Forestry Commission

60th Annual Report and Accounts 1979-80

Front Cover
A family group enjoying the wooded slopes of Mackenzie Grove in Inverliever Forest (E4957).

Sixtieth Annual Report and Accounts of the Forestry Commission for the year ended 31 March 1980

together with the

Comptroller and Auditor General's Report on the Accounts

Presented to Parliament in pursuance of Section 45 of the Forestry Act 1967 and Section 5 of the Exchequer and Audit Departments Act 1921

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FORESTRY COMMISSION
231, Corstorphine Road
Edinburgh, EH12 7AT
1 October 1980

To:

The Rt Hon PETER WALKER MBE, MP,
Minister of Agriculture, Fisheries and Food

The Rt Hon GEORGE YOUNGER MP,
Secretary of State for Scotland

The Rt Hon NICHOLAS EDWARDS MP,
Secretary of State for Wales

Gentlemen

In pursuance of Section 45 of the Forestry Act 1967, I have the honour to transmit the 60th Annual Report of the Forestry Commissioners which covers the year ended 31 March 1980.

I am, Gentlemen,
Your obedient Servant,
(Sgd) DAVID MONTGOMERY
Chairman

The Forestry Commissioners and Senior Staff at 31 March 1980

Forestry Commissioners

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Captain D. S. Bowser JP
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Mr J. M. Hunter MC
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Mr. J. D. Pollock
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Senior Officer for Wales: Mr J. W. L. Zehetmayr VRD
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Director, Estate Management: Mr J. R. Booth MC
Director, Harvesting and Marketing: Mr G. J. Francis
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Deputy Establishment Officer: Mr M. P. Shapcott
Chief Engineer: Mr E. F. Granfield
Chief Economist: Mr A. J. Grayson
Conservator, Forest Management: Mr S. A. Neustein

Territorial Conservators

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North West:	Mr J. H. James
North East:	Mr J. A. Spencer
East:	Mr R. M. Hewitt
New Forest and South East:	Mr C. D. Begley
South West and Dean Forest:	Mr L. C. Troup

Scotland

North:	Mr R. G. Cathie
East:	Mr I. A. D. Grant
South:	Mr E. J. M. Davies
West:	Mr D. Y. M. Robertson

Wales

North:	Mr R. T. Bradley
South:	Mr J. W. L. Zehetmayr VRD

Note: The addresses of the main Forestry Commission offices appear on the inside back cover.

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Acknowledgements

The cover and other pictures were taken from photographs in the Forestry Commission collection.

The Forestry Commission's Diamond Jubilee 1919-1979

A Special Review

1. It is appropriate to begin this Sixtieth Annual Report of the Forestry Commission with a brief summary of the changes, developments and achievements of the years since 29 November 1919 when the first Commissioners took up their duties. The Commission's first thirty years were reviewed in detail in the 1949 Annual Report, so this review will concentrate in the main on the period since then.

The Forest Revolution

2. The first thirty years, although interrupted by the Second World War, laid the foundations for one of the most dynamic periods in the history of British forestry. Since 1949 technological advances have revolutionised every aspect of work in the forest, and transformed a largely rural craft into a highly organised and efficient industrial operation; over this period, the average planting rate for the industry as a whole has been more than three times that achieved during the inter-war years and timber production has more than doubled. Foresters have changed their attitudes and practices no less significantly and demonstrated an increasingly keen awareness of the environmental importance of the forest to both people and wildlife.

3. While the Commission has pioneered much of the rapid expansion of the national forest estate and the developments and advances in forestry practice during the last three decades, it has steadily reduced its payroll and its dependence on Grant-in-Aid. In September 1950 we employed a total of 13,220 people; by March 1980, the figure was 8,129. As the numbers employed fell, our forest area and timber production rose, as illustrated in Diagram 1 opposite. Investment is continuing but is being increasingly covered by revenue from expanding timber sales, so that the difference between payments and receipts made good by Grant-in-Aid has reduced from 79 per cent of total expenditure in 1949–1950 to 47 per cent in the last financial year. During the past 10 years about a quarter of the Grant-in-Aid has been allocated to the Commission's work as Forestry Authority, which covers such items as grants and advice to private woodland owners, the administration of grant schemes, felling licensing and plant health, and a proportion of our expenditure on research and development.

4. Behind these figures lies a story of steadily increasing efficiency in almost every operation, stemming from experience and research and the subsequent development of a wide range of new techniques and equipment, backed by a high level of enthusiasm and dedication by the Commission's staff at all levels.

FORESTRY COMMISSION FOREST AREA, PRODUCTION AND STAFF NUMBERS FROM 1950 to 1980

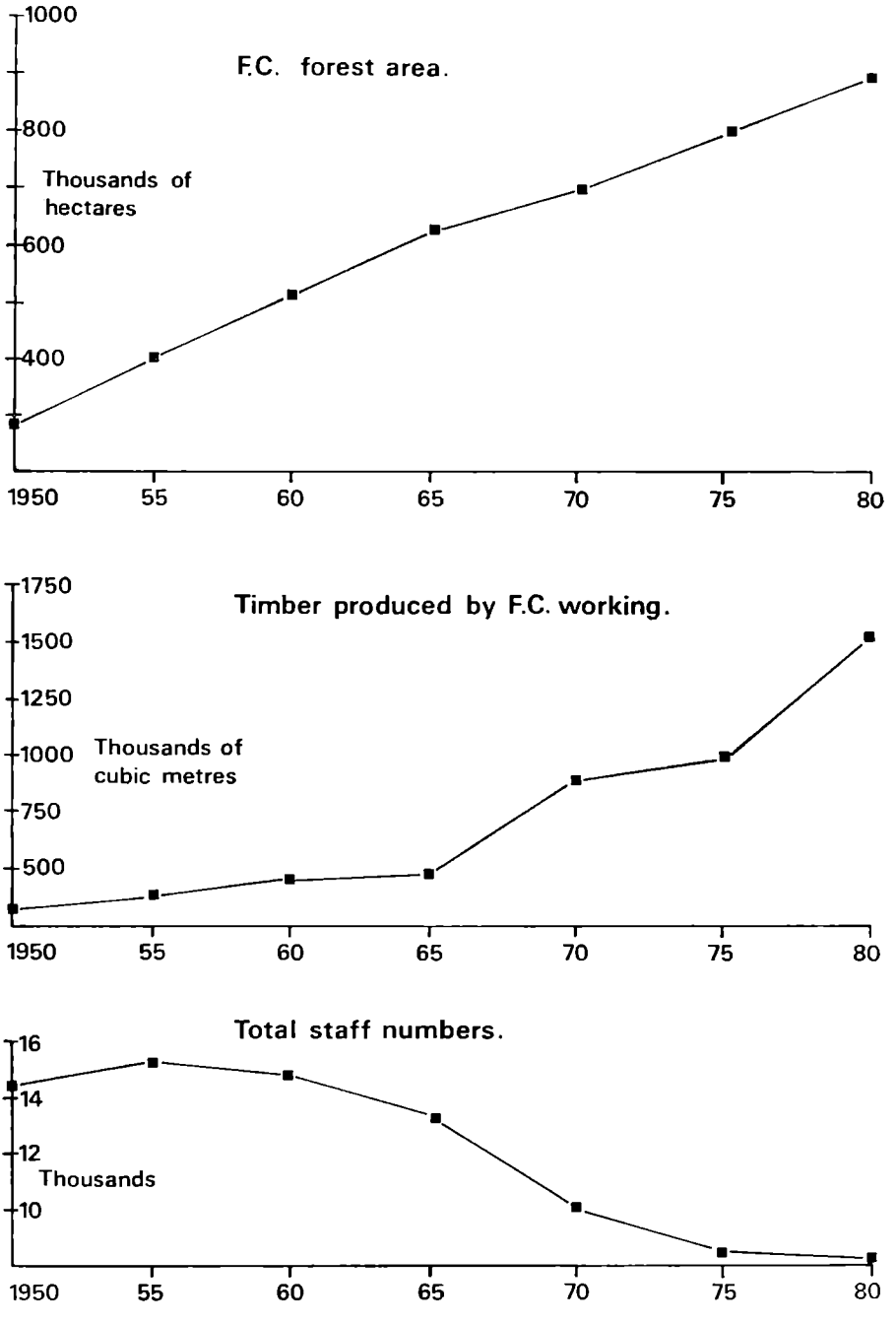

DIAGRAM 1. Showing the increases in the Commission's forest area and production from 1950 to 1980 contrasted with the decline in staff numbers.

Establishing the Forest Estate

5. The remit given to the Commission's first Chairman, the 16th Lord Lovat, and his colleagues was to establish by the end of the century a state forest resource of 715,000 hectares*, and to encourage private owners to repair the wartime ravages and then maintain in a productive state some 1·2 million hectares of their own woodlands, so that neither war nor national emergency should ever again inflict the desperate timber shortages of the First World War. When Britain was again plunged into war in 1939, the Commission had in its care 176,000 hectares of woodland and the private sector had restocked some 50,000 hectares. The importance attached to continuing this work was emphasised in 1943, when the Government published as a White Paper a report prepared by the Commission entitled *Post-war Forestry Policy* which proposed the establishment of an effective national forest estate of 2 million hectares by the year 2000. There already existed some 800,000 hectares, and the balance was to be made up by a partnership of Commission and private planting.

6. The rate of planting in the immediate post-war years gave little indication of the unprecedented expansion of the forest estate which was to start in the 1950s. In the five-year period to 1950 the Commission's annual planting averaged only 10,000 hectares and the private sector's 3,700 hectares; between 1950 and 1959, however, the Commission averaged 24,500 hectares of planting a year, while private owners, with the encouragement of the Dedication Scheme introduced in 1948, achieved an annual average of 9,700 hectares. Government statements in 1958 and 1963 gave the Commission fresh planting programmes; and while no targets were set for the private sector, grants were increased to encourage private woodland owners to maintain their planting levels. In 1960–61 the combined planting achievement exceeded 40,000 hectares for the first time, and over the next few years average annual planting levels stabilised at about 21,000 hectares for the Commission and 13,000 for the private sector.

7. The 1963 statement announced that the Commission's acquisitions of plantable land were to be increasingly concentrated on upland areas, particularly in Scotland and Wales where the expansion of forestry would bring considerable social and employment benefits. A further Government statement in 1966 called for an expansion of the Commission's planting programme in Scotland, with commensurate reductions in England and Wales to retain the overall programme. This switch in emphasis confirmed a trend that was already well established. As early as 1958 more than half the land being acquired by the Commission was in Scotland, and the pattern of land availability made it inevitable that Scotland should play an increasingly prominent role in the expansion of the forest estate. By 1969 Scotland was accounting for up to 90 per cent of our annual land acquisitions, and the bulk of our new planting is now taking place in our Scottish Conservancies. Today more than half our total forest area lies north of the Border. There has been a similar, but less marked switch in the location of private afforestation, largely stemming from the activities of the investment groups and management companies from the mid-sixties.

8. The 1972 forestry policy review again revised the Commission's total planting and replanting programme to its present ceiling of 22,250 hectares a year, and for the next few years our planting achievement matched the new programme. From 1975, however, it became increasingly difficult to obtain suitable

* At the time, these figures were, of course, expressed in acres; the Commission introduced metric measurements in 1971.

land and our annual new planting programme entered a period of steady decline to around 12,000 hectares in 1978–79. Private sector planting, which had matched the Commission's in the early seventies, declined even more dramatically from 1975 onwards and only showed signs of recovery in 1979.

9. In spite of the fluctuations of the seventies, the last 30 years have seen an unprecedented increase in the productive forest area to nearly double that existing just after the war. The expectations of our predecessors, who had the foresight to plan for an ambitious post-war expansion of the nation's forest estate, have been amply fulfilled.

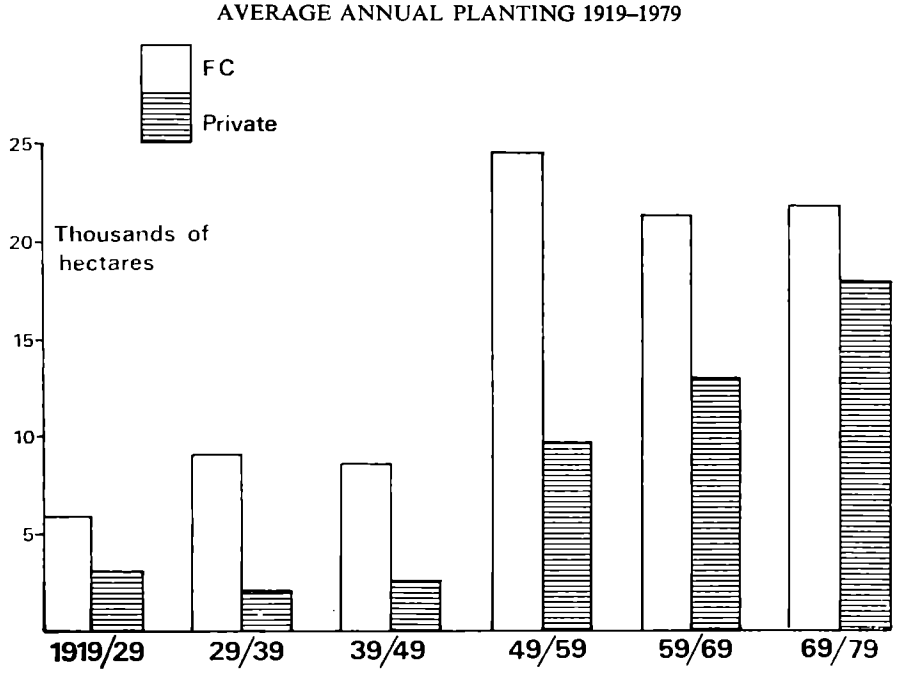

DIAGRAM 2. Average annual planting (including restocking) by the Forestry Commission and the private sector over ten-year periods from 1919 to 1979.

The Evolution of Forestry Policy

10. Behind this continuing expansion of Britain's forest area lay a succession of forestry policy reviews and re-appraisals. The White Paper on *Post-war Forestry Policy* led to the Forestry Acts of 1945 and 1947, under which the Commission was to become directly responsible to Ministers for the expanded post-war programme of afforestation and was to administer a Dedication Scheme to encourage private owners to rehabilitate their woodlands. The Government's main concern at that time was still to establish and maintain a strategic reserve of timber, but in 1957 it accepted the recommendation of the Zuckerman Committee on *Forestry, Agriculture and Marginal Land* that the Commission's future objectives should be of a commercial and social nature. At about the same time, the Report of the Watson Committee, set up to examine the marketing of woodland produce, led to the creation of the Timber Growers' Organisation and the Scottish Woodland Owners Association, which together

constituted the Forestry Committee of Great Britain to represent private woodland owners in negotiations with the Commission and Government. Some changes were also made in the Dedication Scheme, which had not entirely fulfilled earlier expectations, and during the following decade private planting more than doubled.

11. In 1965 the Seventh Report of the Estimates Committee led to a major re-organisation of the structure of the Commission. The country directorates for England, Scotland and Wales were replaced by a unified headquarters for Great Britain to undertake the central management task, with devolution of maximum authority to each of the eleven Conservancies. The Board was strengthened by full-time executive Commissioners, while the part-time Commissioners were to be chosen for their knowledge of commerce, the timber trade, trade union matters, forestry and the countryside.

12. In the early sixties a new factor emerged in the private sector which, coupled with the success of the Dedication Scheme, was to make a marked contribution to raising the level of private afforestation to about 20,000 hectares a year over the next decade. This was the creation of the forestry investment groups and management companies, which served to channel into afforestation private investment attracted by the fiscal arrangements applying to woodlands. Substantial sums of money flowed into the groups and they competed strongly with the Commission for new land.

13. The Countryside Acts of 1967 and 1968 included recognition of the increasing importance of forests for public recreation, and granted the Commission powers to provide facilities such as campsites, picnic places and visitor centres. They also extended the Commission's powers to plant and manage trees in the interests of amenity.

14. As the sixties ended the Government's attention was directed to the costs and benefits of investment in forestry, and in December 1970 a fundamental review of forestry policy began, culminating in the publication in June 1972 of a consultative document supported by an Interdepartmental Cost/Benefit Study. The maintenance of employment in areas of rural depopulation and the enhancement of the environment were seen as the main justifications for continued Government support for both Commission and private planting. While means of applying these principles were considered, existing grant-aid schemes were closed to new applications. Policy statements in 1973 and 1974 set out a framework designed to ensure that forestry formed 'part of an effective pattern of rural land use, in which it is harmonised to the best possible advantage with agriculture and the environment.' To this end a new scheme of grant aid for private forestry (Basis III Dedication) was introduced in October 1974 to succeed the schemes started after the Second World War. Procedures for consulting with the Agricultural Departments over the land use aspects of afforestation proposals, and with local authorities and other statutory bodies over the amenity aspects of planting and felling, had been successfully developed by the Commission over the years in respect of its own operations and were now extended to proposals arising under the forestry grant schemes. At the same time, our Regional Advisory Committees were strengthened by the inclusion of agricultural, planning and amenity interests to assist in reconciling any unresolved differences of view arising under the procedures, and provision was made for Ministers to be consulted as a last resort. These new arrangements have proved most effective, and since their inception in 1974 only a handful of cases have had to be referred to Ministers.

15. The changes in the grant arrangements for private forestry resulting from the 1972 policy review, combined with the world oil recession and the new capital taxation treatment of forestry introduced in 1975, caused a general loss of confidence among private woodland owners which manifested itself in a sharp drop in private planting. An Interdepartmental Review Group was set up in 1976 in response to this problem and led in 1977 and 1978 to significant increases in grants and adjustments to the taxation arrangements. The area of planting for which grants were claimed rose in 1978–79 and has since been maintained, and there has recently been an encouragingly high level of applications to join the Basis III Dedication Scheme.

16. The latter half of the seventies has been marked by a growing awareness of the finite nature of the world's natural resources and a recognition of the value of wood as a renewable and versatile raw material. Studies have been produced in a number of countries and by international bodies such as the FAO and EEC into the long-term trends and prospects for forestry and forest products. These all indicate that there is likely to be a world-wide shortage of timber by the early years of the next century unless provision is made for increased planting over the next few years. We ourselves commissioned a group of officials, drawn mainly from our own staff, to look into the wood production outlook in Britain up to the middle of the next century. The group's report *The Wood Production Outlook in Britain* was published as a consultative document in March 1978 and sparked off a debate which is still continuing. The report assesses the implications of three levels of planting in terms of wood production, the provision of jobs in rural areas and the wood processing industry, and the reduction in our dependence on imported timber. It also suggests that low-grade land could be utilised for forestry in a manner consistent with the needs of agriculture, although it acknowledges that the impact of any major expansion of forestry on agriculture and the environment would require further study. Similar conclusions were reached in a study undertaken by the Centre for Agricultural Strategy at Reading University published in February 1980, to which we refer in more detail in paragraph 42.

17. As the Commission moves into its sixty-first year the Government is engaged in a fresh review of forestry policy (see paragraph 41). The two studies mentioned above will clearly form an important background to this review.

The Woodland Harvest

18. While there have been changes of emphasis in Government policies towards forestry, the ultimate justification for the consistent encouragement and support given to afforestation has been the production of timber to feed our wood-using industries. In the early years the Commission's productive forest area was confined to acquired plantations and the former Crown woodlands, from which the average annual removals amounted to no more than about 30,000 cubic metres, but efforts during the early 1930s to promote the use by the coal-mining industry of small roundwood from thinnings pushed up annual production to 100,000 cubic metres by 1939. During the war years timber from British forests was of vital strategic importance. Heavy fellings were made, and Commission forests produced nearly 2 million cubic metres of wood, with major contributions coming from the New Forest and the Forest of Dean. Even so, over 90 per cent of the timber produced from home sources during the war came from private estates.

19. By 1950 annual removals from Commission forests had reached 325,000 cubic metres and income from produce exceeded £1 million. The Commission stood poised for a series of dramatic surges in output and income. By 1960 timber production had risen to 725,000 cubic metres valued at more than £2 million; 10 years later sales totalled over £5½ million for about 1·5 million cubic metres, of which an increasing proportion was made up of sawlogs. During the year ended March 1980 more than 2·3 million cubic metres of timber were produced and income exceeded £34 million. Even allowing for the effect of inflation, the spectacular leap in the value of sales in the last 10 years is indicative of the higher proportion of sawlogs being harvested in the Commission's forests.

20. The rapid acceleration in the volume of production was made possible by the mechanical revolution which swept through forest harvesting from the early 1960s. The axe and the crosscut saw, for so long the standard logging tools, quickly became museum pieces with the development of the lightweight chainsaw. The horse relinquished its supremacy in extraction work more slowly (Plate 1), but it could not compete with the power and productivity of the rapidly expanding range of specialist machinery. Stables gave way to workshops capable of maintaining the modern range of rugged, yet sophisticated, machines —custom-designed vehicles with articulated frame steering and four-wheel hydrostatic transmissions, radio-controlled winches and hydraulic grapples.

21. Some of the machines were the result of development work carried out by the Commission's own staff, but it was not only the mechanical engineer whose role increased in significance. The evolution of extraction machinery and techniques coincided with a growth in the size of timber-transporting lorries—from about 5 tons up to the present 32 tons—and the civil engineer had to devise roading systems to serve as the arteries along which would flow more and more timber in increasingly heavy loads. Basically, the need today is for a system of fewer, more widely spaced, roads to a far higher standard of design, the construction and maintenance of which requires the use of machinery which is itself a product of modern technology.

22. This same period also witnessed an unprecedented surge of investment and development in the industries processing British wood, which the Commission actively encouraged. Throughout the 1950s the coal industry provided the major market for the increasing volume of thinnings becoming available, but expanding output demanded alternative markets and the Commission began investigating the prospects for using British softwood and hardwood for pulp and paper-making. It was recognised that the Commission had an important role in the consideration of any such projects, both in assessing the general timber-supply position and in giving the assurances of actual supply needed to encourage investment in new wood-using plant. By the end of the decade a number of new processing industries were in operation, including a chipboard factory at Annan in Dumfriesshire, a roundwood pulpmill at Ellesmere Port, Cheshire and a chemical pulpmill consuming hardwood at Sudbrook, Gwent. Ten years later hardwood pulping had been established at Sittingbourne in Kent, pulping capacity was expanded at Ellesmere Port, and major developments in softwood pulping had been completed at Workington, Fort William and Bristol. As the seventies dawned the prospects of additional log supplies in north Scotland led to the first long-term contract being offered to encourage new sawmilling developments, and a new plant was established near Fort William in 1974. Other major expansion and modernisation programmes in sawmilling followed, and there were important advances in the application of performance-grading

to British sawn softwoods. However, the most significant wood-processing expansion of the decade occurred in the particleboard industry, with new capacity being installed at Cowie, Stirlingshire; Irvine, Ayrshire; Hexham, Northumberland; Chirk, Clwyd and South Molton, Devon.

23. As we enter the new decade the outlook for the pulp and paper industry in this country gives cause for serious concern. We refer later in this Report (paragraph 50) to the sad decision to close the Wiggins Teape pulpmill at Fort William, which could have serious consequences for wood production and employment in the Highlands, and other mills will clearly be faced with problems due to the current recession and the competitive position of overseas suppliers resulting from the strength of sterling and the relative costs of energy and wood in Britain. We shall be seeking to alleviate the consequences of the downturn in this market by developing alternative outlets for small roundwood in the medium term. In the longer term the supply and demand projections in our review group's report on *The Wood Production Outlook in Britain,* which many have criticised as being conservative, give reason for optimism about the future of wood processing in this country. The output from Commission forests will more than double over the next 15 years during a period when, as was clearly borne out at the World Forestry Congress in 1978, the volume of wood and wood products available for export from traditional suppliers to this country can be expected to diminish as a result of increases in their domestic consumption and the predicted development of the use of wood as a chemical base for synthetic organic material. As we said in our last Report, these points, combined with a Congress recommendation calling for the creation of large areas of intensively managed plantations, lend support to the conclusions of *The Wood Production Outlook in Britain* report that it would be prudent to continue with afforestation in Britain.

The Impact of Science and Technology

24. Many of the achievements of the last 30 years would have been impossible but for the scientific and technological advances which have so dramatically transformed forestry at every stage of the tree-growing cycle. Well into the 1950s, for instance, lining out and weeding in nurseries were still carried out by hand (Plate 2). Not only was this backbreaking, tedious work, but plant losses were very high; today, the use of machinery and herbicides gives three times the success rate, and in real terms plants are costing half what they did in 1950. In addition, soil analysis to establish fertiliser needs in nurseries and the use of seeds of proven genetic quality give transplants a flying start in their development towards high quality, mature trees.

25. Until the end of the Second World War the Commission's research effort was confined almost exclusively to species selection, establishment and nursery work; but the last 30 years have seen a considerable broadening of research activity with the emphasis falling on the protection of the existing estate, and consequent developments in research in entomology, pathology and animal control and management. The initial work on species selection led to studies of the variation within species and a programme of tree breeding aimed at providing most of the planting stock from genetically superior sources before the end of the century; and the increasing value of genetically superior seed has stimulated research into seed dormancy, seed storage and seed handling in the nursery. For a period after the last war methods of rehabilitating derelict broadleaved woodlands were investigated, and this interest has recently been revived due to a growing realisation of the value of small woodlands for timber production, landscaping and wildlife conservation.

26. Silvicultural research has included work on the stability of tree crops in a windy environment and on large areas of shallow-rooting soils. The role of fertilisers in ensuring survival and rapid establishment has been investigated, and more recently this work has been extended to cover the response of pole-stage crops to a range of fertilisers. From these studies has stemmed a need for physiological research on soil properties, nutrient behaviour and tree flowering. Developments in fertilisation and herbicidal protection, coupled with improved techniques allowing wider spacings in planting, have markedly changed standards of land plantability, permitting poorer and higher land, particularly in northern Scotland, to be planted successfully.

27. Research into insect pests has resulted in the development of techniques which enable felled areas to be replanted within one year instead of waiting up to three years until the site is clear of injurious weevils and beetles. Stump treatment to control the spread of the fungus *Fomes annosus,* which causes butt and root rot and death of conifers, is now standard practice and involves both biological control methods and the use of fungicides. However, the ravages of Dutch elm disease during the last decade leave the forester no room for complacency. No way of eradicating the disease has been discovered, despite intensive research both in this country and in others affected, such as the United States, but Forestry Commission scientists can claim credit for having discovered in the early 1970s that the present epidemic was caused by a new, more virulent strain hitherto unidentified in any part of the world. The risks associated with the possible introduction of oak wilt have also been studied in great detail to ensure that appropriate measures are taken to prevent its introduction into Britain.

