

FORESTRY
COMMISSION

*68th Annual Report
and Accounts
1987-1988*



Forestry Commission

Forestry Commission

ARCHIVE

FORESTRY COMMISSION

*68th Annual Report
and Accounts
for the year ended
31 March 1988.*

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*

*Ordered by The House of Commons to be printed
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FORESTRY COMMISSION

231 Corstorphine Road
Edinburgh EH12 7AT

20 December 1988

To:

The Rt Hon MALCOLM RIFKIND QC, MP,
Secretary of State for Scotland

The Rt Hon JOHN MACGREGOR OBE, MP,
Minister of Agriculture, Fisheries and Food

The Rt Hon PETER WALKER MBE, MP,
Secretary of State for Wales

Gentlemen

In pursuance of Section 45 of the Forestry Act 1967, I have the honour to transmit the 68th Annual Report of the Forestry Commissioners which covers the year ended 31 March 1988.

I am, Gentlemen,
Your obedient Servant,

(Sgd) DAVID MONTGOMERY
Chairman

The Forestry Commissioners, Heads of Divisions and Conservators at 31 March 1988

Forestry Commissioners

Sir David Montgomery Bt, JP, DL, *Chairman*
Mr G. J. Francis *Deputy Chairman and Director General*
Mr R. T. Bradley
Mr I. D. Coutts CBE
Mr D. L. Foot
Mr J. Forbes
Captain W. F. E. Forbes DL
Mr G. O. Hutchison
Mr J. D. Pollock
Mr D. T. J. Rutherford
Mr C. R. Woosnam

Heads of Divisions

Secretary: Mr P. J. Clarke
Director, Harvesting and Marketing: Mr S. E. Quigley
Director, Research: Mr A. J. Grayson
Director, Planning and 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. T. Spillane
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 S. A. Neustein
East:	Mr M. Dinning
West:	Mr J. R. Fletcher

Scotland

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

<i>Wales:</i>	Mr J. F. Morgan
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Note: The addresses of the main Forestry Commission offices appear on the inside back cover.

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GENERAL REVIEW

THE YEAR IN PERSPECTIVE

- 1 1987-88 will be chiefly remembered in the forestry world for two events. The first, and in human terms the more dramatic, was the storm which caused widespread damage to woodland and trees in the south-east of England in the early hours of 16 October 1987. The second was the Government's decision, announced in the 1988 Budget, to change the tax and grant arrangements for private forestry. These events caught the headlines. However, the year was also notable for the continuing progress that the forestry industry made in terms of planting and timber production. Total new planting by the Commission and the private sector was the highest since 1974-75 and the volume of timber produced by the Commission was at an all-time high. The strong demand for British-grown wood was demonstrated by the continuing investment in the wood-processing industry, which is now among the most modern and competitive in the world. There was also clear evidence of the forestry industry's positive response to changing environmental perceptions, as reflected in the wider environmental objectives incorporated in the new Woodland Grant Scheme introduced following the Budget. In a crowded country like ours, with such a low proportion of forest cover, woodlands have always been valued for the variety of benefits they offer, and multi-purpose use is an established objective of woodland management both under our grant schemes and in respect of the management of our own land. The Government has re-emphasised the important role that forestry has to play in the well-being of this country and its wish to see a continuing expansion of woodland cover.

NEW SUPPORT ARRANGEMENTS FOR PRIVATE FORESTRY

Tax and Grant Changes

- 2 In his March 1988 Budget, the Chancellor of the Exchequer, the Rt Hon Nigel Lawson MP, announced changes to the tax and grant support for private forestry. Subject to certain transitional provisions, commercial woodlands were removed entirely from the scope of income tax and corporation tax with effect from the day of the Budget, 15 March 1988. In parallel with this tax reform, the Chancellor announced that there would also be increases in forestry grants affecting both traditional forestry and the proposed Farm Woodland Scheme. In making these changes, the Chancellor acknowledged that the tax system should recognise the special characteristics of forestry, with its very long time-cycles between investment in planting and income from selling the felled timber. He was concerned, however, that this should be done in a manner designed to provide a simpler and more acceptable system of support, and which avoided the previous arrangements under which top rate taxpayers in particular had been able to shelter other income from tax by setting it against expenditure on forestry, while effectively enjoying freedom from tax on the income from the eventual sale of the timber.
- 3 The effect of the tax changes is that expenditure on the planting and maintenance of trees for timber production will no longer be allowed as a tax deduction against other income, and proceeds from the sale of timber and grants received under the new Woodland Grant Scheme (see paragraph 4) will not be chargeable to tax. Tax relief under the previous rules will continue to be available until 5 April 1993 for those who were already occupiers of commercial woodlands before 15 March 1988: these transitional arrangements also apply to those who become occupiers as a result of commitments which were entered into, or of grant scheme applications which were received by the Forestry Commission, before that date.
- 4 Our existing grant schemes — the Forestry Grant Scheme and the Broadleaved Woodland Grant Scheme — were closed to new applications from 15 March 1988 and were replaced on 5 April 1988 by a single scheme known as the Woodland Grant Scheme. Details of this new scheme were announced by the Secretary of State for Scotland on 23 March 1988 in a written Parliamentary statement which is reproduced in full at Appendix X to this report.



- 5 Grant levels under the Woodland Grant Scheme are generally £375 per hectare higher than those under the previous schemes, except that all broadleaved planting, whether on its own or in mixture with conifers, attracts the same rates of grant, and the rates for conifer planting under the Farm Woodland Scheme remain at the old levels. A special supplement of £200 per hectare is also available for new planting on existing arable or improved grassland of less than 10 years of age (although this is not payable on Farm Woodland Scheme applications).
- 6 We have taken the opportunity provided by the introduction of the Woodland Grant Scheme to ensure that the best environmental standards are followed in forestry planting. The scheme encompasses a wide range of objectives with the aim of encouraging multiple-purpose woodland management and appealing to a wider range of interests. Timber production will continue to be an essential objective, but need not necessarily be the primary one in every case. Other objectives, such as planting to provide or improve wildlife habitats, could be accepted as a main aim as long as timber is produced in the process. We shall be launching a new series of guidelines to help applicants achieve the environmental objectives of the scheme. The first of these guidelines on *Forests and Water* was planned to be published in the autumn of 1988. Others in the series will deal with archaeology, landscaping and nature conservation.
- 7 On the day following the Budget, the Secretary of State for Scotland, the Rt Hon Malcolm Rifkind QC MP, made a statement as lead Forestry Minister reaffirming the Government's commitment to its forestry policy. He confirmed that the changes to the support arrangements for private forestry announced by the Chancellor of the Exchequer did not mean that there had been any fundamental change in the policy for encouraging forestry. Forestry Ministers remained of the view that a healthy forestry industry was in the national interest and that long-term confidence in both forestry and wood-processing industries in this country was fully justified. Mr Rifkind also confirmed that the Government was still seeking a forestry programme of 33,000 hectares of new planting a year - as announced in 1987 in the context of its policies for alternative land use - with particular emphasis on the private sector, on environmental considerations and on the planting of a higher proportion of trees on low ground of better quality.
- 8 Mr Rifkind's announcement, the full text of which is reproduced at Appendix VIII to this report, provided timely reassurance to the forestry industry. In particular, the industry welcomed the Secretary of State's conclusion that forestry had an important role to play in the well-being of this country and that it had an assured future.
- 9 An associated announcement concerning afforestation in the English uplands was made jointly on 16 March 1988 by the Secretary of State for the Environment, the Rt Hon Nicholas Ridley MP, and the Minister of Agriculture, Fisheries and Food, the Rt Hon John MacGregor MP. This announcement, the text of which is to be found at Appendix IX, referred to the need to conserve the habitats which the remaining unimproved land in the English uplands provided. It had therefore been decided that, while there was some scope for broadleaved and mixed woodlands, approval should not normally be given in these areas for new planting which consisted predominantly of conifers. The only exception would be small areas where it was clear that such planting would be environmentally acceptable. The announcement indicated that further guidance on the subject would be contained in a letter that the Minister of Agriculture, Fisheries and Food would be sending to the Chairman of the Forestry Commission.*
- 10 In response to questions in Parliament following the announcement of this new policy, Scottish Office and Welsh Office Ministers confirmed that different considerations applied in Scotland and Wales. Compared with England, these countries have a much larger percentage of uplands where new planting will continue to provide economic and social benefits provided that it is done in an environmentally sympathetic way.



Forestry Policy

* This was received in October 1988 and will be covered in the next report.

- 11 It is too early to say how the changes stemming from the Budget will affect the pattern of planting. There will clearly be a period of adjustment while forestry interests assess the new situation, and the transitional tax arrangements introduced by the Chancellor of the Exchequer will contribute to cushioning the effect of the changes. We shall be monitoring the operation of the new grants regime in order to measure its effectiveness against the objectives set.

THE OCTOBER 1987 STORM



- 12 Winds of near hurricane force with speeds up to 90 knots hit south-east England in the early hours of 16 October 1987 causing severe damage to woodlands and trees in towns and in the open countryside. The area affected lay south and east of the line from Bournemouth to King's Lynn, with the counties of Sussex, Suffolk and Kent suffering most damage. Some 15 million trees were blown down, representing a volume of nearly 4 million cubic metres of timber, with about 70 per cent of the damage occurring in privately-owned woodlands, 25 per cent in Commission woodlands and a further 5 per cent in hedgerows, parks and gardens. In an area noted for its botanic gardens and historic woodlands such as Kew, Wakehurst, Sheffield Park and Bedgebury, the loss of trees of great scientific and amenity value was particularly distressing.
- 13 The volume of timber blown down was greater than in any other single recorded storm this century and more than double that blown down in the previous most serious storm in north-east Scotland in 1953. While figures in themselves can do little to convey the devastation and distress caused by the storm, the analysis by ownership and county given at Appendix XIII provides a measure of the extent of the damage.
- 14 In the immediate aftermath of the storm our main priority was to assist in the task of clearing roads and re-opening communication links, and our field staff made an important contribution to this work. At the same time, we developed and instituted plans for assessing the scale of damage, stimulating and organising the harvesting and marketing of the blown timber, and addressing the problems of restoring the damaged woodlands. This was taken forward within a few days of the storm when we established a Forest Windblow Action Committee with membership drawn from Timber Growers United Kingdom, the British Timber Merchants' Association (England and Wales), the UK Wood Processors' Association and the Commission itself. The Committee's terms of reference were directed towards the development of an orderly programme of action to deal with the effects of the storm on woodlands, and it submitted its report to us early in January 1988. Details of the membership of the Committee, its terms of reference and the conclusions and contained in its report are shown at Appendix XIV.
- 15 We also set up a Task Force based at our Research Station at Alice Holt in Surrey to act both as the executive arm of the Action Committee and to provide a comprehensive information and advisory service to woodland owners and the timber trade. In the months following the storm our Task Force dealt with over a thousand enquiries from woodland owners, contractors and others and provided information and advice on a wide range of subjects, including the safe harvesting of windblown timber, lists of timber merchants and other specialists, and advice on timber marketing and replanting. Seminars for woodland owners on the clearance and marketing of the timber were held by the Action Committee early in 1988; these were well received and attended by a large number of owners. A booklet* providing comprehensive guidance to woodland owners was also compiled and issued.



Normal annual harvest
Storm damage

- 16 The major task of clearance lay with the private sector as the greater part of the blown timber (some 2.7 million cubic metres) was in private woodlands. The normal amount of timber harvested annually within the affected area has been about 400,000 cubic metres of conifers and 250,000 cubic metres of broadleaves. It was clear, therefore, that without an increase in harvesting resources it would take nearly five years to clear the conifer timber and up to eight years for the hardwoods, by which time much of the material would be unmarketable. In fact, a steady build-up of harvesting resources was achieved in the

*Forest Windblow Action Committee. *Guidelines for Dealing with Windblown Woodlands* (unpriced).

affected area which continued into 1988, and it reached a level which would result in the harvesting of an estimated 1.25 million cubic metres per annum. At the end of March 1988 - nearly six months after the storm - it was estimated that some 16 per cent of the volume had been cleared from both private woodlands and Commission forests, leaving some 3.3 million cubic metres still to be harvested. Further details of the action taken in relation to our own woodlands are given in paragraph 106.

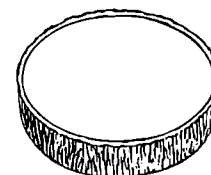
- 17 The House of Commons Agriculture Committee decided to investigate the Government's response to the damage to the countryside caused by the storm and the steps taken to provide relief to farmers and others. We were invited to give written and oral evidence to the Committee, and the report of the Forest Windblow Action Committee formed part of the evidence taken into account. We were pleased that in their report*, published on 25 February 1988, the Agriculture Committee commended both the advisory service that the Commission had given and the quality of technical assistance we had made available to woodland owners and farmers. The Committee also endorsed our policy of self-restraint in limiting Forestry Commission production of pine and hardwoods in areas not affected by the storm in order to avoid adding to the glut of timber. Two of the Committee's main recommendations were concerned with special assistance for woodlands. In order to alleviate the glut of pine and beech, they endorsed the Windblow Action Committee's proposal for assistance in the form of a transport subsidy, and recommended that the Government should come to a swift decision on the matter. The Agriculture Committee also recommended that proposals for tax concessions to woodland growers badly affected by storm damage be looked at sympathetically.
- 18 At the end of the year under review, the Government were considering the Agriculture Committee's report and the recommendations of the Forest Windblow Action Committee regarding the provision of financial assistance to woodland owners affected by the storm.**
- 19 We should like to take this opportunity to place on record our warm appreciation of the invaluable work undertaken by the members of the Action Committee and those who supported them. Our special thanks are due to Mr John Goodwin of the St Regis Paper Co (UK) Ltd for his outstanding contribution as Chairman of the Committee.

WOOD PRODUCTION AND WOOD PROCESSING

- 20 The continuing growth of the domestic economy and a strong international demand for wood products led to new records of wood consumption in 1987 and generally good prices. However, the relative weakness of the US dollar against European currencies provided North American producers with a strong competitive advantage. Imports of Canadian sawn softwood caused some easing of prices in the British market which affected domestic sawn timber and thus log prices. In south-east England the October storm gave rise to a glut of timber which, taken with the somewhat higher costs of harvesting storm-damaged woodlands, severely reduced the prices available to forest owners.
- 21 The total consumption of paper and paperboard products in the UK increased for the fifth successive year, to 8.7 million tonnes. Domestic supplies to this market rose by 6.1 per cent while imports increased by 12.5 per cent. There was a rise in the consumption of particleboard and sawn timber associated with greater activity in house building and construction. For particleboard, the increase was 17 per cent; domestic supplies to this expanding market met nearly 42 per cent of the total consumption of 2.7 million tonnes compared with 39 per cent in 1986. Even more notable was an increase of 12 per cent in the

State of the Wood Market

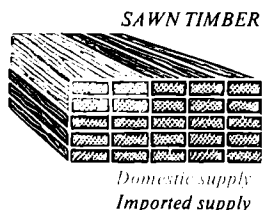
PARTICLEBOARD



Domestic supply
Imported supply

*First Report from the House of Commons Agriculture Committee: Session 1987-88, HC272-I, HMSO, £2.90 net.

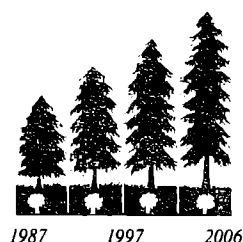
**The Minister of Agriculture, Fisheries and Food announced on 7 June 1988 that special supplements to the Commission's normal grants would be made available to assist in the replanting of the storm-damaged woodlands.



Developments in the Wood Processing Industries

- consumption of sawn timber to nearly 9.3 million cubic metres; domestic production increased from 1.3 million cubic metres the previous year to 1.5 million cubic metres, and accounted for 16 per cent of this market.
- 22 The total volume of wood harvested in Commission forests was a record 3,380,900 cubic metres, an increase of 1.5 per cent over the previous year. Further details are given in paragraphs 98 to 107.
- 23 In our report last year we referred to the decision by the Kymmene Corporation to establish an integrated pulp and paper mill at Irvine in Ayrshire. Construction started in 1987 and has progressed on schedule towards the expected opening of the mill in the spring of 1989.
- 24 Investments in the wood-based panel sector have continued. Egger (UK) Ltd built and opened a third particleboard line at their mill at Hexham in Northumberland; Kronospan commissioned their fourth particleboard line at Chirk in Clwyd; and in Scotland, Caberboard installed their second medium-density fibreboard line at Cowie in Central Region.
- 25 We are pleased to record the decision announced by the Shotton Paper Company in October 1987 to build a second newsprint machine at their mill in north Wales. This new investment is a measure of the success of the company in establishing newsprint production using British-grown spruce. The company have recognised that the supply of domestic wood, while rising steadily, is not yet sufficient to support the large-scale provision of raw material needed for a second line, and they are therefore planning to introduce recycled newsprint to supplement their requirement for fresh fibre. This increase in the domestic newsprint capacity through the utilisation of waste paper, made possible by the core supply of British-grown spruce, is a welcome development.
- 26 In October 1987 two of Britain's largest sawmilling companies, A & R Brownlie Ltd and Thomas Smith and Sons (Kirkoswald) Ltd, announced their intention to merge under the name BSW Timber plc. They also confirmed their proposal to build a large new sawmill near Carlisle.
- 27 We believe that these examples of the continuing development of the wood-processing industry in Britain provide a clear confirmation of the strong market demand for British-grown wood and its suitability for a wide range of wood products in everyday use.

Future Timber Supply and Demand



- 28 During the year we published our five-yearly review of future wood production in Britain, embracing both Forestry Commission and private forests.* This attracted a great deal of interest because of the strong current demand for British timber, arising from the success of our promotion of the wood-processing industries over recent years, and the possibilities for additional development in the future.
- 29 The forecasts of our own production reflected a decision to extend the rotation age of most crops on economic grounds, and to retain certain areas of forest beyond normal rotation age for landscaping, conservation and amenity reasons. Coniferous wood production in both Forestry Commission and private forests is forecast to rise from an average of 5.1 million cubic metres per annum in the quinquennium 1987-1991 to 8.8 million cubic metres in the quinquennium 2002-2006. Broadleaved wood production is expected to remain constant at about 0.9 million cubic metres per annum. Overall, assessments of coniferous and broadleaved wood production indicate that, until the mid-1990s and perhaps slightly beyond, there is a good match between the installed and planned industrial capacity and the growth of timber supplies. We have therefore found it necessary at this stage to urge caution in the consideration of future plans for any additional capacity.

*Forecast of Conifer Roundwood Production, 1987-2006. Forestry and British Timber, October 1987, pages 23-27.

- 30 The Public Accounts Committee examined the Director General on the Comptroller and Auditor General's report *Review of Forestry Commission Objectives and Achievements* in February 1987, and their findings were reported to the House on 29 April 1987. In their report* the Committee recognised the Commission's substantial achievement in meeting its primary objective of increasing the quantity of timber supplied to industry and enlarging Britain's forest area. They noted that the Commission also has other objectives, which include supporting the rural economy, providing recreational opportunities, and protecting and enhancing the rural environment, and that these can conflict with seeking to achieve the primary objective in the most cost-effective manner. The Committee expressed a concern that these secondary objectives did not have the specific quantification that would be helpful when deciding priorities, setting targets and assessing performance. They accepted that there were difficulties in quantifying such objectives, but recommended that the Commission should set in hand the work necessary to collect and analyse the relevant data for establishing more quantified targets and measures of performance for its different objectives and the balance to be sought between them. The Committee's summary of their main conclusions and recommendations is reproduced at Appendix XI.
- 31 In its response** presented on 28 October 1987 (see Appendix XII), the Government agreed that the Commission should consider what further quantification of such objectives would be practicable and cost-effective. Work has since started on assessing methods of valuing and quantifying the Commission's contribution to rural employment, informal recreation, the conservation of wildlife, and the security of the country's wood supplies. We hope that this work will lead to practical ways of quantifying these non-commercial, but very important, benefits.

FINANCE

- 32 The format of our Forestry Enterprise Accounts has been revised and these now include a new-style Operating Account. This identifies more clearly the surplus earned by the Commission through the increase in the value of its growing stock of plantations. In 1987-88 this increase was £70.3 million which, together with the income of £72.5 million from plantations, chiefly the sale of timber, more than covered the net expenditure of £85.0 million. After allowing for a surplus on sales of properties of £1.2 million and a net surplus from other activities of £0.5 million, there was an overall net operating surplus of £59.5 million for the year. Full details are given in the Finance Section at pages 42 to 44.

FORESTRY AND THE ENVIRONMENT

Nature Conservation Initiatives

- 33 In last year's report we were pleased to record the signing of a declaration of intent with the NCC relating to the management of the 344 Sites of Special Scientific Interest (SSSI) on Commission land. Since then a specification for management plans has been prepared, agreed with the NCC and distributed to the staff of both our organisations. A significant number of such plans was completed during the year, one of the most notable being the plan for Newborough Forest which was jointly signed by Dr Morton Boyd, our Conservation Consultant, and Dr Tom Pritchard, the NCC's Director Wales, at a ceremony in the forest on 11 November 1987.
- 34 Newborough Forest was planted from the late 1940s onwards largely with pines as part of a scheme to stabilise shifting sand dunes. Almost all of the 700 hectare forest is now designated as an SSSI on the strength of the flora which have developed in the new pinewoods and in the associated dune slacks. Round-leaved wintergreen and dune hellebore are notable components of the flora in the new woodland. Newborough is also the location of one of our largest conservation projects undertaken during the year. A

*Twelfth Report from the Committee of Public Accounts: Session 1986-87, HC185, HMSO, £4.20 net.

**Treasury Minute on the 11th to 16th, 18th and 19th Reports from the Committee of Public Accounts: Session 1986-87, HC236, HMSO, £2.90 net.



shallow freshwater pool has been created which covers nearly 4 hectares. Already known as Llyn Parc Mawr, it is situated a few hundred metres from the Malltraeth Estuary and has been designed to attract waders and other birds at high tides, as well as to provide a new habitat for water plants and animals.

35 Our conservation courses for Forest District Managers held at the Dean and Ae Management Training Centres were revised and expanded during the year. The aim has been to give our staff a clear appreciation of the latest developments in the Commission's conservation policy and enable them to translate these into management prescriptions, as well as to instruct them in the practical planning and implementation of conservation measures. We have also established a new centre at Cannock in Midlands Forest District which will cater for the training of all new entrant rangers and for the special needs of rangers working in lowland England and Wales. Conservation techniques and recreation will form a large part of the programme.

36 Our greatly expanded conservation research programme is producing practical benefits for wildlife in the forest. A particular example is the black grouse study in Wales, the results of which are now being converted into specific management prescriptions. The rapid communication of research results is one of the priorities of our conservation policy, and we are pleased to record that the first of a new-style, colour-illustrated Research Information Note published during the year was devoted to the improvement of habitats for butterflies on the edges of forest rides.

37 Among the large number of conservation projects we have initiated, one of the most exciting is the scheme to develop habitats for birds through the provision of artificial nests, which was rewarded this year by a pair of osprey rearing three young in one of our new eyries. This work continues with further eyries for osprey as well as nesting rafts for divers being constructed in Scotland.

Archaeology



38 We welcome the publication of *The Archaeology of the Uplands* by Timothy Darvill for the Council of British Archaeology as important in increasing awareness of the significance of upland archaeology. In April 1987, the Inverness Field Club in association with the Council for British Archaeology, Scotland, held a symposium and study tour entitled *Our Vanishing Heritage* which explored the issues in the north of Scotland. Our view was outlined in a paper to the symposium when we made reference to our decision to prepare a field book on upland archaeology which will be of practical value to foresters and other land managers. Work has progressed well on this project with the expert support of the Historic Buildings and Monuments Directorate of the Scottish Development Department. The field book will help in the identification of sites and monuments and in directing enquirers to the appropriate sources of archaeological assistance.

39 It is our firm policy that planting should not damage sites which archaeologists regard as important. There is a risk, however, that ancient monuments can be damaged through ignorance of their existence or extent. We have therefore instituted a procedure, which took effect from 5 April 1988 to coincide with the introduction of the Woodland Grant Scheme, under which our local staff notify the appropriate archaeological authorities of individual planting proposals; this allows features of importance to be identified and protected. The authorities involved are the County archaeologists in England, CADW or their designated agents in Wales, and the Regional archaeologists or the Scottish Development Department in Scotland. This new procedure has been welcomed by archaeological interests as a positive step towards safeguarding ancient monuments, particularly those which, although of importance, have not yet been so identified by scheduling under the Ancient Monuments and Archaeological Areas Act 1979.

Forest Parks

40 Public access to our forests has always been encouraged and enjoyed, but in Forest Parks we have concentrated particularly on providing a wide range of recreation facilities, including visitor centres, campsites, holiday cabins and opportunities for wildlife study and sports. The first National Forest Park established by the Commission was in Argyll in 1935. It was followed in the late 1930s by the Snowdonia and Dean Forest Parks and then in the late 1940s by the New Forest, Glenmore and Galloway Forest Parks. In 1953 we set up the Queen Elizabeth Forest Park in the Trossachs to mark the Coronation and, in 1955,

the Border Forest Park. Most of these Parks provided for access over very large areas of wild and beautiful countryside in the days before National Parks and National Scenic Areas were created.

- 41 In the summer of 1987 we designated three new Forest Parks, all in the north of England - at Delamere in Cheshire, North Riding in Yorkshire and Grizedale in the Lake District. Each of these areas has forest landscapes of distinction and a history of intensive use for recreation. Grizedale Forest Park, for example, has a new visitor centre, wildlife hides, a sculpture trail, bridleways, trails, camp sites, picnic areas and a 200-seat 'Theatre in the Forest' run by the Grizedale Society. The visitor centre, which was officially opened on 20 June 1987 by the Rt Hon Lord Whitelaw, then Lord President of the Council, consists of an exhibition hall, where the role of forestry is explained, a shop, the theatre and a hostel with overnight accommodation for visiting parties of students and schoolchildren. In the same location a former sawmill is being converted into a craft centre. We hope to develop new Parks and facilities in a number of areas. However, a major concern must be to maintain and improve existing facilities in the present Forest Parks and elsewhere to meet the considerable growth in the recreation needs of people from all walks of life.



- 42 We were pleased to be associated with the first UK Conference on Urban Forestry held at Wolverhampton Polytechnic on 29-31 March 1988. This was a welcome initiative which showed that there is a wide-ranging interest in the subject. We are very much involved in urban forestry, both directly because we manage something of the order of 90,000 hectares of woodlands close to towns, and indirectly through grant aid, research and training. At the Conference we undertook to prepare a Handbook of Urban Forestry summarising research knowledge and practical experience. We are co-operating closely with the Countryside Commission in this field.

