FORESTRY COMMISSION

THIRTY-FOURTH ANNUAL REPORT OF THE FORESTRY COMMISSIONERS FOR THE YEAR ENDED SEPTEMBER 30тн 1953

Presented pursuant to Section 7 (3) of the Forestry Act, 1945 (8 & 9 Geo. VI Ch. 35)

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FORESTRY COMMISSION, 25, SAVILE ROW, LONDON, W.1.

11th February, 1954

To:

THE MINISTER OF AGRICULTURE AND FISHERIES. THE SECRETARY OF STATE FOR SCOTLAND.

Gentlemen,

In pursuance of Section 7 (3) of the Forestry Act, 1945, I have the honour to transmit the 34th Annual Report of the Forestry Commissioners covering the Forest Year ended 30th September 1953.

I am,

Gentlemen,

Your obedient Servant,

(Sd.) RADNOR,

Chairman.

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THIRTY-FOURTH ANNUAL REPORT OF THE

FORESTRY COMMISSIONERS

FOR THE YEAR ENDED

SEPTEMBER 30th 1953

THE CORONATION

The Coronation was commemorated by naming a road, a forest and a Forest Park. In Wales a new road, 22 miles long, built to serve Coed Morgannwg (the Forest of Glamorgan) was opened by H.R.H. The Princess Royal and named Ffordd y Frenhines (The Queen's Way). In England, Buriton Forest in Hampshire, which in time will be an almost pure beech wood, was renamed Queen Elizabeth Forest, the ceremony being carried out by the Duke of Wellington, Lord Lieutenant of the County of Southampton. In Scotland a newly formed Forest Park comprising Ben Lomond, Loch Ard Forest and part of the Trossachs is to be named Queen Elizabeth Forest Park, and the naming ceremony will take place in 1954.

The Commissioners also co-operated in many local tree planting ceremonies.

GENERAL REVIEW

Forestry Commission Operations

The need for the greatest possible economy in national expenditure was again a guiding factor to the Commissioners in framing their programme of work.

The gross expenditure during the year on forestry operations, excluding housing and acquisition of land and the increase in expenditure due to a rise in forest workers' wages, was less than 2 per cent. greater than for the previous year, yet the area planted—67,600 acres—was nearly 10 per cent. more than in 1952-53, while the area of plantations to be maintained increased by over 8 per cent. Though the area of plantations thinned in England and Wales increased by 7 per cent. and 3 per cent. respectively, there was a fall in the area thinned in Scotland due to concentration of effort on clearing up the windblow, the net result being that the area of plantations thinned—36,900 acres—was substantially the same as in the previous year. The volume of timber from thinnings and fellings—12 million cubic feet—was likewise substantially the same as last year.

In order to carry out this expanding programme of planting and maintenance within the funds available, it was necessary to postpone some of the work ancillary to the main tasks of planting and thinning. For instance, considerably fewer houses were completed than in the previous year, and the policy of restricting the placing of contracts for new houses was continued, while rather fewer miles of roads were built. Projects of this kind cannot be postponed indefinitely and the Commissioners are aware of the danger of letting arrears become excessive.

The rate of acquisition of land for planting continued to give the Commissioners much concern. The net additions in the past two years, including acquired plantations, have been substantially less than the areas planted; last year they were less by 8,000 acres, this year by 14,000 acres. Clearly, unless this trend is reversed the Commissioners' plans for a steady increase in the planting programme will not succeed. The difficulties are aggravated by the fact that so many acquisitions unavoidably include substantial areas of standing timber, so that a greater proportion of the expenditure under this head is on subjects not strictly required to meet the planting programme. The problem can be solved only if more land can be made available for planting.

UTILISATION OF FORESTRY COMMISSION PRODUCE

The volume of produce from the Commissioners' forests disposed of during the year was 12 million cubic feet; this is some half a million cubic feet less than in the previous year, and interrupts the progressive increase which has been evident since 1947. As in previous years the major part of the produce was obtained from the thinning of plantations, which accounted for 79 per cent. of the total volume felled, the remainder coming from the clear felling of mature crops and the clearance of scrub and devastated areas for replanting. Sales to the timber trade of standing timber, consisting for the most part of thinnings, decreased from 3.3 million cubic feet in 1952 to 2.2 million cubic feet in the year under report. On the other hand the Commissioners despatched over $3\frac{1}{4}$ million cubic feet of mining timber, an increase of half a million cubic feet over last year's consignments, the bulk of this increase coming from the East Conservancy, Scotland.

The consistent upward trend since 1947 of receipts from forest produce was also interrupted, and gross receipts from all classes of forest produce fell from £2,128,000 in 1952 to £1,956,000 in the present year.

A statistical summary of the year's work is given below.

STATISTICAL SUMMARY OF FORESTRY COMMISSION OPERATIONS Table 1

Forest Ye	ar 19	52		Forest Year 1953			
Great Britain 53,600			Plantable land acquired	Great Britain		53,600	
England Scotland Wales	 	18,300 27,000 8,300	(acres)	England Scotland Wales	 	28,600 13,400 11,600	
Great Britain		61,600	Total area planted	Great Britain 6			
England Scotland Wales	 	18,000 31,000 12,600	(acres)	England Scotland Wales	 	21,500 34,300 11,800	
Great Britain		39,600	Afforested	Great Britain		42,700	
England Scotland Wales	 	9,500 20,700 9,400	(acres)	England Scotland Wales	 	11,500 23,200 8,000	
Great Britain		22,000	Replanted	Great Britain		24,900	
England Scotland Wales	 	8,500 10,300 3,200	(acres)	England Scotland Wales	 	10,000 11,100 3,800	
Great Britain		37,300	Area thinned	Great Britain		36,900	
England Scotland Wales		20,600 12,200 4,500	(acres)	England Scotland Wales	 	22,000 10,300 4,600	

For	est Ye	ar 195	2		Forest Yea	r 1953	
Great Brita			427	Houses built	Great Britain	•••	339
England Scotland Wales	···· ···		138 222 67	(number)	England Scotland Wales	 	82 172 85
Great Brita	un		344	Motorable roads constructed	Great Britain		328
England Scotland Wales	···· ····	 	151 128 65	(miles)	England Scotland Wales	···· ···	94 157 77

Private Forestry

THE DEDICATION SCHEME

Progress continues to be made in the dedication of woodlands. During the year 227 estates completed dedication bringing the total to 479, and the area dedicated rose from 149,000 acres to 226,000 acres. At the 30th September, 1953, Plans of Operations under the scheme covering a further 140,000 acres had been approved, and for the majority of these, the deeds were in course of completion.

Discussions with the United Kingdom Forestry Committee on amendments which had been proposed by the Commissioners to take account of objections to the existing dedication deeds (as reported in their 33rd Annual Report) took place at intervals throughout the year, and an amended form of deed was submitted by the Committee towards the end of the year. Although there is agreement on most of the changes proposed, discussions on a legal point in one clause were still proceeding.

ADDITIONAL GRANTS

The Commissioners in consultation with the Committee examined a number of proposals designed to facilitate the rehabilitation of private woodlands and to encourage extended planting; among these were proposals for a grant for the clearance of badly over-grown felled areas—in effect a grant for the clearance of scrub—and for a grant at half the rate payable under the dedication scheme for planting by owners who, though not willing to dedicate their woodlands, are prepared to manage them according to plans approved by the Commissioners. Additional grants covering scrub clearing for planting, and grants for planting in "Approved Woodlands", have since been announced by the Commissioners.

MARKETING

The Committee also expressed the view that special attention should be given to the problems facing private owners in the disposal of their produce, and drew attention once more to the dangers of violent fluctuations in timber prices and to the lack of assured markets. They proposed that problems of this kind should be examined by a specially appointed committee. The Commissioners received this proposal sympathetically and discussions as to the scope of such an inquiry were proceeding.

ASSISTANCE TO CO-OPERATIVE FORESTRY SOCIETIES

The Commissioners have continued their policy of encouraging the formation of new co-operative forestry societies. The Welsh Agricultural Organisation Society, which has given much help in organising new societies in Wales, will receive an increased grant of up to £1,200 per annum for the next three years. Dolgelley Woodlands Association, which was formed in January, 1952, has been guaranteed against loss of £500 in their first year of working. Usk and Wye Woodlands Limited, a new society formed in June, 1953, was offered the loan of a trained forester until an experienced manager was appointed.

The Co-operative Forestry Society (Scotland) Ltd. continues to expand. It is being re-organised, and the staff has been increased by two technical assistants who will take over the work of a Panel of Consultants. During reorganisation, the Commissioners have agreed to increase the guarantee given to the Society from $\pounds 600$ to $\pounds 1,000$ per annum for the years 1953 and 1954. It may be noted that this Society in the past has had no need to call upon the guarantee.

The trading account of Northern Forestry Products Ltd. for the year to 30th September, 1952, showed a marked increase in the work done, and no call on their guarantee of £1,500 for the year ended May, 1952, was made. The guarantee was extended for a further year to May, 1953; in November, 1952, however, the Society intimated that it was in a position to dispense with this backing.

The success of these and the other societies which the Commission assists is noteworthy and it is regrettable that there are still large areas, particularly in England, where no co-operative organisation exists to help the private woodland owner.

PLANTING

It is estimated that 18,200 acres, including 10,400 acres in dedicated woodlands, were planted by private owners during the year, an increase of 3,100 acres compared with the previous year. As felling licences with an obligation to replant were issued during the year in respect of 24,800 acres, it is a fair assumption that within the next few years the annual rate of planting by private owners may rise above the rate of 25,000 acres given in the Private Woodlands Policy Report as the objective for the latter part of the first post-war decade.

THE FELLING QUOTA

For the year ending 30th September, 1953, the Commissioners, after considering the views of the Home Grown Timber Advisory Committee, fixed the felling quota at 7.1 million cubic feet of coniferous timber (less 200,000 cubic feet in respect of excess windblown timber in Scotland in the previous year) and 26 million cubic feet of broadleaved timber, with the proviso that this latter could be increased by a further 2 million cubic feet if necessary to meet desirable fellings of old hedgerow trees and trees in small clumps.