28. The Commission's Work Study Branch within the Research and Development Division has also had a vital role to play in the transformation of forestry over the past 30 years. It has been concerned with two major groups of operations—harvesting and crop establishment. Harvesting studies have included the introduction and improvement of chainsaws with particular regard to safety, the development of cable cranes for extraction, the organisation of efficient harvesting systems and the development and adaptation of sophisticated extraction machinery, of which the development and production of a purpose-built hydrostatic tractor was an important achievement. Studies on silvicultural operations have also covered a very wide range, including weed control by both mechanical and chemical methods and drainage and cultivation techniques.

29. A hallmark of research and development in the Commission has been the interchange between practitioners in the field and research staff. This has enabled our Research and Development Division more readily to understand the problems encountered in the forest and new developments to be successfully introduced. The results of research and work study programmes, and of practical experience, have been made available to the private sector and to anyone interested in forestry and trees through a wide range of publications. These have achieved a high standard over the years under the pioneering hand of our former Publications Officer, the late Mr Herbert Edlin, who was an author of international repute in his own right on forestry subjects.

Forest Protection

30. Foresters have to contend with a number of natural hazards, besides pests and diseases, which can undo years of patient effort. We employ rangers in all our major forests both to conserve and, where appropriate, to control animal

PLATE 1

Horses extracting timber at Beddgelert Forest in 1951.

D2237

PLATE 2

Weeding nursery seedbeds at Tair Onen Forest in 1952

A200

numbers. Although the threat posed for so long by the rabbit was temporarily alleviated with the spread of myxomatosis in the fifties, it is now a renewed problem. No such alleviation has been experienced in the battle against the grey squirrel, which is particularly destructive in young broadleaved woodlands, although our scientists are continuing to develop and improve control methods and our understanding of the habits of this pest. Over the past few years there has been a significant expansion in the numbers of deer, especially of roe and, in Scotland, red deer, both of which are a serious threat to young plantations. Control of deer populations within reasonable bounds has had to be exercised by fencing and by selective culling based on census data.

31. Windthrow is a major hazard of forestry in Britain. There have been six major gales in Britain over the past 30 years, three of which, in 1953, 1968 and 1976, were serious from a forestry point of view. On each occasion the windthrown timber was cleared before the timber deteriorated. A classification of land according to the risk of windthrow has now been completed and is being used to assist in predicting the tree height at which plantations are likely to begin to suffer. The other serious hazard to forestry is fire. The 1976 drought resulted in exceptional summer fire danger, during which period we lost a greater area of plantations than in any year since 1942. A number of important lessons were learned which should stand us in good stead for the future – the value of easily accessible water, the benefits of good communications, especially radio, and the need to have earth-moving equipment available for the rapid construction of fire breaks.

Forestry and the Environment

32. The last 30 years have seen a popular upsurge of interest in nature conservation and in the environment generally. Foresters have, by tradition, always been sensitive to both issues, and this personal awareness has been sharpened and translated into specific policies through co-operation with the Nature Conservancy Council and voluntary organisations, particularly in the establishment of Sites of Special Scientific Interest. By its independent efforts in maintaining or creating wetlands, deer lawns or other wildlife habitats, the Commission has also demonstrated a practical commitment to nature conservation. Our policies and practices towards nature conservation were published last year in the form of a statement entitled *The Forestry Commission and Conservation* which is reproduced at Appendix V to this Report.

33. Forestry can have a major impact on the landscape, and over the centuries the silvicultural management of woodlands has been conducted with a sympathy for the country scene, as the many fine estate woodlands today bear witness. The national drive to acquire land and plant trees following the experiences of the two world wars temporarily blunted this awareness, but it was re-kindled by Dame Sylvia Crowe who was Landscape Consultant to the Commission from 1963 to 1976. She established guidelines for sensitive forest design, which have subsequently been developed by her successor, Mr Clifford Tandy, and our own landscape architects. A statement on *The Commission's Landscape Design Policy* was reproduced at Appendix VI of our 1978–79 Report.

Trees and People

34. During the fifties and sixties the public attitude to the countryside became much more positive. Increasing affluence provided more leisure time and greater mobility, from which developed an ever-growing demand for outdoor recreational facilities. The Commission was in a unique position to respond to this

demand, and anticipated the statutory requirements of the Countryside Acts of 1967 and 1968 by embarking on a continuing programme of developing forest walks, visitor centres, camping and caravan sites, and later the highly successful forest cabin schemes. By actively encouraging the public to visit its woodlands and by maintaining an open and outward-looking press and public relations policy, the Commission has communicated to millions of people an interest in forestry and an understanding of its place in the nation's economy. We nevertheless recognise that forestry is just one of the many interests in the countryside, and during the past 30 years we have attempted through regular consultation with other countryside agencies to achieve a harmonious balance between competing land uses of optimum benefit to the national interest. The consultation arrangements thus built up for our own operations were extended in 1974 to private forestry grant-aid proposals.

35. Achievements in any field of endeavour stem from human involvement, and throughout its history the Commission, and indeed forestry generally, has been fortunate to attract men and women with a sense of dedication. Work in the forest has never been easy, however, and felling and extraction have always been regarded as hazardous operations. Science and technology have reduced the physical drudgery, but have introduced new dangers. We have made, and are still making, strenuous efforts to ensure safe working conditions, and the accident rate in the Commission has shown a steady decline.

36. The most general instance has been the reduction of chainsaw risks. From 1971 all chainsaws were fitted with anti-vibration handles, and by the time the Health and Safety at Work, etc. Act came into force three years later a policy had been adopted of buying only saws which could satisfy a stringent ergonomic checklist. Chainsaw operation is confined to workers who have completed a thorough training programme in which safety is a prominent feature, and since 1975 all workers have been issued with protective equipment for head, eyes, ears, legs, feet and hands. Information about all improvements in safety techniques and procedures introduced in the Commission is made available to the forestry industry as a whole, and the Forestry Safety Council, which we set up in 1974, has published 25 Safety Guides which are distributed free of charge throughout the industry.

37. The mechanisation of forestry operations has brought significant changes to recruitment and training. The numbers of foresters and forest workers needed by the Commission each year have fallen dramatically, as reflected in Diagram 1 (page 9), while those recruited are expected to be more highly skilled and qualified. The training revolution has been just as radical. The peripatetic instructors, who were appointed in the fifties to ensure that workers could maintain as well as use their tools, made the transition from instruction on crosscut saw to chainsaw and became an important vehicle for the dissemination of work study innovations. The increasingly complex, expensive and potentially dangerous machinery coming into service required highly skilled operators, and training today is systematically planned by professional educators. The new entrant forest worker can expect opportunities for expanding his forestry education in areas ranging from specialist machine operation and chemical spraying to management.

38. The reduction in the number of forest workers in the sixties led to a fall in demand for foresters within the Commission. At the same time developments in private forestry emphasised the need for a broader qualification for super-

visors at this level. These factors led in 1971 to the closure of the Commission's forester training schools and the establishment of an OND Course at Cumbria College of Agriculture and Forestry at Newton Rigg.

39. Mechanical developments have had other effects on the life of the forest worker. Advances in ploughing techniques and equipment, for example, combined with fertilising regimes and species selection have pushed the boundaries of forestry into wilder and increasingly remote upland areas. It was the remoteness of the new forests, coupled with a national housing shortage, which led the Commission after the war to embark on a substantial housing programme, including the creation of a number of forest villages. These were less than successful because of their isolation from the social amenities of existing communities, but like the Forest Workers Holdings Scheme, which was the primary means of providing housing before the war, they served the needs of the time. From the mid-sixties the need for Commission housing declined as the national housing stock increased and the falling workforce, now more mobile with the widespread use of the private car, preferred to find their own housing in existing villages. A disposals programme began, and current policy is to retain only the essential houses.

Sixty Years of Achievement

40. British forestry has come a long way since the first national forestry policy was introduced in 1919. Since then the woodland area has been considerably extended through a unique and successful partnership between the Forestry Commission and the private sector (see Diagram 2 on page 11), and we are well on target to achieving the 2 million hectares of productive forests by the turn of the century advocated by the Commissioners in their 1943 White Paper. The greatest advances have been made during the last 30 years, assisted by a revolution in tools and silvicultural techniques. Despite these achievements the United Kingdom still has the lowest proportion of tree cover in Europe, apart from Ireland, and the import bill in wood and wood products amounted to £2,817 million in 1979. Thus there is ample scope on the home market for the increased output which is foreseen from British forests and we are confident that all those involved, whether in the Commission or in private forestry, will continue to exploit this opportunity with the same enthusiasm and adaptability to advancing techniques and practices as have characterised the past 60 years.

Report for the year ended 31 March 1980

General Review

Forestry Policy

41. Shortly after taking office, Forestry Ministers began a study of various aspects of forestry policy to ensure that it properly reflected the Government's overall political and economic strategy. At the end of the year under report, the study was still under way and a statement of the Government's conclusions was awaited. Although he was not yet in a position to state any firm conclusions, the Earl of Mansfield, Minister of State at the Scottish Office with responsibilities for forestry, was able to comment at some length on the questions to which Forestry Ministers were addressing themselves when he spoke in a debate on forestry strategy in the House of Lords on 26 March 1980. Winding up for the Government, after a long debate in which speakers referred to the need for stability and long-term investment in the forestry industry, Lord Mansfield confirmed that the Government was in favour of the continuing expansion of forestry in this country. He pointed out, however, that such expansion raised a number of fundamental questions, the answers to which had long-term implications beyond the confines of forestry and could not be reached hastily. Although the review was being conducted with vigour, it was something that could not be skimped, since the Government wanted to be certain that the policy which emerged was positive and constructive, and provided an acceptable balance, given the limited land and other resources available.

42. In our Report for 1978–79 we referred to a number of papers on topics related to forestry policy which we knew were under preparation. Perhaps the most significant of these was *A Strategy for the UK Forest Industry,* published in February 1980 by the Centre for Agricultural Strategy at Reading University, which called for wider recognition of the importance of forestry in the national economy and emphasised the need for a more positive attitude to forestry in general. The report considered what proportion of future domestic consumption of wood should be home-produced and whether the total output of the remoter rural areas of the United Kingdom could be increased to the benefit of the local communities and the nation. It concluded that there is a good case for further investment in UK forestry by both the public and private sectors in view of the forecast demand for timber, the high potential for domestic timber production and the prospect of future world shortages resulting in higher timber prices—conclusions which are broadly in line with those of our own review into *The Wood Production Outlook in Britain.* The Centre for Agricultural Strategy's report also took the view, which we endorse fully, that land use policy needs to be sufficiently flexible to avoid placing restrictions on future options. Taken together with our own review, this study is a useful contribution to the consideration of future forestry policy in this country currently being undertaken by Forestry Ministers.

43. Of the four other papers mentioned in our last Report, two were published during the year. The Report of Lord Northfield's Committee of Inquiry into *The Acquisition and Occupancy of Agricultural Land* contained little of direct significance for forestry: it was thought that there might be a case for the re-introduction of local development bodies in rural areas but the concept of an all-embracing rural land authority was firmly rejected. The Countryside Review Committee's Topic Paper No. 4 on *Conservation and the Countryside Heritage* endorsed the case for a substantial increase in afforestation by the end of the century: it also recognised the effectiveness of the current consultation arrangements for forestry proposals and concluded that these should continue and not be replaced by planning control. Although the paper as a whole has had a rather mixed reception, we welcome the generally constructive approach adopted and particularly the emphasis placed on a dynamic concept of conservation which recognises that there will be change but that it must be managed in such a way that conservation is taken into account from the outset.

The Commission's Finances

Public Expenditure Survey

44. During the year under review two White Papers were published on the Government's expenditure plans for 1980–81 to 1983–84*. The previously planned levels of expenditure for forestry were reduced by some £5 million per annum for 1980–81 and 1981–82 and by £6 million per annum for 1982–83 and 1983–84. The main effects will be a cut in the level of acquisition funds, which at current prices will restrict our purchases of land for planting to some 4,500 hectares a year; a reduced level of new planting of 11,900 hectares in 1980–81, falling to 8,700 hectares in 1983–84; and a cessation of investment in new recreational facilities. The implications of the manpower reduction exercises, to which we refer in paragraphs 62–63, are also reflected in the cuts.

Grant-in-Aid

45. After adjusting for changes in the working balance, the call on Exchequer funds in 1979–80 was £43·3 million compared with £29·3 million the previous year, an increase of £14 million. This increase was, however, distorted by the effects of the closure by industrial action in early 1979 of the computer processing our accounts which caused delays in the payment of bills received by March 1979 (some £3·2 million) and in the submission of invoices which in normal circumstances would have been on hand and paid by March 1979 (some £1·5 million); had these bills, totalling £4·7 million, all been settled on time, the year-on-year increase in the Exchquer funding would have been £4·6 million (14 per cent).

46. Payments of £93·4 million showed an increase of £27·8 million over the previous year; but for the strike the increase would have been £18·4 million (26 per cent). This increase was mainly caused by the continuing impact of inflation and pay awards, a further increase in funds for land acquisition, a rise in total grant payments to private woodland owners, the effect of the higher rate of VAT introduced in mid-1979, and increased harvesting and road programmes. Receipts rose by £12·8 million (35 per cent) to £49·6 million. This rise was made up of an additional £9·9 million (36 per cent) from the sale of timber, as a result of higher demand and prices; an increase of £1·1 million (65 per cent) in the income from the disposal of surplus assets, due to a larger

* Cmnd 7746, HMSO, £0·74 net.
Cmnd 7841, HMSO, £6·25 net.

programme and better prices; and an increase in other income of £1·8 million (23 per cent) resulting from higher charges and rents and mineral royalties.

47. The statement of Forestry Fund receipts and payments, together with notes and explanations, appears at Table 1 of Appendix VII.

Private Forestry

48. We are glad to report that the higher level of private planting recorded in 1978–79 has been maintained and that applications for entry to the Basis III Dedication Scheme continue at a record level. Further details are given in paragraph 125. A study designed to improve the efficiency of the administration of our grant-aid schemes and felling controls was started in January 1980 under the auspices of Sir Derek Rayner (paragraph 126).

State of the Wood Market

A Year of Strong Demand

49. The market demand for small diameter roundwood improved significantly and the favourable winter weather enabled record amounts of wood to be supplied to industry. The total volume harvested was 16 per cent higher than in the previous year. Deliveries of wood for pulp increased by 30 per cent and those for particleboard by 85 per cent. The market for sawlog was buoyant throughout the year and the volume supplied increased by 14 per cent. Fuller details are given in paragraphs 95–102.

Fort William Pulp Mill

50. In April 1979 Wiggins Teape Ltd. announced their intention to close their chemical pulpmill at Fort William unless a viable alternative could be found. Following that announcement, and in association with Consolidated Bathurst Inc. of Canada, they made a detailed investigation into mechanical pulping integrated with newsprint production. Although the Companies' decision against the project was reached just outside the period covered by this Report, it followed thorough and detailed negotiations during the year involving a package of Government financial assistance and the price of wood supplied by the Commission, and it is appropriate to record it here. Wiggins Teape announced on 29 April 1980 their decision finally to close the pulpmill. The decision was a sad blow to the Highlands and to Fort William. In association with private forestry interests, we are seeking to develop alternative markets to sustain wood production and employment in the Highlands. While alternative markets within this country will be exploited to the maximum extent feasible, export markets will also have to be considered. Nevertheless, our objective remains the promotion of a viable wood-processing industry in the Highlands.

Caberboard Ltd.

51. In February 1980, Caberboard Ltd. announced their plans to install a medium-density fibreboard plant at Cowie in Stirlingshire to be commissioned during 1980 on the same site as their existing particleboard plant. This is a completely new product for the wood-processing industry in this country. We welcome this positive step forward in the development of the industry to take advantage of the increasing availability of British-grown softwoods.

The British Forest Heritage

52. Although forestry is one of the most ancient industries and activities in this country, there is at present no comprehensive collection of the tools of the trade, nor has there been any systematic recording of the forest heritage. The time is

rapidly passing when material can be readily collected and for this reason we have initiated the *British Forest Heritage* project to make a start on the proper recording of the history of forestry and its artefacts. It is hoped that an independent charity, to be known as the British Forest Heritage Trust, can be formed and that this will establish a main collection open to the public.

Commission Statement on Nature Conservation

53. The fourth of our policy statements, entitled *The Forestry Commission and Conservation,* was published in booklet form in March 1980. It appears in full at Appendix V. Earlier statements have covered the Commission's objectives and our policies on landscape design and recreation.

Sheep in the Forest of Dean

54. In our Report for 1977–78, we referred to a scheme we were discussing with the Forest of Dean Commoners' Association to control sheep grazing in the Forest. The successful conclusion of these discussions was announced in Parliament on 13 November 1979. The scheme rests on a minor change to our Byelaws to prohibit sheep grazing without the Commission's consent and to require sheep allowed to graze to be properly marked. It will involve registering the graziers and their markings and limiting the total number of sheep to manageable proportions. The agreement also contains other arrangements to reduce the adverse effects of uncontrolled grazing within the Forest and includes an appeals procedure for graziers aggrieved by local decisions.

Forest Cabins

55. Although we have decided as part of our contribution to Government expenditure reductions not to fund any new recreational projects for the time being, Ministerial endorsement has been given to our participating with the Crown Estate Commissioners in the joint development of a forest cabin scheme at Dalavich on the shores of Loch Awe in Argyll. Subject to satisfactory tenders, the Crown Estate Commissioners will finance the building of the cabins which we shall operate and manage on their behalf. The plan envisages the construction of 44 timber cabins, sited close to the forestry village of Dalavich, home of Commission staff employed at Inverliever Forest.

56. The layout for the site has been prepared by our Forest Design Branch to make best use of the natural features of the area, which is one of high tourist appeal. About half of the cabins will be located on the edges of natural woodlands of oak, birch and alder, and the remainder will be on the fringes of the spruce and larch of Inverliever Forest. Careful thought has been given to the integration of the forest cabins with the neighbouring village, and a new village hall is being planned to serve the needs of both local residents and visitors. This will replace the present, smaller village hall. It is hoped to start the development in May 1980 with cabins ready for letting to the general public by Easter 1981.

Dutch Elm Disease: Report by Parliamentary Commissioner

57. Towards the end of the year, we received from the Parliamentary Commissioner for Administration an advance copy of his proposed report* on a complaint about Dutch elm disease that had been made against the Forestry Commission some three years previously. The complaint had alleged that the disease had been allowed to spread into Scotland because of maladministration by the Commission and that this had resulted in financial loss to timber growers. We are pleased to record that the Parliamentary Commissioner concluded that there had been no maladministration in the way that the Commission had

* The report was published in May 1980 as HC 568, HMSO, £1·50 net.

carried out its functions in attempting to cope with the disease, and that he rejected the suggestion that the Commission had caused the spread to Scotland or that some other course of action on its part would necessarily have produced different results.

58. Our usual report on the state of the disease is to be found at paragraphs 144–146.

2, 4, 5-T

59. During the year doubts were expressed by environmental and Trade Union interests, and echoed in the media, about the safety of the herbicide 2, 4, 5-T. The Trade Union Side of our Industrial and Trade Council decided to instruct its members not to use 2, 4, 5-T, and one of the constituent Unions, the National Union of Agricultural and Allied Workers, presented to the Minister of Agriculture, Fisheries and Food a dossier containing details of cases where harmful effects were alleged to have followed its use. The Minister has asked the Advisory Committee on Pesticides to evaluate the dossier, and we are assisting the Committee in this task in those cases where forestry workers have been mentioned.

60. In our own use of this and other herbicides, we follow the advice of the Advisory Committee, who on present information regard 2, 4, 5-T as a substance which can be safely used if handled in the right way. The completion of the evaluation of the Union's dossier will no doubt be followed by recommendations about the future use of 2, 4, 5-T, and we shall be guided by those in our future policy regarding its use in forestry operations.

British Forestry Delegation's Visit to China

61. A British forestry delegation led by Sir Ralph Verney, and representing private woodland owners, the timber trade, forestry research and development and the universities, visited The People's Republic of China as guests of the Chinese Government in September and October 1979. During their three-week visit they travelled from Guangzhou in the south to Nancha in the north-east. A reciprocal visit by a Chinese forestry delegation is planned for mid-1980.

Manpower Reductions

62. Salaries and wages expenditure in the year was restricted by the Government's cash limits, and savings of 3 per cent in salaries expenditure and $1\frac{1}{2}$ per cent in wages expenditure had to be made to help meet the cost of pay settlements. The savings were achieved by a tight control on recruitment and a reduction in certain work programmes necessitated by the limitation of general cash expenditure. Further staff cuts of 5 per cent were announced by the Government during the year as part of the reduction of expenditure in the Civil Service. Proposals for achieving these cuts, which have to be made by April 1982, are being discussed with the Unions. It will be our aim to ensure that they are made in a way which will have the least effect on our mainstream responsibilities, particularly our harvesting programmes.

63. The present staff reductions extend our long-standing policy of increasing efficiency and reducing costs within the Commission. Diagram 1 (page 9) shows the reductions in manpower over the past 30 years. These have been achieved with a significant increase in productivity through the mechanisation of operations and improvements in techniques.

Royal Visit to the New Forest

64. Her Majesty the Queen and His Royal Highness the Duke of Edinburgh visited the New Forest on 12 April 1979 to mark the 900th anniversary of its foundation. The Royal party toured the Forest by landau via Bolderwood and Rhinefield Ornamental Drives, and Her Majesty planted a commemorative oak at Knight Wood and opened the Commission's most recent car park at Boltons Bench, thus marking the completion of an important phase in our conservation programme in the New Forest. The Queen and the Duke of Edinburgh were accompanied on various stages of their tour by the Director General, the Conservator for South East England and the Deputy Surveyor of the New Forest (Plate 3), and were introduced to the Verderers and to some 30 members of the Commission's local staff.

Chairman

65. Mr John Mackie retired as Chairman of the Commission in July 1979. He was succeeded by Sir David Montgomery who had been Vice Convener of Tayside Regional Council and Vice President of the Convention of Scottish Local Authorities. Sir David had also been a member of the Nature Conservancy Council since 1973, latterly serving as Chairman of its Scottish Advisory Committee.

66. Mr Mackie took office as Chairman in July 1976. His fellow Commissioners and all in the Commission and the forestry industry have good reason to record their high regard for the energy and dedication with which he served the cause of British forestry, especially its relations with the agricultural industry.

Commissioners

67. The Rt Hon J. D. Gibson-Watt was made a life peer and the Director General, Mr G. D. Holmes, appointed a CB in the 1979 Birthday Honours List.

68. Mr J. N. Kennedy was appointed Commissioner for Forest and Estate Management on 17 December 1979 to succeed Mr G. G. Stewart, who retired at the end of 1979. Mr Kennedy was formerly the Director, Forest Management.

Senior Staff

69. In recognition of the increasing responsibilities of Harvesting and Marketing Division, Mr G. J. Francis was promoted to Director, *in situ* from 17 December 1979.

70. The post of Head of Forest Management Division was regraded to Conservator and Mr S. A. Neustein, formerly an Assistant Conservator in the North West England Conservancy, was promoted on 3 December 1979 to take up the appointment.

Staff Numbers

71. On 31 March 1980 the Commission employed 2,179 non-industrial staff (compared with 2,255 the previous year) and 5,950 industrial staff (6,068 the previous year).

Forestry Enterprise

Land Acquisition

A Further Shortfall

72. The area of land we acquired was much less than the area planted, as in the previous two years. Last year we ascribed the shortfall to the limited amount of suitable land for sale; this year more land came on the market, but we were unable to take full advantage of the change because of limited funds. This downward trend in land purchases will continue, as our acquisition budget for 1980–81 has been reduced from £3 million to £1 million as part of the Commission's contribution to the Government's public expenditure cuts, and substantial reductions are also planned for the following three years. As a result, our new planting programme is expected to fall below 9,000 hectares by 1983–84.

73. The total area of plantable land acquired during the year was 7,565 hectares, including 228 hectares already under trees. The distribution was:—

	Total plantable area acquired (hectares)
England	139
Wales	180
Scotland	7,246

The average cost of plantable land was £357 per hectare, an increase of 21 per cent compared with the average for 1978–79 of £295 per hectare.

Land Purchased on Skye

74. The Commission's purchase last year of 382 hectares of land on the Isle of Skye illustrates the value of the consultative procedures followed both for our own afforestation proposals and for those put forward by private owners under our grant-aid schemes. The land concerned was in a sensitive area just a few miles north of the Cuillin mountains, and a number of important factors had to be balanced: the planting proposals not only had to provide an economic return and contribute towards the effectiveness of surrounding crofts, but had to be carefully planned to preserve views to the Cuillins from the main Sligachan-Portree road. The difficult land use and landscaping problems presented by this case were settled to the satisfaction of the crofters, the Department of Agriculture and Fisheries for Scotland and the local planning authority in a spirit of co-operation and with the minimum of formality.

Nurseries

75. The early spring of 1979 was cold and wet and led to delays in seed sowing and the lifting of seedlings and transplants. Although the following summer was cool, it was wetter than usual and the germination and growth of seedlings was

good. As some seedlings sown in 1978 had not been large enough to transplant in the spring of 1979, the total number of usable seedlings at the end of the summer turned out to be higher than expected. However, delays in transplanting spruce seedlings led to a shortage of planting stock in spring 1980.

Planting

76. Because of the prolonged winter the 1978–79 planting programme was not finished until May 1979, whereas the early spring of 1980 was milder than those of the previous two years, enabling a large part of the 1979–80 programme to be completed before the end of March. These factors resulted in the restocking of 5,659 hectares of felled woodland and the formation of 15,839 hectares of new plantations, against the planned programme of 5,100 hectares and 13,500 hectares respectively. The underlying trend, however, is of a continuing reduction in new planting.

Tree Seed

77. This was another poor year for seed crops. Some reasonable collections were made by strenuous local effort, but were not enough to top-up the already depleted stocks which are critically low in several key species. Top priority will have to be given to these species in the coming year.

78. With the co-operation of the British Columbian Forest Service, the Commission sent a four-man team to Canada to collect Lodgepole pine seed from selected sources. Plants raised from this seed will be used in Britain to establish seed stands (see paragraph 128), but similar expeditions may have to be considered in the interval before these stands come into production. Some 20 per cent of the seed collected was sold to the private sector.