Urban Forestry

- 43 We conducted two surveys of forest health in 1987. The main survey was a continuation of those we have been undertaking since 1984; the other was a grid survey required under the EC Regulation on atmospheric pollution. The main survey confirmed that both crown thinning and the yellowing of needles (the two symptoms most frequently associated with the decline of conifers on the Continent) are present in Britain. The extent of these symptoms in Britain is similar to that in West Germany. Because they cannot be clearly correlated with any specific cause, however, no easy interpretation of this similarity is possible. Indeed, examination of the 1987 data for regional differences in crown condition and correlations with variables such as those relating to climate, altitude and pollution show only positive correlations - that is better crown condition where sulphur dioxide, nitrogen oxides and rainfall acidity were higher - in direct contrast to what would be expected.

Forest and Tree Health Surveys

- 44 We are also concerned with identifying whether there is any long-term trend in the health of our trees, whatever the cause may be. In 1987, there was an apparent reduction in the recorded crown densities of Sitka spruce, Norway spruce and Scots pine: information is not yet available for beech and oak as this is the first year that these species have been assessed. A similar decrease in the crown condition of conifers occurred between 1985 and 1986, after a slight improvement between 1984 and 1985. Observer standards have been reviewed to ensure that assessments of year-on-year change are objective.

- 45 In 1986 we joined with the Department of the Environment to fund a three-year studentship at the University of Aberdeen to investigate factors affecting the incidence and severity of ash dieback. This work has provided good support for the previously advanced view that the incidence of dieback is linked to agricultural land use. In the eastern half of Britain more than 40% of the hedgerow trees surrounded by arable land showed some dieback compared with fewer than 20% of trees surrounded by pasture.

Ash Dieback

- 46 In our last report we commented upon the concern expressed by environmental bodies over the perceived threat to the conservation interest by afforestation in the low-lying peatlands of Caithness and Sutherland, known as the 'Flow Country'. We explained that interim arrangements had been introduced in order to safeguard the areas of high conservation

Planting in Caithness and Sutherland

significance, under which the Nature Conservancy Council (NCC) are consulted on all grant applications arising in the local authority Districts of Caithness and Sutherland.



- 47 The NCC produced their advice to the Government on the scientific evidence supporting an expansion of conservation safeguards in the Flow Country in July 1987. Their report entitled *Birds, Bogs and Forestry: the Peatlands of Caithness and Sutherland* generated considerable controversy, however, in calling for a stop to any more planting in the peatlands. We were naturally disappointed that the Council did not take the opportunity at that time to seek to achieve a solution which would secure an acceptable balance in this extensive area between the needs of conservation, forestry and local employment.
- 48 The Government's response to *Birds, Bogs and Forestry* was given on 25 January 1988 in the form of a letter to the NCC Chairman from the Secretary of State for Scotland, the Rt Hon Malcolm Rifkind QC MP. Details were also announced in a written Parliamentary answer, the text of which is reproduced in full at Appendix VII. Mr Rifkind emphasised that he was giving an interim view pending the outcome of work started by a Highland Regional Council working party on an overall land use strategy for the area. He acknowledged that much of the area identified in the report was of national and international importance for conservation and that a substantial proportion should be safeguarded, in particular the most important bog systems and bird habitats, especially on the wet flows. Mr Rifkind did not, however, consider that the whole of the area could be regarded as of uniformly high importance for nature conservation, and he concluded that some further new planting needed to take place to contribute to the overall national forestry planting programme, to maintain present local employment in forestry and to maximise the opportunities for future investment in the wood-processing industry. He considered, moreover, that the evidence indicated that Caithness and Sutherland could accommodate such planting without affecting the conservation significance of the area as a whole.
- 49 The Secretary of State proposed that key conservation areas should be safeguarded by an expansion of the network of Sites of Special Scientific Interest (SSSI) which, taken together with existing SSSIs, might amount to half the total unafforested peatland area. More specific guidance on the areas which could be planted without affecting the areas of major conservation interest awaits the outcome of the Highland Regional Council's land use strategy proposals. In the meantime, the present interim arrangements under which all forestry proposals in Caithness and Sutherland are the subject of consultation with the NCC will continue.
- 50 Such an approach, while safeguarding the conservation interest of substantial parts of the peatlands, should allow enough planting to take place elsewhere in this vast area to enable a viable wood-using industry to be established for the benefit of those who live and work in Caithness and Sutherland. We therefore await with interest the Regional Council's proposals for an overall land use strategy.

Environmental Assessment

- 51 European Community Directive No 85/337 introduced a general requirement that projects likely to have significant effects on the environment, for example because of their size, nature or location, should first be subject to an assessment of those effects. Specific reference is made in the Directive to "initial afforestation where this may lead to adverse ecological changes". The purpose of this procedure is to provide information which would allow proposals to be modified in order to reduce the expected effects on the environment or, where these effects are severe and it is not possible to reduce them to acceptable levels, for permission to proceed with the project to be refused by the competent authority. The system involved is known as Environmental Assessment (EA).
- 52 The Government's detailed proposals for giving effect to the Directive were set out in consultation papers published by the Environment Departments early in 1988. These invited comments towards the end of March with a view to the introduction of the requisite legislation by 3 July 1988. It was proposed that implementation of the Directive in respect of afforestation projects should be linked to our existing arrangements for consultation with environmental agencies and other authorities over applications for forestry grants. It was envisaged that we would normally require an EA when applications were made for

afforestation on a significant scale in areas subject to national designation on environmental grounds. Exceptionally, an EA might be required outside such areas where there were particularly sensitive and complex ecological factors. It was further proposed that similar arrangements should apply to the Forestry Commission's own afforestation proposals. The responses to this consultation exercise were still being analysed at the end of the period covered by this report.*

*Response to
Nature Conservancy
Council Report*

- 53 The Government's response to the report by the Nature Conservancy Council (NCC) on *Nature Conservation and Afforestation in Britain* was given by the Secretary of State for Scotland in a letter to the Council's Chairman in October 1987. The text was also published in a Parliamentary answer which is reproduced in full at Appendix V. The Secretary of State indicated that both forestry and nature conservation have important roles to play in the development of the countryside and that it is the Government's policy that forestry should take place in ways that are compatible with other land use interests, including nature conservation. He also drew attention to the Commission's strong commitment to conservation and to seeking a balanced and flexible approach, both in our own operations and in considering applications for grant aid from private woodland owners.
- 54 The Government welcomed the NCC's detailed analysis of the interrelationship between conservation and forestry, and while it felt unable to adopt all of the suggestions made in the report - for example, the introduction of a system of planting licences or an absolute ban on planting within Sites of Special Scientific Interest - there were others which the Secretary of State commended, particularly where they would lead to an increased dialogue and co-operation between ourselves and the Council. For our part, we welcome constructive discussions between officials of our respective organisations as a practical way forward on one of the major issues facing the countryside today, and we echo the Secretary of State's remarks that "such a move can only be to the benefit of rural development and, with goodwill and a realistic approach on both sides, should lead to a better mutual understanding".

**FORESTRY AND
LAND USE**

*The Farm
Woodland Scheme*

- 55 Last year we reported on a number of new policy initiatives announced by the Government designed to encourage alternative uses of farm land. These included a proposal to introduce a scheme to encourage the development of farm woodlands. The Farm Woodland Scheme is intended to build on the Commission's planting grants but with the provision of annual payments by the Agriculture Departments to bridge the gap between investment in planting and the likely time of first returns of timber income from thinning. The details of the scheme were the subject of a joint consultation document issued by the Agriculture Departments and the Commission in March 1987. This generated considerable interest and many constructive comments. A revised scheme was drawn up incorporating many of the suggestions made by respondents, including enhanced annual payments and a more specific emphasis on the planting of arable and improved grassland. Enabling legislation in the form of the Farm Land and Rural Development Bill was introduced into Parliament last autumn and had virtually completed its Parliamentary progress at the end of the period of this report. It was to be followed by a Statutory Instrument setting out the detailed provisions of the scheme, which was intended to operate from 1 October 1988.
- 56 Our new Woodland Grant Scheme (see paragraphs 4-6) provides that the higher grants for broadleaved planting should also be available for broadleaved trees established under the Farm Woodland Scheme. However, in view of the special emphasis on the promotion of broadleaves under the Farm Woodland Scheme, it was decided that grants for conifers planted in association with that scheme should be restricted to the lower rates applying under the previous Forestry Grant Scheme. A summary of the grants available under the Farm Woodland Scheme is given in Appendix XV.



*Procedures for Environmental Assessment of afforestation projects were introduced on the lines proposed with effect from 15 July 1988, under the provisions of the Environmental Assessment (Afforestation) Regulations 1988 (SI 1988/1207).

- 57 Last year we described the steps we were taking following completion of a consultation exercise on the review of the composition and procedures of our Regional Advisory Committees. We made recommendations to the Government which resulted in several changes being announced by the Secretary of State for Scotland in a written Parliamentary answer on 10 December 1987. This is reproduced at Appendix VI.
- 58 The main purpose of the review was to find ways of achieving greater public accountability in the proceedings of the Regional Advisory Committees, and we now advertise details of any planting and felling proposals which are referred to the Committees as a result of an unresolved objection by a local authority or other statutory body consulted. These advertisements invite anyone who has an interest in such a proposal to make representations in writing which will then be taken into account by the Committee in its discussions with the parties involved. We also took the opportunity when appointing new Regional Advisory Committees in December 1987 to give effect to those matters mentioned in the Secretary of State's announcement relating to the choice of Committee members, including the need to ensure that the Chairmen should as far as possible be drawn from backgrounds which would be unlikely to cause any real or apparent clash of interests when disputed cases come before their Committees. The memberships of the new Committees are listed at Appendix I.

THE NEW FOREST REVIEW

- 59 In our 1985-86 report we mentioned the review which we had initiated to examine the measures that already exist to safeguard the New Forest and to identify whether further measures may be necessary to maintain its unique character. The Review Group, under the Chairmanship of the Deputy Surveyor of the New Forest, produced a comprehensive draft report which was put out for consultation in October 1987. As well as the draft report itself, a summarised version was prepared and given wide circulation to ensure the maximum publicity and comment. The Group sought responses to their report by the end of March 1988. Following this period of consultation, we now look forward to receiving the Group's recommendations which we shall study carefully and discuss with other Government Departments before presenting our advice to Ministers.

FORESTRY INDUSTRY COMMITTEE OF GREAT BRITAIN REPORT

- 60 We were pleased to welcome in December 1987 the publication of an important report entitled *Beyond 2000* from the Forestry Industry Committee of Great Britain. This was significant in that it was the first report on forestry to set out the views of the private sector of the industry as a whole. *Beyond 2000* provided a comprehensive picture of the various components of the industry, emphasised their interaction with each other and described the policies and priorities which the Committee saw as being necessary to sustain the industry's growth and competitiveness. This report was most useful in focussing attention on the important contribution of forestry to trade, employment, the rural economy and the countryside.

PARLIAMENTARY COMMITTEE ENQUIRIES

- 61 A number of Parliamentary Committees initiated enquiries during the year which, to a greater or lesser degree, involved forestry. The House of Commons Agriculture Committee embarked on an examination of the action taken by the Government following the October 1987 storm in the south-east of England; we made a written submission and the Director General gave oral evidence in January 1988. The same Committee also announced their intention to consider the subject of the forestry industry and land use, and we submitted a comprehensive memorandum for this enquiry which was expected to begin during 1988.

- 62 We provided written evidence in January 1988 to the House of Commons Environment Committee who were following up their earlier examination into the effects of air pollution, and our Director of Research gave oral evidence in February. We also provided written evidence to a Sub-Committee of the House of Lords Select Committee on Science and Technology on the possible research implications of forestry as an alternative use for agricultural land, in connection with their enquiry into agricultural and food research.
- 63 In February 1988, a Sub-Committee of the House of Commons Treasury and Civil Service Committee embarked on an enquiry into the Civil Service management reforms announced by the Prime Minister in response to the Efficiency Unit's report *The Next Steps*. We were asked for a memorandum setting out our duties and powers and the level of financial and managerial responsibility delegated to us. We expected to submit this in May 1988.
- 64 Apart from the Agriculture Committee's enquiry into the October storm which we have described in paragraph 17, the results of the deliberations of the other Committees were awaited at the end of the year covered by this report. We shall give a full account of these in the report for 1988-89.

FORESTRY IN EUROPE

- 65 The Single European Act 1986 is the most radical revision of the Treaty of Rome for 30 years. It is aimed at the creation of a single internal market by 1992 with greater opportunities for exporters through the abolition of internal frontiers and allowing the free movement of goods, persons, services and capital. To this end, the EC Commission has outlined a new strategy which would bring about a fundamental change in the current frontier controls for plant health by, for example, eliminating phytosanitary certificates in intra-Community trade. We shall be involved in the development of this strategy and will be seeking to ensure that it does not lead to any unacceptable risks to the health of British woodlands.
- 66 The EC Commission was also planning to promulgate later in 1988 details of its proposals for a strategy and action programme for forestry. It was widely expected that this would make proposals for funding forestry undertakings on two main fronts - on farmland in association with moves to reduce agricultural surpluses and plant alternative crops, and in rural areas in line with the aims of the Single European Act to reduce regional disparities.

Single European Act

*Forestry
Strategy and Action
Programme*

AWARDS TO THE COMMISSION

- 67 We are pleased to record the following awards won by the Commission during the year:
- a. a Commission woodland, near Aberfoyle in Mid Scotland Conservancy, was commended for its landscape design by the Royal Highland and Agricultural Society of Scotland in their annual Scottish Woods and Forests Awards;
 - b. Mr Duncan Gillies of our Lorne Forest District was again successful in the Royal Scottish Forestry Society's National Tree Felling Contest, gaining second place overall and the safety prize; Mr David Grieves, of our Castle Douglas Forest District, won third prize;
 - c. the Commission's staff newspaper was again awarded prizes in the annual competition organised by the Scottish section of the British Association of Industrial Editors;
 - d. our Spiers House Campsite, in North England Conservancy, was selected by the Automobile Association as the Regional Campsite of the Year 1987.

INFORMATION TECHNOLOGY

- 68 We have continued to develop and introduce new management computer systems which are now in use throughout the Commission. In order to accommodate these, we upgraded our telecommunications network at the start of the year and in February 1988 added two new DEC VAX 8350 computers to our Edinburgh Headquarters installation.
- 69 Among the projects introduced since our last report was a new on-line financial accounting and management information system (FAMIS) for the processing and retrieval of financial information. A workshop stock-control system was also in operation in all our 19 mechanical engineering workshops by the end of the year. Other systems introduced were for handling bookings for our forest holiday cabins and for analysing data to monitor the Broadleaved Woodland Grant Scheme. At the end of the year we were considering the development of a system to harness engineering-design techniques for the 3-dimensional projection of landscapes from contour maps; this would greatly increase our ability to evaluate the options for forest design.
- 70 At Forest District level we set up two more systems for operation on the local microcomputers. The first of these was for the computation of timber volumes and timber assortments which saves time compared with previous methods. The second system was a microcomputer version of the forest investment appraisal package (FIAP), on which we have reported previously; this assists managers in identifying key factors in optimising investment and management decisions.

- 71 Mr Geordie Hutchison and Mr Ian Coutts were re-appointed as part-time Commissioners on 30 September 1987. *Commissioners*
- 72 The following senior staff changes took place during the year: *Senior Staff*
- Mr George Taylor, Conservator South Scotland, retired on 5 April 1987. He was succeeded by Mr Gordon Cowie who was formerly Assistant Conservator Operations in Mid Scotland Conservancy.
 - Mr David Robertson retired as Conservator Wales on 28 September 1987 and was succeeded by Mr John Morgan, who was previously Assistant Conservator Operations in North England Conservancy.
 - Mr Colin Turquand retired as Controller of Finance on 30 September 1987. He was succeeded by Mr Colin Spillane from the Welsh Office.
 - Mr Alan Rix, Conservator North England, retired on 4 February 1988. His place was taken by Mr Andrew Neustein, formerly Chief Research Officer at our Northern Research Station.
- 73 On 31 March 1988 the Commission employed 2,137 non-industrial staff compared with 2,170 the previous year. The number of industrial staff fell from 3,628 to 3,374 during the same period; this was achieved by further improvements in efficiency and the greater employment of contractors whose numbers, including some 1,400 working in our woods for purchasers of standing timber, are now equivalent to about 2,500 jobs annually. *Employment*
- 74 Arrangements exist to keep all our employees informed on matters of concern to them, with information being disseminated at all levels. The usual system of Government Whitley Councils at national and regional levels is supplemented by meetings with the Trade Unions on specific issues as needed, and by other meetings to ensure that staff are given the opportunity to comment on and be involved in the decision-making process. A broadly similar arrangement for industrial employees is provided through the Commission's Industrial and Trade Council at national level and a network of Joint Consultative Committees at Conservancy and Forest District levels. *Employee Participation*
- 75 Although the Disabled Persons (Employment) Act 1944 is not binding on the Crown, the Commission, along with other Government Departments, has undertaken to accept the same responsibility as other employers consistent with the principle of recruitment by fair and open competition. 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 we are very concerned to ensure that every opportunity is taken to employ disabled people. The physically-demanding nature of much of forestry work restricts the scope for employment of some disabled persons on forest operations, but within this limitation our policy is to provide for equal opportunities for the disabled. *Disabled Persons*



FORESTRY ENTERPRISE

SILVICULTURAL OPERATIONS

Seed



76 There was a good broadleaved seed crop this year, particularly of oak and beech. The collections of acorns were the best for many years as a result of the careful management of stands for seed collection. Conifer seed crops were more variable, but we were reasonably successful in maintaining our stocks, purchasing from abroad only when necessary. Advantage was taken of the opportunity to make large collections of Corsican and Scots pine seeds from trees blown down in the October storm. This included collections of Scots pine for the American Christmas tree market.

77 The greater call for broadleaves of British provenance undoubtedly stimulated an increased requirement for seeds by the nursery trade. We had a larger number of requests this year from the private sector to collect both conifer and broadleaved seed from our woods. Similarly, more seed was sought in private forests, with particular interest in registered beech stands.

Nurseries

78 The 1987 growing season, although cool in the north, was generally favourable and was followed by a mild winter, resulting in the production of high yields of plants of very good quality.

79 We have been successful in introducing precision-sowing equipment at our Wykeham and Delamere nurseries. This method involves the use of a drill sower which spaces out the seed regularly, providing seedlings with sufficient room to grow on in the seed bed until they are ready for lifting and despatch as two-year old plants. This method is designed to replace the traditional technique of lifting and transplanting after one year's growth in the seed bed which is more costly and can sometimes lead to considerable plant losses. Plants grown by the precision-sowing production system need careful side-cutting and under-cutting, combined with close control of irrigation and nutrient supply to keep root and shoot growth in balance. With good-quality seed and stone-free soils, this new technique offers the promise of a substantial advance on conventional methods in terms of cost saving and plant yields and quality.

80 This year saw the first bulk supplies to forests of some 360,000 plants of genetically-improved Sitka spruce. The seed for this programme is obtained by hand pollination of selected and tested parent trees. Because this high quality seed is available only in small quantities, the seedlings produced from it are used as a source of material for vegetative propagation in order to increase the number of plants from each seed. The seedlings are first raised as stock plants in pots inside polythene greenhouses for two years and then divided up to produce 60 to 100 cuttings each. After two years' growth, the young plants are again used to produce a second cycle of cuttings which are rooted and transplanted into the nursery, to be despatched as two-year old plants. In this way, each seed will produce 400 to 700 usable plants of identical genetic composition. Trees grown from these selected sources are expected to provide an increase in timber yield of some 10 per cent above that of unimproved Sitka spruce. This system applies the results of the tree improvement research and the techniques of vegetative propagation which have been developed by our Research Division. We are planning to increase the supply of plants raised by this method, now that we have established the feasibility of large-scale production.

New Planting and Restocking



New planting

Restocking

81 The mild winter allowed an early start to our new planting and restocking programmes. The area of new planting was 4,952 hectares, which was slightly less than in the previous year, while the restocking programme of 8,177 hectares was marginally higher as the area reaching maturity and ready for final felling gradually increases. Altogether, we planted 1,197 hectares of broadleaves — 9 per cent of our total planting programme — on sites carefully chosen to improve the landscaping and conservation value of our woodlands.

Cultivation Developments

82 Cultivation by scarification for the replanting of felled woodland continues to be given a higher priority as its benefits become more apparent. Six specialised cultivation machines were in regular use in both our upland and lowland forests. Double-furrow tine ploughing was used on both heathland and poorly drained soils, and mounding employed on wet sites,

mainly with excavators on contract hire. We also undertook an initial trial of a Bracke moulder developed from the Bracke patch scarifier. Investigations are continuing into cultivation equipment that could disperse brash and improve site conditions on poorly drained upland sites. During the year, we loaned a scarifier to the Irish Forest and Wildlife Service for cultivating clear felled sites; the machine operated very successfully.

FOREST PROTECTION

- 83 Advances in red deer management in the forest have been the subject of a recently published Bulletin*. It outlines techniques for predicting alterations in deer densities resulting from changes in the age and structure of the forest. Populations are assessed by 'vantage point counts' and by post-mortem estimation of the ages of deer culled. These methods will become a fundamental part of our future deer management, and plans are in hand for training rangers and supervisors in their use at our training centre at Torlundy near Fort William.

Wildlife Management



- 84 The requirements of the Control of Pesticides Regulations 1986 were mentioned in our last report. They will come into force in stages over three years to take full effect by 1 January 1989. We are proceeding with the necessary training of operators and the introduction of improved storage and handling facilities. A draft *Code of Practice for the Use of Pesticides in Forestry* has been issued as a consultation document. This is intended to provide guidance for forestry in parallel with that being provided for agriculture and horticulture by the Agriculture Departments.

Pesticides Regulations

- 85 After pupal counts in the autumn and egg counts in the spring, we found it necessary to apply insecticides to a total of 2,265 hectares in North Scotland Conservancy to control the pine beauty moth. The programme, which was carried out with strict observance of environmental requirements under the Control of Pesticide Regulations 1986, involved the use of fenitrothion and dimilin on part of the area and the specific *Panolis flammea* virus on the remainder. Satisfactory control was obtained by all these methods.

Pine Beauty Control

- 86 Because the year was a wet one, with few dry spells, there were only very limited periods of high fire danger. There was, however, one sizeable fire in North Scotland Conservancy at which the use of helicopters greatly aided control. Losses in Wales, although small, were higher than expected for a wet season. The total area of plantations burnt was 379 hectares.

Fires

ESTATE MANAGEMENT

- 87 During the year, 1,638 hectares of plantable land were acquired, including 3 hectares of land under trees. All the acquisitions were in Scotland.

- 88 The average price of land for planting was £673 per hectare, compared with last year's average of £563. This significant increase in the average price reflects the better quality of land available to us during 1987-88 rather than any major movement in land prices. It is too early to say what effect the abolition of tax incentives for forestry announced by the Chancellor of the Exchequer in March 1988 may have on the market for forestry land.

Land Acquisition

- 89 Our programme of land rationalisation continued during the year with sales being completed of some 230 blocks of forest land totalling 6,387 hectares. The majority of areas sold were under 25 hectares. Sales of a further 2,600 hectares of forest land were in the process of legal completion at the end of March. In addition to forest properties, we sold some 200 houses and 2,542 hectares of other land which were surplus to our requirements. The aggregate receipts for the year were £13.1 million. The total cash receipts since the present disposals programme started in 1981 amount to £110.9 million, of which £108.0 million had been surrendered to the Exchequer (Consolidated Fund) by 31 March 1988.

Sale of Plantations and Other Properties

*Forestry Commission Bulletin No 71: *The Management of Deer in Upland Forests*, £2.35 net.

Management of Property



90 Details of the net area of land disposed of during the year are given at Table 7 of Appendix XVII, while details of forest land sold during the year and average prices received are shown at Table 8.

91 During the year we spent £1.7 million on the construction and improvement of buildings. The provision of office accommodation suitable for our new three-tier management structure continued with the completion of new offices or major improvements at South Downs, West Downs, Thetford, Dorset, and Wiltshire and Avon Forest Districts. A new Forest District centre was constructed at Rheola and a major redevelopment at Cairnbaan in Mid Scotland Conservancy was completed.

92 A review of the Commission's mineral resources was completed during the year and recommendations were adopted to encourage their further exploration and exploitation. There is, in particular, a growing demand for construction materials. The main recommendation of the review was that a more flexible approach to marketing should be adopted, reflecting accepted practices within the industry. The new approach should increase our annual income from this source, which is at present about £500,000.

93 Our rental income for the year, including agricultural, sporting and other rents, was £3.1 million. The Commission's property holding is detailed in Table 13 of Appendix XVII.

94 As part of our energy conservation programme, surveys have been completed at the East England Conservancy office at Cambridge and at two Forest District offices. The results of these surveys will give valuable basic information to assist in our continuing efforts to reduce energy costs.

Commercial Recreation



95 The term 'commercial recreation' encompasses our activities in managing forest cabins, holiday houses and caravan and campsites for letting to the general public. Our aims are to enhance visitors' enjoyment of our forests through the provision of overnight accommodation and to achieve a commercial rate of return on the capital invested.

96 We have introduced more vigorous promotion and marketing techniques, and a new computerised cabin-booking system is enabling enquiries and bookings to be processed more quickly than before with a consequent improvement in the service to our customers. Average cabin occupancy rose during the year to 59 per cent, the highest level since 1980-81, and in the case of the sites at Deerpark in Cornwall (64 per cent) and Lochaweside in Argyll (56 per cent) to their highest levels ever. Mini-break holiday bookings also continued to increase. As part of our planned programme of refurbishment and upgrading, colour TV sets have been installed as standard in our cabins at Keldy in North Yorkshire and Strathyre in Perthshire. We have also continued our programme of general improvements at Keldy. Two more holiday cottages (River Massan Cottages near Benmore Gardens, Argyll) were introduced in July 1987.

97 Our new caravan and camping brochure, introduced in November 1987, was very well received. Good weather over Easter and throughout August, particularly in the south, more than compensated for bad weather in between, with the result that there was an overall increase of about 3 per cent in campsite occupancy levels. We are continuing to improve and extend our campsite facilities, and local and national promotional schemes have been introduced to boost the occupancy figures further. Electrical hook-ups for caravans are in great demand and are providing a good return on capital invested. Nine of our 32 sites now provide hook-ups and another (Beddgelert) will have them installed in time for the 1988-89 season.

HARVESTING AND MARKETING

Market Demand

98 All the major markets for round timber enjoyed a further year of buoyant sales, with demand very strong throughout despite a significant drop in price in the south-east of England following the October 1987 storm. There was a strong market for sawlogs of all sizes. The increasing capacity in the domestic wood-processing industry over recent years meant that demand for small roundwood for the major market in pulp and particleboard

continued to strengthen. The export market for pulpwood weakened significantly towards the end of the year. The demand for round mining timber by British Coal continued its expected decline as mines were closed.

- 99 Sawlog prices moved forward favourably at the start of the year, but the major change in the value of the pound against the US dollar following the slump in the stock market last October, together with the effect of the storm in south-east England, brought about a decline of 10 to 15 per cent from the peak levels achieved. Despite this trend, sawlog prices increased over the year as a whole by an average of almost 20 per cent, with an increase of around 5 per cent for small roundwood.