The allocation of the quota between England, Scotland and Wales was as follows: ---

	Thou	sands of Cubic I	Feet
	England	Scotland	Wales
Coniferous	2,085	4,475	340
Broadleaved	18,900	4,400	2,700

These decisions, taken in June, 1952, had to be reconsidered on account of the disastrous windblow which occurred in north-east Scotland at the end of January, 1953; and the Commissioners, in agreement with the Scottish Landowners' Federation, the Home Timber Merchants' Association of Scotland and the Home Grown Timber Advisory Committee, decided that only in exceptional cases should licences for clear felling be issued in Scotland outside the affected area; the Commissioners also decided that the special addition to the quota of 2 million cubic feet in respect of hedgerow timber should be withdrawn.

LICENSING

The year under report is the second year during which the control of fellings under the Forestry Act 1951 has been in force, and it is noticeable that the number of applications for felling licences was markedly less than in the first year. This was probably a result of the downward trend in timber prices, but it is thought to be due in some measure to a more general understanding of the Commissioners' policy of conservation of timber, which led owners to refrain from making applications which were unlikely to be approved.

The smaller number of applications to be considered enabled the great majority of them to be dealt with promptly, but as is inevitable in the operation of a control of this nature, there were some complaints either on the grounds of delay or because of dissatisfaction with the Commissioners' decision; but such cases represented a very small proportion of the total.

Nearly 9,500 licence applications, including about 1,350 brought forward, were considered during the year, rather more than two-thirds being in respect of felling in England. This number was some 3,300 less than in the previous year. Applications outstanding at the end of the year amounted to only 530. Over 8,000 licences were granted, and only 400 refusal notices were issued, many of which were in respect of only part of the felling applied for.

About 16 per cent. of all applications received were the subject of consultation with the local planning authorities, and 67 applications were referred to the local planning authority to deal with under the relevant Tree Preservation Order. Although consultation with the planning authorities causes some delay, it does result in a successful reconciliation of the interests of forestry and amenity, and this is borne out by the fact that there were only three cases of dispute necessitating a reference to the Minister of Housing and Local Government in accordance with Section 13 (2) of the Act.

Licences issued for the clear felling of more than one acre of woodland are, except in special cases, subject to restocking and maintenance conditions. Licences with these obligations including replacement licences, and licences to dedicated estates, issued during the year numbered 1,917 and required the restocking of 28,847 acres; in only four cases did the owner request the appointment of a Reference Committee because he was aggrieved by those conditions.

From the 1st October, 1951, when the new felling regulations came into force, there have been 19 prosecutions for offences under the Act, 15 in England and 4 in Scotland. In the year to 30th September, 1953, the number of prosecutions was 9, 7 being in England and 2 in Scotland. With one exception the persons involved were convicted. The penalties imposed varied from £3 to £250.

Pitwood

The 1952 Report referred to negotiations which were about to open between producers and the National Coal Board. The downward trend of world timber prices and of freight chartering rates, which was evident in 1952, had its effect on these negotiations, and the agreement reached provided that from January, 1953, in England and Wales, the price f.o.t. for peeled and seasoned softwood props would be reduced from 6s. to 5s. 3d. per cubic foot for props $2\frac{1}{2}$ to 4 inches, and to 5s. $4\frac{1}{2}$ d. for props $4\frac{1}{2}$ inches and over, but subject to consignors being responsible for freight charges in excess of 35s. per ton. An agreement running from December, 1952, was also reached on unpeeled mining timber sold by weight; this type of material is purchased only by the South Western Division of the National Coal Board. The prices were 102s. 6d. per ton for softwoods, 82s. 6d. per ton for hardwoods, and 80s. per ton for laggings, all subject to freight in excess of 30s. per ton being borne by the consignor.

Although these agreements were to run until the end of December, 1953, provision was made for review at the request of either party at the end of June, 1953. The National Coal Board availed themselves of this provision. As the world price trend was still downwards, though moving less abruptly than in the early stages of recession from the 1951-52 peak, further reductions were agreed for the period July to December, 1953. The prices for peeled and seasoned props showed a reduction of 6d. and $4\frac{1}{2}$ d. per cubic foot respectively for props $2\frac{1}{2}$ to 4 inches and $4\frac{1}{2}$ inches and over. The prices of unpeeled pitwood sold by weight were reduced by 5s. per ton for softwoods, 8s. 6d. for hardwoods and 6s. for laggings. In both cases the freight arrangements remained unchanged.

In Scotland the situation was rather different. From July, 1952, the prices (f.o.t.) for unpeeled props had been agreed at 4s. 3d. and 5s. per cubic foot for props 2 to 4 inches and $4\frac{1}{2}$ inches and over, respectively. But the home timber trade became alarmed at the possible effect on markets of the great gale of 31st January, 1953, which would result in a sudden increase in the supplies of home mining timber; and, as a measure of market security for producers distant from the mines, but against the advice of the growers in general, negotiated delivered prices for pitprops to the The agreement, which also covered sawn mining timber, Scottish pits. was arranged to run from April, 1953, to June, 1955, by which date it was expected that the inevitable upset caused by the windblow would be The delivered prices for unpeeled pitprops were 4s. 11d. to 5s. righted. per cubic foot for props 2 to 4 inches, and 5s. 6d. to 5s. 7d. per cubic foot for props 44 inches and over. The delivered price for peeled props was agreed at 4d, per cubic foot higher.

A comparison of Scottish consumption with the estimated increase in production consequent on the windblow showed a substantial surplus of production; this would have to be disposed of elsewhere. The Home Timber Merchants' Association of Scotland therefore negotiated a price agreement on a f.o.r. basis with the National Coal Board headquarters, by which the surplus mining timber from the Scottish windblow would be absorbed by the English and Welsh coalfields; for this abnormal movement the Forestry Commissioners agreed to assist the National Coal Board direct by defraying part of the cost of freight. By the end of the year home production of mining timber was running at a high level, and output was meeting the National Coal Board Scottish Division's requirements to the extent of about 90 per cent.

The course of negotiations over pitwood prices and their frequency during the last two years had demonstrated that many problems still persisted, and consequently it was decided in August to revive the Pitwood Working Party with the following terms of reference : —" To examine generally the experience gained in the preparation, distribution and marketing of home grown pitwood since the Working Party reported in September, 1951, and to devise a basis for fixing periodically prices for round mining timber between the National Coal Board and producers; and to make recommendations." It is expected that this Working Party will report early in 1954.

Utilisation of Thinnings

The Commissioners have arranged to take a financial interest in a company formed with the main object of developing the saw-milling, converting, seasoning and other processing of small-sized coniferous timber. A sawmill of a Swedish type new to this country is being set up for this purpose in the Cowal district of Argyllshire, and it is expected that the mill will be able to commence operations in 1954.

Windblow in Scotland

The gales of December, 1951, and January, 1952, and their effects on Scottish woodlands, were discussed in some detail in last year's Report, but the damage caused by these gales was insignificant compared with that suffered on 31st January, 1953. This storm, which caused much destruction and loss of life in coastal areas in south-eastern England and on the Continent, devastated the woodlands of north-east Scotland. The worst affected areas lay in the counties of Aberdeen, Banff, Kincardine, Angus, Moray, Nairn and Inverness, the biggest concentration of damage being on Deeside. Damage also occurred north and west of Inverness, in Perthshire, in Argyll and even as far south as Wigtownshire. It was some little time before the full extent of the disaster could be accurately gauged, but eventually it was calculated that 47 million cubic feet of timber were blown down, of which over 43 million cubic feet were on private estates.

Clearly, immediate and special measures were necessary to deal with the situation. The Chairman of the Forestry Commission visited Aberdeen early in February where he met representatives of the woodland owners and the home timber trade. It was recognised that rapid salvage of the blown timber was essential to avoid deterioration; it was decided that the aim should be to clear the blow within two years; and it was reckoned that the task of clearance was within the capacity of the home timber trade. To act as a co-ordinating body, an Emergency Committee was set up in Aberdeen with representatives of the North and East Scotland Regional Advisory Committees, the Scotlish Landowners' Federation, the Co-operative Forestry Society (Scotland) Ltd., the Home Timber Merchants' Association of Scotland, the Forestry Commission and the Ministry of Labour.

Problems of labour and marketing had to be tackled resolutely, not only to achieve the rapid clearance necessary but also to minimise so far as practicable the loss to the woodland owners. The question of prices was complicated because the blow had come at a time of falling world timber prices and when a substantial quantity of imported timber—sawn softwood, boxwood and mining timber—had already been bought for delivery in the spring and summer of 1953.

To deal with the question of markets, the Home Timber Merchants' Association of Scotland negotiated the supply of substantial quantities of railway sleepers, crossings and wagon timbers to the Railway Executive; the prices agreed were free on truck at any station, and the agreement is current until the end of 1954. The Home Timber Merchants' Association of Scotland also negotiated mining timber prices with the Scottish Division, National Coal Board, up to June, 1955, on a delivered basis; they also negotiated with the National Coal Board headquarters for the disposal of mining timber, surplus to Scottish requirements, to the English and Welsh coalfields. But it was evident that if woodland owners were to have the chance of obtaining the same prices for their blown timber, irrespective of whether it was to be milled on the spot or transponted to mills outside the affected area, and of whether the mining timber was to go to the Scottish pits or to England and Wales, some form of Government help was needed. Consequently, a freight assistance scheme for sawlogs from windblown trees which were to be transported to points outside the affected area was put into force; and for certain mining timber specifications, surplus to or unsuitable for Scottish needs, arrangements were made for freight assistance directly between the National Coal Board and the Forestry Commission.

Considerable progress had been made by the end of September, 1953, in regard to agreements between owners and merchants and also with the extraction of the timber. Arrangements between owners and merchants accounted for 41 million cubic feet out of the total of 43 million cubic feet estimated as blown on private estates. Much of the remainder is difficult of access or of indifferent quality, but efforts to find purchasers continued. By the end of September, over one quarter of the blown timber had been moved off the ground to roadside or to local mills.