Forest Protection

Fire

79. Losses of plantations from fire totalled 432 hectares. This was around the long-term average, but much less than in recent years. Over half was lost in two fires. One at Rannoch Forest in Tayside, started by lightning, destroyed 90 hectares; in the other at Glentrool Forest in Dumfries and Galloway, caused by two hill walkers who lit a picnic stove in contravention of the Forestry Commission Byelaws, 154 hectares were lost.

Pine Beauty Moth

80. Again, we had to treat some of our Lodgepole pine plantations in Scotland with the insecticide fenitrothion to counter infestations of Pine beauty moth larvae. The operation was carried out in June 1979 when some 3,170 hectares were sprayed from the air. This showed a welcome reduction from the 5,000 hectares treated in 1978, but included outbreaks in East Scotland and South Scotland Conservancies; all the earlier outbreaks had occurred in the North Scotland Conservancy.

81. Pupal surveys conducted in the autumn showed that almost 100 per cent control had been achieved, with the exception of 220 hectares at Bareagle Forest in south Scotland and 107 hectares at Shin Forest in north Scotland which had been treated at half the recommended rate as an experiment. Extensive monitoring by a number of organisations showed that the effects on the environment had been minimal, and this was endorsed by a meeting of all interested bodies held in November to discuss the 1979 operation. We record our appreciation of the assistance we have received from the Advisory Committee on Pesticides and

other bodies with the control operations and the subsequent monitoring. A detailed report *Control of Pine beauty moth by Fenitrothion in Scotland 1978* was published during the year and a further report on the 1979 control measures is in preparation.

82. The Pine beauty moth control programme was touched upon by the Royal Commission on Environmental Pollution in their Seventh Report published in September 1979 (paragraphs 3.56–3.58). The Royal Commission agreed in general with our approach:

> 'We commend the willingness of the Forestry Commission to undertake the task of consultation and co-ordination and we accept that new monitoring exercises will take into account the experience now gained. We noted with interest the role played by the Pesticides Safety Precautions Scheme in assessing proposals for the operation and imposing conditions.'

83. Pupal counts carried out last winter indicated that a further spraying programme would be needed in the summer of 1980, but the area is expected to be considerably less than in previous years.

Forest Design

Landscaping

84. Landscape design has become an integral part of forestry planning (Plates 6 and 7), and has put increasing pressure on our landscape architects. Priority was given during the year to felling and new planting operations, including a project to minimise the visual impact of forest ploughing at Avondale in Ayrshire. The landscape design for a number of new building projects was also undertaken, notably a new engineering workshop and stores in Shin Forest at Lairg in Sutherland.

85. Our landscape consultant, Mr Clifford Tandy, gave advice on major schemes in five Conservancies. These included detailed landscape proposals for a complex planting site on reclaimed colliery spoil heaps at Blaen Rhondda in south Wales. He also gave independent advice on important private woodland projects in the Brecon Beacons National Park and in the Pennines.

86. Examples of the Commission's landscape work were displayed at an exhibition of landscape design in the Kelvingrove Museum, Glasgow, to commemorate the Landscape Institute's Jubilee, at the British Association for the Advancement of Science Conference in Edinburgh and at an exhibition at the Royal Botanic Gardens, Edinburgh.

Visitor Centres

87. Work was completed on the major reconstruction of the popular David Marshall Lodge in the Queen Elizabeth Forest Park in the Trossachs. The Lodge, which receives some 200,000 visitors each year, now has a hexagonal cantilevered extension, designed by Edinburgh architects Ian G. Lindsay & Partners, to house a new display interpreting the Forest Park for visitors. The main theme is about famous visitors to the area over the centuries. The latest interpretative techniques have been used in the display and there is a sales area for literature and souvenirs. Our Dalby Visitor Centre in the North Yorkshire Moors National Park and the Coed y Brenin Visitor Centre in north Wales were also refurbished.

Recreation

88. The public have continued to make good use of our picnic places and forest walks and the other varied recreation facilities provided in Commission woodlands (see Table 14 in Appendix VIII). It is estimated that about 24 million day visits were made to Commission land during the year, about the same level as shown by our survey in 1976. However, the number of people camping, expressed as camper nights, fell back from the peak figure of 1.55 million in 1978 to 1.47 million, due largely to fears of petrol shortages during the main touring period. The annual occupancy rate of our forest cabins showed little change from the previous year, with virtually full booking during the main holiday months. In view of rapidly increasing travel costs and our desire to provide opportunities for woodland recreation for the benefit of the public at large, we have decided to give greater emphasis to the development of recreation facilities in woodlands close to towns, as soon as economic circumstances allow.

89. Over the years, the Commission has adapted and improved its recreation facilities to make them more accessible to disabled people. We now have many miles of well-surfaced and easy forest walks, in addition to 12 forest trails which have been specially designed for the disabled. Nearly 40 toilets at our car parks and picnic places are suitable for use by disabled people and a number of our visitor centres and camp sites have special facilities. New facilities for the disabled completed this year include forest trails at Staindale on the Dalby Forest Drive in North Yorkshire, at Abbot's Wood in Bedgebury Forest (Plate 4), where it is linked to a special picnic place and toilet block, and at Tintern Forest in Gwent.

Estate Management

The Queen's House, Lyndhurst

90. Last year we reported that the Queen's House, Lyndhurst, a Grade II listed building which has been associated with the administration of the New Forest for several centuries, had had to be evacuated on being found to be in a dangerous structural condition. Following a consultant's report, an architect was appointed towards the end of 1979 to prepare a detailed scheme for the restoration of the building for further use by our local staff. It is hoped that the scheme will qualify for a grant of funds from the Historic Buildings Council, who were consulted over the appointment of the architect. A final decision will be made on the future of this historic building once the question of possible funding has been clarified.

Exploration for Barytes near Loch Tummel

91. The presence of barytes, which is used as a lubricating agent in oil and gas drilling operations and also has applications in glass manufacture, medicine and the plastics industry, has been established on Commission land in the vicinity of Creagan Loch to the south of Loch Tummel in Perthshire. The extent and quality of this scarce mineral are not known. We therefore invited offers for the right to explore, coupled with an option to mine, and the tender of Dresser Minerals International Inc. was accepted. The 1,100 hectares of land involved lies within a Scenic Heritage Area, but the site of a mine would not be visible from any public highway. Planning permission has been granted for the exploration work.

Disposals

92. Income from the sale of land, houses, farms and other property no longer needed for forestry purposes, together with receipts derived from the transfer of land required by local authorities and other public bodies for statutory works, increased by £1.1 million to £2.8 million. In common with other Government departments, we are making special efforts to increase our receipts from the sale of surplus property still further over the next few years.

Management of Property

93. During the year we spent £1.8 million on the construction, improvement and acquisition of buildings. Projects completed included a new mechanical repair workshop at Bellingham and an estate depot at Kielder to replace the buildings that will be submerged by the new reservoir. The Commission's rental income for the year amounted to £1.2 million.

94. The numbers of properties managed by the Commission are given at Table 13 of Appendix VIII.

Harvesting and Marketing

Demand

95. The demand for small diameter wood gained momentum right from the start of the year. The upsurge, associated with increased consumption by the particleboard industry, was very marked. The demand for pulpwood for board fluctuated, while that for newsprint production and chemical pulping remained at a consistently high level. The log market continued buoyant throughout the year, with considerable pressure of demand in the southern half of the country, and the demand for low grade hardwood for fuel became more marked during the year. The weather last winter was also particularly favourable for harvesting operations. As a result of all these factors, the total volume of wood harvested (2,326,000 cubic metres) was 16 per cent above the previous year's figure and 5 per cent above the planned programme.

Prices

96. Despite the strong demand, there was no significant increase in prices for small diameter wood, as the industries concerned continued to face strong competition from overseas producers who were favoured by the increasing strength of sterling as the year progressed. Such price increases as did occur were insufficient to keep pace with increasing costs, which were particularly evident in timber transport. By contrast, prices for softwood logs increased strongly throughout the year.

97. The main features of our operations in the year, with comparable figures for previous years, are summarised below.

	Unit	*1975–76*	*1976–77*	*1977–78*	*1978–79*	*1979–80*
Total Removals	Million cubic metres	1·56	2·02	1·97	2·01	2·33
By Sale Standing	,,	0·55	0·83	0·75	0·68	0·76
By Forestry Commission harvesting	,,	1·01	1·19	1·22	1·33	1·57
Gross Receipts	£ million	16·69	23·36	25·91	26·61	34·94
Expenditure (including oncosts but excluding overheads)	,,	7.51	9.23	12·31	14·70	19·37
Net Receipts	,,	9·18	14·13	13·60	11·91	15·57
Receipts per cubic metre	£	10·70	11·56	13.15	13·24	15·00
Expenditure per cubic metre	,,	4·81	4·57	6·25	7·31	8·31
Net Receipts per cubic metre	,,	5·89	6·99	6·90	5·93	6·69

Conifer Sawlog Sales

98. The average price of logs supplied against contracts during the year increased by 18 per cent compared with last year. However, the Commission's Log Price Index, which is an indication of forward prices, rose from 145·2 at 31 March 1979 to 203·4 at 31 March 1980; this represents an increase of 40 per cent and was strongly influenced by the sharp advances in prices experienced at our auction sales in the early months of 1980.

Conifer Small Roundwood Sales

99. Although the strength of sterling has continued to favour the competitive position of overseas producers of paper and board, the demand for pulpwood led to an increase in the quantity we supplied. Deliveries were 30 per cent higher than last year and the highest annual figure on record.

100. There was a great improvement in the demand for roundwood from the particleboard industry as home production recovered strongly. Our deliveries of roundwood to this market were 85 per cent higher than last year and the quantity supplied was the largest on record.

101. Deliveries of round pitwood to the National Coal Board were maintained at last year's level. Quantities of peeled pitwood increased by almost 2,500 cubic metres, but were offset by a reduction in deliveries of unpeeled pitwood.

Sales of Standing Trees

102. The general improvement in markets was reflected in a 13 per cent increase over last year in removals of timber under standing sales contracts, to a total volume of 762,000 cubic metres. Average prices for all sales of standing trees increased by 25 per cent. Our Great Britain Price Index for sales of trees in the smaller size categories increased from 235·0 at 31 March 1979 to 276·6 at the end of the year, an increase of 18 per cent.

Other Developments

103. After a detailed study with the Home Timber Merchants' Associations, arrangements have been concluded for a system of log description and classification to be applied to our sales of logs. This is intended to achieve uniformity in our methods of presentation for sale and to provide a system which is practical for ourselves and sawmillers. We hope that the system will assist sawmillers in extending and expanding the market for British sawn timber. Details have been circulated in our booklet *Softwood Sawlogs–Presentation for Sale.*

104. During the year we offered an additional volume of small logs from our North and West Scotland Conservancies for sale over a period of eight years from 1980. Riddoch of Rothiemay Ltd. were successful in obtaining the contract, which will form part of the increased log requirements for their Kilmallie sawmill at Fort William which is to be modernised and expanded. We regard this development as particularly welcome as it will include a significant proportion of smaller diameter logs which might otherwise have been suitable only for pulping.

105. A revision has now begun of the British Standard for the Structural Use of Timber which will see the introduction of performance grades in the form of strength classes. We have worked closely with the Home Timber Merchants' Associations in representing the interests of British timber during the preparation of the revised Standard, which will be an important contribution to the marketing of British timber for structural purposes.

106. A four-year programme was initiated to modernise the depot at Brandon in Thetford Forest (Plate 5) which handles a significant proportion of our round mining timber production. Working conditions will be improved and productivity increased while ensuring the quality of the end product.

Harvesting

107. During the year there has been a significant increase in the number of forwarders employed in our own harvesting operations. The trend toward shortwood working has increased and the opportunities for a further extension of this system have been enhanced by advances in the design of forwarders available on the market, which has led to improvements in their capability of working on difficult terrain (Plate 8).

Engineering

108. Progress was made in the upgrading of the older parts of the existing road system in Commission forests to provide for modern traffic needs. The construction of new roads continued, either to full standard or to a lower standard for forwarders and light vehicles, although we had to defer some new projects in favour of improvements more urgently required to meet timber harvest commitments. Major roadworks undertaken during the year aggregated more than 400 km (250 miles). The total number of road and footbridges constructed was 25.

109. In the past, it has generally been possible to route timber traffic on to the public highway system with no more than local improvements. Rapidly increasing timber production from both Commission and private forests, with large areas coming into production for the first time, has now made it necessary, however, to undertake comprehensive reviews of road requirements in the medium term. This is being done in conjunction with both national and local authorities. Investigations have also been started into the potential for transporting timber by sea from suitably located mainland forests in the west of Scotland; if trials are successful, the modernised methods could also greatly improve the efficiency of transporting timber from island forests.

110. With rising timber production and advances in machinery design which have made it possible to mechanise many of the more arduous and less productive manual tasks, the Commission's fleet of mechanical plant and vehicles continues to increase in number and variety and in the complexity of many of the individual items. The fleet now numbers some 4,438 road vehicles and major items of mechanical plant, with a total replacement value of £18·1 million.

Forest Workers' Pay

111. The 1980 pay settlement for forest workers gave increases of £8·35 and £10·10 a week in the basic and forest craftsman's rates respectively. The revised rates operative from 21 January 1980 are £57·10 for unskilled forest workers and £64·95 for forest craftsmen. Other features of the settlement were the retention of the piecework incentive level at 126½ per cent, an adjustment in the rates of pay for the various grades of rangers, and an increase in the annual holiday allowance and the introduction of a holiday supplement both effective from November 1980.

112. The average weekly earnings of forest workers, based on a sample of one full week's work by all grades in each quarter, were £74·11.

PLATE 3

Mr G. D. Holmes, Director General, presenting Her Majesty the Queen with a specially bound copy of *Explore the New Forest* on the occasion of Her visit to the Forest in April 1979 to mark its 900th anniversary

ED954

PLATE 4

Visitors to Placket Walk designed for the disabled at Abbot's Wood, Bedgebury Forest

ED952

Safety

113. The accident rate per 100 industrial employees fell from 7·5 to 7·2. The number of accidents reported also showed an improvement, falling from 443 to 423. These figures represent the best safety performance since 1971 and a reversal of the deterioration during the first half of the decade. Accidents in harvesting continue to cause concern, however, and unless some quite dramatic improvement takes place it seems likely that one in five of the harvesting workforce will suffer injury each year. We are not complacent and continue to analyse causes of accidents and to seek ways of preventing them. For instance, major investigations into felling aid tools and chokering techniques were completed during the year by our Work Study Branch, the application of the results of which could well provide worthwhile improvements in both safety and productivity.

114. The review of personal safety equipment has continued and some small improvements have been possible across a range of items with the object of enhancing operator comfort. During the year we introduced new suits for use by workers applying pesticides. These were specially designed for the Commission using a new lightweight fabric, and early indications are that operators have found them an improvement on the suits previously issued.

Finance

115. The accounts of the Forestry Enterprise, including general notes and explanations together with the Comptroller and Auditor General's report thereon, appears after page 86.

116. Three years of the 1977–1982 quinquennium being now completed, a preliminary indication of the performance of the Enterprise is appropriate and opportune. Although a comprehensive assessment cannot be made until a complete revaluation of all the assets is carried out at the end of the quinquennium, it is possible to compare the Plantations and Harvesting performance in relation to standards set and to examine the surpluses or deficits on other ancillary activities. The results to date are shown in Statement 8 of the Annual Accounts on page 94. The general picture revealed is that, because of the economic recession and in particular pressures on timber prices, the Commission is unlikely to achieve the target rate of return of 3 per cent on its plantation investment in the current quinquennium. Details of the more significant variances are given in the following paragraphs.

Harvesting and Marketing

117. To achieve 3 per cent in respect of timber actually harvested, there should be a nil balance on the Harvesting and Marketing account, whereas the cumulative deficit to date is £11.1 million. This is analysed as follows:

	Standard	*Actual*	*Variance*	
			Absolute	*Percentage*
	£ million	*£ million*	*£ million*	
Income ..	102·4	86·4	(16·0)	16
Expenditure ..	70·6	65·7	4·9	7
Balance (deficit)	31·8	20·7	(11·1)	

Costs have been held within the standards set, but income has not kept pace with the general level of inflation due to difficulties – experienced throughout Europe – in the particle, pulp and paper markets. The situation is unlikely to show any improvement in 1980–81.

Plantation Expenditure and Income

118. Measurement of actual plantations expenditure and income against standards, which must be adhered to if 3 per cent is to be earned, reveals a cumulative adverse variance of £4.4 million. The major differences are as follows:

	Standard	*Actual*	*Variance*	
			Absolute	*Percentage*
	£ million	*£ million*	*£ million*	
Land planted	9·4	13·2	(3·8)	41
Road construction	6·8	8·1	(1·3)	19

The sizeable variance on land planted represents the ever-widening divergence between the revised values of land in the plantable reserve and the land actually under plantations. The average price of the former has risen by some 140 per cent since the beginning of the quinquennium, while plantation land has only been revalued by the general rise in inflation of 40 per cent. The additional cost of road construction has been caused by the need to meet higher specifications brought about by the trend to larger and heavier vehicles and by safety requirements.

Surplus Estate

119. The cumulative deficit incurred on the management of properties which are not required for the Enterprise now amounts to £2.9 million. This variance reflects our inability under the constraints of statutory procedures to make charges sufficient to meet the cost of our obligations to maintain properties to a reasonable standard, the management costs involved and interest on the capital employed. An accelerated programme of disposals will gradually reduce the extent of the deficit. Against this deficit, however, can be set the very substantial write-up of £9 million in property values arising from current cost revaluation which, because of its unrealised nature, has been credited to the Current Cost Reserve.

Forestry Authority

Legislation

120. A number of Statutory Instruments were enacted in our name during the year:

(*a*) *Dutch Elm Disease* – The Dutch Elm Disease (Local Authorities) (Amendment) Order 1979 (SI 1979/638) and the Dutch Elm Disease (Restriction on Movement of Elms) (Amendment) Order 1979 (SI 1979/639) came into operation on 11 July 1979. They amended the Dutch Elm Disease Orders of 1977 by altering the list of local authorities empowered to take steps to prevent the spread of Dutch elm disease and adding to the list of areas from which the movement of elms is restricted.

(*b*) *Felling Regulations* – In consequence of the metrication provisions of the Forestry Act 1979, two Orders were made revoking various Orders enacted between 1951 and 1977 and re-enacting them in consolidated form with minor modifications. The new Orders were the Forestry (Felling of Trees) Regulations 1979 (SI 1979/791) and the Forestry (Exceptions from Restriction of Felling) Regulations 1979 (SI 1979/792) both of which came into operation on 9 August 1979.

(*c*) *Metrication* – The Dean Forest and New Forest Acts (Amendment) Regulations 1979 (SI 1979/836) took effect from 16 August 1979. They were enacted under enabling powers granted in the Forestry Act 1979 to metricate imperial references in various New Forest and Dean Forest Acts.

121. The following plant health Orders were made towards the end of the period covered by this Report but had still to be laid before Parliament:

(*a*) *Import Controls* – The Import and Export of Trees, Wood and Bark (Health) (Great Britain) Order 1980* was made on 28 March 1980 with a view to its being presented to Parliament on 9 April. It is designed to implement the EEC Plant Health Directive of 1976 (as amended).

(*b*) *Domestic Controls* – The Tree Pests (Great Britain) Order** was also made on 28 March 1980 to be laid before Parliament on 9 April. It seeks powers to combat non-indigenous tree pests and diseases which, despite the import controls, might secure a foothold in Britain.

Further details of these Orders are given in paragraphs 139 – 143.

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* This Order came into operation on 1 May 1980 as SI 1980/449.

** This Order came into operation on 1 May 1980 as SI 1980/450.

122. *Forestry Commission Byelaws* – Work continues on the preparation of a composite set of Byelaws to cover all Commission land including the Forest of Dean, the New Forest, Westonbirt Arboretum and Bedgebury Pinetum, which at present have separate Byelaws. They are expected to be laid before Parliament soon.

Forestry and Farming

123. We referred in our last Report to the intention to set up a Working Party under the auspices of the Department of Agriculture and Fisheries for Scotland to look into the scope for small-scale integration of forestry and farming in Scotland. The Working Party met in November 1979 and there were indications that the National Farmers' Union of Scotland, the Scottish Woodland Owners Association and the Scottish Landowners' Federation were by and large content that the procedures for dealing with approval for grant-aid under the Basis III Dedication Scheme and the increasing dialogue between the interested parties were leading to forestry and agriculture being better integrated, both at small-scale and national level. Nevertheless, it appeared that small-scale integration was not actually taking place to the extent that it might, largely because farmers were simply unfamiliar with forestry and did not see any obvious benefits from planting trees themselves. This conclusion would seem to indicate a need for the closer integration of education for forestry and agriculture at all levels, and we have subsequently made renewed contacts with the Scottish Agricultural Colleges in this connection.

124. Although much has been said and written on the subject of the integration of forestry and farming, we have been conscious for some time of the lack of any quantitative assessment of the benefits accruing from such schemes as are known to exist in various parts of the country. Early in 1979, we therefore commissioned the Department of Forestry and Natural Resources at Edinburgh University to undertake an investigation into the economic interaction of forestry and agriculture on farms by means of a series of case studies throughout Scotland and the North of England. This research project has now been completed and the results are to be published in due course by the East of Scotland College of Agriculture in an effort to reach a wider agricultural readership. We shall also be publishing shortly a selection of the papers given at the 1979 British Association meeting on the general theme of forestry and farming in upland Britain, as a further contribution to the general debate on making the most of Britain's uplands.

Private Forestry

Planting Levels Maintained

125. We are glad to report that the higher level of private planting recorded in 1978–79 has been maintained. A total of 11,167 hectares of planting was grant-aided under the Commission's schemes, of which 8,302 hectares were new planting (Table 3 of Appendix VIII); in addition, it is estimated that some 500 hectares were planted without grant-aid. The suggestion we made in our last Report that the flow of applications for entry to the Basis III Dedication Scheme would lead to a continuing upward trend in planting has not yet materialised. For a variety of reasons it takes some time for owners' intentions, as reflected in applications to join the scheme, to be translated into actual planting figures. It also has to be borne in mind that our private planting statistics are based on the areas for which grants were paid during the year and relate, on average, to planting done 12 months earlier. The 1979–80 figures will there-

fore include planting undertaken during the 1978–79 season which, like our own (paragraph 76), was delayed by the prolonged winter and severe spring. As far as applications to the Basis III scheme are concerned, 1979–80 proved to be another record year; applications for some 30,500 hectares were approved (39 per cent more than last year) bringing the total area within the scheme to over 110,800 hectares.

Rayner Study

126. We have been concerned for some time about the need to reduce the complexities and the cost of administering our grant-aid schemes and felling controls. We therefore welcomed the decision by Forestry Ministers that this should form the subject of a study under the auspices of Sir Derek Rayner. Work began in January 1980 and the study report was due to be in the hands of Ministers within four months. In the course of the exercise views were sought from a wide cross-section of interested bodies, both in the public and the private sectors.

Research and Development

127. A full account of the wide range of work carried out or grant-aided is given in the Commission's Report on Forest Research published each autumn. The paragraphs below represent a small selection of items of general interest.

Seed Supplies

128. In paragraph 78 we referred to our success in collecting Lodgepole pine seeds from British Columbia. In general, however, it is becoming increasingly difficult to obtain seed of required provenances of our main conifers from their countries of origin. We are therefore placing greater emphasis on the development of seed orchards and collections from registered stands in this country. Additional clonal seed orchards of Sitka spruce and seedling Lodgepole pine orchards have been established, and the first stage of a new hybrid larch orchard has been planted. Further seed stands have also been added to the National Register.

129. When seed is scarce and expensive it becomes doubly necessary to make the best use of available supplies. Experiments have therefore continued to improve germination and seedling yields by pre-chilling and other ways of breaking seed dormancy, and by the use of better seed-bed covers and of irrigation of the nursery beds.

Alternative Species

130. A study of various species and origins of *Nothofagus* is now well advanced and available information has been summarised in Forest Record 122 (*Nothofagus in Britain* by G Tuley). The performance of *Eucalyptus* spp. in Britain has also been reviewed, and various exotic alders are the subject of a preliminary study. In upland experiments, some origins of *Picea engelmannii* have shown growth which compares favourably with that of Sitka spruce, while a hybrid between Sitka and White spruce is showing good early growth in acid peatland in northern Scotland. Studies on *Pinus radiata* and *P. muricata,* two fast-growing pines for possible use in lowland forests, have continued, and information is accumulating on the growth and winter hardiness of a number of origins of these species.

Windthrow

131. Over substantial upland areas windthrow is the most serious hazard faced by the forester. Topographical modelling and wind-tunnel testing in conjunction with anemometer recordings have been started at Glentress Forest in connection with the extension of windthrow-hazard classification. New methods of cultivation to improve long-term stability are also being tested in parallel with research on physiological factors governing root development in spruce and pine.

Reclamation of Derelict Land

132. The soil on derelict land is often too compacted for trees to be established; in some cases no topsoil is present and most trees planted grow slowly due to nitrogen deficiency. Equipment and methods are being developed to increase relief by ridge forming and to loosen and drain compacted soils. Trials are also being set up using various herbaceous and shrubby legumes as undercrops or pioneers, which it is hoped will contribute nitrogen on these impoverished sites.

Pheromones and Other Attractants in the Control of Insect Pests

133. Insects are commonly attracted by chemicals known as pheromones produced by their own males and females, and sometimes by materials produced by their host plants. Applied entomologists are interested in these chemicals as possible aids in monitoring pest populations and ultimately, perhaps, as elements in integrated methods of pest control. Studies are therefore being made with the University of Southampton of chemicals which attract the pine sawfly *Neodiprion sertifer* and the Pine beauty moth *Panolis flammea*. In the case of the latter, pheromone traps have been used in an experimental population monitoring scheme. Similar work on a pheromone which attracts the Elm bark beetle *Scolytus scolytus* is being undertaken in collaboration with the Agricultural Research Council's Unit of Invertebrate Chemistry and Physiology at the University of Sussex.

Wildlife

134. Inaccurate statements are often made about the bird populations of conifer forests. We have therefore begun a study into the birds associated with afforested and restocked areas. Methods of forest management to conserve rare reptiles and amphibia are also being investigated, and a survey is being made of potential sand lizard and smooth snake sites in a forest in south-west England.

Research Contracts

135. Work has continued according to plan on the arboricultural projects commissioned by the Department of the Environment. These include studies on the establishment and maintenance of trees on difficult sites and on the pathology of amenity trees. The enquiries answered by our Arboricultural Advisory Service increased by over a third during the year – from 1497 in 1978 to 2045 in 1979 – reflecting the growing public interest and concern for trees in towns.