Wood Prices



- 100 Set out in the table below are the results of our 1987-88 harvesting and marketing operations and those for the previous four 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 (Note 10(a) on page 61). Whereas in previous reports the financial figures in the table were shown in the outturn prices of the years concerned, they are now expressed on a common basis (£'88) to enable more realistic comparisons to be made.

Forestry Commission Operations

	Unit	1983-84	1984-85	1985-86	1986-87	1987-88
	Million cubic metres					
Total Removals		2.93	2.86	3.11	3.32	3.38
By sale standing	"	0.98	0.93	1.09	1.23	1.24
By Forestry Commission harvesting (adjusted for change in work in progress)	"	1.95	1.93	2.02	2.09	2.14
	£('88) million					
Income		52.86	53.60	61.12	68.03	71.05
Forest costs (expenditure, excluding administrative expenses)	"	27.31	27.19	29.61	28.08	29.22
Gross surplus	"	25.55	26.41	31.51	39.95	41.83
Administrative costs	"	12.44	12.21	12.03	12.22	11.48
Net surplus	"	13.11	14.20	19.48	27.73	30.35
	£('88)					
Income per cubic metre		18.04	18.74	19.65	20.50	20.99
Forest costs per cubic metre	"	9.32	9.51	9.52	8.46	8.63
Gross surplus per cubic metre	"	8.72	9.23	10.13	12.04	12.36
Administrative costs per cubic metre	"	4.25	4.27	3.87	3.69	3.39
Net surplus per cubic metre	"	4.47	4.96	6.26	8.35	8.97

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

- 101 The total volume of sawlogs sold from our own harvesting operations was 1,099,000 cubic metres (measured overbark), an increase of 1.8 per cent over the previous year, and the average price improved by nearly 20 per cent. The Log Price Index, which is an index of forward prices, rose from 218.7 at 31 March 1987 to 247.5 at 30 September 1987 and ended the year at 222.0.

Conifer Sawlog Sales



*Conifer Small
Roundwood Sales*

- 102 There was an increase of 4.3 per cent in our sales of conifer small roundwood over 1986-87, most of which was absorbed by domestic industries. Small roundwood offered in tender sales led to the export of a total of 66,000 tonnes.

- Pitwood* 103 The downward trend of recent years in the demand for round mining timber continued as further pits closed, and the market is now only 53 per cent of the level before the 1984 industrial dispute. The decline in this market led us to review the future of our pitwood production depot at Brandon near Thetford and a decision was taken to close it. All production ceased on 28 February 1988.

- Sales of Standing Timber* 104 There was keen competition for standing timber of all categories. The volume sold standing from Commission forests rose during the year by 1.1 per cent to 1,245,000 cubic metres: this represented 37 per cent of the total volume of wood harvested. At the end of the year the Standing Sales Index stood at 622.5 compared with 521.6 at 31 March 1987, an increase of 19 per cent.

Harvesting



- 105 The volume felled in our own harvesting operations was 2,136,000 cubic metres, of which 500,000 cubic metres came from thinnings and 1,636,000 cubic metres from clear felling. Productivity, which has shown a steady advance through the present decade, continued to improve during the year under review mainly as a result of our increased mechanisation which involves forwarders, processors and harvesters. Purpose-built machines of this kind are now being used increasingly by contractors who are deriving benefits similar to those we have obtained, namely increased productivity, reduced costs, and better and safer working environments for their operators.

- 106 Our forests in East England Conservancy were severely affected by the October storm with about one million cubic metres of timber being blown down. The worst hit areas were Suffolk, Kent and East and West Sussex. Priority for clearance was given to pine, which made up 75 per cent of the conifer volume, and beech, neither of which are durable species. Blue stain fungi posed the most serious threat of deterioration to the pine. To provide the additional harvesting resources needed to deal with the volume of timber involved, forest staff and machines were moved progressively from Thetford to supplement the resources available in the Suffolk Forest District, with the aim of clearing the pine within two years. Two harvesters, a Valmet 862/948 and an Osa 706/250, with supporting forwarders, were purchased and a Bruunett Processor and forwarder team were transferred from North England Conservancy to work in the Weald Forest District in Kent. Operators were selected for the harvesters from volunteers within our workforce and sent with supervisors and mechanics to Sweden for training, after which they formed operational teams in the Weald. By the end of the year under report clearance was well under way.

- 107 We should like to place on record our appreciation of the determination and resourcefulness displayed by all of our staff involved in dealing with the effects of the storm.

ENGINEERING

Civil Engineering

- 108 We constructed 100 kilometres of new roads and upgraded 227 kilometres of existing roads in our forests during the year, bringing the total length of roads in use to 7,312 kilometres. In an effort to reduce maintenance costs, we are continuing to seek improvements in the quality of our roads, and we increased the testing and grading of road-surfacing materials during the year with this in mind.

- 109 In south Wales, we are responsible for a large number of tips on our land, inspection of which has now been completed and reports written as required by the Mines and Quarries (Tips) Act 1969. Those tips which require remedial action have been identified, with the opportunity being taken to ascertain if there are any recoverable minerals that could profitably be worked.

- 110 Within the extensive areas of land under our management are a number of roads and bridges of historical interest; sixty bridges have been identified which are thought to be in this category and their importance is currently being assessed by the Institution of Civil Engineers' Panel for Historic Engineering Works and by other bodies to identify those

worthy of preservation. These bridges are mostly arches on old military roads in Scotland, built by General Wade and his successor Major Caulfield. Fortunately, most of them are on disused roads, but they often lie on the routes of footpaths and can be repaired or restored to the original design without additional strengthening being necessary. Work has started on the Prince Charles bridge at Fochabers with the help of Manpower Services Commission labour.



111 Our efforts to contain the costs of our large and varied fleet of vehicles and machines have continued to meet with success. By the use of our computerised management systems, we are now better able to assess and identify factors which influence reliability and we are bringing increasing pressure to bear on suppliers to remedy these in order to ensure a continuing reduction in operational costs. The level of mechanisation in the nursery and forest establishment phases of our operations, as well as in harvesting, increased over the year.

Mechanical Engineering

112 We now have some 4,000 radios in use throughout our forests, and one of the main tasks during the year was to implement the frequency change referred to in our last report. In addition, changes to Forest District boundaries have required modifications in the sphere of radio cover and control. Our radio mechanics have become increasingly involved in the maintenance and repair of electronic components in machinery. Machines such as scarifiers and harvesters employ electronics of varying complexity ranging from simple electronic ignition circuits, through multiplex wiring to controls using microprocessors. The courses run by the Radio Engineering Branch start with basic electronic principles and go on to basic fault-finding techniques and detailed examination of the electro-hydraulic systems with which the machines are equipped.

Radio Engineering

HEALTH AND SAFETY

113 There was a small increase in 1987 in the level of reportable accidents (ie those causing incapacity for more than three days) to 6.2 per 100 industrial employees compared with 5.8 and 5.9 in the two previous years. We are concerned that this reversal in the downward trend from 8.6 in 1981 should be halted. The use of a new accident report form is leading to more objective reporting and also more frequent reporting of dangerous occurrences or 'near misses', which should assist in our efforts to improve safety.

114 The two Regional Safety Officers appointed last year have concentrated on inspecting the use of pesticides at Forest Districts. Their work is proving to be a significant aid to health and safety management. We have been pleased to participate in the development of a British Standard for protective clothing for users of chain saws, particularly in respect of the effects of after care — washing and dry cleaning — upon clothing used for leg protection.



FORESTRY AUTHORITY

LEGISLATION

- Felling Controls* 115 The Forestry Act 1986 gave us the power to issue notices requiring the restocking of land with trees after conviction of an owner or tenant for illegal felling. In accordance with the Act, we introduced Regulations* promulgating a number of procedural matters such as the prescribed form and period of notice.
- Dutch Elm Disease* 116 Following a comprehensive review during the course of the year, we made some amendments to our principal Dutch elm disease Orders. The amending Orders** reduced the number of areas within which local authorities may exercise prescribed powers and in which elm movement is restricted. These changes were made in recognition of the fact that in many areas of the country the disease was so widespread that control measures had become ineffective, and accord with our strategy of concentrating resources where they can be most effective in helping to slow down its spread.

PRIVATE PLANTING

- 117 We are pleased to record that planting in the private sector was significantly above that achieved in 1986-87. A total of 28,675 hectares was grant-aided under our schemes (compared with 23,618 hectares the previous year) of which 23,821 hectares comprised new planting (19,147 hectares in 1986-87). Another encouraging feature was the rise in broadleaved planting. The proportion of broadleaves planted under all our schemes, including new planting and replanting, showed a significant increase from 13 per cent (3,187 hectares) in 1986-87 to 17 per cent (4,822 hectares) in 1987-88; even more noteworthy is that the total area of new planting with broadleaves rose by 85 per cent to 2,495 hectares. Fuller information of grant-aided planting is to be found at Table 2 of Appendix XVII.
- 1987 1988
- 118 We have commented fully at paragraphs 2 to 6 on the changes to the support arrangements for private forestry stemming from the 1988 Budget.

FORESTRY RESEARCH COORDINATION COMMITTEE

- 119 The Forestry Research Coordination Committee (FRCC) has continued its process of reviewing major fields of research in forestry. In the course of the year it received the report of a review group on farming and forestry in the uplands, and reviews of research activity in three other fields — arboriculture, economics and the physiology of stand growth — were in progress. With these reports, the work of assessing research requirements and performance in the main subject areas of forestry research will have been largely completed.
- 120 The FRCC has also undertaken an active coordinating function in relation to farm forestry research. A sub-committee has considered the priorities for research in this field against the background of current research in forestry generally and of the needs of farmers and has recommended to sponsors the groups of projects that should be funded. We have accepted these recommendations, and in the main they have been agreed by the other sponsor bodies concerned — principally the Agriculture Departments, but also including the Agriculture and Food Research Council in respect of its 'Science Vote' money and the Natural Environment Research Council.

* The Forestry (Felling of Trees) (Amendment) Regulations 1987 (SI 1987/632), which came into force on 1 May 1987.

** The Dutch Elm Disease (Local Authorities) (Amendment) Order 1988 (SI 1988/604) and the Dutch Elm Disease (Restriction on Movement of Elms) (Amendment) Order 1988 (SI 1988/605), both of which came into force on 1 May 1988.

121 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.

122 The Farm Woodland Scheme has provided an important stimulus to those with whom we deal on matters concerning farm woodland experimentation and communication of research results. Joint experimental work with the Agricultural Development and Advisory Service has begun with trial farm woodland projects at the Experimental Husbandry Farms at Trawsgoed, near Aberystwyth, and at Drayton, near Stratford. There has also been continued interest in agroforestry research. Several experiments have been established during the year including those at North Wyke in Devon and at the Long Ashton Research Station near Bristol. Treatments have included different species and initial planting distances and also different methods of protecting trees against livestock damage. No further new experiments are planned on agroforestry, however, as the existing experiments are adequate; interest is now focussing on the wider aspects of farm forestry.

Farm Forestry

123 Work in the second year of our upland restocking project has concentrated upon developing and improving plant-handling procedures, as well as the provision of efficient plant protection against weevils. Trials with electrodyn application of cypermethrin showed that protection was not reaching an adequate standard and use of an alternative insecticide, permethrin, is being pursued actively. A special project team has now been formed to investigate restocking in lowland Britain. Added importance has been given to this work as a consequence of the October 1987 storm.

Restocking Projects

124 Our pathologists and entomologists are studying the development of stain and decay in windblown timber. Beech and both Scots and Corsican pine are receiving most attention on the grounds of their vulnerability to rapid deterioration. A loss of value in pine timber arises from blue stain: the pine shoot beetle is associated with the spread of the fungus causing this condition. However, serious damage is only expected to occur in those areas where beetle populations are high as a result of intensive harvesting activity in recent years. A study of windblown amenity trees has also been put in hand. Combined with information about undamaged trees on the same sites, this will enable an assessment to be made as to whether certain species of tree are disproportionately susceptible to the effects of strong winds.

Damage by October 1987 Storm



125 Studies of roots are necessary in order to gain an understanding of their role in the uptake of water and nutrients and in several aspects of tree anchorage and stability. Studies we have undertaken on Sitka spruce have included the origins of roots, namely whether these have developed from the nursery root system or originated adventitiously from the stem; the influence of old stumps on the root form of the planted tree; the manner in which roots respond to the discontinuities caused by cultivation; and on tolerances of roots of different clones to waterlogging.

Roots

126 During the past few years, a member of the Pathology Branch, Dr Brasier, has been surveying certain regions of central and eastern Asia as part of a programme to determine the geographical centre of origin and direction of spread of the different strains of Dutch elm disease. In August-September 1987 Dr Brasier was invited by the Ministry of Forestry, Beijing to conduct a survey in China in collaboration with a Chinese pathologist and was able to visit several widely separated regions. The results suggest that, although Dr Brasier had found the fungus in the Soviet/Chinese border area in Soviet central Asia in 1986, Dutch elm disease may not yet be established in China.

Elm Surveys in Asia

*Biological Control of
Dendroctonus Micans*

127 Further studies have been made at three sites of the success of *Rhizophagus grandis*, the specific predator beetle introduced in 1984 as a possible biological control agent against *Dendroctonus micans*. Each site has been carefully surveyed to produce very accurate records of *D.micans* activity and distribution. While all the signs point to a central role for *R.grandis* in explaining the decline in the *D.micans* population, it is too early to be definitive about the long-term potential of the predator. Other factors such as the weather may have played a part and continuing study is required over a run of years to resolve this.

*Genetically altered
Baculoviruses*

128 The Institute of Virology of the Natural Environment Research Council has been carrying out research on the genetic alteration of naturally-occurring baculoviruses of insects through the use of recombinant DNA techniques. The purposes of this programme are to study the fate of altered viruses in the environment and, ultimately, to alter the functions of these viruses for more effective pest control. Experiments in 1986 and 1987 resulted in the first-ever releases of altered baculoviruses in the field. Both these experiments were carried out with genetically altered alfalfa looper virus and involved the release of caterpillars infected with the virus into a completely enclosed cabbage patch near Oxford. Plans are also in hand to use a baculovirus infective to the Pine beauty moth which has been marked by inserting an innocuous region of DNA into it. We supported this proposal in 1986 and continue to do so. Although the alteration of the gene has not yet been achieved, the purpose of this experiment remains to plot the fate of a genetically-marked virus in Pine beauty moth populations that already have a naturally-occurring virus.

*Management of
Forest Edges
for Wildlife Conservation*



129 New experiments have been set up to find practical ways of managing the inside and outside edges of forests for three purposes: first, to maintain existing flora, secondly, to enrich poor flora or to encourage them to enrich themselves from nearby seed sources and, thirdly, to form a reservoir of plants poised to invade and enrich adjacent areas after felling. Periodic cutting of shrubs and grass in bays three to ten metres deep is effective in maintaining a range of plants. The compass aspect of the edge is more important to plants than the species of trees forming the adjacent plantation. A comparison of the effect on edge flora of a range of different ride-widening and shrub-management practices has led to the development of techniques for increasing plant diversity and the numbers of butterflies.

*Mathematical Modelling of
Crop Growth*

130 The Commission's yield tables are used to predict the growth of stands of trees, to help in the selection of management options and to provide the basis for forecasting production. The tables have worked well for our common management regimes but it is not easy to extend them to more widely-spaced crops, to new regimes, including fertilisation, or to the growth of trees on better land. Our biometric modelling team is now developing models of crop growth based on underlying physiological, physical and chemical processes, including some reference to climate and soil, with the aim of providing a surer basis for prediction where the data are relatively sparse. Such models will also help us to understand the factors that limit plant growth in particular conditions and may suggest how the growth of particular stands may be improved.

Communications

131 The three new series of technical publications launched in 1987 have been very well received. *Bulletins* are aimed at the technical audience and give straightforward information with no frills. *Handbooks*, although basically technical, are designed to attract wider audiences. *Field books* are for use out in the forest where mensuration data, costings, specifications and the like are needed on the job. A new design for the Research Information Notes was also launched in the year.

- 132 Together with the Timber Trades Federation and the British Wood Preserving Association, we currently support a lectureship in timber technology at Imperial College, London. The lecturer, Dr Murphy, has been instrumental in directing work by a number of students — undergraduate and postgraduate — into preservation problems. One project has examined the penetrability of fresh Sitka spruce sawnwood to preservatives suited to high decay-hazard situations. Another project is investigating pre-treatment infection in utility poles and the possibility of remedial treatments. This project is funded by the Electricity Council, Calders & Grandidge Ltd and ourselves.

PLANT HEALTH

- 133 In our last report we mentioned the review of the Import and Export of Trees, Wood and Bark (Health) (Great Britain) Order 1980 to take account of recent and anticipated changes to the EC Plant Health Directive. It had been hoped to promulgate a new Order during the year but this was delayed because a number of basic issues remained to be resolved by the EC Plant Health Standing Committee.

Plant Health Controls

- 134 We also referred last year to our plans to introduce charges for certain plant health services. Discussions with the Agriculture Departments, whose legislation we plan to follow, revealed a legal obstacle which at the end of the year had still to be resolved. We hoped, however, to bring an Order into force by the end of 1988.

Fees For Certain Plant Health Services

- 135 The number of trees affected by Dutch elm disease continues to increase, although control campaigns in those areas which remain lightly affected still show a measure of success in slowing down its spread. Close liaison has been maintained with those local authorities which have powers under the Dutch Elm Disease (Local Authorities) Order 1984, and agreement was reached with them regarding the areas in which it was no longer practicable to continue control measures. We consequently made two amending Orders (see paragraph 116) considerably reducing the areas within which active sanitation control measures will apply. These are now largely limited to urban areas in England and central Scotland, together with a belt from roughly the Firth of Clyde to the Moray Firth to protect the far north. Those local authorities in Wales which had powers under the 1984 Order have concluded that these are no longer required.

Dutch Elm Disease

- 136 Our campaign against *Dendroctonus micans* (the great spruce bark beetle) has been pursued vigorously. Surveys were again carried out in 1987 in designated areas throughout the country. These surveys indicated that the natural rate of spread of the beetle remained at about 5 kilometres per annum. However, it was noted that up to 80 per cent of the attacks discovered were abortive, and most new attacks which were successful were light in nature and close to sites of old outbreaks. All infested trees found near the boundaries of the infested areas were felled and treated by the end of March 1988.

Dendroctonus Micans



- 137 The survey results demonstrate clearly the effectiveness of the movement controls applying in the Scheduled Area. The controls, embodied in the Restriction on Movement of Spruce Wood Order 1982, require all movements of spruce wood grown within the Scheduled Area to be licensed by the Commission. Roadside checks, with the cooperation of the police, were again conducted during the year to ensure that the loads of spruce wood examined were being moved in accordance with the rules. Allied to the system of movement licensing is the Approved Mill Scheme whereby timber from infested stands can be transported only to mills approved for the purpose and where appropriate facilities exist for ensuring proper treatment and disposal of bark residues. At the end of the year, there were 60 such mills within the Scheduled Area.

- 138 Since the boundary of the Scheduled Area was last amended in March 1986, the outer limit of the Peripheral Zone — an area 10 kilometres wide marking the outermost limits of the pest, in which we carry out intensive surveys — has been moved to such an extent that in certain areas a sufficiently wide buffer zone no longer exists between the two. The *Dendroctonus Micans* Working Group has advised us that a change in the Scheduled Area boundary is needed in Pembroke and the Lleyen peninsula. No changes are thought to be necessary on the eastern and northern boundaries, since there has been no significant extension to the area infested. The Working Group has, however, endorsed the policy of maintaining strict controls in these areas to prevent the spread of the pest to the rest of the country. The requisite amending legislation was expected to be introduced by the summer of 1988.

*Pheromone Traps for
Exotic Bark Beetles*

- 139 We again set up some 200 pheromone traps around the country at major ports, selected timber yards, ladder pole manufacturers' premises and a number of forest sites. Pheromone traps are baited to attract specific bark beetles not present in this country and are a useful complement to the system of plant health inspections of imported wood and wood products. There was one significant capture — that of a single *Ips typographus* at the port of Goole. *I. typographus* is regarded as probably the most aggressive conifer bark beetle in Continental Europe where it causes considerable damage each year. An investigation was quickly mounted and a ship used on a regular basis to carry steel from Norway into Goole was identified as a likely source. On the ship's next arrival our plant health inspectors boarded it and discovered some 300 pieces of roundwood dunnage heavily infested with *I. typographus* and other species of bark beetle. Remedial action was taken and representations made to the Norwegian authorities for their assistance in ensuring that future consignments comply with our requirements. This incident not only endorsed the important role pheromone traps have to play but also emphasised that it is not just imports of wood and wood products which could constitute a threat to the health of the nation's forests.

EDUCATION AND TRAINING

Youth Training Scheme

- 140 A two-year YTS Scheme in forestry, entitled *Preferred National Training Pattern for Forestry*, was introduced after extensive discussions with the Manpower Services Commission, YTS managing agents, Trade Unions and employers' representatives. The scheme is designed to provide a structured programme of training and education integrated with on-the-job experience, supervision and guidance, and a detailed list of competency objectives has been developed. We expect that about 250 young people will benefit each year, and we hope to provide places for about half this number in Commission forests.

Training Activity

- 141 The total number of days devoted to training Commission staff remained constant, but training carried out for the private sector grew by nearly 80 per cent to 2,397 training days. There was an increasing demand for courses from the Forestry Training Council, and courses were also arranged for the Agricultural Development and Advisory Service, the Council of Scottish Agricultural Colleges, the Institute of Chartered Foresters, Inland Revenue valuers and some local authority planning staff. During the year our training centres at Headquarters and Ae were equipped with microcomputers and terminals to meet our needs for training in the use of information technology.

*Liaison with
Forestry Colleges*

- 142 The Commission plays a leading role in providing practical experience for potential forestry students at Cumbria College and the Scottish School of Forestry. About 60 pre-college students, who stay with us for a maximum of two years, are allocated to various Forest Districts. Similarly, we accept a number of sandwich-year students from the colleges for a one-year placement and were able to accommodate 20 students during the year. This system has operated successfully for some time now and the Commission, which meets about half of the colleges' demands, provides a varied experience in practical and supervisory work.

143 The Forestry Training Council was reorganised and reconstituted on 1 April 1987 and is now recognised as the Non-Statutory Training Organisation representing the forestry industry. Its main functions are to identify and advise on training needs and to make proposals regarding the implementation of Government policy on training. A Technical Secretary has been appointed to run the daily affairs of the Council. High priority has been given to the development of syllabuses and objectives for skills training and the means to enable forestry workers to obtain National Council for Vocational Qualifications (NCVQ) accreditation. The Council's annual report is reproduced at Appendix III.

Forestry Training Council

PUBLIC RELATIONS

144 Media interest in forestry grew to unprecedented levels during the year. For the first time, we issued over 100 press releases, and a record number of requests for information from journalists, radio and television producers were handled by our Public Information Division. We also organised and were involved in higher numbers of press conferences and briefings for correspondents, press visits and media events. Notable among these were a press conference held by the Secretary of State for Scotland and several subsequent announcements concerning the development of the new paper mill at Irvine by Caledonian Paper; publicity for European Year of the Environment; promotion of our involvement at the Glasgow Garden Festival; the aftermath of the October 1987 storm in south-east England and the Commission's response; the Chancellor's statement about forestry taxation in the March 1988 Budget; and the subsequent announcement of the new Woodland Grant Scheme. We also introduced a new form of press briefing, *Forestry Features*, designed to generate coverage in magazines and newspaper feature pages.

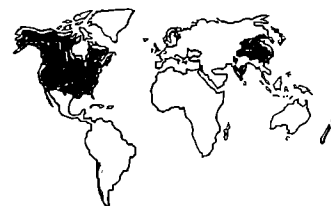
Press Briefing

145 Enquiries from the public remained at last year's high level, averaging over 200 a week throughout the year, a high proportion coming from schools. We completed a full redesign of all our information publications and launched a new magazine, *Forest Life*, to be published three times a year. (Details of new publications produced during the year may be found in Appendix XVI.).

Publications and Public Enquiries

146 There was a considerable increase in the number of official visits from overseas handled by our Public Information Division during the year, with 9 parties of foreign government representatives visiting British forests and 12 visits from overseas foresters and industrial groups. The visitors came to investigate and study the Commission's practices in areas ranging from silvicultural techniques to computing. Countries represented were the Netherlands, Finland, Norway, Canada, the USA, Korea, Israel, Turkey, Chile, Czechoslovakia, India, New Zealand, Japan and the Peoples Republic of China.

Overseas Visitors



147 A high degree of interest was shown during the year in our survey of tree health and our complementary research into the effects of air pollution on trees in specially designed open-top chambers at three locations in England and Scotland. The full results of our forest health survey are published annually; this year we also published a technical Bulletin, *Air Pollution and Forestry**, explaining our researches in detail, and a booklet, *Acid Rain, Air Pollution and Forests***, explaining our approach to non-specialists.

Air Pollution and Forestry

148 In our report last year, we referred to our close involvement in the launch of the 1987 European Year of the Environment. We subsequently made an active contribution throughout Britain with a large number of practical projects designed to improve the forest environment for wildlife and man. We concentrated on three specific objectives: the management of ancient woodlands; developing the forest as a bird habitat; and tree planting on derelict industrial sites. A major publicity event was arranged for each campaign and the year ended with our co-ordinating a *Woodlands and Forestry Week* with over 300 events mounted by a wide range of statutory and voluntary conservation and woodland bodies.

European Year of the Environment

* Forestry Commission Bulletin No 70. *Air Pollution and Forestry*, £2.60 net.

** Forestry Commission Booklet. *Acid Rain, Air Pollution and Forests* (unpriced).



Preparations for our exhibit at the Glasgow Garden Festival, which opened on 28 April 1988, were reaching completion at the end of the year. Planning began two years before the opening date. The exhibit was designed by a team of our landscape architects and constructed by a combination of Manpower Services Commission teams, specialist contractors and forest craftsmen. We are grateful for the sponsorship received, including generous assistance from the British timber industry. The title of our exhibit was *The Magical Forest*. It was aimed at raising public awareness of the multi-purpose objectives of forestry by demonstrating timber harvesting, wildlife conservation, recreation and the physiology of the tree. The novel nature of the exhibit attracted a good deal of interest during its preparation and resulted in wide media coverage.