Inevitably some problems of disposal arose which were not fully solved by the end of the year under report, but on the whole marketing went along fairly smoothly. Mining timber moved to the Scottish pits in greater quantity than ever before in peace time. There were initial difficulties, which were soon largely overcome, about the movement of surplus production of mining timber to England and Wales. Although there was substantial and increasing movement of sawlogs to mills outside the windblown area, this traffic had by the end of the year not reached the scale originally anticipated.

As additional help, the Railway Executive were able to offer special freight rates, and though the concessions were not as attractive as had been hoped, they were by no means negligible. The Ministry of Materials, too, accepted in part the Scottish home timber trade's plea for preference under the softwood consumer licensing system by agreeing to "clause" licences in Scotland and the north of England, in appropriate cases. for home grown timber only.

This account has not so far touched on the wider aspects of the windblow and its general effect on the country as a whole. The wind struck the area in Great Britain which contained, and still contains, a high proportion of the country's reserves of mature and nearly mature softwood 'imber. The effect is thus going to be felt for many years, and poses problems for the Commissioners, who are charged with the responsibility of maintaining adequate reserves of growing trees. There are, too, problems of insect pests and fire risks, though the present indication is that these dangers are likely to be less than was feared. Re-planting is another problem that is already being considered. A more encouraging aspect is the co-operation among private woodland owners, the timber trade, and the Forestry Commission, and the lively appreciation shown and help given by the National Coal Board, the Railway Executive and others in facing what was a major disaster for Scotland.

Grey Squirrels

The Committee, under the Chairmanship of Sir Richard Cotterell, set up by the Commissioners in 1952 to study the problems created by the grey squirrel, continued its activities during the year. Acting on the advice of this Committee, the Commissioners, in conjunction with the Ministry of Agriculture, started an intensive campaign against these animals, which are causing considerable damage to timber trees as well as to orchards, gardens and agricultural crops. The object of this campaign is to acquaint the public with the damage caused by grey squirrels, and to encourage their destruction and eventual extermination.

In co-operation with the Ministry of Agriculture, arrangements were made for the payment of a bonus of 1s. for every grey squirrel tail sent in to the County Pests Officers in England and Wales, or to the Forestry Commission in Scotland; members of grey squirrel clubs were given the option of this bonus or their customary issue of free cartridges. Wide publicity was given to the scheme, both by the Press and the B.B.C.

This campaign is having considerable success. In the year ended September 1953, a total of 263,000 squirrels had been accounted for, 33,000 by Forestry Commission staff and 230,000 by squirrel clubs, occupiers of land and others; for comparison the numbers recorded as killed in the previous year were 27,000 by the Forestry Commission and 141,000 by others. The increase of 95,000 squirrels destroyed can thus be put to the credit of the "shilling per tail" scheme, and the activities of the Committee in other directions.

Two leaflets describing methods of controlling grey squirrels were published during the year. The larger of these, entitled *The Grey Squirrel, a Woodland Pest,* was put on sale through H.M. Stationery Office (Forestry Commission Leaflet No. 31, price 9d.). The smaller leaflet, entitled *Hints on Controlling Grey Squirrels,* was issued free of charge by the Commission, and, with the co-operation of the principal societies representing foresters and landowners, given a very wide circulation throughout the country.

Field research into the life history and feeding habits of the grey squirrel is continuing, and various methods of shooting and trapping are being investigated; trapping appears to hold out good hopes for all-the-year-round control. Although the number of known kills appears impressive, it cannot yet be said with any certainty that enough have been killed to check the general increase in the population that had become apparent. Even if this is so, there is every need to continue the campaign against this serious enemy of our hardwood crops, and it is hoped that all concerned will realise that efforts should be increased as the numbers of kills fall. Only in this way can damage be kept down to the minimum, if not eliminated entirely.

A smaller Committee is studying the question of grey squirrel control in Scotland, where so far the trouble is confined to a relatively small area in the Central Lowlands.

Wages and Holidays of Industrial Employees

Among the chief activities of the Commission's Industrial and Trade Council during the year was the revision of the agreement governing the pay and conditions of service of the Commission's industrial workers which was last revised in 1948. At the end of the year a revised agreement incorporating some important changes was sent for printing.

An increase of the minimum wage for adult workers to 122s. was negotiated, with corresponding changes in the wages of women and juveniles. It was also agreed that with effect from 1st October, 1953, the Commission's workers should be entitled to the three days privilege holidays which are granted to industrial workers in the Government Service generally, making the total annual allowance (including public holidays) 21 days. It should be noted that the Industrial and Trade Council is concerned only with the wages and conditions of service of Forestry Commission employees; for forestry workers on private estates these matters are regulated by the Agricultural Wages Boards.

Conferences and Visits Abroad

The Fifth Session of the European Commission on Forestry and Forest Products, to which the Commission sent three representatives, was held in October, 1952. A note on this meeting was included in last year's Report.

The Pilot Committee on Logging Techniques and Training of Forest Workers, set up by the European Commission on Forestry and Forest Products, met at Helsinki in February, 1953. The United Kingdom was represented on this Committee by Mr. E. G. Richards, Utilisation Development Officer, who was appointed joint rapporteur. The Committee studied methods of improving working techniques by training; consideration was also given to improvement in design of forest machinery.

Mr. W. H. Guillebaud, Deputy Director General, accompanied by Mr. G. D. Holmes, attended a Conference of the International Seed Testing Association held in Dublin in May, 1953, as a representative of the International Union of Forest Research Organisations. The main work of this Conference was to consider a revision of the International Rules for Seed Testing. Certain amendments relating to the testing of forest tree seeds were agreed, and have been incorporated in the new International Rules.

The 11th Congress of the International Union of Forest Research Organisations met in Rome at the end of September, 1953. One hundred and fifty delegates representing twenty-two countries were present. The Forestry Commission was represented by Mr. James Macdonald, Director of Research and Education, Mr. M. V. Laurie, Chief Research Officer, and Messrs. M. V. Edwards and G. D. Holmes. Recommendations were made for further work on a number of subjects, including documentation of forest literature, forest influences, provenances, tree breeding, protection, operational efficiency and utilisation. It is proposed to hold the next Congress in Great Britain in 1956.

The annual meeting of the British Association for the Advancement of Science was held in September, 1953. Professor John Walton, Forestry Commissioner, was Chairman of the Botany Section, and Mr. A. P. Long, Director of Forestry for Wales, was Chairman of the Forestry Sub-Section. In addition to Mr. Long's address as Chairman of the Sub-Section, contributions to the interest of the meeting were made by Mr. Lloyd O. Owen, Forestry Commissioner, Mr. James Macdonald, Director of Research and Education, and Messrs. W. A. Cadman, T. R. Peace and W. T. Smith, officers of the Forestry Commission.

A Commonwealth Fellowship for the study of the mechanisation of forest operations in the United States of America was awarded to Mr. B. R. Feaver, one of the Commissioners' District Forest Officers.

SUMMARY OF YEAR'S WORK

A great deal of the work in the forest is carried out during the winter months, and apart from the devastating gale in north-east Scotland in January the weather was favourable for forestry operations. In general, the winter months—September to March—were drier than the average, and planting and nursery work were completed in good time. Dry weather in March brought on a period of acute fire risk, but otherwise the fire danger throughout the year was less than usual. Unsettled weather during the summer months was favourable to the growth of trees in nurseries and in the plantations.

Finance.—Payments and receipts for the forest years ended 30th September, 1952, and 1953 were : —

		1952	1953
		£	£
Payments	 •••	9,277,642	9,421,426
Receipts	 •••	2,365,033	2,217,319

The amount paid into the Forestry Fund from Parliamentary Votes during the forest year ended 30th September 1953 was £7,041,000, made up of £3,250,000 from the Vote for the financial year 1952–53, and £3,791,000 from the Vote for 1953-54 (Page 23).

Land Acquired.—The net area of plantable land acquired during the year was 53,635 acres, comprising 22,252 acres of bare land, 27,768 acres of felled or devastated woodlands and 3,615 acres of standing woods. (Table 6, page 26).

The total area of land at 30th September, 1953, acquired through the Forestry Fund, under the Transfer of Woods Act, 1923, and by gifts, was 1,909,400 acres. This comprised 1,181,400 acres classed as "Forest Land" which is either already planted or will be planted in due course, and 728,000 acres of "Other Land" which includes nurseries, rough grazing and agricultural land, and other land unsuitable for tree planting. The areas of these individual categories in each of the three countries are given in Table 3, page 24.

New Forests.—Twenty-six new forests were started during the year: nineteen in England; two in Scotland; and five in Wales. (Page 25).

Forest Nurseries.—The area in use as forest nurseries was 2,082 acres. The seed sown amounted to 200,594 lb. of broadleaved species and 13,624 lb. of conifer seed. Stocks of forest trees in the nurseries at the end of the year totalled 189 million transplants and 275 million seedlings. (Pages 28 to 33.)

Forestry Commission Planting.—The area planted was 67,610 acres; this exceeds last year's planting by almost 6,000 acres, and is the largest area of plantations made in any year. More than 118 million trees were used to form these plantations, and to replace failures in recently planted areas. (Pages 34 to 36.)

Forest Protection.—Fires in or threatening Forestry Commission plantations totalled 1,253; of these 85 per cent. were extinguished before causing damage to plantations. The area of plantations burned was 532 acres, and the assessed damage, including cost of extinguishing fires, was £15,000. (Page 36.)

More than 280,000 rabbits and hares, and 33,000 grey squirrels were destroyed. (Page 37.)

Preparation and Sales of Produce.

Thinning and Clear Felling.—Silvicultural thinnings were made in 36,872 acres of young plantations. The area clear felled was 5,098 acres, of which

2,843 acres consisted of scrub or devastated woodlands and 771 acres of coppice or coppice with standards. (Page 37.)

Sales of Forest Produce.—Produce sold, or used for forest purposes, amounted to just over 12 million cubic feet, of which 79 per cent. came from thinnings. The main products were saw timber, mining timber, pulpwood, fencing material, poles and firewood. The gross income from forest produce was £1,956,565; expenditure under the corresponding head of account was £1,089,818. (Page 38.)

