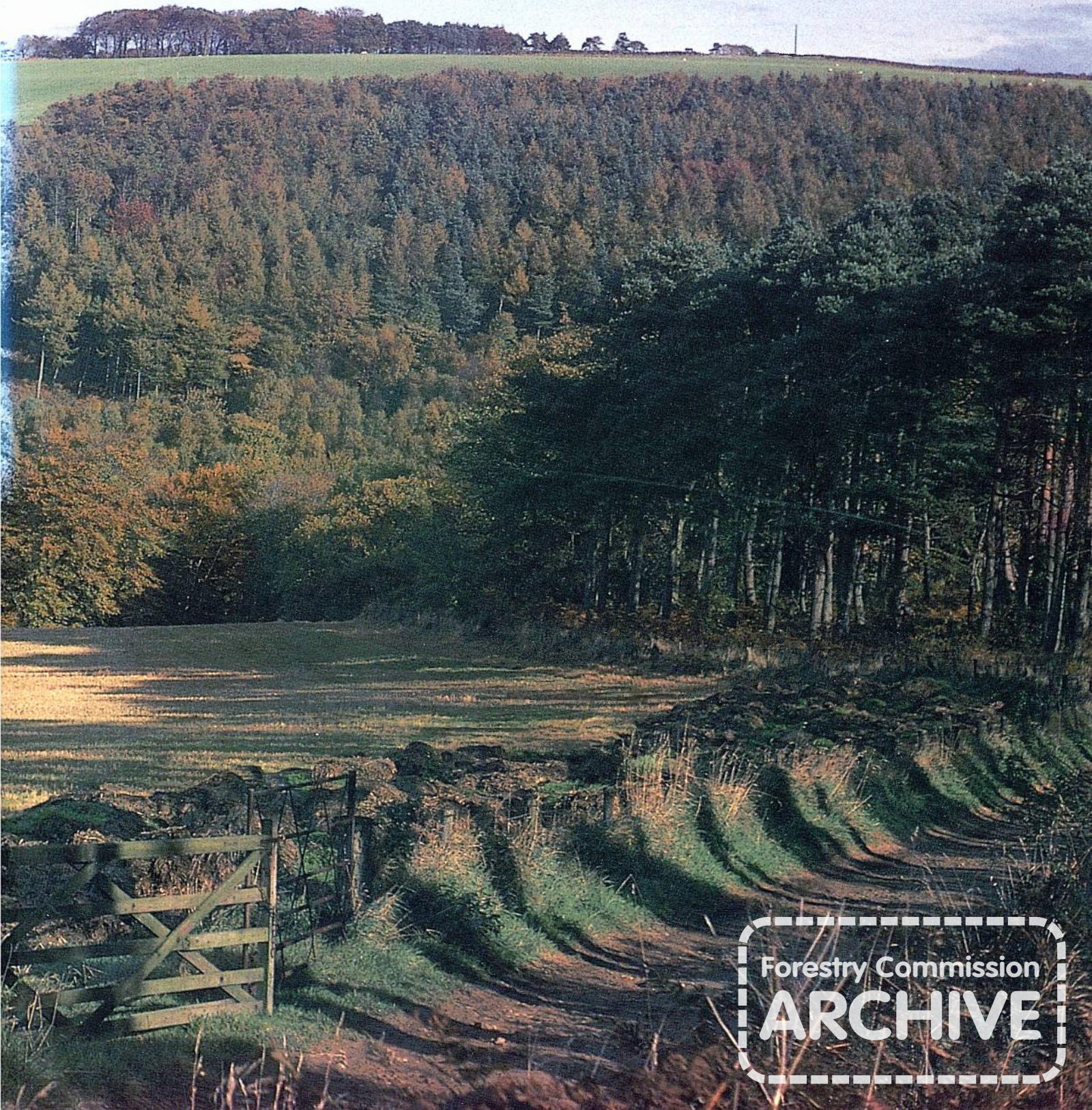


Forestry Commission

66th Annual Report and Accounts 1985-86



Forestry Commission
ARCHIVE

COVER: A farm and forestry landscape near Falling Fosse, North Yorkshire. The attractive mixed larch and broadleaved woodlands are managed by the Forestry Commission.

Sixty-Sixth Annual
Report and Accounts of the
Forestry Commission
for the year ended
31 March 1986
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

19 September 1986

To:

The Rt Hon MICHAEL JOPLING MP,
Minister of Agriculture, Fisheries and Food

The Rt Hon MALCOLM RIFKIND QC, 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 66th Annual Report of the Forestry Commissioners which covers the year ended 31 March 1986.

I am, Gentlemen,
Your obedient Servant,

(Sgd) DAVID MONTGOMERY
Chairman

The Forestry Commissioners, Heads of Divisions and Conservators at 31 March 1986

Forestry Commissioners

Sir David Montgomery Bt, JP, DL, *Chairman*
Mr G. D. Holmes CB, *Deputy Chairman and Director General*
Mr R. T. Bradley
Mr I. D. Coutts CBE
Mr J. Forbes
Captain W. F. E. Forbes DL
Mr G. J. Francis
Lord Gibson-Watt PC,MC,DL
Mr G. O. Hutchison
Mr J. D. Pollock
Mr D. T. J. Rutherford

Heads of Divisions

Secretary: Mr P. J. Clarke
Director, Harvesting and Marketing: Mr D. L. Foot
Director, Research: Mr A. J. Grayson
Director, Planning & Surveys: Mr D.S. Grundy
Director, Estate Management: Mr R. P. Illingworth
Director, Private Forestry and Services: Mr A. A. Rowan
Director, Personnel: Mr C. W. Simmonds
Controller of Finance: Mr C. F. Turquand
Head of Silviculture: Mr J. R. Aldhous
Head of Data Processing: Mr E. K. Arthurs
Chief Engineer: Mr R. M. Hay
Head of Information: Mr J. F. Lindsay

Conservators

England

North: Mr A. Rix
East: Mr M. Dinning
West: Mr J. R. Fletcher

Scotland

North: Mr J. Atterson
Mid: Mr A. Morrison
South: Mr G. G. M. Taylor

Wales: Mr D. Y. M. Robertson

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

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Acknowledgements

We are grateful to the following for their kind permission to reproduce photographs from their collections: Caberboard Ltd, Castle Wightman Ltd, The Dean and Chapter of York Minster and Henry Venables Ltd, Highland Forest Products, Jones of Larbert, A.H. McIntosh & Co Ltd, Shotton Paper Co Ltd, and Thomas Smith (Kirkoswald) Ltd. The cover and other pictures are taken from the Forestry Commission's collection.

General Review

The Year in Perspective

1. Our chief impression of 1985-86 is one of an increasing interest in forestry issues, both in Parliament and in the Press, compared with previous years. Much of this added attention has stemmed from the interest generated in conservation in the countryside which has led to a continuing public and political debate on the relationship and balance between forestry, conservation and other land use interests. We have ourselves helped to promote this discussion through our broadleaves policy review and the launch of our new conservation initiative. The search for solutions to the problem of agricultural surpluses has concentrated attention on the place of woodland as a farm crop, and there was also extensive, if brief, publicity towards the end of the year arising from speculation that the Commission's entire landholdings were to be privatised.
2. Important though these topics undoubtedly are, they tend to hide the solid, but less dramatic, achievement of the forestry industry in Britain. Against the background of changes in attitude in the environmental and land use spheres, it is worth remembering that the Forestry Commission is still statutorily charged, as it was originally in the Forestry Act of 1919, with the general duty of promoting the interests of forestry, the development of afforestation and the production and supply of timber and other forest products. The way in which we set about this duty must, of course, continue to adapt to changes in public perceptions, but our *raison d'être* remains that of contributing as much as we reasonably can towards Britain's current and future timber needs, which are still among the highest in the world. We feel it right, therefore, to begin our general review of the year with a report on wood production and wood processing.

Wood Production and Wood Processing

State of the Wood Market

3. British timber continues to expand its share of the sawn softwood market. While 1985 was a year of static demand, with consumption in the UK totalling 7.8 million cubic metres, production from domestic sources increased by 19 per cent to an estimated 1.4 million cubic metres. Thus home production now represents an estimated 18 per cent of total consumption, and in 1985 took second place only to Sweden in terms of volume supplied.
4. There was a small growth in Britain's consumption of paper and board products and particleboard, and both sectors saw an increase in production from British-grown timber. In the paper and board sector, the start of newsprint production by the Shotton Paper Company in May 1985 helped to maintain the recent growth in output. Newsprint production at this plant, which relies solely on home-grown timber, meets 14 per cent of the UK's requirements. Further information about this new mill appears at paragraph 6. Coated cartonboard, a packaging material widely used for foodstuffs, toiletries and pharmaceuticals, has recently increased its market share to 45 per cent of consumption following the expansion by Thames Board in 1982. The particleboard industry, as a result of the expansion and modernisation we reported last year, increased its sales by 16 per cent and now accounts for 30 per cent of apparent UK consumption. This increase of capacity in both the paper and panel sectors enabled us to achieve a dramatic increase in sales of small roundwood to domestic industry, which more than doubled.
5. These are encouraging gains for British wood products, although it should be noted that there are some sectors of the market where there is no domestic manufacture, such as chemical pulp which is used in some kinds of paper making. The size of the overall market is assessed in terms of wood raw material equivalent, and in 1985 UK consumption was an estimated 39.9 million cubic metres. Out of this, the consumption of domestic roundwood was 4.4 million cubic metres, representing a market share of 11 per cent and an estimated 12.5 per cent of consumption in value terms. The balance represents an import bill for wood and wood products of some £4 billion.

Developments in the Wood Processing Industries

6. United Paper Mills' newsprint mill at Shotton in north Wales, trading under the title Shotton Paper Company Ltd, was officially opened by His Royal Highness the Prince of Wales on 17 December 1985. The Shotton mill, which uses the latest pulp and paper-making technology, is now the largest, single wood-processing plant in Britain and a major customer for the Commission and many private forest owners. The plant is capable of

producing 200,000 tonnes of newsprint a year and the Company expect to achieve this level of production by the end of 1986, well ahead of their planned start-up schedule (Plate 2). The quality of wood fibre from their pulpwood supplies, of which 90 per cent is spruce, has exceeded the Company's expectations, and Shotton paper is now being used in the press rooms of several national daily and provincial newspapers.

7. For the third year in succession we have seen an increase in manufacturing capacity for wood-based panels. Highland Forest Products' structural composition board plant at Dalcross near Inverness was commissioned in May 1985 and formally opened by the then Secretary of State for Scotland, the Rt Hon George Younger MP, on 25 November 1985. Production is expected to reach its full capacity of 80,000 cubic metres a year during 1986 (Plate 2). At Hexham, Egger (UK) installed a new chipboard line which was commissioned in December 1985 to produce high-grade chipboard for furniture manufacture. At the year's end, Caberboard Ltd were also actively expanding by increasing the capacity of their medium density fibreboard (MDF) plant at Cowie in Stirlingshire. Since installing Britain's first MDF plant in 1980, the Company have developed a successful and growing market for this product in the furniture industry (Plate 2).

8. One of the largest Scottish sawmill enterprises, Riddoch of Rothiemay Ltd, went into receivership on 29 July 1985. The main sawmill at Kilmallie was purchased by Thomas Smith and Sons (Kirkoswald) Ltd. The other two sawmills at Kinnoir and Mosstodloch were sold by the Receiver to Generation Securities Ltd, who formed a new company, Riddochs Ltd, to operate them. All three mills were in production, under their new owners, by mid-autumn 1985.

9. A Finnish company, Oy Kaukas Ab, announced in September 1985 that they were undertaking a study into the feasibility of building an integrated mechanical-pulp and lightweight-coated paper mill in Scotland. This type of development was identified as a promising prospect by consultants Arthur D. Little in their 1982 study of a wood-processing strategy for Scotland. Kaukas' consideration of this project is still in its exploratory stages, but a decision is expected in 1986.

10. 1985-86 saw the forest products industry in Britain reaching a milestone in its reconstruction and development, and the total volume of wood harvested from Commission forests passing the 3 million cubic metres mark for the first time. Only five years ago we reported on the effects of the recession, including the collapse of three major pulpmills, which resulted in the loss of a market for some 550,000 tonnes of pulpwood annually. The two greenfield investments by Shotton Paper Company and Highland Forest Products, together with the several other developments in the sawmilling and small roundwood sectors which we have reported over the last two years, bring to a happy conclusion a period of considerable uncertainty in the market place for British forest products.

Forestry and the Environment

11. The year was marked by a continuing concern, in which we shared, to ensure that developments in the countryside are undertaken in harmony with the environment. Our commitment to good conservation practice in forestry was strengthened by a number of policy initiatives, as well as through a new duty laid upon us through the Wildlife and Countryside (Amendment) Act 1985. The concept of achieving a 'reasonable balance' between competing interests lies at the root of the present countryside debate and forms the basis of our new statutory duty.

Broadleaves Policy

12. In our last two reports, we noted the progress made in our review of broadleaves policy. This major review, which covered a period of 2½ years and involved detailed consultations with some 120 organisations and individuals, culminated in the announcement on 24 July 1985 by the then Secretary of State for Scotland, the Rt Hon George Younger MP, of new policy initiatives by the Government "designed to maintain and enhance the value of Britain's broadleaved woodlands for timber production, landscape, recreation and nature conservation".

13. The aims of the new policy were described by Mr Younger in the following way:

"It is the Government's wish to ensure that the broadleaved character of the well-wooded parts of the country is maintained and improved and to see broadleaved woodlands established in areas where they are scarce, including areas on the periphery of towns and cities. The maintenance and greater use of broadleaves in the uplands will be encouraged, particularly where they will add to the beauty of the landscape and the

wildlife interest; this will apply equally to the extensive conifer plantations which have been established in the uplands in response to our continuing policy of expanding home timber supplies. Encouragement will also be given to the greater use of broadleaved woodlands generally for conservation, recreation, sport and landscape, as well as for wood production. In particular, steps will be taken to ensure that the special interest of the ancient semi-natural woodlands is recognised and maintained. Essential to these objectives is the need to increase the quality and value of timber produced by broadleaved woodlands. We also consider it important to the success of these new policy aims that they are pursued with a reasonable degree of flexibility and within the framework of an essentially voluntary approach which harnesses the interest and goodwill of landowners, farmers and foresters”.

14. A number of new measures were announced to achieve these policy aims, which would apply as appropriate both to the Commission’s woodlands and to those in private ownership. Among these was a new grant scheme — the Broadleaved Woodland Grant Scheme — which we introduced on 1 October 1985. The scheme is designed to encourage the rehabilitation of existing broadleaved woodlands, by natural regeneration or planting, and the establishment of new ones. It offers significantly higher rates of grant than our other schemes for the planting or regeneration of broadleaves on their own. The scheme has had a most encouraging start and it looks as though it will prove popular with landowners of all categories. We received more than 1,800 applications for entry to the scheme in the first six months covering over 11,000 hectares, of which 9,000 hectares were in England. The average size of application has been just over 6 hectares, and 20 per cent of the area approved for planting during the period has related to the creation of new woodland.

15. As with most planting plans, it will take a year or more before the proposals made under the Broadleaved Woodland Grant Scheme are translated into significant planting achievements, but we are very pleased to be able to report that in the year ended 31 March 1986 we grant-aided some 850 hectares of new broadleaved planting under our various schemes, including 46 hectares under the new scheme: this represented a total increase in new broadleaved planting of some 43 per cent over the previous year. We expect this figure to be significantly higher in succeeding years as planting under the Broadleaved Woodland Grant Scheme gets into its stride.

16. Before the start of the new scheme, we published guidance on the management of broadleaved woodlands agreed in consultation with the Environment Departments, the Nature Conservancy Council, the Countryside Commissions and appropriate non-Government bodies. We are taking these guidelines into account both in our own operations and in considering applications for grant aid or felling permission for broadleaved woods. The Government’s policy statement predicted that, where management proposals were within the guidelines, our consultations with other authorities should be easier because the ‘ground rules’ would be clear to all concerned, and this has proved to be the case.

17. The broadleaves policy statement also foreshadowed a reduction in the volume of timber — both broadleaved and conifer — which may be felled without a licence. This change, which was designed to give further protection against the depletion of existing woodlands, was made through an Order for which we received Parliamentary approval last December (paragraph 138). Its effect was to reduce the ‘licence-free quota’ from 30 cubic metres to 5 cubic metres per quarter, with a reduction in the volume of such timber that may be sold from 5.5 cubic metres to 2 cubic metres. Allied to this change we are continuing, in the administration of the felling-licensing system, to operate a general presumption against the granting of clear-felling permissions where the intention is to convert woodland to agricultural use, or broadleaved woodland to conifers. This policy, which we introduced in March 1984, has already had a dramatic effect in stemming the erosion of broadleaved woodland. Further protection against the indiscriminate loss of woodland was also envisaged in the Forestry Bill presented to Parliament in March 1986 by Sir John Stradling Thomas MP which provided for our being given powers to require owners or tenants convicted of illegal felling to restock the land with trees.

18. The broadleaves review was one of the most important and difficult exercises we have undertaken in recent years. We were faced with having to strike a balance between the legitimate interests of the owners of broadleaved woodlands on the one hand and those of the conservation lobby on the other. The outcome was a triumph of patient negotiation in which the Nature Conservancy Council, the Countryside Commissions, Timber Growers United Kingdom and the Institute of Chartered Foresters played a prominent part, made all the more noteworthy by the fact that it entailed no additional calls on public funds. The response to the new grant scheme, as well as the goodwill shown towards the new measures

generally, augurs well for the success of the policy, which we shall be reviewing towards the end of 1988.

19. The full text of the Government's broadleaves policy statement is reproduced at Appendix V. We have also published a number of free explanatory booklets relating to the new measures, which are included in the list of publications at Appendix VII.

*Wildlife and
Countryside
(Amendment)
Act 1985*

20. Like other Government Departments, the Forestry Commission has a general duty under the Countryside Acts to have regard to the desirability of conserving the natural beauty and amenity of the countryside, including the conservation of its flora, fauna and geological and physiographical features. Since 26 August 1985, we have also had a particular duty to endeavour to achieve a reasonable balance between the needs of forestry and those of the environment. This further duty is set out in Section 1(3A) of the Forestry Act 1967 — as amended by the Wildlife and Countryside (Amendment) Act 1985 — in the following terms:

“In discharging their functions under the Forestry Acts 1967 to 1979 the Commissioners shall, so far as may be consistent with the proper discharge of those functions, endeavour to achieve a reasonable balance between:-

- a. the development of afforestation, the management of forests and the production and supply of timber, and
- b. the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographical features of special interest.”

21. We have welcomed this new duty, which gives statutory force to our long-standing policy of harmonising forestry development with other interests in the countryside, including that of conservation. The appointment by the Commission of a Landscape Consultant and of a Conservation Consultant, the preparation of conservation plans to cover all the Commission's forests, and the review of broadleaves policy are examples of this continuing objective of harmonisation and balance — all of which pre-date the new statutory duty.

*The Commission's
Nature Conservation
Policy*

22. Arising from the new statutory duty and on the basis of comprehensive advice received from our Conservation Consultant, Dr J. Morton Boyd (Plate 4), we published on 24 March 1986 a revised version of our Policy and Procedure Paper No 4 *The Forestry Commission and Conservation*. This sets out in clear terms our policies towards nature conservation, based upon the important theme that the forest as a whole must be regarded as having conservation value.

23. With the publication of this policy paper, we took the opportunity to announce the following complementary initiatives:

- to consult at national level with both statutory and voluntary environmental organisations on the detailed practical implementation of our nature conservation policy, as outlined in the policy paper;
- to agree a statement of intent with the Nature Conservancy Council about the management of our 344 Sites of Special Scientific Interest (SSSIs);
- to identify and develop sites of special nature conservation interest on our land in addition to the existing SSSIs, with the help of voluntary conservation bodies and the Royal Society for Nature Conservation;
- to improve the conservation plans for our forests as a whole in consultation with voluntary conservation groups;
- to set up local consultative panels as recommended by Dr Boyd to provide a forum for discussion of environmental issues of all kinds: these will be distinct from our statutory Regional Advisory Committees, which will continue with their general advisory role and their special task of conciliating over disputed grant and felling proposals.

24. We hope that the consultations upon which we have now embarked will result in the production of constructive detailed guidance on the ways in which forestry can best further the aim of improved conservation practice.

*Forestry and
Woodland Code*

25. We warmly welcomed the publication by Timber Growers United Kingdom in November 1985 of their *Forestry and Woodland Code*. The code provides guidance to

private woodland owners on good forestry practices which harmonise with nature conservation and the needs of the community. It gives information about the help and advice available to owners and managers of woodlands, and presents guidelines on access, recreation, nature conservation, landscape, roads, water and archaeological sites.

26. It is a condition of our current grant schemes that the woodland area should be managed in such a way as to secure, among other things, environmental benefits and the provision of opportunities for recreation; applicants are also encouraged, in framing their proposals, to ensure that sufficient account is taken of amenity and conservation considerations, especially in areas designated for their landscape or conservation value. Adherence to the guidance given in Timber Growers' code should assist in this process and ensure that there is a common environmental standard both for our own woodlands and those in the private sector.

*Forestry and
Environment Studies*

27. A number of reports were in the course of preparation at the end of the year which considered the place of forestry in the environment. These included the Nature Conservancy Council's paper *Nature Conservation and Afforestation in Britain*, a first draft of which was circulated for comment in August 1985; a paper by the Countryside Commission for Scotland on *Forestry in Scotland*, which was issued for comment in November 1985; and a report by the Centre for Economic and Environmental Development entitled *Forestry: Britain's Growing Resource*, on which we were also given the opportunity to express our views. These reports, which were expected to be published in the summer of 1986, look at forestry from differing standpoints, but they will all make a contribution to the important debate taking place at present on forestry and the environment generally.

28. It has been a deliberate policy of ours since the early 1970s to take account of the needs of other land users and of the views of those who care for the countryside. We therefore looked forward to the publication of these reports and the opportunity to consider their proposals. Along with the consultations we are carrying out on the implementation of our own conservation policies, we hope that they will help to achieve the necessary balance to which we are committed.

*Planting in Caithness
and Sutherland*

29. During the year mounting concern was expressed over the afforestation taking place in the low-lying peatlands of east Sutherland and Caithness — known as the 'flow country' — because of fears that it poses a significant threat to the conservation interest, and bird habitats in particular. We have had a number of meetings with the Nature Conservancy Council and the Royal Society for the Protection of Birds in order to identify the nature conservation interest in the area and to avoid conflicts of interest as far as possible. While afforestation proposals in areas designated as SSSIs are automatically the subject of discussions with the Nature Conservancy Council, we have, since early 1985, extended these consultations to sensitive sites in the flow country outside the designated areas. In order to establish the extent of the problem, we have also contracted with the research department of the Royal Society for the Protection of Birds to undertake a major research project in the area in 1986 to look at the effects of afforestation on moorland birds. Fountain Forestry, the private company which is carrying out much of the afforestation in the area, is also contributing towards the cost of the project.

30. We hope that these various initiatives will lead to a mutually acceptable balance between forestry and conservation in the flow country. We can understand the misgivings being expressed by conservationists over afforestation there, but the flow country is a very large area by no means all of which can be considered of high conservation value. We are confident, therefore, that properly considered and planned forestry schemes can be compatible with the needs of nature conservation in this part of Scotland.

*Planting Without
Approval*

31. There is no statutory control over tree planting, except that provided, in relation to SSSIs, by the Wildlife and Countryside Act 1981. For many years, however, an effective means of control has been available through our consultation procedures, which are designed to ensure that planting proposals take account of the interests of agriculture, the environment and other land uses. These procedures are triggered by applications for grant aid. Until recently, no substantial planting took place without grant, and the procedures have come to be recognised and accepted as the way by which the necessary checks and balances are applied to afforestation proposals. Their success can be gauged from the fact that, during the ten years following the introduction of the present arrangements in 1974, no significant cases of planting took place without approval from the Commission. In this period some 9,000 grant cases were dealt with satisfactorily under the present procedures.

32. We are therefore disappointed to report that, in the early part of 1985, two large areas of hill land in the south of Scotland were planted without clearance. In one case, clearance

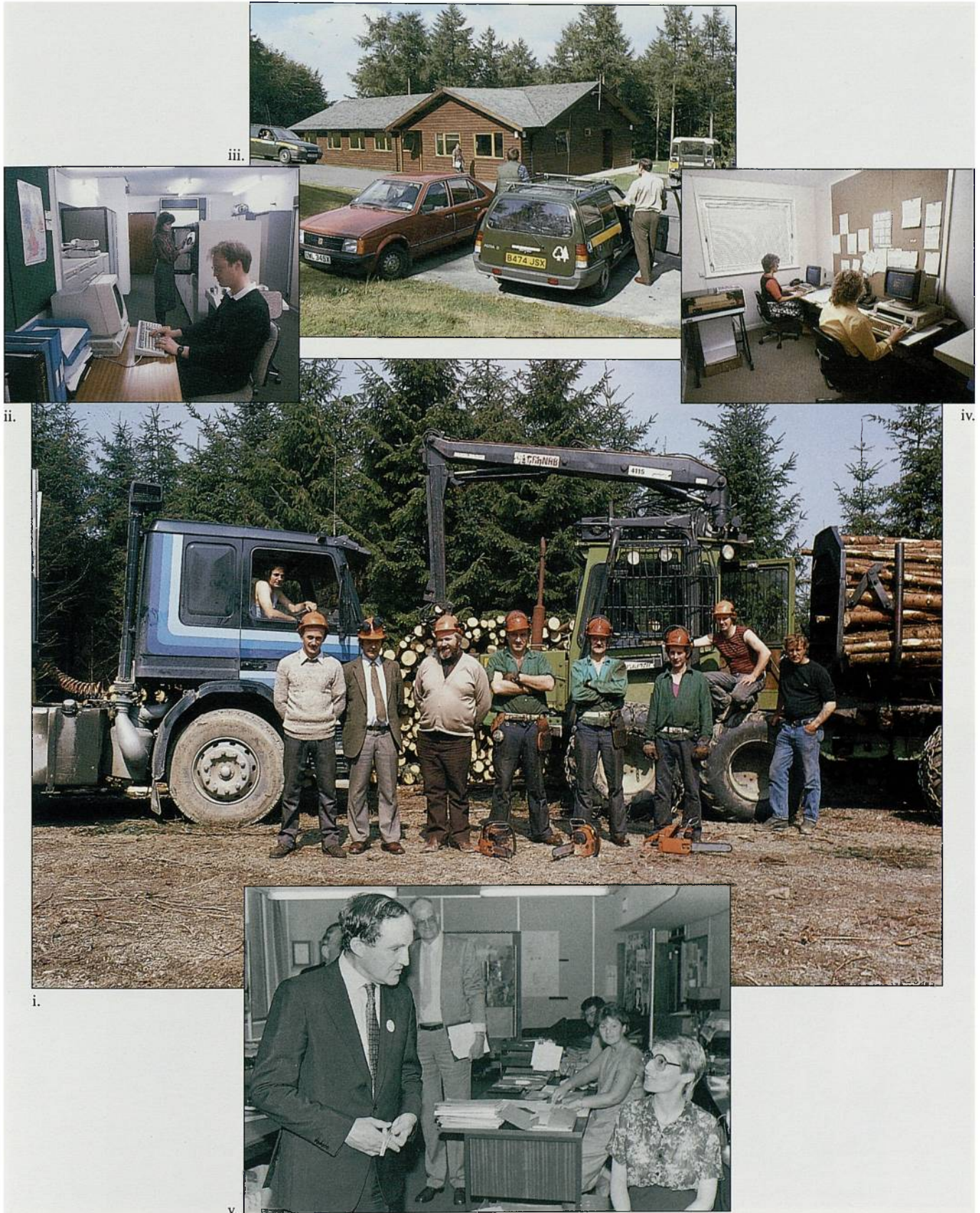


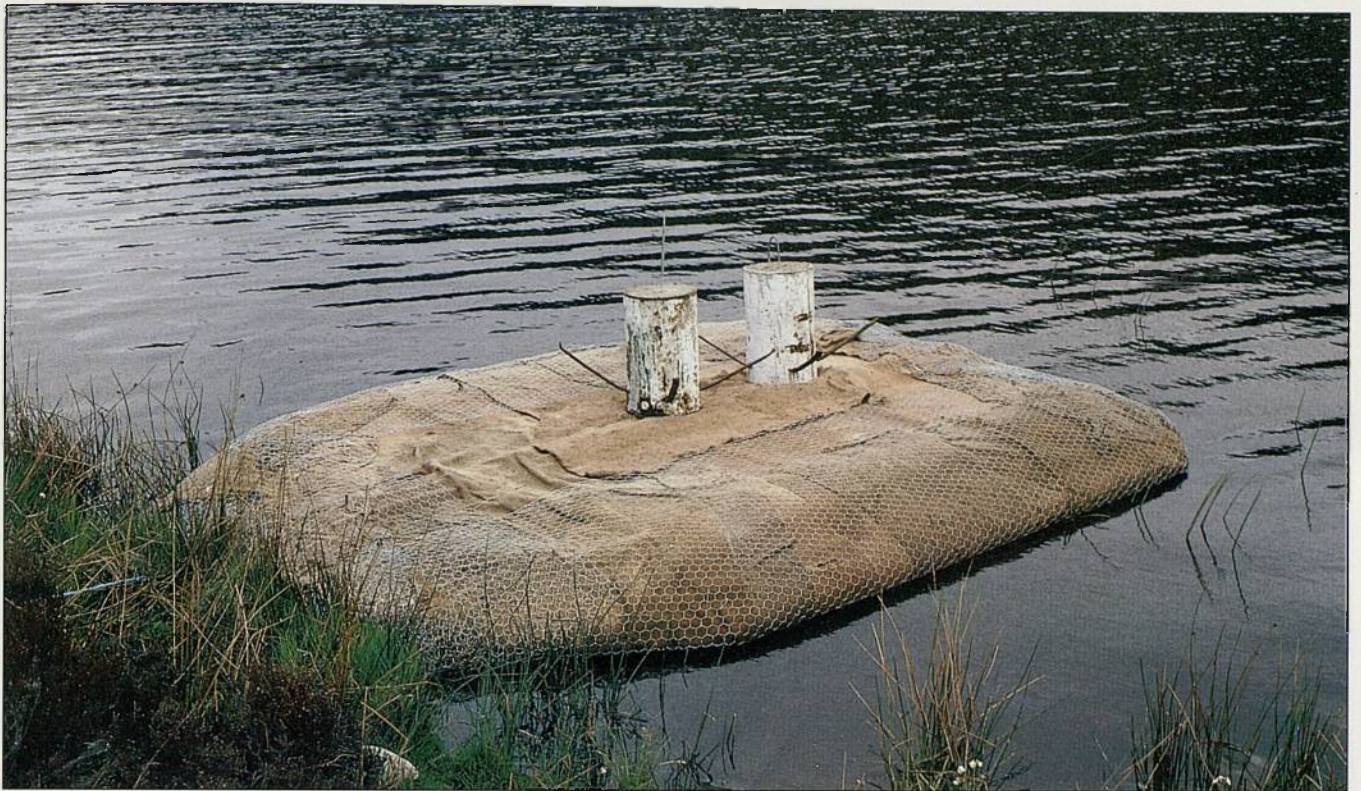
PLATE 1: *The Commission at Work*

- i. The harvesting and marketing team at the Llandoverly Forest District with one of the first deliveries to Shotton Paper Mill.
- ii. Computer division staff operating the VAX 8600 mini-computer. The computer, supplied by British Telecom, is part of the Forestry Commission's new distributed network.
- iii. The Marches Forest District Office at Mortimer Forest, Shropshire.
- iv. Marches Forest District clerical staff working with their micro-computer terminals.
- v. Visit of the Rt Hon George Younger MP to Headquarters on 20 August 1985. At the time, he was Secretary of State for Scotland.



