to the person chosen, before putting his name forward to the Admiralty Board for official action.

The full Committee meets annually to consider reports made by the sub-Committees to deal with matters of general application

The sub-Committees hold meetings in Admiralty or at the College or consult informally; members visit the appropriate College two or three times a year. Matters may be brought to their attention through such visits, by D.N.E.S. or D.G.T., or members may raise them on their own initiative.

Sub-Committee reports and other papers submitted for the full Committee are tabled by D.N.E.S., with the Chairman's agreement. One of D.N.E.S.'s staff officers acts as Secretary. Committee papers are sent to the Admiralty Board.

Much of the Committee's value lies in its discussion of general questions, particularly of the application to naval requirements of trends in civilian education,

but it also makes specific recommendations. A few examples from the last two years are shown on the following page.

<i>Topic/Recommendation</i>	<i>Action Taken</i>
(a) Importance of new Applied Mechanics Laboratory at Greenwich.	Architects' plans in preparation.
(b) Advised against amalgamation of History and English and Languages departments at Dartmouth.	Accepted.
(c) Recommended admission of civilian students to courses at Greenwich.	"Government" civilians now admitted. Progress on admission of "pure" civilians.
(d) Lecturing load on staff at Manadon.	New basis of complement agreed.
(e) Review of "Third Year" syllabus at Dartmouth.	Syllabus amended.
(f) Full-time librarian at Dartmouth.	Complement amended. Candidates now being considered.
(g) The Certificate of Secondary Education and the Junior Training Establishments.	Under consideration. (C.S.E. starts in 1965.)

The Committee's advice on all matters concerned with education and training has been, and will continue to be, most valuable. Apart from the formal meetings D.N.E.S. maintains close informal contacts with most members, two of whom now act as moderators of examinations at Dartmouth; others will do so for Manadon quite soon.

APPENDIX 5

FUNCTIONS OF FINANCE DIVISION 1 (NAVY)

Memorandum submitted on behalf of the Secretary of State for defence

The College Estimates, and any proposals for expenditure submitted at any time in the financial year are scrutinised by F1(N) (formerly G.F.I.), in consultation with the naval personnel and civil establishment divisions, in the normal manner of a Finance Division; that is, by a body of laymen requiring satisfactory answers to commonsense probing questions. F1(N) ensures that provision for the Colleges is consistent with, and scrutinised at higher levels in the same way, as the provision for other naval services. F1(N) also produces annual costings of the Colleges which include elements of cost not financed from Vote 5 of Navy Estimates such as Works Maintenance. These costings also relate the total expenditure to output (student weeks). No individual member of F1(N) is concerned solely with the Colleges or with education generally.

F1(N) are not specifically consulted over proposals for increases in complements. Their costings are, however, available to those considering complement problems, who also make use of relevant information from other service and civil educational establishments. For example, in a recent inspection of the academic teaching staff at Dartmouth, the number of hours per week in which teaching staff at Sandhurst were "in contact" with their pupils and the recommended scales of "contact hours" laid down by the Ministry of Education for comparable civil institutions were used as guides in assessing similar scales for Dartmouth.

The Ministry of Education were consulted in 1961 and provided a considerable amount of statistical information on various Universities and Teacher Training Colleges, including Loughborough College of Technology. Although direct comparisons with Naval Colleges were blurred by differences in function, the higher incidence of students accommodated and the specialised military training given at R.N. Colleges in addition to normal academic studies, the exercise was of considerable interest.

APPENDIX 6

INSPECTION OF NAVAL COLLEGES

Memorandum submitted on behalf of the Secretary of State for Defence

It is confirmed that the Training Efficiency Inspection at Greenwich in March, 1964, covered only the "Naval side" of the course as opposed to the departments, and that this embraced the Naval Staff employed there. There has been no previous comparable inspection at the College, but inspections at Greenwich, and all other Naval training establishments, are planned to take place biennially.