Licensing of Timber Felling.—8,030 licences were issued, authorising the felling of 68,760,000 cubic feet of timber. The conifer quota was exceeded by approximately 24 million cubic feet on account of windblown trees in Scotland. (Page 39.)

Roads.—Main extraction and feeder roads totalling 328 miles were constructed in 174 forests. (Page 40.)

New Houses.—339 houses for local supervisors and workmen were completed; at the end of the year work was in progress on a further 299 houses. (Page 40.)

The Dedication Scheme.—Dedication deeds were completed by 227 estates in respect of 76,810 acres of woodland; in addition 291 deeds covering 139,731 acres of woodland were in an advanced stage of preparation. The total area dedicated at the end of September 1953 was 225,954 acres. (Page 42.)

Planting on Private Estates.—It is estimated that private planting amounted to 18,200 acres, of which 13,000 acres qualified for planting grants. (Page 43.)

Research and Experiment.—Research work on a wide range of forestry problems has been continued at the Forest Research Station, Alice Holt Lodge, near Farnham, Surrey, and in experimental areas in many Commission forests and nurseries. (Page 44.)

Grants for forest research in specific fields have been made to universities and other institutions; the main subjects of investigation have been forest soils and problems of forest tree nutrition. (Page 48.)

Education.—The Commissioners maintain five Forester Training Schools, at which 119 men completed the two-year course; 109 Forester Certificates and 10 Foreman Certificates were awarded. All but 2 men took up forestry posts, 101 with the Forestry Commission, 7 in private forestry, 3 with the Colonial Forest Service, while 6 nominees of the Government of Northern Ireland returned to posts in that country. (Page 48.)

Two short courses of six weeks duration for forest workers from private estates were attended by a total of 30 men, all of whom were awarded certificates of efficiency. (Page 48.)

Northerwood House in the New Forest has continued to be a useful centre for giving special courses on forestry. Twenty-five courses of instruction, each lasting a week, were given. These included courses on forestry practice for landowners and agents, for timber merchants' employees, and for the Commission's own staff. In addition to these courses, the universities continued to make extensive use of Northerwood House as a centre for studying practical forest management and silviculture in the New Forest. (Page 49.)

Publications.—Nineteen new publications for sale were issued and 13 publications issued in previous years were revised or reprinted. (Page 49.)

Publicity and Public Relations.—The work of the Commission and the need for the protection of the country's woodlands were brought to the notice of the public by means of Press and B.B.C. announcements, organised visits to forests, and lectures to various organisations by officers of the Commission. Exhibits were provided at 11 of the major agricultural shows. (Page 50.)

ORGANISATION

THE FORESTRY COMMISSIONERS

The Earl of Radnor, K.C.V.O., Deputy Chairman, was appointed Chairman of the Commission on 22nd October 1952 in succession to Lord Robinson, O.B.E., who died on 5th September 1952. The vacant place on the Commission was filled by Mr. A. P. F. Hamilton, C.I.E., O.B.E., M.C., who was appointed a Commissioner on 30th December 1952. Major John Stirling of Fairburn, M.B.E., and Mr. W. H. Vaughan, O.B.E., J.P., Commissioners, were reappointed for a further term of office from 26th July 1953, and Mr. John McNaughton was appointed a Commissioner on 26th July 1953 in the place of Mr. J. E. Hamilton, M.C., whose term of appointment expired on 25th July 1953.

The Commissioners holding office at the close of the year under review were: --

The Earl of Radnor, K.C.V.O. (*Chairman*).
Mr. J. M. Bannerman, O.B.E.
Major Sir Richard Cotterell, Bt., J.P.
Mr. A. P. F. Hamilton, C.I.E., O.B.E., M.C.
Mr. Stanley C. Longhurst, J.P.
Mr. John McNaughton, C.B.E.
Mr. Lloyd O. Owen, J.P.
Major John Stirling of Fairburn, M.B.E.
Mr. W. H. Vaughan, O.B.E., J.P.
Professor J. Walton, F.R.S.E.

Secretary to the Commissioners : Mr. H. A. Turner.

THE NATIONAL COMMITTEES

Some changes took place in the membership of the National Committee for England and the National Committee for Scotland. The Earl of Radnor, on his appointment as Chairman of the Forestry Commission, relinquished the chairmanship of the National Committee for England, an appointment he had held since this committee was first constituted under the Forestry Act, 1945. Sir Richard Cotterell, Bt., a member since 1945, succeeded the Earl of Radnor as chairman, and Mr. A. P. F. Hamilton, C.I.E., O.B.E., M.C., was appointed a member of this committee. Mr. John McNaughton, C.B.E., was appointed to the National Committee for Scotland in the place of Mr. J. E. Hamilton, M.C. The National Committee for Wales continued unchanged throughout the year.

These Committees met monthly (except in August) throughout the year.

The Members are listed below; the Chairman of the Forestry Commission being *ex officio* a Member of each Committee.

THE NATIONAL COMMITTEE FOR ENGLAND : ----

Major Sir Richard Cotterell, Bt. (*Chairman*), The Hon. James W. Best, Mr. A. P. F. Hamilton, The Earl of Listowel. Mr. S. C. Longhurst, Major Charles Mitchell.

Secretary to the Committee, Mr. E. S. J. Hinds.

THE NATIONAL COMMITTEE FOR SCOTLAND: ---

Major John Stirling of Fairburn (*Chairman*), Mr. J. M. Bannerman, Mr. John A. Cameron, The Earl Cawdor, Mr. John McNaughton, Mr. J. Veitch, Professor J. Walton.

Secretary to the Committee, Mr. F. C. Handford.

THE NATIONAL COMMITTEE FOR WALES : ----

Mr. Lloyd O. Owen (*Chairman*), Major Sir Richard Cotterell, Bt., Colonel J. C. Wynne Finch, Mr. David Lewis, Professor R. Alun Roberts, Mr. W. H. Vaughan.

Secretary to the Committee, Mr. E. R. Lewis.

THE REGIONAL ADVISORY COMMITTEES

The Regional Advisory Committees appointed in accordance with Section 15 of the Forestry Act, 1951, have continued to meet at intervals. Except for one change in the Committee for South-East England, where Mr. G. E. H. Palmer was appointed to a vacancy caused by the death of Mr. J. W. C. Agate, the membership of these Committees remained throughout the year as given below.

ENGLAND

North-West.—Viscount Newport (Chairman), Alderman J. V. Allen, Mr. P. J. B. Clive, Mr. R. F. Dickinson, Mr. J. Edwards, Lt.-Col. E. D. Holder, Mr. G. R. Jacob, Mr. C. J. Venables. Secretary to the Committee, Mr. T. L. Eadie. The Committee met in October, 1952, and in April and July, 1953.

North-East.—Lord Bolton (Chairman), Professor J. S. Allen, Mr. W. P. Hedley, Mr. A. Kirkup, Jr., Mr. A. M. Leitch, Mr. R. Minto, Jr., Mr. W. Robertson, Mr. R. Stanley, Col. W. St. A. Warde-Aldam. Secretary to the Committee, Mr. L. A. Chaplin. Meetings were held in December, 1952, and in March, June and September, 1953.

East.—Major Sir Richard G. Proby, Bt. (*Chairman*), Lt.-Col. M. E. St. J. Barne, Major R. L. Coke, Mr. N. D. G. James, Mr. R. W. B. Newton, Mr. G. Oates, Lt.-Col. E. R. Pratt, Mr. C. H. Thompson, Mr. R. B. Verney. *Secretary to the Committee*, Mr. G. H. Clark. The Committee met in November, 1952, and in September, 1953.

South-East.—Lt.-Col. H. S. Eeles (Chairman), Mr. A. E. Aitkins, Lt.-Col. W. R. Burrell, Mr. G. E. H. Calvert, The Rt. Hon. Viscount Cowdray, Mr. A. L. F. Hills, Mr. G. E. H. Palmer, Mr. W. H. Pearson, Mr. A. D. C. Le Sueur. Secretary to the Committee, Mr. H. W. Gulliver. There were meetings in November, 1952, and in March and July, 1953.

South-West.—Mr. W. E. Hiley (Chairman), The Earl Bathurst, Col. C. M. Floyd, Major H. T. H. Foley, Mr. J. R. Maeer, Mr. M. Philips Price, M.P., Mr. L. C. Wheeler, Lt. Commander R. J. B. White, Brig. C. H. Woodhouse. Secretary to the Committee, Mr. A. W. Matthews. Meetings were held in October, 1952, and in February, May and September, 1953.

SCOTLAND

North.—Mr. G. Brown (Chairman), Mr. J. Armstrong, Major D. J. Brodie, Mr. A. Cumming, Mr. A. R. Mackenzie, The Earl of Moray, Mr. A. B. L. Munro-Ferguson, Mr. G. Ralph, Brig. J. Willis-Fleming. Secretary to the Committee, Mr. M. Nicolson. The Committee met in December, 1952, and in May, 1953.

East.—Professor H. M. Steven (Chairman), Mr. A. Anderson, The Earl of Dundee, Lord Glentanar, Sir Ian Forbes Leith, Bt., Mr. W. Leven, Mr. W. E. Paterson, Bailie R. A. Raffan, Mr. W. Riddoch. Secretary to the Committee, Mr. J. P. Lenman. Meetings were held in November, 1952, and in March and July, 1953. South.—The Earl of Haddington (Chairman), Sir James Hunter Blair, Bt., Mr. G. J. Cameron, Mr. J. C. Carson, Mr. W. P. Earsman, Commander D. Herries Maxwell, Mr. J. J. Patterson, Professor J. Ritchie. Secretary to the Committee, Mr. T. H. McGeorge. There were meetings in November, 1952 and in May, 1953.

West.—Capt. J. Maxwell Macdonald (*Chairman*), Major D. C. Bowser, Sir George I. Campbell, Bt., Mr. P. Campbell, Capt. J. Craig, Professor J. Kirkwood, Mr. P. S. Murray. Secretary to the Committee, Mr. B. Kinnaird. The Committee met in October, 1952, and in September, 1953.