PLATE 2: *Harvesting and Marketing*

- i. A Volvo 861 forwarder extracting 60-year old Scots pine, Thetford Forest, Norfolk.
- ii. Stacking new pallets made from British-grown timber at the premises of Castle Wightman Ltd, Kinross.
- iii. Peeled and pointed fencing stakes at the Forestry Commission's Brandon Depot, Thetford Forest District.
- iv. End stamping of sawn softwood shows its grade, quality and the sawmill from which it originated. The picture shows timber from Thomas Smith Ltd, Kirkoswald, Ayrshire.
- v. Rolls of newsprint, Shotton Paper Company Ltd.
- vi. Larch used in boat building at Jones of Larbert's yard at Buckie.
- vii. Furniture made by A H McIntosh and Co Ltd from medium density fibreboard produced by Caberboard Ltd at Cowie.
- viii. Structural composition board made by Highland Forest Products.



i.



ii.

PLATE 3: *Wildlife Management*

- i. & ii. Constructing an artificial island, part of a joint venture by the Forestry Commission and the Royal Society for the Protection of Birds to help black throated divers breed on Commission lochs. The island is constructed from a block of polystyrene contained in a wire frame topped off with natural vegetation.

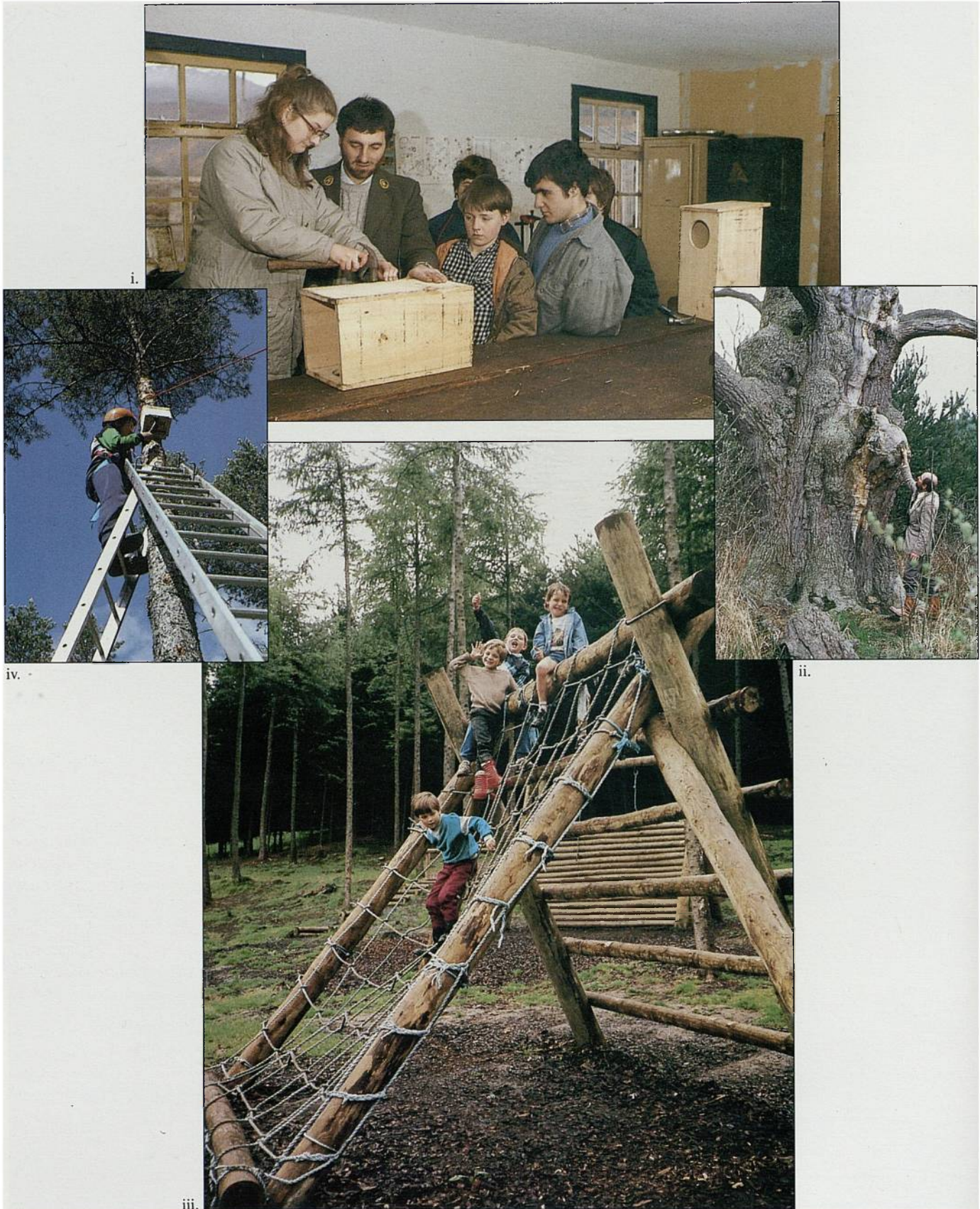


PLATE 4: *Wildlife and Recreation*

- i. Children at Raddery Special School, Ross-shire, constructing nesting boxes for goldeneye ducks.
- ii. Old oak at Salcey Forest being inspected by Dr Morton Boyd, the Forestry Commission's Conservation Consultant.
- iii. Mynydd Maendy adventure playground and picnic site at Cwmparc, Rhondda, Mid-Glamorgan, which is now a valuable community amenity.
- iv. Mounting a bat box as part of a school project. Over 5,000 have been put up by the Forestry Commission and the Institute of Terrestrial Ecology throughout Britain.

for planting had been refused on agriculture grounds; in the other, it is likely that part of the land could have been accepted for planting after consultation, but the owner was not prepared to await a possible compromise. These two cases, which came hard on each other's heels, raised demands for formal controls over forestry planting. In response to questions in Parliament, Ministers stressed the point that these were the first significant cases of their kind to arise since the present procedures were introduced in 1974, and did not justify taking precipitate action. They did undertake, however, to keep a close watch on the situation and to consider what steps might have to be taken if these cases proved not to be exceptions but the beginning of a trend towards uncontrolled planting. We are glad to say that no further cases of this kind have arisen.

Air Pollution and Forest Health

33. Surveys of forest health are continuing in Britain and Europe with a view to observing trends and relating the condition of the trees to various environmental influences, including pollution. Reports from continental Europe during 1985 suggested a stabilisation in the level of damage to tree crowns observed on conifers, though increased damage to oak was reported from West Germany and Switzerland. The halt in the rate of increase in damage in German forests can, in part at least, be attributed to the wet summers of 1984 and 1985, which must have reduced stress in trees. The extent to which air pollution is implicated in the damage found in different parts of northern and western Europe remains unclear and is a subject for intensive research in several European countries.

34. Our own survey of conifers in 1985 was carried out on the same plots as the previous year, with the addition of a further nine in north Scotland, an area which had previously been under-represented. The system of classifying tree crowns was modified slightly to take account of procedures agreed by a working party of the Economic Commission for Europe's Executive Body for the Convention on Long-Range Transboundary Air Pollution. Foliage was taken from all plots for chemical analysis, again in accordance with agreed procedures. The results have shown a slight increase in crown density, most probably owing to the cool wet summer, but also because the assessments were made in September rather than December so that natural needle fall would not have proceeded as far. Foliar analysis showed no signs of magnesium deficiency, and concentrations of other major nutrients were adequate. We found no evidence of damage associated with air pollution. The survey will be repeated in 1986, when we hope to include older Norway spruce in order to see whether older trees, which are generally regarded as more susceptible to air pollution, show signs of decline.

35. The question of low-level damage from pollutants, without visible symptoms but with reductions in growth, is being addressed in a new research project at three sites in Britain: at Headley in Hampshire, Glendevon in Perthshire and Matlock in Derbyshire. These sites have contrasting climates and types and intensities of pollution, and each will have 16 open-top chambers, 3 m wide and 2.5 m tall, in which the trees can be subjected to ambient and filtered air. In addition, at four of the chambers at Headley pollutants can be added in controlled concentrations (Plate 5). Air quality, inside and outside the chambers, will be monitored continuously. It is essential to use clonal trees for assessing the effects of pollutants precisely, and plants spanning the range of susceptibility to ozone have been selected for propagation following tests carried out on standard planting stock fumigated with an acute dose of ozone. The same will be done with trees selected from tests with other pollutants such as SO₂ and NO_x.

Beech Health Study

36. Beech is the broadleaved tree that has received the greatest attention in descriptions of 'forest decline' in Germany and other parts of central Europe. During 1985, we began a study to develop a reliable system of assessing the health of woodland beech in this country and to apply it on a sufficiently wide geographical basis to provide a reasonable chance of detecting any major deterioration in health that might have occurred in the relatively recent past. The data from 19 widely-distributed plots showed that most of the trees were in moderate to good health and that there was no *prima facie* evidence of air pollution effects. Symptoms of poor health — leaf yellowing, fastigate branching and thinness of crown — were present in some plots, however, and further work is in hand to examine growth patterns of woodland beech on sites with differing features, such as available soil moisture and pollution climate.

Upland Forestry and Water Quality

37. Our collaboration with organisations researching into the effects of forestry on the quality and yield of water has increased now that several of the studies have reached an active phase in forest operations. Plans are well advanced for the clear felling of a 150 hectare catchment in Loch Ard forest in Central Region during the coming year, the effects of which on stream chemistry and biota will be studied by staff from the Freshwater Fisheries Laboratory, Pitlochry. A similar-sized catchment is being studied by the Institute of Hydrology at Hafren Forest in Powys, but with more emphasis on water and sediment yields. At Balquhider in Central Region, one of a pair of catchments is being afforested

whilst the other is being clear felled; the Institute of Hydrology are again comparing and contrasting the effects of these forestry activities on water resources. About 15 different catchment land uses, some of them involving forestry, are being studied by the Welsh Water Authority near Llandovery, primarily in relation to their effects on fish populations. At all these sites, our staff are actively concerned with the design and planning of the projects, and in some cases with the physical work of carrying out the requisite operations; we are also making available the land and plantations in many cases.

Changing Patterns of Land Use

38. Afforestation in Britain has taken place mainly on poorer agricultural land since before the inception of the Forestry Commission in 1919, with its initial remit to establish a reserve of growing timber for use in time of war. The objectives of forestry policy have been revised since then, and now concentrate on economic and social objectives, including the supply of raw material to industry and provision of employment in rural areas, but the type of land made available for planting has changed very little. This is because until very recently the nation regarded the production of food as an overriding priority, and accordingly confined afforestation to relatively poor and inhospitable sites in the uplands. It is important to recognise this deliberate policy which led directly to the type of forests we have today, dictating that the species planted must be both hardy and productive so as to thrive on the infertile and exposed sites available. Conifers best met these criteria as well as contributing towards the timber-processing industry's major requirement for softwoods, which form the principal raw material for most of the wood products used in this country.

39. Over the past year or so, the burgeoning cost of agricultural support and the strains imposed on the Common Agricultural Policy in storing and disposing of surpluses have led to a wide-ranging and continuing land use debate, and the prospect of a reappraisal of the whole question. This has manifested itself in a series of initiatives which could have a fundamental and beneficial effect on the prospects for forestry in this country.

European Community Initiatives

40. There is general agreement among the EC Agriculture Ministers that a reform of the Common Agricultural Policy is needed, although there is as yet no general accord on how this should be done. However, the EC Commission has recognised that forestry is an alternative use of land that can offer substantial benefits. The EC Commission's ideas were elaborated and put forward in January 1986 in a discussion paper entitled *Community Action in the Forestry Sector*. This was intended as a basis for consultation following which the EC Commission would make proposals for a Community forestry action programme. To help this discussion, the Commission also published a more extensive and descriptive paper as a complementary memorandum to the discussion paper.

41. As in its previous documents on forestry, the EC Commission's latest discussion paper stresses the importance of Community forests for economic, social, environmental and recreational purposes. It draws attention to the Community's wood deficit caused partly by the insufficiency of the planted area and partly by under-utilisation of the existing forests. The action programme proposed would be complementary to national policies and would involve a series of measures aimed at increasing the forest area and improving production from existing forests. The EC Commission considers that these measures would be more effective if taken at Community level rather than at national level. Despite the reluctance of the Council of Ministers to agree forestry measures in the past, the EC Commission feels that new initiatives are justified in order to help reduce agricultural surpluses, reduce the wood deficit, assist rural areas and stop what they describe as the accelerating destruction of forests by atmospheric pollution and fires. It is worth noting that the last three factors were the justifications given for earlier initiatives by the EC Commission that did not find favour with the Council of Ministers. The first — the agricultural surpluses situation — is, however, a new dimension.

42. The EC Commission's discussion paper seeks comments from the other Community institutions and from representative organisations with the intention that the Commission will, in the light of these comments, draw up new proposals to be presented to the Council of Ministers. At present, the paper contains no specific proposals, nor any assessment of the likely costs or effectiveness of any of the measures envisaged, which will clearly need to be spelled out before a firm Governmental view on the initiative can be taken. Since the extent of disincentive measures aimed at reducing agricultural surpluses would have a major bearing on the question of increased forestry activity, particularly in relation to expenditure at Community and national Government levels, the EC Commission will also need to take account of discussions in the Agriculture Council in the context of the agricultural price-fixing and the related socio-structural proposals. At this stage, therefore,

it is difficult to gauge the possible impact on forestry in this country of the Community initiatives. In the context of the agricultural surpluses problem, however, it seems to us that it will be particularly important to emphasise that any Community-level measures should concentrate more on the planting of trees on former agricultural land than to action aimed at intensifying the management of existing woodlands, because of the scope for afforestation in the United Kingdom and our national policy to this end.

*Report on Woodland
as a Farm Crop*

43. In September 1985, the Government issued, as a consultation paper, the report of an inter-departmental working group on *Woodland as a Farm Crop*. The group, which comprised officials from the Agriculture Departments and the Forestry Commission under the chairmanship of the Ministry of Agriculture, Fisheries and Food, was given the task of considering the economic possibilities for developing woodlands as an integral part of farming activity at individual farm level (Plate 6). In so doing, it took account of the potential value of woodlands for shelter, game cover, employment, amenity, wildlife and landscape, as well as for timber production.

44. The group concluded that farm woodlands were capable of making a valuable contribution to farm income as well as providing more general environmental benefits and that their planting and better management might usefully be encouraged. The principal measures identified by the group were:

- a sustained promotion campaign backed by an enhanced advisory effort;
- joint marketing arrangements and better access to market information for farmers;
- further enhancement of planting grants for small areas of woodlands under the grant schemes run by the Forestry Commission;
- special assistance analogous to the Hill Livestock Compensatory Allowances —referred to in the working group's report as Woodland Compensatory Allowances — to encourage the planting of new woodlands in the Less Favoured Areas.

45. At the end of the year under report, the responses to the consultation paper were being analysed and considered by the Government against the background of developments in the wider context, such as the EC Commission's ideas on possible forestry measures, to which we have referred in the preceding section.

*Afforestation in
Scotland*

46. On 24 March 1986, the Secretary of State for Scotland, the Rt Hon Malcolm Rifkind QC MP, announced measures to facilitate an increase in the rate of planting in Scotland. These were in the form of a relaxation of the criteria followed by the Department of Agriculture and Fisheries for Scotland in clearing agricultural land for forestry use.

47. Within the Department's overall framework for the consideration of afforestation proposals — which takes account of such factors as the quality of the land, the viability of individual farm units, the extent to which forestry proposals integrate with and benefit agriculture and the importance of the farm in the agricultural structure of the area — there will in future be a presumption in favour of forestry on an extended range of hill land, including improved or unsuccessfully improved areas of peat or peaty gley soils and areas which are not making a significant agricultural contribution for reasons of size, slope or location. Forestry proposals on hill land will also be favoured when they are to be undertaken by the farmer as part of a plan accepted by the Department which takes account of agriculture and forestry and specifies the continuation of the unit in agricultural use for at least ten years. Important changes have also been made in the criteria for clearing land for forestry in upland and arable areas. Except in the case of prime land, forestry proposals will be given favourable consideration where the land forms part of a farm-forestry proposal promoted by the farmer as part of his existing business, or where the land requires capital or maintenance which is high in relation to the agricultural production that can be achieved.

48. These measures, full details of which are set out in Mr Rifkind's statement which we have reproduced in this Report at Appendix VI, have been welcomed in forestry circles. Although it will be some time before their impact can be fully gauged, they should significantly increase the area of land potentially available for forestry in Scotland. We shall be keeping a careful watch on the position as it develops especially in the light of the current debate on the future shape of the Common Agricultural Policy and its possible effects on land use in Britain.

*Regional Advisory
Committee Review*

49. Our procedures for consulting other countryside authorities over forestry planting and felling proposals have now been in operation for over ten years, and have provided an

effective means of reconciling conflicting interests. With changes in land-use patterns in prospect as a result of the situation in the agricultural sector, it is important that these procedures are adapted where necessary to meet new demands and attitudes.

50. In our report last year, we referred to the Government's response to the Countryside Commission's report *A Better Future for the Uplands*, made on 31 January 1985, which endorsed the present consultative procedures, in which, it said, our Regional Advisory Committees play a key role. It added, however, that "to meet the concern that the Committees' proceedings are not as open as the equivalent planning process, the Forestry Commission is currently looking at ways of achieving greater public accountability". In the course of this review, we decided that we would also consider ways of improving the composition of the Regional Advisory Committees with a view to achieving a better balance on them between forestry and other countryside interests. Our conclusions were published at the end of March 1986 in the form of a consultation paper under the title *The Composition and Procedures of the Forestry Commission's Regional Advisory Committees*. This was given a wide circulation to interested parties whose views were invited by the end of May.

51. The Regional Advisory Committees are set up under the Forestry Act 1967 to advise the Commission in the performance of its functions. With the introduction of the consultative procedures for planting and felling proposals in 1974, they were given the further task of assisting us in the reconciliation of differences of view arising from such consultations. It is this role to which we addressed ourselves in the review. Our main conclusions were that:

- an early increase in the membership of the Regional Advisory Committees would be desirable, so that additional places could be allocated to environmental and farming interests; in this connection, we welcomed the proposal included in the Forestry Bill introduced to Parliament by Sir John Stradling Thomas MP shortly before the publication of our paper to raise the maximum membership of the Committees from nine to twelve;
- closer consideration should be given in appointing Committee members to ensuring that they are suited by technical, professional and practical experience and knowledge to speak for the general interest they are appointed to represent;
- new Regional Advisory Committee Chairmen should as far as possible be appointed from backgrounds which are unlikely to cause any real or apparent clash of interest when disputed cases come before their Committees;
- Committee members should normally be restricted to two three-year terms of service, although exceptions might be made in special cases;
- procedures should be introduced to give the public the opportunity to submit views to the Regional Advisory Committees when they are considering disputed planting and felling proposals. We envisaged that this should be done through a system of advertising details of cases to be considered by the Committees and inviting those wishing to comment to do so in writing; these comments would then be taken into account by the Committee in its discussions with the parties to the dispute. We did not, however, favour opening the meetings of the Committees to the public since, unlike the planning processes, the Regional Advisory Committees' role in such cases is wholly a conciliatory one, more suited to patient discussion and presentation of views aimed at reaching an agreement than to meetings on the public local enquiry model.

52. At the end of the year under report, we awaited with interest the receipt of comments on these proposals. Once the responses have been analysed and considered we shall be making final recommendations to Ministers with the aim that any changes decided upon should be introduced to coincide with the start of the Committees' next term of office.

The International Scene

Ninth World Forestry Congress

53. The Ninth World Forestry Congress, hosted by the Government of Mexico, was held in Mexico City in July 1985. More than 2,200 delegates from 105 countries, including an official United Kingdom delegation led by the Director General, attended the Congress which had as its theme *Forest Resources in the Integral Development of Society*. The work of the Congress was centred around three Technical Commissions which considered some 320 papers which addressed themselves to trends and new contributions in the fields of forest resource management, production and productivity, and institutions and rural development.

54. The main areas of concern that emerged were:

- the threats to world forests and the importance of conserving and developing the resource;
- in tropical and sub-tropical regions, the gravity of deforestation and the increase of desert, coupled with the need of growing populations for food and fuelwood and its effect on the forests;
- in temperate regions, the increasing threat to forests arising from air pollution and pests and diseases.

55. To deal with these problems, the Congress considered that forests should be part of integrated rural development, and that foresters must give a lead to society through better communications and initiatives. It was also agreed that priority should be given to combating desertification; conserving and managing tropical forests; developing fuelwood forests; reducing air pollution; and expanding the forest resource in general.

56. The Director General was appointed moderator of the Technical Commission which considered the subject of trends and new contributions in the management of forest resources. He was also a member of the Policy Committee concerned with the Manifesto which was published at the end of the Congress.

Twelfth Commonwealth Forestry Conference

57. This Conference, which was hosted by the Canadian Government in Victoria, British Columbia, in September 1985, addressed the theme of *Investment in Forestry – the needs and opportunities*. It was attended by over 200 delegates from 30 Commonwealth countries. The Director General participated as Chairman of the Standing Committee on Commonwealth Forestry and led a 15-strong United Kingdom delegation drawn from the Forestry Commission, the timber trade, private forestry, universities and Commonwealth bodies. The theme speaker was the Hon Donald S. Macdonald, Chairman of the Canadian Royal Commission on the Economy, who drew attention to the responsibilities incumbent on foresters and politicians alike to preserve the world's forest resource and to work towards achieving the necessary balance between man and his environment. Thirteen recommendations were drawn-up and supported by a concluding statement which highlighted the need to conserve and, where possible, renew the forest resource in a sustainable manner.

58. The Commonwealth Deputy Secretary-General (Economic), Sir Peter Marshall who himself addressed the Conference, formally drew the attention of the Commonwealth Ministers of Agriculture to the Conference recommendations at their meeting in Rome in November 1985. In giving their unanimous support to the recommendations, the Ministers laid particular emphasis on those concerning Commonwealth cooperation and the role of Commonwealth institutions.

International Forestry Conference, Paris

59. An international conference on trees and forests was held in Paris in February 1986. More than 50 Ministers from 20 European and 26 African countries were present, an unprecedented level of political participation on a forestry topic. The five-man United Kingdom delegation was headed by Mr Timothy Raison MP, Minister for Overseas Development, who was assisted by the Director General.

60. The high level of political involvement was the outstanding feature of the Conference, which was called on the personal initiative of the President of France. His reasons were associated with the growing political pressures arising both from the sense of impending catastrophe in the public mind about the effects of air pollution on the forests of central Europe and Scandinavia, and by the desertification and poverty which has followed the destruction of forests in the dry countries of Africa.

61. The Conference produced a 'solemn appeal', 19 resolutions and a number of national declarations of intent. The more significant resolutions related to the reduction of atmospheric pollution, the need for greater cooperation on research in Europe and the call to give high priority to trees and forests in national development programmes. The United Kingdom delegation expressed the Government's support for the Food and Agriculture Organisation's Tropical Forestry Action Plan, and its willingness to play a part in its implementation.

International Year of the Forest

62. As we mentioned in our last Report, 1985 was designated by the Food and Agriculture Organisation as *International Year of the Forest* (IYF). We gave it our full support by organising a number of events to increase the public's awareness of forestry. These included open days, displays, a national photographic competition — organised jointly by the Commission, Pentax UK and Amateur Photographer, with awards presented

by Dr David Bellamy (Plate 7) — and the authorship of a children's book on the work of the forester. The opportunity was also taken to carry out a number of nature conservation projects under the auspices of IYF. These ranged from the restoration of oak woods in Argyll and the creation and improvement of pools in several parts of the country to research on red squirrel, black grouse and woodlark. Projects to provide artificial nesting sites for goldeneye duck, osprey, divers and small birds successfully involved a wide range of bodies; the construction of nesting boxes by schools and the advice given on the siting of boxes and artificial nests from the Royal Society for the Protection of Birds were particularly appreciated (Plates 3 and 4).

63. The report of the October 1985 meeting of the EC Committee on Coordination of Forestry Policies had this to say about our IYF projects:

“The Forestry Commission is to be congratulated on its enthusiastic response to International Year of the Forest. Not only has it adapted many events such as National Forest Open Days and stands at regional fairs to take account of IYF, but has adopted the FAO's IYF symbol on its press releases as well as producing a special IYF leaflet and organising a photographic competition for IYF.”