136. A preliminary review of the problems of planting deep-mining spoil heaps was completed for the Department during the year and the results are being published. The first stage of an investigation into the production of biomass for energy from short rotation broadleaved coppice was also completed for the Department of Energy.

IUFRO Executive Board Meeting

137. The Executive Board of the International Union of Forest Research Organisations (IUFRO) held their 1979 meeting in Edinburgh at the invitation of the Director General. The Board, which is the governing body of IUFRO, is

composed of eminent forest research scientists from 18 countries and headed by Professor Dr W Liese of West Germany, the current President of IUFRO. Their presence in Scotland provided a valuable opportunity to exchange views on British forestry and forest research. After completing their business meetings in Edinburgh, the Board members were shown current research at our Northern Research Station and forests and research areas in West and North Scotland Conservancies. Their tour also included a visit arranged by the University of Aberdeen to the Glentanar native pinewoods.

British Association Meeting

138. The latest developments in the design of upland forests were presented to the 1979 meeting of the British Association for the Advancement of Science at Heriot-Watt University in Edinburgh. The design of forests to balance, integrate and maximise industrial wood production, the enhancement of landscapes, public recreation and wildlife conservation is much more advanced than generally realised and was the theme common to a series of specialised papers. The needs and potentials for development and for collaborative land use by forestry and agriculture in the uplands were presented jointly by the Forestry and Agriculture sections of the Association.

Plant Health

New Controls

139. Mention has already been made in paragraph 121 of the two new plant health Orders that we were about to present to Parliament at the end of the year under report. The first of these, the Import and Export of Trees, Wood and Bark (Health) (Great Britain) Order will implement the EEC Plant Health Directive of 1976, which has been the subject of further negotiations in Brussels and was amended by two further Directives in March 1980. So far as wood is concerned, the terms of the Directive were largely anticipated by the Importation of Wood and Bark (Prohibition) (Great Britain) Order 1977 (SI 1977/901). As regards tree plants, the Directive relaxes the rules contained in the Importation of Forest Trees (Prohibition) (Great Britain) Order 1965 (SI 1965/2121) by allowing imports of tree plants from European countries. The new Order will contain control measures over plants, wood and isolated bark of a wide range of genera, the particular requirements varying according to the area from which they are exported and the degree of risk entailed. By means of a closer definition of 'wood', specific control will be provided for dunnage, pallets and containers using wood of the controlled genera. The problems of dealing effectively with these materials are formidable, however, and we shall be concentrating for the time being on ensuring as far as practicable that they are bark free.

140. Of special concern are the controls in respect of oak wood from North America because of oak wilt, which is known to occur only in the USA. As we explained in our last Report, the possibility of transmission of this disease on sawn wood is considered by pathologists both in Britain and America to be extremely remote. The bark, which attracts the beetle vectors, is the source of risk, and the Order will call for bark to be completely removed before shipment; in addition the wood will have to be further treated by one of three options – complete squaring (i.e. removing all of the wane), or drying to prescribed limits, or disinfection by hot water or hot air. The wood will also have to be accompanied by a plant health certificate confirming that the requirements have been carried out. The EEC has plans for a joint programme of further research on oak wilt this year and we shall participate.

141. The Commission has inspectors throughout the country who are concerned with imports of wood and bark. They are supported by scientists of our Research and Development Division, and their activities are co-ordinated by the Plant Health Officer, a new post we created in September 1979. Inspections of tree plants are undertaken by plant health inspectors of the Agricultural Departments on the Commission's behalf. Physical inspections of imports are an important aspect of frontier plant health controls, but since resources do not allow all imports to be examined we have to be selective and concentrate efforts where the risk is greatest. The first lines of defence are the Customs officials, who ensure that consignments are accompanied by any necessary documentation. Good working relationships have been built up between Commission inspectors and Customs officials, who immediately notify inspectors of incorrectly documented consignments and of any irregularity they notice such as the presence of bark. They also advise our inspectors of all imports of unmanufactured North American oak, and we aim to inspect each consignment.

142. The controls are not, however, simply a matter for the authorities. Everyone concerned with the import of plants and plant products has a responsibility to ensure compliance, and efforts are being made to obtain the co-operation of those concerned in the trade and, where possible, of shippers abroad. For example, good progress in this direction has been made with importers and exporters of oak originating in the USA, particularly for the whisky industry, and this approach will be developed.

143. The second new Order to be laid before Parliament is the Tree Pests (Great Britain) Order which is designed to meet the situation where, despite import controls, a non-indigenous pest arrives in this country and establishes a foothold requiring remedial action. This Order seeks new powers of two kinds. First, as in parallel Agricultural Orders, the Commission will be enabled to order owners of trees or wood infected by a non-indigenous tree pest to take action to kill the pest by destroying or otherwise treating the host material within a specified period; if the owner fails to do so, we shall be empowered to enter the land and remedy the default at the owner's expense. In addition, our inspectors will be empowered to enter premises to take action to destroy or otherwise treat infected trees or wood at Commission expense, rather than to delay by serving a notice on the owner requiring him to do it. We envisage that this urgent action would be needed, for example, to deal with an outbreak of oak wilt.

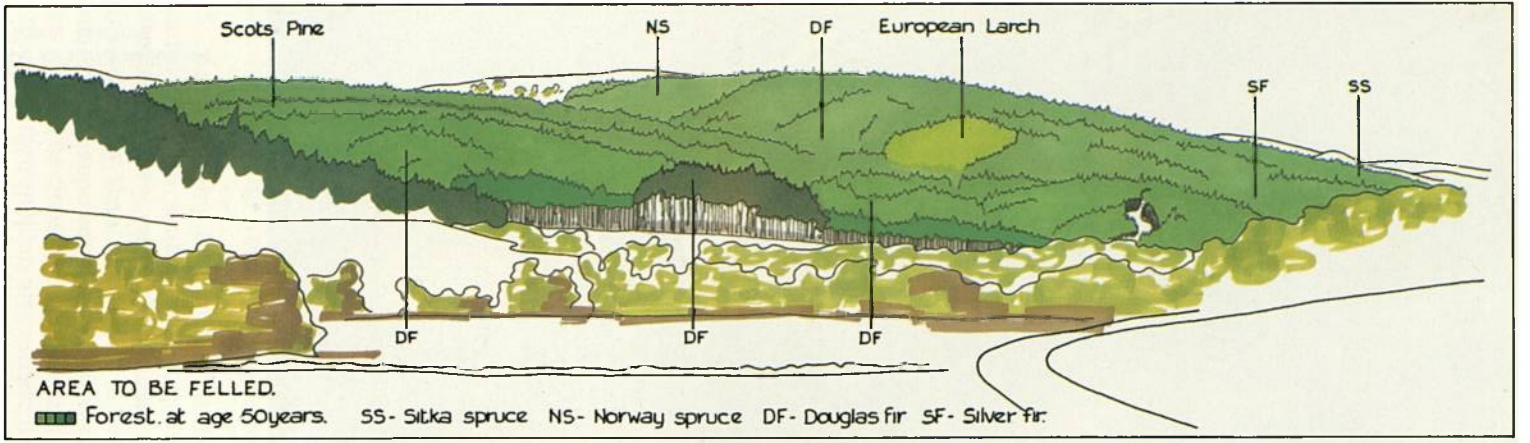
Dutch Elm Disease

144. During 1979 Dutch elm disease continued to spread in many parts of the country. However, losses were lower than in 1978 in certain areas, notably in parts of Scotland. The cool, wet summer experienced in northern Britain may have contributed to this reduction, while the controls exercised by some local authorities will also have had an influence.

145. After assessing the situation in the country as a whole, we have recommended that the strategy we have advocated over the past year to local authorities actively engaged in disease control should be continued, but with more selectivity than in the past in order to make the best use of available resources of manpower and finance by concentrating them where they will have most effect. The circumstances in which selective action may be appropriate are in towns or metropolitan areas where disease levels are low, and where there is clear merit on amenity grounds in pursuing a policy of sanitation felling, and in the countryside where an important elm population is geographically isolated,

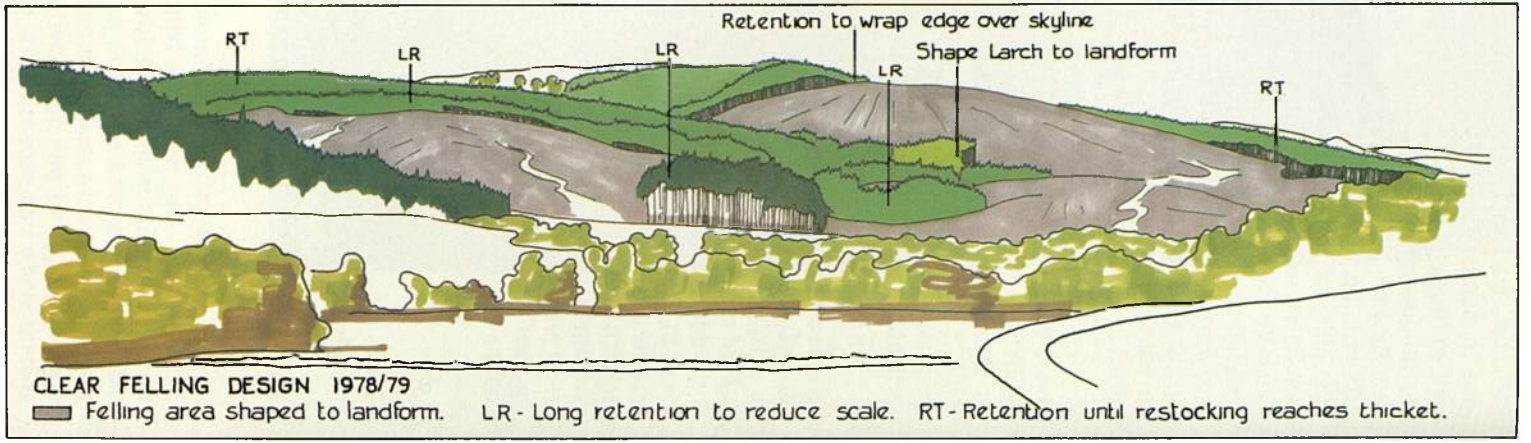
PLATE 5
Peeled pitwood awaiting collection at Brandon Depot, Thetford Forest.

E4961



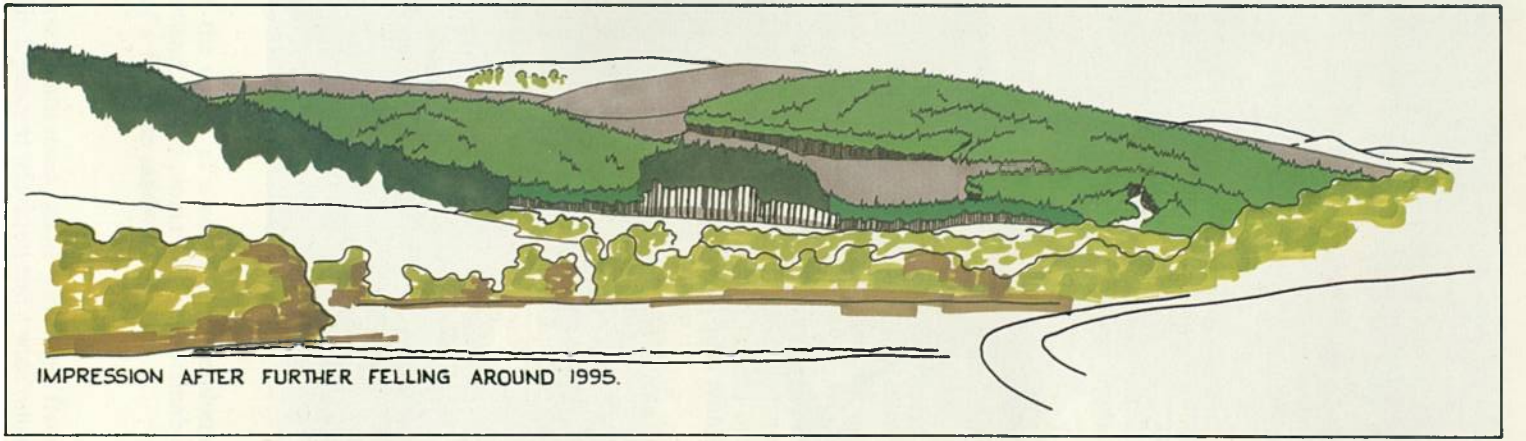
AREA TO BE FELLED.

Forest at age 50years. SS- Sitka spruce NS- Norway spruce DF- Douglas fir SF- Silver fir.



CLEAR FELLING DESIGN 1978/79

Felling area shaped to landform. LR- Long retention to reduce scale. RT- Retention until restocking reaches thicket.



PLATES 6 AND 7

The three sketches shown in this Plate and the one opposite form part of a series of working drawings used in the design of clear felling coupes at Shenval, Glenurquhart Forest. They illustrate the techniques used in the Commission's work on landscape design. The photograph, taken in the summer of 1978, shows the progress made in the felling patterns envisaged in the sketches.

E4956

PLATE 8
A Brunett forwarder working in Glentress Forest. With the aid of this machine, one man can collect logs and pulpwood, take them to roadside and stack them to await collection.

the disease level is low, and there is a real prospect of significantly slowing down its spread if control measures are continued. Because the spread of the disease has slowed down, we have decided not to make any changes in the coming year to the boundary of the heavily affected area (that is the area where disease levels are such that controls are no longer appropriate) for the purposes of our two Dutch Elm Disease Orders. We shall continue to control the movement of elm timber within areas lightly affected by the disease, by issuing movement licences which take account of local needs within the framework of the recommended strategy.

146. Our research on aspects of the disease is continuing, some of it under an EEC programme. As part of this programme, the Commission recently carried out an experimental planting of a number of varieties of elm selected in the Netherlands or North America for their resistant qualities; the same varieties were also being planted in other EEC countries.

Education and Training

147. We reduced the number of courses run by our Education and Training Branch during the year in order to secure manpower economies – mainly internal courses, and particularly those at our HQ training centre. Our existing commitments to the private forestry sector and other organisations were, however, maintained. We shall be keeping the level and content of courses, both for our own employees and for outside bodies, under review to ensure that staff resources are concentrated in the areas of highest priority. During the year, for example, we expanded our internal training programme for chainsaw operators in response to an increase in the demand for small roundwood. We have also revised our Instructors' Chainsaw Manual, which has been favourably received both within and outside the Commission.

148. Work has continued in conjunction with the Industrial Training Research Unit at Cambridge on the measurement of job attitudes. A questionnaire prepared by the Unit has been given to a wide variety of employees in the public and private sectors of the forest industry. We hope that from the answers a number of 'job profiles' can be prepared which will be of value to young persons enquiring about a career in forestry.

149. Considerable progress has been made in the development of job-related aptitude tests designed to assess suitability for training. There has been an encouraging correlation between the test results and performance under training, and the Education and Training Branch is now able to offer a testing service which enables field managers to select, as chainsaw operators, those with most potential. The development of tests for operators of harvesting machinery is well advanced.

150. Commission staff have assisted in the design of a new forestry diploma course which is being developed in Scotland. The diploma will be obtainable either by part-time study or by means of a full-time sandwich course.

Public Relations

151. The Commission's 60th Anniversary attracted good coverage from national and local newspapers, BBC and independent television and a wide range of local radio stations. The basic 'press kit' issued by our Information Branch was used by a number of newspapers as the basis of special forestry supplements.

The other major item of press interest was the continuing controversy over the use of the herbicide 2,4,5-T. Allegations about the harmful effects on humans and animals of this substance drew extensive coverage for several months in newspapers and on radio and television.

152. The continuing high level of general interest in forestry was typified by 5,000 individual requests from schools for assistance with educational projects and by a steadily increasing number of approaches from education authorities seeking our co-operation in the production of teaching aids covering both the nature conservation and commercial aspects of forestry. We were closely involved in the preparation of two major television documentaries, Horizon's *Treasury of Trees* and, in the World About Us series, *Highland Story*.

Finance

153. The statement of expenditure on Forestry Authority services, together with notes and explanations, appears at Table 2 of Appendix VII.

DAVID MONTGOMERY, *Chairman*
G. D. HOLMES,
Deputy Chairman and Director General
D. S. BOWSER
GIBSON-WATT
D. R. HICKLIN
J. M. HUNTER
J. N. KENNEDY
D. A. MITHEN
J. D. POLLOCK
RALPH VERNEY

P. J. CLARKE, *Secretary*
FORESTRY COMMISSION
231 Corstorphine Road
Edinburgh EH12 7AT

Appendix I
Committees

National Committees

The membership of these Committees at 31 March 1980 was as follows:

England

Sir Ralph Verney, Bt. (*Chairman*), Mr J. L. Benson, Major D. J. C. Davenport, Mr D. R. Hicklin, Mr P. H. L. Hills, Mr J. N. Kennedy. *Secretary to the Committee:* Mr J. R. Wallace. The Committee met in April and December 1979.

Scotland

Capt. D. S. Bowser (*Chairman*), Lt.-Col. A. E. Cameron, Mr D. A. Mithen, Mr J. D. Pollock, Mr William Wolfe, Capt. J. M. A. Yerburgh. *Secretary to the Committee:* Mr D. J. Goddard. The Committee met in April, June and November 1979.

Wales

Lord Gibson-Watt (*Chairman*), Mr R. T. Bradley, Mr B. Davies, Mr D. Davies, Mr T. O. Lewis, Mr J. W. L. Zehetmayr. *Secretary to the Committee:* Mr E. G. Owen. The Committee met in October 1979.

Regional Advisory Committees

The membership of the Committees at 31 March 1980 was as follows:

ENGLAND

North-West Conservancy

Mr J. L. Benson (*Chairman*), Mr G. Price Bowring, Mr J. E. Croasdale, Rt. Hon. The Lord Forester, Mr E. M. Hart, Mr F. G. Humphreys, The Earl of Lonsdale, Mr A. H. Unsworth, Mr R. Ward. *Secretary to the Committee:* Mr D. P. Pringle. The Committee met in May and September 1979.

North-East Conservancy

Mr J. Brocklebank (*Chairman*), Mr F. M. Berthele, Mr M. J. M. Bliss, Mr P. O. R. Bridgeman, Mr J. M. Coatsworth, Mr M. L. Richardson, Mr G. F. Stevenson, Mr J. C. R. Trevelyan, Major P. B. Walker. *Secretary to the Committee:* Mr D. L. Hendry. The Committee met in June 1979.

East Conservancy

Mr W. E. Lane (*Chairman*), Major G. K. Agnew, Mr R. W. R. Browning, Mr W. H. Darling, Major A. G. N. Hadden-Paton, Mr F. J. Massey, Mr P. H. Peck, Mr J. K. Royston, Mr R. C. Steele. *Secretary to the Committee:* Mr W. O. Wittering. The Committee met in September 1979 and March 1980.

South-East Conservancy

Mr P. H. L. Hills (*Chairman*), Mr T. J. Daniel, Viscount Falmouth, Dr W. P. K. Findlay, Mr D. T. Hodson, Mr H. Mackworth-Praed, Mr A. G. Porter, Mr J. H. Stenning, Mr B. T. Tompsett. *Secretary to the Committee:* Mr B. Tipping. The Committee met in October 1979.

South-West Conservancy

Major D. J. C. Davenport (*Chairman*), Mr W. H. Denniss, Mr L. S. W. Howard, Mr R. M. Moody, Mr M. Roper, Mr R. F. Worgan, Mr J. H. B. Workman, Dr T. W. Wright, Mr G. C. Wyndham. *Secretary to the Committee:* Mr J. E. Taylor. The Committee met in May and October 1979.

SCOTLAND

North Conservancy

Lt.-Col. A. E. Cameron (*Chairman*), Mr Ewan J. Brodie, Mr J. Evans, Mr A. N. S. Kinnear, Mr G. G. Lyon, Major A. McCall, Mr H. D. Skinner, Capt. R. W. K. Stirling, Mr A. F. F. Williamson. *Secretary to the Committee:* Mr T. S. B. Macbeath. The Committee met in May and October 1979.

East Conservancy

Dr Jean Balfour (*Chairman*), The Viscount of Arbuthnott, Mr G. W. Christie, Mr G. Cruickshank, Mr N. Gordon-Smith, Mr T. Bruce Jones, Mr D. F. Ogilvie, Major R. N. Jardine Paterson, Mr J. G. Scalley. *Secretary to the Committee:* Mr E. G. Roberts. The Committee met in May and November 1979.

South Conservancy

Capt. J. M. A. Yerburgh (*Chairman*), Mr J. Hunter Blair, Mr D. Bridges, Mr H. Crawford, Mr T. Y. Gibson, Admiral Sir Nigel Henderson, Father M. Lynch, Mr R. A. McClymont, Capt. J. G. Milne-Home. *Secretary to the Committee:* Mr R. B. Stewart. The Committee met in April and October 1979.

West Conservancy

Mr William Wolfe (*Chairman*), Mr D. Brierton, Mr T. Doyle, Mr G. Farquharson, Mr A. Fleming, Capt. W. F. E. Forbes, Capt. P. L. Mackie-Campbell, Mr S. A. J. Oldham, Mr T. Smith. *Secretary to the Committee:* Mr F. S. Henderson. The Committee met in May and October 1979.

WALES

North Conservancy

Mr T. H. Owen (*Chairman*), Mr F. C. Best, Mr N. H. Gore, Mr J. M. Harrop, Mr R. ap Simon Jones, Mr D. R. L. Keogh, Mr V. Lloyd, Capt. D. Y. F. Myddelton, Major P. C. Ormrod. *Secretary to the Committee:* Mr G. H. Bowers. The Committee met in May and October 1979.

South Conservancy

Mr H. L. Knight (*Chairman*), Mr E. Bartlett, Mr C. J. S. Burd, Mr A. J. Llewellyn, Mr M. A. McLaggan, Mr S. K. Neale, Mr R. G. Thomas, Mrs D. Walmsley, Mr R. H. Wheelock. *Secretary to the Committee:* Mr R. R. Davies. The Committee met in October 1979.

Home Grown Timber Advisory Committee

The membership of the Committee at 31 March 1980 was as follows:

Sir Goronwy Hopkin Daniel (*Chairman*)
Mr W. J. Alsford
*Dr R. H. Best
Mr A. J. Brownlie
The Hon James Bruce
Mr J. G. M. Dawson
Lord Dulverton
Mr C. G. Ellwood
Mr A. B. L. Munro Ferguson
Hon. J. M. G. Galbraith
Mr J. Glegg
Mr R. M. Harley
*Mr J. D. W. Janes
Mr H. J. Keys
*Mr W. E. Lane
*Mr R. J. Lennox
The Earl of Lonsdale
Mr J. E. McDonald
*Mr A. Mills
*Mr R. Pierson
Mr J. V. Pomeroy
Mr H. Richardson
*Professor C. J. Taylor
Mr R. N. J. Watson

*Independent Members

Secretary: Mr W. G. Williamson

With the exception of the independent members the membership was drawn from nominations received from the following bodies: Timber Growers' Organisation Ltd., Scottish Woodland Owners Association Ltd., Home Timber Merchants' Association of England and Wales, Home Timber Merchants' Association of Scotland, National Coal Board, Timber Trade Federation of the United Kingdom, British Wood Chipboard Manufacturers' Association, Association of United Kingdom Wood Pulp Producers, Timber Research and Development Association Ltd.

The Committee met in June, September and December 1979 and March 1980. The Annual Report of the Committee is at Appendix II, page 46.

The Chairman, the Director General, the three full-time Commissioners and the Secretary of the Commission were present during meetings of the Committee. Part-time Commissioners and assessors from the Department of Agriculture and Fisheries for Scotland, the Department of the Environment, the Department of Industry and the Princes Risborough Laboratory (DOE) also attended one or more meetings of the Committee.

Technical Sub-Committee of the Home Grown Timber Advisory Committee

The membership of the Committee at 31 March 1980 was as follows:

Mr H. Richardson	Timber Research and Development Association Ltd. (*Chairman of the Sub-Committee*)
Mr A. E. Aitkens Major P. C. Ormrod	Timber Growers' Organisation Ltd.
Mr D. B. Crawford	Scottish Woodland Owners Association Ltd.
Mr J. R. Maeer Mr R. J. Tilley	Home Timber Merchants' Association of England and Wales
Mr T. S. Smith Mr J. E. McDonald	Home Timber Merchants' Association of Scotland
Mr J. Henderson	Institute of Foresters of Great Britain
Mr A. R. Powell	Association of Professional Foresters
Col. D. A. Campbell	Royal Institution of Chartered Surveyors
Mr P. R. Willan	Association of United Kingdom Wood Pulp Producers
Mr T. D. Stitt	National Coal Board
Mr A. O'Connor	British Wood Chipboard Manufacturers' Association

Secretary: Mr J. R. Aaron.

The Sub-Committee met in April, June and September 1979 and January 1980. The Annual Progress Report of the Sub-Committee is at Appendix II, page 47.

Advisory Committee on Forest Research

At 31 March 1980 the membership of the Committee was as follows:

Professor P. F. Wareing (*Chairman*)	Professor J. P. Hudson
Mr J. D. Brazier	Professor J. D. Matthews
Professor J. P. M. Brenan	Professor M. E. D. Poore
Dr J. P. Dempster	Professor L. Roche
Professor J. M. Hirst	Professor T. S. West

Secretary: Mr J. E. Applegate.

The Committee met in December 1979.

Appendix II
Home Grown Timber Advisory Committee: Annual Report for the year ended 31 March 1980

During the year the Committee continued to pay close attention to the state of the chipboard industry and welcomed the improvement in its trading position. It was reported to the December 1979 meeting that total home consumption in 1979 was expected to have increased by at least 12 per cent over the 1978 figure and that the UK mills' share of this market had increased at October 1979 to 31 per cent. However, increasing costs and the effects of the continuing strengthening of the £ and of raw material shortages remained matters of concern.

The Committee followed closely developments at the Scottish Pulp and Paper Mill at Fort William. It was reported at the March 1980 meeting that, following a year of investigatory work, Wiggins Teape Ltd and Consolidated Bathurst Ltd of Montreal, Canada were preparing detailed proposals for the production of newsprint from British wood to replace the existing chemical pulpmill.

The December 1979 meeting learned with disappointment of the rejection by Forestry Ministers of the Committee's case for grants for the purchase of forest harvesting machinery, and it was agreed at the following meeting that the original Working Group on the future of harvesting should be reconvened with Mr Richardson as Chairman to consider the implications of the Ministerial decision and report back to the main Committee.