FINANCE

FORESTRY FUND RECEIPTS AND PAYMENTS

- 150 The Grant-in-Aid voted by Parliament forms the Commission's agreed cash limit. For 1987-88 the amount voted was £53.8 million of which £51.3 million was taken into the Forestry Fund, leaving £2.5 million to be handed back to the Exchequer. The actual net call on Exchequer funds (excluding surrenderable disposals receipts) was £48.1 million (£51.2 million in 1986-87), leaving a balance of £3.2 million in the Forestry Fund which will also be returned to the Exchequer.
- 151 Other receipts from the Commission's activities amounted to £99.0 million against £86.7 million in 1986-87. The increase of £12.3 million (14 per cent) over the previous year stemmed principally from increased timber receipts. Cash received from the disposal of land, buildings and plantations amounted to £13.1 million during the year which together with £3.1 million brought forward from 1986-87 was available for surrender to the Consolidated Fund. £13.3 million had been paid by 31 March 1988, leaving a balance of £2.9 million to be surrendered during 1988-89.
- 152 Payments, excluding amounts paid or due to the Consolidated Fund, totalled £147.0 million. These were £9.2 million (7 per cent) more than in 1986-87, mainly arising from increased programmes which resulted in higher payments being made under private woodland grant schemes; capital expenditure, including harvesting equipment to clear storm-damaged timber; pension costs associated with new retirement schemes introduced across the Civil Service in 1987; and higher VAT payments as a consequence of the increase in timber receipts.
- 153 The statement of Forestry Fund Receipts and Payments, including notes thereon, appears on pages 50 and 51.

FORESTRY ENTERPRISE

1987-88 Accounts

- 154 A new Operating Account was introduced in 1987-88 which aims to identify more clearly the annual surplus earned by the Commission through the increase in the value of the growing stock of plantations.
- 155 For the year ended 31 March 1988 the overall net operating surplus was £59.5 million. This is analysed between Plantations, Forest Recreation and Amenity, and Other Activities. For Plantations, the increase in the value of the growing stock of £70.3 million, together with income, mainly from the sale of timber, of £72.5 million, exceeded the net expenditure of £85.0 million by £57.8 million. After taking into account a surplus of £1.2 million on the sale of properties, the net operating surplus from plantations was £59.0 million.
- 156 On Forest Recreation and Amenity, the net expenditure was £8.5 million which was met from the subsidy for this activity. Other activities — Campsites and Cabins, Agency and Miscellaneous — had an income of £4.8 million and a net operating surplus of £0.5 million after deducting expenditure of £4.3 million.
- 157 The net call on Exchequer funds by the Enterprise was £27.8 million compared with £33.0 million in the previous year, a reduction of £5.2 million which reflects the increasing contribution from timber sales.



Measurement of Performance

Plantations

- 158 Owing to the comparative immaturity of our plantations, the operations of the Enterprise are not yet self-financing. However, the growing stock of timber continues to increase in value, and financial performance is measured by comparing changes in the value of the crop against actual net cash expenditure. This is assessed by revaluing the plantations on a three-yearly basis — the triennium. The next complete revaluation of plantations takes place at the end of the current triennium in 1990.

159 During the triennium the performance each year is judged from a comparison of the actual income and expenditure with the performance standards which were set at the beginning of the triennium. Favourable variances indicate that the target rate of return of 3 per cent has been exceeded. Adverse variances mean that the return is below the 3 per cent target, not that it is negative.

160 In 1987-88, for the equivalent levels of business and volume of activity, the income realised was better than the standard by £2.4 million. Expenditure also showed a favourable variance, being lower than the standard by £2.0 million. This indicates that, at this stage of the triennium, financial performance is better than the target 3 per cent return.

161 The real rate of return on capital invested in cabins and campsites was 7.6 per cent. This may be compared with 5.4 per cent in the previous year and a target rate of return in real terms of 5 per cent. The improved performance was due to the higher occupancy we achieved; this was helped by good weather in the south of the country and a promotion campaign combined with a new pricing structure.

*Commercial Recreation
(campsites and forest cabins)*

162 The Accounts for Agency work broke even and the joint management scheme at Lake Vyrnwy showed a surplus.

Other Commercial Activities

Subsidies

163 These reflect the situation where new planting and restocking is projected to earn less than the target rate of return of 3 per cent in real terms. Such investments are undertaken primarily for social reasons. The planting subsidies of £3.6 million shown in the Operating Account comprise £1.5 million for new planting and £2.1 million for restocking; the year before the total was £8.5 million — £3.0 million for new planting and £5.5 million for restocking. The reduction of £4.9 million in the level of subsidy was mainly achieved through the introduction of improved techniques and practices leading to lower expenditure and a higher implied rate of return.

Planting subsidies for 1987-88.

164 Over the current triennium (1987-90) the projected real rates of return for new planting and restocking are 2.5 and 2.7 per cent respectively. These returns take into account the application of the broadleaves policy. In the absence of such a policy the rates of return would increase to 2.8 per cent for new planting and 3.0 per cent for restocking.

165 This represents the net cost of providing recreational and amenity facilities for which commercial objectives cannot be set. The subsidy of £8.5 million claimed for 1987-88 may be compared with the annual amount set for the triennium of £7.4 million (£7.0 million in £'87). The difference arises from the growing demand for recreation in our forests and the conservation and amenity measures we have taken.

*Forest Recreation and
Amenity Subsidy*

166 The accounts for the Forestry Enterprise appear on pages 52 to 65.

Accounts

FORESTRY AUTHORITY SERVICES

167 Of the total net call on Exchequer Funds of £48.1 million in 1987-88, £20.3 million was spent on Forestry Authority services compared with £18.2 million the previous year. The main reasons for the increase (12 per cent) were the rise in the area planted by private woodland owners under our grant schemes; the additional resources devoted to our information and publicity services; the greater emphasis on Forestry Authority matters at all levels within the Commission; and an increase in resources devoted to research on environmental studies, wildlife and conservation.



168 The statement of expenditure on Forestry Authority services, together with notes, appears on pages 66 and 67.

SALIENT FACTS

169 A table of salient facts is provided on the following page. This gives details of key financial and physical achievements in the last five years, as well as a number of performance measurements.

DAVID MONTGOMERY, *Chairman*
G J FRANCIS, *Deputy Chairman and*
Director General
R T BRADLEY
I D COUTTS
D L FOOT
J FORBES
W F E FORBES
G O HUTCHISON
J D POLLOCK
D T J RUTHERFORD
C R WOOSNAM

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

FORESTRY AUTHORITY AND FORESTRY ENTERPRISE

SALIENT FACTS

		Year ended 31 March				
		1984	1985	1986	1987	1988
Forestry Authority						
Grant-in-Aid	£('88) million	16.2	16.6	17.7	19.1	20.3
Area planted by private sector on which grants were paid						
New planting	thousands hectares	16.7	16.0	19.0	19.1	23.8
Restocking	thousands hectares	3.1	3.1	4.3	4.5	4.9
Private woodlands grants and administration costs	£('88) million	8.9	8.5	9.8	11.0	12.0
Area covered by grant schemes	thousands hectares	683	701	735	778	821
Consultation and administration costs of grant schemes	£('88) per hectare managed	3.1	3.2	3.7	4.3	3.7
Research	£('88) million	6.0	6.3	6.3	6.9	7.5
Forestry Enterprise						
Grant-in-Aid	£('88) million	51.7	45.1	37.6	34.6	27.8
Proceeds from sales of properties and plantations	£('88) million	28.6	25.2	18.4	15.5	13.4
Sales of timber	£('88) million	52.9	53.6	61.1	68.0	71.1
Sales of timber	Millions cubic metres	2.9	2.9	3.1	3.3	3.4
Gross surplus (income less direct costs) from sales of timber	£('88) per cubic metre	8.7	9.2	10.1	12.0	12.4
Net surplus (gross surplus less administration costs)	£('88) per cubic metre	4.5	5.0	6.3	8.4	9.0
Total area managed	thousands hectares	1209	1181	1166	1156	1149
Forest land	thousands hectares	949	935	928	926	919
New planting	thousands hectares	8.4	5.1	4.3	5.3	5.0
Forest cost	£('88) per hectare	953	982	699	888	784
Restocking	thousands hectares	6.8	5.9	7.3	8.0	8.2
Forest cost	£('88) per hectare	1045	909	966	849	860
Forest recreation and amenity net expenditure	£('88) million	5.2	5.2	6.3	7.0	8.5
Commercial recreation (return on assets employed)	%	8.8	8.4	5.7	5.4	7.6
Forestry Authority and Forestry Enterprise						
Staff at 31 March	Numbers	6836	6273	5967	5798	5511

FINANCIAL
STATEMENTS
AND
ACCOUNTS
1987 — 88



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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. Since 1985, the Commission has also had a statutory duty to seek to achieve a reasonable balance, in carrying out its functions, between the needs of forestry and the environment.
- (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 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

The Forestry Commission produces the following accounts and financial statement which are audited by the Comptroller and Auditor General:-

- (a) the Appropriation Account, which, in accordance with the Appropriation and Exchequer and Audit Department Acts, sets out the funds voted by Parliament for the Forestry Commission as a whole, and the amounts withdrawn therefrom into the Forestry Fund;
- (b) Statement of Forestry Fund Receipts and Payments;
- (c) accounts for the Forestry Enterprise in a format approved by the Treasury.

Additionally, the Forestry Commission produces an unaudited statement detailing the net expenditure on Forestry Authority Services and the consequential amount of Grant-in-Aid appropriated for the Forestry Authority.

The Appropriation Account is published separately along with such accounts for other Government Departments. The other three accounts or statements are published in the Forestry Commission Annual Report.

4. ACCOUNTING PRINCIPLES

The Appropriation Account and Statement of Forestry Fund Receipts and Payments are prepared on a cash basis. The Statement of Expenditure on Forestry Authority Services and the Forestry Enterprise Balance Sheet and Accounts are prepared on an accruals basis, modified in the latter to include the expectation value of cash flows from forest plantations.

The Accounting policies adopted in the Forestry Enterprise accounts in relation to the valuation of machinery, plant and equipment and stocks of consumable materials and supplies are also followed in completing the Statement of Expenditure on Forestry Authority Services.

5. MARKET VALUE OF PROPERTIES INCLUDING PLANTATIONS

Non-Afforested Land and Buildings

These properties were revalued as at 31 March 1987, generally on an open market value basis. The valuation of £72.6 million in the Enterprise Accounts reflects changes during 1987-88 and has been revalued using a general price index.

Plantations

The Plantations (land, timber and roads) were revalued on an expectation value basis as at 31 March 1987: an assessment was also made of their market value at the same date.

The market value assessment was carried out 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 restraints existed, as they do in practice, from title, statute and environmental considerations. The assessment took due account of prices realised in the Commission's woodland sales since 1984 with such prices reflecting the financial and other criteria adopted by purchasers. On the other hand, the expectation value is assessed using the Commission's target rate of return of 3 per cent, and it is for this reason that the two values can be expected to differ.

The market value was assessed at £1,220 million as at 31 March 1987. Taking account of disposals and acquisitions and a further year's enhancement, the market value at 31 March 1988 is estimated to be £1,330 million. This is £426 million lower than the revaluation of £1,756 million shown in the Forestry Enterprise Accounts.

**FORESTRY AUTHORITY AND FORESTRY ENTERPRISE
STATEMENT OF FORESTRY FUND RECEIPTS AND PAYMENTS
FOR THE YEAR ENDED 31 MARCH 1988**

		<i>Previous Year</i>
	£ thousand	£ thousand
<i>Receipts</i>		
Sales of timber	83,418	71,655
Miscellaneous	15,322	14,719
Disposal of land, buildings and plantations - by exchanges	217	289
	98,957	86,663
 Grant-in-Aid		
Forestry Enterprise ...	30,976	34,288
Forestry Authority ...	20,314	18,212
	51,290	52,500
Disposal of land, buildings and plantations - cash received payable to the Consolidated Fund	13,117	14,527
	163,364	153,690
Balance brought forward at 1 April 1987	4,337	6,262
	167,701	159,952
 <i>Payments</i>		
Salaries, wages and related expenses	59,326	57,205
Pensions and gratuities to retired staff	15,139	13,570
Materials, contract services and general expenses	45,840	43,667
Acquisition of land, buildings and plantations and construction of buildings	3,210	3,633
Plant, machinery and equipment	8,207	7,707
Grants to private woodland owners (£9,076,799), universities, institutions etc	9,609	7,533
Remittances of VAT to Customs and Excise	5,701	4,557
	147,032	137,872
Payments to the Consolidated Fund		
— cash received from disposal of land, buildings and plantations, including £3,046,103 brought forward from 1986-87	13,285	16,189
— excess cash balance brought forward from 1986-87	1,291	1,554
	161,608	155,615
Balance carried forward at 31 March 1988 to be surrendered to the Consolidated Fund during 1988-89	6,093	4,337
	167,701	159,952

The notes on page 51 form part of this statement.

G J Francis
Accounting Officer
21 November 1988

I certify that I have examined the above financial statement in accordance with S44(3) of the Forestry Act 1967 and the National Audit Office auditing standards.

In my opinion the financial statement properly presents the receipts and payments of the Forestry Fund for the year ended 31 March 1988 and complies with S44(2) of the Forestry Act 1967.

I have no observations to make on this financial statement.

John Bourn
Comptroller and Auditor General

19th January 1989
National Audit Office

NOTES

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 1987-88 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 are 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 excess cash balance held at the end of each financial year.

Receipts

4. The Grant-in-Aid of the Forestry Fund voted by Parliament for 1987-88 was £53,790,000 of which £51,290,000 was drawn into the Forestry Fund leaving £2,500,000 to be surrendered from the Vote to the Consolidated Fund.
5. Receipts from the sale of timber exceeded the 1986-87 level by £11,763,000. This stems mainly from higher prices and improvements in credit control.
6. Miscellaneous receipts were £603,000 more than in 1986-87. This was mainly due to an increase in Silviculture income of £353,000; Estate receipts £172,000 and disposal of surplus vehicles, machinery and equipment of £121,000 which however were partly offset by reduced staff superannuation contributions of £86,000.

Payments

7. Payments of salaries, wages and related expenses were £2,121,000 (4 per cent) more than in 1986-87. Increased rates of pay and allowances were partially offset by reduced numbers of employees.
8. Payments of pensions and gratuities to retired staff increased by £1,569,000 (12 per cent) reflecting both increasing numbers of pensioners and higher average pensions. In addition, payments of lump sums, death benefits and medical retirements increased.
9. Payments for materials, contract services and general expenses increased by £2,173,000 (5 per cent) mainly due to price increases and greater use of contractors.
10. Payments for land acquisition and building construction were £423,000 less than 1986-87. Acquisition of new land for planting was down by £147,000 and building construction down by £276,000.
11. Payments for purchase of plant, machinery and equipment increased by £500,000 compared with 1986-87. Expenditure on machinery and vehicles was £1,158,000 higher mainly due to the purchase of additional harvesting equipment to clear windblown timber following the October 1987 storm. However computer and office equipment purchases were £658,000 lower than in 1986-87.
12. Payments of grants to private woodland owners were £1,754,000 higher than in 1986-87 and £772,000 more than originally estimated reflecting a higher take-up of both the Forestry Grant Scheme and the Broadleaved Woodland Grant Scheme.
13. Remittances of VAT to Customs and Excise increased by £1,144,000 mainly as a consequence of the increase in timber receipts.

Balance Carried Forward at 31 March 1988

14. The balance amounting to £6,093,021 carried forward at 31 March 1988 will be paid into the Consolidated Fund in 1988-89 in accordance with the Ministerial direction given under Section 41(4a) of the Forestry Act 1967 as amended. It comprises £2,877,029 relating to the unremitted balance of disposal proceeds received in 1987-88 and £3,215,992 in respect of the excess cash balance remaining at 31 March 1988. Disposal receipts from sale of properties and plantations received in 1987-88 and payable to the Consolidated Fund totalled £13,116,429 which together with £3,046,103 brought forward from 1986-87 was available for surrender to the Consolidated Fund. As at 31 March 1988 £13,285,503 had been paid over leaving a balance of £2,877,029 to be surrendered.

FORESTRY ENTERPRISE ACCOUNTING POLICIES

1. General

The key factor in accounting for forestry is the determination of satisfactory performance indicators for a crop whose typical rotation cycle can span 50 years for coniferous trees and more than 100 years for broadleaved trees. 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 woodlands and provide a return on funds invested. The Enterprise is unlikely to achieve this until beyond the turn of the century because of the relative immaturity of its plantations.

2. Form of Accounts

Since 1972 a form of accounts, based on the expectation value concept, has been in use with periodic reviews of asset valuations, subsidies and performance at 5-yearly intervals (quinquennia) up to 31 March 1987. With effect from 1 April 1987, reviews will be carried out at 3-yearly intervals (triennia) and a new form of Operating Account has been introduced which aims to identify more clearly the annual surplus earned through the increase in the value of plantations. Where necessary, prior year figures have been restated to give a true comparison. The principal aims are:-

- (a) establishing, at the start of each review period, 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;
- (b) measuring performance against the target rate of return in (a) above by comparison of changes in the value of the growing crop with actual expenditure and income incurred;
- (c) disclosing subsidies to cover new investments and other expenditures not able to achieve the target rate of return;
- (d) measuring the difference between the target rate of return and that set for other public sector bodies.

3. Target rate of return

The Commission is set a target rate of return of 3 per cent in real terms on its forest estate assets and any new investment therein. The target rate of return on its commercial recreation assets is 5 per cent which is the required rate of return for public sector trading bodies.

4. Investment valuation

At the end of each review period plantations and other tangible fixed assets are revalued by professionally qualified staff employed by the Forestry Commission.

During the review period, the valuation of plantations and associated other tangible fixed assets is updated annually using a general price index since no industry index is available. The commercial recreation assets are updated by professionally determined in-house indices. All such revaluation surpluses and deficits are taken to the Revaluation Reserve.

Apart from acquisitions and disposals, there are physical changes in the crop arising from growth and removal of timber. These changes, which currently enhance the value of the plantations, are reflected in the Operating Account by the entry termed 'Growth in Standard Value of Plantations', which is calculated from the alteration in the net present value of future standard cash flows as the crop moves one year nearer to maturity.

5. Subsidies

Subsidies are dealt with as follows:

- (a) planting and restocking subsidies — the extent to which investment in both new planting and restocking is estimated to be incapable of earning the target rate of return;
- (b) forest recreation and amenity subsidy — the net cost of the provision of recreational facilities for which commercial objectives cannot be set;
- (c) forestry subsidy — the difference between the target rate of return and that set for public sector trading bodies is identified in a note to the accounts and is a measure of the opportunity cost of new investment in forestry.

6. Measurement of Performance

Plantations

The Commission's plantations are comparatively immature and its operations are thus not yet self-financing. However, the crop continues to grow in value, and financial performance is measured by comparing changes in the value of the crop against actual expenditure and income. Revaluations of the plantations are carried out on a three-year cycle and in order to provide interim measurements a standard value is assessed annually based on the reduction in the amounts and timings of future cash flows built into the opening valuation.

During the review period, the difference between the growth in standard value of plantations and the actual expenditure and income which represents the net operating surplus in the Operating Account, is also analysed in a Note to the accounts.

Accounting Policies (continued)

Commercial Recreation

Operational performance is measured by expressing the net operating surplus included in the Operating Account as a percentage return in real terms on assets employed, which is then compared with the target rate of 5 per cent.

7. Accounting Concepts

Since the measurements of performance are against target rates of return in real terms, the accounting records of the Forestry Commission are maintained on a modified current cost basis. Income and expenditure is adjusted using the GDP price deflator and the accounts are prepared accordingly. Gearing adjustments are not made because there is no external borrowing, and no adjustment is made to reflect the impact of price changes on the financing of monetary working capital since it is considered to be immaterial. Supplementary historical cost statements are not prepared because in the opinion of the Commissioners this would be an unnecessary costly exercise.

Without limiting the information given, the accounts meet the requirements of the Companies Act 1985 and of the Statements of Standard Accountancy Practice where relevant. The inclusion within the growth in standard value of plantations in the Operating Account of an element for unrealised surpluses, arising from the reduction in the period over which future income cash flows are discounted, is a departure from normal accounting conventions, but is in line with Section 228(2) of the Companies Act 1985 to enable the financial statements to give a true and fair view.

8. Depreciation

Depreciation is provided on all tangible fixed assets except plantations, freehold and leasehold land 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 2 to 20 years

9. Stocks

Finished goods and work in progress are valued as follows:-

- (a) timber at the cost of production;
- (b) seed at the lower of cost of collection or net realisable value;
- (c) plants and livestock at net realisable value;
- (d) consumable materials and supplies at current replacement cost.

Cost of production and collection comprises labour and attributable administrative expenses based on the normal level of activity. Net realisable value is based on estimated selling prices less further costs expected to be incurred to completion and disposal.

10. Provision for bad and doubtful debts

Specific provisions for bad and doubtful debts are set aside on the basis of a review at each year end.

11. Research

The research expenditure of the Forestry Commission is identified in total in the Forestry Authority accounts. The expenditure is subsequently allocated between the Forestry Authority and the Forestry Enterprise in the ratio of 50:50 on the basis of assessed workloads, with the Enterprise share being charged to the Plantations activity in the Operating Account as part of forest costs.

12. Government funding

Government funding to the Forestry Commission to meet its current excess of payments over retainable receipts is by means of an annual Grant-in-Aid. The Forestry Enterprise share of this funding is credited in the accounts as follows:-

Operating Account	— planting and restocking subsidies, 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.

Grant-in-Aid Account — the balance representing the funding of all other activities of the Forestry Enterprise.

Receipts from disposal of land, buildings and plantations are not retained but surrendered to the Consolidated Fund. These receipts nevertheless represent a reduction in the call upon Government funding and appropriate adjustments are made to the Capital Account.

13. Superannuation scheme

Legislation relating to the superannuation of the Forestry Commissioners and Commission staff is to be found in Part II to Schedule 1 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.

Accounting Policies (continued)

The provision for superannuation reflects the liabilities of the Forestry Commission and is revalued by the Government Actuary at the beginning of each triennium. During the triennium the provision is increased by:-

- (a) contributions received from employees;
- (b) notional employers' contributions based on funding rates set by the Government Actuary;
- (c) a revaluation adjustment based on a general price index;
- (d) notional return on assets of 3 per cent.

Superannuation benefits are met on a Pay as You Go basis and benefits paid in the year are charged against the provision. The provision is not specifically invested but since part of the forestry assets is deemed to represent the investment of the scheme, the provision is credited with a notional return of 3 per cent on those assets by an appropriation out of the Net Operating Surplus for the year.

**FORESTRY ENTERPRISE
OPERATING ACCOUNT
FOR THE YEAR ENDED 31 MARCH 1988**

	<i>Notes</i>	Plantations £million	Forest Recreation and Amenity £ million	Other Activities £ million	Total £ million	<i>Previous Year (Restated) £ million</i>
Income	10	72.5	0.8	4.8	78.1	73.1
Expenditure						
Forest costs	13	64.8	5.6	3.5	73.9	71.0
Administrative expenses		23.8	3.7	0.8	28.3	28.0
		88.6	9.3	4.3	102.2	99.0
Less subsidies	11	3.6	8.5	—	12.1	14.9
		85.0	0.8	4.3	90.1	84.1
Surplus/(Deficit) of Income over Expenditure		(12.5)	—	0.5	(12.0)	(11.0)
Growth in standard value of plantations	10	70.3	—	—	70.3	87.1
Surplus on sale of properties	12	1.2	—	—	1.2	2.5
Net Operating Surplus for the Year	10	59.0	—	0.5	59.5	78.6
Appropriated to						
Provision for Superannuation (Note 6)					7.5	6.6
Retained surplus for year					52.0	72.0

The statement of accounting policies on pages 52 to 54 and the notes on pages 58 to 65 form part of these accounts.

FORESTRY ENTERPRISE
BALANCE SHEET
AS AT 31 MARCH 1988

			<i>Previous Year (Restated) £ million</i>
FIXED ASSETS	<i>Notes</i>	£ million	
Plantations ...	1a	1,756.1	1,611.7
Other tangible assets	1c	97.2	97.0
		1,853.3	1,708.7
CURRENT ASSETS			
Stocks	2	11.2	9.4
Debtors	3	12.3	14.4
Cash at banks and in hand	4	7.2	5.5
		30.7	29.3
CREDITORS — amounts falling due within one year	5	12.4	8.5
NET CURRENT ASSETS		18.3	20.8
TOTAL ASSETS LESS CURRENT LIABILITIES		1,871.6	1,729.5
PROVISION FOR SUPERANNUATION	6	261.2	246.0
CAPITAL AND RESERVES			
Capital	7	1,483.5	1,483.5
Movements in the current Review Period			
Grant-in-aid	8	2.6	
Revaluation Reserve	9	72.3	
Retained Surplus for year ...		52.0	
		1,871.6	1,729.5

The statement of accounting policies on pages 52 to 54 and the notes on pages 58 to 65 form part of these accounts.

G J Francis
Accounting Officer
21 November 1988

I certify that I have examined the financial statements on pages 52 to 65 in accordance with the provisions of Section 5 of the Exchequer and Audit Departments Act 1921 and the National Audit Office auditing standards.

Subject to the uncertainty as to the valuation of plantations at 31 March 1987 referred to in Note 1b, in my opinion the financial statements give under the principles embodied in the Statement of Accounting Policies, a true and fair view of the state of affairs of the Forestry Enterprise activities of the Forestry Commission at 31 March 1988 and of its results and source and application of funds for the year then ended and have been properly prepared in accordance with Section 5 of the Exchequer and Audit Departments Act 1921 and directions made thereunder.

I have no observations to make upon these financial statements.

John Bourn
Comptroller and Auditor General

19th January 1989
National Audit Office

FORESTRY ENTERPRISE
STATEMENT OF SOURCE AND APPLICATION OF FUNDS
FOR THE YEAR ENDED 31 MARCH 1988

			<i>Previous year (Restated)</i>
	<i>Notes</i>	£ million	£ million
SOURCE OF FUNDS			
Net operating surplus for the year		59.5	78.6
Adjustment for items not involving the movement of funds:-			
Depreciation	1c	7.0	6.9
Employers notional superannuation contributions	6	9.6	9.7
Book value of land newly planted in year included in forest costs		2.2	2.2
Planting, Restocking and Forest Recreation and Amenity Subsidies	11	(12.1)	(14.9)
Growth in standard value of plantations	10	(70.3)	(87.1)
Surplus on sale of properties ...	12	(2.6)	(4.3)
Transfer of Buildings to Forest Recreation and Amenity		0.1	—
		(66.1)	(87.5)
Total funds absorbed by operations		(6.6)	(8.9)
Funds from other sources:-			
Grant-in-Aid	8	31.0	34.3
Proceeds from sale of properties ...	12	13.4	14.7
Proceeds from sale of other tangible fixed assets		0.7	0.9
Employees superannuation contributions	6	0.9	1.0
		46.0	50.9
		39.4	42.0
APPLICATION OF FUNDS			
Purchase of other tangible fixed assets ...	1c	10.4	10.2
Purchase of freehold rights of properties ...		0.1	0.1
Monies surrenderable to Consolidated Fund	8	16.3	15.8
Superannuation payments	6	15.1	13.5
		41.9	39.6
DECREASE IN WORKING CAPITAL		(2.5)	2.4
Components of increase/(decrease) in working capital			
Stocks	2	1.8	0.1
Debtors	3	(2.1)	1.4
Creditors	5	(3.9)	2.8
Cash at banks and in hand	4	1.7	(1.9)
		(2.5)	2.4

The statement of accounting policies on pages 52 to 54 and the notes on pages 58 to 65 form part of these accounts.