Privatisation

64. There was general speculation in the media in February and March 1986 that the Government was considering the case for complete privatisation of the land and forests managed by the Commission. This led to a widespread reaction from Members of Parliament, bodies representing countryside interests, trade unions and members of the public. In response to questions in Parliament and in correspondence, Forestry Ministers made it clear that the Government's policy on the sale of Commission land was still as described in the statement made to the House of Commons by the then Secretary of State for Scotland, the Rt Hon George Younger MP, on 8 November 1984; as in all other areas of Government activity, that policy was, however, kept under regular review.

65. The November 1984 policy statement, which we reproduced at Appendix V to our 1984-85 Report, said that the main purpose of our disposals programme would be the rationalisation of the estate with a view to improving the Commission's efficiency and the commercial effectiveness of the Forestry Enterprise. Our land sales have continued on that basis, and a report on progress is given at paragraphs 106 and 107.

Management Reorganisation

66. As explained in last year's Report, the reorganisation of Headquarters and the reduction in the number of Conservancies from 11 to 7 took place on 1 April 1985. This involved a great many changes of personnel with extensive consultations between management and the Trade Unions on the transfer of staff, many of whom did not wish to move either into other Departments or from their present locations. We are glad to say that almost all of the outstanding problems had been resolved by the end of the year. Out of the 149 staff settled by this date, 55 transferred to other Government Departments, 60 moved within the Commission, 24 left through natural wastage and 10 left on redundancy terms. The Commission's new management structure has settled down well and is already leading to the greater flexibility, improved communications and streamlining of procedures that we predicted in our earlier reports on this exercise. We are indebted to staff at all levels who have cooperated so loyally during a difficult period of upheaval.

67. As foreshadowed last year, consultations have continued with the Trade Unions aimed at merging the Forester and Forest Officer classes in order to improve their career structure and opportunities. Although it did not prove possible to reach agreement during the year under report, negotiations were proceeding and we remained hopeful that a satisfactory conclusion could be reached.

Information Technology

68. We made good progress during the year with the development of information technology systems within the Commission, in spite of difficulties in recruiting enough qualified personnel. Microcomputers have been introduced into all Conservancy and Forest District offices, engineering workshops and research establishments, where they are

dealing with such tasks as the industrial payroll, spreadsheets, evaluation of windthrow/clear fell options, word processing and simple filing systems (Plate 1). As a matter of priority, however, most of our activity in this field was concentrated on preparing the way for the introduction of major systems during 1986-87.

69. In January 1986, a contract was placed with British Telecom to supply a further minicomputer in Edinburgh to provide necessary additional processing capacity for Headquarters and Conservancies; to facilitate this and to link with the distributed microcomputers, the contract with British Telecom also covered the provision of a nationwide telecommunications network. All of this equipment was due to be delivered in April 1986.

70. By the end of the year computer programs for credit control, for invoicing and recording timber sales and for vehicle fleet management were being tested for introduction as soon as practicable after the installation of the network. We have also purchased commercial computer packages for our new distributed financial accounting and management information systems for development and testing prior to their planned introduction by April 1987.

Grant-in-Aid

71. The Grant-in-Aid voted by Parliament forms the Commission's agreed cash limit. For 1985-86 the amount voted was £53.4 million of which £52.9 million was taken into the Forestry Fund, leaving £0.5 million of the vote to be handed back to the Exchequer. The actual net call on Exchequer funds (excluding surrenderable disposals receipts and remittances) was £51.4 million, leaving a working balance of £1.5 million in the Forestry Fund which will also be handed back.

72. Payments, excluding amounts paid or due to the Consolidated Fund, totalled £130 million. These were £9.2 million (8 per cent) more than 1984-85, mainly because of the continuing effects of inflation, pay awards and superannuation payments, a rise in the amount of grants paid to private woodland owners, increased land acquisition and capital building expenditure and higher VAT remittances (resulting from increased timber receipts), offset in part by a reduction in staffing. Receipts (excluding Grant-in-Aid and cash from the disposal of land, buildings and plantations) amounted to £78.6 million against £66.8 million in 1984-85, an increase of £11.8 million (18 per cent). This addition mainly arose as a result of increased timber receipts compared with the previous year, which had, of course, been affected by the impact of the miners' strike. Cash receipts from the disposal of land, buildings and plantations for surrender to the Consolidated Fund amounted to £17.2 million of which £12.5 million had been paid by 31 March 1986, leaving a balance of £4.7 million to be surrendered during 1986-87. The figure of £17.0 million for the proceeds of disposals shown in Note 13 to the Forestry Enterprise Accounts differs due to adjustments arising from debtors and exchange transactions.

73. The Statement of Forestry Fund receipts and payments, including notes and explanations, together with the Comptroller and Auditor General's report thereon, appears at Table 1 of Appendix X.

New Forest Review

74. Towards the end of the year we decided to initiate a major review — the first since 1977 — to examine the measures that already exist to safeguard the New Forest and to identify whether further measures may be necessary to maintain the character of this unique part of Britain's heritage. This will be carried forward by a review group under the chairmanship of the Deputy Surveyor, Mr D.J. Perry, on which the Verderers of the New Forest, the New Forest District Council, the Hampshire County Council, the Nature Conservancy Council and the Countryside Commission will be represented. The review is expected to take two years to complete.

Oak for York Minster

75. In response to the appeal for oak beams for the repair of the roof of York Minster, which was damaged by fire after being struck by lightning, we donated three exceptionally fine trees from the New Forest (Plate 8). The beams required were 40 feet in length, and quality trees of this size are very rare. The Commission also donated a number of smaller

trees. We arranged the collection and delivery of these, and other oaks donated by a number of private estates throughout southern England, to the sawmill of Henry Venables Ltd in Stafford for conversion into sawn timber.

Commissioners

76. We were greatly saddened by the sudden death of Mr John Kennedy in July 1985 at the age of 58. Mr Kennedy had served the Commission with distinction since 1952, latterly as a full-time Commissioner. He was succeeded as Commissioner for Private Forestry and Development by Mr R.T. Bradley.

Senior Staff

77. The following senior staff changes were made in the course of the year:

- Mr A.A. Rowan, formerly Conservator North West England, moved to Headquarters in April 1985 to fill the new post of Director, Private Forestry & Services.
- Mr J. Aldhous, formerly Assistant Conservator Harvesting and Marketing, South West England Conservancy, transferred to Headquarters in April 1985 to become Head of Silviculture Division.
- Mr A. Morrison, formerly Director, Private Forestry & Land Use Planning, was appointed Conservator Mid Scotland in July 1985.
- Mr R.G. Cathie, Conservator North Scotland, retired in July 1985. He was succeeded by Mr J. Atterson, previously Conservator Mid Scotland.
- Mr D.T. Seal, Chief Research Officer (North), retired in September 1985. He was succeeded by Mr S.A. Neustein, formerly Head of Silviculture Division.
- Mr D.L. Foot, Conservator South Scotland, transferred to Headquarters in December 1985 to fill the post of Director, Harvesting & Marketing. He was succeeded by Mr G.G.M. Taylor, Assistant Conservator (Operations) in South Scotland Conservancy.
- Mr J.M. Gwynn retired as Director, Estate Management, in December 1985 and was succeeded by Mr R.P. Illingworth, Conservator Estate Management. Mr Gwynn was awarded the CBE in the 1986 New Year Honours List.
- Mr P.G. Drumm, Head of Public Information Division, left the Commission in February 1986 to take up a post in the Historic Buildings and Monuments Directorate of the Scottish Development Department. He was succeeded by Mr J.F. Lindsay on transfer from the Scottish Office.
- Mr J.A. Spencer retired as Conservator North England in March 1986. He was succeeded by Mr A. Rix, Assistant Conservator (Operations) in North England Conservancy.
- Mr R.M. Hewitt retired as Conservator East England in March 1986. He was succeeded by Mr M. Dinning, Assistant Conservator (Operations) in East England Conservancy.

Staff Numbers

78. On 31 March 1986, the Commission employed 2,128 non-industrial staff (compared with 2,173 the previous year) and 3,839 industrial staff (4,100 the previous year). The fall in non-industrial numbers was a direct result of the reorganisation of the Commission's management structure (see paragraph 66). The continuing reduction in industrial staff levels arose from a variety of factors, the chief of which were the increasing employment of contractors for certain tasks, such as ploughing and draining, and a reduction in labour-intensive forest operations as a result of further mechanisation.



i.



ii.



iii.



iv.



v.



vi.

PLATE 5: Research

- i. Low-level pollutant damage research is carried out in these open-topped chambers at Headley Nursery, Hampshire.
- ii. Great Spruce Bark Beetle — *Dendroctonus micans*.
- iii. *Rhizophagus grandis* — A specific predator of *Dendroctonus micans*.
- iv. A female *Rhizophagus grandis* is introduced to *Dendroctonus micans* larvae, part of the *Rhizophagus grandis* breeding and release programme.
- v. 14-week old Corsican pine seedlings in Japanese paper pots. They will be ready for removal from the Polyhouse for planting at 20 weeks.
- vi. Micropropagated shoot of Sitka spruce in vitro.



i.



ii.

PLATE 6: Woodland Management

i. Snedding and crosscutting 30-year old oak thinnings to 2m lengths for pulp at King's Wood, Monmouth Forest, Gwent Forest District, Wales.

ii. Forestry grants help farmers to improve their farm woodlands by planting in odd corners. The picture shows Mr J Younie of Garbeg Farm, Inverness-shire.



i.



ii.



iii.

PLATE 7: IYF 1985: *International Year of the Forest 'Forests in Focus' Photographic Competition*

- i. 'Footpath to Little Gaddesden', Ashridge Park, Herts. Wyn Frances.
- ii. 'Springtime', Ashridge Park, Herts. Wyn Frances.

- iii. *left to right*: 2nd Prize Winner, Rev John Bird. Chairman of the Forestry Commission, Sir David Montgomery. Dr. David Bellamy. 1st Prize Winner, Wyn Frances, and Laurie Moore of Pentax UK.



PLATE 8: *York Minster*

i. Raising an 'A' frame into position on the roof of York Minster through the open canopy on the South Transept. The roof was destroyed by fire in July 1984.

ii. New Forest oak gifted by the Forestry Commission for the restoration of the South Transept of York Minster after the fire.

Forestry Enterprise

Silvicultural Operations

Seed

79. After the excellent harvest of broadleaved seeds in the autumn of 1984, especially of acorns, last year's crops were very light. Despite determined efforts, the amount of seed collected was but a fraction of the 1984 total. The pattern was the same throughout Europe, being a reflection of last year's poor weather particularly during the critical flowering period in the spring. Some species such as beech were virtually unobtainable and supplies of oak were very scarce. The poor summer of 1985 promised little improvement in 1986.

80. The conifer crop was little better, though modest collections were made of Scots pine, Lodgepole pine, European larch and Norway spruce. The best achievement was in East Anglia where almost 200 kg of Scots pine were collected and supplied to a flourishing export market among North American Christmas tree growers.

81. The domestic seed market has also flourished, and our sales of seed during the year increased both in volume and income. Sitka spruce seed derived from hand-pollinated flowers of superior clones was available for the first time and was sold successfully by tender. These limited amounts of seed will be used for the production of rooted cuttings. The genetic quality of these seeds, each one of which is eventually capable of yielding 500 forest plants, is considerably better than those collected from the first Sitka spruce orchards established in 1978.

Nurseries

82. A total of 35.2 million plants was raised for forest planting in our nine nurseries during the year (Plate 5). This represents a considerable achievement in a period when work programmes were delayed by the wet summer and plant growth was slowed by lack of warmth. The contrast between the hot, dry summer in 1984 and the cool, wet conditions last year emphasises the range of skills and facilities that the nursery manager must have at his disposal if he is to maintain a consistent output of good-quality plants.

83. A new design of polythene bag for despatching plants from nurseries was successfully introduced on a trial scale in Scotland. The bags are made from a double layer of polythene, opaque white on the outside and black inside, fused together, which has been found to reduce the risk of damage to plants by over-heating.

84. At Delamere nursery, pilot production of vegetatively-produced cuttings of superior strains of Sitka spruce has built up well. There are now 18 polyhouses, in which 560,000 second-generation cuttings are being rooted this year. These will then be grown on to produce the Commission's first large-scale supply of vegetatively-produced planting stock.

Broadleaves

85. The new policy for broadleaved woodlands (see paragraphs 12 to 19) was put into effect immediately in our new planting and restocking programmes. The area of broadleaves planted was 362 hectares compared with 197 hectares in 1984-85. In addition, small areas of naturally-regenerated broadleaves have been accepted as part of current restocking programmes. We have also undertaken widespread amenity plantings of broadleaves in groups, alongside rides and streams and within gaps in previous planting. We are making extensive use of tree shelters in these schemes to ensure protection and rapid early growth. These additions to the broadleaved element in our plantations will greatly improve their conservation, landscape and amenity value.

Planting

86. Severe weather in February and March 1986 badly delayed our upland planting programme, so that a substantial area of the planned late-winter planting had to be deferred to April. The area of bare land planted was 4,324 hectares, the lowest figure since 1946; 7,297 hectares of felled plantation were restocked. This is the first year in the Commission's history that the area restocked has substantially exceeded the area of new planting. Our restocking programme is expected to continue to rise steadily over the next two decades. By contrast, if the present limited scale of land acquisition persists, the rate of new planting will continue to decline.

87. Our reserve of land for planting currently stands at 30,000 hectares — enough for six years' planting at the present rate of 4,500-5,000 hectares per annum. Recent additions to this area have been relatively small. Approximately 55 per cent of the plantable reserve is in North Scotland Conservancy, where most of the Forest Districts have planting programmes which span at least five years. Elsewhere in Scotland, programmes based on

existing land reserves will in the majority of Districts run out in one to three years. Programmes of new planting in England and Wales are already at a low level in most Forest Districts.

Use of Chemicals

88. Newly-planted conifers are prone to attack by bark-eating insects, notably the pine weevil *Hylobius abietis*, and the protection of plants by insecticide application has been standard practice for many years. It became apparent during the year that, in certain circumstances on restocking sites, men handling plants dipped in gamma-HCH briefly absorbed more of the chemical than was desirable. As a consequence, a suit of protective clothing has been prescribed under the Pesticides Safety Precautions Scheme for use when planting HCH-dipped plants. The effectiveness of the new clothing in terms of protection is being carefully monitored (see paragraph 134).

Work Study

89. The application of work study has had a significant effect on the efficiency of forest operations over the past two decades, and it continues to play an important role. During the year method studies continued on various silvicultural operations. A new transplant handling system was tested at Newton nursery; a prototype transplant insecticide applicator based on a conveyor system and ultra low-volume application of pyrethroids was developed ready for field trials; and further modifications were made to the weeding spot gun which is now in widespread use. The evaluation of scarifiers for preparing ground for restocking continued; of these, forest trials of the Delta TTS35 powered scarifier showed great promise for drier sites with heavy brash and ground vegetation. In the harvesting field, a review of 10-tonne forwarders was undertaken with three machines being identified as meeting Commission needs. A review of thinning harvesters was also begun. Work measurement programmes continued in most areas. The preparation of tables for spruce, using log assortments produced as the method of assessing work content, is nearly complete; various safety projects are also being progressed, including the monitoring of carbon monoxide emissions from chain saws.

Forest Protection

Fires

90. Outbreaks of fire and consequent plantation losses were below average in 1985 because of the generally wet spring and early summer. The total stocked area burnt was 568 hectares. At the beginning of the year, there were two cases of fire spreading from muirburn which destroyed 292 hectares of plantation in South Scotland Conservancy, while at the end of the year, 139 fires occurred in South Wales Conservancy during a late winter dry spell which fortunately entailed the loss of only 38 hectares of woodland. Two successful prosecutions for arson were brought by the police in Wales, one leading to a sentence of 6 months' imprisonment. In the same period, a major heath fire on the Isle of Purbeck threatened adjoining woodland and encroached in one area: fortunately only 13 hectares of pine woodland were destroyed.

91. Helicopters have again proved useful, both for observing major fires in order to determine the best fire-fighting tactics and for moving fire-fighters and their equipment. We have had a programme of training for staff concerned to enable them to make the most effective use of helicopters when available.

Pest Control

92. In North Scotland Conservancy, we had to spray 4,860 hectares of Lodgepole pine with Fenitrothion to avert severe defoliation by larvae of the Pine Beauty moth which would have led to the death of the affected trees. The operation was generally successful, but control was incomplete in a small proportion of the sites treated and these will require further treatment in 1986. The search continues for alternative methods of controlling this pest, including the use of a natural virus; these are described later in this Report in the section dealing with research (paragraph 157).

93. We also successfully treated 2,435 hectares of Lodgepole pine in North Scotland Conservancy against Pine sawfly attack by using a natural virus applied from the air. The virus is effective only against this species of sawfly and is prepared from naturally-infected larvae collected in the forest. The area treated was less than in 1984 which gives grounds for hoping that this outbreak is now on the wane.

Deer

94. Deer management and control continued at much the same level as in recent years. The creation of deer glades is now being undertaken on a wide scale in upland forests. The continuing spread of the introduced species, Sika and Muntjac, is a constant cause for

concern, particularly in north and west Scotland where Sika are doing considerable damage. Sika not only interbreed freely with native Red deer but are also more secretive and proving harder to cull.

Squirrels

95. A coordinated national assessment of squirrel distribution and damage to woodland crops was again undertaken by our Research Division. Greater damage by grey squirrels in the Chilterns and in isolated areas in the Midlands was recorded; otherwise, squirrel populations and damage were similar to those found last year. A substantial effort is being made to encourage private owners to control grey squirrels, in line with the new broadleaves policy. A series of practical training days has been organised by Commission staff, and administrative support is being provided to assist the formation of squirrel control groups.

Environment Organisation and Structure

96. We have referred in detail earlier in this Report (paragraphs 20 to 24) to our new statutory duty in relation to the environment and to our various nature conservation initiatives. We are well placed to take these forward since, as part of the reorganisation of the Commission's management structure, we took the opportunity to improve and strengthen the environment organisation at all levels of management.

97. At Headquarters, a new Environment Branch is responsible for the formulation of policy and practice in landscape design, nature conservation, recreation and archaeology in a comprehensive and integrated manner. It communicates these through training and publicity, and audits environmental standards in the field. Each Conservancy now has a Private Forestry and Environment Officer who is responsible for implementing environment and private forestry policies according to the needs of the Conservancy. At the basic tier of management, Forest District Managers are responsible and accountable for the effective implementation of environmental and other forestry policies, assisted by specialist staff including Rangers of whom we have over 250.

98. By judicious redeployment of resources it has also been possible to increase the numbers of professional environment staff. A full-time Conservation Officer has been appointed at Headquarters and the number of Landscape Architects is being increased from two to six, three of whom will be based in Conservancies. In addition, the Wildlife and Conservation Research Branch in Research Division is being restructured to create two new posts for conservation projects. Our professional staff, at all levels and of all disciplines, now have a specific responsibility to safeguard the environment.

Forest Design

99. Our landscape design work has continued to concentrate on felling and restocking sites, with the new broadleaves policy adding a fresh dimension. Substantial areas of our upland forests are now approaching maturity and this presents an opportunity for their comprehensive re-design. The relatively uniform first-generation forests are being converted into woodland which is more varied in terms of shape, age and species, in such a way that the multiple objectives of wood production, good landscape and enhanced conservation value are achieved in an harmonious manner. Nowhere is this more evident than in Kielder Forest in Northumberland — the largest man-made forest in Britain — where the first plantings began in 1926. It is now approaching the time when it is a fully productive forest, and the felling and restocking of the earlier plantations is being done in a way which will bring substantial benefits and variety in terms of landscape and conservation. New methods of management such as the creation of open areas, deer lawns and ponds will give the forest a more diverse and interesting appearance. More than 350 miles of watercourses will eventually have broadleaved species planted alongside. Such changes will be taking place in all our major forests over the next decades as felling begins and we can create a more varied age structure and species mix.

100. Major forest design projects were also undertaken during the year at Ardgartan, Cwmcarn, Taf Fechan and on Dartmoor, and work has been carried out on the design of extensive roadside landscapes in Galloway, including a detailed landscape plan for the Raiders' Road Forest Drive. The visual aspect of offices, campsites and forest villages is another area which has continued to occupy our Landscape Architects. We have also investigated the use of computers for forest design, and they show promise in the quick and accurate transfer of designs between sketch and map.

101. Training of our own staff and others in these aspects of our work continues to expand. Additional seminars have been held on forest and building design, and our landscape staff contributed to a Forestry Training Council course on forest design for private forestry managers held in the Peak District National Park. Lectures to universities and other Government Departments have also increased.

Forest Recreation

102. We have continued with the refurbishment of our recreation facilities with the start of major improvements at our oldest visitor centre in Grizedale Forest, first opened in the mid-1960s, and at Maesgwm visitor centre in Coed y Brenin Forest, Snowdonia. Both these projects emphasise the importance we attach to the maintenance of good interpretation facilities as a means of improving the understanding of our work and the role of forestry in the countryside. A number of joint recreation schemes with outside bodies are also being undertaken. A notable example has been the erection of a forest shelter and information point at Glendoll car park and picnic place in Angus, in which we were assisted by the Manpower Services Commission, a rehabilitation centre in Dundee, the Tayside community programme and the Airlie Sawmill.

Estate Management

Land Acquisition

103. During the year 1,018 hectares of plantable land were acquired, including 83 hectares of land under trees. The distribution of acquisitions was as follows:

	<i>Total plantable area acquired (hectares)</i>
England	300
Wales	57
Scotland	661

104. The average price of plantable land without trees was £523 per hectare, compared with last year's average of £328 per hectare. It would be unwise to read too much into either figure, however, because of the relatively low area and small number of individual properties involved.

105. Our acquisition funds are limited and we have concentrated on properties that are rational additions to our existing woodlands or will maintain employment in socially-fragile areas. We faced a highly-competitive market for plantable land and were outbid on a number of occasions.

Sale of Plantations and Other Properties

106. Our programme of land rationalisation continued during the year. Some 200 blocks of forest land totalling 8,314 hectares were sold and realised the sum of £9.6 million. The majority of areas sold were under 25 hectares. A further 3,600 hectares of forest land were in the process of legal completion at the end of March. In addition to forest properties, we sold well over 300 houses and some 8,259 hectares of other land which were surplus to our requirements. The aggregate receipts for the year were £17.0 million. The total cash receipts since the present disposals programme started in 1981 amount to £83.3 million, of which £78.6 million had been surrendered to the Exchequer (Consolidated Fund) by 31 March 1986.

107. Details of forest land sold during the year and average prices received are shown at Appendix VIII Table 8. Table 7 of Appendix VIII gives details of the net area of land disposed of during the year.

Market Value of Properties, Including Plantations

108. The market value of the Commission's plantations, as referred to in the foreword to the Accounts, was assessed on the basis of the forestry estate being sold in an orderly manner as between a willing seller and a willing buyer, in full accordance with public accountability and assuming its existing use. It was further assumed that no constraints existed, as they do in practice, from title, statute and environmental considerations. This assessment of market value takes account of prices realised in the Commission's woodland sales since 1981. These prices reflect the financial and other criteria adopted by purchasers. The book value, on the other hand, is assessed using the Commission's target rate of return (3 per cent) as explained in Note 1(c) to the Accounts on page 77. It is for this reason that the two values can be expected to differ. The market value of forest buildings within plantations reflects the price that might be expected from a break-up sale as compared with a book value calculated on a going-concern basis.

*Management of
Property*

109. During the year we spent £1.8 million on the construction and improvement of houses and buildings. The provision of office accommodation suitable for our new three-tier management structure continued, with major improvements being carried out to the Forest District Offices at Gwent, Brecon, Ayrshire, Lockerbie and Lothian & Tweed. Our Conservancy office at Aberystwyth was refurbished and work started at Grizedale in the Lake District on improvements to the visitor centre and provision of offices and forest buildings.

110. There was increased interest in private opencast and deep coal mining on our land in parts of Ayrshire and West Lothian under British Coal licence. Sand and gravel extraction from Bramshill Forest in Hampshire will commence soon following open market competitive tenders. The land will be restored to forestry after phased working of the deposits.

111. The biennial review of house rents took place in England and Wales during the year and existing 'fair rents' were reassessed analogous to those in the Rent Acts. 1,040 properties were involved, resulting in an average increase in rent of 17 per cent. Our total rental income for the year, including agricultural, sporting and other rents, was £2.0 million. The Commission's property holding is detailed in Table 13 of Appendix VIII.

112. Our energy conservation programme has been an outstanding success and is being extended. Surveys are now being undertaken at our main research establishments at Alice Holt in Surrey and The Bush near Edinburgh. Arrangements are also in hand to enable us to monitor energy consumption in the remainder of our offices and other forest buildings throughout the country. A similar programme is being undertaken in respect of our vehicle energy costs (see paragraph 130).

*Commercial
Recreation*

113. In spite of a very wet summer, commercial recreational facilities continued to make a valuable contribution to the public's use of our forests. We achieved satisfactory occupancy levels for our forest cabins and holiday houses, but the appalling weather had an adverse effect on the use of campsites. We were pleased that our efforts to extend the season for the cabins and houses with competitively priced off-peak holidays and mini-breaks were successful. We began the refurbishment of our cabins at Strathyre (this was our first forest cabin site, built in 1972), caravan electrical hook-ups were installed at several campsites, and three new holiday houses were furnished ready for the 1986-87 season.

Harvesting and Marketing

Market Demand

114. This was a buoyant year for sales across the whole range of roundwood products. The settlement of the miners' strike in March 1985 brought an immediate recovery in the demand for sawlogs and round pitwood. Other sawnwood markets remained level, although there was a slight improvement in construction and housebuilding. The recent increases in sawmilling capacity, some of which we reported last year, brought keen competition to our auction and tender sales of sawlogs and standing timber. The demand for small roundwood for pulp and particleboard was extremely strong throughout the year following the developments described in paragraphs 6 and 7, and sales increased by 17 per cent. The total volume of wood harvested from our forests in the year rose by 9 per cent to 3,119,000 cubic metres.

115. The alterations to our Conservancy structure, which came into operation in April 1985, have not called for any major changes in the way in which we market our timber. The opportunity was taken, however, to introduce a new annual auction at Dunblane offering timber from the new Mid Scotland Conservancy. The first auction at this venue took place in September 1985 and proved very successful.

Wood Prices

116. Reflecting the strength of market demand, prices obtained for sawlogs and small roundwood maintained an upward trend. Sawlog prices increased by an average 6 per cent, despite a slight decline in imported sawn softwood prices towards the end of the year. Pulp and chipwood prices moved ahead strongly, as a result of the growing demand from new domestic consumers. Overall, we achieved a price increase of 11 per cent on small roundwood sales.

*Forestry Commission
Operations*

117. Set out overleaf are the results of our 1985-86 harvesting and marketing operations, together with results from the previous five years. These figures have been adjusted to take account of work in progress so that comparisons can be made with the Accounts of the Forestry Enterprise (pages 67 to 86).

	<i>Unit</i>	<i>1980-81</i>	<i>1981-82</i>	<i>1982-83</i>	<i>1983-84</i>	<i>1984-85</i>	<i>1985-86</i>
	Million cubic metres						
<i>Total Removals</i>		2.48	2.73	2.80	2.93	2.86	3.11
By Sale Standing	"	0.82	0.91	0.96	0.98	0.93	1.09
By Forestry Commission harvesting (adjusted for change in work in progress)	"	1.66	1.82	1.84	1.95	1.93	2.02
<i>Gross receipts</i>	£ million	36.13	36.32	38.43	44.20	46.96	56.70
Expenditure (including oncosts but excluding overheads)	"	23.29	24.60	23.98	22.84	23.82	27.47
Net receipts	"	12.84	11.72	14.45	21.36	23.14	29.23
<i>Gross receipts per cubic metre</i>	£	14.57	13.30	13.73	15.08	16.42	18.23
Expenditure per cubic metre	"	9.39	9.01	8.56	7.79	8.33	8.83
Net receipts per cubic metre	"	5.18	4.29	5.17	7.29	8.09	9.40

In the following paragraphs the features of our operations in each of the main sectors are set out in more detail.