The integration of farming and forestry was another subject to which the Committee gave its attention during the year and it was informed of a series of case studies undertaken by Edinburgh University which would be published by the East of Scotland College of Agriculture. It was generally agreed by the Committee that it would be difficult to secure the co-operation of farmers without the involvement of the Agricultural Advisory Services and the agricultural educational establishments, but that efforts to achieve better integration of land use between improved sheep farming and forestry should be reinforced. It was felt that additional encouragement for farmers to go in for forestry should preferably be by way of small scale and administratively simple schemes.

The report by the Reading Centre for Agricultural Strategy on *A Strategy for the UK Forest Industry* was given initial consideration at the March 1980 meeting. It was welcomed as giving authoritative support for the case for further forestry expansion made out in the Forestry Commission's Working Party report on *The Wood Production Outlook in Britain*, which the Committee considered in 1978.

Regular reports have been made to the Committee on developments in plant health, including measures to combat Dutch elm disease. Although losses had been lower than in past years, elm disease was continuing to spread and the Committee supported the emphasis placed by the Forestry Commission on selective sanitation felling in lightly affected areas. The Committee was also consulted on the amending Orders to the Dutch Elm Disease (Local Authorities) Order 1977 and the Dutch Elm Disease (Restriction on Movement of Elms) Order 1977 which came into operation on 11 July 1979 and altered the list of local authorities to which the first named Order applies and the list of areas from which the movement of elm is restricted.

The Committee were informed of steps being taken to combat non-indigenous tree pests and diseases and received regular reports on the consultations taking place in Brussels in connection with oak wilt. The Committee were glad to learn at the March 1980 meeting that two Orders would come into operation on 1 May 1980 – one to implement the EEC Plant Health Directive on the import and export of trees, wood and bark and the other to control any non-indigenous tree pests which might gain a foothold in Great Britain despite import controls. It was explained that much of the work leading up to the implementation of the Plant Health Directive, in which the UK had played a leading role, had been concerned with safeguards on the import of North American oak and that an effort was also being made in the Order to introduce a

degree of control over the import of dunnage wood. The Committee asked the Forestry Commission to look at the possibility of compensating owners for the costs involved in dealing with diseased trees where the action had been taken under the terms of a statutory notice.

The Committee were consulted on the Forestry (Felling of Trees) Regulations 1979 and the Forestry (Exceptions from Restriction of Felling) Regulations 1979 which came into operation on 9 August 1979 and revoked and re-enacted previous Orders relating to felling licences and directions.

Among other issues discussed during the year were the Technical Sub-Committee's recommendations on a number of topics chosen for further study in the light of the report on *The Wood Production Outlook in Britain*. The Committee also considered the report of a working group on alternative markets for poplar.

Throughout the year the Supply and Demand Sub-Committee and the Technical Sub-Committee made regular reports. A report on the work of the latter is summarised below.

Annual Progress Report of the Technical Sub-Committee of the Home Grown Timber Advisory Committee for the Year ended 31 March 1980

The Working Party on the Future of Harvesting

1. In accordance with a recommendation of this Working Party, a member of the Association of Professional Foresters was nominated to the Sub-Committee on a trial basis to represent the interests of forest machinery suppliers.

Terms of Reference

2. The revised terms of reference approved by the main Committee during the previous year came into effect on 15 June 1979.

Ad Hoc Group on Alternative Markets for Poplar

3. After two further meetings the Group presented its final report to the Sub-Committee in January 1980; it was forwarded to the main Committee for consideration in March 1980.

Working Party on Current and Future Uses for Hardwoods

4. The Working Party submitted its report in September 1979 and it was still under discussion by the Sub-Committee at the end of the year.

Joint Building Research Establishment/Forestry Commission Programme of Research

5. The proposals for next year's programme were reviewed. The Sub-Committee recommended that work should be concentrated on the effect of tree spacing on wood properties, as it regarded the project on the effect of fertilisers of less immediate importance.

The Wood Production Outlook in Britain

6. Many organisations had offered views on this document and 15 subjects had been identified as requiring further study. At the request of the HGTAC, the Sub-Committee allocated priorities to these subjects and proposed methods of investigation.

Wood Poles for Overhead Lines

7. The Sub-Committee monitored the work being carried out jointly by the Forestry Commission, the Electricity Council and others on the possible use of spruce for power transmission poles. The final results were not available by the end of the year, but the strength tests and some aspects of the preservation trials were encouraging.

Working Party on Softwood Sawmilling

8. The Working Party was convened to consider all aspects of softwood sawmilling and to make recommendations on areas found to require further study. The first meeting was held in January 1980.

Discrimination against British Wood

9. The Sub-Committee discussed a number of cases where discrimination against the use of British wood had been reported. These included use for pallets, packing cases and building.

Nailing of Softwood Pallet Blocks

10. Due to the reduced availability of elm for pallet manufacture, the Sub-Committee monitored a study at the Timber Research and Development Association's laboratory organised by the Home Timber Merchants' Associations and the Timber Packaging and Pallet Confederation to test the suitability of alternative species for pallets. The final results of the study were still awaited at the end of the year.

Harvesting

11. The Sub-Committee considered two situation reports by the Forestry Commission's Work Study Branch. These reports covered modifications to the Sifer SS103 and SS103B processors, trials of the Husqvarna SP26 processor head fitted to the Gremo TT12 forwarder, and tests on the Kockums GP822 thinning processor. The Massey-Ferguson 1200 was modified to a skidder, as was the Bray T100 chassis, and tests carried out on the Roadless 'Logmaster' skidder. Trials were also conducted on the Sifer KF40, the Mini Brunnett 575 and the Gremo TT8H forwarders. Front-end loaders were considered and trials completed on the Bray 358TL and the Volvo 4300. Reports on Chokers and Chokering, Aid Tools for Chainsaw Workers, and Standard Timetables were being completed for publication.

Safety

12. The Sub-Committee received oral reports on the work of the Forestry Safety Council. They noted that the individual and squad first-aid kits approved by the Council were now available.

Utilisation

13. The Sub-Committee considered and approved the revision of Forest Record 19 *The Production of Wood Charcoal in Great Britain,* last published in 1969. It was noted that retail sales of bark had reached the level of £1 million per annum.

EEC Matters

14. The Sub-Committee reviewed the draft directive on Wood in the Rough. A survey of the pattern of oak imports from North America, undertaken by the Forestry Commission as part of its assessment of the potential risks of introducing oak wilt from the United States, was noted.

Appendix III
Forestry Training Council
Annual Report for the year ended 31 March 1980

In this its eighth full year, the Council met in Edinburgh at Forestry Commission Headquarters on 7 June 1979 and 6 March 1980, and in London on 18 October 1979. Lord Norton, who had represented the Timber Growers' Organisation since the Council was formed, retired during the year and his place was taken by Major General T. A. Richardson. Mr M. McBride took the place of Mrs M. E. Granshaw as an assessor for the Department of Education and Science. The Management Committee of the Forestry Training Council met three times during the year, on 7 June and 18 October 1979 and 6 March 1980.

Statistics were again assembled on the quantity of training activity. The number of attendances on courses leading to nationally recognised craft qualifications was virtually the same as in the previous year but there was an increase in attendances on courses leading to supervisory and managerial qualifications (Table 1).

Table 1

Attendance on courses for Recognised Craft, Supervisory and Managerial Qualifications in 1978–79 and 1979–80

Courses	Grade and Type	1978–79 Number of Courses/Students		1979–80 Number of Courses/Students	
City and Guilds 012 Stage 1	Craft (young workers) Day and Block Release	10	148	11	162
City and Guilds 012 Stage 2	Craft (adult workers) Block Release	4	63	3	47
Totals for Craft Courses	.. ..	14	211	14	209
Ordinary National Diploma	Supervisory 3-year Sandwich	1	84	1	91
Certificate in Supervisory Studies	Supervisory Block Release	2	17	3	44
City and Guilds 012 Stage 3	Supervisory Block Release	2	26	2	15
National Diploma in Forestry	Managerial Residential..	2	12	2	10
Totals for Supervisory and Managerial Courses ..		7	139	8	160

The English and Welsh Forestry Training Group and the Scottish Forestry Training Group again arranged short courses for the private sector, and the Forestry Commission provided short courses for their own workforce. There was a substantial increase over the previous year in the number of trainee course days, particularly for forest workers (Table 2); the increase in the private sector reflects increased availability, through the Council's group training arrangements, of courses to meet demand.

Table 2

Attendance on Short Courses for Forest Workers, Supervisors and Managers during 1978–79 and 1979–80

Level	Source of Participants	1978–79 Trainee Course Days	1979–80 Trainee Course Days
Craft	Private Forestry ..	2,524	2,996
	Forestry Commission ..	9,401	12,575
	Totals	11,925	15,571
Supervisory and Managerial	Private Forestry ..	1,714	1,872
	Forestry Commission ..	2,377	2,331
	Totals	4,091	4,203

The courses and instructors for the private sector were provided by a variety of agencies including the Forest Industry Centre at Inverness, Cumbria College of Agriculture and Forestry, Merrist Wood Agricultural College, the Forestry Commission, the University of Aberdeen, the Furniture and Timber Industry Training Board, Forestry Training Associations and the West of Scotland College of Agriculture. The Council was pleased to co-operate with the Manpower Services Commission in arranging 12-week Short Industrial Courses in forestry for unemployed young people under the Youth Opportunities Programme; three such courses were held at Inverness Technical College and one at Hereford College of Agriculture.

The Manpower Services Commission continued to provide Key Training Grant support to the Council to help it develop the Group Training Scheme. The Highlands and Islands Development Board also provided some financial help towards the costs of developing training in the Highlands. The English and Welsh Forestry Training Group was placed during the year under the same administrative arrangements as had proved successful for the Scottish Forestry Training Group; the result was added impetus and a strong demand for skills training. Further progress towards financial self-sufficiency was made by the Scottish Forestry Training Group, and the English and Welsh Forestry Training Group began its new method of operating with this requirement in mind.

Arrangements were made with the help of the Manpower Services Commission for a professional survey of manpower and training needs in the forestry industry, to be undertaken in England and Wales initially and then in Scotland.

Further discussions were held with the National Proficiency Tests Council with a view to the establishment of a proficiency testing scheme for forestry; there are now good prospects of development in this sphere.

The Forestry Training Council worked closely with the Scottish Technical Education Council (SCOTEC) to develop syllabuses for courses leading to qualifications at Certificate and Diploma level suited to the requirements of the modern forestry industry. Close liaison was maintained with the Technician Education Council to ensure eventual comparability of qualifications throughout Great Britain. The Forestry Training Council continued to make grants to assist those who wished to complete City and Guilds courses but were unable to obtain financial support from local education authorities or employers. During the year, 20 awards were made under the Council's Grant Award Scheme.

The Forestry Training Council continued to work closely with the Forestry Safety Council. The Council again records with pleasure the willing co-operation of many people and organisations, and particularly that of the Colleges providing courses in forestry, the Forestry Commission, the private sector of forestry and the Assessors.

Signed for the
Forestry Training Council

John D. Matthews
Chairman

J. McRitchie
Secretary to the Council

Members of the Forestry Training Council at 31 March 1980

Chairman

Professor J. D. Matthews

Employer Members

Mr A. F. F. Williamson Commander A. G. Claridge	Scottish Woodland Owners Association Ltd.
Major General T. A. Richardson Mr P. J. D. Donnelly	Timber Growers' Organisation Ltd.
Mr M. P. Shapcott Mr J. F. Goodwin	Forestry Commission
Mr A. G. Phillips	Association of Professional Foresters

Employee Members

Mr H. Crawford Mr A. Mills Mr D. Keogh	Transport and General Workers' Union
Mr J. H. Hose Mr S. Neale Mr R. Pierson	National Union of Agricultural and Allied Workers
Mr R. G. Braine	Civil Service Union

Education and Training Members

Mr A. I. MacNab Mr A. P. B. Hamilton	Forestry Education, Scotland
Mr A. G. Pyman Mr R. M. Boothroyd	Forestry Education, England and Wales
Mr J. Saddler	Furniture and Timber Industry Training Board

Forestry Society, etc. Members

Professor C. J. Taylor	Institute of Foresters of Great Britain
Mr R. S. Carlaw	Royal Scottish Forestry Society
Mr R. Rowland	Royal Forestry Society of England, Wales and Northern Ireland
Dr P. G. Biddle	Standing Committee for Arboricultural Education

Assessors

Mr R. H. Nelson Mr R. Naylor	Scottish Education Department
Dr T. W. Martin Mr M. McBride	Department of Education and Science
Mr P. R. Wells Mr K. Holmes	Manpower Services Commission

Secretary

Mr J. McRitchie	Forestry Commission

Working Group on Forestry Qualifications

Professor C. J. Taylor (*Chairman*)
Mr J. F. Goodwin
Mr R. H. Nelson
Dr T. W. Martin
Mr A. I. MacNab
Mr R. G. Braine
Mr A. G. Pyman

Working Group on Grading of Craftsmen and Others in Forestry

Mr P. J. D. Donnelly
Commander A. G. Claridge
Mr J. F. Goodwin
Mr A. Mills
Mr R. G. Braine

Appendix IV
Forestry Safety Council
Annual Report for the year ended 31 March 1980

The Council met twice during the year (May and November 1979) and the Safety Guides Sub-Committee held three meetings.

Forest Industry Safety Guides dealing with the felling of large broadleaved trees and with tree climbing and pruning were published during the year; the latter guide was prepared in co-operation with the Arboricultural Association. Two further guides concerned with extraction by forwarder and by cable crane will be available shortly. A programme of revision of earlier guides is well under way, three having already been reissued.

Further consideration was given to draft regulations relating to the sale, use and maintenance of petrol-driven chainsaws, and it was noted that the Health and Safety Executive intended to publish a guidance note dealing with the design and construction requirements of chainsaws. The Executive will also be producing a leaflet, in the Agricultural Safety Series, about the safe use of chainsaws on the farm.

The Council undertook to scrutinise the safety rules devised by the Association of Professional Foresters for their National Forest Machinery Demonstrations, with the object of assisting the Health and Safety Executive in its aim to lay down, on a broad basis, a standard set of rules which can be used for demonstrations and shows generally.

A consultative document setting out proposals relating to the notification of accidents and dangerous occurrences (incorporating comments received in response to two earlier consultative documents on the same subject) was received from the Health and Safety Commission. The main recommendation made by the Council was that overturning tractors should be listed as notifiable. Also received was a consultative document which proposed amendments to the Agriculture (Tractor Cabs) Regulations 1974 for the purpose of giving effect to two EEC Directives relating to noise levels and roll-over protection. The view taken was that there were no disadvantages as far as the forest industry was concerned.

Members of the Forestry Safety Council at 31 March 1980

Col. D. A. Campbell	*Chairman*
Mr D. G. Whieldon	Timber Growers' Organisation
Mr K. J. Ramsay	Scottish Woodland Owners Association
Mr D. J. Cooper	Home Timber Merchants' Association of England and Wales
Mr J. E. McDonald	Home Timber Merchants' Association of Scotland
Mr J. H. Hose	National Union of Agricultural and Allied Workers
Mr A. Mills	Transport and General Workers' Union
Mr R. Neale	General and Municipal Workers' Union
Prof. J. D. Matthews	Forestry Training Council
Mr M. P. Shapcott	Forestry Commission
Mr D. A. Bardy	Forestry Commission Safety Officer
Mr R. J. Bell	*Secretary*

Appendix V
The Forestry Commission & Conservation

Introduction

The principal objective of the Commission is the efficient production of wood for industry. However, forests are important wildlife habitats and the Commission follows management practices which seek to achieve a reasonable balance between wood production on the one hand, and nature conservation and indeed all its other objectives, on the other.

Although Britain is not well-wooded, forests occupy substantial areas of land. The Commission recognises the importance of this land as a reservoir for wildlife. The Commission's woodlands can be divided into two types, lowland and upland. The former includes 50,000 hectares of broadleaved woodlands and although only some of them are on sites of ancient woodlands almost all have a particular value for nature conservation. Most of the Commission's estate lies in the uplands where virtually all the woodlands are coniferous and most are still young. Substantial areas of new forest are being established there each year on sites which have not carried trees for generations. This alteration of habitat from moorland to forest brings about considerable change in the ecology of the area as well as in the scenery, and creates special opportunities as well as problems for nature conservation.

General Aims

The Commission has two main aims for nature conservation. First, to safeguard its woodlands as wildlife habitats and where practicable to improve them. Secondly, to give particular attention to those sites where nature conservation has been identified as of special importance.

Safeguarding and Improving Woodlands as Wildlife Habitats

There are many ways in which woodlands can be safeguarded and improved for nature conservation, while maintaining their principal function of wood production. These are given in some detail in Forestry Commission Booklet No 29 Wildlife Conservation in Woodlands.

Commission woodlands are managed woodlands and the basis for safeguarding them for nature conservation must be through good management.

The edges of plantations, both internal and external, often provide good wildlife habitats, and the management effort for nature conservation is concentrated in those areas. Margins of plantations alongside roads, paths, streams, and open glades are left as irregular as possible and special attention is given to protecting natural features such as streams and other areas of water, gullies and screes. Broadleaved trees and areas of scrub are retained when they are important for nature conservation.

The Commission recognises the importance of native broadleaved species for nature conservation. Where broadleaves are planted for reasons of visual amenity, native trees are used unless other broadleaved species are clearly silviculturally more suitable.

Most first rotation forests contain large areas of even-aged plantations. As the forests mature, areas to be felled are designed to take account of visual amenity as well as the economic harvesting of the crop. The felling areas are of varied size and shape and the age structure of the forest as a whole will eventually become uneven. As a consequence, more internal margins will be created which will improve the habitat for wildlife. It may be possible to plant a wider variety of species in the second rotation and opportunities to diversify species will be taken if silvicultural and market requirements allow.

Although forest operations are conducted in a workmanlike manner, unnecessary tidying up is avoided. Fallen trees provide for insect colonies and encourage the growth of fungi; dead trees are left alone unless they threaten forest hygiene or safety.

Some species of wildlife are strongly attached to traditional sites and as far as possible these sites are not disturbed. Glades are left, or made, for deer to graze and to direct them away from vulnerable crops.

Special Sites

Many areas within Commission woodlands have been designated as Sites of Special Scientific Interest and some as National Nature Reserves; a few have been named by the Commission as Forest Nature Reserves. The Reserves and many of the Sites of Special Scientific Interest are managed in agreement with the Nature Conservancy Council, and in some cases, areas are leased to the Council for it to manage. There are also a considerable number of other sites, not all designated, in which naturalists' trusts have an interest, and which the Commission either manages according to a joint agreement with the trust concerned or leases to the trust.

All designated sites on Commission land are managed to take account of the particular conservation interest concerned.

Protection of the Forest

Some wildlife can be harmful to woodlands and the Commission protects its plantations against an unacceptable level of damage. Obvious pests which require stringent control are rabbits and grey squirrels.

Deer are among the animals whose natural habitat is woodland and their presence in limited numbers can be accepted as a part of our natural heritage. However, too many can be destructive and they are controlled selectively by humane methods. The Commission recognises that total prevention of damage is impracticable and within reasonable limits accepts some loss of wood production.

Some birds and mammals which may not harm the forest can damage the interests of neighbours, and these species are controlled as far as practicable and in accordance with the Commission's legal obligations.

Research and Management

Wildlife research is undertaken by the Commission's Research and Development Division which provides advice to forest managers. The introduction of species to an area, their re-introduction, or their movement from one area to another, is exceptional and is considered only after very careful investigation and consultation with the Nature Conservancy Council.

Liaison with Regional Conservators and between the Commission and other countryside agencies is carried out by a Headquarters' Branch with special responsibility for nature conservation.

The Forestry Commission has some 300 highly trained Rangers concerned with woodland protection and wildlife management. Under the direction of Foresters and with advice from specialist staff, the Rangers are responsible for carrying out in the field the Commission's objectives for nature conservation.

Liaison

The Nature Conservancy Council is the Government's statutory adviser on nature conservation and the Commission looks to the Council for expert advice. Regular liaison is maintained with the Council at all levels, and in particular the Council is consulted on any proposals to acquire for planting land which is designated as a Site of Special Scientific Interest.

The Commission also consults naturalists' trusts as appropriate.

Fertilisers

On most upland sites the use of fertilisers is an essential part of forest management. The most common fertilisers are phosphate and potash, and compared with agriculture the quantities used during a rotation are small and seem unlikely to have adverse effects on the environment.

Pesticides

Pesticides, including insecticides and herbicides, are of great importance to forestry. The Commission controls their application in its forests by a strict set of rules, which ensures that only substances approved under the Pesticides Safety Precautions Scheme are used and that full precautions are taken to protect the user and the environment.

Conflicts With Other Objectives

In addition to concern for the needs of nature conservation the Commission's objectives include the provision of recreation and the landscaping of forests. All these objectives interact with each other and with the primary objective of the efficient production of wood.

In general there need be little conflict in the forest between nature conservation and wood production, provided sites of particular importance are managed carefully, and the methods which have been outlined to safeguard woodlands for nature conservation are adopted. The main potential for conflict lies in the forester's need to manage simply and on a scale large enough to produce timber of uniform size and quality economically, while small-scale working best suits the aims of nature conservation for natural variety and biological diversity. The Commission seeks to manage its forests in such a way that a reasonable balance is achieved between wood production and nature conservation within a general pattern of good land use and sound management.

Recreation and nature conservation need not be incompatible although conflicts can occur locally. Given proper care in zoning the forest, visitors can be guided to selected attractive areas and away from those which are sensitive.

Good landscaping of forests and provision for the conservation of nature do not conflict in any way. Indeed, many of the features of good forest design go hand in hand with good nature conservation.

Forestry Authority

The Commission in its role as Forestry Authority gives advice to the private sector of the forestry industry on all aspects of woodland management, including the effect of management practices on nature conservation. General advice is given in the course of approving woodland owners' applications for grant aid, and the Nature Conservancy Council is consulted on any such proposals affecting National Nature Reserves and Sites of Special Scientific Interest. Commission publications include reports on the outcome of research by the Wildlife Management Branch of the Commission's Research and Development Division.

Under the Basis III Dedication Scheme a special supplement can be paid for the planting of broadleaved trees where they are of particular importance in the landscape. Such planting is also of value for nature conservation. In certain areas which have been agreed with the Nature Conservancy Council, a similar supplement can be paid for the establishment and management of native Caledonian pine in Scotland.

Appendix VI
New Publications

During the year, 14 titles were published, eight by Her Majesty's Stationery Office.

Reports

59th Annual Report of the Forestry Commissioners 1978–79 (£5·75).
Report on Forest Research 1979 (£3·00).

Booklet

No. 45. Standard Time and Output Guides (£8.00).

Forest Record

No. 120. Pine Beauty Moth (75p).

Leaflets

No. 12. Taxation of Woodlands (revised) (50p).
No. 72. Forest Drainage Schemes (55p)
No. 74. High Seats for Deer Management (80p).

Arboricultural Leaflets

No. 5. Common Decay Fungi of Broadleaved Trees (£2·00).

Titles published by the Forestry Commission include three of a new series.

Occasional Papers

No. 3. Tree Planting on Man-made Sites in Wales (£1·50).
No. 4. Control of Pine Beauty Moth by Fenitrothion in Scotland, 1978 (£2·50).
No. 5. The Use of Chemicals in the Forestry Commission (50p).

Two productions featured Westonbirt Arboretum – a short guide for day visitors entitled *About Westonbirt* and a calendar *Trees for All Seasons 1980* to which the Forestry Commission contributed design and promotion.

A new edition of the FC *Catalogue of Publications* was published.

Appendix VII
Financial Tables

1. **Forestry Fund Receipts and Payments**
2. **Expenditure on Forestry Authority Services**

Table 1

STATEMENT OF FORESTRY FUND RECEIPTS AND PAYMENTS
in the year ended 31 March 1980

Previous Year £000		£000
	Receipts	
29,310	Grant-in-Aid	43,250
27,270	Sales of timber	37,216
1,713	Disposals of surplus assets	2,785
7,796	Miscellaneous	9,648
66,089		92,899
(498)	Decrease in working balance	478
65,591		93,377
	Payments	
35,941	Salaries, wages and related expenses	42,832
4,772	Pensions and gratuities to retired staff	6,285
14,574	Materials, contract services and general expenses	25,834
2,969	Acquisition of land, buildings and plantations and construction of buildings	5,025
4,271	Machinery and equipment	9,044
2,157	Grants to private woodland owners (£2,584,000), universities, institutions, etc.	2,682
907	Remittances of VAT to Customs and Excise	1,675
65,591		93,377

NOTES ON TABLE 1

General

1. Expenditure incurred by the Forestry Commissioners in the exercise of their powers in the performance of their duties is financed from the Forestry Fund which was constituted under Section 8 of the Forestry Act 1919. All sums received by the Commissioners are paid into this Fund.

2. Receipts and payments are shown inclusive of VAT where applicable.

Receipts

3. The Grant-in-Aid of the Forestry Fund voted by Parliament for 1979-80 was £43,480,000 of which £43,250,000 was drawn into the Forestry Fund. The remaining balance of £230,000 will be surrendered to the Consolidated Fund. Additionally the sum of £110,076 was received from the EEC Regional Development Fund in respect of roadwork and construction carried out by the Forestry Commission and remitted directly to the Exchequer.

4. Receipts from sale of timber rose by £9,946,000 as a result of higher prices and increased demand.

5. There was an increase of £1,072,000 in receipts from the disposal of surplus assets due to increased sales and higher prices.

6. Miscellaneous receipts rose by £1,852,000 due to increased charges for campsites and forest cabins and sporting lets (£470,000), increased estate income from mineral royalties and increased rents (£1,230,000) and other income from pension contributions, salaries of seconded staff, research work, repayment of private woodland grants, etc., increased due to higher prices and greater activity (£152,000).

Payments

7. Payments of salaries, wages and related expenses rose by over 18 per cent due to increased rates of pay and allowances and the inclusion of arrears of pay from 1978-79 (£420,000).

8. Payment of pensions and gratuities to retired staff and their dependants rose by £1,513,000 due to the award of higher superannuation benefits and an increase in the number of pensioners.

9. The cost of materials, contract services and general expenses rose by £11,260,000. But last year's figure was reduced and this year's correspondingly increased by a carry-over of unpaid bills from the previous financial year due to industrial action at the Scottish Office Computer Centre (£3,000,000). The real increase of £5,260,000 over the previous year is attributable to VAT (£860,000), increases in harvesting and road programmes (£1,800,000) and price increases (£2,600,000).