**FORESTRY ENTERPRISE
NOTES TO THE ACCOUNTS**

1. FIXED ASSETS

	£ million	<i>Previous year £ million</i>
(a) Plantations (Land, Roads and Timber)		
Valuation:		
At 1 April 1987 - 899, 678 hectares	1,611.7	1,492.7
Revaluation to current prices ...	80.2	53.6
	1,691.9	1,546.3
Acquisitions	—	—
Disposals (at book value) ...	(6.1)	(4.7)
Growth in value for year (Note 10)	70.3	87.1
	1,756.1	1,628.7
Revaluation adjustment at end of 1982-87 quinquennium	—	(17.0)
At 31 March 1988 — 898, 509 hectares	1,756.1	1,611.7

(b) Valuation of Plantations

The Commission revalued its plantations at 31 March 1987 on an expectation value basis making various assumptions about future expenditures and incomes and discounting these at the target rate of 3 per cent. The Comptroller and Auditor General qualified his certificate to the Commission's 1986-87 Accounts on the grounds of uncertainties in the valuation of plantations at 31 March 1987. In consultation with the National Audit Office, the Commission is currently investigating ways in which it can establish a basis for the next valuation that is to be carried out in 1990 which will resolve the uncertainties inherent in the existing method.

(c) Other Tangible Assets

	Land and Buildings £ million	Machinery Plant and Equipment £ million	Total £ million
Valuation:			
At 1 April 1987 ...	74.7	54.9	129.6
Additions	3.1	7.3	10.4
Disposals and transfers	(7.9)	(6.0)	(13.9)
Revaluation to current prices	2.7	3.3	6.0
At 31 March 1988	72.6	59.5	132.1
Depreciation:			
At 1 April 1987 ...	—	32.6	32.6
Provided during year	1.4	5.6	7.0
Disposals and transfers	—	(5.2)	(5.2)
Revaluation to current prices	(1.4)	1.9	0.5
At 31 March 1988	—	34.9	34.9
Net book value:			
At 31 March 1988	72.6	24.6	97.2
At 31 March 1987	74.7	22.3	97.0

(d) Analysis of Land and Buildings (Other Tangible Assets)

	£ million	<i>Previous year £ million</i>
Forest estate ...	52.4	51.7
Surplus estate ...	16.0	18.8
Commercial recreation	4.2	4.2
	72.6	74.7

(e) The basis of valuation of plantations and other tangible fixed assets and the updating of these valuations to current prices is described in Accounting Policies.

Notes to the Accounts (continued)

2. STOCKS

	£ million	Previous Year (Restated) £ million
Timber	6.2	5.1
Plants and seed	2.9	2.4
Consumable materials, supplies and livestock	2.1	1.9
	11.2	9.4

3. DEBTORS

	£ million	Previous Year £ million
Trade debtors	10.4	12.8
Other debtors	1.9	1.6
	12.3	14.4

Other debtors include amounts falling due after more than one year of £1.2 million (£1.2 million at 31 March 1987)

4. CASH AT BANKS AND IN HAND

	£ million	Previous Year £ million
Balance of Forestry Fund with Paymaster General	7.1	5.3
Cash at commercial banks and in hand ...	0.1	0.2
	7.2	5.5

5. CREDITORS: amounts falling due within one year

	£ million	Previous Year £ million
Payments received on account ...	0.3	0.6
Trade creditors	2.9	1.6
Other creditors including taxation and social security costs	3.1	2.0

Consolidated Fund surrender:-

Balance of proceeds from disposal of properties and plantations in 1987-88	...	2.9	3.0
Excess cash balance	3.2	1.3
		6.1	4.3
		12.4	8.5

6. PROVISION FOR SUPERANNUATION

	£ million	<i>Previous Year £ million</i>
Balance at 1 April 1987	246.0	217.5
Revaluation to current prices (Note 9)	12.3	7.8
	258.3	225.3
Contributions received from staff	0.9	1.0
Notional employers' contribution	9.6	9.7
Notional return on assets (Accounting Policy 13)	7.5	6.6
	276.3	242.6
Payments made during the year	15.1	13.5
	261.2	229.1
Increase in liability on Government Actuarial Valuation of scheme at end of quinquennium	—	16.9
Balance at 31 March 1988	261.2	246.0

7. CAPITAL

	£ million
Capital and Reserves as per Balance Sheet 31 March 1987	
Capital	1,151.5
Revaluation Reserve	283.3
Plantations Account Variance	80.9
Trading Account ...	3.2
	1,518.9
Revaluation adjustments at end of Quinquennium 1982-1987 as per Special Note 1 to 1986-87 Accounts	
Extra provision for superannuation liabilities ...	16.9
Reduced Valuation of: Plantations ...	17.0
Net Current Assets ...	1.5
	35.4
Amalgamated and Restated as Capital at 31 March 1987	1,483.5

8. GRANT-IN-AID

	£ million
Grant-in-Aid transferred into the Forestry Fund ...	51.3
less: Appropriated for the Forestry Authority ...	20.3
	31.0
less: Excess cash balance to be surrendered in 1988-89	3.2
Grant-in-Aid appropriated for the Forestry Enterprise	27.8
less: Receipts from disposal of land, buildings and plantations surrenderable to Consolidated Fund ...	13.1
Planting, Restocking and Forest Recreation and Amenity Subsidies (Note 11)	12.1
	25.2
Net addition in year for Forestry Enterprise	2.6
Cumulative Grant-in-Aid in review period	2.6

9. REVALUATION RESERVE

	£ million
Revaluation surplus in year:	
Plantations ...	80.2
Other tangible assets	5.5
	<u>85.7</u>
Adjustments arising from resurvey and reclassification of properties ...	1.1
	<u>84.6</u>
less: allocated to Provision for Superannuation (Note 6)	12.3
	<u>72.3</u>
Balance at 31 March 1988	<u>72.3</u>

10. MEASUREMENT OF PERFORMANCE**(a) Plantations: Comparison of Actual Income and Expenditure Against Growth in Standard Values**

	<i>Notes</i>	Growth in Standard Values £ million	Actual Income and Expenditure £ million	Net Operating Surplus £ million	<i>Net Operating Surplus Previous Year £ million</i>
Income					
Establishment and Maintenance	(i)	1.0	1.4	0.4	0.4
Harvesting and Marketing	(ii)	69.1	71.1	2.0	11.9
		<u>70.1</u>	<u>72.5</u>	<u>2.4</u>	<u>12.3</u>
Forest costs and administrative expenses					
Establishment and Maintenance		47.9	47.9	—	6.9
Harvesting and Marketing	(iii)	42.7	40.7	2.0	8.7
		<u>90.6</u>	<u>88.6</u>	<u>2.0</u>	<u>15.6</u>
less: Subsidies		3.6	3.6	—	—
		<u>87.0</u>	<u>85.0</u>	<u>2.0</u>	<u>15.6</u>
Surplus/(deficit) of income over expenditure		(16.9)	(12.5)	4.4	27.9
Notional return on assets for the year	(iv)	(53.4)	—	53.4	48.3
Surplus on sale of properties	(v)	—	1.2	1.2	1.3
Net Operating Surplus	(vi)	<u>(70.3)</u>	<u>11.3</u>	<u>59.0</u>	<u>77.5</u>

(i) About half of the surplus is due to compensation received in West England for sterilisation of ground by an oil company in the construction of an oil gathering station. The remainder is due to increased sales of seed and higher receipts from sales of venison.

(ii) The increase in the price of sawlogs was greater than forecast in the standard. This more than offset a negative variance against standard for standing sales caused by the windblow in East England and a localised effect on prices for Commission harvesting in that Conservancy.

(iii) Of the total surplus of £2.0 million, £0.7 million is due to a reduction in actual administrative expenses compared with those forecast in the standard. The remainder of £1.3 million is attributable to stock changes.

(iv) The notional return on assets for the year represents the inherent increase in the standard valuation of plantations which arises from the one year reduction in the period over which future cash flows are discounted at 3 per cent and is an unrealised surplus.

(v) The surplus on sale of properties entry represents the excess over book value and costs on the disposal of £10.8 million of plantations and associated forest estate properties (Note 12).

Notes to the Accounts (continued)

(vi) The net operating surplus is the difference between actual income and expenditure and the estimated 'standard' cash flows (updated for inflation) which were built into the plantation revaluation at the start of the triennium.

(b) Other Activities: Operating Surplus by Activity

	Campsites and Cabins £ million	Agency £ million	Misc £ million	Total £ million	Previous Year (Restated) £ million
Income ...	2.3	2.4	0.1	4.8	4.5
Expenditure	1.9	2.4	—	4.3	3.9
Operating surplus for year	0.4	—	0.1	0.5	0.6
Notes	(vii)		(viii)		
Operating Surplus for previous year	0.3	0.2	0.1	0.6	—

(vii) The real rate of return on capital invested in cabins and campsites was 7.6% against 5.4% in the previous year. Increased occupancy because of good weather in the south of the country and a greater marketing effort, a better pricing structure and improved customer service due to the introduction of a computerised cabin booking system all contributed to a 15% increase in income which more than offset the general inflationary rises in costs whilst still enabling additional cabin improvement work to be undertaken.

(viii) 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.

(c) Expenditure in the Operating Account includes

	£ million	Previous Year £ million
Hire of Plant and Equipment	1.3	0.9
Research	3.7	3.0

11. PLANTING, RESTOCKING AND FOREST RECREATION AND AMENITY SUBSIDIES

	Planting				Restocking				Forest Recreation and Amenity	Total Subsidies
	Area Planted (hectares)	Subsidy per hectare	Subsidy	Implied Real Rate of Return	Area Planted (hectares)	Subsidy per hectare	Subsidy	Implied Real Rate of Return		
ENGLAND		£	£000	%		£	£000	%	£000	£000
Conservancy										
North	131	575	75	2.4	1,364	804	1,096	2.2	965	2,136
East	9	2,602	24	1.0	675	467	316	2.5	2,097	2,437
West	38	2,192	83	0.9	570	412	235	2.7	1,388	1,706
	178	1,023	182	2.0	2,609	631	1,647	2.4	4,450	6,279
WALES										
Conservancy	157	14	2	2.6	2,041	63	129	2.9	1,376	1,507
SCOTLAND										
Conservancy										
North	2,209	402	888	2.4	1,309	(91)	(119)	3.0	720	1,489
Mid	1,274	31	40	2.9	1,166	(195)	(227)	3.2	965	778
South	1,134	369	418	2.3	1,052	602	633	2.2	952	2,003
	4,617	292	1,346	2.5	3,527	81	287	2.8	2,637	4,270
GREAT BRITAIN	4,952	309	1,530	2.5	8,177	252	2,063	2.7	8,463	12,056

(a) Planting and Restocking subsidies represent the capitalised extent to which new or reinvestment will not earn the target rate of return of 3 per cent and they are brought into the accounts to maintain the Plantation valuation at a level which will earn the target rate. The subsidies are determined from individual models created in each Forest District for planned investments in the triennium 1987/88-1989/90 with the anticipated future expenditure and income being discounted at 3 per cent and the net sum expressed as the

Notes to the Accounts (continued)

subsidy. The implied return on the investment is the interest rate at which the future expenditure and income when discounted nets to zero. The individual subsidies and implied rates of return are weighted to provide Conservancy averages for portrayal in the table above.

(b) The projected rates of return for 1987-90 are affected by the Broadleaves Policy. In the absence of such a policy, the rate of return would increase from 2.5 per cent to 2.8 per cent for new planting and from 2.7 per cent to 3.0 per cent for restocking.

(c) The Planting subsidies for East England and West England refer to small areas of broadleaved planting. The bracketed entries under Restocking identify the capitalised surplus per hectare that is expected to be earned in excess of 3 per cent from investments in the Conservancies concerned. These surpluses are deducted from the subsidies claimed for investments which fall below the target rate of return.

(d) Forest recreation and amenity subsidy represents the net cost of the provision of recreational facilities for the public such as visitor centres, forest walks, nature trails, together with the conservation of wildlife and small scale amenity planting from which no commercial rate of return can be expected.

12. SURPLUS ON SALE OF PROPERTIES

	Plantations and associated properties £ million	<i>Previous Year £ million</i>
Proceeds	13.4	14.7
Less: Book value	10.8	10.1
	2.6	4.6
Less: Disposal costs	0.6	0.7
	2.0	3.9
Less: Attributable administrative expenses	0.8	1.4
	1.2	2.5

13. ADMINISTRATIVE EXPENSES

	£ million	<i>Previous Year (Restated) £ million</i>
Salaries and national insurance	23.0	21.0
Travelling, subsistence and staff transfer expenses	5.2	4.5
Notional Employers Superannuation Contributions	4.6	4.3
Accommodation and estate expenses	1.1	2.5
Office expenses	3.3	3.4
Other net expenses (including Auditors' remuneration of £88,650)	3.2	3.5
	40.4	39.2
less allocated to Forestry Authority	7.8	9.4
	32.6	29.8
Forestry Enterprise		
Allocated to:		
Operating Account		
Plantations	23.8	21.1
Forest recreation and amenity	3.7	2.5
Other activities	0.8	1.9
Distributed activities included in forest costs	3.5	3.0
	31.8	28.5
Sale of properties (Note 12)	0.8	1.3
	32.6	29.8

Notes to the Accounts (continued)

Distributed activities consist of the internally-provided services of vehicles, machinery and equipment and plant supply, for which charges are made throughout the year on the basis of utilisation. Before 1 April 1987, these charges excluded the associated administrative expenses, which were allocated to operational activities at the end of the year in proportion to the charges already made. From 1 April 1987, the charges include the associated administrative expenses which are thus also included in the Operating Account forest costs. These administrative expenses are identified here for notation and comparative purposes only.

The total administrative expenses of £40.4 million (£39.2 million in 1986-87) were incurred as follows:-

	£ million	<i>Previous Year (Restated) £ million</i>
Forest Districts	19.9	17.7
Conservancy Offices	7.5	8.0
Headquarters	12.7	11.9
Net forest and surplus estate expenses	0.3	1.6
	40.4	39.2

The costs of non-industrial staff employed at Research institutions are not included in the above figures but form part of the net Research expenditure in the Forestry Authority Services Statement of Expenditure with a subsequent reallocation of 50 per cent to the Operating Account and included in forest costs.

14. STAFF COSTS AND NUMBERS

As many of the Commission's staff divide their time between Forestry Enterprise and Forestry Authority duties, it is considered more appropriate to provide the statutory information on staff costs and numbers for the Commission as a whole.

(a) Total staff costs for the Forestry Enterprise and Forestry Authority comprise:

	£ million	<i>Previous Year £ million</i>
Salaries	23.1	22.0
Wages	27.1	26.6
Social security costs	3.5	3.3
Superannuation costs	9.6	9.7
	63.3	61.6
Travel and subsistence	3.9	3.7
	67.2	65.3

Approximately 82 per cent (previous year 84 per cent) of this total relates to Forestry Enterprise operations.

(b) The average number of employees during the year was as follows:-

	Number	<i>Previous Year Number</i>
Industrial Staff ...	3,502	3,743
Non-Industrial Staff	2,146	2,151
	5,648	5,894

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

	£ thousands	<i>Previous Year £ thousands</i>
Chairman	24	23
Highest paid Commissioner ...	44	38
Other Commissioners ...	135	122
Total emoluments of Commissioners	203	183
Travel and subsistence of Commissioners	36	39

Notes to the Accounts (continued)

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

	Number	<i>Previous Year Number</i>
£ nil to £5,000 ...	6	6
£30,001 to £35,000	1	3
£35,001 to £40,000	2	—

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

15. CAPITAL COMMITMENTS

Future capital expenditure on Other Tangible Fixed Assets in 1988-89 authorised by the Commission amounts to £10.7 million (£10.9 million for 1987-88).

16. CONTINGENT LIABILITIES

Contingent liabilities exist at 31 March 1988 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 £0.5 million (£0.4 million at 31 March 1987).

17. FORESTRY SUBSIDY

The Forestry Subsidy represents the opportunity cost of investment in forestry. Since 1 April 1982 it is presented as the capitalised sum on new investment, in a similar way to the planting and restocking subsidies. It 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 discount rate of 5 per cent. Details of the calculations are set out below.

	£ million
Planting and restocking subsidies to achieve the public sector discount rate of 5 per cent	18.1
Planting and restocking subsidies to achieve the target rate of return of 3 per cent	3.6
Forestry subsidy on new investment in 1987-88	14.5

**FORESTRY AUTHORITY SERVICES
STATEMENT OF EXPENDITURE
FOR THE YEAR ENDED 31 MARCH 1988**

	£000	Previous Year (Restated) £000
Services to private woodland owners for grants and advisory services		
Forestry Grant Scheme	5,294	4,405
Broadleaved Woodland Grant Scheme	2,154	1,155
Dedication Schemes (including legal expenses)	1,469	1,566
Other Grants	38	85
Survey of Private Sector Costs	118	114
Consultation, Management and Advisory Services: Consultation	727)	
Other management costs	2,278)	3,225
	<hr/>	<hr/>
	12,078	10,550
Less Sundry Income	71	35
	<hr/>	<hr/>
	12,007	10,515
	<hr/>	<hr/>
Special Services		
Licensing of Felling: Consultation	170)	
Other management costs	353)	674
Illegal Felling (including legal and investigation expenses)	158)	
Information, Shows and Publications	1,556	1,239
General administration: Forestry training	81	—
Plant Health	600	599
Other management costs including EEC and other regulatory duties	1,872	1,620
	<hr/>	<hr/>
	4,790	4,132
	<hr/>	<hr/>
Research		
Silviculture	2,221	2,401
Arboreta	336	388
Genetics	785	693
Physiology	346	341
Seed Research	122	110
Site Studies	880	618
Wildlife and Conservation	511	226
Pathology	566	514
Entomology	572	532
Mensuration	319	260
Wood Utilisation	276	253
Statistics	235	29
Communications	300	220
	<hr/>	<hr/>
Total	7,469	6,585
Less Allocation to Forestry Enterprise Operating Account	3,734	3,039
	<hr/>	<hr/>
	3,735	3,546
	<hr/>	<hr/>
Change in assets		
Decrease — Current Assets	(244)	26
Increase — Fixed Assets	26	(7)
	<hr/>	<hr/>
Net decrease	(218)	19
	<hr/>	<hr/>
Amount of Grant-in-Aid appropriated for the Forestry Authority	20,314	18,212
	<hr/>	<hr/>

NOTES

1. The above statement includes £7.8 million (previous year £9.4 million) administrative expenses allocated to Forestry Authority Services (Note 13 of the Forestry Enterprise Accounts).

Services to Private Woodland Owners

2. Grant expenditure on the Forestry Grant Scheme and the Broadleaved Woodland Grant Scheme rose in the year by £1,888,000 (34 per cent) due to a considerable increase in planting levels in both schemes. Forestry Grant Scheme planting increased from 19,920 hectares to 23,737 hectares. Broadleaved Woodland Grant Scheme planting increased from 1,635 hectares to 3,225 hectares.

Special Services

3. The increased cost of Information, Shows and Publications represents the additional efforts which were made to promote the Government's forestry policies during a period of considerable public and media interest. A number of new publications were produced to support a campaign designed to raise awareness of the Commission's objectives and strategies, and in particular to provide information on the recreation facilities provided in the forest.

4. The increase in the costs of General Administration is partly due to the inclusion of the costs of the Forestry Training Council, which was previously administered as an independent service. The remainder of the increase reflects a higher involvement in general Forestry Authority matters at all levels of the Commission associated with the increased regulatory duties arising from more demanding environmental standards.

Research

5. For the current triennium, 50 per cent of the net cost of Research is charged to the Forestry Enterprise and is included in the Operating Account under forest costs (Plantations).

6. The increased expenditure on Site Studies is mainly due to increased research on the effects of air pollution on forest health but also due to an increase in advisory work on the impact of forestry on water resources.

7. The increased expenditure on Wildlife and Conservation reflects the significant increase in conservation research, with particular emphasis on vegetation management to encourage forest edge plant communities.

8. The increase in Statistics expenditure is mainly due to the retention of certain costs previously charged out to other functions but also due to the development of new computer models to provide management information on wildlife habitats and populations.

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APPENDIX I

Statutory and Other Committees Appointed by the Forestry Commission: Membership at 31 March 1988

National Committees

England

Mr I.D. Coutts (*Chairman*), Mr R.T. Bradley, Professor G.R. Dickson, Mr J. Forbes, Mr G.O. Hutchison, Mr W.E. Lane, Mr I. Mercer. *Secretary to the Committee*: Miss M. O'Hare. The Committee had no meetings during the year.

Scotland

Captain W.F.E. Forbes (*Chairman*), Dr Jean Balfour, Mr R.T. Bradley, Mr J.D. Pollock, Sheriff S. Scott Robinson, Mr H.A. Waterson. *Secretary to the Committee*: Mr B.D. Inglis. The Committee had no meetings during the year.

Wales

Mr C.R. Woosnam (*Chairman*), Mr R.T. Bradley, Mr M.A. McLaggan, Mr J.F. Morgan. *Secretary to the Committee*: Mr M. Wheeler. The Committee had no meetings during the year.

Regional Advisory Committees

ENGLAND

North Conservancy

Professor G.R. Dickson (*Chairman*), Mr J. Browne-Swinburne, Mr T.R. Fetherstonhaugh, Professor B. Hackett, Mr T.N. Hammond, Lady Elizabeth Kirk, Mr W.W. Metcalfe, Mr R.E. Shapland, Mr P. Townson. *Secretary to the Committee*: Mr J. McGough. The Committee met in June 1987 and January 1988.

East Conservancy

Mr W.E. Lane (*Chairman*), Major G.K. Agnew, Mr T.R.E. Cook, Mr P.H. Peck, Mr J.K. Royston, Mr C. Stratton, Mr J.T. Todd, Mr L. Woodham, Councillor Mrs M.P. Wright. *Secretary to the Committee*: Mr R.C. Herbert. The Committee met in May and October 1987 and February 1988.

West Conservancy

Mr I. Mercer (*Chairman*), Major D.J.C. Davenport, Mr C.A. Eade, Mr A. East, Mr A. Fooks, Mr D.W. Hildred, Mr W.A. Isaac, Mr R. Jarman, Mr J.H.B. Workman. *Secretary to the Committee*: Mr R.B. Urquhart. The Committee met in May and October 1987.

SCOTLAND

North Conservancy

Sheriff S. Scott Robinson (*Chairman*), Mr E.J. Brodie, Mr B.E. Crabtree, Mr J. Evans, Mr A.D.M. Farquharson, Professor C. Gimmingham, Councillor N.J.O. Graham, Mr W.W. McAskill, Mr M. Pottinger. *Secretary to the Committee*: Mr K. Roscoe. The Committee met in October 1987.

Mid Conservancy

Dr Jean Balfour (*Chairman*), Mr B.S. Brookes, Mr P.M. Fairweather, Mr J.D. Hutchison, Mr C.R. Langton, Mr J. McNaughton, Mr G. Morton, Mr P.S. Murray, Councillor T. Rae. *Secretary to the Committee*: Mr W.J. Anderson. The Committee met in June and November 1987 and January 1988.

South Conservancy

Mr H.A. Waterson (*Chairman*), Mr W.S. Brack, Mr D.B. Crawford, Mr T. Croft, Mr D.F. Hewitt, Mr D.I. Liddell-Grainger, Mr R.A. McClymont, Councillor D.R. Robinson, The Earl of Rosebery. *Secretary to the Committee*: Mr W.G. Williamson. The Committee met in May and October 1987 and January 1988.

WALES

Mr M.A. McLaggan (*Chairman*), Mr J.R. Lloyd Jones, Mr S.K. Neale, Colonel P.C. Ormrod, Mrs D.M. Raikes, Mrs R.A. Rooney, Councillor D.W.L. Rowlands, Mr J.W. Sutton, Mr W.R. Williams. *Secretary to the Committee*: Mr M. Wheeler. The Committee met in May and November 1987 and February 1988.

Home Grown Timber Advisory Committee

Mr J.D.W. Janes (*Chairman*)
Mr A.F. Bloomfield
Dr J. Brazier
The Hon James Bruce
Mr T.A. Bruce Jones
Mr N.F. Cairncross*
Mr A. Christie-Miller
Mr J.R. Cordiner
Mr W. Elliot*
Dr G.K. Elliott
The Hon James Galbraith
Lord Gibson-Watt
Professor C.H. Gimingham *

Mr R.D. Gordon
Mr H.C. Griffith
Mr B.W. Haycox
Mr P.L. Herring
Mr J.H. Hose *
Mr D.I. Liddell-Grainger
Mr G.B. Little
Mr A.F. MacPherson *
Mr A.W. Mills *
Dr C.D. Pigott *
Mr C.W. Wardle
Mr G. Waugh

*Independent members

Secretary: Mr B.A. Robertson

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, British Coal, Timber Trade Federation, UK and Ireland Particleboard Association, British Paper & Board Industry Federation, Timber Research and Development Association Ltd.

The Committee met in September and December 1987 and March 1988. The Annual Report of the Committee is at Appendix II.

Technical Sub-Committee of the Home Grown Timber Advisory Committee

Dr J.D. Brazier (*Chairman*)
Mr D.B. Crawford
Colonel P.C. Ormrod
Mr M.T. Rogers
Mr A. East
Mr M.D. Oxnard
Mr J.A. Kissock
Mr A.H. Smith
Dr G.K. Elliott
Mr A.R. Powell
Mr K.R. McDiarmid
Mr G.B. Little
Mr P.J. Lambert
Mr S.K. Neale

}
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}
}

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
British Coal
Transport and General Workers' Union

Secretary: Mr D.A. Thompson

The Sub-Committee met in April, July and September 1987 and January 1988.

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

Mr N.F. Cairncross (*Chairman*)
Mr D.B. Crawford
Mr A. Willis
Mr G. Waugh
Mr P.S. Murray
Mr A.F. Bloomfield
Mr J. Goodwin
Mr B.W. Haycox

}

Timber Growers United Kingdom
British Timber Merchants' Association (England and Wales)
Home Timber Merchants' Association of Scotland
UK and Ireland Particleboard Association
Association of United Kingdom Wood Pulp Producers
British Coal

Secretary: Mr A. Lyon

The Sub-Committee met in May and November 1987.

Advisory Committee on Forest Research

Professor J.P. Cooper (*Chairman*)
Professor E.C. Cocking
Professor R.M. Cormack
Dr J.P. Dempster
Dr M.P. Denne

Professor D. Henderson
Professor J.M. Hirst
Professor H.G. Miller
Dr W.E.S. Mutch
Dr M.B. Usher

Secretary: Mr I. Lumley

The Committee met in November 1987.