Conifer Sawlog Sales

118. The total volume of sawlogs sold from our own harvesting operations was 1,070,000 cubic metres (measured over bark), an increase of 7 per cent over the previous year. The average price improved slightly throughout the year ending about 6 per cent higher than in 1984-85. At the same time the Log Price Index, which is an indication of forward prices, ended the year at 196.4 compared with 177.8 at 31 March 1985. This 10 per cent increase was a reflection of the strengthening demand at the year's end following the recent expansion in capacity at a number of mills.

Conifer Small Roundwood Sales

119. Our overall sales of pulpwood and chipwood increased by 17 per cent and now represent 36 per cent of our total direct production (Plate 6). However, we brought about a significant and progressive change in emphasis during the year — away from export sales into the domestic market. The volume sold under domestic long-term contracts accounted for 77 per cent of small roundwood sales. Exports of pulpwood were reduced from 300,000 tonnes in 1984-85 to 104,000 tonnes, and by the end of the year all our direct contracts with overseas buyers had finished.

Pitwood

120. The effect of the miners' strike which had badly affected deliveries of round mining timber in 1984 continued into the early part of this year. However, demand and deliveries improved more strongly than had been expected later in the year, with the result that our total deliveries were only 8 per cent below those of the last full year before the strike. Whilst this recovery is welcomed, there is nevertheless a significant reduction in British Coal's overall roundwood requirement as a result of pit closures.

Sales of Standing Timber

121. The volume of timber sold standing from Commission forests rose during the year by 16 per cent to 1,087,000 cubic metres. This represents 35 per cent of the total volume of wood harvested, the highest proportion of standing sales for several years. The demand from small roundwood consumers was particularly strong and three major companies — Shotton, Thames and Egger — came into the market with their own harvesting enterprises with a view to strengthening their wood-supply arrangements. The competition for wood has caused several companies to look outside their normal supply catchments and to make increasing use of rail carriage. Purpose-built railway wagons are now available by arrangement with British Rail, who are actively developing their rail-freight timber business in Scotland, Wales and the west of England. The standing Sales Price Index rose from 371.1 at 31 March 1985 to 440.5 at 31 March 1986, an increase of 19 per cent.

Harvesting

122. The volume felled by direct working was 2,032,000 cubic metres. The average tree size harvested remained unchanged from the previous year's figure of 0.24 cubic metres. Despite one of the wettest summers recorded for several years, we achieved a productivity increase of over 5 per cent. Improved harvesting systems, based in the main on forwarder extraction, continue to play their part in maintaining the downward trend in the cost of harvesting in real terms achieved in recent years. A notable example during the past year

has been the achievement at Thetford Forest, which provides almost 10 per cent of the directly-harvested volume. A move to shortwood harvesting systems at Thetford, made possible by the development of a forwarder specification particularly suited to local conditions, resulted in a considerable saving in annual harvesting costs (Plate 2).

123. A series of one-day seminars was held during October at Monmouth and Peebles, to demonstrate improved felling methods which we have developed through work study techniques. These methods offer significant safety and ergonomic advantages and result in a well-ordered presentation of timber for extraction. The seminars were attended by representatives of the private sector, as well as Commission staff. The methods demonstrated are now standard practice in the Commission.

124. The evaluation work on processors and harvesters has continued. The two Bruunett 678P processors, both working in North England Conservancy, have proved very effective and are operating at significantly lower unit costs than the alternative motor-manual method. The Bruunett 678P is now a recommended machine for clear felling where the average tree size is no greater than 0.25 cubic metres. Two harvesters, one designed for thinning and one for clear felling, have been on extended trials during the year, but it is not intended to draw any firm conclusions about their performance or future role until they have been fully tested in field operation for a further 12 months.

125. The management of the Commission's fleet of medium forwarders was reviewed during the year. These machines represent an investment, in terms of current replacement cost, of more than £4 million and were responsible for the extraction of approximately 500,000 cubic metres of roundwood in the year. A series of detailed recommendations to improve mechanical availability, reduce repair costs and increase utilisation through better planning and the introduction of more flexible working practices emerged from the review. Implementation of these recommendations was already in progress before the end of the year.

126. The results of a similar but earlier review, on the operational aspects of the Commission's cablecranes, began to show during the year. These machines, used for extracting timber on steep slopes, have declined in number dramatically in recent years owing to the improved terrain performance of forwarders, bringing consequent cost advantages. We had more than 100 cablecranes in use in the late 70s: there were only 12 operational machines at the end of the year under review. The average volume produced by these remaining machines during the year showed an increase of some 24 per cent over their average output in previous years.

Engineering

Civil Engineering

127. We constructed 84 kilometres of new roads and upgraded 259 kilometres of existing roads during the year, bringing the total length of roads to be maintained in Commission forests to 10,553 kilometres. An increasing effort is being made to locate suitable outcrops of rock on our land for the establishment of quarries to produce high-quality stone for road surfacing. The intensity of traffic on forest roads demands a higher quality of surfacing material and this has necessitated the processing of materials by screening gravels and crushing rock. A new crusher has been acquired and is now successfully producing well-graded crushed rock at an economical price.

128. Our engineering staff have continued their detailed discussions with local authorities and central Government over the question of improving low-quality rural roads to take timber-haulage vehicles. Some success has been achieved in obtaining Government assistance for a number of the local authorities in Scotland most severely affected, and our efforts will continue to ensure that forestry-generated traffic obtains reasonable access to the public highway system.

129. The design of a standard workshop has been completed to accommodate the larger and more sophisticated machinery. This design has built-in flexibility to allow changes to be made to suit particular Conservancy requirements, and a computer program has been written to select the most cost-effective sites.

Mechanical Engineering

130. Our revised management structure is now showing benefits through the rationalisation of fleet holdings and their support systems. Examples are the standards of workshop equipment, specialist training of personnel and contributions to computerised management and stores systems. The Commission's mechanical engineering staff were fully involved in the forwarder review referred to in paragraph 125. They are also in the process of setting up technical and energy audit systems which should lead to further

savings in fleet running-costs. Arduous working conditions for our machines have brought their usual technical problems; the intensified scarification programme on restocking sites (paragraph 89) has also required an engineering input in the provision of power units.

131. The year under review saw the completion of the three-year programme of re-organisation and expansion of the Commission's radio network consequent upon the re-organisation of Conservancies and Forest Districts. Trials are under way of a system using an infra-red detector and ultrasonic sound as a possible alternative to cattle-grids. Our engineering staff have built, tested and installed four prototypes. If the trials are successful the system will show considerable savings over conventional cattle-grids.

Forest Workers' Pay

132. The pay settlement for forest worker grades agreed during the year increased the weekly rate for unskilled forest workers to £82.35 and for forest craftsmen to £93.65 from 29 July 1985. As in the three previous years, the settlement included a provision that in those weeks in which piecework earnings were not available guaranteed rates would be paid, the amounts being £89.50 for unskilled forest workers and £101.80 for forest craftsmen. The average weekly earnings of forest workers in 1985-86, based on a sample of one full week's work by all grades in each quarter, were £124.76.

Health and Safety

133. We are pleased to report that there was a noticeable reduction in the level of reportable accidents (ie those causing incapacity for more than three days) from 6.8 per 100 industrial employees in 1984 to 5.8 in 1985. This reduction occurred in all three operational areas — silviculture, harvesting and marketing and engineering.

134. The change in planting practice when handling plants dipped in gamma-HCH has already been noted (paragraph 88). The effectiveness of the protective clothing prescribed is being studied by the Operator Protection Research Group, which is part of the Ministry of Agriculture, Fisheries and Food's Pesticides Registration and Surveillance Department. The study involves analysis of the amounts of insecticide accumulating on different portions of the protective clothing. In the meantime, to check that the chemical was not being absorbed by workers despite the provision of full protection, arrangements were made for all Commission workers involved to have blood and urine samples tested by the Employment Medical Advisory Service of the Health and Safety Executive.

Finance

135. The accounts of the Forestry Enterprise, including general notes and explanations together with the Comptroller and Auditor General's report thereon, appear after page 67.

136. With four years of the 1982-87 quinquennium now over, the indications are that we shall exceed, in real terms, the set targets of 3 per cent on our forest estate valuation and 5 per cent on our commercial recreation and surplus estate investment. Cumulative favourable variances on the Plantations Account, which indicate the extent to which the 3 per cent target has been exceeded, totalled £51.7 million. Income exceeded the standard by £15.9 million, mainly because of improvements in timber markets. Forest costs were £26.1 million lower than the standard as a consequence of improvements in efficiency and productivity, particularly in harvesting operations. The Trading Account showed a cumulative surplus of £3.4 million above the targets set. This was chiefly due to the profit achieved on the sale of surplus properties.

Forestry Authority

Legislation

Exemption from Felling Licensing Requirements

137. New Regulations* came into operation on 12 November 1985 which exempt from the need to obtain a felling licence any felling of trees carried out in accordance with a plan of operations approved under the Broadleaved Woodland Grant Scheme. This brought the new scheme into line with the statutory arrangements which already apply to our other grant schemes.

Felling Licences – Reductions in Licence-free Quota

138. The Government's broadleaves policy statement indicated that it had been decided to reduce the volume of timber that may be felled without a licence from 30 cubic metres to 5 cubic metres per quarter, with a reduction in the volume of such timber that may be sold from 5.5 cubic metres to 2 cubic metres. The amendment to the Forestry Act 1967 to give effect to this was affirmed by both Houses of Parliament and came into operation on 13 December 1985†.

Amendment to the Movement of Spruce Wood Order 1982

139. A further amendment was made to our Restriction on Movement of Spruce Order 1982. The amending Order‡ was made on 11 March 1986, to come into operation on 8 April 1986. The 1982 Order, as amended in 1985, imposes licensing controls over the movement of spruce wood with a diameter of 75 mm or more grown in specified areas with the object of preventing the spread of *Dendroctonus micans* (the Great Spruce Bark Beetle). The new Order extends the Scheduled Area to include additional parts of the counties of Dyfed and Gwynedd and a part of the county of North Yorkshire (Craven District). This extension was required because of a slight spread of the pest, as reported in paragraph 160.

Amendment to the Watermark Disease (Local Authorities) Order 1974

140. As a consequence of a review of the practical measures being taken by local authorities against the bacterium *Erwinia salicis* (Watermark disease of Willow), we are planning an amendment to the Order to remove control powers from certain local authorities. These powers were introduced to prevent the spread of the disease into areas where cricket bat willows are grown, and they will continue to be held by the local authorities in the areas concerned.

Implementation of Forest Reproductive Material Regulations 1977

141. There were 18 new entries in the National Register of Basic Materials maintained under these Regulations. We carried out 41 inspections of private forest nurseries which showed a generally satisfactory standard of compliance with the Regulations. A new free booklet outlining the Regulations was published in October 1985.

Private Forestry

Planting

142. Planting by the private sector reached its highest level for 13 years, with 23,358 hectares being grant-aided compared with 19,095 hectares in the previous year. The area of new planting rose to 19,019 hectares (16,029 hectares in 1984-85). Of particular interest was the fact that broadleaved planting increased to 2,341 hectares (1,647 in 1984-85), despite only 75 hectares of new planting and restocking being grant-aided under the newly-introduced Broadleaved Woodland Grant Scheme; as we have indicated earlier in this Report (paragraph 14), the scheme has got off to a most encouraging start and should lead to further increases in broadleaved planting levels over the next few years. Over 89 per cent of the total area of planting grant-aided in the year under report was under the Forestry Grant Scheme and, although the number of applications to enter the scheme was lower than in the previous year (1,911 compared to 2,296), the area covered by these amounted to 101,627 hectares, an increase of over 21,500 hectares on the 1984-85 figure: this area represented the largest annual figure covered by applications since the Forestry Grant Scheme was introduced on 1 October 1981. Fuller details of grant-aided planting are to be found in Table 2 of Appendix VIII.

* The Forestry (Exceptions from Restriction of Felling) (Amendment) Regulations 1985 (SI 1985/1572)

† The Forestry (Modification of Felling Restrictions) Regulations 1985 (SI 1985/1958)

‡ The Restriction on Movement of Spruce Wood (Amendment) Order 1986 (SI 1986/476)

143. The substantial increase in planting in the year is most encouraging and conforms to the pattern of recent years in which the area planted has risen sharply after two years at roughly the same level. It is possible that this pattern will be repeated, though the area covered by applications for entry to the Broadleaved Woodland and Forestry Grant Schemes indicates that there may be a further rise in planting levels in 1986-87. The private sector's growing interest in planting is leading to significant increases both in our Forestry Authority expenditure on grant-aid and in the resources we are having to devote to the consideration of planting and felling applications, all of which involve prior site inspection: much of the expenditure in dealing with such applications is occasioned by the greater incidence and complexity of consultations with other countryside authorities over land use and environmental factors.

144. The grant review mentioned in paragraph 112 of our 1984-85 Report was completed in July 1985 and it was decided to increase the planting grant rates under the Basis II and Basis III Dedication Schemes and the Forestry Grant Schemes by some 5 per cent from 1 October 1984. It was concluded that there should be no change in the levels of management grants paid under the Dedication Schemes. The revised rates of grant were set out in Tables 2 and 3 to the Government's broadleaves policy statement of 24 July 1985 (see Appendix V).

International Affairs

145. Besides our participation in the major international forestry events described in paragraphs 53 to 61, we continued to be actively involved in the work of a number of international committees — notably the Joint Committee of the Food and Agriculture Organisation (FAO), the Economic Commission for Europe (ECE) and the International Labour Organisation (ILO) on Forest Working Techniques and Training of Forest Workers, the 22nd session of the European Forestry Commission of the FAO, and the inaugural meeting of the ECE Timber Committee's team of specialists on the Implications of Air Pollution Damage to Forests for Wood Supply and Forest Product Markets. Other international bodies to whose work we contributed during the year were the ILO Committee on Forestry and Wood Industries, the FAO/ECE Joint Working Party on Forest Economics and Statistics, the FAO Council, the ECE Executive Body for the Convention on Long-Range Transboundary Air Pollution, and the International Tropical Timber Organisation. Commission staff also attended the International Union of Forest Research Organisations' conference on Research in Forestry for Energy.

Forestry Research Coordination Committee

146. The Forestry Research Coordination Committee met six times during the year, Mr R.T. Bradley taking over as Chairman from Mr G.J. Francis on 1 January 1986. The Committee's responses to four of the reports of review groups were published in Information Notes which were given a wide distribution. The research subjects covered by these reviews related to Wood science and processing, Integration of farming and forestry in the lowlands, Tree physiology in relation to tree improvement and propagation, and Broadleaved woodlands. Each report made recommendations on changes in the emphasis of research, and a number of these were picked out for special attention in the Committee's responses. The reactions of the authorities responsible for financing research, as well as those undertaking research, to the various proposals made by the Forestry Research Coordination Committee are being monitored. Positive responses have been reported to the first two reports; it is a little early to assess what action will be taken in relation to the other two reports, but preliminary responses have been promising.

Research

147. With the increasing attention paid to the role of forestry, the continuing expansion of the country's woodland area and the growing volume of timber at risk from damaging agencies, we have considered it right to maintain the effort devoted to research. We are pleased to note that others concerned with forestry research — such as the Natural Environment Research Council (NERC) with its Charter responsibility for basic research in this field — have been able to maintain their support, either directly or through grants to universities.

148. The Commission's Report on Forest Research, published each autumn, gives a full account of the work carried out or commissioned by our Research Division and other Divisions with responsibility for research in their own fields. The paragraphs below represent a small selection of items of general interest.

*Silviculture –
Provenance*

149. The wide native range of the main forest species planted in this country has necessitated a major and lengthy programme of applied research to identify the appropriate seed sources for different site types and purposes in this country. This field of research is now being markedly curtailed following final publication of its valuable results. It is recognised that future improvements will be based on the more precise work of the tree breeder.

*Genetics – Biochemical
Variation in Trees*

150. The heritability of monoterpene, a constituent of tree resin, is being studied for several practical reasons. First, for use as a means of identifying (finger-printing) the improved plant material which comes from tree breeding; secondly, to characterise Sitka spruce trees which appear to be naturally resistant to the important butt-rotting fungus *Heterobasidion annosum*, so that this factor can be incorporated into future breeding programmes; and thirdly, as it appears that the susceptibility of Lodgepole pine to the Pine beauty moth, *Panolis flammea*, is correlated with heritable biochemical variations, it is thought that with this species also such characterisation may offer a ready means of testing newly-bred progeny for susceptibility.

*Physiology – Flower
Induction*

151. Means of promoting early flowering are important to the Sitka spruce breeding programme. The role of potassium deficiency in cone production has been investigated and it appears that a potassium imbalance may be a key factor in increasing the development of cones rather than new growth. The mechanism of the effect is not known, but potassium, being important to the control of stomata, may affect water relations and thus contribute to physiological stress which is known to promote flowering.

*Silviculture – Plant
Handling*

152. The survival and early growth of planted trees is known to be dependent on the treatment they receive after lifting from the nursery. In addition to the adverse effects of heating and drying (see paragraph 83), it has been established that rough handling, which produces no visible symptoms, can markedly reduce growth on site. This will be taken into account in developing improved plant-handling procedures.

Tree Shelters

153. Tree shelters, first tested in 1979 and taken up speedily by those who saw the promise of our early experiments, have proved increasingly popular at home and abroad. More attention is being paid to details of design, such as methods of support and of avoiding fraying damage to the stem after it has emerged. The favoured colour now widely used is a shade of fawn, which usually fits most appropriately into the country scene and at all seasons. However, interest still attaches to the merits of different colours and densities of shade for different species. Nine colours from red to violet, including plain white, have been tested on ash, beech and oak. With all three species, both height and diameter growth in the first year after planting tended to be greater in the red-orange-yellow range of colour and also in the blue-violet range. These colours coincide with the peaks of the chlorophyll absorption spectrum. Experiments testing the commercially-available shades of brown, green and translucent white showed, as expected, smaller height growth in green.

*Silviculture –
Agro-forestry*

154. The interest in silvi-pastoral systems which combine widely-spaced trees with grazing, to which we referred in last year's Report, has continued. The first experiment to assess the growth of a standard grass sward under a range of woodland densities has been established near Edinburgh in a collaborative research project involving the Forestry Commission, the Hill Farming Research Organisation and Edinburgh University. Other joint experiments, both to determine limiting factors and practical difficulties, are planned. Parallel studies are being undertaken jointly by researchers at our Alice Holt Research Station and the Animal and Grassland Research Institute at Hurley. These studies are on lowland sites where moisture relations are of particular concern.

*Effects of Trees on
Sites*

155. A joint study we are undertaking with NERC's Institute of Terrestrial Ecology has been concerned with the long-term effects which trees, and their management, have on the site. The main experiment has been undertaken in a Sitka spruce area at Beddgelert Forest in Snowdonia where the tree crops were felled two years ago. One treatment involved the removal of whole trees from the site (foliage, branches and stem) and the other a conventional harvesting. It was expected that clear felling would create a pulse in the leaching pattern of major nutrients. It is now clear that phosphate has moved 20-30 cm down the profile following felling. By contrast, nitrogen and potassium have appeared in the catchment outflow, the pulse of potassium leaching being largely complete after two years. There were no obvious differences in relation to nutrients between the conventional and whole-tree harvesting treatments. In the latter, however, the seasonal water table moved 5 cm closer to the surface immediately after felling.

Forest Health Days

156. There has been a growing concern in recent years that forest damage caused by fungal and insect pests and by mammals and other biotic agents in the forest has not been adequately identified or monitored. In order to heighten the awareness of forest staff, as well as to discover whether any important pests and diseases were present without our knowledge, we arranged a trial series of forest health days in one District in each Conservancy. The Forest District Manager and the majority of his professional staff allocated one full day in mid-summer to inspecting the health of between 10 and 20 per cent of the stands in the District. In each case, briefing and debriefing by Research Division staff were an essential part of the exercise. Although no serious causal agency was found in the seven Districts covered, the exercise was universally thought to be useful. We therefore propose to introduce this practice into more Districts in 1986. Private woodlands were covered by some of the forest health day surveys in 1985 and arrangements are being made with Timber Growers United Kingdom to strengthen this connection.

Pine Beauty Moth

157. Population levels of the Pine beauty moth have been monitored in Lodgepole pine stands in North Scotland Conservancy since the first outbreak occurred there in 1976. Pupal counts undertaken in the Highland Region in the autumn of 1984 indicated that populations were high in certain areas and that aerial spraying with insecticide was likely to be needed. This assessment was confirmed by egg counts in the following spring and 4,860 hectares were sprayed in June 1985. Treatment was mainly by ultra low-volume application of Fenitrothion. At the same time a number of alternative materials were tested for their efficacy, including the insecticide Dimilin and an insect virus which has been developed and tested by NERC's Institute of Virology. Both gave satisfactory control and are likely to be used in extended trials in 1986. Trials with a second biological control agent, *Bacillus thuringiensis*, gave less effective control of the pest.

Dutch Elm Disease

158. Dutch elm disease has long since annihilated the majority of the large elms in southern Britain, but the causal fungus, *Ceratocystis ulmi*, can be found in the large populations of suckers growing around the stumps of felled elms. At the same time the disease is still moving on an epidemic front in other parts of Europe (for example in Spain and Portugal). This gives the opportunity to study the fungal populations in different phases of an epidemic. On the basis of the studies undertaken so far, it appears that the non-aggressive strain, omnipresent in Europe before the recent outbreak, is likely to be totally replaced by the two races ('NAN' and 'EAN') of the aggressive strain. It is also clear that the 'NAN' and 'EAN' races are now hybridising in those parts of Europe such as Holland where they co-exist. Preliminary results indicate that the hybrids are slightly less pathogenic than the parent races. These studies provide valuable material for the construction of a model of the development of a tree disease when it is introduced from one continent to another.

Yields from Unthinned Crops

159. An important concern for those planning to invest in new wood-using plant and for the managers responsible for timber harvesting is that predictions of the yield of wood from a given area should be unbiased. With thinned stands, some indication of the adequacy of yield models can be obtained through the productive stage of the stands' lives. A considerable proportion of crops in areas of high windthrow hazard will not be thinned, however, and the felling yield predicted is a vital statistic. A comparison of actual volumes with yield table predictions for 64 unthinned sample plots of Sitka spruce showed that, on average, there are no significant differences between actual and predicted volumes. Variation around the mean result can be accounted for by the usual range of variation in the relationship between cumulative volume production and top height of the stand, the measure used to estimate general yield class.

Plant Health

Dendroctonus Micans

160. The campaign against *Dendroctonus micans* (the Great Spruce Bark Beetle) continues. Intensive surveys were carried out in 1985 throughout the Bowland area in Lancashire and in the designated peripheral zone in Wales and the Marches, defined as an area 10 kilometres beyond the known area of infestation determined in the 1984 survey. All spruce trees were examined in both areas and attacks were discovered at 55 locations, comprising a total of 183 trees. Of the affected trees, 87 were in Wales and the Marches (74 Norway spruce and 13 Sitka spruce) and 96 in the Bowland area (23 Norway spruce and 73 Sitka spruce). The majority of these attacks were between two to three years old, indicating that they had been missed during previous general surveys; only 68 trees were found to be newly affected (ie in 1985). The maximum distance of spread shown by these recent attacks was 3 kilometres, which is consistent with the natural rate of spread by beetle flight. More general surveys were also carried out by our staff in every Conservancy and by the private sector in 40 estates outside the Scheduled Area and 24 estates within the

Scheduled Area. Attacks were discovered on a total of 22 Norway spruce trees at three locations in the Aberconwy District of Gwynedd, 6 kilometres outside the Scheduled Area, but no infestations were found elsewhere outside the Scheduled Area. All infested trees discovered in these surveys were felled and treated by 31 March 1986.

161. In addition to the intensive and general surveys described above, we also undertook research surveys in the heavily affected parts of the Scheduled Area to collect data on the population dynamics of *Dendroctonus micans*. So far no pattern has emerged from an analysis of the results.

162. The *Dendroctonus Micans* Working Group — an advisory group comprising Commission staff and representatives of private growers and the timber trade — have reaffirmed that controls over the movement of spruce under the licensing procedure remains an essential and integral part of the strategy to prevent the long-range dispersal of the pest. On the basis of this advice, we decided to amend the Restriction on Movement of Spruce Wood Order 1982 to extend the Scheduled Area to take account of the spread of the pest identified by the 1985 surveys. Details on this amendment are given in paragraph 139. We also revised the leaflet *Guide for Woodland Owners, Hauliers and Drivers Moving Spruce Wood* which summarises the statutory procedures for licensing.

163. The Group have also reaffirmed the concept of 'approved mills' which is now firmly established as part of the control strategy. These are mills — of which there are now 38 — that have been authorised to handle spruce wood moved under licence. Approved status depends on the mill having the capacity to peel the spruce logs and to pulverise and compost the bark. We have continued our inspections of approved and other mills, one of the main purposes of the inspection of approved mills being to check that the criteria, under which the approved status was originally granted, continues to be observed; in the event of a breach of these criteria we reserve the right to withdraw approved status.

Rhizophagus Grandis Release Programme

164. Following the success of the 1984 *Rhizophagus grandis* breeding programme, a new rearing unit was installed with the aim of producing 60,000 of these specific predators of *Dendroctonus micans* for release in 1985. In fact, it proved possible to release only 34,000. Although well short of the target, this nevertheless represented a large addition to the breeding population of *Rhizophagus grandis* in infested stands. The reasons for the lower numbers were a decline in breeding vigour due to the relatively narrow genetic base, the effect of uninterrupted breeding compared with seasonal breeding in the wild and the effect of disease from the fungus *Beauveria bassiana*. During the year we took steps to obtain new breeding stock, and established experiments to determine means of offsetting the other factors which had depressed breeding.

165. A strategy of mass releases at all sites having more than one infested tree was undertaken initially; this was subsequently adjusted as breeding levels fell below expectations. All sites in the peripheral zone and in the Bowland area were treated, however, as were all sites elsewhere with more than ten infested trees which had not been treated in 1984. The number of sites at which releases were made in 1984 and 1985 was 1,640 (94 per cent) out of the total of 1,752 infested sites. Of the sites treated, 508 were in Commission woods and 1,132 in private woods. In all, 65,800 *Rhizophagus grandis* have been released during the two years of the programme (Plate 5). Sites where they were released in 1984 were examined to determine their behaviour in the wild. The results showed evidence of their over-wintering and breeding, and an ability to pinpoint their prey and to disperse effectively within an infested stand.

Pheromone Traps for *Exotic Bark Beetles*

166. As we reported last year, pheromone traps baited for specific European and North American pests were set up at major ports throughout the country and at certain inland locations. These traps were checked at regular intervals and, while catches were normally innocuous, two *Ips typographus* were discovered, one at Southampton and one at Grangemouth. One of these incidents showed that *Ips typographus* could be transported for considerable distances in wood consignments and still be capable of flight under British conditions. For 1986 the programme will be extended to include various forest sites.

Dutch Elm Disease

167. Because of uncertainties surrounding the extent and efficacy of the measures being taken to control Dutch elm disease by some local authorities in the Scheduled Areas, including the extent of the commitment of certain districts following the abolition of the Metropolitan authorities, we plan to mount a comprehensive review of the position in 1986 with the object of reappraising present strategies.

European Community *Plant Health* *Legislation*

168. Further progress in the development of amendments to the EC Plant Health Directive has been made in discussions during the year. Once agreed, these will be reflected in our domestic legislation.

Education and Training

- Education* 169. Following the changes in teaching methods and qualifications which we reported last year, the new forestry courses at the Cumbria College of Agriculture and Forestry and the Scottish School of Forestry have proceeded well. The introduction of a system of 'modules' in the Scottish course has been particularly successful, giving considerable flexibility in meeting individual needs.
- Training* 170. We continue to place great importance on the training needs of field supervisors, particularly in relation to the installation of computer facilities at Forest District offices. The greater emphasis on the good management of broadleaved woodlands gave rise to an increased training demand in all aspects of this subject for staff engaged in forest management and in advising private owners, which was met by additional courses being run at our Forest of Dean Management Training Centre. These included two courses in broadleaved woodland management for 25 Agricultural Development and Advisory Service advisers.
171. We have also continued to support the one-year Youth Training Scheme in forestry. During the year, we allocated 74 jobs in forests throughout the country for trainees to gain experience in forestry work. We are pleased to say that a small number of these trainees subsequently took advantage of opportunities to seek formal qualifications in forestry.