10. Expenditure on acquisitions and construction of buildings rose by £2,056,000. The carry-over of unpaid bills from the previous financial year due to industrial action was £400,000 and the actual increase of £1,256,000 arose from increased prices and programme. The area of plantable land acquired increased to 7,565 hectares compared with 5,675 hectares in the previous year and the average price paid per hectare increased to £357 per hectare compared with £295 per hectare in 1978-79.

11. Expenditure on machinery and equipment rose by £4,773,000. The carry-over of unpaid bills due to industrial action was £1,300,000 and the actual increase of £2,173,000 was due to higher prices (£700,000), higher VAT rates (£573,000), an increase in the purchasing programme and accelerated deliveries against orders (£900,000).

12 Remittances of net VAT to Customs and Excise increased by £768,000 due to greater sales resulting in a higher level of output tax from the increased receipts; this more than offset the rise in recoverable input tax from higher costs and the carry-over of bills from 1978-79.

Table 2

EXPENDITURE ON FORESTRY AUTHORITY SERVICES
in the year ended 31 March 1980

Previous Year £000		*£000*
	Services to Private Woodland Owners	
	Grants under Dedication Schemes	
37	Basis I	32
256	Basis II: Planting Grants	238
899	Management Grants	877
599	Basis III: Basic Grant	675
50	Broadleaved Supplement	54
115	Management Grant	159
9	Native Pinewood Planting Grants	—
17	Approved Woodlands Planting Grants	14
203	Small Woods Planting Grants	265
33	Other Grants	107
36	Miscellaneous	47
987	Overhead expenses	1,110*
3,241		3,578
103	*Less* Miscellaneous Income	87
3,138		3,491
	Special Services	
261	Licensing of Felling	273*
675	Information and Shows	709*
892	General administration (EEC, fiscal and regulatory duties and including £1,027,000* overheads)	1,040
1,828		2,022
	Research and Development	
1,052	Silviculture	1,323
259	Genetics	294
74	Physiology	79
37	Seed Research	42
171	Site Studies	176
472	Protection	556
198	Statistics	238
163	Communications	174
134	Westonbirt and Bedgebury Arboreta	181
60	Experimental Workshops	62
69	Grants to Universities	80
540	Work Study	651
829	Field Surveys	1,124
4,058	Total (includes £210,000* overheads)	4,980
1,826	*Less* allocation to Forestry Enterprise (Statement 1 on page 89)	2,241
2,232		2,739
7,198	Net total expenditure in year	8,252
4	Notional sick and injury benefit	4
7,202		8,256
	Change in Assets *£000*	
(119)	Increase – Current 120	
(115)	Increase – Fixed 64	
(234)	Net increase	184
6,968	Amount of Grant-in-Aid appropriated for the Forestry Authority	8,440

*Statement 11 of Forestry Enterprise Accounts page 97, £3,329,000

NOTES ON TABLE 2

1. The Forestry Authority share of the Grant-in-Aid amounted to £8,440,000 compared to £6,968,000 last year.

Services to Private Woodland Owners

2. Net expenditure rose in the year by £353,000 to £3,491,000 due to increases in staff costs, minor programme increases and payments of balances due under the interim planting grant scheme.

Special Services

3. Rises in staff costs account for the increase of £194,000 (11 per cent) in the total cost of Special Services.

Research and Development

4. The total cost of Research and Development activities, which also includes technical services to management, at £4,980,000 is £922,000 or 23 per cent higher than in the previous year. Rises in staff costs and continued work on the new census of all trees and woodlands are the principal reasons for the increase. During the quinquennium 1977/78–1981/82, 45 per cent of the net cost of Research and Development will be charged to the Forestry Enterprise and shown in Plantations Account (Statement 1). This allocation amounts to £2,241,000 in 1979–80 reducing the cost of Research and Development chargeable to the Forestry Authority to £2,739,000.

Appendix VIII
Statistical Tables

Measurements in the Statistical Tables in the following pages are in metric values. Their imperial equivalents are listed below.

1 hectare = 2·471 acres

1 acre = 0·4047 hectares

1 kilometre = 0·621 miles

1 mile = 1·609 kilometres

Forestry Authority

DEDICATION SCHEMES FOR PRIVATE ESTATES
POSITION AT 31 MARCH 1980

Table 1

Area in hectares

	England		Wales		Scotland		Great Britain	
	Number	Area	Number	Area	Number	Area	Number	Area
Basis I and II Dedications in existence	2,474	211,635	508	31,299	1,155	241,710	4,137	484,644
Basis III Dedications in existence	168	7,283	49	2,799	247	33,930	464	44,012
Dedications in preparation	205	13,015	63	4,459	290	49,335	558	66,809
Total	373	20,298	112	7,258	537	83,265	1,022	110,821

Notes:
(i) A dedication exists when the Deed of Covenant or Agreement has been completed.
(ii) Dedications in preparation include all applications which have been approved as suitable for dedication.

THE APPROVED WOODLANDS SCHEME FOR PRIVATE ESTATES
POSITION AT 31 MARCH 1980

Table 2

Area in hectares

	England		Wales		Scotland		Great Britain	
	Number	Area	Number	Area	Number	Area	Number	Area
Plans of Operations in existence at the beginning of the year ..	226	23,283	15	1,275	55	10,698	296	35,256
Terminations during the year	53	2,587	6	212	23	3,311	82	6,110
Plans remaining ..	173	20,696	9	1,063	32	7,387	214	29,146

Note: The Approved Woodlands Scheme was closed to new applications in June 1972 but existing participants were allowed to continue in the Scheme until their current plans of operations expired.

AREA OF PLANTING BY PRIVATE WOODLAND OWNERS FOR WHICH GRANTS WERE PAID IN THE YEAR ENDED 31 MARCH 1980

Table 3

Hectares

Country	In Dedicated Woodlands Basis I and II			In Dedicated Woodlands Basis III			In Approved Woodlands			In Small Woods Schemes			Total		
	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	All Planting
ENGLAND															
Conifer ..	225	849	1,074	153	119	272	—	26	26	135	141	276	513	1,135	1,648
Broadleaved .	21	279	300	95	145	240	—	12	12	185	160	345	301	596	897
Total	246	1,128	1,374	248	264	512	—	38	38	320	301	621	814	1,731	2,545
WALES															
Conifer ..	96	53	149	357	15	372	—	—	—	77	12	89	530	80	610
Broadleaved .	3	11	14	8	4	12	—	—	—	15	17	32	26	32	58
Total	99	64	163	365	19	384	—	—	—	92	29	121	556	112	668
SCOTLAND															
Conifer ..	866	628	1,494	5,657	162	5,819	—	1	1	278	147	425	6,801	938	7,739
Broadleaved .	2	35	37	92	18	110	1	—	1	36	31	67	131	84	215
Total	868	663	1,531	5,749	180	5,929	1	1	2	314	178	492	6,932	1,022	7,954
GREAT BRITAIN															
Conifer ..	1,187	1,530	2,717	6,167	296	6,463	—	27	27	490	300	790	7,844	2,153	9,997
Broadleaved .	26	325	351	195	167	362	1	12	13	236	208	444	458	712	1,170
Total	1,213	1,855	3,068	6,362	463	6,825	1	39	40	726	508	1,234	8,302	2,865	11,167

In addition it is estimated that the following areas were planted without grant aid:

England ..	354
Wales ..	33
Scotland ..	109
Great Britain	496

AREA OF PLANTING BY PRIVATE WOODLAND OWNERS FOR WHICH GRANTS WERE PAID IN THE 10-YEAR PERIOD 1 APRIL 1970 TO 31 MARCH 1980

Table 4

Hectares

Year ended 31 March	England			Wales			Scotland			Great Britain		
	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total
1971	3,270	2,407	5,677	1,213	264	1,477	14,398	1,153	15,551	18,881	3,824	22,705
1972	3,766	2,391	6,157	1,409	266	1,675	14,505	1,673	16,178	19,680	4,330	24,010
1973	3,496	2,234	5,730	1,292	250	1,542	15,233	1,269	16,502	20,021	3,753	23,774
1974	2,170	2,147	4,317	1,327	175	1,502	15,392	1,579	16,971	18,889	3,901	22,790
1975	2,033	1,633	3,666	1,234	123	1,357	15,037	1,287	16,324	18,304	3,043	21,347
1976	1,026	1,454	2,480	408	112	520	8,170	1,071	9,241	9,604	2,637	12,241
1977	775	1,156	1,931	723	125	848	5,734	643	6,377	7,232	1,924	9,156
1978	831	1,008	1,839	591	36	627	4,900	933	5,833	6,322	1,977	8,299
1979	702	1,439	2,141	591	90	681	6,656	1,321	7,977	7,949	2,850	10,799
1980	814	1,731	2,545	556	112	668	6,932	1,022	7,954	8,302	2,865	11,167

Note: This table does not include planting done without Forestry Commission grants.

VOLUME OF TIMBER LICENSED FOR FELLING AND THINNING ON PRIVATE ESTATES IN THE YEAR ENDED 31 MARCH 1980

Table 5

Volume in thousands of cubic metres

	England	Wales	Scotland	Great Britain
Conifer	165	15	123	303
Broadleaved	206	18	23	247
Total volume	371	33	146	550
Number of licences issued	1,658	122	373	2,153

Note: Excludes felling and thinning on dedicated estates for which no licence is required.

AREA LICENSED FOR CLEAR FELLING ON PRIVATE ESTATES IN THE YEAR ENDED 31 MARCH 1980

Table 6

Hectares

	England	Wales	Scotland	Great Britain
Conditional licences	1,356	76	409	1,841
Unconditional licences	328	57	200	585
Total	1,684	133	609	2,426

Note: Conditional licences require the restocking of the land concerned.

Forestry Enterprise

LAND USE
AT 31 MARCH 1980

Table 7

Thousands of hectares

	England	Wales	Scotland	Great Britain
Forest Land				
Under plantations	250·4	135·9	497·7	884·0
Retained scrub	1·7	1·7	3·5	6·9
To be planted	6·8	3·4	61·3	71·5
Total	258·9	141·0	562·5	962·4
Other Land				
Agricultural and grazing	12·5	11·0	104·2	127·7
Forest workers' holdings	0·6	0·7	4·9	6·2
Unplantable and miscellaneous (includes nursery land)	31·0	8·0	128·1	167·1
Total	44·1	19·7	237·2	301·0
Total area	303·0	160·7	799·7	1,263·4

NET AREA OF FOREST LAND ACQUIRED/DISPOSED OF DURING THE YEAR ENDED 31 MARCH 1980

Table 8

Thousands of hectares

	England	Wales	Scotland	Great Britain
Plantations acquired	—	—	0·2	0·2
Plantations disposed of	0·3	—	0·1	0·4
Planting land acquired	0·1	0·2	7·0	7·3
Planting land disposed of	—	—	0·2	0·2
Net area of forest land acquired/disposed of	(0·2)	0·2	6·9	6·9

PLANTING IN THE YEAR ENDED 31 MARCH 1980

Table 9

Hectares

	New Planting	Re-stocking	Total
England			
Conifer	855	2,027	2,882
Broadleaved	43	141	184
Total	898	2,168	3,066
Wales			
Conifer	770	1,224	1,994
Broadleaved	27	17	44
Total	797	1,241	2,038
Scotland			
Conifer	14,052	2,253	16,305
Broadleaved	83	7	90
Total	14,135	2,260	16,395
Great Britain			
Conifer	15,677	5,504	21,181
Broadleaved	153	165	318
Total	15,830	5,669	21,499

AREA PLANTED ANNUALLY BY THE COMMISSION IN THE 10-YEAR PERIOD 1 APRIL 1970 TO 31 MARCH 1980

Table 10

Hectares

Year ended 31 March	England			Wales			Scotland			Great Britain		
	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total
1971	3,040	2,387	5,427	2,491	857	3,348	17,427	2,324	19,751	22,958	5,568	28,526
1972	2,251	1,923	4,174	1,821	598	2,419	17,686	1,956	19,642	21,758	4,477	26,235
1973	1,735	1,419	3,154	1,469	771	2,240	16,174	1,590	17,764	19,378	3,780	23,158
1974	1,552	1,348	2,900	1,417	762	2,179	15,433	1,211	16,644	18,402	3,321	21,723
1975	1,239	1,384	2,623	1,412	649	2,061	17,010	1,461	18,471	19,661	3,494	23,155
1976	1,487	1,043	2,530	1,131	476	1,607	14,651	1,723	16,374	17,269	3,242	20,511
1977	1,302	1,170	2,472	1,096	793	1,889	13,148	1,194	14,342	15,546	3,157	18,703
1978	1,148	1,164	2,312	769	937	1,706	12,206	968	13,174	14,123	3,069	17,192
1979	686	1,424	2,110	572	884	1,456	10,584	1,259	11,843	11,842	3,567	15,409
1980	898	2,168	3,066	797	1,241	2,038	14,135	2,260	16,395	15,830	5,669	21,499

AREAS OF PLANTATIONS AND VOLUMES OF TIMBER THINNED AND FELLED IN THE YEAR ENDED 31 MARCH 1980

Table 11

Area in hectares; Volume in thousands of cubic metres

	Felled		Thinned		Total Volume Felled and Thinned
	Area	Volume	Area	Volume	
England					
Conservancy:					
North-West ..	348	80	2,302	110	190
North-East ..	392	114	1,447	84	198
East	500	119	4,100	142	261
New Forest and South-East ..	127	29	2,013	73	102
South-West and Dean	376	102	1,968	97	199
Total	1,743	444	11,830	506	950
Wales					
Conservancy:					
North	337	84	2,904	152	236
South	557	141	2,117	103	244
Total	894	225	5,021	255	480
Scotland					
Conservancy:					
North	424	152	1,356	75	227
East	337	88	2,394	118	206
South	312	86	3,130	155	241
West	498	136	1,586	86	222
Total	1,571	462	8,466	434	896
Great Britain ..	4,208	1,131	25,317	1,195	2,326

SALES OF TIMBER IN THE YEAR ENDED 31 MARCH 1980

Table 12

Thousand cubic metres

Description	England	Wales	Scotland	Great Britain
Trees sold standing	268·6	206·5	286·9	762·0
Converted*				
Round timber and saw logs	296·9	109·2	247·7	653·8
Telegraph and other selected poles ..	7·0	1·1	6·9	15·0
Mining timber	39·1	17·7	0·1	56·9
Posts and stakes	15·0	9·4	2·2	26·6
Pulpwood and boardmill material ..	199·8	97·8	291·7	589·3
Firewood	17·7	2·4	2·7	22·8
Miscellaneous	26·4	0·6	—	27·0
Poles sold in length (other than selected) ..	1·5	0·7	2·5	4·7
Total	603·4	238·9	553·8	1,396·1

*In addition the following volumes were converted and used internally for forest and estate purposes:

England ..	2·0
Wales ..	1·6
Scotland ..	4·3
Great Britain	7·9

PROPERTIES MANAGED BY THE COMMISSION
AT 31 MARCH 1980

Table 13

Number

Type of Property	England	Wales	Scotland	Great Britain
Forest properties				
Foresters' houses	219	115	291	625
Forest workers' houses	641	212	796	1,649
Forest workers' holdings	60	59	147	266
Miscellaneous*	1,427	495	868	2,790
Total	2,347	881	2,102	5,330
Other properties†				
Farms and other agricultural subjects	553	506	754	1,813
Residential and other lettings	1,455	794	1,257	3,506
Total	2,008	1,300	2,011	5,319

*Miscellaneous covers hostels, bothies, offices, repair workshops and other buildings not normally let.

†In addition there are 2,387 sporting lettings.

PUBLIC RECREATIONAL FACILITIES
AT 31 MARCH 1980

Table 14

Number

	England	Wales	Scotland	Great Britain
Camping and caravan sites*	23	1	9	33
Picnic places	370	104	135	609
Forest walks and forest nature trails	277	137	234	648
Visitor centres	12	6	11	29
Arboreta	11	7	5	23
Forest drives	4	1	2	7
Forest cabins and holiday houses	109	4	53	166

*In addition to these campsites, the Commission provides the following:–

(i) five sites leased to the Caravan Club and two sites to the Camping Club of Great Britain and Northern Ireland;

(ii) 43 sites set aside for youth camping;

(iii) facilities for caravan rallies.

Table 15

North-West England Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
						Planting (hectares)		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	New Planting	Re-stocking	Production (000 cu. m.)
Arden, Hereford and Worcester, West Midlands, Warwick and Leics. ..	1,073	990	—	67	16	—	—	—
Bagot, Staffs ..	1,026	953	—	65	8	—	—	—
Blengdale, Cumbria	1,260	1,035	11	45	169	—	3	4
Bowland, Lancs ..	1,836	1,716	8	6	106	—	17	8
Cannock, Staffs ..	2,696	2,621	—	10	65	—	67	13
Dalton, Cumbria and Lancs	1,654	1,378	5	—	271	—	—	1
Delamere, Cheshire	969	937	—	—	32	—	20	6
Dunnerdale, Cumbria	951	805	22	—	124	—	3	3
Ennerdale, Cumbria	3,657	1,583	25	53	1,996	13	2	9
Greystoke, Cumbria	1,270	1,161	3	—	106	—	11	7
Grizedale, Cumbria	3,527	3,067	—	3	457	7	3	15
Inglewood, Cumbria	996	951	—	7	38	—	5	1
Kershope, Cumbria	5,734	5,292	—	42	400	26	22	24
Launde, Derby, Notts and Leics	891	864	—	20	7	—	3	1
Matlock, Derby and Cheshire	3,139	1,725	—	245	1,169	22	—	—
Mortimer, Salop, Hereford and Worcester	4,795	4,604	—	44	147	—	76	47
Sherwood, Notts ..	6,426	6,036	30	103	257	9	178	26
Shropshire Hills, Salop	1,293	924	—	101	268	—	32	1
Spadeadam, Cumbria and Northumberland	6,583	4,515	22	1,045	1,001	85	—	—
Swynnerton, Salop and Staffs	1,020	975	—	30	15	—	1	6
Thornthwaite, Cumbria	2,656	2,193	—	17	446	—	40	18
Total	53,452	44,325	126	1,903	7,098	162	483	190

Note: Kinver Forest has been added to Wyre Forest, S.W. England Conservancy.

Table 15—*continued*

North-East England Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	Planting (hectares)		Production (000 cu. m.)
						New Planting	Restocking	
Chopwell, Durham, Tyne and Wear ..	875	801	2	6	66	—	1	3
Cleveland, North Yorks and Cleveland	3,288	3,016	77	55	140	27	4	5
Cropton, North Yorks	4,642	3,820	70	173	579	1	25	13
Dalby, North Yorks	4,748	3,772	—	11	965	2	54	28
Don, South, West and North Yorks ..	2,921	1,584	32	899	406	33	10	1
Falstone, Northumberland	14,964	13,267	—	—	1,697	—	66	21
Hambleton, North Yorks	4,486	3,840	28	166	452	37	6	9
Hamsterley, Durham	4,372	3,409	—	721	242	6	39	13
Harwood, Northumberland	4,525	4,080	—	61	384	23	23	8
Jervaulx, North Yorks and Durham ..	876	794	—	77	5	17	8	1
Kidland, Northumberland	3,458	2,553	—	256	649	159	—	—
Kielder, Northumberland	16,389	10,216	—	6	6,167	57	113	29
Knaresborough, North and West Yorks	1,276	1,194	—	33	49	—	4	1
Langdale, North Yorks	4,999	4,046	61	87	805	—	5	7
Redesdale, Northumberland	5,697	5,009	—	—	688	—	—	13
Slaley, Northumberland and Durham	1,190	1,090	8	51	41	4	—	3
Thrunton, Northumberland	3,626	3,254	—	167	205	130	25	12
Wark, Northumberland	13,745	11,633	—	528	1,584	105	127	21
Wykeham, North Yorks	1,886	1,622	—	34	230	—	19	7
Wynyard, Cleveland	593	571	—	21	1	11	—	—
York, North Yorks and Humberside ..	1,947	1,816	11	55	65	13	—	3
Total	100,503	81,387	289	3,407	15,420	625	529	198

Note: Osmotherley has been added to Cleveland.

Table 15—*continued*

EAST ENGLAND CONSERVANCY	Land use at 31 March 1980 (hectares)					During Year 1979–80		
						Planting (hectares)		Production (000 cu. m.)
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	New Planting	Restocking	
Aldewood, Suffolk ..	3,623	3,471	—	23	129	3	57	33
Ampthill, Beds ..	820	665	80	35	40	—	3	1
Bardney, Lincs ..	3,041	2,925	17	6	93	—	1	6
Bernwood, Bucks and Oxon	888	697	191	—	—	—	—	—
Bramfield, Herts ..	639	618	2	10	9	—	11	—
Chiltern, Bucks, Oxon, Beds, and Herts ..	2,399	2,217	—	138	44	2	9	3
Hazelborough, Northants and Bucks	1,146	1,104	8	24	10	7	10	7
Kesteven, Lincs ..	2,076	1,985	2	14	75	—	3	1
Lavenham, Suffolk ..	811	807	—	1	3	—	—	—
North Lindsey, Lincs	2,098	2,022	3	2	71	—	55	11
Rockingham, Northants and Cambs	2,863	2,623	85	44	111	5	48	5
Thetford, Norfolk and Suffolk	21,273	20,085	43	103	1,042	73	361	178
Walden, Essex, Cambs and Herts	705	648	41	6	10	—	1	1
Wensum, Norfolk ..	2,187	2,122	1	—	64	—	37	11
Wymersley, Beds, Northants and Bucks	1,519	1,460	33	9	17	3	7	4
TOTAL	46,088	43,449	506	415	1,718	93	603	261

Note: Lynn has been added to Thetford.

Table 15—*continued*

New Forest and South-East England Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	Planting (hectares)		Production (000 cu. m.)
						New Planting	Restocking	
Alice Holt, Hampshire, West Sussex and Surrey ..	3,189	2,903	16	16	254	—	17	8
Arundel, West Sussex	3,436	3,253	60	—	123	—	—	4
Bedgebury, Kent and East Sussex ..	3,961	3,641	—	—	320	—	8	14
Bramshill, Hampshire and Berks ..	2,455	2,322	49	24	60	—	14	7
Challock, Kent ..	2,579	2,559	2	—	18	—	15	9
Micheldever, Berks and Hampshire ..	2,412	2,321	31	4	56	—	9	5
New Forest, Hampshire	27,025	11,723	138	1	15,163	—	47	37
Queen Elizabeth Forest, West Sussex and Hampshire ..	4,210	3,964	90	13	143	—	—	3
Ringwood, Dorset ..	2,976	2,602	32	—	342	—	9	9
St. Leonards, East Sussex and West Sussex	1,748	1,554	10	—	184	—	5	1
Shipbourne, Kent and Surrey	1,127	1,026	34	45	22	—	16	1
Wight, Isle of Wight	1,850	1,702	20	—	128	—	11	4
Total	56,968	39,570	482	103	16,813	—	151	102

Table 15—*continued*

South-West England and Dean Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
						Planting (hectares)		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	New Planting	Re-stocking	Production (000 cu. m.)
Brendon, Somerset and Devon ..	1,545	1,386	6	20	133	—	40	10
Dartmoor, Devon ..	2,384	2,123	—	—	261	—	20	21
Dean Forest, Gloucester, Hereford and Worcester and Gwent	10,755	9,574	—	147	1,034	—	61	48
Eggesford, Devon ..	1,157	1,135	1	1	20	—	16	6
Exeter, Devon ..	2,687	2,413	35	165	74	1	21	18
Hereford, Gloucester and Hereford and Worcester ..	2,355	2,043	—	304	8	—	13	6
Kernow, Cornwall ..	3,497	3,284	46	50	117	—	29	12
Mendip, Avon, Somerset and Wilts	1,411	1,353	12	1	45	—	14	7
Neroche, Somerset and Devon ..	2,057	1,811	—	51	195	13	2	—
Powerstock, Dorset	1,596	1,487	9	9	91	—	1	—
Quantock, Somerset	1,311	1,095	10	3	203	—	14	9
Savernake, Wiltshire, Hampshire and Berks	5,043	4,764	115	41	123	—	20	14
Torridge, Devon ..	3,681	3,454	—	76	151	4	80	25
Wareham, Dorset ..	4,834	4,180	101	26	527	—	37	13
Westonbirt, Gloucester	100	—	59	—	41	—	—	—
Wyre, Salop and Hereford and Worcester	1,836	1,788	—	—	48	—	34	11
Total	46,249	41,890	394	894	3,071	18	402	200

Note: Kinver Forest, formerly in NW England Conservancy, has been added to Wyre Forest.