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
Dr P.B. Tinker		
Professor J.P. Cooper		Forestry Commission Research Advisory Committee
Dr J. Blackwood		Nature Conservancy Council
Dr W.E.S. Mutch		Forestry Universities
Professor T. Swinburne		Agricultural and Food Research Council
		<i>Secretary:</i> Mr D.A. Burdekin

The Committee met in June, September and December 1987 and February 1988.

Forestry Training Council

Mr D.A. Mithen (*Chairman*)

Employer Members

Mr H.J. Brewis	Timber Growers United Kingdom
Mr D.A. Bardy	Forestry Commission
Mr A.G. Phillips	Association of Professional Foresters

Employee Members

Mr A.W. Mills	}	Transport and General Workers' Union
Mr S.K. Neale		National Union of Civil and Public Servants
Mr T.E. Radford		

Education and Training Members

Mr R.M. Boothroyd	Craft/Diploma Courses (England and Wales)
Mr W.J. Hedley	Craft/Diploma Courses (Scotland)
Dr J.C. Hetherington	Degree Level Courses

Forestry Society etc. Members

Mr G. Little	British Timber Merchants' Association (England and Wales)
Mr R. Callander	Home Timber Merchants' Association of Scotland
Mr M.N. Haworth	Institute of Chartered Foresters
Mr J. Brown	Royal Scottish Forestry Society
Mr E.H.M. Harris	Royal Forestry Society of England, Wales and Northern Ireland
Dr P.G. Biddle	Standing Committee for Arboricultural Education

Technical Secretary: Mr G. Robertson

The Committee met in April and October 1987. The Annual Report of the Council is at Appendix III.

Forestry Safety Council

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

Secretary: Miss M M Lewis

The Council met in April and October 1987. The Annual Report of the Council is at Appendix IV.

APPENDIX II

Home Grown Timber Advisory Committee

Annual Report for the Year Ended 31 March 1988

The Committee began a new three-year term of office on 1 August 1987 with the appointment of thirteen new members. The full membership of the Committee at 31 March 1988 is shown at Appendix I. Three meetings were held during the year, in September and December 1987 and March 1988; the meeting arranged for 11 June 1987 was cancelled due to the General Election falling on that date.

The Committee devoted much time during the year to discussing environmental issues, such as the relationship between afforestation and conservation in the 'flow country' of Caithness and Sutherland, the report of the Countryside Commission's Policy Review Panel, the forthcoming review of the 1985 broadleaves policy and the European Commission's Directive on Environmental Assessment. Among other matters considered were the report of the Public Accounts Committee on their examination of the National Audit Office's *Review of Forestry Commission Objectives and Achievements*, the damage to woodlands caused by the storm of 16 October 1987, and the revised procedure to be adopted for forecasting future conifer roundwood production.

The Committee were pleased to note the clear statement made by the Secretary of State for Scotland on 25 January 1988 setting out his interim conclusions on the balance between forestry and conservation in Caithness and Sutherland. While confirming that much of the region was of national and international nature conservation importance and would need to be protected by an expansion of the SSSI network, the Secretary of State was of the view that some new planting was justified in the area in order to contribute to the overall national forestry planting programme, to maintain local employment in forestry and to maximise the opportunities for investment in wood-processing industry. The Committee were glad to learn that the Secretary of State was prepared to see four private forestry grant applications approved in the area, amounting to some 2,300 hectares. This would allow sufficient planting to sustain employment while the Nature Conservancy Council (NCC) considered what further areas in the two counties should be designated as Sites of Special Scientific Interest. The Committee strongly expressed their hope that the NCC would act quickly so that the Highland Regional Council could complete their report on land use in Caithness and Sutherland.

In September, the Committee considered the report of the Countryside Commission's Policy Review Panel. This recommended, inter alia, a planting licensing system to be operated within forestry strategies which County Councils would have a statutory requirement to prepare. This was not generally favoured by the Committee who considered that the present forestry consultation arrangements were adequate and had a very satisfactory record. If a planting licensing system were to be introduced, it was the Committee's view that it should be operated in association with the Forestry Commission's consultation procedures rather than being predetermined by local authority strategies. Also in September, the Committee discussed the report of the Public Accounts Committee (PAC) following its consideration of the report by the National Audit Office — *Review of Forestry Commission Objectives and Achievements*. The main recommendation of the PAC report centred on the need for the Forestry Commission to take steps to evaluate certain non-economic benefits from forestry, such as conservation and recreation. The Committee were pleased to note that the PAC did not endorse the narrow approach to the economic benefits of forestry adopted in the NAO report and that the Government accepted the PAC recommendations regarding future evaluation.

At their meeting in December, the Committee considered the damage caused to woodlands in the south-east of England by the catastrophic storm during the early hours of 16 October. They were of the strong view that without a transport subsidy to make the blown timber competitive outside the South East, much valuable timber could rot on the ground. This view was made known to Forestry Ministers. At their March meeting the Committee were gravely concerned that, despite their recommendations and those from the Forest Windblow Action Committee and the House of Commons Select Committee on Agriculture, after five months the Government had still not provided any financial assistance for the forestry industry although all others affected by the storm had been helped. Further representations were made to Ministers.

At the December meeting, the Committee considered issues connected with the review of the broadleaves policy to be initiated in 1988, including the computerised system which was being set up to analyse data for the past three years; detailed views would be sought from the Committee when the review was under way. The Committee stressed the importance of recognising that there was an industrial objective to the policy, as well as an environmental one. The need for more effective control against deer and squirrel damage was also stressed.

In March, the Committee discussed the consultative document on the implementation of the EC Directive on Environmental Assessment (EA) following an invitation to comment from the Department of the Environment. It was agreed that EAs ought to be required only for a limited number of the more important cases each year, that their cost could be a considerable burden on the applicant and that the criteria must be such as to ensure that EAs were only applied to the most sensitive sites and not based on a threshold in terms of area. A formal response to the consultative document was sent by the Chairman reflecting these views.

At the September meeting, the Committee discussed a paper compiled by the Supply and Demand Sub-Committee on the forecast of production of coniferous roundwood for the years 1987-2006. Overall, conifer production was forecast to rise from a level of 5.1 million cubic metres per annum in the period 1987-91 to 8.8 million cubic metres per annum in the period 2002-2006. While this is a substantial rate of growth, the previous forecast had suggested a more rapid rate of increase, and trade representatives had expressed concern about the reduction in the build up of the forecasts. The Committee considered the new methodology which had been adopted to predict the production of timber from private sector woodlands, whereby forecasts were calculated as an estimate of removals rather than an assessment of potential cut, and agreed that this provided a more reliable indicator of future production trends.

During the year the Committee also endorsed changes to plant health regulations proposed by the Forestry Commission. These included proposed revisions to the Order relating to timber import and export controls and amendments to the boundaries of the Dutch elm disease control areas. Other items discussed were the time taken up considering grant and felling applications as a result of protracted consultations with other authorities, the impending EC Regulation banning the use of wooden fish boxes and the work of

the Forestry Commission's Research Division. The Committee were pleased to note that a good deal of research effort had centred on farm woodlands and on the effects of atmospheric pollution upon tree growth.

The Technical Sub-Committee and the Supply and Demand Sub-Committee made regular reports to the parent Committee. Among the subjects discussed by the Technical Sub-Committee were the methods of kiln drying sawn timber, including the prospects for high temperature drying under restraint; a campaign to promote awareness of the need to protect roadside verges during timber loading; and various technical problems associated with the storm damage of 16 October 1987.

The Supply and Demand Sub-Committee did valuable work in forecasting the production of coniferous roundwood, as previously mentioned. It also reported on the Great Britain wood supply and demand in 1987 and gave its views on prospects for 1988.

The Committee would like to take the opportunity to thank the Sub-Committees for their comprehensive support and advice throughout the year.

APPENDIX III

Forestry Training Council

Annual Report for the Year Ended 31 March 1988

The Forestry Training Council was reorganised and reconstituted as from 1 April 1987 and is now the Non-Statutory Training Organisation for the Forestry Industry.

Meetings of the full Council took place on 30 April and 29 October 1987 and of the Management Committee on 9 April, 26 June and 25 October 1987 and 23 March 1988; in addition, the Training and Education Sub-Committee and the Grant Award Committee met at various times during the year.

The complete membership of the Forestry Training Council was subject to nomination and to appointment by the Forestry Commissioners following the changes to the Constitution.

Statistics on the quantity of training undertaken were again compiled and are provided in Tables 1 and 2.

TABLE 1

Attendance on Courses for Recognised Craft, Supervisory and Managerial Qualifications during 1986/87 and 1987/88

Courses	Grade and Type	1986/87 Number of Courses/Students		1987/88 Number of Courses/Students	
City and Guilds Phase I	Craft (Young Workers) Day and Block Release	—	—	4	54
City and Guilds Phase II	Craft (Adult Workers) Block Release	3	56	2	43
SCOTVEC National Certificate	Basic Craft Block Release	6	38	4	37
SCOTVEC National Certificate	Basic Craft Block Release	4	29	2	22
Total for Craft Courses		13	123	12	156
SCOTVEC National Certificate	Supervisory (Year 1) 3-Year Sandwich (Year 2) 3-Year Sandwich (Year 3)	— 3 —	— 54 —	1 1 1	21 19 18
City and Guilds Stage III	Supervisory Block Release	3	37	2	38
City and Guilds Stage IV	Supervisory Block Release	—	—	2	28
BTEC	National Diploma Year 1	1	25	1	27
BTEC	National Diploma Year 2 (Sandwich)	—	—	1	22
BTEC	National Diploma Year 3	1	23	1	22
ICF/National Diploma	Revision	2	40	2	21
Totals for Supervisory/Management Courses		10	179	12	216

TABLE 2

Attendance on Short Courses for Forest Workers, Supervisors and Managers during 1986/87 and 1987/88

Level	Source of Participants	1986/87 Trainee Course Days	1987/88 Trainee Course Days
Craft	Private Forestry	8,089	20,058*
	Forestry Commission	5,545	5,655
	Totals	13,634	25,713
Supervisory and Managerial	Private Forestry	2,166	429
	Forestry Commission	4,926	4,833
	Totals	7,092	5,262

*Includes training given under the 2-year Youth Training Scheme in Forestry.

A Technical Secretary was appointed to provide both technical expertise and secretarial services to the Council.

The Council has produced the Preferred National Training Pattern for the two-year Youth Training Scheme for Forestry and this has been accepted by the Manpower Services Commission (MSC).

A register of Council approved instructors is being developed and syllabuses, objectives and model course programmes have been written for the skills courses. This will ensure available training is to a very high national standard.

MSC have given financial assistance towards the cost of producing an open learning package for self-employed forestry contractors. A series of eight booklets will give business training to improve book-keeping and financial planning for the small forestry business.

The Forestry Training Council has the responsibility for the training of operators under the Control of Pesticide Regulations. Instructor training and registration will enable pesticide users to seek certification and confidence.

The Council offered its sincere congratulations to Mr Tony Phillips, representing the Association of Professional Foresters, who received the OBE during the year.

Publicity and articles for the Press remain a high priority and will continue to do so, in order that both the industry and others can see that the Council is available to offer help with all training needs.

Contact is maintained with Agricultural Colleges who are becoming involved in agroforestry, as well as the six Colleges who are managing agents for the two-year Youth Training Scheme.

The Forestry Training Council has maintained close liaison with the Forestry Safety Council, Agricultural Training Board, Highlands and Islands Development Board, Manpower Services Commission, Forestry Commissioners and the private sector of the forestry industry, and greatly appreciates the help and co-operation it has received from the many people and organisations involved in forestry training.

Signed for the Forestry Training Council

D.A. Mithen, *Chairman*

G.K. Robertson, *Technical Secretary*

APPENDIX IV

Forestry Safety Council

Annual Report for Year Ended 31 March 1988

The Council met twice at Forestry Commission Headquarters in Edinburgh on 8 April and 8 October 1987. The Safety Guides Sub-Committee met once on 7 October.

No new guides were published but amended editions of 11 guides were issued.

The consideration of the Council's terms of reference and constitution was completed during the year and after agreement with the Forestry Commission have now been formally adopted by the Council. The terms of reference as revised in 1987 are as follows:

1. To promote safety in forestry by encouraging cooperation and consultation at all levels within the industry. In this context forestry is taken to cover all operations within the forest, thus excluding sawmilling and haulage on public roads.
2. To make representations to the Health and Safety Commission on the special problems of safety in forestry and to respond to consultation by HSC on proposed legislation, regulations, and other relevant matters.
3. To produce and maintain Forest Safety Guides.
4. To undertake publicity on health and safety matters and to encourage research including the collection of statistics.
5. To liaise with the Forestry Training Council and other appropriate bodies on education and training in safety.
6. To review and report progress annually to the Forestry Ministers through the Forestry Commissioners, who will submit the report to the Home Grown Timber Advisory Committee for information.

A major consequence of the agreement that the Council's work stopped 'at the forest gate' is that the position of arboriculture has been resolved after some years of meetings and discussion. The way is now open for organisations involved in tree surgery and related operations to develop their own safety standards. The problem of dual standards is recognised and is exemplified by the recent windblow where so much of the damage and resulting work is arboricultural rather than forestry related.

In the context of the great storm of October 1987 the main function of the Council was to see that guides were available to all directly involved, at all training sessions and to all enquirers at the various centres. No gaps were apparent in the range of guides but training staff in particular are alert to possible needs for amendment. Advice was given to Timber Growers United Kingdom on the responsibilities of woodland owners, agents and manufacturers under the Health and Safety at Work Act.

Another major subject developing during the year was the preparation by the Forestry Commission of a *Code of Practice for the Use of Pesticides in Forestry*. Comments on the outline and the first draft were called for in the year and the second draft received at the end.

Items discussed or reviewed included the following:

- Chain saw protective clothing which is the subject of a proposed British Standard.
- Vibration in used chain saws.
- Toxic fumes from chain saws which could present a hazard in extreme conditions.
- Correct procedures and protective clothing for the handling of plants during dipping and then subsequent planting to avoid any ill effects from prolonged exposure.
- The status of safety guides in relation to the responsibilities of managers and workers. It is hoped to produce an agreed statement on this matter.

In short, the year made it clear that despite refining its terms of reference, the development of and the problems facing forestry were such that there were many and varied items requiring the consideration of the Council so that safety could play its part as an essential component of management, craftsmen's skills and training.

J.W.L. Zehetmayr
Chairman

Miss M.M. Lewis
Secretary

APPENDIX V

The Nature Conservancy Council's Report "Nature Conservation and Afforestation in Britain"

Announcement made by the Secretary of State for Scotland on 23 October 1987

The Rt. Hon. Malcolm Rifkind QC MP, Secretary of State for Scotland, made the following announcement in a Written Answer to a Parliamentary Question about the Nature Conservancy Council's report *Nature Conservation and Afforestation in Britain*.

"I have sent the following letter, setting out the Government's views, to the NCC's chairman, Mr William Wilkinson.

'1. I am writing to let you have the Government's considered response to the recommendations contained in your report *Nature Conservation and Afforestation in Britain*.

2. We are indebted to you for producing this comprehensive, clear and helpful view of the interaction between forestry and nature conservation. We particularly welcome the importance attached throughout the report to the need for balance in addressing the issues raised. Forestry and nature conservation have important roles to play in the development of the countryside and it is the Government's policy that forestry should take place in ways that are compatible with other land use interests, including nature conservation.

Forestry Policy

3. Your report has come at a time when rural areas in Britain are facing important changes as a result of the need to tackle agricultural surpluses within the EEC. Along with other reports on the future of the countryside, it was a useful contribution in our consideration of policies for the rural economy and environment which resulted in the publication *Farming and Rural Enterprise*. Our conclusions on the positive role that forestry has to play as an alternative use for agricultural land were outlined in the document *Farming UK* which formed part of that publication. We propose an expansion of the traditional forestry programme — to 33,000 hectares a year — with due regard being paid to environmental considerations. We shall also be encouraging the planting of an increased proportion of trees on low ground of better quality.

4. I hope you will welcome this new emphasis which should offer opportunities for landscape and habitat diversity, including a greater use of broadleaves. We also expect broadleaved woodlands to feature strongly in our new scheme to encourage the development of farm woodlands.

5. In the context of encouraging farmers to plant trees, your report suggested that a review of the present tax incentives for forestry should be carried out. We have taken careful note of what you have to say in this regard. Since your views were published, however, the Public Accounts Committee has reported on a review by the Comptroller and Auditor General on the objectives and achievements of the Forestry Commission which also touches on the question of fiscal incentives for private forestry. We shall be responding to the Committee's report very shortly. I am sure you will understand, therefore, that I cannot comment on the point about forestry taxation at this stage.

SSSIs

6. We welcome and support the continuing co-operation between the Forestry Commission and the Nature Conservancy Council on the management of the large number of SSSIs on Commission land, as evidenced by the Declaration of Intent signed by both bodies in 1986. We share your concern that SSSIs should, within the terms of the 1981 Act, be protected from damaging operations. I am pleased to note from your report that only one SSSI has in fact been damaged by forestry, and that, I understand, was accidental. I do not believe it would be reasonable, therefore, to put an absolute ban on planting within SSSIs. Unlike the case of NNRs, nature conservation is not the primary land use within SSSIs and the right course is to consider each case on its merits. I very much hope that there will continue to be the closest co-operation between your Council and the Forestry Commission to resolve cases where a balance had to be struck between nature conservation and other interests, with cases being referred to Ministers where this does not prove to be possible.

Controlling Afforestation

7. As regards methods for ensuring that forestry developments take place in harmony with nature conservation, we do of course have well-established guidelines and mechanisms in place. There is already a strong commitment to conservation on the part of the Forestry Commission — both in its own operations and in its handling of private sector proposals — and it has sought over the years to adopt a balanced and flexible approach in considering each new issue as it arises. The Commission is required to consult, as appropriate, with the Agriculture Departments, local planning authorities and other statutory authorities on applications for grant-aid or felling licences and on draft plans of operations containing planting and felling proposals. The Nature Conservancy Council is consulted whenever a proposal falls wholly or partly within a National Nature Reserve, an SSSI or an area formally proposed for such designation to ensure that conservation factors are fully considered. Special arrangements for consultations on forestry proposals within Environmentally Sensitive Areas have also been introduced after discussion between the Forestry Commission and your Council. To take a recent example, because of the importance which your Council attaches to the flow country of Caithness and Sutherland, the Forestry Commission has further extended its formal consultations with you to embrace all applications for grant aid in these two districts to allow time for the nature conservation interest to be defined more clearly, and I am now giving careful consideration to the proposals you have made in that regard in your report *Birds, Bogs and Forestry*. Local authorities are also encouraged to consult widely, for example with voluntary conservation groups.

8. Under the terms of a Ministerial Direction, where objections are raised which cannot be resolved, the application has to be referred to the Commission's Regional Advisory Committee, which makes further efforts to find a solution acceptable to all the parties; as you know, ways of widening the representation of non-forestry interests on these Committees and of making them more publicly accountable have been the subject of a review by the Forestry Commission, and I hope that an announcement can be made reasonably soon. It is also important to bear in mind that where an authority consulted under these procedures maintains its objections to an application beyond the Regional Advisory Committee stage, the Forestry Commission may over-ride them only with the endorsement of Ministers. There are therefore important safeguards for the environment built into the present procedures.

Planting Licences

9. Your report proposes the introduction of a system of planting licences to strengthen the existing controls which operate through the forestry grant schemes. As I have said above, however, we consider that the present procedures have generally proved to be an effective form of control. That the private sector supports this voluntary approach is evidenced by its remarkably good record over the years; there have been very few instances where the consultation procedures have been side-stepped and the grant forgone. The Government therefore considers that there is insufficient evidence to suggest a need for the existing arrangements to be supplemented by statutory controls such as planting licensing, although this will be kept under review.

The Wider Countryside

10. There has been an important shift of emphasis on the part of the Forestry Commission in recent years in response to changing perceptions on environmental matters, including nature conservation, and in the light of advice it has received from the Nature Conservancy Council and other statutory authorities such as the Countryside Commissions. The statutory remit of the Forestry Commissioners has been extended to include a duty to endeavour to achieve a reasonable balance between timber production and the environment. This is not to suggest that the pursuit of this new duty will necessarily avoid conflicts of interest in every instance, but the Government believes that such conflicts will be reduced as the Forestry Commission's policies and practices develop. In this connection, I was pleased to learn that discussions have begun between the Forestry Commission and yourselves aimed at the provision of constructive advice on nature conservation issues in the wider countryside. Such a move can only be to the benefit of rural development and, with goodwill and a realistic approach on both sides, should lead to a better mutual understanding.

Return on Investment in New Planting

11. Your report placed some stress on the need to determine criteria for estimating an acceptable return on timber production, both for the Forestry Commission's own planting and as a qualifying threshold for grant-aid. It also suggested that the grant-aid function should be used as a regulator to achieve a reasonable balance between afforestation and other land uses in any county or district. Taking this last point first, the Government takes the view that the best method of achieving an acceptable balance between forestry and conservation, and of taking account of other legitimate land-use interests, is through the present consultation system rather than by means of regulation. The current conditions for grant-aid involve the careful examination of applications to ensure, as far as practicable, that proposals are sensibly drawn on nature conservation, land use and landscape grounds before the consultation process is begun. The Forestry Commission is also required to satisfy itself that the proposed planting scheme is silviculturally suited to the site and will produce a utilisable crop of timber. Market forces also influence the choice of species, and the main requirement for the wood-processing industry is for softwood. There is no evidence that setting a financial rate of return would in general help to safeguard nature conservation interests. It could, for example, militate against the use of broadleaves in many circumstances since these produce a lower return on all but the most fertile lowland sites. The Government would not therefore wish to stipulate acceptable rates of return which are, and should remain, matters to be determined by those investing in forestry.

12. As far as the Forestry Commission's own planting is concerned, a financial return on investment is calculated for each site taking into account such factors as soil and site characteristics and the species to be planted. However, this is only part of the evaluation process. Other factors have also to be considered, including employment, effective integration with agriculture, environmental safeguards and, where appropriate, opportunities for public access and recreation.

Increased Planting of Better Agricultural Land

13. Your report recommends a closer inter-relationship between forestry and agriculture, and the planting of enclosed agricultural land. This is in line with the Government's report *Farming UK*, which confirmed our commitment to increasing the proportion of planting which takes place on low ground of better quality than hitherto. In addition, the consultation paper on the Farm Woodland Scheme proposed measures which should increase planting on agricultural land. In recent years, most planting has taken place in Scotland, and last year I announced changes in the criteria for the approval of agricultural land for forestry which are already providing new opportunities for planting, including, in certain circumstances, planting on enclosed agricultural land. There are few agricultural restrictions on new planting in England and Wales. The Forestry Commission will also keep in mind the need to encourage planting on better quality land in their regular reviews of grant rates.

Design and Management of Forestry Schemes

14. I note that the report is deeply critical of "blanket" afforestation; however, we believe that there can be scope for large-scale afforestation, provided that a balance is reached with other relevant land use interests. New planting — on whatever scale — should continue to reflect the economic, landscape and nature conservation needs of the locality, and we agree entirely with you that appropriate design and management practices should be adopted in all forestry schemes. Applicants for grant aid are required to provide sufficient information in the draft plan of operations, which forms part of the application, to determine whether a reasonable balance can be achieved with other land use interests. This draft plan is sent to the appropriate statutory authorities for comment under mutually agreed arrangements, and those authorities are encouraged to give copies to, and seek views from, local interests including voluntary conservation bodies. Because the plan of operations prepared under the present system should take account of conservation factors where appropriate, we do not feel it is necessary to adopt your suggestion for a separate conservation plan.

15. We are certainly in total agreement when it comes to the need to develop and adopt silvicultural practices which minimise the adverse impacts of forestry on the environment. I know that the Forestry Commission has devoted considerable effort to this over the years. For example, the techniques of ploughing have been developed to minimise soil erosion; planting well back from stream-sides has also been promoted as good practice for some time, as has the avoidance of fertiliser run-off and the minimum use of pesticides.

Increasing the Nature Conservation Value of Forests

16. The Government fully endorses the suggestion that the Forestry Commission should continue its efforts to maximise benefits for wildlife within existing forests. To this end conservation plans have been drawn up for all Commission forests with the help and assistance of a wide range of voluntary and statutory conservation organisations, including the Nature Conservancy Council. The recommendation in your report for establishing experimental conservation areas could be useful in both a research and a demonstration sense, although the Forestry Commission intends to apply good conservation practice to all its forests.

17. While changes in attitude and approach towards conservation will be reflected in new planting where measures are considered from the inception of a scheme, because of the long-term nature of the industry it will take some time for dramatic changes to be seen in existing forests. Opportunities for diversification and modification will occur, however, when felling commences, and advantage can be taken at the time of subsequent restocking to introduce positive conservation measures.

Research

18. I am pleased to record that the research activities recommended in the report are being covered by the Forestry Commission's wildlife conservation research studies. I am also glad to learn that joint programmes of research between the Commission and the Nature Conservancy Council have been started and that opportunities will be sought to do more. Your Council's membership of the Forestry Research Co-ordination Committee, which we established in 1982, gives you the opportunity to comment on the Commission's research programmes, to the mutual benefit of both bodies. We commend such co-operation and look to its continuing development.

Training

19. The Government fully endorses the suggestion that opportunities should be taken for forestry staff in the public and private sectors to receive training on management for nature conservation. I understand that the Forestry Commission has already run courses with help and advice from the Nature Conservancy Council.

Conclusion

20. May I conclude by expressing once again the Government's gratitude for the helpful suggestions in your report. These have provided us with a timely and important contribution to the debate on the role of forestry in the countryside. It is appropriate that I should have directed my last remarks to the subject of training since this is of crucial importance if we are to continue to build upon the progress already made in protecting our natural heritage. I know that you have this question of education and the promotion of a more positive attitude to nature conservation very much in mind, and I would like to assure you that the Government supports most warmly all constructive attempts to achieve this very desirable objective'."

APPENDIX VI

Review of the Composition and Procedures of the Forestry Commission's Regional Advisory Committees

Announcement made by the Secretary of State for Scotland on 10 December 1987.

The Rt. Hon. Malcolm Rifkind QC MP, Secretary of State for Scotland, made the following announcement on 10 December 1987 in a Written Answer to a Parliamentary Question about the Forestry Commission's review of the composition and procedures of its Regional Advisory Committees.

"The Forestry Commission has now completed its review, and my right hon. Friends and I have agreed a number of changes designed to improve the effectiveness of the Regional Advisory Committees in their role of conciliating over forestry proposals in respect of which there are unresolved objections from statutory authorities consulted by the Commission.

This review stemmed from the undertaking given by my hon. Friend, the member for Bristol West, on 31 January 1985 in his response to the Countryside Commission's Report *A Better Future for the Uplands* (Official Report Cols 282-290) that the Forestry Commission would be seeking ways to achieve greater public accountability for the Regional Advisory Committees' proceedings. The basis on which the Commission approached this task was to look for ways in which the proceedings of the Committees might be better publicised when they are exercising their conciliation role in disputed forestry grant and felling applications, so that the public can have an opportunity to voice their opinion. The Commission subsequently extended the review to consider possible improvements to the composition of the Committees with a view to achieving a better balance on them between forestry and other countryside interests.