Public Relations

- Promotion of Broadleaves Policy* 172. The promotion of the Government's policy for broadleaved woodlands began with a press conference in London immediately after the policy statement in Parliament (Appendix V). This was followed by a major launch of the new Broadleaved Woodland Grant Scheme on 1 October 1985 at the London Press Club, at which the Director General held a press conference and introduced the Commission's tape-slide presentation *A Future for Broadleaved Woodlands*. The launch coincided with the publication of two new Forestry Commission leaflets supporting the broadleaves initiative — *The Policy for Broadleaved Woodlands* and *Guidelines for the Management of Broadleaved Woodlands*. Substantial media coverage was generated by these two events and the impetus was subsequently sustained by press releases covering Conservancy seminars, training courses for Agricultural Development and Advisory Service advisers and features in the national and farming press. Copies of the tape-slide presentation transferred to video, together with a supporting broadleaves display, were circulated to each Conservancy for their use.
- International Year of the Forest* 173. Staff in our Public Information Division were heavily engaged in planning and executing events and displays to mark the International Year of the Forest 1985, details of which have been given in paragraphs 62 and 63.
- Conservation* 174. We held a successful press tour for the Guild of Agricultural Journalists at the launch of Thetford Forest's *Management Plan: Conservation Review*. A good deal of positive publicity resulted on television and in the national press. We also briefed producers and advised on the final scripting for the forestry content of three programmes in the BBC's *Living Isles* natural history series. We were pleased to be associated with Dr David Bellamy's Conservation Foundation in jointly sponsoring with Tomy UK a major oak planting project in Sherwood Forest. Four hundred volunteers took part in a mass planting of oak as part of the restoration of an ancient woodland site in the Forest of Arden — an event televised live by Channel 4's *Worldwise* environmental programme. In addition to special events of this kind, we have jointly sponsored a number of initiatives such as Coed Cymru, which was launched on 24 June 1985 to promote better conservation and management of broadleaved woodlands by encouraging woodland owners in Wales to undertake effective management schemes.
- Press Briefing* 175. The media continued their interest in issues of air pollution and tree damage, afforestation in the uplands, and the disposals programme, and the number of press calls handled by our Public Information Division almost doubled. Briefing of journalists and radio and television producers produced good coverage particularly in television programmes on forestry and the timber industry shown by BBC TV, Granada TV, STV, Central TV, Anglia TV and Channel 4. We prepared a record number of 68 press releases during the year.
- Tours for Overseas Visitors* 176. We handled 25 tours for distinguished visitors from overseas, including parties from USSR, USA, Korea, Sweden, New Zealand and France.

Finance

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

DAVID MONTGOMERY, *Chairman*

G.D. HOLMES, *Deputy Chairman and
Director General*

R.T. BRADLEY

I.D. COUTTS

J. FORBES

W.F.E. FORBES

G.J. FRANCIS

GIBSON-WATT

G.O. HUTCHISON

J.D. POLLOCK

D.T.J. RUTHERFORD

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

Appendix I

Statutory and other Committees appointed by the Forestry Commission: membership at 31 March 1986

National Committees

England

Mr R.T. Bradley (*Chairman*), Mr P.O.R. Bridgeman, Mr J. Forbes, Mr G.O. Hutchison, Mr W.E. Lane, Major D.J.C. Davenport. *Secretary to the Committee*: Miss M. O'Hare. The Committee met in May 1985.

Scotland

Captain W.F.E. Forbes (*Chairman*), Mr R.T. Bradley, Lt-Col A.E. Cameron, Mr J.D. Pollock, Mr William Wolfe, Captain J.M.A. Yerburch. *Secretary to the Committee*: Mr B.R. Sidaway. The Committee met in April 1985.

Wales

Lord Gibson-Watt (*Chairman*), Mr R.T. Bradley, Mr B. Davies, Mr D. Davies, Mr D.Y.M. Robertson, Mr W.R. Williams. *Secretary to the Committee*: Mr B.P. Easton. The Committee met in November 1985.

Regional Advisory Committees

ENGLAND

North Conservancy

Mr P.O.R. Bridgeman (*Chairman*), Mr M.J.M. Bliss, Dr H. Frankland, Professor B. Hackett, Mr T.N. Hammond, Mr W.W. Metcalfe, Mr R.E. Shapland, Mr P. Townson, Sir Marcus Worsley. *Secretary to the Committee*: Mr J.G. Armstrong. The Committee met in May and September 1985 and January 1986.

East Conservancy

Mr W.E. Lane (*Chairman*), Major G.K. Agnew, Mr W.H. Darling, Mr D.J. Edwards, Mr J.P.M.H. Evelyn, Mr A.C.S. Jennings, Mr H.W. Mackworth-Praed, Mr P.H. Peck, Mr J.K. Royston. *Secretary to the Committee*: Mr W.O. Wittering. The Committee met in May and October 1985.

West Conservancy

Major D.J.C. Davenport (*Chairman*), Mr M. Bray, Mr C.A. Eade, Mr I. Mercer, Mr R.M. Moody, Councillor A.G. Phillips, Mr M. Roper, Mr R.F. Worgan, Mr J.H.B. Workman. *Secretary to the Committee*: Mr B. Tipping. The Committee met in May and October 1985.

SCOTLAND

North Conservancy

Lt-Col A.E. Cameron (*Chairman*), Mr E.J. Brodie, Mr R. Cameron, Mr J. Evans, Mr A.D.M. Farquharson, Mr N. Gordon-Smith, Mr J.P. Grant, Mr W.W. McAskill, Mr H.D. Skinner. *Secretary to the Committee*: Mr K. Roscoe. The Committee met in May and October 1985.

Mid Conservancy

Mr William Wolfe (*Chairman*), Captain J.N.B. Baillie-Hamilton, Mr D. Brierton, Mr B.S. Brookes, Mr A. Fleming, Mr R. Newberry, Councillor T. Rae, Mr T. Smith. *Secretary to the Committee*: Mr W.J. Anderson. The Committee met in May and October 1985.

South Conservancy

Captain J.M.A. Yerburch (*Chairman*), Dr R. Aitken, Mr W.S. Brack, Major D. Bridges, Mr D.F. Hewitt, Councillor J.G. Hope, Mr D.W.N. Landale, Mr R.A. McClymont, Captain J.G. Milne-Home. *Secretary to the Committee*: Mr W.G. Williamson. The Committee met in May and October 1985.

WALES

Mr T.H. Owen (*Chairman*), Mr J.M. Harrop, Mr R. ap Simon Jones, Mr M.A. McLaggan, Mr S.K. Neale, Councillor D.W.L. Rowlands, Mr J.W. Sutton, Mr P.A. Wilde, Mr C.R. Woosnam. *Secretary to the Committee*: Mr B.P. Easton. The Committee met in May and October 1985.

Home Grown Timber Advisory Committee

Mr J.D.W. Janes (*Chairman*)
Mr A.F. Bloomfield
Mr R.E. Boote*
The Hon James Bruce
Mr N.F. Cairncross*
Mr D.J. Cooper
Mr J.R. Cordiner
Mr J.W. Dodds*
Mr W. Elliot*
The Hon James Galbraith
Mr R.D. Gordon
Mr R.M. Harley
Mr P.L. Herring

Mr J.H. Hose*
Mr D.W.N. Landale
Mr R.W. Mackenzie
Professor A. MacLeary*
Mr R.B. Metcalfe
Mr A.W. Mills*
Mr P.S. Murray
Mr H. Richardson
Captain P.H.W. Studholme
Mr R. Whitaker
Mr H.F. Wilson
Mr C.R. Woosnam

*Independent members

Secretary: Mr R.N. Burgess

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

The Committee met in June, September and December 1985 and March 1986. The Annual Report of the Committee is at Appendix II, page 39.

Technical Sub-Committee of the Home Grown Timber Advisory Committee

Mr H. Richardson
Mr D.B. Crawford
Major P.C. Ormrod
Mr M.T. Rogers
Mr J.R. Maer
Mr M.D. Oxnard
Mr J.A. Kissock
Mr T.S. Smith
Dr G.K. Elliott
Mr A.R. Powell
Mr K.R. McDiarmid
Mr H. MacLeod
Mr V.J. Cridge
Mr S.K. Neale

(*Chairman*)

Timber Growers United Kingdom

British Timber Merchants' Association (England and Wales)

Home Timber Merchants' Association of Scotland

Institute of Chartered Foresters

Association of Professional Foresters

Royal Institution of Chartered Surveyors

Association of United Kingdom Wood Pulp Producers

National Coal Board

Transport and General Workers' Union

Secretary: Mr D.A. Thompson

The Sub-Committee met in July and October 1985 and January 1986.

Supply and Demand Sub-Committee of the Home Grown Timber Advisory Committee

Mr N.F. Cairncross
Mr P.J. Warburton-Lee
Mr D.B. Crawford
Mr D.J. Cooper
Mr P.S. Murray
Mr A.F. Bloomfield
Mr K.F. Deane
Mr B.W. Haycox

(*Chairman*)

Timber Growers United Kingdom

British Timber Merchants' Association (England and Wales)

Home Timber Merchants' Association of Scotland

UK Particleboard Association

Association of United Kingdom Wood Pulp Producers

National Coal Board

Secretary: Mr R.M. Smith

The Sub-Committee met in May and November 1985.

Advisory Committee on Forest Research

Professor P.F. Wareing (*Chairman*)
Professor J.R. Ashton
Dr J.D. Brazier
Professor J.P. Cooper
Professor P.R. Day

Dr J.P. Dempster
Professor J.M. Hirst
Dr W.E.S. Mutch
Professor L. Roche
Professor T.S. West

Secretary: Mr I. Lumley

The Committee met in October 1985.

Forestry Research Coordination Committee

Mr R.T. Bradley (<i>Chairman</i>)		Forestry Commission
Mr A.J. Grayson		Forestry Commission
Dr T. Hegarty		Agriculture Departments
Mr J.M. Baker		Department of the Environment
Dr J.C. Bowman	}	Natural Environment Research Council
Mr J.N.R. Jeffers		Agricultural and Food Research Council
Dr J. Moorby		Nature Conservancy Council
Mr R.C. Steele		Forestry Universities
Dr W.E.S. Mutch		Forestry Commission Research Advisory Committee
Professor P.F. Wareing		

Secretary: Mr D.A. Burdekin

The Committee met in April, June, October and December 1985 and March 1986.

Forestry Training Council

Mr D.A. Mithen (*Chairman*)

Employer Members

Mr H.J. Brewis	}	Timber Growers United Kingdom
Mr N.G. Halsey		
Mr K. Hillcoat		
Mr A.A. Rowan	}	Forestry Commission
Mr D.A. Bardy		Association of Professional Foresters
Mr A.G. Phillips		

Employee Members

Mr J.H. Hose	}	
Mr D.R.L. Keogh		Transport and General Workers' Union
Mr A. W. Mills		
Mr S.K. Neale		
Mr T.E. Radford		Civil Service Union

Education and Training Members

Mr W.J. Hedley	}	Forestry Education (Scotland)
Mr J. McMillan		
Mr R.M. Boothroyd	}	Forestry Education (England and Wales)
Mr D. Danbury		

Forestry Society etc Members

Mr B. Roebuck	Institute of Chartered Foresters
Mr J. Brown	Royal Scottish Forestry Society
Mr W.R. Start	Royal Forestry Society of England, Wales and Northern Ireland
Dr P.G. Biddle	Standing Committee for Arboricultural Education

Secretary: Mr D.B. Parsons

The Committee met in June and October 1985 and January 1986.

Forestry Safety Council

Col D.A. Campbell (<i>Chairman</i>)		
Mr N.G. Halsey	}	Timber Growers United Kingdom
Mr K.J. Ramsay		British Timber Merchants' Association (England and Wales)
Mr D.J. Cooper		Home Timber Merchants' Association of Scotland
Mr R. Callander	}	Transport and General Workers' Union
Mr J.H. Hose		
Mr A. W. Mills		General, Municipal, Boilermakers and Allied Trades Union
Mr P.B. Munn		Forestry Training Council
Mr D.G. Whieldon		Forestry Commission
Mr C.W. Simmonds		Forestry Commission Safety Officer
Mr J.B. Teasdale		

Secretary: Mr M. Abrahams

The Council met in April and September 1985. The Annual Report of the Council is at Appendix IV, page 43.

Appendix II

Home Grown Timber Advisory Committee

Annual Report for the year ended 31 March 1986

In its last Report, the Committee recorded its concern about the policy of the Department of Agriculture and Fisheries for Scotland to oppose all applications for afforestation of better-quality land. The Committee was therefore especially pleased to learn at the end of the year of the imminent announcement of modifications to the criteria governing the release of land in Scotland for forestry. Concern was also expressed at the increasing burdens being placed on the Regional Advisory Committees, particularly in Wales where there appeared to be considerable resistance to any new planting.

Throughout the year, the Committee noted with growing anxiety the increasingly rigid attitude of the Nature Conservancy Council in its opposition to coniferous afforestation and had strongly supported the Commission in its efforts to reach an understanding with the Council. The Committee's concern was heightened by the appearance of misleading statements in the NCC's Annual Report alleging widespread planting in north Scotland outside the grant schemes. We are pleased to record that, following representations, these statements were withdrawn and Parliament advised accordingly. It is hoped that the NCC's paper *Nature Conservation and Afforestation in Britain*, due to be published in June 1986, will display a more reasonable and conciliatory attitude.

In June, the Committee welcomed the Secretary of State for Scotland's decision to uphold an appeal against a refusal by Dumfries and Galloway Regional Council to grant planning permission for accesses from a forest area to a rural road unless the applicants bore the costs of improving these roads. The Committee was pleased to note that the Reporter at the public local enquiry had accepted the Commission's view that forestry traffic could not be regarded as 'extraordinary traffic'.

Also at its June meeting, the Committee continued its discussion on the Commission's broadleaves policy review which culminated in a Government statement on 24 July. Particular concern was expressed by some members over the methods by which the NCC were compiling their Register of Ancient Woodland since this would not directly involve owners, nor would the results be notified to them; the fact that the classification of a woodland on the Register would dictate the management regime the Commission would apply for grant and felling licence purposes made it important that the Register should be properly verified. The Committee was reassured by the Commission's confirmation that no decisions would be taken on grant or felling applications relating to woodlands on the Register unless the Commission's local staff had resolved any doubts, following an inspection, about the NCC's classification. In discussing the Government's broadleaves policy statement at its September meeting, the Committee expressed itself as generally satisfied that a balanced package had emerged following the Commission's long and difficult task in seeking to reconcile opposing interests. They were disappointed, however, that the Government had not endorsed all the Commission's proposals stemming from its review.

The Committee continued to watch with interest proposals affecting forestry emanating from the EC Commission. In June, the Committee welcomed Article 15 of the EC's Agricultural Structures Regulations, which led in December to the introduction by the Government of changes to the Hill Livestock Compensatory Allowances to permit applicants to continue to take into account for the purposes of the allowances newly afforested forage areas. This change was particularly gratifying in view of the Committee's representations, some four years earlier, for a measure along these lines aimed at encouraging farm forestry.

In September, the Committee considered an EC Commission consultation paper on perspectives for the Common Agricultural Policy. The Committee welcomed the recognition in the paper that in dealing with agricultural surpluses alternative uses for farmland would have to be found and that forestry offered distinct opportunities in this direction. In March, the Committee was advised that the EC Commission had published an extensive Memorandum painting a country-by-country picture of forestry in Europe and expressing ideas for the formulation of a common forestry policy. The Committee was reminded that the EC Commission had made proposals earlier to the Council of Ministers which had not been accepted. Several reasons were given for pressing for new initiatives, but only one, concerning agricultural surpluses, was new. In addition, the Committee noted that initiatives to control the supply of tropical timber were suggested. The Committee was still uneasy about the possibility of European Regulations for forestry and urged the Commission to keep a watchful eye on the situation.

The Government's consultation paper *Woodland as a Farm Crop* was considered at the December meeting. The Committee welcomed the tenor of the paper but expressed the view that more encouragement was needed to turn farmers from food production to farm forestry and urged the Commission to take a lead in this.

The Committee was very concerned over reports in the press about possible plans to privatise the Forestry Commission. It expressed the view in the strongest terms that the well-being of the forestry industry depended upon the continued existence of the Forestry Commission in its present form. The success of the essential regulatory role of the Commission rested on the direct experience of forestry gained from the Forestry Enterprise. The Enterprise also ensured stability and confidence in the supply of timber without which much investment in the timber-using industry would not occur. The Committee welcomed the reassurance that there were no immediate plans to dispose of the Commission and that the policy statement made by the then Secretary of State for Scotland, the Rt Hon George Younger MP, on 8 November 1984 was still current. The Committee noted, however, that the Government was keeping this policy under review.

In March, the Committee considered the work of the Commission's Research Division. It welcomed the news that in an attempt to reduce the controversy over the effects of atmospheric pollution on Britain's trees, the Commission had invited some of its critics to visit the Research Station at Alice Holt Lodge to discuss its surveys and studies of tree health. The Committee was reassured to learn that the Commission could still find no evidence of air pollution damage similar to that found in the forests of central Europe and Scandinavia. The Committee was also pleased to note the innovation of a system of 'forest health days' designed to make people aware of conditions and possible sources of damage to tree health.

The Technical Sub-Committee and the Supply and Demand Sub-Committee made regular reports throughout the year. Among the subjects considered by the Technical Sub-Committee were the relationship between wood quality in Sitka spruce and initial planting distances; distortion during drying of British-grown spruce; sawing accuracy in British mills; machine grading of home-grown larch

and reports by the Commission's Work Study Branch on new harvesting machinery. The Sub-Committee's interest was considerably aroused by developments in the field of chemical thinning which was regarded principally as a remedial silvicultural management tool, rather than an alternative to conventional thinning methods.

The Supply and Demand Sub-Committee kept the parent Committee well informed on wood supply and demand and prospects for the coming year on the basis of information supplied by consumers' and growers' associations.

The Committee wishes to record its indebtedness to both Sub-Committees for their continuing hard work and the high quality of the advice they tender.

Appendix III

Forestry Training Council

Annual Report for the year ended 31 March 1986

Meetings of the main Council and of the Management Committee took place in Edinburgh on 6 June and 3 October 1985; the Management Committee also met on 23 January 1986. The Grant Award Committee and Working Groups of Council Members met at various times during the year.

Mr A. A. Rowan of the Forestry Commission replaced Mr C. W. Simmonds on the Council. Mr P. Donnelly of TGUK resigned leaving a vacancy on the Council.

Statistics concerning the volume of training are in Tables 1 and 2.

TABLE 1

Attendance on Courses for Recognised Craft, Supervisory and Managerial Qualifications During 1984-85 and 1985-86

Courses	Grade and Type	1984-85		1985-86	
		Number of Courses/Students		Number of Courses/Students	
City and Guilds Phase I	Craft (Young Workers) Day and Block Release	1	17	1	20
City and Guilds Phase II	Craft Adult Workers Block Release ...	2	33	2	38
SCOTEC Certificate Part I	Craft (Young Workers) Block Release ...	1	5	5	36
SCOTEC Certificate Part II	Craft (Adult Workers) Block Release	5	35	5	28
Totals for Craft Courses	9	90	13	122
Ordinary National Diploma	Supervisory 3-Year Sandwich	—	—	—	—
SCOTEC Diploma	Supervisory 2-Year Sandwich	2	38	3	54
City and Guilds Stage 3	Supervisory Block Release	2	20	3	34
SCOTEC Certificate Part III	Supervisory Block Release	2	15	1	3
BTEC — Year 1	National Diploma	1	25	1	24
BTEC — Year 3	National Diploma	1	30	1	24
National Diploma	Managerial Residential	2	11	2	17
Totals for Supervisory/Management Courses	10	139	11	156

TABLE 2

Attendance on Short Courses for Forest Workers, Supervisors and Managers During 1983-84 and 1984-85

Level	Source of Participants	1984-85		1985-86	
		Trainee	Course Days	Trainee	Course Days
Craft	Private Forestry		5,025		6,213
	Forestry Commission		5,206		5,733
	Totals		10,231		11,946
Supervisory and Managerial	Private Forestry		1,457		1,377
	Forestry Commission		2,467		4,213
	Totals		3,924		5,590

During the year under review there were three important developments affecting Education and Training. Firstly, the Manpower Services Commission set up a Working Group to conduct 'A Review of Vocational Training' in England and Wales; the Council has been accepted as the lead organisation for forestry.

Secondly, a new National Examination Board for Agriculture, Horticulture and Allied Industries was established in England and Wales and the Council is represented on the Agricultural Sector Committee of the Board.

Finally, the Council decided to form a Sub-Committee to advise the full Council on the changing pattern of education and vocational training in the United Kingdom and identify the particular needs of the forest industry.

For various reasons it was considered that the role and responsibilities of the Training Council were in need of clarification. A review was commenced during the year and its findings are expected during 1986.

The Council continued to assist with the co-ordination of the one year YTS Scheme which involved 295 students during the year. All future YTS Schemes will be for 2 years, and the Council has assisted with the co-ordination and planning for the proposed 2-year YTS Scheme in forestry.

The Manpower Services Commission and the Highlands and Islands Development Board have continued to give grant aid for harvesting contractor training and are expected to do so during the next year. The Manpower Services Commission approved in principle grant aid for management training during the next year.

The close liaison with the Forestry Safety Council continued throughout the year. The Council is grateful for the help and co-operation given by many people and many organisations during the year, the colleges providing forestry education, the Highlands and Islands Development Board, the Manpower Services Commission, the Forestry Commission, the private sector of forestry and the assessors to the Council.

Signed for the Forestry Training Council

D A Mithen, *Chairman*

D B Parsons, *Secretary to the Council*

Appendix IV

Forestry Safety Council

Annual Report for the year ended 31 March 1986

The Council met on two occasions during the year. Both meetings, the first on 18 April 1985 and the second on 2 October 1985, were held in the Forestry Commission Headquarters in Edinburgh.

Due to staff changes and management reorganisation within Forestry Commission Headquarters, the Guides Sub-Committee did not meet during the year. Mr J.B. Teasdale was appointed Forestry Commission Safety Officer in place of Mr D.A. Bardy.

The Council continued to show an interest in the use of Phostoxin and Mag discs as an alternative to using Cymag to control rabbits. The Council also directed its attention to the tests being carried out to investigate the levels of contamination among forest workers using plants dipped in gamma-HCH.

A rig for testing the resistance of protective clothing to cutting by chain saws was being considered by the Shoe and Allied Trades Research Association. The Forestry Commission was expected to be represented on the Construction Sub-Committee.

After 12 years as Chairman of the Council, Col D.A. Campbell retired at the end of the year. Col Campbell had been the Council's Chairman since it was set up. He had striven for many years to ensure that safe working practices were adopted, and had succeeded in establishing the Forestry Safety Council as the authoritative safety body within the forestry industry, largely through the medium of its 29 Safety Guide leaflets which are issued free of charge, upon request, to all sections of the industry and have been adopted by the Forestry Commission as its own minimum safety standards.

Appendix V

Policy for Broadleaved Woodlands

Announcement made by the Secretary of State for Scotland on 24 July 1985.

The Rt Hon George Younger, MP, then Secretary of State for Scotland, made the following announcement on 24 July 1985 in a Written Answer to a Parliamentary Question about the Forestry Commission's review of policy for broadleaved woodlands.

"The Forestry Commission has now completed its review after wide consultations covering a period of some 2½ years, and my rt hon Friends and I have agreed new policy initiatives designed to maintain and enhance the value of Britain's broadleaved woodlands for timber production, landscape, recreation and nature conservation.

The new policy will have a number of complementary aims. It is the Government's wish to ensure that the broadleaved character of the well-wooded parts of the country is maintained and improved and to see broadleaved woodlands established in areas where they are scarce, including areas on the periphery of towns and cities. The maintenance and greater use of broadleaves in the uplands will also be encouraged, particularly where they will add to the beauty of the landscape and the wildlife interest; this will apply equally to the extensive conifer plantations which have been established in the uplands in response to our continuing policy of expanding home timber supplies. Encouragement will also be given to the greater use of broadleaved woodlands generally for conservation, recreation, sport and landscape, as well as for wood production. In particular, steps will be taken to ensure that the special interest of the ancient semi-natural woodlands is recognised and maintained. Essential to these objectives is the need to increase the quality and value of timber produced by broadleaved woodlands. We also consider it important to the success of these new policy aims that they are pursued with a reasonable degree of flexibility and within the framework of an essentially voluntary approach which harnesses the interest and goodwill of landowners, farmers and foresters.

A number of new measures will be introduced to achieve these policy aims, both for the long term and to afford more immediate protection for existing woodlands; they will apply equally to woodlands under the direct management of the Forestry Commission and to those in private or other ownership. These measures are outlined below. Full details will be given in a Forestry Commission booklet to be published shortly.

Among the long-term measures, the Forestry Commission will be designating a senior officer in each of its seven Conservancies who will be responsible for co-ordinating the advice already available from a wide variety of Government and non-Government sources on the establishment and management of broadleaved woodlands; for stimulating new planting in poorly-wooded areas and the better management of existing woods, by means of promotional activities and practical demonstrations; and for assembling and disseminating information on the marketing of produce and the encouragement of co-operative marketing ventures. These officers will be supported by the Commission's 70 Forest District Managers and their staffs in each locality. The Commission will also be arranging training — both for its own staff and for advisers in other Government departments and agencies and in the voluntary movement — in the various aspects of broadleaved woodland management, including landscape design, wildlife conservation and the provision of recreation, and will be promoting further research into the measures required to enhance the conservation value of broadleaved woodlands and the development of less costly establishment techniques.

A new Forestry Commission grant scheme, to be known as the Broadleaved Woodland Grant Scheme, will be introduced on 1 October 1985. It is designed to assist in bringing neglected woodlands back into use for a variety of purposes; to help meet the cost of creating new multi-purpose woodlands; and has particular relevance to farm woodlands, especially in the lowlands. Significantly higher rates of grant will be offered under this new scheme, as shown in Table 1 below, for the use of broadleaved species on their own and the rate of grant will be determined by the area planted and not by the size of the wood in which planting takes place. Details of the new scheme, which will be closely monitored and funded within the Forestry Commission's planned expenditure, will be published shortly by the Commission. Broadleaves in mixture with conifers will be grant-aided under the Forestry Grant Scheme, which will continue as a separate scheme.

In addition to the Forestry Commission's grant-aid schemes, which all have wood production as one of their aims, there are other sources of finance available for planting broadleaved trees for other purposes, notably those administered by the Countryside Commissions and local authorities for amenity planting, which are designed to dovetail with the Forestry Commission's grants.

At this point, it would be appropriate to inform the House that the levels of grant available under the Commission's Basis II and III Dedication Schemes and the Forestry Grant Scheme have recently been reviewed by the Forestry Commissioners under the agreed biennial review arrangements, and my rt hon Friends and I have endorsed their proposal that the planting grants under those schemes should be increased from 1 October 1984. Management grants, available only under the Dedication Schemes, will remain at the present levels. The revised rates of planting grant are shown in Tables 2 and 3 below. These will give rise to an increase in expenditure of about 5 per cent in a full year.

Before the start of the Broadleaved Woodland Grant Scheme, the Forestry Commission also plans to publish, after further discussions with the Environment Departments, the Nature Conservancy Council, the Countryside Commissions and appropriate non-Government bodies, general guidance on the management considerations appropriate to various types of broadleaved woodlands. The Forestry Commission will have regard to this guidance, both in its own operations and in considering applications for grant aid or felling permission. This should make the Commission's consultations with other interested authorities easier and lead in time to a reduced requirement for consultation where the proposed management is in accordance with the guidelines, although it is intended that local authorities would continue to be informed of proposals of particular interest to them. It is recognised that there is a growing public interest in broadleaved woodlands. The Forestry Commission will be taking this into account in considering ways and means of making the proceedings of its Regional Advisory Committees more open when they are dealing with disputed applications for grant aid or felling permission, as announced by my hon Friend, the Parliamentary Under-Secretary of State for the Environment, in his response to the Countryside Commission's report *A Better Future for the Uplands* (Official Report 31 January 1985, col 287).