WALES

North.—Col. P. R. Davies-Cooke (Chairman), Mr. P. S. Barnie, Alderman H. T. Edwards, Capt. G. L. Bennett Evans, Major W. D. D. Evans, Major J. M. Landers, Professor E. C. Mobbs, Mr. D. Tudor, Lt.-Col. J. F. Williams-Wynne. Secretary to the Committee, Mr. K. Mayhew. Meetings took place in October and December, 1952, and in March and June, 1953. South.—Major J. D. D. Evans (Chairman), Mr. D. G. Badham, Mr. H. H. Busher, Mr. J. C. Deakin, Mr. I. G. Gordon, Mr. H. A. Hyde, Mr. J. E. Lewis, Mr. M. H. Maxwell, Lord Merthyr. Secretary to the Committee, Mr. E. H. Bradford. This Committee met in October, 1952, and in February and September, 1953.

THE HOME GROWN TIMBER ADVISORY COMMITTEE

This Committee met in October, 1952, and in January, April and July, 1953; the membership at the end of the year is given below:

The Earl of Radnor	Chairman, Forestry Commission (Chairman of the Committee)
Mr. A. H. Gosling]
Sir Henry C. Beresford-Peirse, 1	Bt.
Mr. O. J. Sangar	··· Forestry Commission
Mr. A. P. Long	(Torestry commission
Mr. J. Macdonald	
Mr. H. A. Turner	J
Mr. E. V. Kelly	Ministry of Materials
Mr. J. Rea Price	
Lord Bolton]
Mr. W. E. Hiley	Country Landowners' Association.
Mr. R. W. B. Newton	
Major Sir Richard G. Proby, E	St J
The Earl Cawdor]
Mr. T. W. Dalgleish	··· > Scottish Landowners' Federation.
Capt. J. Maxwell Macdonald	
The Earl of Dundee	J
Mr. G. R. Jacob]
Mr. J. R. Maeer	
Mr. C. J. Venables	Federated Home Timber Association.
Mr. Harold Wright Mr. H. N. Sadd	
Mr. T. Bruce Jones Mr. J. T. Smith	Home Timber Merchants' Association
	$\dots \int \text{for Scotland.}$
Mr. Bryan Latham	Timber Trades Federation.
Secretary to the	Committee, Mr. H. R. Flowers.

One change in membership occurred during the year : Mr. E. V. Kelly, Ministry of Materials, replaced Sir Edward B. Monkhouse.

THE COMMISSIONERS' STAFF

PROFESSIONAL AND TECHNICAL STAFF

The organisation of the staff at the Headquarters of the Commission and in the Directorates remained substantially unchanged. The Director General and Deputy Director General have been assisted by the Directors of Forestry for England, Scotland and Wales, the Director of Research and Education, and the Chief Engineer. Some changes in the officers holding these appointments took place during the year. Mr. W. H. Guillebaud, C.B.E., Deputy Director General from 1st July, 1948, retired on 2nd July, 1953, and was succeeded in this post by Sir Henry Beresford-Peirse, Bt., F.R.S.E., Director of Forestry for Scotland. The post of Director of Forestry for Scotland was filled by the promotion of Mr. A. H. H. Ross, O.B.E., Conservator of Forests, North-West Conservancy, England.

The officers holding these appointments at the close of the year are given below :

Director General: Mr. A. H. Gosling, C.B., F.R.S.E.

Deputy Director General : Sir Henry Beresford-Peirse, Bt., F.R.S.E.

Director of Forestry for England : Mr. O. J. Sangar, C.B.E., M.C.

Director of Forestry for Scotland: Mr. A. H. H. Ross, O.B.E.

Director of Forestry for Wales: Mr. A. P. Long, C.B.E.

Director of Research and Education : Mr. James Macdonald, C.B.E.

Chief Engineer: Major General H. P. W. Hutson, C.B., D.S.O., O.B.E., M.C.

The forest and estate staff of the Directors comprised 19 Conservators, the Deputy Surveyor New Forest, the Deputy Surveyor Dean Forest, 35 Divisional Officers and 202 District Officers. One Divisional Officer was promoted to the rank of Conservator, and two District Officers to the rank of Divisional Officer. In the District Officer grade, 17 appointments were made, but owing to promotions, resignations and other causes this resulted in a net addition of only 8 District Officers.

The local supervision of forest work is carried out by Foresters and Foremen, most of whom have been recruited from men trained at one of the Commission's Forester Training Schools. The numbers in these grades at the end of the year were:—Foresters, 645; Foremen, 286. There were also 20 Estate Clerks of Works.

The Engineer staff comprised 3 Directorate Engineers, 1 Machinery Research Officer, 2 Planning Officers, 3 Mechanical Engineers, 10 Conservancy Engineers, 31 Assistant Engineers, and 33 Clerks of Works.

Administrative, Executive and Clerical Staff

At the Headquarters of the Commission, the Secretary's staff consisted of a Principal, a Deputy Establishment Officer, a Principal Information Officer, 13 officers of the rank of Higher Executive Officer and above, and 50 other Executive and Clerical Officers.

The Controller of Finance had a staff of 11 officers of the rank of Higher Executive Officer and above, and 39 other Executive and Clerical Officers.

The staff attached to the offices of the Directors of Forestry, the Director of Research and Education, and the Conservators comprised 34 officers of the rank of Higher Executive Officer and above, and 455 other Executive and Clerical Officers.

LABOUR EMPLOYED

The number of men, women and boys employed at 30th September, 1953, was 13,200, of whom 5,300 were in England, 4,900 in Scotland and 3,000 in Wales. The number at the end of the previous year was 12,900.

THE YEAR'S WORK

THE FORESTRY FUND

The Forestry Fund was established by the Forestry Act, 1919. From this Fund is defrayed all the expenditure of the Commissioners, and into it are paid their receipts from sales of produce, rentals, etc., together with the amounts drawn against the annual Parliamentary Vote. Any balance of a Vote not required during the year for which it was voted may not be drawn into the Forestry Fund, but the Commissioners are permitted to carry forward a small working balance to the next financial year.

In Table 2 below are shown the drawings during each Forest Year and also the balance remaining in the Forestry Fund at the 30th September (the end of the Forest Year).

£

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			I		
	Balance from Preceding Year	Total	From Parliamen- tary Votes	From Forestry Operations, etc.	Payments (Appendix 1)
	(1)	(2)	(3)	(Appendix 1) (4)	(5)
Grand Total, 1920–1953	 ·	72,615,860	54,586,800	18,029,060	72,403,480
1920-29 1930-39 1940-46 1947 1948 1949 1950 1951 1952 1953 1954	 28,619 117,621 170,846 240,014 245,348 395,096 375,487 212,380	4,421,484 8,114,652 8,785,542 3,959,062 6,675,749 6,950,425 7,030,748 8,161,846 9,258,033 9,258,319	3,570,000 6,292,800 4,439,000 3,300,000 5,606,000 5,606,000 5,495,000 6,350,000 6,893,000 7,041,000	851,484 1,821,852 4,346,542 659,062 1,069,749 1,350,425 1,535,748 1,811,846 2,365,033 2,217,319 —	4,502,018 7,926,093 8,864,948 3,870,060 6,622,524 6,881,257 7,025,414 8,012,098 9,277,642 9,421,426

FORESTRY FUND—SUMMARY Year ended 30th September

Table 2

The amount drawn from Parliamentary Votes into the Fund during the Forest Year to 30th September, 1953, was £7,041,000, made up of £3,250,000 from the Vote for the Financial Year ended 31st March, 1953, and £3,791,000 from the Vote for the year ending 31st March, 1954. Receipts from Forestry Operations, etc., amounted to £2,217,319, a decrease of £147,714 compared with last year, and payments to £9,421,426, an increase of £143,784.

Financial Tables.—In Appendix 1, page 52, are given the payments, analysed by major heads of account, and the receipts from Forestry Operations, etc. Appendix 2, page 52, is a statement of expenditure and income. In this table amounts due to or by the Commissioners at the end of the Forest Year have been brought to account; salaries and office charges, which are shown separately in Appendix 1, are distributed over the heads to which they are appropriate; income from Forestry Operations, Education, etc., is shown separately, and adjustments have been made between heads of account in respect of transactions not reflected in the cash accounts, such as the value of produce used for forest purposes.

In Appendices 3 to 8, pages 53 to 55, expenditure and income under the heads shown in Appendix 2 are given in greater detail.

ACQUISITION AND UTILISATION OF LAND

The total area of land acquired through the Forestry Fund, under the Forestry (Transfer of Woods) Act, 1923, and by gifts from private persons, less disposals, was 1,909,400 acres at 30th September, 1953. In most acquisitions of land it is unavoidable that in addition to plantable land there is included some rough grazing and agricultural land which it is not intended to plant, and also land unsuitable for planting on account of soil conditions, exposure and other reasons. Table 3 below gives the present or intended future use of the land so far acquired.

UTILISATION OF LAND

Table 3	At 30th	ı Sep	tember, 195	Great England Section		
			Great Britain	England	Scotland	Wales
Total Acquired			1,909.4	622·5	1,031.4	255-5
Forest Land: Total			1,181.4	474.5	511.4	195.5
Acquired Plantations Planted by Forestry Commission To be planted		 	81·2 786·2 314·0	55·0 304·8 114·7	21 · 2 334 · 5 155 · 7	5·0 146·9 43·6
Other Land: Total			728·0	148.0	520.0	60.0
Nurseries Rough Grazing and Agricultura Forest Workers Holdings Unplantable and Miscellaneous	1 Land 	 	2·1 459·1 12·4 254·4	0·8 60·7 6·8 79·7	0.9 351.8 3.3 164.0	0·4 46·6 2·3 10·7

This table shows that of the 1,909,400 acres acquired to date, 1,181,400 acres are classed as Forest Land comprising 867,400 acres of plantations and 314,000 acres of land to be planted in due course. The land awaiting planting is held by the three countries as follows: —England, 114,700 acres; Scotland, 155,700 acres; Wales, 43,600 acres. Compared with last year, in England and Wales there were increases of the order of 3,000 acres while in Scotland there was a decrease amounting to 15,100 acres. It should be noted that as much as possible of the land awaiting planting is let for grazing until it is actually required. Land which it is not intended to plant is shown under Other Land; this included 471,500 acres of rough grazings and agricultural land, and 254,400 acres of land unsuitable for planting.