The civilian staff at the colleges can be divided into four broad categories:—

- | | | |
|--|---|-----------------|
| (a) Academic and laboratory staff | } | Non-industrials |
| (b) General purpose staff (Executive, Clerical and miscellaneous grades). | | |
| (c) Staff whose numbers are related to the number of pupils on course, (e.g. cleaners, catering staff). | } | Industrials |
| (d) Staff employed on relatively stable tasks (e.g. MT drivers, groundsmen). | | |

Apart from the staff at (c) above, whose numbers vary with the student population, control is exercised by laying down basic complements which cannot be varied without specific Headquarters authority. The numbers provided in annual estimates are ceiling forecasts only and any increases provided in estimates require specific approval in the course of the financial year in question. At this stage they are examined in detail.

As regards inspections, the bulk of the staff in category (b) were inspected in March, 1963, at Dartmouth, in October, 1963, at Manadon (together with the civilian laboratory and technical instructional staff). An inspection at Greenwich is currently under way. Inspections of the academic complements at Greenwich and Dartmouth (the academic staff at Manadon is entirely naval) have been vitiated in recent years by radical changes in the teaching tasks of the colleges which have left little scope for "routine" inspections. For example, at Greenwich, the cessation of the Sub-Lieutenants' Course, in early 1958, led to a rundown in the staff of the History and English Department. In 1959 a new Department of Nuclear Science and Technology was instituted, and the transfer of the naval degree course to Manadon led to uncertainty about the future teaching load of some of the departments concerned. At Dartmouth the introduction of a new scheme of cadets training following the report of the Murray Committee led to a reorganisation of the teaching staff. The situation at the two colleges is now more stable and an inspection of the teaching staff at Dartmouth (with which the Treasury were associated) took place last year. It is intended to carry out a similar inspection at Greenwich this summer.

The Treasury do not invariably take part in all staff inspections. They are informed of inspections as and when they take place and select those in which they wish to participate. The last joint inspection which took place was concerned with the academic staff at Dartmouth last year. Its principal recommendations involved a net increase of one in the teaching staff (the college authorities had originally requested two); the definition of the number of "contact hours" appropriate to teaching staff at Dartmouth; and the size of the various supervision groups, seminars and lecture classes.

The correct allocation of work between service personnel and civilians is one of the concerns of any inspection team within the framework of Navy Department policy.

APPENDIX 7

SELECTION OF OVERSEAS STUDENTS

Memorandum submitted on behalf of the Secretary of State for Defence

The question has been raised of extending the existing arrangements for interviewing candidates overseas who wish to join H.M. Forces to include members

of the Forces of Commonwealth and foreign countries due to attend courses at Service Colleges in this country, to ensure that they are up to standard, particularly in English.

2. Apart from the opportunities to apply direct, there are arrangements whereby Service representatives in Commonwealth countries may assist candidates, for entry as officers or other ranks or their equivalent, e.g., by the provision of the latest information on competitions, educational and health standards, age limits, etc. Informal and, in certain circumstances, formal interviews of candidates may be held and recommendations forwarded on their merits. In the R.N., for example, special cadet entry interview boards may be convened locally by a senior officer—the C.-in-C., or, perhaps, the Captain of a visiting warship; since the same standards and conditions apply throughout, the recommendations of these boards are accepted along with those of the main (U.K.) Interview Board. Nominations of candidates for consideration for cadet entry in the normal way may also be received from time to time from Governors or High Commissioners in Commonwealth countries. All overseas candidates must acquire the necessary educational qualifications and otherwise meet the conditions of entry.

3. These arrangements are essentially for British subjects wishing to enter H.M. Forces and do not, and could not, apply in foreign countries; any which might be set up for Commonwealth or foreign officers due to attend courses at Service Colleges in this country must necessarily take a different character. In the first place, given the presence of U.K. Service representatives in the country concerned, the decision must rest with that country whether to call for advice beyond that provided in the invitations, either written or oral, to send officers. This will normally have included not only the qualifications desired in the student but an outline of the syllabus. Each case must be dealt with on its merits: while, on the one hand, there is no need to give full details to countries which are fully aware of the standards or send officers regularly to particular colleges, on the other hand, it is accepted that special emphasis may require to be laid on the appropriate rank or experience needed by an officer attending a course, and on the need for him to have reached proficiency in the English language: where appropriate, representations may be made direct or through diplomatic channels to that end.

4. In the last resort the standards required of the overseas students must be a matter for their own authorities, who alone can set them to meet their (sometimes different) requirements. It would be invidious and politically undesirable for Service representatives overseas to go beyond making themselves available, as they already do, for consultation.