Finally, while we do not think there is a case for any change in the tax law, we will consider whether, within the existing rules, ancient semi-natural broadleaved woodlands should be able to qualify for exemption from capital taxation in recognition of their heritage value.

To afford more immediate protection against the depletion of existing woodlands, my rt hon Friends and I have endorsed the Forestry Commission's proposal to reduce the volume of timber — both broadleaved and conifer — which may be felled without a licence from 30 cubic metres to 5 cubic metres per quarter, with a reduction in the volume of such timber that may be sold from 5.5 cubic metres to 2 cubic metres. The Forestry Commissioners will be introducing an Order shortly to give effect to this under their powers contained in Section 9(5)(c) of the Forestry Act 1967. For similar reasons, I have also decided not to proceed with the proposal I announced in my statement to the House on 27 May 1982 to exempt silvicultural thinnings from felling controls. Allied to these changes, the Forestry Commission will continue, in its administration of the statutory felling controls, to operate a general presumption against the granting of clear-felling permissions where the intention is to convert woodland to other uses, and to prosecute those responsible for unauthorised felling. Full details of these changes will be published in a revised version of the Commission's leaflet *Control of Tree Felling*.

The successful establishment of broadleaved woodlands is often frustrated by the damage done by grey squirrels, and the Forestry Commission intends to set up local squirrel control groups with the co-operation of the private sector to control such damage in vulnerable broadleaved woodlands through the effective application of known methods. Further details will be published in due course in a Forestry Commission leaflet.

Among other initiatives directed at the protection of existing woodlands, the Register of Ancient Woodland now being compiled on a provisional basis by the Nature Conservancy Council will be completed as soon as possible. This will show where positive management in the interests of conservation is particularly required. The Tree Council is preparing a leaflet which will give advice on ways of ensuring the good management of trees and woodlands which are subject to Tree Preservation Orders. Such Orders are seen as a last resort for the protection of broadleaved woodland, and local authorities are encouraged to continue to seek management agreements with landowners for the proper management of their broadleaved woodlands in appropriate circumstances.

Broadleaved woodlands form a significant part of our national heritage. The Government is firmly committed, through the initiatives I have announced, to stemming their depletion — particularly that of the ancient woodlands — to making good the years of neglect from which many small, but important broadleaved woods have suffered, and to encouraging the formation of new ones. We have asked the Forestry Commission to report regularly on the operation and effectiveness of the new measures and we shall review them after some 3 years.

Now that our policy has been determined, we look to the many interests concerned — including the Forestry Commission, woodland owners, the Nature Conservancy Council, the Countryside Commissions and voluntary bodies — to work together in a spirit of co-operation to make it a success."

BROADLEAVED WOODLAND GRANT SCHEME: GRANT RATES EFFECTIVE FROM 1 OCTOBER 1985

Table 1 £/hectare

Band (Area of planting or regeneration)	Planting				Natural Regeneration			
	1 (70%)	2 (15%)	3 (15%)	Total	1 (50%)	2 (30%)	3 (20%)	Total
0.25 ha - 0.9 ha	840	180	180	1,200	600	360	240	1,200
1.0 ha - 2.9 ha	700	150	150	1,000	500	300	200	1,000
3.0 ha - 9.9 ha	560	120	120	800	400	240	160	800
10.0 ha and over	420	90	90	600	300	180	120	600

- (i) The grant bands will be linked to the area of planting (including restocking) or natural regeneration.
- (ii) The second and third instalments of grant will be paid as a percentage of the rate current at the time they are due.
- (iii) In the case of planting, the first instalment will be paid on completion of planting and the second and third instalments at five-yearly intervals thereafter, subject to satisfactory establishment and maintenance of the trees. In the case of natural regeneration, the first instalment will be paid on completion of approved work designed to lead to regeneration, the second instalment when an adequate stocking has been achieved and the third instalment five years after subject to satisfactory establishment and maintenance.

FORESTRY GRANT SCHEME: GRANT RATES EFFECTIVE FROM 1 OCTOBER 1984

Table 2 £/hectare

Area of Wood	Conifers	Broadleaves
0.25 ha - 0.9 ha	630	890
1.0 ha - 2.9 ha	505	735
3.0 ha - 9.9 ha	420	630
10.0 ha and over	240	470

Payment of these amounts will be made in two instalments — 80% on completion of planting, the remainder five years later subject to satisfactory establishment.

BASIS II AND III DEDICATION SCHEMES: GRANT RATES EFFECTIVE FROM 1 OCTOBER 1984

Table 3

£/hectare

Basis II Dedication		Basis III Dedication	
Planting grant	110	Planting grant —	
Management grant (per annum) —		Conifers	145
first 40 hectares	4.80	Broadleaves	330
second 40 hectares	3.25	Management grant (per annum)	4.20
balance	2.00		

Appendix VI

Afforestation in Scotland

Announcement made by the Secretary of State for Scotland on 24 March 1986

The Rt Hon Malcolm Rifkind QC, MP, Secretary of State for Scotland, made the following announcement on 24 March 1986 in a Written Answer to a Parliamentary Question about the release of land for forestry planting.

“The statement on forestry policy made on 10 December 1980 by my right hon Friend the Member for Ayr said that the Government saw scope for continued planting at broadly the rate of the previous 25 years (about 30,000 hectares per year) and that planting of this order would be compatible with preserving an acceptable balance with agriculture, the environment and other interests. Since 1980, new planting, at about 23,000 hectares a year, has fallen significantly short of this figure. Scotland has been the focus of interest for new planting. I have, accordingly, considered what measures might be taken to facilitate an increased rate of planting that is consistent with maintaining a balance with those other interests.

Policy has long been to encourage forestry planting on the poorer land and to preserve arable land and the better hill land for agriculture. The Government remain committed to a prosperous agricultural industry and in particular to the maintenance of a thriving hill sheep sector, but I believe there is scope for forestry planting in blocks of appropriate size, type and location on land which hitherto would have been reserved for agricultural use. Applications under the Forestry Commission's grant schemes will continue to be considered on their merits through the usual procedures for consultation between the Commission and others. In advising the Commission on agricultural implications my Department will continue to pay regard to factors such as the quality of land, the viability of the unit and the extent to which forestry proposals integrate with and benefit agriculture. It will also continue to take into account the importance of the land in the agricultural structure of the area. But within this overall framework it will in future acknowledge a presumption in favour of forestry in the following cases:-

In the case of hill land

- (a) where the application is in respect of land not essential to the viability of a unit consisting of unimproved or unsuccessfully improved peats or peaty gleys which although of agricultural potential are not being agriculturally exploited; or
- (b) where the application is in respect of land which, although of good quality, is not capable (by virtue of its size, slope or location) of making a significant agricultural contribution; or
- (c) where the application, although in respect of land which would not otherwise meet the criteria for clearance, forms part of a plan accepted by the Department which takes account of agriculture and forestry and specifies the continuation of the unit in agricultural use for at least 10 years.

In the case of upland and arable land other than prime land (class 4 or poorer in the land capability classification for agriculture)

- (a) where the land forms part of a farm-forestry proposal promoted by the farmer and remains part of his business; or
- (b) where the land requires capital and/or maintenance inputs which are high in relation to the agricultural production achievable.

The Department will maintain a presumption against clearance for afforestation of prime land (LCA classes 1 to 3) except in the case of proposals for small stands for eg shelter, amenity or sporting purposes.

In appropriate cases other than on prime land clearance will be given to the restoration of opencast coal and mineral sites for forestry as an alternative to agriculture.

The general threshold on hill land below which clearance is not required will be increased from 20 to 40 hectares. Other thresholds on hill and upland farms will remain 5 hectares for arable and former arable land, for reseeded land and for land consisting predominantly of better soils and 20 hectares for land not in these categories. The requirement for clearance will also continue on areas below these thresholds where agricultural grant has been given within the previous two years or where the application forms part of a series of adjacent or connected areas.

These changes will provide the basis for a more flexible approach to new planting proposals while safeguarding essential agricultural interest. It will, however, be no less important to ensure that environmental and other interests are equally safeguarded. There is a general duty on Departments to have regard to the desirability of conserving the natural beauty and amenity of the countryside and the Forestry Commission has a particular duty to endeavour to achieve a reasonable balance between the needs of forestry and the environment. It is already the practice for the Forestry Commission to consult, as appropriate, local planning authorities, the Nature Conservancy Council, the Countryside Commission for Scotland and the Red Deer Commission. Where an objection arising from these consultations cannot be resolved, the matter is put before the Forestry Commission's regional advisory committee, which considers the conflicting arguments and seeks to reconcile them.

This system has worked well but it is now right to consider whether the composition and procedures of these committees could be adjusted to achieve a better balance between forestry and other countryside interests and to improve public accountability. To this end, and in response to the undertaking given in the Government's reply to the Countryside Commission's report *A Better Future for the Uplands*, the Forestry Commission is today issuing a consultation paper which seeks comments on a number of proposed changes.”

Appendix VII

New Publications

Reports

- 65th Annual Report and Accounts of the Forestry Commission 1984-85 (£10.00).
Report on Forest Research 1985 (£7.10).

Bulletin

- No. 14 Forestry Practice, 10th edition, edited by B.G. Hibberd (£5.25).

Booklets

- No. 15 Conifers, 3rd edition, revised by A.F. Mitchell (£2.95).
No. 20 Broadleaves, 2nd edition, by H.L. Edlin (£3.95).
No. 54 Thinning Control, by T.J.D. Rollinson (£2.00).

Forest Records

- No. 129 Forest Pathogens of NW North America and their potential for damage in Britain, by E.M. Hansen (£1.35).
No. 130 Thetford Forest Management Plan, by L.M. Simpson and D.B. Henderson-Howat (£2.00).

Leaflets

- No. 12 Taxation of Woodlands, 7th edition (£1.15).
No. 83 Coppice, 2nd edition, by R.E. Crowther and J. Evans (£1.75).
No. 85 Windthrow Hazard Classification, by K.F. Miller (£1.75).
No. 86 Glades for Deer Control in Upland Forests, by P.R. Ratcliffe (£1.45).
No. 87 Forest Fencing, 2nd edition, by H.W. Pepper and L.A. Tee (£3.20).
No. 88 Use of Broadleaved Species in Upland Forests — selection and establishment for environmental improvement, by A.J. Low (£2.50).

Arboricultural Leaflet

- No. 10 Individual Tree Protection, by H.W. Pepper, J.J. Rowe and L.A. Tee (£2.00).

Research and Development Papers

- No. 135 Site Characteristics and Population Dynamics of Hymenopteran and Lepidopteran Forest Pests, edited by D. Bevan and J.T. Stoakley (£7.50).
No. 136 Tree Planting in Colliery Spoil, by J. Jobling and R. Carnell (50p).
No. 138 Champion Trees in the British Isles, by A.F. Mitchell and V.E. Hallett (£1.00).
No. 141 A Guide to the Reclamation of Mineral Workings for Forestry, by K. Wilson (£2.50).
No. 142 Forest Health and Air Pollution — 1984 Survey, by W.O. Binns, D.B. Redfern, K. Rennolls and A.J.A. Betts (£1.40).
No. 143 Environmental Influences on Forestry Investment in the British Uplands, by D.L. Foot (50p).
No. 144 Investment in Wood Processing in Developed Countries, by G. J. Francis (50p).
No. 145 Developing the Economic Arguments for Investment in Forestry: A Survey, by D. S. Grundy (50p).

Occasional Paper

- No. 14 The Gwent Small Woods Project 1979-84, by J.W.LI. Zehetmayr (£3.50).

Miscellaneous

- Wood as Fuel — a guide to burning wood efficiently, by G.D. Keighley (20p).
British Native Trees at Westonbirt, by J. Bailey and J. White (95p).

Guides

- Coedwigaeth ygn Nghymru — (Welsh version of Forestry in Wales) (25p).

In addition, the following free publications were produced:

- Forestry Facts and Figures 1984-85.
The FC and Conservation (Revised Edition), Policy and Procedure Paper No 4.
The Policy for Broadleaved Woodlands, Policy and Procedure Paper No 5.
Broadleaved Woodland Grant Scheme
Guidelines for the Management of Broadleaved Woodlands
Grey Squirrel Damage Control Groups
The Forest Reproductive Material Regulations 1977: An Explanatory Booklet (Revised)
Plant Health Controls: Wood and Bark
Come Touring in the Forest (Revised).
Forestry '85.

Appendix VIII

Statistical Tables

Forestry Authority

FORESTRY COMMISSION GRANT SCHEMES POSITION AT 31 MARCH 1986

Table 1

Area in hectares

	England		Wales		Scotland		Great Britain	
	Num-ber	Area	Num-ber	Area	Num-ber	Area	Num-ber	Area
Basis I and II Dedication Schemes	1,945	178,803	459	27,878	1,013	208,408	3,417	415,089
Basis III Dedication Schemes	321	17,705	92	5,991	456	73,291	869	96,987
Forestry Grant Schemes	4,826	60,515	585	8,972	1,965	149,664	7,376	219,151
Broadleaved Woodland Grant Schemes	676	3,334	72	214	90	313	838	3,861

AREA OF PLANTING BY PRIVATE WOODLAND OWNERS FOR WHICH GRANTS
WERE PAID IN THE YEAR ENDED 31 MARCH 1986

Table 2

Hectares

Country	In Forestry Grant Scheme			In Broadleaved Woodland Grant Scheme			In Dedication and *other grant schemes			Total		
	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total	New Planting	Re-stocking	Total
ENGLAND												
Conifer	390	481	871	—	—	—	31	629	660	421	1,110	1,531
Broadleaved	497	817	1,314	40	27	67	26	391	418	563	1,236	1,799
Total	887	1,298	2,185	40	27	67	57	1,021	1,078	984	2,346	3,330
WALES												
Conifer	685	245	930	—	—	—	17	117	134	702	362	1,064
Broadleaved	34	35	69	6	2	8	1	35	36	41	72	113
Total	719	280	999	6	2	8	18	152	170	743	434	1,177
SCOTLAND												
Conifer	16,598	738	17,336	—	—	—	449	637	1,086	17,047	1,375	18,422
Broadleaved	241	137	378	—	—	—	4	47	51	245	184	429
Total	16,839	875	17,714	—	—	—	453	684	1,137	17,292	1,559	18,851
GREAT BRITAIN												
Conifer	17,673	1,464	19,137	—	—	—	497	1,383	1,880	18,170	2,847	21,017
Broadleaved	772	989	1,761	46	29	75	31	474	505	849	1,492	2,341
Total	18,445	2,453	20,898	46	29	75	528	1,857	2,385	19,019	4,339	23,358

Note: It is estimated that the following areas were planted without grant aid:

	<i>New Planting</i>	<i>Restocking</i>
England	125	124
Wales	30	108
Scotland	241	49
Great Britain	<u>396</u>	<u>281</u>

These figures were compiled from a large number of local estimates of small areas of planting.

* Total area in other grant schemes was 15 hectares.

AREA OF PLANTING BY PRIVATE WOODLAND OWNERS FOR WHICH GRANTS WERE PAID IN
THE 10-YEAR PERIOD 1 APRIL 1976 TO 31 MARCH 1986

Table 3

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
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
1981	905	1,930	2,835	561	142	703	6,934	927	7,861	8,400	2,999	11,399
1982	795	1,888	2,683	1,004	223	1,227	10,663	1,339	12,002	12,462	3,450	15,912
1983	1,514	1,994	3,508	911	156	1,067	10,086	968	11,054	12,511	3,118	15,629
1984	1,480	1,935	3,415	1,064	113	1,177	14,129	1,019	15,148	16,673	3,067	19,740
1985	976	1,767	2,743	918	122	1,040	14,135	1,177	15,312	16,029	3,066	19,095
1986	984	2,346	3,330	743	434	1,177	17,292	1,559	18,851	19,019	4,339	23,358

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

**VOLUME OF TIMBER LICENSED FOR FELLING AND THINNING
ON PRIVATE LAND IN THE YEAR ENDED 31 MARCH 1986**

Table 4

Volume in thousands of cubic metres

	England	Wales	Scotland	Great Britain
Conifer	134	37	129	300
Broadleaved	142	16	15	173
Total volume	276	53	144	473
Number of licences issued	973	175	270	1,418

Note: Excludes felling and thinning covered by an approved plan of operations under one of the Forestry Commission's grant schemes, for which no licence is required.

**AREA LICENSED FOR CLEAR FELLING ON PRIVATE LAND
IN THE YEAR ENDED 31 MARCH 1986**

Table 5

Hectares

	England	Wales	Scotland	Great Britain
Conditional licences	477	85	479	1,041
Unconditional licences	252	28	87	367
Total	729	113	566	1,408

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

Forestry Enterprise

LAND USE AT 31 MARCH 1986

Table 6

Hectares

	England	Wales	Scotland	Great Britain
Forest Land				
Under plantations	239,198	132,880	517,216	889,294
Other woodland	1,683	1,546	5,033	8,262
To be planted	3,996	1,198	24,996	30,190
Total	244,877	135,624	547,245	927,746
Other Land				
Agricultural and grazing	10,420	5,705	79,112	95,237
Forest workers' holdings	415	210	2,485	3,110
Unplatable and miscellaneous (includes nursery land)	29,973	6,212	103,312	139,497
Total	40,808	12,127	184,909	237,844
Total area	285,685	147,751	732,154	1,165,590

NET AREA OF LAND ACQUIRED/DISPOSED OF DURING THE YEAR ENDED 31 MARCH 1986

Table 7

Hectares

	England	Wales	Scotland	Great Britain
Plantations acquired	—	57	26	83
Plantations disposed of	2,460	1,630	3,201	7,291
Planting land acquired	300	—	635	935
Planting land disposed of	29	140	854	1,023
Other land acquired	94	22	55	171
Other land disposed of	300	1,459	6,500	8,259
Net area of land acquired/disposed of	(2,395)	(3,150)	(9,839)	(15,384)

FOREST LAND DISPOSED OF IN THE YEAR ENDED 31 MARCH 1986

Table 8

Conservancy	Forest Areas (hectares)		Plantable Land (hectares)	Total Area (hectares)	Receipts (£000)	Average £/hectare for Land Under Trees and Plantable Land
	Under Trees	Associated Land				
England						
North	685	19	23	727	806.2	1,138.7
East	1,137	35	6	1,178	2,654.7	2,322.6
West	551	33	—	584	802.0	1,455.5
Total	2,373	87	29	2,489	4,262.9	1,774.7
Wales	1,552	78	140	1,770	2,192.6	1,295.9
Scotland						
North	1,972	—	331	2,303	1,668.4	724.4
Mid	634	82	335	1,051	894.6	923.2
South	501	12	188	701	573.0	831.6
Total	3,107	94	854	4,055	3,136.0	791.7
Great Britain	7,032	259	1,023	8,314	9,591.5	1,190.8

PLANTING IN THE YEAR ENDED 31 MARCH 1986

Table 9

Hectares

	New Planting	Restocking	Total
England			
Conifer	233	1,950	2,183
Broadleaved	13	206	219
Total	246	2,156	2,402
Wales			
Conifer	47	1,749	1,796
Broadleaved	2	29	31
Total	49	1,778	1,827
Scotland			
Conifer	3,997	3,292	7,289
Broadleaved	41	71	112
Total	4,038	3,363	7,401
Great Britain			
Conifer	4,277	6,991	11,268
Broadleaved	56	306	362
Total	4,333	7,297	11,630

AREA PLANTED ANNUALLY BY THE COMMISSION IN THE 10-YEAR PERIOD 1 APRIL 1976 TO 31 MARCH 1986

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
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
1981	470	1,902	2,372	683	1,116	1,799	10,481	1,996	12,477	11,634	5,014	16,648
1982	558	1,949	2,507	326	1,524	1,850	10,094	2,037	12,131	10,978	5,510	16,488
1983	429	2,027	2,456	436	1,482	1,918	8,021	2,289	10,310	8,886	5,798	14,684
1984	397	2,567	2,964	275	1,539	1,814	7,710	2,647	10,357	8,382	6,753	15,135
1985	167	2,171	2,338	161	1,300	1,461	4,777	2,445	7,222	5,105	5,916	11,021
1986	246	2,156	2,402	49	1,778	1,827	4,038	3,363	7,401	4,333	7,297	11,630

AREAS OF PLANTATIONS AND VOLUMES OF TIMBER FELLED
AND THINNED IN THE YEAR ENDED 31 MARCH 1986

Area in hectares
Volume in thousands of cubic metres

Table 11

	Felled		Thinned		Total Volume Felled and Thinned
	Area	Volume	Area	Volume	
England					
North	1,418	378	1,351	57	435
East	947	213	5,958	216	429
West	573	135	3,148	163	298
Total	2,938	726	10,457	436	1,162
Wales	1,794	451	4,487	268	719
Scotland					
North	1,169	356	2,979	164	520
Mid	1,103	297	1,059	48	345
South	1,269	323	1,078	50	373
Total	3,541	976	5,116	262	1,238
Great Britain	8,273	2,153	20,060	966	3,119

SALES OF TIMBER IN THE YEAR ENDED 31 MARCH 1986

Table 12

Thousand cubic metres

Description	England	Wales	Scotland	Great Britain
Tree sold standing	388	289	410	1,087
Converted*				
Round timber and saw logs	408	225	441	1,074
Telegraph and other selected poles	1	2	7	10
Mining timber	27	17	—	44
Posts and stakes	10	8	2	20
Pulpwood and boardmill material	224	157	319	700
Firewood	23	6	14	43
Miscellaneous	21	3	—	24
Total	714	418	783	1,915

* In addition 4,000 cubic metres were converted and used internally for forest and estate purposes. (England 1,000; Wales 2,000; Scotland 1,000.)

**PROPERTIES MANAGED BY THE COMMISSION
AT 31 MARCH 1986**

Table 13

Number

Type of Property	England	Wales	Scotland	Great Britain
Forest properties				
Foresters' houses	92	46	140	278
Forest workers' houses	338	46	392	776
Forest workers' holdings	22	17	59	98
Miscellaneous*	750	326	576	1,652
Total	1,202	435	1,167	2,804
Other properties				
Farms and other agricultural subjects	511	238	504	1,253
Residential and other lettings	715	75	413	1,203
Other lettings	154	473	636	1,263
Total	1,380	786	1,553	3,719
Sporting lettings	633	163	1,154	1,950

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

**PUBLIC RECREATIONAL FACILITIES
AT 31 MARCH 1986**

Table 14

Number

	England	Wales	Scotland	Great Britain
Camping and caravan sites *	22	1	9	32
Picnic places	364	112	148	624
Forest walks and forest nature trails	289	158	199	646
Visitor centres	7	4	6	17
Arboreta	12	4	4	20
Forest drives	5	1	2	8
Forest cabins and holiday houses	107	—	84	191

* In addition to the campsites listed above, the Commission provides:-

- (i) 4 sites leased to the Caravan Club and 2 sites to the Camping and Caravanning Club;
- (ii) 51 sites set aside for youth camping;
- (iii) facilities for caravan rallies.

LAND USE, PLANTING AND TIMBER PRODUCTION BY FOREST DISTRICTS
— ENGLAND

Table 15

Conservancy	Land use at 31 March 1986 (hectares)					During Year 1985-86		
	Total Area of Forest	Under Plantations	Other Woodland	To be Planted	Other Land	Planting (hectares)		Production (000 cu m)
						New Planting	Re-stocking	
NORTH ENGLAND								
Border	12,982	11,436	22	268	1,256	135	44	65
Cheshire	958	916	1	—	41	—	23	6
Durham	5,788	5,396	6	94	292	4	128	29
Kielder	50,671	40,180	—	524	9,967	—	313	160
North Lakes	7,956	5,283	60	68	2,545	31	89	36
North York Moors	22,624	19,526	218	358	2,522	23	193	71
Rothbury	11,639	9,806	20	376	1,437	33	92	11
South Lakes	7,999	6,983	218	56	742	—	73	48
York	6,073	4,911	45	801	316	—	25	9
TOTAL	126,690	104,437	590	2,545	19,118	226	980	435
EAST ENGLAND								
Chilterns	3,768	3,495	97	97	79	6	—	8
New	26,929	11,731	135	—	15,063	—	16	38
Northants	7,501	7,269	3	37	192	2	49	18
North Lincs	4,505	4,333	17	5	150	—	41	22
Sherwood	9,125	7,741	24	525	835	—	54	34
South Downs	8,834	8,347	167	28	292	—	1	30
Suffolk	4,683	4,490	28	30	135	—	79	32
Thetford	22,171	21,214	44	59	854	—	491	196
Weald	8,344	7,855	10	—	479	—	10	25
West Downs	6,607	6,288	71	17	231	—	25	26
TOTAL	102,467	82,763	596	798	18,310	8	766	429
WEST ENGLAND								
Cornwall and North Devon	8,003	7,620	42	62	279	7	118	54
Dean and Three Counties	11,951	10,858	—	193	900	—	70	63
Dorset	5,160	4,468	61	33	598	—	32	27
Marches	7,388	6,981	23	88	296	5	21	40
Midlands	5,553	5,371	—	87	95	—	61	23
Ringwood	2,848	2,519	32	—	297	—	30	15
Somerset and South Devon	9,747	8,800	45	168	734	—	51	61
Wiltshire and Avon	5,636	5,381	95	22	138	—	27	15
Westonbirt	242	—	199	—	43	—	—	—
TOTAL	56,528	51,998	497	653	3,380	12	410	298

Notes: *North England Conservancy*: Border, Cheshire, North Lakes and South Lakes Forest Districts were in the former North West England Conservancy. The others were in the former North East England Conservancy.

East England Conservancy: Chilterns, North Lincs, Northants (part), Suffolk and Thetford Forest Districts were in the former East England Conservancy. Sherwood and the rest of Northants Forest District (previously part of Midlands Forest District) were in the former North West England Conservancy.

The remaining Forest Districts — New, South Downs (which now includes part of the former Ringwood Forest District), Weald (previously known as East Forest District) and West Downs (previously known as North Forest District) — were in the former South East England Conservancy.

West England Conservancy: Marches and Midlands Forest Districts were in the former North West England Conservancy. (Part of the old Midlands Forest District has been added to Northants Forest District in East England Conservancy.) Ringwood Forest District was in the former South East England Conservancy but is now only part of the former Forest District of that name. The remainder were in the former South West England Conservancy.

LAND USE, PLANTING AND TIMBER PRODUCTION BY FOREST DISTRICTS
— WALES

Table 16

Conservancy	Land use at 31 March 1986 (hectares)					During Year 1985-86		
	Total Area of Forest	Under Plantations	Other Woodland	To be Planted	Other Land	Planting (hectares)		Production (000 cu m)
						New Planting	Re-stocking	
WALES								
Aberystwyth	13,081	11,381	63	346	1,291	2	30	40
Afan	9,566	8,792	190	108	476	8	84	42
Brechfa	11,514	10,628	324	45	517	—	158	91
Brecon	7,930	7,216	36	2	676	—	183	56
Corris	8,023	7,575	—	2	446	—	34	45
Dolgellau	12,382	10,708	115	93	1,466	39	70	45
Gwent	9,599	9,035	102	64	398	—	58	46
Llandovery	17,117	15,876	144	64	1,033	—	166	72
Llandrindod	9,015	8,860	28	6	121	—	91	50
Llanrwst	12,698	10,112	93	15	2,478	—	260	61
Llanwynno	9,515	7,940	71	207	1,297	—	207	26
Newtown	5,735	5,641	8	4	82	—	47	25
Rheola	11,273	9,377	366	200	1,330	—	285	56
Ruthin	10,303	9,739	6	42	516	—	105	64
TOTAL	147,751	132,880	1,546	1,198	12,127	49	1,778	719

Note: Aberystwyth, Corris, Dolgellau, Llandrindod, Llanrwst, Newtown and Ruthin Forest Districts were in the former North Wales Conservancy. The others were in the former South Wales Conservancy.