Land not placed at the disposal of the Commissioners

The statement of areas given in the previous table includes land under the management of the Ministry of Agriculture and the Department of Agriculture for Scotland. Details of this land are given below.

LAND NOT PLACED AT THE D	ISPOSAL OF	F THE COM	IMISSIONER	5		
Table 4 At 30th September, 1953						
	Great Britain	England	Scotland	Wales		
Total	345,725	59,268	249,872	36,585		
Forest Land	50,750	8,163	40,355	2,232		
Rough grazing, agricultural and miscel- laneous	294,975	51,105	209,517	34,353		

The acreage of land in the charge of the Agricultural Departments at the end of the year was 345,725 acres, of which 50,750 acres are classified as forest land, and will be transferred to the Commissioners when required for planting.

Number of Forests

There are now 462 forests, a total which includes a small number of central nurseries which have little or no woodlands attached. The numbers in each of the three countries are given in Table 5 below. The individual forests are listed by Conservancies in Appendices 12 to 14 on pages 59 to 69, and their approximate positions are shown on the Conservancy maps on pages 72 to 83.

NUMBER OF FORESTS

Table 5	At 30th Sep	tember, 195	53		
		Great Britain	England	Scotland	Wales
Number of Forests:— At beginning of year At end of year Net increase during the year		437 462 25	175 193 18	191 193 2	71 76 5

Twenty-six new forests were started, but one forest nursery, Culmhead, was dispensed with. The names of the new forests, and the counties in which they lie, are given below.

ENGLAND

Bowland, Lancashire and Yorkshire. Causeway Wood, Shropshire. Corhampton, Hampshire. Corvedale, Shropshire. Croft Pascoe, Cornwall. Ditton, Cambridge. Foremark Woods, Derby. Foulshaw Wood, Westmorland. Havant, Hampshire. Highclere, Hampshire. SCOTLAND

Faskally, Perthshire.

WALES

Abergavenny, Monmouth. Aeron, Cardigan. Daugleddau, Pembroke.

Hurn, Hampshire. Jervaulx, Yorkshire. Molton Wood, Devon. Nassburgh, Northamptonshire. Pershore, Worcestershire. Pytchley, Northamptonshire. Wilmington, Sussex. Winterfold, Surrey. Wynyard, Durham.

Glencripesdale, Argyll.

Elwy, Denbigh. Glyn Tarell, Brecon.

Land acquired during the year

The area of land acquired, including land to which entry was secured prior to the legal procedure being completed, amounted to 62,806 acres, of which 54,751 acres are classed as plantable land. Disposals and adjustments totalled 9,210 acres, made up of 1,116 acres of plantable land, 7,111 acres of high lying unplantable land, and 983 acres of grazing and agricultural land.

The net addition of plantable land was thus 53,635 acres, details of which are given in Table 6 below.

PLANTABLE LAND ACQUIRED DURING THE YEAR [NET AREA]

Table (6
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Year ended 30th September, 1953

Acres

	Total	Bare Land	Land previously under a Tree Crop	Standing Woods
Great Britain	 53,635	22,252	27,768	3,615
England Scotland Wales	 28,621 13,357 11,657	9,552 7,031 5,669	16,684 5,849 5,235	2,385 477 753

The net addition of 53,635 acres comprised 22,252 acres of bare land (41.5 per cent.), 27,768 acres of felled or devastated woodlands (51.8 per cent.) and 3,615 acres of standing woods (6.7 per cent.). Compared with the previous year, there was a slight increase in the proportion of bare land, and slight decreases in the proportions of old woodland and standing woods.

As stated earlier in this report (page 7) the Commissioners are concerned that in the past two years the acreage acquired has fallen considerably below the acreage planted.

Progress of acquisition of Plantable Land

The progress made in the acquisition of plantable land from 1920 onwards is given below.

Table 7	Table 7 Ye				ar ended 30th September				
Per	riod			Total	By Lease or Feu	By Purchase			
Total 1920–1953				1,135,060	385,859	749,201			
1920–29 1930–39 1940–46 1947 1948 1949 1950 1951 1952 1953	···· ···· ···· ···	· · · · · · · · · · · · · · · ·	···· ··· ··· ··· ···	310,230 344,757 150,709 22,322 29,945 52,749 60,996 56,113 53,604 53,635	156,759 60,057 40,427 13,016 14,465 13,628 26,423 24,624 15,718 20,742	153,471 284,700 110,282 9,306 15,480 39,121 34,573 31,489 37,886 32,893			

ACQUISITION OF PLANTABLE LAND

Land acquired to date

Table 8 opposite presents a summary statement of the land acquired to date, classified into Plantable Land (including land already planted before acquisition) and other land. The table also shows separately the amounts acquired by lease or feu, and by purchase. The heading Entry Secured relates to properties in which work was able to start although the legal procedure had not been actually completed.

SUMMARY STATEMENT OF LAND ACQUIRED*

Acres

Table 8

At 30th September, 1953

Table 8									
	1	By Lease or Feu				By Purchase			
	Total	Total	Plant- able†	Other	Total	Plant- able†	Other		
Total: Great Britain	1,789,229	541,891	385,859	156,032	1,247,338	749,201	498,137		
England Scotland Wal c s	520,206 1,018,864 250,159	197,484 257,856 86,551	173,588 142,485 69,786	23,896 115,371 16,765	322,722 761,008 163,608	256,390 365,518 127,293	66,332 395,490 36,315		
Acquisitions completed : Great Britain	1,771,899	529,176	373,879	155,297	1,242,723	744,815	497,908		
England Scotland Wales	512,814 1,010,485 248,600	193,612 250,572 84,992	169,850 135,686 68,343	23,762 114,886 16,649	319,202 759,913 163,608	253,010 364,512 127,293	66,192 395,401 36,315		
Entry Secured: Great Britain	17,330	12,715	11,980	735	4,615	4,386	229		
England Scotland Wales	7,392 8,379 1,559	3,872 7,284 1,559	3,738 6,799 1,443	134 485 116	3,520 1,095 —	3,380 1,006 —	140 89 —		

* Excluding Crown Woods amounting to 120,000 acres (of which some 60,000 acres are plantable) transferred to the Commissioners under the Forestry (Transfer of Woods) Act, 1923. † Including planted land.

Of the total of 1,789,229 acres acquired, 1,135,060 acres were classified at the time of acquisition as plantable land, of which 429,978 acres (38 per cent.) are in England, 508,003 acres (45 per cent.) in Scotland and 197,079 acres (17 per cent.) in Wales.

Expenditure during the year in connection with the purchase and lease of land was £469,318, made up as follows:—

	t
Purchase of land, including buildings and standing timber	411,981
Rents and feu duties	50,153
Redemption of tithes	7,184
Total	469,318

The first item shown above includes the purchase of buildings and standing timber on land acquired by lease as well as by purchase; and in the year under review the amounts in respect of buildings and standing timber were £72,997 and £188,254 respectively. It should be noted that the expenditure on the purchase of land cannot be directly related to the area acquired during the year, since that area includes land to which entry was secured pending financial settlement. The average price paid during the year for plantable land, excluding any timber and buildings, was £3 per acre; the average rent paid for plantable land was 2s. 4d. per acre.

Sales of land and buildings amounted to £11,879. (Appendix 3, page 53.)

CULTURAL OPERATIONS

Cultural operations include works carried out in the formation, maintenance and protection of plantations. These operations are discussed below, under: Forest nurseries, including the collection and supply of seed, and the raising of the young trees required for planting; plantations, comprising fencing, clearing of ground, ploughing, draining and planting, also the subsequent maintenance work such as weeding and beating-up; and the protection of the plantations from damage by fire, and the measures taken against injurious animals, insects and fungi. Expenditure on cultural operations during the year amounted to £2,578,639, a decrease of £36,380 compared with the amount spent in the previous year.

Forest Nurseries

Seed Supply

With the exception of poplars which are propagated by vegetative means, the trees required for the Commissioner's planting programme are raised from seed sown in forest nurseries. As much as possible of the seed required is collected from home sources, that is, from the Commissioner's own woods and plantations and, by arrangement with owners, also from private woodlands. The amount of seed available from these sources varies greatly with the season, but it is usually possible to meet our own requirements for most of the broadleaved species, notably oak, ash, sycamore and beech, though the crop of the latter as in the past two years has failed. As regards conifers, with the exception of Scots pine there are still insufficient stands of seedbearing age to make anything but a small contribution to our needs, so that it is necessary to import our main requirements from the countries of origin.

Home Collection of Seed:—The quantities of cones for the extraction of seed, and the amounts of broadleaved tree seeds, harvested during the year are given in Tables 9 and 10 opposite.

As regards conifers, in general the crop of cones was less than usual. Good stocks of seed of Scots pine, Corsican pine, and Norway spruce, however, were held in the Commission's seed stores, so that it was not considered necessary to make special efforts to collect cones of these species; but in the case of Scots pine as the hurricane in north-east Scotland had blown down large numbers of trees of this species with specially good characteristics the opportunity was taken to collect more than 600 bushels of cones from selected trees. Similarly a good quantity of cones was collected from blown down larch trees of outstanding quality. As the crop of cones of Japanese larch and Douglas fir had failed in their countries of origin, special attention was given to collecting cones from trees in this country; this resulted in 468 bushels of Japanese larch cones being harvested, as compared with 82 bushels in the previous year; the Douglas fir crop, however, was again poor and only 70 bushels of cones were collected. The coning of Norway spruce was on the same low level as in the previous year, while the Corsican pine crop failed in all districts.

As regards the broadleaved trees, except for oak which produced an abundance of acorns throughout England and most of Scotland and Wales, seed crops were very variable. Beech mast was generally poor; ash seed was also poor except for some good pockets; sycamore was generally good, while Spanish chestnut provided good seed only in the south of England.