5. Our general view is that, in practice, the overseas students are of sufficiently high standard intellectually and in personal qualities to overcome any initial language or other difficulties and that they do not retard the progress of our own students. If necessary, arrangements can be, and are, made for them to take a preliminary course in English.

APPENDIX 8

RELATIONS WITH DEPARTMENT OF EDUCATION AND SCIENCE

Letter to the Clerk to the Sub-Committee

MINISTRY OF EDUCATION,
CURZON STREET,
LONDON, W.1.

31st March, 1964

Thank you for your letter of 25th February. We have had from Devereux the memorandum and other material relating to your present enquiry into the Service Colleges and these have given me a good idea of the scope of this enquiry. I am far less sure that the information which I can give you about the Colleges which

we are concerned with will be as relevant as you may have expected. Certainly, direct comparisons could be misleading as there are a number of factors and requirements which are not at all the same, notably the staffing situation.

I hope the enclosed table of figures will help you. They relate to four Colleges of Advanced Technology (the range over the whole ten of these C.A.T.s is not great). I have not included Cranfield as this is an entirely postgraduate and research institution—and it has, in any case, been the subject of a recent Cost Investigation Unit report resulting in a number of important changes. In the figures I have provided, residential costs, as you will see, are excluded. This is mainly because most students at these colleges (with the exclusion of Loughborough) are not provided with accommodation. Where board and lodging is provided, the cost works out at about £220 per student.

Secondly, I attach the note you asked for on the work of the Cost Investigation Unit. There has from time to time been consultation between the Services Departments and the Ministry on a number of points. So far as the Cost Investigation Unit itself is concerned, there were some informal discussions, for instance, on the cost of Army Schools in Germany. The Unit would certainly be prepared to give advice of a general kind, such as you are asking for now, though I fear that shortage of staff, and a large number of projects waiting to be undertaken, would preclude their participating in specific, large-scale exercises.

Finally, you asked me on the telephone about consultation with H.M. Inspectorate. I can, of course, confirm that from time to time the Service Departments request the services of Inspectors to undertake reviews of specific areas or of specific institutions, and that these are made available whenever possible. Most of these inspections concern service schools overseas. It is true that Chief Inspector Mr. C. R. English was invited by the Air Ministry to participate in an examination of the technical establishment at Henlow and its relationship with Cranwell and has been consulted on the same subject more recently. On parallel institutions maintained by the War Office and the Admiralty there has been no such contact with the technical Inspectorate. I should of course emphasise that the function of H.M. Inspectorate is purely advisory and is exercised only on the invitation of the Service Department concerned.

Yours sincerely,

J. F. EMBLING.

APPENDIX 9

LOUGHBOROUGH COLLEGE OF ADVANCED TECHNOLOGY

Memorandum submitted on behalf of the Minister of Education

	£
	(1962-63)
ACADEMIC AND GENERAL SERVICES (excluding Halls of Residence)	
Teaching Expenses:—	
Salaries and Wages:	
Academic staff:	
Full time	272,618
Part-time and visiting lecturers	10,478
Ancillary Staff:	
Research Assistants	14,461
Technicians, librarians, secretaries	85,858
	<hr/>
	383,415
Superannuation	21,353
National Insurance	6,713
	<hr/>
Total—Salaries, wages, etc.	411,481
Books, equipment and materials	52,055
Examinations and other expenses	3,227
	<hr/>
TOTAL—Teaching Expenses	£466,763
	<hr/>