LAND USE, PLANTING AND TIMBER PRODUCTION BY FOREST DISTRICTS
— SCOTLAND

Table 17

Conservancy	Land use at 31 March 1986 (hectares)					During Year 1985-86		
	Total Area of Forest	Under Plantations	Other Woodland	To be Planted	Other Land	Planting (hectares)		Production (000 cu m)
						New Planting	Re-stocking	
NORTH SCOTLAND								
Buchan	24,400	21,242	23	242	2,893	65	111	110
Dornoch	58,870	33,302	91	8,418	17,059	1,051	49	10
Easter Ross	30,676	23,162	123	1,234	6,157	156	53	75
Fort Augustus	39,617	18,832	188	924	19,673	27	135	49
Inverness	20,309	15,622	112	639	3,936	66	61	29
Kincardine	14,967	13,711	12	113	1,131	37	181	56
Lochaber	36,828	19,970	234	417	16,207	29	97	48
Moray	7,693	7,124	38	—	531	—	71	56
Mull	15,724	10,643	249	872	3,960	92	49	12
Speyside	17,424	15,284	18	1,248	874	141	37	33
Strontian	19,745	11,341	486	1,428	6,490	56	51	15
Wester Ross	30,103	15,910	119	1,029	13,045	132	120	27
TOTAL	316,356	206,143	1,693	16,564	91,956	1,852	1,015	520
MID SCOTLAND								
Aberfoyle	33,140	25,437	483	481	6,739	48	310	65
Angus	10,087	8,570	5	291	1,221	106	15	19
Ardgartan	18,994	9,768	369	518	8,339	105	92	26
Cowal	36,589	24,482	533	108	11,466	221	150	42
Fife	7,792	7,311	71	10	400	5	68	40
Kintyre	34,443	26,265	590	490	7,098	317	127	59
Loch Awe	34,365	25,505	269	417	8,174	138	119	43
Lorne	29,267	17,987	573	323	10,384	73	51	27
Tay	7,930	6,533	91	518	788	109	5	23
Tummel	22,091	13,984	166	691	7,250	205	—	1
Chapelhall Depot	2	—	—	—	2	—	—	—
TOTAL	234,700	165,842	3,150	3,847	61,861	1,327	937	345
SOUTH SCOTLAND								
Ayrshire	34,082	23,672	3	2,245	8,162	339	105	31
Borders	17,750	16,143	8	49	1,550	—	198	58
Castle Douglas	31,131	25,387	—	508	5,236	98	443	108
Lockerbie	17,493	15,653	—	6	1,834	—	258	46
Lothian & Tweed	15,543	14,809	4	16	714	111	79	30
Newton Stewart	43,958	30,581	172	1,040	12,165	130	264	50
Nithsdale	21,141	18,986	3	721	1,431	181	64	50
TOTAL	181,098	145,231	190	4,585	31,092	859	1,411	373

Notes: *North Scotland Conservancy:* Buchan, Kincardine, Moray and Speyside Forest Districts were in the former East Scotland Conservancy. The others were in the former North Scotland Conservancy.

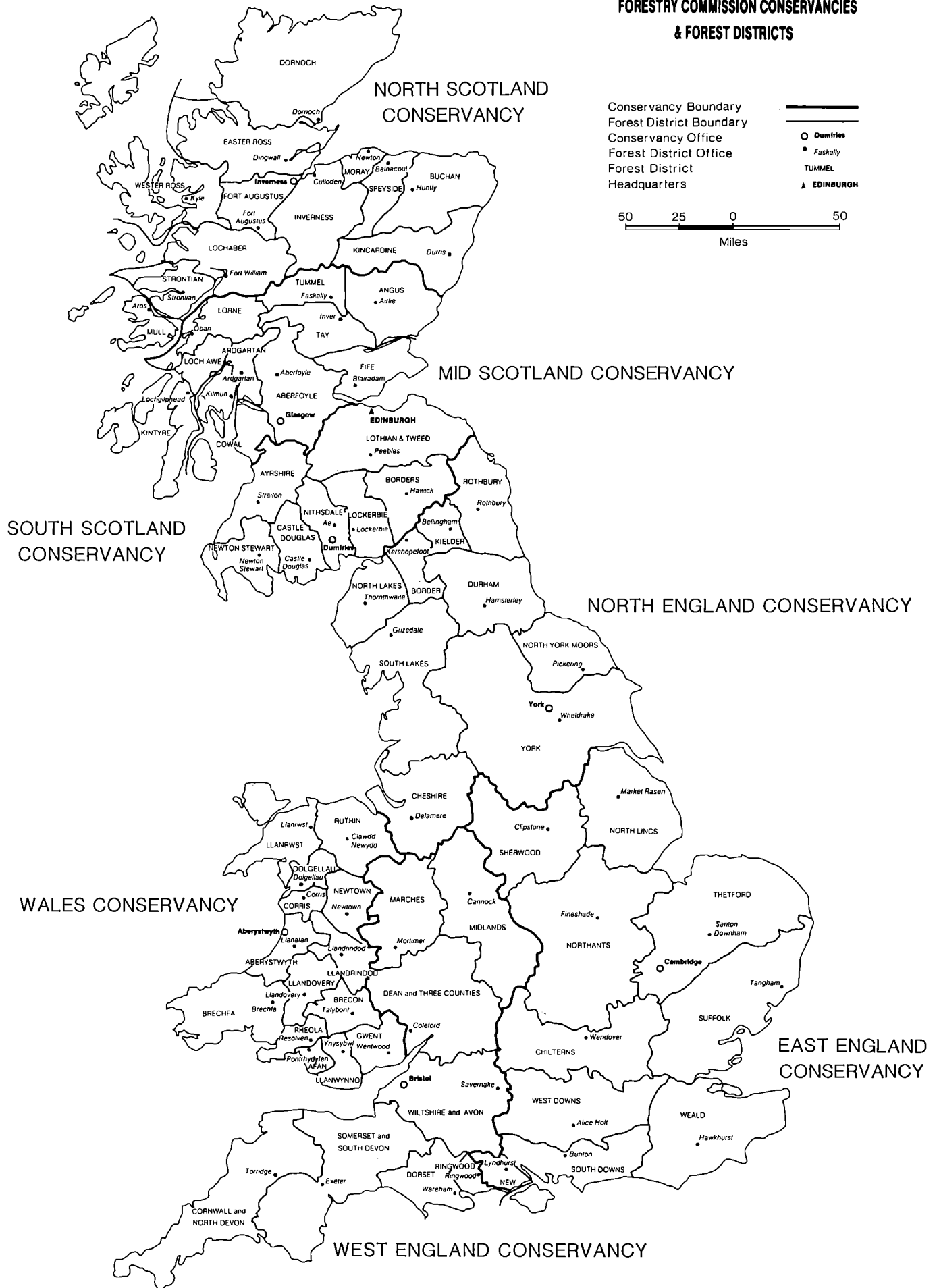
Mid Scotland Conservancy: Angus, Fife, Tay and Tummel Forest Districts were in the former East Scotland Conservancy. The others were in the former West Scotland Conservancy.

South Scotland Conservancy: No changes have been made to the composition of this Conservancy.

Appendix IX

**Map showing the boundaries of the Commission's Conservancies and Forest Districts
at 31 March 1986**

**FORESTRY COMMISSION CONSERVANCIES
& FOREST DISTRICTS**



Appendix X

Forestry Commission Financial Tables 1985-86

- 1. Statement of 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 1986

	<i>Receipts</i>	<i>£ thousand</i>	<i>Previous Year £ thousand</i>
Grant-in-Aid		52,929	55,194
Sales of timber		64,070	52,719
Disposal of land, buildings and plantations			
— by exchanges		52	127
— cash received payable to the Consolidated Fund		17,238	21,788
Miscellaneous		14,468	13,927
		<hr/>	<hr/>
		148,757	143,755
Balance brought forward at 1 April 1985		4,066	9,313
		<hr/>	<hr/>
		152,823	153,068
		<hr/>	<hr/>
 <i>Payments</i>			
Salaries, wages and related expenses		55,589	55,187
Pensions and gratuities to retired staff		13,063	11,510
Materials, contract services and general expenses		40,397	37,068
Acquisition of land, buildings and plantations and construction of buildings		2,869	2,030
Plant, machinery and equipment		7,181	6,459
Grants to private woodland owners (£6,634,908) universities, institutions etc		6,816	5,684
Remittances of VAT to Customs and Excise		4,050	2,851
Payments to the Consolidated Fund			
— cash received from sales of land, buildings and plantations, including £2,888,173 brought forward from 1984-85		15,418	26,471
— working balance brought forward from 1984-85		1,178	1,742
		<hr/>	<hr/>
		146,561	149,002
Balance carried forward at 31 March 1986 to be surrendered to the Consolidated Fund during 1986-87		6,262	4,066
		<hr/>	<hr/>
		152,823	153,068
		<hr/> <hr/>	<hr/> <hr/>

G D Holmes
Accounting Officer
28 July 1986

I certify that I have examined the above Account. In my opinion the Account properly presents the receipts and payments of the Forestry Fund for the year ended 31 March 1986. I have no observations to make upon it.

2 October 1986
National Audit Office

Gordon Downey
Comptroller & Auditor General

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 in 1985-86 were paid into this Fund.
2. Receipts and payments are shown inclusive of VAT where applicable.

Grant-in-Aid

3. The Grant-in-Aid, which also forms the agreed cash limit, is determined for each year on the basis of Supply Estimates prepared in advance setting out the expected receipts and payments calculated at estimated outturn prices. Pursuant to Section 42(4) of the Forestry Act 1967 capital sums received from sales of land, etc shall be paid into the Forestry Fund although they do not affect the calculation of the Grant-in-Aid. However, such receipts are surrendered from the Forestry Fund to the Consolidated Fund as directed by Ministers under Section 41(4a.) together with the remaining working balance held at the end of each financial year.

Receipts

4. The Grant-in-Aid of the Forestry Fund voted by Parliament for 1985-86 was £53,416,000 of which £52,929,000 was drawn into the Forestry Fund account leaving £487,000 to be surrendered from the Vote to the Consolidated Fund.
5. Receipts from the sale of timber exceeded the 1984-85 level by £11,351,000 **but** it must be remembered that the miners' strike in 1984-85 affected that year's receipts by possibly as much as £2 million. The increases stem from larger programmes and better prices.
6. Miscellaneous receipts were £541,000 more than 1984-85 mainly due to estates income increasing by £365,000, increased receipts from agency work £267,000, compensation receipts, joint management schemes and general administration receipts up by £297,000 but offset by reductions on disposal of surplus Vehicles Machinery and Equipment £265,000 and staff pension contributions £192,000.

Payments

7. Payments of salaries, wages and related expenses, were £402,000 (1 per cent) more than 1984-85. Increased rates of pay and allowances were largely offset by reduced numbers of employees.
8. Payments of pensions and gratuities to retired staff increased by £1,553,000 (13 per cent) and reflected changes in retirement policy together with additional transfer value payments to other departments as a result of the Management Structure Review and closure of some Conservancy offices.
9. Payments for materials, contract services and general expenses increased by £3,329,000 (9 per cent) mainly due to the effects of price inflation, the increased use of contractors and additional expenditure on conservation and the environment.
10. Expenditure on land acquisition and building construction was £839,000 more than 1984-85 but the expenditure was cut back to assist in counteracting the reduced income consequent on the miners' strike. Funds for acquiring new land for planting were up by £472,000 and expenditure on building construction increased by £367,000.
11. Payments for purchase of plant, machinery and equipment increased by £722,000 over 1984-85 represented by an increase of £1,473,000 on machinery and vehicles including a carry-over effect from the miners' strike, offset by a reduction of £751,000 on office and computer equipment.
12. Payments of grants to private woodland owners were £1,140,000 more than 1984-85 and £357,000 ~~more~~ ^{sales} than originally estimated, reflecting ~~THE~~ higher take-up of the Forestry Grant Scheme especially in North Scotland.
13. Remittances of VAT to Customs and Excise increased by £1,199,000 mainly due to the higher level of output tax from increased receipts.

Balance carried forward at 31 March 1986

14. The balance amounting to £6,262,109 carried forward at 31 March 1986 will be paid into the Consolidated Fund in 1986-87 in accordance with the Ministerial direction given under Section 41(4a) of the Forestry Act 1967 as amended. It comprises £4,708,440 relating to the unremitted balance of disposal proceeds received in 1985-86 and £1,553,669 in respect of the working balance remaining at 31 March 1986. Disposal receipts on sale of land, buildings and plantations, payable to the Consolidated Fund totalled £17,238,440 of which £12,530,000 had been paid over by 31 March 1986 leaving the balance of £4,708,440 shown above.

Table 2

EXPENDITURE ON FORESTRY AUTHORITY SERVICES
in the year ended 31 March 1986

	<i>£ thousand</i>	<i>Previous Year £ thousand</i>
Services to private woodland owners for grants and advisory services		
Forestry Grant Scheme	4,703	3,583
Broadleaved Woodland Grant Scheme	41	—
Basis I	22	23
Basis II : Planting Grants	196	199
Management Grants	1,069	1,058
Basis III: Basic Grants	87	91
Broadleaved Supplement	35	36
Management Grants	294	303
Native Pinewood Planting and Management Grants	8	9
Small Woods and Other Planting Grants	74	73
Miscellaneous (including Labour oncost)	110	121
Administrative expenses	2,552*	1,956
	9,191	7,452
<i>Less: Miscellaneous income</i>	55	23
	9,136	7,429
Special Services		
Licensing of Felling	585*	496
Information, Shows and Publications net cost (including £1,046,000* administrative expenses)	1,163	1,219
General administration (EEC, fiscal and regulatory duties and including £1,600,000* administrative expenses)	1,816	1,936
	3,564	3,651
Research and Development		
Silviculture	2,224	2,285
Arboreta	332	334
Genetics	669	640
Physiology	290	238
Seed Research	102	100
Site Studies ...	525	421
Wildlife ...	206	233
Pathology ...	455	438
Entomology ...	417	432
Mensuration ...	191	—
Wood Utilisation	270	236
Statistics ...	—	21
Communications	138	101
	5,819	5,479
Work Study	790	844
Forest Survey	1,479	1,656
	8,088	7,979
<i>Less: Allocation to Forestry Enterprise (Plantations Account)</i>	4,447	4,386
	3,641	3,593
Net total expenditure	16,341	14,673
	£ thousand	
Change in assets		
Decrease — Current	71	194
Increase — Fixed	192	62
	121	(132)
Net increase		
Amount of Grant-in-Aid appropriated for the Forestry Authority	16,462	14,541

* Note 19 of Forestry Enterprise Accounts page 85 £8.4 million

NOTES ON TABLE 2

1. The Forestry Authority share of the Grant-in-Aid amounted to £16,462,000 compared to £14,541,000 last year.

Services to Private Woodland Owners

2. Net expenditure rose in the year by £1,707,000 due largely to an increased area planted, up 28 per cent on the 1984-85 levels, under the Forestry Grant Scheme and increased administration expenditure. The latter is mainly a reflection of the overall increase in the area planted with grants, up 22 per cent on the previous year, and the large number of applications for entry to the Commission's grant schemes made in the year — 3,736 (1,911 under the Forestry Grant Scheme and 1,825 under the Broadleaved Woodland Grant Scheme) compared with 2,296 in 1984-85.

Special Services

3. The total cost of special services fell overall by £87,000 with an increase in the cost of administering felling licences stemming from additional workloads in consultation with other statutory authorities and dealing with breaches of felling licence regulations, being offset in part by reduced expenditure on *Dendroctonus micans* control.

Research

4. The total cost of Research activities, which includes technical services to management, was £8,088,000, being £109,000 higher than the previous year.

5. During the quinquennium 1982-83/1986-87 55 per cent of the net cost of Research will be charged to the Forestry Enterprise and shown in the Plantations account under forest costs. This allocation amounts to £4,447,000 in 1985-86, reducing the cost chargeable to the Forestry Authority to £3,641,000.

FORESTRY ENTERPRISE

ACCOUNTS 1985-86

FOREWORD, BALANCE SHEET of the Forestry Commission Forestry Enterprise as at 31 March 1986, and **ACCOUNTS** for the year ended 31 March 1986, together with the Report of the Comptroller and Auditor General thereon.

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FOREWORD

1. CONSTITUTIONAL STATUS

- (a) The Forestry Commission was established in 1919. Under legislation now consolidated mainly in the Forestry Act 1967 it is charged with the general duties of promoting the interests of forestry, the establishment and maintenance of adequate reserves of growing trees, the production and supply of timber and the development of the recreational potential of the forests it manages.
- (b) The Commission has the legal status of and functions as a Government Department. It reports directly to Forestry Ministers, namely the Minister of Agriculture, Fisheries and Food, the Secretary of State for Scotland and the Secretary of State for Wales, to whom it is responsible for advice on forestry policy and for the implementation of that policy. It is, however, different from the usual Departments of State in that there is a statutorily-appointed Chairman and Board of Commissioners with prescribed duties and powers.

2. FUNCTIONS AND OBJECTIVES

The Commission fulfils two distinct roles:

- (a) as the Forestry Authority it acts as adviser on Government forestry policy and undertakes functions such as research, technical advice, plant health and administration of grant-in-aid for the private sector;
- (b) as the Forestry Enterprise it acts as a trading body primarily responsible for the management of its own forests but with other functions such as the protection and enhancement of the environment and the provision of recreational facilities.

3. ACCOUNTS

Each year the Commission prepares two sets of accounts derived from a common data base:

- (a) the Appropriation Account, which, in accordance with the Appropriation Acts and Exchequer and Audit Department Acts, sets out the funds voted by Parliament for the Forestry Commission as a whole, and the amount withdrawn therefrom into the Forestry Fund. Table 1 of Appendix X to this Report sets out the receipts and payments relating to the Fund;
- (b) the Balance Sheet and Accounts for the Forestry Enterprise alone in a format approved by the Treasury and published in the Forestry Commission Annual Report.

4. THE BALANCE SHEET AND ACCOUNTS OF THE FORESTRY ENTERPRISE

General

- (a) The key factor in accounting for forestry is the problem of determining satisfactory performance indicators for a crop whose typical rotation cycle can span 50 years for conifers and more than 100 years for broadleaves. Traditional measures of profitability can be established only when the Forestry Enterprise has a cycle of production which is financially self-perpetuating. At that stage revenue would be sufficient to re-establish the area harvested, maintain the remainder of the woodland and provide a return on funds invested. The Enterprise is not likely to achieve this until the turn of the century because of the relative immaturity of its plantations.
- (b) Since 1972 a form of account has been in use based on 5-yearly periods (quinquennia) with the principal aims of:
 - (i) establishing, at the start of each new quinquennium, an asset valuation capable of earning a rate of return equivalent to the maximum that could be earned in northern Europe on good sites close to markets;
 - (ii) measuring management performance against that target rate of return;
 - (iii) introducing subsidies to cover new investment and other expenditures not able to achieve the target rate of return;
 - (iv) measuring the difference between the target rate of return and that set for public sector trading bodies.

This format is likely to be continued until the plantations have attained greater maturity and become self-supporting.

Methodology

The following measures have been adopted in the Accounts:

(a) *Target rate of return*

The Commission was set a target rate of return of 3 per cent in real terms on its forest estate assets and any new investment thereon, and the required rate of return for public sector trading bodies, currently 5 per cent, on its commercial recreation assets and its surplus assets (ie those assets not required for forest estate purposes which are intended for disposal as and when practicable).

(b) *Investment evaluation*

Assets employed in the Forestry Enterprise are revalued in their entirety at the start of each quinquennium. Plantations, the main asset, are valued on the basis of estimated future costs and incomes at current prices (referred to hereafter as 'standards') discounted at the target rate of return. At the same time the liability for future superannuation benefits is revalued by the Government Actuary. From this information the capital, which represents the Exchequer's investment in the Forestry Enterprise, is reconstructed and provides a revised Balance Sheet to open the quinquennium. The assets and liabilities are updated in subsequent accounts by either a general price index or professionally determined 'in house' indices.

(c) Subsidies

Subsidies are established to record:

- (i) planting and restocking subsidy — the extent to which new investment in both planting and restocking is estimated to be incapable of earning the target rate of return;
- (ii) forest recreation and amenity subsidy — the net cost of the provision of recreational facilities for which commercial objectives cannot be set.

These subsidies are allocated out of the Grant-in-Aid in order to maintain the valuation of assets and liabilities at such level as will service the target rate of return. The difference between the target rate of return and that set for public sector trading bodies is identified as the 'Forestry subsidy' and is a measure of the opportunity cost of new investment in forestry. It is recorded by way of a note to the accounts.

(d) *Measurement of performance*

Forest Estate

Each quinquennium stands alone and performance both within the quinquennium and for the remainder of the rotation can only be measured against the standard costs and incomes built into the opening valuations. That measurement is achieved in two stages, namely:

- (i) by evaluation within the quinquennium of the variances between actual expenditure and income in the plantations account with the standard cash flows (suitably adjusted where appropriate for programme alterations and for inflation) built into the plantations valuation at the start of the quinquennium;
- (ii) by assessment at the end of the quinquennium of the future variances that will arise during the remainder of the rotation from management decisions taken during the quinquennium about future work and outputs. These future variances are evaluated by comparison of the Balance Sheet standard valuation with the revised plantations valuation for the next quinquennium excluding the changes to future cost and price assumptions included therein.

The amalgamation of both sets of variances (within and beyond the quinquennium) provides the basis for determination of the rates of return actually achievable on the investment valuation set at the beginning of the quinquennium.

Format of Accounts

A format for the Forestry Enterprise accounts has been adopted to comply with the foregoing concepts and, as far as is practicable, with the accounting and disclosure requirements of the Companies Act 1985. These accounts comprise:

- (a) Balance Sheet;
- (b) Plantations account which shows both the cumulative and in-year variances between the actual costs and incomes and the standard cash flows built into the plantations valuation thus indicating performance against the assessments made at the start of the quinquennium;
- (c) Trading account which shows both the cumulative and in-year surpluses or deficits achieved against the target rate of return for other commercial activities;
- (d) Statement of Source and Application of Funds;
- (e) Notes to the accounts which provide further analyses of amounts in the Balance Sheet, Plantations and Trading accounts and detailed explanations for the operating results disclosed in the accounts;
- (f) For the final year of the quinquennium only, special notes which provide details of:
 - (i) the revaluation of assets and liabilities which provide the starting point for the next quinquennium;
 - (ii) the reassessment of planting and restocking subsidies for the next quinquennium resulting from the changed assumptions about work, outputs, costs and prices;
 - (iii) the measurement of performance on the forest estate by summing the cumulative variances in the quinquennium and the future plantation variances arising from altered work and output perceptions and using this information to assess an achievable rate of return over the whole quinquennium for comparison with the target of 3 per cent;
 - (iv) measurement of performance on the Trading account over the whole quinquennium.

5. REVIEW OF ACTIVITIES

The activities of the Forestry Enterprise are reviewed in the Annual Report.

6. RESEARCH

A full account of the activities carried out in the field of research is given annually each autumn in the Forestry Commission Report on Forest Research and a selection of items therefrom of general interest is also provided on page 30 of the Annual Report.

7. FINANCIAL RESULTS

Commentary on the performance of the Forestry Enterprise in the year and in the quinquennium to date is provided at page 28 of the Annual Report.

8. FIXED ASSETS

The changes in the plantations valuation and in other tangible fixed assets in the year are detailed in the Plantations account and in Note 2 to the Accounts respectively.

9. MARKET VALUE OF PROPERTIES INCLUDING PLANTATIONS

The Forestry Commission considers that the best estimate of the market value of its properties, including plantations, is £1,212 million which is £355 million lower than the book value of £1,567 million (comprising plantations — £1,492 million and land and buildings — £75 million). See also paragraph 108 on page 24 of the Annual Report.

10. FORESTRY COMMISSIONERS

The names of the Forestry Commissioners are listed on page 4 of the Annual Report.

11. EMPLOYEE PARTICIPATION

Arrangements exist to keep all employees informed on matters of concern to them. Information is disseminated widely at both local and departmental levels. The usual system of Government Whitley Councils at departmental and regional levels is supplemented by *ad hoc* meetings with trade unions as the occasion demands and briefing meetings to ensure that staff are given every opportunity to comment and be involved in the decision-making process. A broadly similar arrangement for manual employees is provided through the Forestry Commission Industrial and Trade Council at departmental level and a network of Joint Consultative Committees at Conservancy and Forest District levels.

12. DISABLED PERSONS

Although the Disabled Persons (Employment) Act 1944 is not binding on the Crown, the Commission as with other Government Departments, has undertaken to accept the same responsibility as other employers. The basic policy followed is that disablement of itself is no bar to recruitment to, or advancement within, the Commission. The test applied is the ability to do the job and the Commission is concerned to ensure that every opportunity to employ disabled people is taken. The physically demanding nature of much of the work available in the Commission restricts the scope for employment of disabled persons in the forests but within this limitation the Commission's policy is to provide for equal opportunities for the disabled.

13. AUDITORS

The accounts of the Forestry Enterprise are audited by the Comptroller and Auditor General.

G D Holmes
Accounting Officer
28 July 1986

FORESTRY COMMISSION
FORESTRY ENTERPRISE
BALANCE SHEET AS AT 31 MARCH 1986

	<i>Notes</i>	£ million	£ million	<i>Previous Year £ million</i>
FIXED ASSETS				
Plantations		1,492.7		1,335.6
Other Tangible Assets	2	<u>96.1</u>		96.8
			1,588.8	1,432.4
CURRENT ASSETS				
Stocks	3	10.8		10.4
Debtors	4	13.0		12.6
Cash at banks and in hand	5	7.4		5.3
		<u>31.2</u>		28.3
CREDITORS — amounts falling due within one year	6	<u>11.3</u>		<u>8.9</u>
NET CURRENT ASSETS			<u>19.9</u>	<u>19.4</u>
TOTAL ASSETS LESS CURRENT LIABILITIES			<u>1,608.7</u>	<u>1,451.8</u>
 PROVISION FOR SUPERANNUATION	 7		 <u>217.5</u>	 <u>200.8</u>
CAPITAL AND RESERVES				
Capital	8	1,104.9		1,060.4
Revaluation Reserve ...	10	231.2		158.6
Plantations Account Variance		51.7		29.0
Trading Account		3.4		3.0
			<u>1,391.2</u>	<u>1,251.0</u>
			<u>1,608.7</u>	<u>1,451.8</u>

The notes on pages 77 to 86 form part of these Accounts.

G. D. Holmes
Accounting Officer
28 July 1986

I certify that I have examined the foregoing Balance Sheet and the Plantations Account, Trading Account and the supporting information set out in the Statement of Source and Application of Funds and the Notes.

In my opinion the above-mentioned Balance Sheet, Plantations Account, Trading Account, Statement of Source and Application of Funds and Notes give a true and fair view, under the principles embodied in the accounting policies described in Note 1, of the state of affairs of the Forestry Enterprise at 31 March 1986 and of its results for the year ended on that date, and comply with the provisions of the Forestry Act 1967 and the directions made thereunder. I have no observations to make upon these Accounts.

13 October 1986
National Audit Office

Gordon Downey
Comptroller & Auditor General

FORESTRY COMMISSION
FORESTRY ENTERPRISE
PLANTATIONS ACCOUNT
FOR THE YEAR ENDED 31 MARCH 1986

	<i>Notes</i>	£ million	£ million	£ million	£ million	<i>Previous Year £ million</i>
At 1 April 1985:						
900,485 hectares	1(c)				1,335.6	1,220.0
Revaluation surplus	10				<u>80.7</u>	<u>47.6</u>
Balance brought forward revalued					1,416.3	1,267.6
		Establish- ment and Maintenance	Harvest- ing and Marketing	Forest Recreation and Amenity		
Income		(1.4)	(56.7)	(0.8)		
Profit on sale of properties and plantations ...	13	<u>(1.6)</u>	—	—		
		<u>(3.0)</u>	<u>(56.7)</u>	<u>(0.8)</u>	(60.5)	(50.5)
Expenditure						
Forest costs		26.0	27.5	4.4		
Administrative expenses		<u>11.4</u>	<u>11.1</u>	<u>2.1</u>		
	15	<u>37.4</u>	<u>38.6</u>	<u>6.5</u>	82.5	74.9
Notional interest charge	12	<u>43.2</u>	<u>0.9</u>	<u>0.1</u>	44.2	40.3
Forest recreation and amenity subsidy	9				(5.8)	(4.6)
Planting and restocking subsidy	9				<u>(6.7)</u>	<u>(6.3)</u>
					1,470.0	1,321.4
At 31 March 1986:						
897,556 hectares	1(c)				<u>1,492.7</u>	<u>1,335.6</u>
Favourable variance from standard					22.7	14.2
Favourable variance from previous year					<u>29.0</u>	<u>14.8</u>
Favourable variance to date carried forward					<u>51.7</u>	<u>29.0</u>

The notes on pages 77 to 86 form part of these Accounts.