HOME COLLECTION OF CONIFER SEED

Table 9 Cones Collected Cones Seed kilned extracted Total Scotland England Wales Bushels Bushels lb. 554 390 Total 5,259 4,315 5,108 3,187 Scots Pine ... 2,414 466 1,948 2,392 973 ... 2 Corsican Pine 3 1 • • • 960 8 917 10 942 435 European Larch • • • 468 47 241 180 453 479 Japanese Larch ... 70 28 42 Douglas Fir 65 21 • • • Norway Spruce 69 4 61 4 65 35 ... Other Conifers 1,275 24 1,095 1,243 156 1,214 ...

Year ended 30th September, 1953

HOME COLLECTION OF BROADLEAVED SEED Year ended 30th September, 1953

lb.

Table 10

				Total	England	Scotland	Wales
Total				 263,040	245,228	5,165	12,647
Ash				 32	21	10	1
Beech			•••	 1,089	1,022	60	7
Oak	•••		•••	 230,830	215,141	4,024 263	11,665 124
Sycamore	•••	•••		 846	459	263	124
Spanish Ch	iestnut			 27,274	27,274		
Other broa	dleave	d trees	•••	 2,969	1,311	808	850

Imports of seed :- The Commissioners have continued to make bulk imports of seed of Douglas fir, Sitka spruce, Japanese larch and Corsican pine to cover private and trade needs as well as the Commissioner's own requirements; purchases for the trade of seed of other species, including *Tsuga heterophylla, Pinus contorta, and European larch were also undertaken.* As regards the major species, no Douglas fir or Japanese larch seed of the 1952 crop was available, but supplies of the latter from the 1951 crop were obtained. There were abundant supplies of Sitka spruce and Corsican pine seed. European larch of approved origin was scarce, while seed of Abies grandis was not available and supplies of Tsuga heterophylla were scarce; but sufficient quantities of Pinus contorta were available from British Columbia and Oregon, U.S.A.

The principal imports of broadleaved tree seeds were 29,120 lb. of red oak from Holland and 1,760 lb. of sessile acorns from Germany. As the failure of the beech mast extended over western Europe none was available. Details of seed imported showing their countries of origin are given in Table 11 overleaf.

Sales of Seed :- The total quantity of seed sold to the nursery trade and to woodland owners was very much greater than in the previous year. Coniferous seed, Japanese larch in particular, accounted for part of the increased trade requirements, but the major increases were in respect of

IMPORTED SEED

Table 11

Year ended 30th September, 1953

Species		Quantity (lb.)	Origin	
All species: Total		41,664		
Coniferous: Total		10,514	_	
Major species:				
Corsican pine		1,800	Corsica	
Sitka spruce		3,000	British Columbia	
Pinus contorta		820	British Columbia	
Pinus contorta		50	Oregon, U.S.A.	
European larch		72	Germany	
European larch		50	Austria	
European larch		630	Czechoslovakia	
European larch		88	Poland	
Japanese larch		2,500	Japan	
Minor species: Abies procera Abies concolor Abies concolor Abies nordmanniana Abies amabilis Lawson cypress Pinus mugo Sequoia sempervirens Thuja plicata Tsuga heterophylla Other conifers	···· ··· ··· ···	379 100 200 30 11 20 60 5 500 99	Washington, U.S.A. Arizona, U.S.A. Colorado, U.S.A. France Washington, U.S.A. Denmark California, U.S.A. British Columbia British Columbia Various	
Broadleaved: Total		31,150	_	
Oak		1,760	Germany	
Red oak		29,120	Holland	
Walnut		50	France	
Other broadleaved species		220	Various	

acorns from home woods. Comparative figures by species for 1952 and 1953 are given in Table 12 opposite.

Nursery Work

The main nursery operations are done during open weather throughout the winter and spring; young trees fit for planting out in the forest are lifted and despatched, seedlings are lifted and transplanted, and new seedbeds are sown. Favourable weather enabled these operations to be completed in good time and, with few exceptions, the newly transplanted trees had established themselves before dry weather set in during March. Over most of the country there was good germination in the seed-beds, and the subsequent growth of both seedlings and transplants was favoured by the generally unsettled weather experienced during the summer. These conditions also encouraged heavy weed growth in the nurseries, and in the case of seedbeds the use of mineral-oil sprays before the tree seedlings had emerged proved successful in reducing the amount of hand weeding required to prevent the seedlings being suppressed by weeds.

Nursery area:—The area in use as forest nurseries at the end of the year was 2,082 acres; some of the older and less satisfactory areas were dispensed with and fresh ground taken in, resulting in a decrease of 30 acres.

Table 12	Year ended 30th September lb						
			Sold to				
Species		otal	Nurser	y Trade	Woodland Owners		
	1952	1953	1952	1953	1952	1953	
All species: Total	3,404	25,417	3,211	22,661	193	2,756	
Coniferous: Total	2,968	3,511	2,775	3,339	193	172	
Scots pineCorsican pineEuropean larchJapanese larchDouglas firNorway spruceSitka sprucePinus contortaAbies grandisOther conifers	65 339 60 915 693 94 502 21 239 40	200 309 103 1,264 683 132 622 115 	52 304 60 872 665 63 489 21 209 40	163 299 89 1,236 668 107 605 113 	$ \begin{array}{c} 13\\35\\-\\43\\28\\31\\13\\-\\30\\-\\\end{array} $	37 10 14 28 15 25 17 2 2 	
Broadleaved: Total	436	21,906	436	19,322	_	2,584	
Oak Beech Spanish Chestnut Other broadleaved species	162 224 50	20,444 1,462 	162 224 50	17,866 1,456 —		2,578 6 6	

SALES OF SEED

Use of nursery ground :--- A rotation of cropping is observed in the nurseries, and of the total area of 2,082 acres, 321 acres (15 per cent.) were under seed-beds, 697 acres (34 per cent.) under transplant lines, and 647 acres (31 per cent.) in fallow or under green crops. These proportions show no material change from last year. Table 13, page 32, gives details by Conservancies.

Seed Sown:—The amount of seed sown in the forest nurseries was 214,218 lb., made up of 13,624 lb. of coniferous seed, and 200,594 lb. of broadleaved tree seed. A comparison with last year shows that the quantity of conifer seed sown was less by 1,492 lb., while the amount of broadleaved tree seed was greater by 61,624 lb., due to increased sowings of homecollected acorns and Spanish chestnuts. Details of seed sown by countries are given in Table 14, page 32.

Stocks of Seedlings and Transplants :- At the end of September the nurseries held 189 million transplants and 275 million seedlings. Compared with last year this shows an increase of over 5 million transplants, with a decrease of almost 40 million seedlings. Comparative figures for the two previous years are detailed in Table 15 on page 33.

Sales of Nursery Stock :- During the year under review close on 8 million surplus seedlings and transplants were sold to the nursery trade for lining out in trade nurseries or for direct resale to woodland owners. This shows an increase of almost three quarters of a million plants compared with last year. Details by species are given in Table 16, page 33.

Expenditure :---Expenditure on nurseries, including the purchase and collection of seed, was £465,842, a decrease of £20,619 compared with the previous year.

USE OF NURSERY GROUND

Table 13		At 30th September, 1953					
		Total	Seedbeds	Transplant Lines	Fallow and Green Crops	Other	
GREAT BRITAIN		2,082	321	697	647	417	
Percentage of total area		100	15	34 .	31	20	
ENGLAND: Total		755	127	252	250	126	
Conservancy:North WestNorth EastEastSouth EastSouth WestNew ForestDean Forest	···· ··· ···	174 163 154 91 82 61 30	23 27 32 14 17 5 9	66 64 36 34 27 18 7	45 51 60 26 29 30 9	40 21 26 17 9 8 5	
SCOTLAND: Total		895	127	281	264	223	
Conservancy: North East South West	 	222 206 237 230	40 26 35 26	69 60 100 52	88 42 57 77	25 78 45 75	
Wales: Total		432	67	164	133	68	
Conservancy: North South		230 202	35 32	87 77	72 61	36 32	

SEED SOWN IN NURSERIES

Table 14	Year e	Year ended 30th September				
		1951	1952	1953		
TOTAL SEED SOWN Great Britain		227,720	154,086	214,218		
Wales		155,021 12,333 60,366	98,009 12,739 43,338	140,973 15,825 57,420		
Coniferous Seed Great Britain		17,848	15,116	13,624		
Wales	·····	4,742 6,501 6,605	4,870 6,712 3,534	3,919 6,732 2,973		
BROADLEAVED SEED Great Britain		209,872	138,970	200,594		
Wales	··· ···	150,279 5,832 53, 761	93,139 6,027 39,8 0 4	137,054 9,093 54,447		

STOCKS OF TRANSPLANTS AND SEEDLINGS

Table 15		At 30th September	T	Thousands of Plants	
		1951	1952	1953	
TOTAL TRANSPLANTS		176 202	102 701	180.007	
Scotland	··· ···	176,393 51,286 85,759 39,348	183,781 58,144 87,096 38,541	189,007 55,506 88,568 44,933	
Coniferous Total, Great Britain		163,849	166,441	176,845	
	··· ··· ··· ···	42,481 84,323 37,045	45,914 85,596 34,931	47,150 87,360 42,335	
England Scotland	···· ···	12,544 8,805 1,436 2,303	17,340 12,230 1,500 3,610	12,162 8,356 1,208 2,598	
TOTAL SEEDLINGS Great Britain England Scotland Wales	··· ···	334,929 93,239 152,551 89,139	314,609 93,517 150,510 70,582	275,178 90,993 134,769 49,416	
Coniferous Total, Great Britain		308,679	302,528	259,934	
Walaa	··· ···	75,045 151,267 82,367	85,874 149,691 66,963	81,597 132,963 45,374	
		26,250	12,081	15,244	
England Scotland Wales	··· ···	18,194 1,284 6,772	7,643 819 3,619	9,396 1,806 4,042	
			·	5	

SALES OF NURSERY PLANTS

Table 16	Year ended 30th September, 1953			53	Thousands	
All species: TOTAL				 		7,954
Coniferous: Total				•••		7,732
Scots pine Corsican pine	•••]	2,309 206
European larch Japanese larch	····	••••		 		1,217
Douglas fir Norway spruce	 	 	···	 	 	690 2,528
Sitka spruce Other conifers	•••	 	 		 	669 113
Broadleaved: Total						222
Ash Oak		····	 	 		1 165
Beech Other broadleave	 d spe	cies	···	 .		49 7

Plantations

Favourable conditions during the autumn and winter permitted the preparatory work of fencing, ploughing and draining to be pushed ahead so that planting was completed in good time. The March drought caused some concern for the newly planted trees, but April brought more rain than the average for that month almost everywhere before drought had affected the trees. Apart from a frost in early May which caused some damage to oak and beech in the south of England, the weather during the year was favourable to growth.