		£
		(1962-63)
PREMISES EXPENSES (excluding Halls of Residence)		
Salaries and wages:—		
Maintenance, caretaking, cleaning, gardening, etc., staff	... ..	33,171
Superannuation	... ..	588
National Insurance	... ..	1,609
		<hr/> 35,368
Repair and maintenance of buildings and grounds	... ..	8,667
Fuel, light, water and cleaning materials	... ..	20,758
Rent, rates and insurance	... ..	27,169
Furniture and other expenses	... ..	172
		<hr/> £92,134
ADMINISTRATIVE EXPENSES		
Salaries and wages:—		
Senior administrative staff	... ..	26,688
Secretaries, clerks, typists, etc.	... ..	}
		<hr/> £26,688
Superannuation	... ..	1,461
National Insurance	... ..	676
		<hr/> £28,825
Printing, stationery, advertising	... ..	8,865
Postage and telephones	... ..	4,809
Travelling and subsistence	... ..	6,978
Office equipment, etc.	... ..	138
Other items	... ..	3,825
		<hr/> £53,440
OTHER ACADEMIC AND GENERAL EXPENSES		
Scholarships and awards	... ..	—
Other items	... ..	5,932
		<hr/> £5,932
SUMMARY—ACADEMY AND GENERAL SERVICES		
GROSS EXPENDITURE (excluding loan charges, etc.)		
Teaching expenses	... ..	466,763
Premises expenses	... ..	92,134
Administrative expenses	... ..	53,440
Other expenses	... ..	5,932
		<hr/> £618,269
Less—Income other than Tuition Fees	... ..	29,711
		<hr/>
NET EXPENDITURE—ACADEMIC AND GENERAL SERVICES (excluding loan charges, etc.)	... ..	£588,558
		<hr/>
NUMBERS OF STUDENTS (November, 1962)		
(a) Full-time and sandwich	... ..	1,314
(b) Part-time day	... ..	—
(c) Evening	... ..	—
		<hr/>
(d) Total number of students	... ..	*1,314
		<hr/>

* Number of students in residence—1,094.

STAFF ESTABLISHMENT (approximate 1962-63)										(1962-63)
Teaching:—										
Academic staff:										
Full-time	...	...	...	...	...	...	...	...	...	188
Part-time (approximate F.T. equivalent)	...	...	...	...	...	...	...	...	...	7
Ancillary staff:										
Research assistants	...	...	...	...	...	...	...	...	...	20
Technicians, Laboratory Assistants, etc.	...	...	...	...	...	...	...	...	...	97
Librarians	...	...	...	...	...	...	...	...	...	7
Departmental secretaries, etc.	...	...	...	...	...	...	...	...	...	15
Others	...	...	...	...	...	...	...	...	...	—
										334
Premises and Grounds:—										
Building maintenance staff, etc.	...	...	...	...	...	...	...	...	...	12
Caretakers, stokers, porters, etc.	...	...	...	...	...	...	...	...	...	15
Cleaners	...	...	...	...	...	...	...	...	...	40
Gardeners and groundsmen	...	...	...	...	...	...	...	...	...	6
Administrative staff	...	...	...	...	...	...	...	...	...	36
										443

RESIDENTIAL HALLS, UNION BUILDINGS AND CAFE POINTS

*Actual Expenditure and Income (other than students' residence fees) for
Financial Year 1962-63*

EXPENDITURE	£
Salaries and wages	86,245
Superannuation, National Insurance, etc.	6,538
	92,783
Food, drink, etc.	84,785
Fuel, light, water	29,448
Rent, rates and insurance	25,152
Upkeep of grounds and buildings	7,135
Repair and replacement of furniture and equipment	4,659
Laundry	2,666
Cleaning materials	2,561
Loan charges	2,349
Travel, telephones and other miscellaneous expenses	2,039
	£253,577
TOTAL—Gross Expenditure	
Less—Miscellaneous income (other than students' residence fees), i.e., external lettings and casual sales	34,623
	£218,954

APPENDIX 10

SERVICE COLLEGES AND STAFF ASSOCIATIONS

Memorandum submitted by the Institution of Professional Civil Servants

The Institution

1. The Institution of Professional Civil Servants is a national organisation representing professional, technical and scientific civil servants with a membership on 31st December, 1963, of 57,520. Among the staff represented by the Institution are the civilian lecturing staff in the Service colleges and schools. In addition, the Institution represents those members of the general service classes in the professional, scientific and technical fields such as the experimental officer class and the scientific assistant class who are also employed in the colleges.

The Types of Colleges

2. The Service schools and colleges which train officers and officer cadets can be roughly classified into four groups. One of these groups covers the colleges designed to provide a specialised training relevant to only one service and this group is therefore outside the scope of the enquiry now being conducted by the Estimates Sub-Committee. The remaining three groups are described in the following paragraphs.