In the course of the review, the Forestry Commission issued a consultation paper setting out its proposals which drew comments from over 50 organisations and individuals with interests in forestry, land use and the environment. The consultation paper, a copy of which has been placed in the Library of the House, also provided a helpful background summary of the Commission's present consultative procedures for forestry grant and felling permissions and the key role played in these by the Regional Advisory Committees.

The Commission noted the concern which has been expressed by environmental bodies that the planning and environmental members on the Committees cannot be expected to be in a position to cover the whole range of environmental interests — such as landscape, recreation and nature conservation — and that the numbers should be increased to accommodate members with expertise in those areas. The farming interest on the Committees was also considered to be under-represented. In the past, this problem has to a certain extent been met by the appointment of forestry members with multi-disciplinary backgrounds, but this was clearly not a satisfactory answer in the longer term.

With the growing importance attached to the Regional Advisory Committees' conciliatory role, coupled with the Commission's new environmental duty introduced under the Wildlife and Countryside (Amendment) Act 1985, we have some sympathy with the Commission's conclusion, which has received fairly wide support from both forestry and environmental interests, that the membership of the Committees should be raised from a maximum of nine to twelve, and we are considering this matter further.

In the meantime, the Regional Advisory Committee Chairmen will be encouraged to invite to meetings considering disputed grant or felling cases any persons whom they think might be able to assist in achieving an agreed solution, particularly when a case involves an interest not represented on the Committee. The Commission will prepare and maintain lists of persons who could be asked to serve in this capacity as the occasion arises.

As regards other aspects of the appointment of Committee members, we agree that the Forestry Commissioners should give closer consideration to ensuring that appointees are suited by technical, professional and practical experience and knowledge to speak for the general interests they are appointed to represent. We also endorse the Commission's proposal that the service of Committee members should normally be restricted to two three-year terms, although exceptions might be made in special circumstances in order to retain the services of a particular member for an extended period. This proposal has merit in allowing a reasonable turnover of members. Further, we endorse the principle that 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 interests when disputed cases come before their Committees. It is also desirable that the Chairmen should have a broad range of knowledge on relevant land use matters.

Turning to the main purpose of the review, which was to find ways of achieving greater public accountability in the proceedings of the Regional Advisory Committees, the Forestry Commission proposed in its consultation paper that procedures should be introduced to give the public the opportunity to submit views to the Committees when they were considering disputed planting and felling proposals. It was envisaged that this would 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; such comments would then be taken into account by the Committee in its discussions with the parties to the dispute.

The Commission received a wide variety of views on this proposal, ranging from those which felt that it would detract from the Regional Advisory Committees' chances of successfully fulfilling their conciliation role to those which considered that, while it was a small step in the right direction, it did not go far enough. A number of environmental interests wish to see all forestry proposals presented for public comment, not just the small percentage referred to the Committees.

We have considered these representations very carefully but have concluded that the Commission's proposals strike broadly the right balance between wider public involvement and the risk of increased bureaucracy and administrative costs. However, the statutory authorities consulted are already encouraged to consider the views of voluntary bodies and others in commenting on forestry applications, and we have asked the Commission to discuss with the Local Authority Associations the effectiveness of those arrangements and any ways in which they might be improved and made more cost-effective.

Again, we have carefully considered calls for the meetings of the Committees to discuss disputed cases to be open to the public, and for the record of such meetings, including the intended advice to the Forestry Commissioners, to be published. We accept the Commission's view, however, that it would not be practical or conducive to the Committees' conciliation role to throw open site discussions with the applicant and the objecting authority or authorities to anyone who wishes to attend. As was stated in the consultation paper, the Committee Chairmen will nevertheless have discretion to invite any person or non-statutory organisation who has submitted views to attend or be represented at the site meeting, if it is considered that this will assist in the conciliation process.

We also take the view that the publication of a record of Committee meetings could inhibit full and frank discussion between the parties and hamper the prospects of a compromise solution being found. It would be the intention, however, to notify those who had submitted comments of the outcome of the case.

The procedure for public participation proposed by the Commission is necessarily a limited one, but the Government is satisfied that it should broadly meet the need for public views to be taken into account by the Regional Advisory Committees without detracting from their conciliation function. We have therefore asked the Commission to introduce it in respect of all future cases.

The Government greatly appreciates the dedicated and constructive contribution that the members of the Regional Advisory Committees make, not only in giving general advice to the Forestry Commission but also in the part they play in the Commission's consultation procedures. We hope that the changes I have announced will assist them in their work and lead to a wider understanding and acceptance of their role."

APPENDIX VII

Afforestation in Caithness and Sutherland

Announcement made by the Secretary of State for Scotland on 25 January 1988.

The Rt. Hon. Malcolm Rifkind QC MP, Secretary of State for Scotland, made the following announcement in a Written Answer to a Parliamentary Question about afforestation in Caithness and Sutherland.

"I have today written to the chairman of the Nature Conservancy Council in the following terms:-

'As you know, the Government have been considering carefully your Council's report *Birds, Bogs and Forestry: the Peatlands of Caithness and Sutherland* and your representations about the relationship between afforestation and nature conservation in the area. You will be aware that helpful discussions have taken place between Departmental and NCC officials to clarify certain aspects of the report. Officials have also had the benefit of seeing some of the detailed scientific material which will in due course be incorporated in your report *The Flow Country*.

It would clearly not be right to attempt to reach final conclusions on this matter at the present time. First, *The Flow Country* has not yet been finalised. Second, the Highland Regional Council have, as you will be aware, set up a working party to propose a land use strategy for the area. The working party is currently assessing evidence and is likely to report next month. We have, however, sought to form an interim view on your findings in order to consider their implications for forestry in the short term. In this, we have been helped by the receipt of interim responses to your report from the Highland Regional Council, the Highlands and Islands Development Board, the Countryside Commission for Scotland and the Crofters Commission.

We acknowledge the important service which your Council have rendered by highlighting the exceptional nature conservation interest occurring in Caithness and Sutherland. We agree that much of the two counties is of national and international importance for conservation. We do not think, however, that the whole of the area identified in *Birds, Bogs and Forestry* can be considered to be of uniformly high importance. Indeed, the detailed evidence contained in your own work suggests that there are varying degrees of conservation significance, and we believe therefore that it is possible to identify a selection of key areas which should be safeguarded, amounting in total to a very substantial area of peatland. These would require a substantial expansion of the SSSI network and, taken together with the sizeable area within existing SSSIs, might amount to around half of the total unafforested peatland area of some 350,000 hectares. We envisage that these areas would, in particular, include the most important bog systems and bird habitats, especially on the wet flows.

It seems to us that some new planting needs to take place in Caithness and Sutherland both in order to contribute to the overall national forestry planting programme and to maintain local employment in forestry and maximise the opportunities for future investment in wood-processing industry. We consider, moreover, that the evidence points to the view that Caithness and Sutherland can accommodate some further afforestation without affecting the conservation significance of the area as a whole.

There is, of course, no question of any forestry approval being given or grant offered without full regard to the conservation case and, as you know, the consultation arrangements which currently apply throughout Caithness and Sutherland provide for disputed cases to be referred, if necessary, to me. I have seven such cases before me at the moment as a result of NCC objections. I have advised the Forestry Commissioners that I support their view that grant should be offered for a substantial part of the area subject to application at Limekiln and Whitewell. I have examined the available evidence carefully and have concluded that the conservation evidence is not sufficient to justify opposing forestry over the very large tract of land involved. However, I am aware that the southern part of this site does contain some wetland and pool complexes which are of considerable interest and I have asked the Commissioners to seek NCC's detailed views before determining the precise boundary of the area which may be approved for planting.

I have also decided to support the Forestry Commissioners' intention to approve the applications at Jubilee Wood (Shinside) and Loubcroy, subject to certain modifications suggested by the Commission's Wildlife and Conservation Officer in respect of the Jubilee Wood application. I am proposing a further discussion with NCC about areas of peatland that might be excluded from planting at Sciberscross where, however, I have given general approval to the planting proposals. All these are areas outside the main region of prime peatland, and not of outstanding intrinsic conservation value according to the information before me.

The remaining three cases, on the other hand, do lie in the heart of the flow country and involve land comprising peatlands and wader habitat of high quality and I have asked for these cases to be referred back to your Council for a decision on future designation. I shall be considering further cases in the next few months and it may be appropriate to give additional approvals. Each case will, however, be scrutinised with great care, and the conclusions I have reached on the present tranche should not be taken as establishing a presumption in favour of forestry on other sites in their vicinity.

The present arrangement under which consultations with your Council on forestry grant applications extend to the whole of Caithness and Sutherland is, of course, an interim measure only, pending the more precise definition of the conservation interest and the establishment of the appropriate measures to protect it. It is therefore essential that high priority is given by NCC to the work of identifying those parts of the area which are of prime importance for nature conservation so that they can be safeguarded.

With regard to the means of protection, we consider that the notification of SSSIs is the only satisfactory approach to the conservation of areas of prime importance in Caithness and Sutherland, though your suggested approach of seeking to make ad hoc management agreements may provide a convenient means of protection where this is necessary to secure protection in advance of the SSSI programme. While the selection of SSSIs is, of course, ultimately a matter for NCC, it would I believe be helpful in this case for the various officials involved within NCC, the Departments concerned and the Highland Regional Council

to get together at an early date so that the site selection process can be tied in with the on-going work of the HRC working party, with the application of the forestry consultation procedures and with the assessment of the financial implications arising from potential management agreements.

I shall arrange for my officials to get in touch with yours to discuss the next steps.

I propose to make this letter public, along with an announcement about the forestry cases referred to above.'

The letter refers to a number of forestry grant applications which are before me at the moment. I have advised the Forestry Commissioners that I am content for grant to be offered in the four cases listed, subject to further consultations with the Nature Conservancy Council about the boundary of the area to be planted in the first two cases and subject to some minor modifications to improve the planting design in the third case. These cases concern the following applications:

<i>Proposed Area to be Planted</i>	
<i>Location</i>	<i>(hectares)</i>
Limekiln and Whitewell, Caithness	1,307
Sciberscross, Sutherland	790
Jubilee Wood, Shinside, Sutherland	19
Loubcroy, Sutherland	202

”

APPENDIX VIII

Forestry Policy

Announcement made by the Secretary of State for Scotland on 16 March 1988.

The Rt. Hon. Malcolm Rifkind QC MP, Secretary of State for Scotland, made the following announcement in a Written Answer to a Parliamentary Question about the Government's forestry policy in the light of the changes to the support arrangements for private forestry announced in the Budget.

"The changes to the tax and grant arrangements announced by my right hon. Friend are designed to provide a simpler and more widely acceptable system of support for private forestry. There has not, however, been any fundamental change in the Government's policy for encouraging forestry, in an environmentally acceptable way. This is reflected in the Forestry Commission's statutory duty to endeavour to achieve a reasonable balance between forestry and environmental considerations.

My right hon. Friends, the Minister of Agriculture, Fisheries and Food and the Secretary of State for Wales, and I remain of the view that a healthy forestry industry is in the national interest and that long term confidence in both forestry and wood processing industries in this country is fully justified. Last year in the context of new policies for alternative land use we announced an expansion of the forestry programme to 33,000 hectares of new planting a year, with particular emphasis on the private sector and with due regard to environmental considerations. The planting of a higher proportion of trees on low ground of better quality was also to be encouraged.

These policies remain unchanged, and to this end planting grants will be substantially increased. The expansion of planting in recent years has led to a significant and welcome growth in the United Kingdom of a modern wood processing industry through developments such as the Shotton Paper Company in Wales and Caledonian Paper in Scotland. The industry will in turn help to meet the growing demand for wood products and, together with the new planting programme, this will ensure that forestry contributes to employment in rural areas. Increased planting on better land will also provide an alternative to agricultural production and thereby assist in the reduction of agricultural surpluses.

The environmental effects of the changes will be positive for a number of reasons. First, the new arrangements for Government financial assistance for planting will strengthen the careful scrutiny and consultation procedures undertaken by the Forestry Commission, because it is very unlikely that any sizeable scheme will go ahead unless the Commission has approved it for grant purposes. In considering applications the Commission will continue to observe its published management guidelines relating to broadleaved woodland and will introduce similar guidelines for all types of woodland as part of the new scheme. Its procedures for dealing with applications for planting grants should thus gain in effectiveness as a means of controlling the environmental impact of forestry and ensure that the right trees are planted in the right places.

Second, the increased planting grants will incorporate a substantial differential in favour of broadleaved planting, so that the share of broadleaves in total planting can be expected to continue to increase. Third, there will be a new supplement for planting on arable or improved grassland. Full details of a new Forestry Commission grant scheme reflecting these new arrangements will be announced next week.

Finally, the increased grants will be available for replanting in existing forest areas. In considering applications for replanting grants the Forestry Commission will follow policies which are designed to convert forests of an even age into attractive and more varied landscapes with a mixture of types and ages of tree.

The changes that have been announced, together with the new grant scheme to be announced next week, are designed to encourage the achievement of the Government's aims for forestry in a manner which is acceptable in environmental and land use terms and which appeals to a wider range of interests. Forestry has an important role to play in the well being of this country. The industry has the support of the Government and has an assured future.

My right hon. Friend, the Secretary of State for the Environment, is today making a separate announcement on behalf of my rt hon Friend the Minister of Agriculture, Fisheries and Food and himself, about environmental guidance on the approval of grant applications for afforestation in England."

APPENDIX IX

Afforestation in the English Uplands

Announcement made by the Secretary of State for the Environment on 16 March 1988.

The Rt. Hon. Nicholas Ridley MP, Secretary of State for the Environment, made the following announcement in a Written Answer to a Parliamentary Question about environmental guidance on afforestation in the English uplands.

“My right hon. Friend the Secretary of State for Scotland is making a general statement about forestry policy in Great Britain in the light of the Budget changes. Both in its own forestry operations and in considering applications for planting grants, the Forestry Commission has a statutory duty to endeavour to achieve a reasonable balance between forestry and environmental considerations. In cases where the appropriate balance is in doubt, because an objection has been made by the relevant public or local authority and has not been resolved by the Commission's regional advisory committee, the Commission has since 1974 been directed by forestry Ministers to seek their views before approving the application, or proceeding with the scheme, as the case may be. In England, I am consulted in appropriate cases.

My right hon. Friend the Minister of Agriculture, Fisheries and Food and I have decided that it would be helpful for the Forestry Commission also to have general guidance from the Government about fulfilling its statutory duties in relation to the environment in England. This guidance will be contained in a letter which the Minister of Agriculture, Fisheries and Food will be sending to the chairman of the Forestry Commission. The main features of the guidance will be as follows:

A large proportion of the land in England has been used for agriculture as either arable or improved grassland. We therefore attach a high value to conserving, and where necessary restoring, the habitats which the remaining unimproved land provides, including the uplands and ancient woodlands. While we see some scope for broadleaved and mixed woodlands, approval should not normally be given in the uplands of England for new planting which consists predominantly of conifers. The only exception would be small areas where it is clear that such planting would be environmentally acceptable.

The main potential for afforestation in England lies on arable land and improved grassland which may no longer be needed for food production. It has already been decided that the Farm Woodland Scheme should be targeted on land previously in agricultural use. This concept is incorporated in the Farm Land and Rural Development Bill currently before Parliament. The new grant rates will provide additional incentives for the planting of broadleaved trees and for planting on improved land.

In existing forested areas, the granting of felling licences by the Forestry Commission to private owners is normally subject to the condition that replanting should be carried out. In future, however, the Forestry Commission will be expected to follow policies which will convert forests of an even age into attractive and more varied landscapes with a mixture of types and ages of trees.”

APPENDIX X

The Woodland Grant Scheme

Announcement made by the Secretary of State for Scotland on 23 March 1988.

The Rt. Hon. Malcolm Rifkind QC MP, Secretary of State for Scotland, made the following announcement in a Written Answer to a Parliamentary Question about the new forestry grant arrangements.

"In the answer I gave on 16 March to a question put by my hon. Friend, I stated that the changes to the tax and grant arrangements announced by my right hon. Friend the Chancellor of the Exchequer were designed to provide a simpler and more widely acceptable system of support for private forestry.

The Forestry Commission's Forestry Grant Scheme and Broadleaved Woodland Grant Scheme were closed to new applications from 15 March 1988, and will be replaced on 5 April 1988 by a single grant scheme, to be known as the Woodland Grant Scheme. The European Commission is being informed under the provisions of Article 93 of the Treaty of Rome. Applications may be made under this scheme from 5 April 1988, but cannot be approved until clearance of the scheme by the European Commission.

The scheme will apply to the establishment and restocking of broadleaved, conifer and mixed woodlands, whether by planting or by natural regeneration, and to the rehabilitation of neglected woodland under 20 years of age. It will also cover planting done under the Farm Woodland Scheme.

The objectives of the scheme are:

- to encourage timber production;
- to provide jobs in and increase the economic potential of rural areas with declining agricultural employment and few alternative sources of economic activity;
- to provide an alternative to agricultural production and thereby assist in the reduction of agricultural surpluses;
- to enhance the landscape, to create new wildlife habitats and to provide for recreation and sporting uses in the longer term;
- to encourage the conservation and regeneration of existing forests and woodlands.

The rates of grant will be increased to the levels set out in the following table:

<i>Area approved for planting or regeneration (hectares)</i>	<i>Rates of Grant</i>	
	<i>Conifers £ per hectare</i>	<i>Broadleaves £ per hectare</i>
Area band 0.25-0.9	1,005	1,575
1.0-2.9	880	1,375
3.0-9.9	795	1,175
10 and over	615	975

These rates of grant are generally £375 per hectare higher than those under the Forestry Grant Scheme and the Broadleaved Woodland Grant Scheme, but the increase for broadleaved trees planted or regenerated in mixed woodlands will be substantially larger.

The rates of grant for conifer planting done under the Farm Woodland Scheme will remain unchanged; broadleaved planting under that scheme will, however, be eligible for the new broadleaved grants.

For new planting on existing arable or improved grassland of less than 10 years of age which is undertaken outside the Farm Woodland Scheme, there will be a supplement of £200 per hectare.

Apart from the increased rates of grant and the special supplement for planting on better land, the scheme will have a number of important features:

- the simplicity of a scheme which replaces two schemes with different conditions, and which covers all forms of planting, regeneration and rehabilitation of woodlands;
- a substantial differential in favour of broadleaves;
- all broadleaved planting, whether it be on its own or in mixture, will attract the same rates of grant;
- the broadleaved rate of grant will also apply to the planting and natural regeneration of native pinewoods in specified areas of Scotland;

environmental objectives and provisions that will apply to all types of woodland;

all types of natural regeneration will now be eligible for the first instalment of grant-aid at the time the preparatory work is carried out;

grants for the rehabilitation of derelict woodlands under 20 years of age will now include conifer and mixed woodlands;

grants will be paid in three instalments over 10 years. For conifers as well as for broadleaves, the second and third instalments will attract the rates of grant applicable when they fall due;

grant bands will be determined by the total area approved for planting or regeneration under the application and not, as was the case under the Forestry Grant Scheme, by the size of the woodland of which such planting or regeneration might form a part.

The scheme will encompass a wide range of management objectives designed not only to provide timber but to encourage the development of multi-purpose woodland management, to achieve a proper balance between broadleaves and conifers, to enable forestry to play its full part as an alternative use of agricultural land no longer needed for food production, and to ensure that the expansion of forestry takes place in harmony with other land uses and the environment.

In this connection, applications relating to the establishment and restocking of broadleaved woodland will be subject to the provisions of the guidelines for the management of broadleaved woodland published by the Forestry Commission, and the new scheme will incorporate similar guidelines for the management of all types of woodland. These will be subject to the review of our broadleaves policy which is due to take place later this year.

Full details of the new Woodland Grant Scheme are set out in a Forestry Commission leaflet, copies of which have been placed in the Library of the House.

I am sure the announcement of this new scheme, with its greatly improved rates of grant and wide-ranging objectives, will serve to underline the Government's commitment to the sensitive yet vigorous expansion of forestry."

APPENDIX XI

Forestry Commission: Review of Objectives and Achievements Extract from the Report by the Committee of Public Accounts*

Summary of Main Conclusions and Recommendations

- 25.
- (i) We recognise the Forestry Commission's substantial physical achievements. However, given the conflicts between some of their objectives and the attendant risks to value for money we are concerned at the continuing extent to which the objectives appear to lack the specific quantification against which achievement and performance can reliably be judged (paragraph 6).**
 - (ii) We note the Commission's views on the difficulties of quantification in some areas of their responsibilities. Nevertheless we believe that a good deal more quantification can and should be carried out, and we recommend that the Commission should immediately set in hand the work necessary to collect and analyse the relevant data for establishing more quantified targets and measures of performance for their different objectives and the balance to be sought between them (paragraphs 7 and 8).
 - (iii) Although the Commission have met their 3 per cent target rate of return on forest sale assets, for much of their new investment the expected rate of return of 1.25 per cent is 1.75 per cent lower than their target return. This underlines the importance of the rural employment benefits advanced as the main justification for this very low rate of return being clearly identified and quantified (paragraphs 11-13).
 - (iv) We recognise the special contribution forestry is making to jobs in rural areas and to maintaining rural infrastructure. But the bulk of jobs created by new planting do not arise until harvesting some 40 years after that planting. We are therefore concerned that full regard should be paid to the comparative costs of such job creation as well as the benefits, and to the additional opportunities for extending the Commission's profitable activities in the areas of tourism and recreation (paragraphs 16 and 17).
 - (v) We recognise that investment in forestry has some beneficial impact in such matters as the environment and balance of payments. In both these areas we recommend that greater efforts need to be made to identify clearly the benefits and the adverse effects, and to establish their value wherever possible. We note that Ministers have recently produced a number of policy documents on land use (paragraphs 18-20).
 - (vi) Generally we found that across many of the Commission's activities there was insufficient assurance on the extent and quantification of the benefits achieved or how far these were commensurate with the resources used to achieve them. We are concerned that there appears to have been no fundamental re-examination since 1972 of the information needed and available to support many of the policy and operational decisions being made (paragraph 21).
 - (vii) We emphasise the importance of tackling the problems involved in improving the quantity and quality of necessary information, not least because of the likelihood of Government subsidies for the Forestry Commission being continued until well into the next century (paragraph 22).
 - (viii) We are also concerned at the lack of reliable and up-to-date information on some of the public sector costs of, and the benefits arising from, private sector forestry; we recommend that more information is needed as a basis for ensuring that its contribution is reliably assessed (paragraph 24).

*Twelfth Report from the Committee of Public Accounts: Session 1986-87, HC185, HMSO, £4.20 net.

**The cross references quoted relate to other parts of the Committee's Report.

APPENDIX XII

Forestry Commission: Review of Objectives and Achievements The Government's Response to the Report by the Committee of Public Accounts*

Twelfth Report

FORESTRY COMMISSION

Forestry Commission Review of Objectives and Achievements

17. The Treasury and the Forestry Commission note the conclusions and recommendations of the Committee.

18. The Forestry Commission welcomes the Committee's recognition of the Commission's substantial physical achievements in terms of the area brought under afforestation, the contribution this will increasingly make to the country's timber needs and the special contribution forestry is making to jobs in rural areas together with the security of employment it offers.

19. The Commission notes the Committee's recommendations that more quantification of the Commission's objectives, particularly its secondary objectives, should be carried out to help establish the balance between its various objectives; and the importance attached by the Committee to improvements in the quality and quantity of information required to establish targets and measures of performance, in particular in relation to the benefits and costs of rural job creation and environmental aspects.

20. Work has already started on the identification of data relevant for this purpose. There are, however, difficulties in producing quantified measures of this kind, which the Committee recognise. The Commission, in consultation with the Treasury, will consider this further in order to achieve such quantification as is practicable and cost effective.

21. The Commission is also pleased to note the Committee's statements that private sector forestry is making an important contribution towards home grown timber and that this is likely to become even more significant as its plantations mature. The Treasury and the Commission note the Committee's views on the need for more information on the costs and benefits arising from private sector forestry and will consider what further material can be provided in addition to the data already published in the Public Expenditure White Paper.

*Treasury Minute on the 11th to 16th, 18th and 19th Reports from the Committee of Public Accounts: Session 1986-87, Cm236, HMSO, £2.90 net.

APPENDIX XIII

October 1987 Storm: Assessment of Damage

TABLE 1
Volumes of Timber Blown Down

'000 cubic metres (overbark)

	<i>Suffolk</i>	<i>Essex</i>	<i>Kent</i>	<i>E Sussex</i>	<i>W Sussex</i>	<i>Surrey</i>	<i>Hants</i>	<i>Other</i>	<i>Total</i>
<i>Forestry Commission</i>									
Conifers	430	0	160	140	50	20	50	80	930
Broadleaves	0	0	10	20	50	0	30	0	110
Total	430	0	170	160	100	20	80	80	1,040
<i>Private Woodlands</i>									
Conifers	80	10	70	240	300	90	40	150	980
Broadleaves	200	90	300	340	400	160	80	150	1,720
Total	280	100	370	580	700	250	120	300	2,700
<i>Non-woodland trees</i>									
Conifers and Broadleaves	30	10	20	10	30	20	10	40	170
<i>All trees</i>									
Conifers	510	10	230	380	350	120	100	230	1,930
Broadleaves	230	100	330	370	480	170	110	190	1,980
Total	740	110	560	750	830	290	210	420	3,910

TABLE 2
Proportion of Original Standing Volume Blown Down

percentages

	<i>Suffolk</i>	<i>Essex</i>	<i>Kent</i>	<i>E Sussex</i>	<i>W Sussex</i>	<i>Surrey</i>	<i>Hants</i>
<i>Forestry Commission</i>							
Conifers	27	5	44	51	20	8	3
Broadleaves	3	min	10	23	22	min	3
<i>Private Woodlands</i>							
Conifers	20	7	25	35	30	10	4
Broadleaves	8	4	18	18	18	5	2
<i>Non-woodland trees</i>							
Conifers and Broadleaves	3	2	4	6	5	3	2
Total	13	4	18	24	19	6	2

Note: This information was first published on 16 November 1987

APPENDIX XIV

October 1987 Storm:

The Forest Windblow Action Committee

Terms of Reference of the Committee

- Determine policy for restoration of forest damage
- Co-ordinate action through the Task Force
- Control and monitor progress
- Provide an advice and communications service on windblow and recovery action
- Report to the Forestry Commissioners

Membership of the Committee

Mr J Goodwin (<i>Chairman</i>)	— Association of United Kingdom Wood Pulp Producers
Mrs P Greenwood	— Timber Growers United Kingdom
Mr G Waugh	— British Timber Merchants' Association (England and Wales)
Mr S Quigley	— Forestry Commission
Mr J Dewar (<i>Joint Secretary</i>)	— Forestry Commission
Miss A Sayers (<i>Joint Secretary</i>)	— Timber Growers United Kingdom

Extract from the Committee's Report to the Forestry Commissioners, January 1988:

10. Conclusions and Recommendations

10.1 The storm of 16 October caused more damage to woodlands than any storm in living memory and was unique in a number of features, not least the high proportion of broadleaved trees which have blown down or were otherwise damaged. In the worst affected counties, around 20 per cent of the woodland stock has been lost and the gale has brought much devastation to the landscape of woods and forests which will take many years to restore.