FORESTRY COMMISSION
FORESTRY ENTERPRISE
TRADING ACCOUNT
 (other non-plantation commercial activities)
FOR THE YEAR ENDED 31 MARCH 1986

	<i>Notes</i>	£ million	£ million	<i>Previous Year £ million</i>
Income			6.1	5.7
Profit on sale of properties	13		1.5	2.0
			<hr/> 7.6	<hr/> 7.7
Expenditure:				
Operating costs ...		4.3		3.7
Administrative expenses		1.7		1.6
	15		<hr/> 6.0	<hr/> 5.3
			1.6	2.4
Notional interest charge for use of ancillary assets	12		<hr/> 0.1	<hr/> 0.1
Operating surplus ...			1.5	2.3
Notional interest charge	12		1.1	1.1
			<hr/> 0.4	<hr/> 1.2
Surplus for year	14		3.0	1.8
Surplus from previous year			<hr/> 3.4	<hr/> 3.0
Surplus to date carried forward			<hr/> 3.4	<hr/> 3.0

The notes on pages 77 to 86 form part of these Accounts.

FORESTRY COMMISSION
FORESTRY ENTERPRISE
STATEMENT OF SOURCE AND APPLICATION OF FUNDS
FOR THE YEAR ENDED 31 MARCH 1986

	<i>Notes</i>	£ million	£ million	<i>Previous Year £ million</i>
SOURCE OF FUNDS				
Grant-in-Aid	9		36.4	40.7
<i>Less</i> — surrenderable to Consolidated Fund	8	18.7		23.0
— superannuation payments	7	13.1		11.4
			<u>31.8</u>	<u>34.4</u>
			4.6	6.3
Proceeds from disposals				
Properties and plantations	13	17.0		22.1
Plant and machinery	2(a)	1.1		1.0
			<u>18.1</u>	<u>23.1</u>
Employees' superannuation contributions	7		1.0	1.1
			<u>23.7</u>	<u>30.5</u>
APPLICATION OF FUNDS				
Net expenditure on Plantations				
Expenditure as per Plantations Account		82.5		
<i>Plus</i> : book value of disposals and reclassifications	11	7.4		
			<u>89.9</u>	
<i>Less</i> : book value of land newly planted in year	11	1.7		
			<u>88.2</u>	
Income as per Plantations Account			60.5	
<i>Plus</i> : interest included in profit on sale of properties and plantations	13	—		
			<u>60.5</u>	
			27.7	34.5
<i>Less</i> : Trading Account surplus before notional interest			1.6	2.4
			<u>26.1</u>	<u>32.1</u>
<i>Less</i> — items not involving the movement of funds				
Depreciation	2(a)	6.5		6.7
Notional employers' superannuation contributions	7	10.4		10.4
			<u>16.9</u>	<u>17.1</u>
<i>Deduct</i> : excess over book value on disposals	13	5.2		6.0
			<u>11.7</u>	<u>11.1</u>
			14.4	21.0
Payment for purchase of freehold rights of properties			0.4	—
Purchase of other tangible fixed assets	2(a)		8.7	7.3
			<u>23.5</u>	<u>28.3</u>
			0.2	2.2
WORKING CAPITAL INCREASE				
Components of increase/(decrease) in working capital				
Stocks (excluding revaluation increase of £0.3 million)	3		0.1	0.8
Debtors	4		0.4	0.9
Creditors	6		(2.4)	5.9
			<u>(1.9)</u>	<u>7.6</u>
Movement in net liquid funds:				
Increase/(decrease) in cash at bank and in hand	5		2.1	(5.4)
			<u>0.2</u>	<u>2.2</u>

The notes on pages 77 to 86 form part of these Accounts.

FORESTRY COMMISSION

FORESTRY ENTERPRISE NOTES TO THE ACCOUNTS AS AT 31 MARCH 1986

1. ACCOUNTING POLICIES

(a) Accounting convention

The accounts are prepared under the current cost convention modified as described in Notes 1(c) and (d).

Without limiting the information given, the accounts meet the requirements of the Companies Act 1985 and of the Statements of Standard Accounting Practice issued by member bodies of the Consultative Committee of Accountancy Bodies so far as these requirements are appropriate. Departures from the Standard on Current Cost Accounting (No 16) are explained in Notes 1(c) and (d).

(b) Period of account

The Forestry Enterprise reviews the performance of its activities based on a five-year period of account (a 'quinquennium'). Annual accounts are prepared to monitor progress in that period with the estimated enhancement of those assets being reflected in various categories of reserves. At the commencement of each quinquennium a full professional revaluation of the assets is performed and the capital and accumulated reserves are amalgamated to form the new capital base for that five-year period. This year is the fourth year of the current quinquennium.

(c) Valuation of plantations and other tangible fixed assets

The accounts at the beginning of the quinquennium are prepared in accordance with the provisions of Statement of Standard Accounting Practice No 16. Plantations are valued on an expectation basis by discounting estimated future incomes and expenditures in terms of current prices ('Standard' incomes and expenditures) and using the target rate of return of 3 per cent. Land and buildings are valued where possible on an open market basis by professionally qualified staff employed by the Forestry Commission.

During the quinquennium the valuations of plantations and associated other tangible fixed assets are updated annually using a general price index, since no industry index is available. The commercial recreation and surplus estate tangible fixed assets are updated by professionally determined 'in house' indices.

The accounting records of the Forestry Enterprise are maintained on a current cost basis. In the opinion of the Commissioners it would be an unnecessarily costly exercise to recover historical cost information and therefore, contrary to the Standard and the Companies Act 1985, no such supplementary statement has been provided.

(d) Other current cost adjustments

A gearing adjustment indicates the benefit or cost arising from the financing of part of net operating assets by external borrowings. Since the Forestry Enterprise has no such borrowings, no gearing adjustment is required. In addition, no adjustment has been made to reflect the impact of price changes on the financing of monetary working capital since it is considered to be immaterial.

(e) Depreciation

Depreciation is provided on all other tangible fixed assets other than freehold and leasehold land and surplus estate buildings, at rates calculated to write off the valuation less estimated residual values, of each asset evenly over its expected useful life as follows:

Freehold buildings	— over 20 to 80 years
Leasehold buildings	— over the lease term
Plant and machinery	— over 3 to 16 years
Office equipment	— over 4 to 20 years

(f) Government funding

Grant-in-Aid attributable to the Forestry Enterprise is accounted for as received and allocated as follows:

Plantations account	— planting and restocking subsidy being the extent to which new investment in planting and restocking is estimated to fall short of the target rate of return.
	— forest recreation and amenity subsidy being the net cost of the provision of recreational facilities for which commercial objectives cannot be set.
Capital	— the balance of the Grant-in-Aid being the funding of all the other activities of the Forestry Enterprise.

(g) Stocks

Timber, plants and livestock are stated at net realisable value, which is based on estimated selling price less further costs expected to be incurred to completion or disposal.

Consumable materials and supplies are stated at current replacement cost. Seed is stated at current replacement cost or selling price whichever is the lower.

Notes to the Accounts (*continued*)

(h) Research and Development

Research and Development expenditure of the Forestry Commission as a whole is allocated 45 per cent to the Forestry Authority and 55 per cent to the Forestry Enterprise. The Forestry Enterprise charges its share of the expenditure to the Plantations account as incurred.

(i) Notional interest charges

Notional interest is charged to the Plantations account and the Trading account based on the average net assets employed during the year. Forestry assets bear interest at 3 per cent and other assets 5 per cent.

As part of the forestry assets are deemed to represent the investments of the superannuation scheme, the provision is credited with part of the notional interest charge. The amount so allocated is calculated as 3 per cent of the average liability of the scheme for the year.

(j) Superannuation scheme

Following usual public service practice, superannuation benefits are met out of Grant-in-Aid on a Pay As You Go basis. However, to give a fair presentation of the liabilities of the Forestry Enterprise at 31 March, a provision for future benefits is made based upon an actuarial valuation. It is not specifically invested but is, in effect, a first charge on the assets employed by the Commission. The valuation is carried out by the Government Actuary at the beginning of each quinquennium. During the quinquennium the provision is increased by (i) notional employer's contributions based on funding rates set by the Government Actuary; (ii) notional interest charges as noted above; (iii) a revaluation adjustment based on the general price index used to update the underlying assets, and (iv) contributions received from employees.

Benefits paid in the year are charged against the provision.

2. OTHER TANGIBLE FIXED ASSETS

(a)	Land and Buildings £ million	Machinery Plant and Equipment £ million	Total £million
Valuation:			
At 1 April 1985	76.4	53.0	129.4
Additions	2.2	6.5	8.7
Disposals and transfers	(6.0)	(7.2)	(13.2)
Surplus on revaluation	2.0	2.8	4.8
At 31 March 1986	74.6	55.1	129.7
Depreciation:			
At 1 April 1985	—	32.6	32.6
Provided during year	1.1	5.4	6.5
Disposals and transfers	—	(6.1)	(6.1)
Surplus on revaluation	(1.1)	1.7	0.6
At 31 March 1986	—	33.6	33.6
Net book value:			
At 31 March 1986	74.6	21.5	96.1
At 31 March 1985	76.4	20.4	96.8

(b) Analysis of Land and Buildings

	£ million	Previous Year £ million
Forest estate	50.9	53.2
Surplus estate	19.2	18.8
Commercial recreation	4.5	4.4
	74.6	76.4

(c) Land under plantations is treated as part of the Plantations valuation.

(d) Land afforested in the year is transferred to the Plantations account.

(e) Freehold and leasehold land, and surplus estate buildings which are not depreciated, amount to £38.1 million (at 31 March 1985 — £38.5 million).

(f) The bases of valuation of other tangible fixed assets are given in Note 1 (c).

Notes to the Accounts (*continued*)3. **STOCKS**

	£ million	<i>Previous Year £ million</i>
Timber	7.0	7.3
Plants and seed	1.7	1.4
Consumable materials and supplies	2.1	1.7
	10.8	10.4

4. **DEBTORS**

Trade debtors	11.5	10.8
Other debtors	1.5	1.8
	13.0	12.6

Other debtors include amounts falling due after more than one year of £1.2 million (£1.0 million at 31 March 1985).

5. **CASH AT BANKS AND IN HAND**

Balance of proceeds from disposal of properties and plantations in 1985-86	4.7	2.9
Excess cash balance	1.5	1.2
To be surrendered to the Consolidated Fund	6.2	4.1
Retained funds	0.9	0.7
Balance of Forestry Fund with Paymaster General	7.1	4.8
Cash at commercial banks and in hand ...	0.3	0.5
	7.4	5.3

6. **CREDITORS:** amounts falling due within one year

Payments received on account	0.3	0.6
Trade creditors	2.3	2.0
Other creditors including taxation and social security costs	2.5	2.2
Consolidated Fund surrender	6.2	4.1
	11.3	8.9

7. **PROVISION FOR SUPERANNUATION**

	£ million	£ million
Balances at 1 April 1985		
Current liabilities	13.2	
Long-term liabilities	187.6	
		200.8
Revaluation Adjustment (Note 10)		12.2
		213.0
Contributions received from staff		1.0
Notional employer's contribution		10.4
Notional interest charge (Note 12)		6.2
		230.6
Payments made during the year		13.1
Balances at 31 March 1986		
Current liabilities ...	13.0	
Long-term liabilities	204.5	
		217.5

Legislation relating to the superannuation of the Forestry Commissioners and Commission staff is to be found in Schedule 1 Part II of the Forestry Act 1967 as amended by the Superannuation Act 1972. The superannuation benefits and contributions payable are identical to those of the Principal Civil Service Pension Scheme except that such benefits are paid out of the Forestry Fund and not the Civil Service Superannuation Vote.

Notes to the Accounts (*continued*)**8. CAPITAL**

	£ million	£ million
Balance at 1 April 1985		1,060.4
Amounts payable to the Consolidated Fund:		
Proceeds from disposals of properties and plantations	17.2	
Excess cash balance	1.5	
		<u>(18.7)</u>
Addition of Grant-in-Aid to Capital (Note 9)		23.9
Notional interest charge (Note 12) ...		39.3
		<u>1,104.9</u>
Balance at 31 March 1986		<u>1,104.9</u>

9. GRANT-IN-AID

	£ million	£ million	<i>Previous Year £ million</i>
Grant-in-Aid transferred into the Forestry Fund		52.9	55.2
Less: Appropriated for the Forestry Authority		16.5	14.5
		<u>36.4</u>	40.7
Grant-in-Aid for the Forestry Enterprise			
Less: Plantations account subsidies:			
Planting and restocking ...	6.7		6.3
Forest recreation and amenity	5.8		4.6
		<u>12.5</u>	10.9
Addition of Grant-In-Aid to Capital ...		<u>23.9</u>	29.8

See Note 20 for detailed analysis of Planting and Restocking and Forest Recreation and Amenity subsidies by Conservancy.

10. REVALUATION RESERVE

	£ million	£ million
Balance at 1 April 1985		158.6
Revaluation surplus in year:		
Plantations	80.7	
Other tangible assets	4.1	84.8
		<u>243.4</u>
Less: allocated to Provision for Superannuation (Note 7)		12.2
Balance at 31 March 1986		<u>231.2</u>

11. PLANTATIONS ACCOUNT VARIANCE

	Establish- ment and Maintenance £ million	Harvesting ing and Marketing £ million	Total £ million
Income	0.9	7.7	8.6
Profit on sale of properties and plantations	1.6	—	1.6
	<u>2.5</u>	<u>7.7</u>	<u>10.2</u>
Expenditure:			
Forest costs	4.2	5.5	9.7
Administrative expenses	2.4	0.4	2.8
	<u>6.6</u>	<u>5.9</u>	<u>12.5</u>
Net variances — favourable	<u>9.1</u>	<u>13.6</u>	<u>22.7</u>

Analysis and explanation of variance

	Notes	Standard £ million	Actual £ million	Favourable variance £ million
Establishment and Maintenance:				
Sundry income	(a)	0.5	1.4	0.9
Profit on sale of properties and plantations	(b)	—	1.6	1.6
		<u>0.5</u>	<u>3.0</u>	<u>2.5</u>
Plantations acquired		—	—	—
Land planted	(c)	2.0	1.7	0.3
New plantations	(d)	3.8	2.9	0.9
Restocked plantations		3.6	3.5	0.1
Maintenance	(e)	5.4	4.3	1.1
Lease rents, supplies and miscellaneous		0.9	0.6	0.3
Road construction		3.8	3.7	0.1
Road maintenance		2.6	2.3	0.3
Labour oncost	(f)	10.9	10.0	0.9
Research and development		4.6	4.4	0.2
		<u>37.6</u>	<u>33.4</u>	<u>4.2</u>
<i>Less:</i> Book value of disposals and reclassifications		<u>7.4</u>	<u>7.4</u>	<u>—</u>
Forest costs ...		30.2	26.0	4.2
Administrative expenses	(g)	13.8	11.4	2.4
		<u>44.0</u>	<u>37.4</u>	<u>6.6</u>

- (a) Increased venison income over standard set together with surplus realised on sale of seed.
- (b) This variance represents the excess over book value and costs on the disposal of £11.7 million forest estate properties and plantations.
- (c) Represents the difference between the lower value of land in the plantable reserve and the standard allowed for in the plantations valuation, mainly in North and Mid Scotland.
- (d) This substantial favourable variance is due principally to a reduction in the fertiliser programmes arising from a switch of resources to Forest Recreation, amenity and conservation, the wet summer and also to savings in weeding costs by the increased use of herbicides.
- (e) Sizeable economies in costs of fence maintenance, improved deployment of rangers on wildlife protection and fewer fires because of the cool wet weather contributed to the favourable variance of £1.1 million.
- (f) Consequential variance from the reductions in costs of creating new plantations and maintenance (see d. and e. above) against standards set.
- (g) The favourable variance is due to a combination of staff costs in the quinquennium being held below the general rate of inflation; to the reductions associated with the Forest District reorganisation following the amalgamation and the move to the three-tier structure.

	Notes	Standard £ million	Actual £ million	Favourable Variance £ million
Harvesting and Marketing:				
Income	(a)	<u>49.0</u>	<u>56.7</u>	<u>7.7</u>
Direct costs		24.1	21.0	3.1
Labour oncost		8.9	6.5	2.4
Forest costs ...	(b)	33.0	27.5	5.5
Administrative expenses		11.5	11.1	0.4
		<u>44.5</u>	<u>38.6</u>	<u>5.9</u>

Notes to the Accounts (*continued*)

- (a) Income per cubic metre increased by 11 per cent over the previous year which represents a rise of approximately 5 per cent in real terms. This was due to increased demand as a result of the recent investment in the pulp, wood based panels and sawmill sectors of the domestic industry.
- (b) Unit costs per cubic metre for expenditure on Commission harvesting have decreased substantially during the quinquennium. Of the total favourable variance of £5.9 million, £4.3 million represents savings from improvements in efficiency above those which were anticipated when the standards were set. The remaining £1.6 million is the result of an increase in the average tree size harvested.

12. NOTIONAL INTEREST CHARGES

Notional interest charges have been allocated as follows:

	£ million	<i>Previous Year £ million</i>
Plantations account ...	44.2	40.3
Trading account ...	1.2	1.2
Sale of properties (Note 13)	0.1	0.1
	<hr/> 45.5 <hr/>	<hr/> 41.6 <hr/>
Attributable to:		
Capital (Note 8)	39.3	35.8
Provision for Superannuation (Notes 1(i), 1(j) and 7)	6.2	5.8
	<hr/> 45.5 <hr/>	<hr/> 41.6 <hr/>

13. PROFIT ON SALE OF PROPERTIES

	Trading Account £ million	Plantations Account		Total £ million	<i>Previous Year £ million</i>
		Properties £ million	Plantations £ million		
Proceeds	5.3	2.6	9.1	17.0	22.1
Less: Book value	3.1	1.3	7.4	11.8	16.1
	<hr/> 2.2 <hr/>	<hr/> 1.3 <hr/>	<hr/> 1.7 <hr/>	<hr/> 5.2 <hr/>	<hr/> 6.0 <hr/>
Less: Expenses (including 0.1 notional interest)	0.2	0.1	0.4	0.7	0.8
	<hr/> 2.0 <hr/>	<hr/> 1.2 <hr/>	<hr/> 1.3 <hr/>	<hr/> 4.5 <hr/>	<hr/> 5.2 <hr/>
Less: Related attributable administrative expenses	0.5	0.2	0.7	1.4	1.6
	<hr/> 1.5 <hr/>	<hr/> 1.0 <hr/>	<hr/> 0.6 <hr/>	<hr/> 3.1 <hr/>	<hr/> 3.6 <hr/>

Total proceeds from sales and exchanges of land, buildings and plantations amount to £17.0 million a decrease of £5.1 million over the previous year. The net profit in all sales amounts to £3.1 million and this is apportioned between land and buildings which are surplus to requirements and forest estate properties and plantations. The profit on the surplus estate is taken to the Trading account whilst the profit on the forest estate is credited to the Plantations account and regarded therein as a favourable variance.

14. TRADING ACCOUNT SURPLUS FOR YEAR

	Notes	Previous Year			
		Income £ million	Surplus for year £ million	Income £ million	Surplus for year £ million
Cabins and campsites	(a)	1.9	—	1.9	0.1
Shooting and fishing		0.5	0.1	0.5	0.1
Surplus estate ...	(b)	1.2	—	1.1	0.6
Agency ...		2.4	0.2	2.0	0.2
Miscellaneous ...	(c)	0.1	0.1	0.2	0.2
		6.1	0.4	5.7	1.2

The entries above represent the trading results after inclusion, where appropriate, of a notional interest charge of 5 per cent, being the real return expected from public sector trading bodies.

(a) The real rate of return achieved on capital invested in cabins and campsites was 5.7 per cent against 8.4 per cent in the previous year. This is due to refurbishment work on cabins and a fall in campsite income as a result of the very wet summer.

(b) The Surplus Estate comprises those properties which are not required for the Forestry Enterprise and which will be sold as quickly as security of tenure, interest in purchase by tenants and vacant possession allows. The properties concerned are relatively expensive to maintain because of their type, age and remoteness and, in the case of houses, income is limited to phased fair rents. The operational deficit after charging interest of 5 per cent is £1.5 million (£1.4 million in 1984-85) which is reduced to nil when the profit of £1.5 million (£2.0 million 1984-85) on sales during the year is added back.

(c) The miscellaneous entry represents the income received from the Severn Trent Water Authority in respect of the Commission's equal share in the surplus on the joint management scheme at Lake Vyrnwy in Wales.

15. EXPENDITURE

	£ million	Previous Year £ million
(a) Total expenditure before notional interest charges comprises:		
Plantations account ...	82.5	74.9
Trading account ...	6.0	5.3
Sale of properties (Note 13) ...	2.0	2.3
	90.5	82.5
(b) The above expenditure includes:		
Hire of plant and machinery ...	0.5	—*
Labour oncost (Note 18) ...	18.8	18.7
Administrative expenses (Note 19) ...	27.7	27.2
Research and development ...	4.4	4.4
	51.4	50.3
(c) Total staff costs for the Forestry Enterprise and Forestry Authority comprise:		
Salaries ...	20.4	20.0
Wages ...	26.5	26.9
Social security costs ...	3.3	3.6
Superannuation costs ...	10.4	10.4
	60.6	60.9
Travel and subsistence	3.6	3.5
	64.2	64.4

* prior year figure is not available

Approximately 85 per cent (previous year 86 per cent) relates to Forestry Enterprise operations.

(d) The average number of employees during the year was made up as follows:-

	Number	Number
Industrial	3,928	4,318
Non-industrial	2,139	2,165
	6,067	6,483

Notes to the Accounts (*continued*)

(e) Included in staff costs at (c) above is the remuneration of the Commissioners which comprises (excluding pension contributions):

	£ thousands	<i>Previous Year £ thousands</i>
Chairman	19	17
Highest paid Commissioner	39	37
Other Commissioners	111	110
	<hr/>	<hr/>
Total emoluments of Commissioners	169	164
	<hr/>	<hr/>
Travel and subsistence of Commissioners	31	25
	<hr/>	<hr/>

The emoluments of the other Commissioners fell within the following ranges:

	Number	<i>Number</i>
£nil to £5,000	6	6
£5,001 to £10,000	—	—
£10,001 to £15,000	—	—
£15,001 to £20,000	—	—
£20,001 to £25,000	—	—
£25,001 to £30,000	—	3
£30,001 to £35,000	3	—

The Commissioners' remuneration is in accordance with Civil Service pay rates.

16. CAPITAL COMMITMENTS

Future capital expenditure on Other Tangible Fixed Assets in 1986-87 authorised by the Commission amounts to £11.3 million (£11.3 million for 1985-86).

17. CONTINGENT LIABILITIES

Contingent liabilities exist at 31 March 1986 for damages caused by the Commission to other persons' property and for compensation for personal injury to Commission employees amounting to an estimated sum of £0.6 million (£0.2 million at 31 March 1985).

18. LABOUR ONCOST

Labour oncost covers those costs incurred in the employment of industrial labour which cannot be allocated directly to activities, eg employer's national insurance and provision for superannuation.

The costs incurred for the year ended 31 March 1986 were:

	£ million	<i>Previous Year £ million</i>
National insurance, holiday and sick pay ...	5.0	5.3
Wet time	1.2	1.1
Transport of workers and travelling and subsistence	5.6	5.5
Provision for superannuation	5.4	5.5
Other net costs	1.6	1.4
	<hr/>	<hr/>
	18.8	18.8
<i>Less: charged to Forestry Authority</i>	—	0.1
	<hr/>	<hr/>
	18.8	18.7

Allocated to:

Plantations account:		
Establishment and maintenance	10.0	10.5
Harvesting and marketing	6.5	6.3
Forest recreation and amenity	1.5	1.2
Trading account	0.8	0.7
	<hr/>	<hr/>
	18.8	18.7

19. ADMINISTRATIVE EXPENSES

	£ million	<i>Previous Year £ million</i>
Salaries and national insurance	19.4	19.2*
Travelling, subsistence and staff transfer expenses	4.7	4.2*
Provision for superannuation	4.3	4.2*
Accommodation and estate expenses	1.8	2.2
Office expenses	1.6	1.2
Other net expenses (including Auditors' Remuneration £42,660)	4.3	3.7*
	36.1	34.7*
<i>Less: charged to Forestry Authority</i>	8.4	7.5*
	27.7	27.2
Allocated to:		
Plantations account:		
Establishment and maintenance	11.4	11.6
Harvesting and marketing ...	11.1	10.7
Forest recreation and amenity	2.1	1.7
Trading account	1.7	1.6
Sale of properties (Note 13)	1.4	1.6
	27.7	27.2
The total administrative expenses of £36.1 million (£34.7 million in 1984-85) were incurred as follows:-		
Forest Districts	16.6	16.3
Conservancy Offices	7.3	7.4
Headquarters	11.5	9.9*
Forest Estate	0.7	1.1
	36.1	34.7

* Previous year figures adjusted to take account of Work Study and Forest Survey expenditure now classified as administrative expenses.

20. PLANTING, RESTOCKING AND FOREST RECREATION AND AMENITY SUBSIDIES*(a) Details*

	Planting			Restocking			Forest Recreation and Amenity
	Area Planted (hectares)	Subsidy per hectare	Subsidy 85/86 (000)	Area Planted (hectares)	Subsidy per hectare	Subsidy 85/86 (000)	
GREAT BRITAIN	4,333	£ 523	2,266	7,297	£ 613	4,476	£000 5,813
ENGLAND							
Total	246	585	144	2,156	968	2,086	2,780
<i>Conservancy</i>							
North	226	494	112	980	854	836	780
East	8	972	8	766	1,010	774	1,287
West	12	2,047	24	410	1,161	476	713
WALES							
<i>Conservancy</i>	49	1,058	52	1,778	1,066	1,896	1,156
SCOTLAND							
Total	4,038	513	2,070	3,363	147	494	1,877
<i>Conservancy</i>							
North	1,852	855	1,583	1,015	347	352	542
Mid	1,327	329	437	937	44	42	784
South	859	58	50	1,411	71	100	551

(b) The planting and restocking subsidies per hectare for each of the Conservancies in existence at 1 April 1982 were derived from the weighted average of the net discounted revenue at 3 per cent of the various soil type models representing the reserve of plantable land at that date. The 1985-86 subsidies for the restructured Conservancies have been derived by identification of the areas planted and restocked to the old Conservancies, using the appropriate 1982 subsidies updated for inflation and redistributing the calculated sums to the new Conservancies.

Notes to the Accounts (*continued*)

(c) 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.

21. FORESTRY SUBSIDY

From 1 April 1982 the Forestry Subsidy, which represents the opportunity cost of investment in forestry, is presented as the capitalised sum on new investment, similar to the planting and restocking subsidies, and is assessed as the difference between the net present values of income and expenditure discounted on the one hand at the target rate of 3 per cent and on the other at the public sector trading rate, which is currently 5 per cent. Details of the calculations are set out below.

	£ million
Planting and restocking subsidies to achieve the public sector trading rate of 5 per cent	17.1
Planting and restocking subsidies to achieve the target rate of return of 3 per cent ...	6.7
	<hr/>
Forestry subsidy on new investment in 1985-86	10.4
	<hr/> <hr/>

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