Officer Training Colleges

3. These are colleges such as the Royal Naval College, Dartmouth, which have it as their aim to produce a young officer with a broad view of his profession as a whole and of his responsibilities as a servant of the State. Leadership, man management, sense of discipline and duty, physical fitness and military and academic "awareness" are qualities which are intentionally fostered during courses at these colleges. The colleges provide appropriate academic training. At the Royal Military Academy, Sandhurst, this training is designed to fit the young officer for degree courses at universities or at the Service colleges which provide higher education.

Colleges Providing Higher Education

4. At these colleges, there is training for university degrees and in special subjects to graduate and post-graduate level. Post-graduate research is actively encouraged. For example, at the Royal Military College of Science, Shrivenham, some 70 students each year enroll for London University External Degree courses and some 250 students undertake other courses such as the Technical Staff Officers Science Course, a Nuclear Science and Technology Course, a Guided Weapons Course and the Ammunition Technical Officers' Course.

* * * * *

Future of the Colleges

6. In this section, the question of the future use and development of various types of colleges will be examined and consideration will be given to each of the types of colleges described in paragraphs 3, 4 and 5 above.

Training Colleges

7. There will clearly be a continuing need for training of the type provided at the Royal Naval College, Dartmouth, the Royal Military Academy, Sandhurst, and the Royal Air Force College, Cranwell. These colleges provide specialised training for the officer in relation to his chosen Service and it would be neither practicable nor desirable to endeavour to bring together into one institution the three different types of specialised training. Each of these colleges is of a sufficient size to justify its continued independence.

8. The teaching work at the Royal Naval College, Dartmouth, and the Royal Military Academy, Sandhurst is at present divided between Service instructors and civilian lecturers. There is some scope for the transfer of certain work now undertaken by Serving instructors to civilian lecturers, but the general principle of the division of the teaching work between Service officers and civilian staff is considered satisfactory. At the R.A.F. College, Cranwell, instruction is however given only by Service officers and the Institution believes there is no reason why civilian lecturers should not be introduced into this college on a basis similar to that in the colleges of the other two Service departments.

Colleges of Higher Education

9. These colleges tend to be smaller in size than the colleges dealt with in the previous two paragraphs. Their activities in relation to less specialised courses overlap with the work of the universities and to some extent with one another. The numbers of students they take are considerably smaller than those recommended by the Robbins Committee on Higher Education (Cmnd. 2154).

10. There will be a continuing need for specialised training of the type now given at the Royal Naval College, Greenwich, and the Royal Military College of Science, Shrivenham, but even if training of this type for all three Services could be brought together in one college, it would not provide an institution approaching

the economic size recommended by the Robbins Committee. Furthermore, if the colleges are to continue to attract and retain lecturing staff of the desired calibre their curriculum must contain a high proportion of degree courses.

11. Rather than to attempt to bring these colleges together, it would be better to build up the present organisations into full-scale universities with special Service subjects being taught in Service Wings. This development of existing colleges would be in line with the recommendations of the Robbins Committee and would benefit the Service element in the colleges. Experience at the Royal Military College of Science where a proportion of civilian students has been admitted each year, shows that this has a beneficial effect on the academic standard of the colleges and on the attainments of the Service students. An extension of this principal until the Service element became only a part of the wider university could be expected to carry these benefits even further.

12. This planned growth of the Service colleges into universities would be fairly simple to arrange in those colleges where there is already a large proportion of civilian lecturers. The Royal Military College of Science could be the nucleus of a University of Swindon; the Royal Naval College, Greenwich, could combine with other organisations in the area, such as the Woolwich Polytechnic, to form a University of North West Kent. For colleges, such as the Navy Department's college at Manadon, which are staffed exclusively by Service officers, there would have to be a change in staffing arrangements to introduce a number of civilians into the lecturing staff before there could be either a combination with existing educational institutions in the area or a growth of the Service college into a university.

* * * * *

Salaries and Careers of Lecturing Staff

15. The salaries of lecturing staff in the Royal Naval Colleges at Dartmouth and Greenwich, in the Royal Military Academy, Sandhurst, and the Royal Military College of Science, Shrivenham, are related to those of the scientific officer class. The scales of the lecturers at the Royal Naval College, Greenwich, and the Royal Military College of Science are identical with those of grades in the scientific officer class. At the Royal Naval College, Dartmouth, and the Royal Military Academy, Sandhurst, the scales are related to but not identical with those of grades in the scientific officer class.