Table 16

North Wales Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
						Planting (hectares)		Production (000 cu. m.)
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	New Planting	Restocking	
Aeron, Dyfed ..	2,372	2,288	20	18	46	—	2	3
Beddgelert, Gwynedd	3,955	3,196	32	50	677	—	12	15
Ceiriog, Clwyd ..	1,808	1,752	1	—	55	—	—	4
Ceri, Powys	1,852	1,838	3	—	11	—	103	10
Clocaenog, Clwyd ..	7,120	5,755	—	6	1,359	16	15	34
Clwyd, Clwyd ..	2,090	1,923	7	39	121	10	—	1
Coed, Sarnau, Powys	3,106	2,985	29	39	53	—	80	10
Coed-y-Brenin, Gwynedd	9,307	6,481	52	567	2,207	78	60	36
Cynwyd, Gwynedd and Clwyd ..	785	721	—	—	64	—	8	4
Dyfi, Gwynedd and Powys	7,507	6,447	24	213	823	2	48	24
Dyfnant, Powys ..	3,253	2,565	—	152	536	6	1	5
Gwydyr, Gwynedd and Clwyd ..	8,159	5,916	53	11	2,179	19	58	27
Hafren, Powys ..	5,079	4,547	—	17	515	—	9	15
Mathrafal, Powys and Clwyd	1,576	1,490	5	—	81	—	9	3
Newborough, Gwynedd	1,791	1,485	9	1	296	—	6	2
Penllyn, Gwynedd ..	4,212	3,688	—	312	212	146	—	5
Radnor, Powys ..	2,499	2,426	5	—	68	—	83	13
Rheidol, Dyfed ..	5,449	4,257	34	86	1,072	21	8	4
Ystwyth, Dyfed and Powys	7,069	5,755	20	263	1,031	—	75	21
Total	78,989	65,515	294	1,774	11,406	298	577	236

Table 16—*continued*

South Wales Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
						Planting (hectares)		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	New Planting	Re-stocking	Production (000 cu. m.)
Brechfa, Dyfed ..	6,809	6,208	88	21	492	8	51	49
Brycheiniog, Powys	1,612	1,505	—	1	106	—	32	20
Caeo, Dyfed.. ..	2,129	1,900	43	5	181	2	25	9
Coed Abertawe, West Glam.	868	808	32	4	24	—	8	4
Coed Deufor, Dyfed	1,991	1,901	53	8	29	4	—	—
Coed Morgannwg: Crynant, West Glam.	3,249	2,440	53	367	389	77	37	5
Cymer, West Glam. and Mid Glam.	5,339	4,666	30	108	535	—	38	5
Margam, West Glam. and Mid. Glam.	4,761	4,173	170	3	415	23	12	10
Rheola, West Glam. and Mid Glam.	5,246	4,311	87	2	846	3	51	22
Coed Preseli, Dyfed	2,171	1,866	201	—	104	2	—	2
Coed Taf, Powys and Mid Glam. ..	2,569	2,148	21	1	399	29	13	5
Coed-y-Rhaiadr, Powys	2,512	1,818	221	121	352	57	27	1
Crychan, Powys and Dyfed	4,763	4,550	83	10	120	13	95	32
Ebbw, Gwent ..	5,163	4,433	127	15	588	7	96	9
Glasfynydd, Powys and Dyfed ..	1,493	1,426	1	40	26	5	31	18
Irfon, Powys and Dyfed	2,695	2,320	8	131	236	19	19	4
Mynydd Du, Powys and Gwent ..	1,468	1,304	—	23	141	—	11	7
Pembrey, Dyfed ..	1,978	1,268	17	—	693	—	1	3
Rhondda, Mid Glam.	4,578	3,275	—	460	843	169	41	—
St. Gwynno, Mid Glam.	3,936	3,318	—	45	573	26	13	9
Tair Onen, Mid and South Glam. ..	1,367	1,152	73	15	127	—	16	4
Talybont, Powys ..	1,601	1,506	15	—	80	—	—	5
Tintern, Gwent ..	3,899	3,804	29	2	64	—	43	16
Tywi, Powys and Dyfed	8,457	7,282	10	263	902	55	—	2
Wentwood, Gwent ..	1,072	1,005	54	—	13	—	4	3
Total	81,726	70,387	1,416	1,645	8,278	499	664	244

Table 17

North Scotland Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
						Planting (hectares)		Production (000 cu. m.)
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	New Planting	Restocking	
Achnashellach, Highland	4,713	2,868	24	257	1,564	75	8	7
Affric, Highland	28,743	7,043	—	777	20,923	165	—	3
Ardross, Highland	9,854	7,352	88	1,487	927	352	41	11
Black Isle, Highland	5,848	5,370	29	—	449	—	—	16
Clunes, Highland	6,820	4,423	—	210	2,187	—	—	17
Culloden, Highland	8,592	5,789	2	1,325	1,476	33	20	17
Dornoch, Highland	1,204	1,103	3	—	98	—	—	1
Farigaig, Highland	4,377	3,319	100	30	928	—	4	4
Fiunary, Highland	6,737	4,899	—	260	1,578	82	20	9
Glengarry, Highland	17,281	6,103	10	794	10,374	110	43	8
Glenurquhart, Highland	10,470	5,016	107	517	4,830	19	30	15
Helmsdale, Highland	1,548	969	—	273	306	61	—	—
Hoy Experiments Orkney Islands	13	13	—	—	—	—	—	—
Inchnacardoch, Highland	10,457	6,051	81	1,072	3,253	48	57	27
Inshriach, Highland	4,146	3,380	10	40	716	65	10	3
Leanachan, Highland	13,057	5,910	—	325	6,822	348	27	19
Mull, Strathclyde	16,085	8,814	—	3,228	4,043	435	11	10
Naver, Highland	12,782	6,376	—	1,696	4,710	209	123	—
The Queens Forest, Highland	2,644	1,535	—	—	1,109	—	—	1
Ratagan, Highland	5,013	2,701	—	41	2,271	41	65	20
Rumster, Highland	8,590	3,484	—	4,167	939	560	—	—
Shin, Highland	34,862	15,375	35	7,740	11,712	490	170	4
Skye, Highland and Western Isles	21,524	7,855	90	2,273	11,306	561	43	6
South Strome, Highland	2,998	1,958	19	65	956	11	6	6
Strathmashie, Highland	18,650	4,425	—	16	14,209	9	50	4
Sunart, Highland	13,449	6,419	—	373	6,657	363	24	10
Torrachilty, Highland	16,594	8,490	6	38	8,060	108	7	9
Total	287,051	137,040	604	27,004	122,403	4,145	759	227

Notes: (i) Clunes is a newly formed forest.
(ii) Glenrigh has been added to Leanachan.

Table 17—*continued*

East Scotland Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	Planting (hectares)		Production (000 cu. m.)
						New Planting	Restocking	
Alltcailleach, Grampian	1,806	1,670	—	10	126	—	3	2
Banchory, Grampian	5,526	5,307	4	49	166	20	8	11
Bennachie, Grampian	7,117	5,422	3	514	1,178	145	23	15
Braes of Angus, Tayside	4,951	3,571	5	252	1,123	6	1	1
Craigellachie, Grampain	5,626	4,616	—	714	296	124	15	2
Drummond Hill, Tayside	3,583	2,640	41	454	448	90	15	10
Dunkeld, Tayside	5,224	4,068	66	774	316	165	8	18
Eden, Fife and Central	3,558	3,300	7	17	234	—	41	20
Forest of Deer, Grampian	2,900	2,614	1	152	133	45	37	14
Glenlivet, Grampian	4,634	4,296	7	—	331	—	18	3
Huntly, Grampian	10,224	8,696	—	148	1,380	6	6	27
Kirkhill, Grampian	1,199	1,166	—	6	27	—	6	3
Laigh of Moray, Grampian and Highland	6,929	6,512	39	—	378	—	54	27
Mearns, Grampian	7,022	6,013	17	81	911	113	14	12
Montreathmont, Grampian and Tayside	1,852	1,817	7	—	28	—	9	10
Ochil, Fife, Tayside and Central	4,509	3,920	27	184	378	98	41	10
Rannoch, Tayside	14,168	7,416	59	1,692	5,001	319	44	2
Speymouth, Grampian	10,616	9,709	3	412	492	122	32	12
Strathardle, Tayside	3,431	3,028	—	96	307	20	9	4
Tornashean, Grampian	4,473	3,322	—	375	776	95	9	1
Tummel, Tayside	8,338	5,541	100	404	2,293	123	21	2
Total	117,686	94,644	386	6,334	16,322	1,491	414	206

Table 17—*continued*

South Scotland Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	Planting (hectares)		Production (000 cu. m.)
						New Planting	Restocking	
Ae, Dumfries and Galloway	7,136	6,299	—	703	134	8	34	22
Arecleoch, Strathclyde	5,080	4,089	—	935	56	366	—	—
Bareagle, Dumfries and Galloway ..	4,990	4,531	170	154	135	81	—	1
Bennan, Dumfries and Galloway	6,879	6,354	—	—	525	—	17	17
Carrick, Dumfries and Galloway and Strathclyde ..	17,547	8,503	3	1,188	7,853	200	15	16
Castle O'er, Dumfries and Galloway and Borders	5,495	5,368	—	—	127	1	143	19
Clatteringshaws, Dumfries and Galloway	12,542	8,357	—	405	3,780	346	—	5
Clydesdale, Strathclyde and Lothian	5,493	4,691	4	219	579	312	73	1
Craik, Borders ..	6,047	5,050	—	539	458	107	13	7
Dalmacallan, Dumfries and Galloway	4,057	3,252	—	320	485	167	—	10
Dundeugh, Dumfries and Galloway ..	3,706	3,037	—	206	463	—	—	6
Fleet, Dumfries and Galloway	8,070	6,432	—	754	884	1	—	18
Glentress, Borders and Lothian	9,829	8,407	—	359	1,063	339	35	22
Glentrool, Dumfries and Galloway and Strathclyde ..	23,413	12,910	2	886	9,615	11	188	10
Kirroughtree, Dumfries and Galloway	6,621	4,249	—	—	2,372	—	26	18
Kyle, Strathclyde ..	6,411	5,175	—	753	483	390	1	—
Lammermuir, Borders	2,830	2,718	—	9	103	—	13	5
Moffat, Dumfries and Galloway and Borders	13,061	10,944	—	389	1,728	314	10	8
Newcastleton, Dumfries and Galloway and Borders ..	3,845	3,759	—	9	77	—	48	17
Penninghame, Dumfries and Galloway	6,842	6,568	—	61	213	98	1	3
Solway, Dumfries and Galloway	6,986	6,372	3	5	606	93	22	24
Upper Nithsdale, Dumfries and Galloway and Strathclyde ..	3,764	2,946	—	198	620	160	—	—
Wauchope, Borders	9,422	8,035	8	320	1,059	118	—	12
Bush Nursery, Lothian	6	—	—	—	6	—	—	—
Whittingehame Seed Orchard, Lothian	12	—	—	—	12	—	—	—
Total	180,084	138,046	190	8,412	33,436	3,112	639	241

Notes: (i) Part of Douglas has been added to Clydesdale and the remainder to Kyle.
(ii) Elibank has been added to Glentress.
(iii) Stenton has been added to Lammermuir.

Table 17—*continued*

West Scotland Conservancy	Land use at 31 March 1980 (hectares)					During Year 1979–80		
	Total Area of Forest	Under Plantations	Retained Scrub	To be planted	Other land	Planting (hectares)		Production (000 cu. m.)
						New Planting	Re-stocking	
Achaglachgach, Strathclyde ..	11,342	4,838	175	3,291	3,038	403	2	7
Achray, Central ..	5,561	3,817	106	147	1,491	45	13	6
Ardgartan, Strathclyde	13,361	5,225	212	24	7,900	24	45	21
Arran, Strathclyde ..	11,427	6,115	—	1,779	3,533	430	—	—
Barcaldine, Strathclyde	7,779	4,617	251	347	2,564	64	19	13
Benmore, Strathclyde	10,399	5,761	129	322	4,187	103	50	22
Buchanan, Strathclyde and Central ..	6,474	3,474	186	35	2,779	89	43	2
Carradale, Strathclyde	6,575	3,330	41	1,772	1,432	359	6	4
Carron Valley, Strathclyde and Central	4,708	4,148	—	153	407	114	44	15
Eredine, Strathclyde	6,956	4,732	32	437	1,755	255	—	5
Fearnoch, Strathclyde	6,013	4,780	149	479	605	273	6	3
Garelochhead, Strathclyde	2,641	1,791	65	152	633	74	16	—
Glenaray, Strathclyde	7,454	4,125	108	1,622	1,599	213	—	—
Glenbranter, Strathclyde	6,969	4,435	85	71	2,378	46	73	24
Glencoe, Strathclyde and Highland ..	9,023	4,571	51	138	4,263	5	5	11
Glendaruel, Strathclyde	9,712	5,637	164	1,380	2,531	246	9	4
Glenorchy, Strathclyde and Central	15,314	7,507	63	298	7,446	287	—	—
Inverliever, Strathclyde	13,381	8,556	36	524	4,265	140	52	15
Kilmichael, Strathclyde	11,493	8,624	17	150	2,702	160	20	24
Knapdale, Strathclyde	7,237	4,903	185	695	1,454	144	28	16
Loch Ard, Central ..	10,911	7,482	193	905	2,331	154	17	15
South Kintyre, Strathclyde	11,855	9,390	47	1,018	1,400	624	—	3
Strathyre, Central and Tayside	9,477	5,520	—	1,180	2,777	497	—	12
Whitelee, Strathclyde	8,860	4,606	—	2,643	1,611	638	—	—
Chapelhall Depot, Strathclyde ..	2	—	—	—	2	—	—	—
Total	214,924	127,984	2,295	19,562	65,083	5,387	448	222

Appendix IX

Map showing the situation of the Commission Forests and the boundaries of the Conservancies at 31 March 1980


North Scotland
West Scotland
East Scotland
South Scotland
North East England
Naver
Rumster
Helmsdale
Skye pt
Shin
Dornoch
Ardross
Torrachilty
Laigh of Moray
Black Isle
Achnashellach
Speymouth
Craigellachie
Forest of Deer
HIGHLAND REGION
Culloden
Huntly
South Strome
Affric
Glenurquhart
Fairgaig
Glenlivet
Bennachie
Skye
Ratagan
Inchnacardoch
Queen's
Tornashean
GRAMPIAN REGION
Kirkhill
Inshriach
Banchory
Glengarry
Allt-caileach
Strathmashie
Mearns
Clunes
Braes of Angus
Sunart
Leanachan
Tummel
Rannoch
Strathardle
Montreathmont
Fiunary
Glencoe
TAYSIDE REGION
Barcaldine
Drummond Hill
Mull
Glenorchy
Dunkeld
Fearnoch
CENTRAL REGION
Eden
Inverliever
Glenaray
Strathyre
Eredine
Ardgarten
Achray
FIFE REGION
Glenbranter
Loch Ard
Kilmichael
Ochil
Knapdale
Buchanan
Glendaruel
Garelochead
Benmore
Carron Valley
LOTHIAN REGION
STRATHCLYDE REGION
Achaglachgach
Lammermuir
Carradale
Whitelee
Clydesdale
Glentress
Arran
BORDERS REGION
South Kintyre
Wauchope
Kyle
Craik
Thrunton
Upper Nithsdale
Moffat
Kidland
Carrick
Castle Oer
Redesdale
Dundeugh
Ae
Kielder
Harwood
DUMFRIES & GALLOWAY
Falstone
Glentrool
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Wark
Arecleoch
Bennan
Kershope
Kirroughtree
Spadeadam
Penrunghame
Chopwell
TYNE & WEAR
Fleet
Solway
Slaley
Barrasgle
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Gwydyr
Clocaenog
CLWYD
DERBY
NOTTINGHAM
LINCOLNSHIRE
Beddgelert
GWYNEDD
Cynwyd
Swynnerton
Penllyn
Ceiriog
Coed-y-Brenin
Bagot
STAFFORDSHIRE
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Aldewood
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DYFED
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HEREFORD & WORCESTER
Crychan
Brycheiniog
Hazelborough
BEDS
Ampthill
Lavenham
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Mynydd Du
Hereford
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Coed Deulor
Coed-y-Rhaiadr
Coed Tal
Dean
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Bramfield
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GREATER LONDON
MID
GLAMORGAN
SOUTH
Tair Onen
AVON
BERKSHIRE
Bramshill
Shipbourne
WILTSHIRE
Savernake
SURREY
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Micheldever
Challock
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Quantock
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Wight
Exeter
Dartmoor
Kernow
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ACCOUNTS 1979-80

BALANCE SHEET of the Forestry Commission Forestry Enterprise as at 31 March 1980, and ACCOUNTS for the year ended 31 March 1980, together with the Report of the Comptroller and Auditor General thereon.

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FORESTRY COMMISSION

ACCOUNTS OF THE FORESTRY ENTERPRISE FOR THE YEAR ENDED 31 MARCH 1980

BALANCE SHEET AS AT 31 MARCH 1980

As at 31 March 1979 £000		*See Notes/ Statements*	£000	£000
	Source of Funds			
	CAPITAL AND RESERVES			
463,534	Capital	Note 3	496,432	
(3,050)	Trading and Variance Account balances	Statement 8	(18,024)	
129,084	Current Cost Reserve	Note 6	248,411	
589,568				726,819
93,959	NOTIONAL SUPERANNUATION FUND	Note 7		107,583
683,527				834,402
	Employment of Funds			
117,717	FIXED ASSETS	Note 8		144,935
	NET CURRENT ASSETS			
7,539	Stocks and work in progress	Note 9	9,087	
7,603	Debtors and sundry debit balances		10,539	
1,990	Cash at bank and in hand	Note 10	1,417	
17,132			21,043	
9,435	Creditors and accrued expenses		7,168	
7,697				13,875
558,113	PLANTATIONS at standard cost	Statement 1		675,592
683,527				834,402

The notes on pages 98 to 107 form part of these Accounts.

G. D. Holmes
Accounting Officer
4 September 1980

I have examined the above Balance Sheet and the annexed Statements 1 to 11 in accordance with the provisions of the Exchequer and Audit Departments Act 1921. I have obtained all the information and explanations that I have required, and I certify, as the result of my audit, that in my opinion this Balance Sheet and the Statements 1 to 11 are properly drawn up so as to exhibit a true and fair view of the state of affairs and transactions of the services to which they relate, subject to the inaccuracies referred to in Note 21.

20 November 1980
Exchequer and Audit Department

Douglas Henley
Comptroller and Auditor General

FORESTRY COMMISSION

PLANTATIONS ACCOUNT FOR THE YEAR ENDED 31 MARCH 1980

Previous Year £000		*See Notes/ Statements*	£000	£000
482,685	At 1 April 1979: 875,240 hectares valued at standard (1978–79) cost			558,113
43,442	Revaluation adjustment	Note 6		83,717
526,127				641,830
	EXPENDITURE			
43	Plantations acquired		139	
3,811	Land planted	Note 8(d)	6,201	
3,071	Formation		3,791	
2,697	Protection		3,053	
1,996	Crop improvement		2,333	
485	Lease rents, supplies and miscellaneous		645	
2,587	Road construction		3,368	
1,413	Road maintenance		1,450	
1,826	Research and development		2,241	
6,770	Labour oncost	Statement 10	7,823	
8,005	Overhead expenses	Statement 11	8,518	
16,955	Interest	Note 5	20,149	
49,659				59,711
575,786				701,541
	INCOME			
159	Disposal of plantations		365	
63	Surplus on sale of Forest Estate properties	Statement 9	102	
479	Sundry income		550	
701				1,017
575,085	NET EXPENDITURE			700,524
	SUBSIDIES AND TRANSFERS			
5,260	Planting and restocking subsidies	Note 3(b), (c) and (d)	8,406	
9,533	Transfer charge to Harvesting Trading Account for thinnings and fellings removed	Statement 4 and Note 13	13,796	
14,793				22,202
560,292	NET TOTAL			678,322
558,113	At 31 March 1980: 890,939 hectares valued at standard (1979-80) cost			675,592
(2,179)	Variance from standard — Deficit	Note 11		(2,730)
501	Variance from previous year — Deficit			(1,678)
(1,678)	Variance to date — Deficit	Statement 8		(4,408)

Statement 2

FORESTRY COMMISSION
FOREST RECREATION AND AMENITY ACCOUNT
FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Notes/ Statements*	
£000			£000
1,492	Direct expenditure ..	..	1,689
664	Labour oncost ..	.. Statement 10	720
1,538	Overhead expenses ..	.. Statement 11	1,478
181	Interest	.. Note 5	194
3,875			4,081
9	*Less* increase in stock		28
3,866			4,053
440	Income		520
3,426	Recreation and Amenity subsidy ..	.. Note 3(b), (c) and (e)	3,533

Statement 3

COMMERCIAL RECREATION TRADING ACCOUNT
FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Notes/ Statements*		*£000*	*£000*
£000					
	(A) Campsites and Forest Cabins				
495	Direct expenditure			683	
80	Labour oncost	Statement 10		97	
176	Overhead expenses	Statement 11		152	
21	Interest	Note 5		26	
772					958
897	Income				1,117
125	Balance (standard surplus £255,000)		Surplus		159
130	Interest on capital employed ..	Note 5			170
(5)	Balance in year after interest	Note 12	Deficit		(11)
(1)	Balance from previous year		Deficit		(6)
(6)	Balance to date ..		Deficit		(17)
	(B) Shooting and Fishing				
68	Direct expenditure ..			89	
35	Labour oncost	Statement 10		51	
186	Overhead expenses ..	Statement 11		198	
18	Interest	Note 5		25	
307					363
351	Income				432
44	Balance in year	Note 12	Surplus		69
(11)	Balance from previous year		Surplus		33
33	Balance to date		Surplus		102
27	(A) and (B) Balance to date ..	Statement 8	Surplus		85

FORESTRY COMMISSION

HARVESTING TRADING ACCOUNT FOR THE YEAR ENDED 31 MARCH 1980

Previous Year £000		*See Notes/ Statements*		£000	£000
	INCOME				
25,647	Sale of produce			34,157	
217	Value of produce used in Commission's forests			225	
25,864					34,382
	EXPENDITURE				
8,704	Marking, measuring, harvesting, extraction and conversion			11,301	
1,977	Carriage and other expenses			2,873	
10,681				14,174	
751	*Deduct* increase in stock and work in progress			556	
9,930					13,618
15,934	NET HARVESTING REVENUE				20,764
4,023	*Deduct* Labour oncost	Statement 10		5,197	
5,706	Overhead expenses	Statement 11		6,653	
898	Interest	Note 5		1,171	
10,627					13,021
5,307	BALANCE		Surplus		7,743
9,533	*Deduct* Transfer charge from Plantations Account for thinnings and fellings removed .. .. (at 1979–80 standard value) ..	Statement 1 and Note 13			13,796
(4,226)	BALANCE		Deficit		(6,053)
(788)	Balance from previous year ..		Deficit		(5,014)
(5,014)	Balance to date	Statement 8	Deficit		(11,067)

FORESTRY COMMISSION
SURPLUS ESTATE TRADING ACCOUNT FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Notes/ Statements*		*£000*	*£000*
£000					
	Operational Account				
157	Direct expenditure			180	
13	Labour oncost	Statement 10		12	
196	Overhead expenses	Statement 11		278	
14	Interest	Note 5		22	
380					492
(14)	*Add* decrease in stock				14
366					506
197	Income				278
(169)	Balance		Deficit		(228)
606	Interest on capital employed	Note 5			858
(775)	Balance in year after interest		Deficit		(1,086)
	Capital Adjustments				
4,018	Surplus on revaluation of land and buildings	Note 2		—	
(76)	Deficit on sale of properties	Statement 9		(200)	
3,942					(200)
3,167	Balance in year				(1,286)
	Balance from previous year				
258	As previously reported		Surplus	3,425	
—	Prior year adjustment	Note 2		(5,044)	
—	As restated				(1,619)
3,425	Balance to date	Statement 8	Deficit		(2,905)

Statement 6

FORESTRY COMMISSION

AGENCY SERVICES TRADING ACCOUNT FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Notes/ Statements*		
£000				*£000*
886	Direct expenditure			962
365	Labour oncost	Statement 10		397
253	Overhead expenses	Statement 11		276
50	Interest	Note 5		61
1,554				1,696
1,598	Income			1,626
44	Balance	Note 15	Deficit	(70)
(74)	Balance from previous year		Deficit	(30)
(30)	Balance to date	Statement 8	Deficit	(100)

Statement 7

MISCELLANEOUS TRADING ACCOUNT FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Notes/ Statements*		
£000				*£000*
	Joint Management Scheme	Note 16		
166	Income			151
54	Balance from previous year			220
220	Balance to date	Statement 8	Surplus	371

FORESTRY COMMISSION

TRADING AND VARIANCE ACCOUNTS SUMMARY FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Statements*		
£000				*£000*
(1,678)	Plantations	1	Deficit	(4,408)
(5,014)	Harvesting	4	Deficit	(11,067)
(6,692)	Sub-Total			(15,475)
27	Commercial Recreation	3	Surplus	85
3,425	Surplus Estate	5	Deficit	(2,905)
(30)	Agency Services	6	Deficit	(100)
220	Miscellaneous	7	Surplus	371
(3,050)	Balance at 31 March 1980 being accumulated to end of quinquennium (1982)		Deficit	(18,024)

FORESTRY COMMISSION
SALE OF LAND AND BUILDINGS ACCOUNT
FOR THE YEAR ENDED 31 MARCH 1980

Previous Year		*See Notes/ Statements*	*£000*	*£000*
£000				
1,250	Sale price			2,148
830	*Deduct* Current valuation ..		1,650	
187	Disposal expenses ..		221	
1	Labour oncost	Statement 10	1	
229	Overhead expenses ..	Statement 11	344	
16	Interest	Note 5	30	
1,263				2,246
(13)	Balance in year ..	Deficit		(98)

Analysed to			*£000*	*Transferred to*
(76)	Surplus Estate	Deficit	(200)	Surplus Estate Trading Account (Statement 5)
63	Forest Estate	Surplus	102	Plantations Account (Statement 1)

FORESTRY COMMISSION
STATEMENT OF LABOUR ONCOST
FOR THE YEAR ENDED 31 MARCH 1980

Previous Year			
£000			*£000*
3,568	National insurance, holidays and sick pay ..		4,396
1,273	Wet time		1,368
3,077	Transport of workers and travelling and subsistence		3,644
335	Training		391
523	Miscellaneous		819
—	Protective clothing		313
3,236	Provision for pensions and gratuities		3,434
12,012			14,365
57	*Less* Miscellaneous income ..		61
11,955			14,304
	Distribution	*See Statements*	
6,770	Plantations	1	7,823
4,023	Harvesting	4	5,197
10,793	Sub-Total (Standard £11,805,000)		13,020
664	Forest Recreation and Amenity	2	720
80	Commercial Recreation: Campsites and Forest Cabins	3	97
35	Shooting and Fishing	3	51
13	Surplus Estate	5	12
365	Agency	6	397
1	Sale of Land and Buildings	9	1
4	Debtors		6
11,955			14,304

FORESTRY COMMISSION

STATEMENT OF OVERHEAD AND FOREST ESTATE EXPENSES FOR THE YEAR ENDED 31 MARCH 1980

Previous Year			
£000			*£000*
10,439	Salaries and national insurance		11,964
2,098†	Travelling, subsistence and staff transfer expenses		2,486
1,560	Office expenses		1,785
176	Losses, compensation and bad debts		276
175	Legal expenses		210
451	Depreciation on equipment		571
220	Protective clothing		—
681†	Miscellaneous expenses		838
1,982	Provision for pensions and gratuities		2,250
1,772	Accommodation and estate expenses (Note 18)		1,052
19,554			21,432
268	*Less* Miscellaneous income		203
19,286			21,229
	Distribution	*See Statements*	
8,005	Plantations	1	8,518
1,538	Forest Recreation and Amenity	2	1,478
	Commercial Recreation: Camp sites and Forest		
176	Cabins	3	152
186	Shooting and Fishing	3	198
5,706	Harvesting	4	6,653
196	Surplus Estate	5	278
253	Agency	6	276
229	Sale of Land and Buildings	9	344
3	Debtors		3
16,292	Total Forestry Enterprise		17,900
2,994	Forestry Authority		3,329
19,286			21,229
20,672	Standard		24,023

†Previous year's figures incorporate a compensatory adjustment of £432,000 due to reclassification of certain expenses.