10.2 A fundamental requirement towards the task of effective restoration is that woodland owners should salvage as much as they can from the blown timber both to help finance the restoration work and to minimise the loss of valuable raw material to the wood processing industry. Thus the committee has concentrated its work on assessing the timber volume blown down and the prospects for harvesting and marketing it.

10.3 Regrettably it is now clear that this windblow will pose a variety of major problems, firstly due to the sheer volume of timber on the ground, secondly due to the proportion of non-durable wood, thirdly because of the poor quality and damage caused to much of the timber and finally because of the additional cost of clearing and harvesting it. Overall we feel that the scale of the disaster, the damage to the landscape and the potential economic losses are such as to merit making a special case to government for assistance.

10.4 Accordingly we have examined various means of encouraging the process of marketing and replanting, including harvesting and wood storage. We have concluded that the most effective assistance should be granted in two directions, first the mechanism to increase the size of a potential wood market and second the means of promoting replanting.

10.5 With the aim of attracting timber merchants from outside the normal market catchment of the affected area, we recommend the introduction of a transport subsidy on the terms set out in Appendix 4 [of the report]. We suggest a limited scheme running until March 1989 targetted specifically to encourage the rapid harvesting of pine and beech. We think that the subsidy should be paid on the whole marginal cost of timber movement over and above an assessed normal transport cost of £6 per tonne. We estimate that up to 250,000 tonnes of timber, mostly pine sawlogs, would be purchased by sawmillers outside the normal market area and would therefore qualify for a transport subsidy under the proposed scheme. On this basis we calculate the cost of the subsidy to be a maximum of £2.5 million over a 15 month period.

10.6 We also recommend that a fixed cost supplement for planting is paid over and above the normal planting grants available from the Forestry Commission for restocking felled woodland. Our case is set out in section 8 of the report and although we note the likely scale of clearance costs for unmarketable timber, the case is based on the additional site preparation and replanting costs associated with windblown sites. We have suggested that a supplement of £500 per hectare for broadleaved planting and £200 per hectare for conifer would be a sufficiently attractive incentive to encourage quicker and more widespread restoration of storm damaged woodlands and we estimate that the total cost of such a scheme would amount to £4 million, a cost which would be spread over a period of perhaps 5 years.

10.7 These are the committee's recommendations which, if accepted, will provide a timely stimulus to the forestry industry in its massive task of restoring the storm damaged woods.

APPENDIX XV

Grants Available under the Farm Woodland Scheme

Planting under this scheme will attract a Forestry Commission planting grant and annual payments from the Agricultural Departments as follows:

(a) Forestry Commission planting grant

Area band (hectares)	Conifers (£ per hectare)	Broadleaves (£ per hectare)
1.0-2.9	505	1,375
3.0-9.9	420	1,175
10.0 and over	240	975

These grants will be paid in three instalments, 70% on completion of planting and further instalments of 20% and 10% at five-yearly intervals thereafter, subject to satisfactory establishment and maintenance. The Woodland Grant Scheme supplement of £200 per hectare for planting on better land will not be available.

The minimum area that can be planted by any applicant in the first three years of this scheme is 3 hectares and the maximum is 40, with a one hectare minimum for each block of woodland.

(b) Annual payments under the Farm Woodland Scheme

	Severely Disadvantaged Areas (£ per hectare)	Disadvantaged Areas (£ per hectare)	Elsewhere (£ per hectare)
Arable land and improved grassland which has been cultivated and reseeded within the last 10 years	100	150	190
Unimproved grassland (including rough grazing)	30	30	—

These annual payments will be made for 40 years for oak and beech; 30 years for other broadleaves and mixed woodland containing more than 50% broadleaves by area; 20 years for other woodland; and 10 years for traditional coppice. The first payment will be made the year after planting.

APPENDIX XVI

New Publications

Reports

67th Annual Report and Accounts of the Forestry Commission 1987-88 (£8.50).

Report on Forest Research 1987 (£8.95).

Bulletins

- No. 64 The Yield of Sweet Chestnut Coppice, by T.J.D. Rollinson and J. Evans (£2.00).
- No. 65 Advances in Practical Arboriculture, edited by D. Patch (£8.50).
- No. 66 Choice of Seed Origins for the Main Forest Species in Britain, by R. Lines (£5.20).
- No. 67 Population Biology and Control of the Pine Beauty Moth, edited by S.R. Leather, J.T. Stoakley and H.F. Evans (£5.60).
- No. 68 Price-Size Curves for Conifers, by D.C. Mitlin (£2.00).
- No. 69 Beech Bark Disease, by D. Lonsdale and D. Wainhouse (£2.00).
- No. 70 Air Pollution and Forestry, by J.L. Innes (£2.60).
- No. 71 The Management of Red Deer in Upland Forests, by P.R. Ratcliffe (£2.35).
- No. 72 Predicting the Productivity of Sitka Spruce on Upland Sites in Northern Britain, by R. Worrell (£2.00).
- No. 73 *Rhododendron ponticum* as a Forest Weed, by P.M. Tabbush and D.R. Williamson (£2.00).
- No. 74 Forest Health Surveys 1987. Part 1: Results, by J.L. Innes and R.C. Boswell (£2.00).

Field Books

- No. 1 Top Diameter Sawlog Tables (£2.00).
- No. 2 Thinning Control, by T.J.D. Rollinson (£3.95).

Handbooks

- No. 1 Forest Insects — A Guide to Insects Feeding on Trees in Britain, by D. Bevan (£6.95).
- No. 2 Trees and Weeds — Weed Control for Successful Tree Establishment, by R.J. Davies (£2.70).

Occasional Paper

- No. 15 Evaluation of Forestry Research, by A.J. Grayson (£3.50).

Research and Development Paper

- No. 138 Champion Trees in the British Isles, 2nd Edition, by A.F. Mitchell and V.E. Hallett (£1.00).

Miscellaneous

Wood as Fuel — A Guide to Burning Wood Efficiently, 3rd Edition, by G.D. Keighley (20p).

In addition, the following free publications were produced:

Forestry Review (a popular version of the Annual Report).

Forest Life (Issues 1 and 2).

Advice on Establishment and Tending of Trees — with notes on choice of species, by R.E. Crowther and A.J. Low.

Guidelines for Dealing with Windblown Woodlands — Issued by the Forest Windblow Action Committee.

Acid Rain, Air Pollution and Forests, by J.L. Innes.

The Recognition of Hazardous Trees, 2nd Edition.

Forestry Facts and Figures 1986-1987.

Woodland Grant Scheme.

Forestry Facts series:

1. Forestry Policy since 1919.
2. The Forestry Commission.
3. Timber Production in Britain.
4. Forestry in the Environment.
5. Forestry and Rural Employment.

European Year of the Environment publications:

1. Focus on Forests.
2. The Forest as a Bird Habitat.
3. The Blackwood of Rannoch — An Ancient Woodland.
4. Land Reclamation and Forestry.

APPENDIX XVII

Statistical Tables

Forestry Authority

FORESTRY COMMISSION GRANT SCHEMES POSITION AT 31 MARCH 1988

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	1,718	157,450	348	23,973	905	193,407	2,971	374,830
Basis III Dedication Schemes	287	15,731	63	6,501	396	68,158	746	90,390
Forestry Grant Schemes	4,160	67,473	649	11,679	2,761	233,318	7,570	312,470
Broadleaved Woodland Grant Schemes	4,823	34,650	647	2,484	1,209	6,172	6,679	43,306

- Note:
1. The Basis I and II Dedication Schemes were closed to new applications in June 1972 and the Basis III Dedication Scheme in July 1981. The Forestry Grant Scheme and the Broadleaved Woodland Grant Scheme were closed to new applications from 15 March 1988 and have been superseded by the Woodland Grant Scheme which was introduced on 5 April 1988.
 2. The areas shown are the gross areas managed under the schemes as at 31 March 1988 and include existing woodlands, areas awaiting planting and areas to be left unplanted.

AREA OF PLANTING BY PRIVATE WOODLAND OWNERS FOR WHICH GRANTS
WERE PAID IN THE YEAR ENDED 31 MARCH 1988

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	514	551	1,065	—	—	—	16	422	438	530	973	1,503
Broadleaved	216	312	528	915	1,142	2,057	18	291	309	1,149	1,745	2,894
Total	730	863	1,593	915	1,142	2,057	34	713	747	1,679	2,718	4,397
WALES												
Conifer	679	214	893	—	—	—	4	128	132	683	342	1,025
Broadleaved	43	36	79	219	87	306	0	11	11	262	134	396
Total	722	250	972	219	87	306	4	139	143	945	476	1,421
SCOTLAND												
Conifer	19,725	834	20,559	—	—	—	388	378	766	20,113	1,212	21,325
Broadleaved	552	61	613	526	366	892	6	21	27	1,084	448	1,532
Total	20,277	895	21,172	526	366	892	394	399	793	21,197	1,660	22,857
GREAT BRITAIN												
Conifer	20,918	1,599	22,517	—	—	—	408	928	1,336	21,326	2,527	23,853
Broadleaved	811	409	1,220	1,660	1,595	3,255	24	323	347	2,495	2,327	4,822
Total	21,729	2,008	23,737	1,660	1,595	3,255	432	1,251	1,683	23,821	4,854	28,675

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

	<i>New Planting</i>	<i>Restocking</i>
England	89	72
Wales	21	2
Scotland	30	55
Great Britain	<u>140</u>	<u>129</u>

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

* Total area in other grant schemes was 11 hectares.

AREA OF PLANTING BY PRIVATE WOODLAND OWNERS FOR WHICH GRANTS WERE PAID IN
THE 10-YEAR PERIOD 1 APRIL 1978 TO 31 MARCH 1988

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
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
1987	1,219	2,644	3,863	708	280	988	17,220	1,547	18,767	19,147	4,471	23,618
1988	1,679	2,718	4,397	945	476	1,421	21,197	1,660	22,857	23,821	4,854	28,675

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 1988**

Table 4

Volume in thousands of cubic metres

	England	Wales	Scotland	Great Britain
Conifer	120,213	56,769	149,380	326,362
Broadleaved	109,940	9,938	10,983	130,861
Total volume	230,153	66,707	160,363	457,223
Number of licences issued	1,262	202	455	1,919

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 1988**

Table 5

Hectares

	England	Wales	Scotland	Great Britain
Conditional licences	507	100	380	987
Unconditional licences	83	4	53	140
Total	590	104	433	1,127

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

Forestry Enterprise

LAND USE AT 31 MARCH 1988

Table 6

Hectares

	England	Wales	Scotland	Great Britain
Forest Land				
Under plantations	234,326	131,376	522,416	888,118
Other woodland	2,502	1,445	6,444	10,391
To be planted	1,609	971	17,975	20,555
Total	238,437	133,792	546,835	919,064
Other Land				
Agricultural and grazing	10,139	4,105	48,875	63,119
Forest workers' holdings	249	115	1,972	2,336
Unplantable and miscellaneous (includes nursery land)	28,615	6,317	129,988	164,920
Total	39,003	10,537	180,835	230,375
Total area	277,440	144,329	727,670	1,149,439

NET AREA OF LAND ACQUIRED/DISPOSED OF DURING THE YEAR ENDED 31 MARCH 1988

Table 7

Hectares

	England	Wales	Scotland	Great Britain
Plantations acquired	0	0	3	3
Plantations disposed of	3,222	603	1,536	5,361
Planting land acquired	0	0	1,635	1,635
Planting land disposed of	886	14	126	1,026
Other land acquired	1	0	79	80
Other land disposed of	485	360	1,697	2,542
Net area of land acquired/disposed of	(4,592)	(977)	(1,642)	(7,211)

FOREST LAND DISPOSED OF IN THE YEAR ENDED 31 MARCH 1988

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	1,458	14	830	2,302	1,841.2	805
East	1,359	14	34	1,407	1,992.2	1,430
West	375	2	22	399	613.7	1,546
Total	3,192	30	886	4,108	4,447.1	1,091
Wales	596	7	14	617	870.5	1,427
Scotland						
North	245	1	106	352	336.2	958
Mid	1,130	43	6	1,179	1,026.5	904
South	117	0	14	131	158.7	1,211
Total	1,492	44	126	1,662	1,521.4	940
Great Britain	5,280	81	1,026	6,387	6,839.0	1,085

PLANTING IN THE YEAR ENDED 31 MARCH 1988

Table 9

Hectares

	New Planting	Restocking	Total
England			
Conifer	111	2,286	2,397
Broadleaved	67	323	390
Total	178	2,609	2,787
Wales			
Conifer	148	1,922	2,070
Broadleaved	9	119	128
Total	157	2,041	2,198
Scotland			
Conifer	4,320	3,145	7,465
Broadleaved	297	382	679
Total	4,617	3,527	8,144
Great Britain			
Conifer	4,579	7,353	11,932
Broadleaved	373	824	1,197
Total	4,952	8,177	13,129

**AREA PLANTED ANNUALLY BY THE COMMISSION IN
THE 10-YEAR PERIOD 1 APRIL 1978 TO 31 MARCH 1988**

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
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
1987	138	2,784	2,922	138	1,935	2,073	5,066	3,319	8,385	5,342	8,038	13,380
1988	178	2,609	2,787	157	2,041	2,198	4,617	3,527	8,144	4,952	8,177	13,129

AREAS OF PLANTATIONS AND VOLUMES OF TIMBER FELLED
AND THINNED IN THE YEAR ENDED 31 MARCH 1988

Table 11

Area in hectares
Volume in thousands of cubic metres

	Felled		Thinned		Total Volume Felled and Thinned
	Area	Volume	Area	Volume	
England					
North	1,461	424	1,583	67	491
East	1,065	304	3,928	153	457
West	448	132	2,698	169	301
Total	2,974	860	8,209	389	1,249
Wales	1,541	406	5,175	347	753
Scotland					
North	1,182	365	3,435	211	576
Mid	1,069	351	994	53	404
South	1,126	336	1,239	62	398
Total	3,377	1,052	5,668	326	1,378
Great Britain	7,892	2,318	19,052	1,062	3,380

SALES OF TIMBER IN THE YEAR ENDED 31 MARCH 1988

Table 12

Thousand cubic metres

Description	England	Wales	Scotland	Great Britain
Trees sold standing	469	301	475	1,245
Converted*				
Round timber and saw logs	408	237	454	1,099
Telegraph and other selected poles	1	2	2	5
Mining timber	15	8	0	23
Posts and stakes	8	14	2	24
Pulpwood and boardmill material	254	155	367	776
Firewood	14	5	11	30
Miscellaneous	42	4	2	48
Total	742	425	838	2,005

* In addition 3,100 cubic metres were converted and used internally for forest and estate purposes. (England 1,700; Wales 900; Scotland 500.)

**PROPERTIES MANAGED BY THE COMMISSION
AT 31 MARCH 1988**

Table 13

Number

Type of Property	England	Wales	Scotland	Great Britain
Forest properties				
Foresters' houses	38	17	82	137
Forest workers' houses	279	37	296	612
Forest workers' holdings	18	11	62	91
Miscellaneous*	594	195	566	1,355
Total	929	260	1,006	2,195
Other properties				
Farms and other agricultural subjects	437	280	408	1,125
Residential and other lettings	653	86	422	1,161
Other lettings	199	134	423	756
Total	1,289	500	1,253	3,042
Sporting lettings	514	125	1,061	1,700

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

**PUBLIC RECREATIONAL FACILITIES
AT 31 MARCH 1988**

Table 14

Number

	England	Wales	Scotland	Great Britain
Camping and caravan sites *	23	1	8	32
Picnic places	375	103	168	646
Forest walks and forest nature trails	300	117	292	709
Visitor centres	8	4	7	19
Arboreta	12	4	5	21
Forest drives	5	3	2	10
Forest cabins and holiday houses	107	0	87	194

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

- (i) 5 sites leased to the Caravan Club and 3 sites to the Camping and Caravanning Club;
- (ii) 53 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 1988 (hectares)					During Year 1987-88		
NORTH ENGLAND	Total Area of Forest	Under Planta- tions	Other Wood- land	To be Planted	Other Land	Planting (hectares)		Pro- duction (000 cu m)
						New Planting	Re- stocking	
Border	12,933	11,435	31	13	1,454	36	250	65
Cheshire	926	868	2	0	56	0	0	7
Durham	5,060	4,744	7	91	218	3	102	41
Kielder	49,484	39,380	0	79	10,025	6	548	187
North Lakes	7,953	5,324	47	6	2,576	9	94	40
North York Moors	22,590	19,561	363	172	2,494	7	201	73
Rothbury	11,274	9,531	32	225	1,486	70	94	11
South Lakes	7,980	6,982	220	36	742	0	72	57
York	4,193	3,793	9	109	282	0	3	10
TOTAL	122,393	101,618	711	731	19,333	131	1,364	491
EAST ENGLAND								
Chilterns	3,542	3,325	60	94	63	8	3	6
New	27,157	12,389	683	0	14,085	0	44	33
Northants	7,432	7,247	20	32	133	0	42	15
North Lincs	4,213	4,149	4	0	60	0	27	17
Sherwood	8,719	7,236	31	429	1,023	1	41	35
South Downs	8,032	7,707	161	9	155	0	20	45
Suffolk	4,525	4,469	20	14	22	0	35	51
Thetford	21,519	21,086	128	20	285	0	406	185
Weald	7,791	7,241	44	2	504	0	26	44
West Downs	5,893	5,588	46	6	253	0	31	26
TOTAL	98,823	80,437	1,197	606	16,583	9	675	457
WEST ENGLAND								
Cornwall and North Devon	7,792	7,480	11	23	278	2	127	50
Dean and Three Counties	12,489	11,083	292	2	1,112	0	104	76
Dorset	7,483	6,670	127	1	685	0	68	25
Marches	7,338	7,010	61	67	200	32	97	40
Midlands	5,557	5,420	33	31	73	0	23	30
Somerset and South Devon	9,995	9,166	70	132	627	4	124	67
Wiltshire and Avon	5,570	5,442	0	16	112	0	27	13
TOTAL	56,224	52,271	594	272	3,087	38	570	301

Note: Dorset Forest District comprises the former Dorset and Ringwood Forest Districts.

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

Table 16

Conservancy	Land use at 31 March 1987 (hectares)					During Year 1987-88		
WALES	Total Area of Forest	Under Planta- tions	Other Wood- land	To be Planted	Other Land	Planting (hectares)		Pro- duction (000 cu m)
						New Planting	Re- stocking	
Aberystwyth	12,640	11,458	50	302	830	10	214	63
Afan	10,251	9,501	175	7	568	0	112	36
Brechfa	10,946	10,197	349	9	391	0	216	84
Brecon	7,755	7,049	56	28	622	1	99	52
Corris	7,862	7,497	50	17	298	38	152	52
Dolgellau	11,697	10,508	103	36	1,050	19	71	44
Gwent	9,388	8,940	91	18	339	0	52	42
Llandovery	17,021	16,016	45	207	753	0	108	70
Llandrindod	8,894	8,742	15	5	132	0	151	64
Llanrwst	12,430	10,302	72	7	2,049	15	225	72
Llanwynno	9,434	7,921	57	25	1,431	0	145	25
Newtown	5,583	5,463	26	0	94	0	86	25
Rheola	10,372	8,344	340	294	1,394	74	330	49
Ruthin	10,056	9,438	16	16	586	0	80	75
TOTAL	144,329	131,376	1,445	971	10,537	157	2,041	753

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

Table 17

Conservancy	Land use at 31 March 1988 (hectares)					During Year 1987-88		
NORTH SCOTLAND	Total Area of Forest	Under Planta- tions	Other Wood- land	To be Planted	Other Land	Planting (hectares)		Pro- duction (000 cu m)
						New Planting	Re- stocking	
Buchan	24,363	21,274	103	91	2,895	33	137	100
Dornoch	56,081	35,180	46	4,416	16,439	1,053	19	17
Easter Ross	30,637	23,795	265	770	5,807	199	104	83
Fort Augustus	39,037	19,787	404	1,008	17,838	125	201	62
Inverness	20,194	16,029	128	537	3,500	90	31	31
Kincardine	14,928	13,891	8	9	1,020	38	199	69
Lochaber	36,552	19,351	718	521	15,962	87	158	39
Moray	7,674	7,098	90	7	479	0	54	55
Mull	15,521	10,680	259	461	4,121	168	45	16
Speyside	17,196	15,393	19	1,099	685	105	93	36
Strontian	20,857	11,629	397	1,611	7,220	90	87	20
Wester Ross	30,880	15,584	168	531	14,597	221	181	48
TOTAL	313,920	209,691	2,605	11,061	90,563	2,209	1,309	576
MID SCOTLAND								
Aberfoyle	32,057	24,431	260	338	7,028	53	244	69
Angus	10,197	8,724	2	138	1,333	58	98	24
Cowal	38,671	23,521	998	621	13,531	260	233	87
Fife	7,986	7,317	138	53	478	0	78	27
Kintyre	34,670	26,287	709	1,611	6,063	247	245	76
Loch Awe	34,034	25,202	550	266	8,016	191	82	58
Lorne	32,873	21,270	629	431	10,543	170	126	30
Perthshire	29,824	21,912	275	591	7,046	295	60	33
TOTAL	220,312	158,664	3,561	4,049	54,038	1,274	1,166	404
SOUTH SCOTLAND								
Ayrshire & Arran	41,702	29,189	162	635	11,716	424	123	26
Borders	18,516	16,213	0	722	1,581	0	159	65
Castle Douglas	33,272	27,415	11	43	5,803	0	270	94
Lockerbie	17,483	15,700	19	0	1,764	0	209	51
Lothian & Tweed	14,674	14,046	13	13	602	5	126	33
Newton Stewart	49,640	35,275	21	1,056	13,288	549	97	59
Nithsdale	18,151	16,223	52	396	1,480	156	68	70
TOTAL	193,438	154,061	278	2,865	36,234	1,134	1,052	398

Note: *Mid Scotland:* Cowal Forest District comprises the whole of the former Ardgartan Forest District and part of the former Cowal Forest District.

Fife Forest District comprises the whole of the former Fife Forest District and part of the former Tay Forest District.

Lorne Forest District comprises the whole of the former Lorne Forest District and part of the former Tay Forest District.

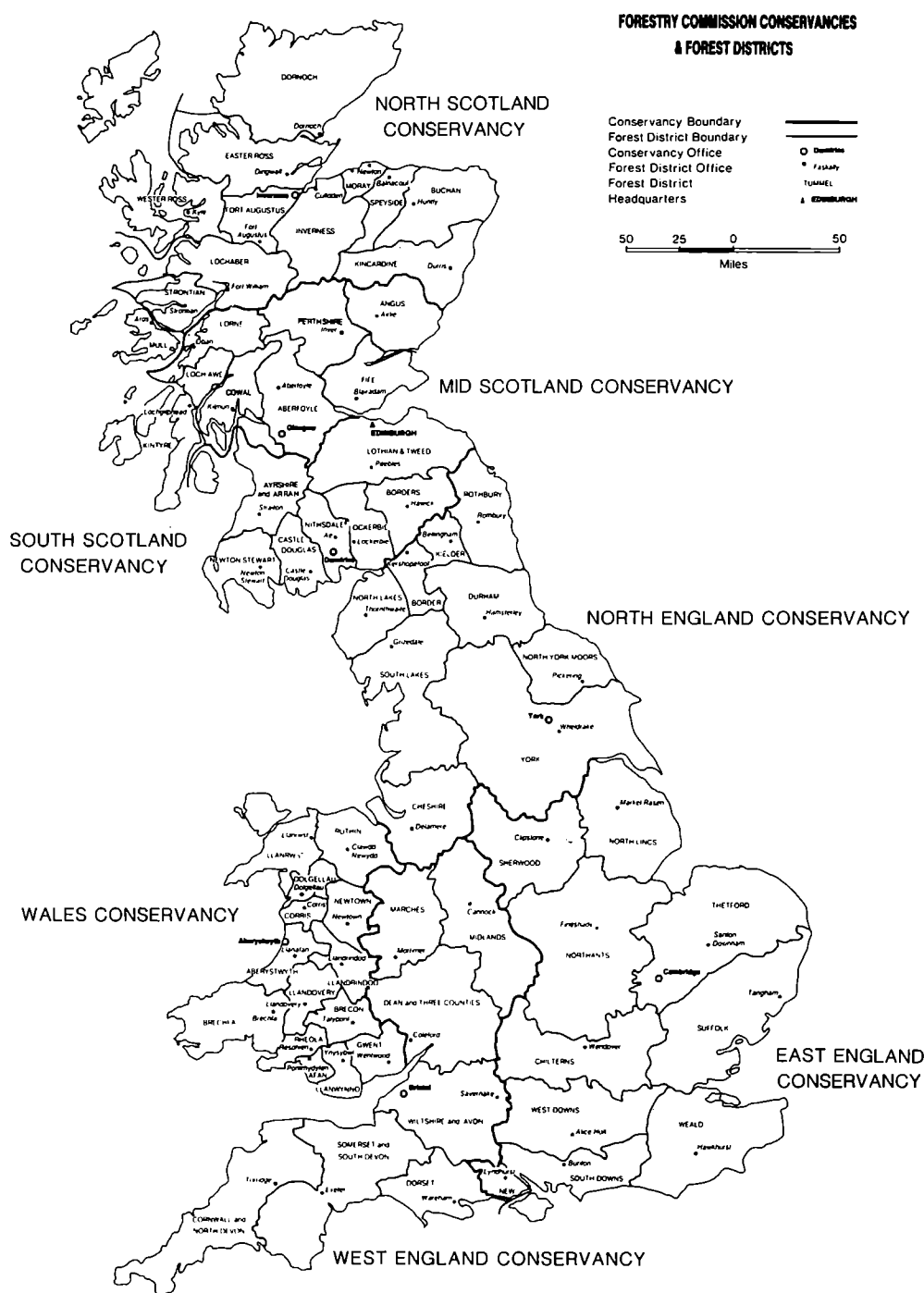
Perthshire Forest District comprises the whole of the former Tummel Forest District and part of the former Tay Forest District.

South Scotland: Ayrshire and Arran Forest District comprises part of the former Ayrshire Forest District and part of the former Cowal Forest District transferred from Mid Scotland Conservancy.

Newton Stewart Forest District comprises the whole of the former Newton Stewart Forest District and part of the former Ayrshire Forest District.

APPENDIX XVIII

Map showing the boundaries of the Commission's Conservancies and Forest Districts at 31 March 1988



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