16. Although the Institution is not entirely satisfied with the present level of the link of the lecturing staff at Dartmouth and Sandhurst with the grades within the scientific officer class, it does accept that the difference in salaries between the two types of colleges is reasonable because of the different grading structures at the colleges. The lecturer at Dartmouth or Sandhurst has a poorer prospect of achieving the grade of principal lecturer during his career than does the lecturer at Greenwich or Shrivenham. It is therefore appropriate that the senior lecturer at the former two colleges should have a higher salary maximum than the senior lecturer at the latter two colleges.

17. While the Institution is satisfied that the direct link with the scientific officer class is appropriate for the lecturers at the Royal Naval College, Greenwich, and the Royal Military College of Science, Shrivenham, there is one feature of the grading structure which needs correction in order to make this salary link wholly acceptable. In the scientific officer class generally, staff complements are so arranged as to provide for a member of the class to secure promotion to principal scientific officer at the latest during his early forties. This is not the situation in the Colleges where there is a rigid complementing pattern, with the result that promotion to principal lecturer is often considerably delayed. The Institution considers that fluid complementing up to and including the level of principal lecturer should be introduced with automatic promotion to the grade of principal lecturer as soon as he has shown that he is of the appropriate standard. In this way the careers of the lecturers would be brought more closely into line with those of the general Scientific Civil Service, an improvement which is necessary because in certain departments of the Colleges owing to the specialised nature of the lecturers' work, opportunities of transfer elsewhere are limited or non-existent. Another change which is necessary to bring the conditions of the lecturers

more closely into line with those of scientific staff would be for Associate Professors to be chosen internally from the Principal Lecturers. External advertisement for such a post should be necessary only if there is no suitable internal candidate.

18. The lecturers at the four colleges at Dartmouth, Greenwich, Sandhurst and Shrivenham are civil servants with opportunities of establishment under the Superannuation Acts and with the normal conditions of service appropriate to civil servants. The Institution believes this to be appropriate for the lecturers at these colleges who can be expected to make their careers within Service colleges. For those few lecturers who wish to move outside the Service colleges into the universities, there are arrangements for approved service transfer.

* * * * *

Working Conditions

21. In the main, working conditions are satisfactory although there are isolated problems needing attention. For example, at the Royal Military Academy, Sandhurst, in three out of five academic departments, offices and tutorial rooms are in Nissen huts which have neither the amenities nor the dignity conducive to giving the right emphasis to academic studies. The plans for a new engineering wing at Greenwich have been approved for some time, but work on the wing has still to be commenced.

22. Staff at the colleges consider that they are too rigidly restricted in the expenditure of the money which is available for the running of the colleges. They find the need to forecast twelve months in advance precisely what equipment will be needed for research projects, etc., unrealistic. Equally unsatisfactory is the requirement to tender for even small purchases exceeding £20 in value.

23. There is no serious difficulty about acquiring the necessary books for the college libraries, but the library facilities in the Naval Colleges could be improved by the employment of professional librarians as is the practice in the Army Department colleges.

Relations with Service Officers

24. In those colleges where civilian lecturing staff are employed, they work in close association with Service officers. Relationships are, on the whole, satisfactory, but at some colleges where there is a Service Commanding Officer there is an unfortunate tendency for civilian lecturers to be treated as though they were Service officers. This problem of proper working relations between civilians and Service officers, is not peculiar to Service colleges. There is no doubt that there is room for Service officers to be made more fully aware of the correct attitude towards civilians working with them.

Civilianisation

25. As has already been stated there is clearly need for some civilianisation in those colleges where all teaching is undertaken by Service officers. In addition there is scope for further civilianisation in the colleges which already employ civilian lecturers. In particular, teaching at degree level needs experienced staff, which means that there must be a continuity of staff which cannot be realised with Service Officers.

26. The Institution accepts that there is a requirement for the employment of some Service teaching staff in these colleges. It is appropriate that training related to the professional requirements of the Services and other specifically Service training should be by Service officers. However, in certain of the colleges mentioned in this memorandum, training which could be done by civilian lecturers is undertaken by Service instructors. In the Institution's view, this is a wrong use of Service personnel and this work should be progressively handed over to civilian staff.

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