FORESTRY COMMISSION

FORESTRY ENTERPRISE

NOTES ON THE ACCOUNTS

1. Accounting Policies

(*a*) Target Rate of Return

The Commission has been set a target rate of return of 3 per cent in real terms on assets employed, which were revalued at 1 April 1977.
Plantations, the main asset, were revalued on the basis of the sum of net incomes expected in the future discounted at the target rate. Subsidies were introduced into the account to record:

(i) The Forestry subsidy, being the difference between the target of 3 per cent and the rate (currently 5 per cent) set for public sector trading bodies. Details are given in Note 4 to the Accounts.

(ii) The extent to which new planting and restocking undertaken principally for social reasons cannot earn 3 per cent. Details are given in Note 3.

(iii) The net cost of the provision of recreation, amenity and nature conservation for which commercial objectives cannot be set. Details are given in Statement 2 and Note 3 (*c*) and (*e*).

(*b*) Measurement of Performance

Performance against the target rate of return can only be effectively measured after complete revaluation of the plantations and other assets which is undertaken every five years, the results being reported in special notes to the accounts together with a review of the level of subsidies for the next quinquennium. To monitor progress during the years between valuations an annual comparison is made of the actual costs incurred and income realised from sales with the standards assumed in the revaluation and suitably adjusted for inflation. The variances between these standards and actual results are accumulated in the Balance Sheet and explained in the notes on the accounts.

(*c*) Inflation Accounting

The general objectives of current cost accounting as promulgated in Statement of Standard Accounting Practice (SSAP) 16 have been adopted in preparation of the accounts. Supplementary historical cost information has not however been prepared in addition to the current cost accounts since it is inappropriate and unnecessary with a complete revaluation and reconstruction at five-yearly intervals. Specific published indices have been used to adjust the value of fixed assets, and also stock where appropriate, to current value to the business. There is, however, no specific published 'forestry' index and since one cannot be accurately constructed because of the varying weights of expenditures and incomes, a general price index (based on the GDP implicit price deflator) of the change in the purchasing power of the pound has been used instead to adjust the plantations valuation, the planting and restocking subsidies and the standards used in the measurement of performance. A financial gearing adjustment is not made since it is inappropriate for a grant-aided body, and no adjustment is made to reflect the impact of price changes in the funds tied up in monetary working capital because the effect on the Commission is considered to be minimal.

(*d*) Prior year amounts are provided for comparison but without adjustments for the change in the purchasing power of the pound.

(*e*) The accounting policies adopted for other items are explained under appropriate headings in the notes below.

2. Prior Year Adjustments

(*a*) The increase arising from the annual revaluation of the surplus estate assets was, in the first two years of the quinquennium, credited to the Surplus Estate Trading Account (Statement 5). In conformity with the recommended accounting treatment in Statement of Standard Accounting Practice (SSAP) 16, such unrealised surpluses on revaluation are more appropriately credited to the Current Cost Reserve (Note 6), and an adjustment of £5,044,000 has therefore been made to the prior year balances carried forward in the Surplus Estate Trading Account and in the Current Cost Reserve.

(*b*) Minor discrepancies, totalling £25,000, have been discovered in the calculation of prior year new planting and restocking subsidies. Appropriate corrections have been made in the current year in both the Plantations Account (Statement 1) and in Capital (Note 3).

3. CAPITAL

Previous Year *£000*		*£000*	*£000*
441,788	Balance at 1 April 1979		463,534
29,310	Grant-in-Aid of the Forestry Fund for 1979–80	43,250	
6,968	*less* Appropriated for the Forestry Authority	8,440	
22,342	Grant-in-Aid of the Forestry Enterprise for 1979–80	34,810	
8,785	*less* Subsidies etc (see analysis below in (*b*))	12,027	
13,557	Addition of Grant-in-Aid to Capital for 1979–80		22,783
8,189	Notional interest on Capital (Note 5 below)		10,115
463,534	Balance at 31 March 1980		496,432

(*a*) The balance at 31 March 1980 includes:

(i) A liability to the Crown Estate Commissioners of £1,371,000 (no change from the previous year) contingent upon the sale of property acquired without payment under Forestry (Transfer of Woods) Orders 1924–61.

(ii) Gifts to the value of £153,000 (no change from the previous year).

(*b*) The sum of £12,027,000 deducted for Subsidies etc. is made up of:

Previous Year *£000*		*£000*
5,260	Planting and restocking subsidies including prior year adjustment ((*c*) and (*d*) below and Note 2)	8,406
3,426	Forest Recreation and Amenity subsidy (Statement 2 and (*c*) and (*e*) below)	3,533
99	Notional sick and injury benefit and maternity pay	88
8,785		12,027

(*c*) Details of subsidies (see page 100).

(*d*) The planting and restocking subsidies per hectare for each Conservancy are derived from the weighted average of the net discounted revenues at 3 per cent of the various soil type models representing the reserve of the plantable land at 1 April 1977. The total subsidies for each Conservancy are calculated by multiplying the total area planted and restocked in the year by the average subsidy per hectare converted into current pounds by application of the index based on the GDP implicit price deflator.

(*e*) Forest Recreation and Amenity covers visitor centres, car parks, forest walks, nature trails, conservation of wildlife etc. and small-scale amenity planting from which no commercial rate of return can be expected, together with motor sports and other specialist activities. Expenditure on these facilities less related income is met by a subsidy which amounts to £3,533,000 in 1979–80 (compared to £3,426,000 in 1978–79). The level of subsidy to date is less than the amount foreshadowed annually for the current quinquennium in the 1976–77 Annual Report of £3 million in real terms.

4. FORESTRY SUBSIDY

This subsidy measures the extent to which the target rate of return set at 3 per cent in real terms for forestry falls short of the required rate of return (currently 5 per cent) set for public sector trading bodies calculated as follows:

Previous Year *£000*		*£000*
30,990	Interest at 5 per cent in real terms being the required rate of return (RRR) set for public sector trading bodies calculated on the average value of assets employed at the beginning and end of the year	37,158
18,889	Interest charge in real terms made in the accounts (see Note 5 below) based on the average value of assets employed at the beginning and end of the year	22,706
12,101	Difference being Forestry Subsidy	14,452

Details of Subsidies (*see p. 99*)

	Planting			Restocking			Forest Recreation and Amenity
	Area Planted (hectares)	Subsidy per hectare	Subsidy £79/80 (000)	Area Planted (hectares)	Subsidy per hectare	Subsidy £79/80 (000)	
		£			£		*£000*
Great Britain	15,830	349	5,517	5,669	505	2,864	3,533
ENGLAND							
Total ..	898	383	344	2,168	890	1,930	1,826
Conservancy:							
North-West	162	641	104	483	1,000	483	206
North-East	625	287	179	529	596	315	292
East	93	500	46	603	650	392	364
South-East	—	1,308	—	151	1,581	239	641
South-West	18	806	15	402	1,245	501	323
SCOTLAND							
Total ..	14,135	320	4,525	2,260	(71)	(161)	1,070
Conservancy:							
North	4,145	559	2,317	759	92	70	263
East	1,491	298	444	414	(29)	(12)	214
South	3,112	148	460	639	(188)	(120)	312
West	5,387	242	1,304	448	(220)	(99)	281
WALES							
Total ..	797	813	648	1,241	883	1,095	637
Conservancy:							
North	298	643	192	577	951	549	362
South	499	914	456	664	823	546	275

Further analysis of Great Britain Forest Recreation and Amenity Subsidy is shown on Statement 2.

5. INTEREST CHARGE

The target rate of return set for forestry is 3 per cent in real terms except for investment in Surplus Estate and Commercial Recreation where the required rate is that set for public sector trading bodies, currently 5 per cent. In addition an internal standard is used in investment appraisal and setting charges for camp sites and cabin projects based on yielding a surplus of 7½ per cent on the current value of capital employed. This particular standard is recorded separately in the Commercial Recreation Account for comparison with the surplus earned prior to interest charges at the required rate of return.

The target rates of return are reflected in the accounts by interest charges which are based on the average value of assets employed at the beginning and end of the year. These interest charges are calculated as follows:

	£000
5 per cent on Surplus Estate assets	880
5 per cent on Commercial Recreation assets	196
3 per cent on all other assets	21,630
	22,706

The total interest of £22,706,000 has been distributed within the accounts as follows:

	See Notes/ Statements	*£000*
Capital	Note 3	10,115
Superannuation Fund	Note 7	12,591
		22,706

		£000
Plantations	Statement 1	20,149
Forest Recreation and Amenity	Statement 2	194
Commercial Recreation: Campsites and Forest Cabins	Statement 3	196*
Shooting and Fishing	Statement 3	25
Harvesting	Statement 4	1,171
Surplus Estate	Statement 5	880*
Agency	Statement 6	61
Sale of Land and Buildings	Statement 9	30
		22,706

*Includes interest on the use of other assets (e.g. VME and administration buildings) which were not specifically acquired for the activities concerned. Such interest charges are identified separately under operational expenditure in the accounts.

6. CURRENT COST RESERVE

(previously Capital Maintenance Reserve)

Previous Year *£000*		*£000*	*£000*
57,742	Balance at 1 April 1979	129,084	
—	Prior year adjustment	5,044	
—	As restated		134,128
	Increases arising from revaluation of assets at 31 March 1980		
43,442	Standard value of plantations	83,717	
26,085	Land and buildings in Forest Estate	24,603	
—	Land and buildings in Surplus Estate	3,954	
1,553	Vehicles, machinery and equipment	1,549	
99	Furniture and equipment	180	
82	Stocks and work in progress	176	
71,261			114,179
81	Adjustments arising from reclassification of assets at 31 March 1980		104
129,084			248,411

The Current Cost Reserve consists mainly of the surpluses (or deficits) arising from the annual revaluation of assets within the quinquennium.

The standard value of plantations, including the land, is reassessed annually by application of an index based on the GDP implicit price deflator; this index records a rise of 15 per cent in the year and 40 per cent since the beginning of the quinquennium. Other assets are revalued as described in notes 8 and 9 below.

Reclassification of properties between groups of assets (other than new planting which is dealt with in note 8 below) occasionally takes place within the quinquennium and this may result in a change of value. Such adjustments are reflected by an entry in the Current Cost Reserve.

7. Notional Superannuation Fund

Previous Year £000		*£000*
81,684	Balance at 1 April 1979	93,959
10,700	Interest at 13·4 per cent on opening balance	12,591
5,604	Provision made during year (including £462,000 charged to Forestry Authority)	6,146
785	Contributions received during the year	1,171
98,773		113,867
4,814	*Less* Payments made during the year	6,284
93,959	Balance at 31 March 1980	107,583

The Notional Superannuation Fund was revalued by the Government Actuary at 1 April 1977 to £71,400,000. The balance of the Fund represents the Commission's liability for payments of pension rights to existing and retired staff. It is not specifically invested but is, in effect, a first charge on the assets employed by the Commission. Included in the payments are annuities totalling £47,000 paid to the National Debt Office in respect of commuted compensation allowances totalling £317.000 which were paid to forester grades who retired prematurely.

8. Fixed Assets

Freehold and Leasehold Land and Buildings

	Forest Estate £000	*Surplus Estate £000*	*Total £000*
At 1 April 1979	87,990	13,981	101,971
Additions	4,386	154	4,540
Disposals and transfers at book value	9,738	(2,218)	7,520
Depreciation charge for year	1,720	—	1,720
Revaluation adjustment	24,603	3,954	28,557
At 31 March 1980	105,521	20,307	125,828

Plant and Equipment

	Vehicles, Machines and Equipment £000	*Furniture and Equipment £000*	*Total £000*
Gross current replacement cost			
At 1 April 1979	37,356	1,714	39,070
Additions during year at cost	6,544	104	6,648
Disposals and transfers at book value	2,817	74	2,891
Revaluation adjustment	3,780	344	4,124
At 31 March 1980	44,863	2,088	46,951

	Vehicles, Machines and Equipment £000	*Furniture and Equipment* £000	*Total* £000
Depreciation			
At 1 April 1979	22,469	855	23,324
Provision for year	4,755	166	4,921
Eliminated on disposals and transfers ..	2,726	70	2,796
Backlog depreciation on revaluation ..	2,231	164	2,395
At 31 March 1980 ..	26,729	1,115	27,844
Net current replacement cost			
At 31 March 1980 ..	18,134	973	19,107
At 1 April 1979	14,887	859	15,746
Total Fixed Assets			
At 31 March 1980	—	—	144,935
At 1 April 1979 ..	—	—	117,717

Land and Buildings

(*a*) Land under plantations is treated as part of the overall Plantations asset (Statement 1) and is accordingly revalued annually by reference to the index based on the GDP implicit price deflator.

(*b*) Other freehold and leasehold land and all buildings were valued by professionally qualified staff at 1 April 1977 generally on the basis of open market values with acquisition costs added for forest estate properties and disposal expenses deducted from surplus properties. Specialist buildings were, however, valued at net replacement cost. Forest recreation and amenity facilities are only included in the Balance Sheet at a nominal value of £1 per item for asset accounting purposes. The balance of the expenditure on the creation of these facilities is charged directly to the Forest Recreation and Amenity Subsidy Account as this is intended to embrace both the capital and current expenditure on these activities when incurred.

(*c*) A further professional valuation of these assets will be carried out at the end of the quinquennium in March 1982. In the interim period the end of year valuations have been assessed as follows:

Land – for land awaiting planting by use of an internal index based on the current cost of acquisition (indicating a 20 per cent rise over the year) and for other land by application of indices published by the Inland Revenue relating to sales of agricultural and forestry land (indicating increases ranging from 32 to 34 per cent in the valuations).

Buildings – by application of an index relating to the cost of new construction as published by the Department of Industry. This index indicates a rise of 30 per cent in the year and a suitable adjustment was made thereto in respect of surplus buildings which are not depreciated.

(*d*) Disposals and transfers include land afforested in the year with a corresponding entry in the Plantations account and also reclassification of land between Forest and Surplus Estate. Differences between the updated value of the land used for planting and the standard value of land under plantations (see (*a*) above) are reflected in the Plantations Variance account. Differences arising from reclassification between Forest and Surplus Estate are reflected in the Current Cost Reserve.

(*e*) Buildings are occasionally reclassified between Forest Estate and Surplus Estate during the quinquennium and an appropriate adjustment is made in such cases to the opening balances at the start of each year. In addition, amendments were made to the 1979–80 opening balances within Fixed Assets to cover the reclassification of Forest Estate Buildings to Plant and Equipment.

Plant, Machinery and Equipment

(*f*) These assets have been valued at gross current replacement cost calculated principally by reference to asset type indices issued by the Department of Industry (showing increases of up to 20 per cent) less aggregate depreciation on the basis stated below to reflect the expired proportion of the assets' working lives.

Depreciation

(*g*) Depreciation is provided at varying rates designed to write off the cost of fixed assets in equal annual instalments over their anticipated useful lives. Freehold and leasehold land and buildings classified as surplus are not depreciated. The estimated useful lives used for depreciation calculations are as follows:

Buildings	– 13–80 years or, in the case of leasehold buildings, the term of the lease, whichever is the shorter.
Vehicles, machinery and equipment	– 3–16 years
Furniture and equipment	– 5–20 years.

9. Stocks and Work in Progress

Previous Year £000		£000
4,832	Timber	5,388
829	Plants and seed	1,109
157	Livestock	105
1,721	Consumable materials and supplies	2,485
7,539		9,087

The bases for valuation are as follows:

Timber and plants	– at net realisable value
Livestock	– at the lower of historic cost and net realisable value.
Consumable materials, supplies and seed	– at current replacement cost assessed either by last price paid or by application of a DOI index thereto.

10. Cash at Banks and in Hand

Previous Year £000		£000
1,693	Balance of Forestry Fund with Paymaster General	560
105	Balance in banks	852
192	Cash in transit and in hand	5
1,990		1,417

11. Variance on Plantations Account

The increase in the valuation of plantations during the year (at 1979–80 standard costs and prices) is £33,762,000 while the actual net expenditures and transfer values amount to £36,492,000, an adverse variance of £2,730,000 which arises as follows:

	Standard at 1979–80 costs and prices £000	*Actual* £000	*Variances* £000
Plantations acquired	153	139	14
Land planted	3,756	6,201	(2,445)
Formation	3,846	3,791	55
Protection	3,080	3,053	27
Crop improvement	2,223	2,333	(110)
Lease rents, supplies and miscellaneous	661	645	16
Road construction	2,508	3,368	(860)
Road maintenance	1,687	1,450	237
	17,914	20,980	(3,066)
Sundry income	463	550	87
Net operational expenditure	17,451	20,430	(2,979)
Labour oncost	6,282	7,823	(1,541)
Overhead expenses	10,035	8,518	1,517
Research and Development	2,514	2,241	273
			(2,730)

The contributory reasons for the variances are detailed below.

(*a*) The excess cost of £2,445,000 on Land planted represents the difference between the current value and the standard allowed for in the plantations valuation updated by the GDP index. The difference between the two sets of valuations is now very significant with acquisition costs of plantable land having risen by 148 per cent since the start of the quinquennium against an increase in the standard value of plantable land of 40 per cent based on the GDP.

(*b*) The saving of £55,000 on Formation arose from reductions in normal planting costs attributable to the open weather conditions in winter and spring partially offset by increases in the costs of restocking windblown areas and expenditure on the purchase of imported plants at higher prices.

(*c*) Restrictions on manpower levels resulted in reduced programmes in fire protection and fence maintenance which compensated for increased fencing costs in replanting areas and produced an overall saving of £27,000 on Protection.

(*d*) The additional cost of £110,000 on Crop Improvement stemmed mainly from increased programmes of cleaning to reduce arrears from previous years and aerial fertilisation, a significant proportion of which is expected to increase the productivity of plantations beyond the level envisaged in the valuation at the start of the quinquennium.

(*e*) The saving of £16,000 on Lease rents, supplies and miscellaneous is principally due to lower legal costs on the purchase of land than envisaged in the standard.

(*f*) The excess cost of £860,000 on Road construction is principally due to programme increases, particularly on upgrading, to meet the higher specifications required by the trend to larger and heavier vehicles and safety requirements.

(*g*) The reduction of £237,000 on Road maintenance expenditure is due to timing changes in programmes mainly related to the need to transfer resources to road construction.

(*h*) The £87,000 excess of income over standard is due to larger deer culls and higher prices paid for venison than visualised when the standard was set.

(*i*) The excess cost of £1,541,000 on Labour oncost is principally due to arrears of pay following backdated pay awards, the inclusion of protective clothing previously treated as overheads and increases above the standard both in the provisions made for superannuation benefit to industrial staff and in transport costs (see also Note 21).

(*j*) The reduction of £1,517,000 in Overhead expenses is due to a significant increase in the income received from mineral exploitation, the transfer of protective clothing costs to Labour Oncost and the fact that staff costs, which form the bulk of overheads, have risen by a smaller margin since the beginning of the quinquennium than the GDP increase of 40 per cent.

(*k*) Research and Development charges to the Enterprise were £273,000 less than anticipated partly due to savings in staff costs together with a programme reduction in work study.

12. Commercial Recreation Trading Account

The Commercial Recreation account covers the provision of tourist accommodation in the form of camping and caravan sites, forest cabins, etc. for overnight visitors and the letting of shooting and fishing rights belonging to the Commission.

Camp sites and cabins show a surplus of £159,000 before interest on capital employed. This surplus is equivalent to a return of 4·7 per cent compared to the target rate of 5 per cent for public sector trading bodies and 7·5 per cent set as the internal standard. However the current year's account includes expenditure incurred on the development of potential cabin sites now abandoned because of public expenditure cuts and if this expenditure is disregarded the return on capital employed is 5·5 per cent. The provision of facilities, which will never attain a commercial return, to combat the problems of 'wild' camping, and a lower occupancy rate than the previous year for both cabins and camp sites are the principal reasons for the shortfall against the internal standard. The cumulative shortfall in the quinquennium against this internal standard is now £218,000 but only £17,000 against the 5 per cent interest rate charged in the accounts. It is unlikely that the earlier shortfall against the internal standard will be recouped in the current quinquennium but it is still expected that the overall return will reach 5 per cent for the five-yearly period.

No separate standard has been set for shooting and fishing. There is a surplus of £69,000 on the account in the year after charging interest for the use of vehicles and forest estate properties and a cumulative surplus of £102,000 since the beginning of the quinquennium.

13. HARVESTING TRADING ACCOUNT

There was a deficit of £6,053,000 in the year on the Harvesting Trading Account after charging £13,796,000 for the value of fellings and thinnings consumed at current standard values which allow for a 15 per cent increase for the year based on the GDP implicit price deflator. A nil balance would have indicated for the trees harvested no deviation from the 3 per cent target.

This deficit arose as follows:

	Standard at 1979–80 costs and prices £000	*Actual £000*	*Variance £000*
Income (after adjustment for increase in stock of £97,000)	42,904	34,479	(8,425)
Expenditure (after adjustment for increase in work in progress of £459,000)	15,357	13,715	1,642
Net Harvesting Revenue ..	27,547	20,764	(6,783)
Labour oncost (see Note 17) ..	5,523	5,197	326
Surplus	22,024	15,567	(6,457)
Overheads and Interest	8,228	7,824	404
Balance ..	13,796	7,743	(6,053)

The standards are based on unit costs per cubic metre so that the comparison with actual performance remains unaffected by changes in the volume of wood handled.

The 1979–80 standards allow for a 15 per cent increase in income and expenditure based on the GDP index. Costs have been held within the revalued standards. However, income has only increased in value per cubic metre by 13 per cent which, although representing an improvement in actual money terms from 1978–79 (which was already below standard), represents a shortfall of 2 per cent compared to the increase in standard expected for the year as wood values failed to keep pace with the general rate of inflation. Although some recovery occurred in the particle-board industry, developments in the pulp, paper board industry were less favourable and the pressures on prices for small roundwood continued to feature in the market. These events reflect the general experience throughout Europe.

It is not considered likely that the significant improvement needed to raise actual income to the standard will be attainable in the remaining years of this quinquennium.

14. SURPLUS ESTATE TRADING ACCOUNT

Surplus Estate comprises those properties which are not required for the Forestry Enterprise and are intended to be sold at the earliest opportunity. The account shows an operational deficit on letting the properties of £1,086,000 after charging interest on capital employed at 5 per cent. In addition a deficit of £200,000 arose on sales during the year (see Statement 9 for details). The cumulative deficit since the beginning of the quinquennium is now £2,905,000 but this is more than balanced by the write up of £8,998,000 in property values, arising from the annual revaluation by index, which has been credited to the Current Cost Reserve.

15. AGENCY SERVICES TRADING ACCOUNT

Agency services covers the provision of staff and machinery to carry out motorway and trunk road planting on behalf of the Department of the Environment, forestry operations for private estates generally where there is no contractual service available and the occasional loan of labour to adjoining landowners.

The account should be in balance with income equalling expenditure. Due however to a failure to fully recover overheads and the cost of machinery employed in a time of sharply rising prices of fuel and spares, there was a deficit of £70,000 during the year. Charges have since been adjusted to recover fully the costs of future agency work and also the cumulative deficit in the quinquennium of £100,000.

16. MISCELLANEOUS TRADING ACCOUNT

The income in this account comprises a receipt from the Severn Trent Water Authority representing an equal share in the surplus on the joint management scheme at Lake Vyrnwy in North Wales.

17. LABOUR ONCOST

Labour oncost covers those expenses incurred in the employment of industrial labour which cannot be allocated directly to activities, eg employers national insurance, wet time, provision for superannuation rights. Most of the expenditure varies in relation to the number of men employed and the total cost is distributed annually to activities on a time basis.

Standards are only set for the Plantations and Harvesting accounts and the respective variances are set out in Notes 11 and 13. The variances are principally related to arrears of pay, the inclusion of protective clothing previously treated as part of overhead expenses and increases above the standard both in the provisions made for superannuation benefit to industrial staff and in transport costs (see also Note 21).

18. OVERHEAD AND FOREST ESTATE EXPENSES

The actual cost of overheads and forest estate expenses amounted to £21,229,000 compared to an updated standard of £24,023,000 giving a favourable variance of £2,794,000. Part of this variance is due to a lower rise in salaries and associated staff costs than the 40 per cent increase (based on the GDP implicit price deflator) built into the standard. Other contributory reasons are the sizeable increase in income received from mineral exploitation and the transfer of protective clothing expenditure to labour oncost.

Accommodation and estate expenses detailed in Statement 11 comprise the net cost of properties (other than Commercial Recreation) needed for the Forestry Enterprise. The properties include houses let to forest workers, foresters and outside parties, administration buildings and agricultural and other subjects temporarily let pending planting. The total net direct cost in the year amounts to £1,052,000 and is analysed as follows with royalties and other income from mineral exploitation being detailed separately:

	Expenditure £000	*Income* £000	*Net* £000
Forest workers' houses and holdings	1,221	365	(856)
Foresters' houses	375	208	(167)
Administration buildings	1,670	356	(1,314)
Agricultural properties and other residential accommodation	786	970	184
Mineral exploitation	—	1,101	1,101
	4,052	3,000	(1,052)

19. FUTURE CAPITAL EXPENDITURE

Future capital expenditure on Fixed Assets in 1980–81 authorised by the Commission amounts to £11,727,000 (£11,080,000 for 1979–80).

20. CONTINGENT LIABILITIES

Contingent liabilities exist at 31 March 1980 for damages caused by the Commission to other persons' property and for compensation for personal injury to Commission employees amounting in all to an estimated sum of £69,000 (£66,000 at 31 March 1979).

21. SPECIAL NOTE

Examination of the variances on the Plantations and Harvesting Trading Accounts has revealed inaccuracies in the attribution of the standards set for labour oncost at the 1977 revaluation, as between these accounts. This will have no net effect on the activity variances used in the measurement of performance to be reported at the end of the quinquennium but could alter the opening (1977) and subsequent valuation of the plantations and planting subsidy levels as a result of the discounting effect on the future cash flows. The precise effect on the Annual Accounts as a whole could only be quantified and corrected by a complex and costly exercise necessitating a revision of the accounts and valuations from 1 April 1977. It is, however, considered that the overall effect on the valuation and subsidies is unlikely to be sufficiently significant to justify the costs and resources involved in its correction especially bearing in mind that a full revaluation taking these points into account will be made at 1 April 1982.

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