The total area planted was 67,610 acres; this exceeds last year's planting by almost 6,000 acres, and is the largest area yet achieved in one year. In addition, 309 acres of woods were underplanted.

The acreages planted were: in England 21,508 acres, in Scotland, 34,337 acres, and in Wales, 11,765 acres. A comparison with last year's achievements shows that the areas planted in England and Scotland were greater by 3,453 acres and 3,359 acres respectively; in Wales there was a small decrease of 834 acres. Details of the areas planted in each country, by Conservancies, are given in Table 17 below, and the acreage planted in individual forests is detailed in Appendices 12 to 14 on pages 59 to 69.

AREAS PLANTED AND UNDERPLANTED

Table 17	Year ended 30th September, 1953				
Country or Conservancy	Planted	Under- planted	Country or Conservancy	Planted	Under- planted
GREAT BRITAIN	67,610	309	SCOTLAND: Total Conservancy:	34,337	71
ENGLAND: Total Conservancy:	21,508	159	North East	8,525 8,334	6 25
North West North East	3,285 9,050	28	South West	9,080 8,398	29 11
East South East South West	2,754 2,343 2,813	124	Wales: Total	11,765	79
New Forest Dean Forest	920 343	5 2	Conservancy: North South	6,219 5,546	60 19
	1				

Of the 67,610 acres planted during the year, 42,665 acres were afforested, and 24,945 acres of cleared woodlands were replanted; this latter figure includes the replacement of 625 acres destroyed by fire. Afforestation thus comprises 63 per cent., and replanting, 37 per cent. of the total area planted; these proportions show little change from the previous year.

The area afforested is made up of 41,716 acres of conifer plantations and 949 acres of broadleaved plantations; the area replanted shows a somewhat higher proportion of broadleaved plantations, the areas being 18,945 acres of conifers and 6,000 acres of broadleaved trees. The total area of broadleaved plantations made during the year was thus 6,949 acres, of which more than half was in the East, South-East and South-West Conservancies of England. Further details are given in Table 18 opposite.

Plants used for Planting and Beating-up

A total of 118.4 million young trees were planted in the Commissions' forests; 104.4 million were used in forming new plantations and 14 million for beating-up, that is, replacing failures in the more recently formed plantations. For comparison, the numbers of plants used last year were: in new plantations, 102 million; for beating-up, 18 million.

Table 18			Year ended 30	Acres Wales		
		Great Britain	England			Scotland
Total Planted All species	:		67,610	21,508	34,337	11,765
Conifers Broadleaved	 	···· ···	60,661 6,949	16,307 5,201	33,886 451	10,468 1,297
AFFORESTED: All species			42,665	11,546	23,197	7,922
Conifers Broadleaved	••• •••	•••	41,716 949	10,822 724	23,085 112	7,809 113
RE-PLANTED: All species			24,945	9,962	11,140	3,843
Conifers Broadleaved	 	••••	18,945 6,000	5,485 4,477	10,801 339	2 ,659 1,184

AFFORESTATION AND REPLANTING

The proportions in which the main species were used are given below:

Spruces (Norway and Sitka)		37 per cent.
Pines (Scots and Corsican)	•••	26 per cent.
Larches (European and Japanese)		14 per cent.
Douglas fir and other conifers		13 per cent.
Broadleaved species (chiefly beech	and	-
oak)		10 per cent.

Trends over the past few years have shown a reduction in the proportion of spruces and a greater use of a number of species which hitherto had not been used extensively—notably *Pinus contorta*, and to a less extent hybrid larch, and *Picea omorika*. The proportion of broadleaved species has remained fairly constant at about 10 per cent.

The numbers of the main species used in each Conservancy are listed in Appendix 9, page 56, and a summary of the species used for planting and beating-up in each of the three countries is given in Appendix 10, page 58.

Progress of Planting to date

Table 19 below sets out by periods, the total area planted to date.

Table 19		 	Acres			
			Total	Afforested	Re-planted	
Total, 1920–1953			826,143	583,966	242,177	
1920-29 1930-39 1940-46 1947 1948 1949 1950 1951 1952 1953	···· ···· ···· ····	···· ····	138,271 230,607 110,476 26,356 36,404 43,886 53,737 57,164 61,632 67,610	101,976 174,428 77,616 17,456 23,932 30,864 37,355 38,018 39,656 42,665	36,295 56,179 32,860 8,900 12,472 13,022 16,382 19,146 21,976 24,945	

The total of 826,143 acres shown in the above table is the gross acreage planted by the Commissioners, without taking account of losses from fire or wind or as a result of fellings, disposals, etc. The area of plantations existing at the end of the year was 786,200 acres (see Table 3, page 24). Included in the 242,177 acres shown above as replanted, are 18,869 acres replanted after fires.

Forest Protection

The cost of forest protection was £327,161 (Appendix 4, page 53); of this sum £149,556 was spent on fire protection, including making and maintaining fire lines, fire patrols and actual fire fighting, and £177,605 was spent on other protective measures which include the destruction of rabbits and squirrels, and measures taken in plantations and nurseries against injurious insects and fungi. The corresponding figures for last year were: fire protection, £151,405; other protection, £149,222; the increased cost of this latter item being due to intensification of the campaign against rabbits and grey squirrels.

Fire Protection

Table 20

Over most of the country acute fire danger developed during the spring for short periods only, with lesser fire danger periods in the south during the early parts of August and September. The most dangerous months were March, April and May when more than 85 per cent. of the outbreaks occurred. The total number of fires in or threatening Commission plantations was 1,253, of which 85 per cent. were extinguished before causing damage to plantations; in the previous year the proportion was 90 per cent.

The area of plantations burned amounted to 532 acres, the damage being assessed at £15,000. No individual fire in plantations was particularly large; the six largest ranged from 15 to 44 acres and accounted for a total of 169 acres. The number of fires dealt with during the year, the area of plantations burned, and the loss sustained in the past five years are given in Table 20, below.

An analysis of the causes of forest fires is given in Table 21, page 37. This analysis shows that railways caused more fires than all other agencies together; the 714 fires originating from railways accounted for 57 per cent of the total number of outbreaks and 21 per cent. of the area of plantations burned; the corresponding figures for the previous year were 751 fires accounting for 67 per cent. of the total, and 5 per cent. of the area of plantations burned. Fires spreading in from adjoining land come next in importance; these numbered 327, being 26 per cent. of the total, and accounting for 32 per cent. of the area of plantations burned. Fires caused by the Commission's employees numbered 14, of which 11 resulted from the burning of fire lines, etc., which got out of control; most of the damage from this cause resulted from one incident in which 42 acres of plantations were burned.

NUMBER AND EXTENT OF FOREST FIRES, 1949–1953 Year ended 30th September

				Number of Fires	Area Burned (acres)	Assessed Damage
1949				1,094	489	22,000
1950				874	158	7,000 12,000
1951 1952	•••	•••	•••	1,327 1,130	348 455	16,000
1952				1,253	532	15,000

CAUSES OF FOREST FIRES Year ended 30th September, 1953

	Number of Fires	Area Burned (acres)
Total	1,253	532
Railways	714	111
Adjoining Land General Public	327	168
General Public	75	69
Commission Employees	14	48
Incendiarism	14	9
Miscellaneous	23	37
Unknown	86	90

Protection against Damage by Animals

The absence of long spells of hard weather during the winter, and the generally dry conditions in the spring, resulted in considerable increases in the rabbit population, and, locally, areas of blown timber have afforded good harbourage for breeding. Co-operative action to control this pest over considerable areas has been continued, with, on the whole, satisfactory results. The Commission maintains trappers and warreners who wage an all the year round war against these destructive animals, and more than 267,000 rabbits and 13,000 hares were killed. The figures for the previous year were 215,000 rabbits and 11,000 hares.

The campaign against grey squirrels in the Commission's forests resulted in 33,000 being destroyed; of this number 31,800 were killed in England, 900 in South Wales and 250 in forests in central Scotland. In England, most of the squirrels destroyed were in the southern half of the country, the New Forest and the Dean Forest accounting for 8,000 and 9,000 respectively, and the South-East Conservancy for 9,500. A report on the countrywide campaign against this animal is given in the Review Section on page 14.

Considerable damage to trees by voles occurred in Carron Valley Forest, Stirlingshire, where natural control is to some extent occurring due to the large number of predatory birds which have been attracted to the forest.

In the interests of our tenants and neighbours 3,500 foxes and cubs were killed.

Gale Damage

Table 21

An account of the damage to plantations in north-east Scotland caused by the severe gale of 31st January, 1953, is given on page 13.

PREPARATION AND SALE OF PRODUCE

Thinning and Clear Felling

As in previous years, the greater part of the produce from the Commission's forests came from thinnings made in the younger plantations. Clear fellings of high forest are kept to the lowest extent consistent with good forestry. A summary by Conservancies of the areas thinned and clear felled is given in Table 22 overleaf.

Thirty-six thousand, eight hundred and seventy-two acres of young plantations were thinned, of this 15,363 acres were thinned for the first time and 21,509 acres had already been gone over one or more times. The total area

Table 22	Year ended 30th September, 1953					
	Thinned	Felled		Thinned	Felled	
GREAT BRITAIN: Total	36,872	5,098	SCOTLAND: Total Conservancy:	10,232	1,453	
ENGLAND: Total	22,016	2,613	North	2,489	520	
Conservancy:	,		East	2,653	698	
North West	3,765	352	South	2,139	6	
North East	3,067	194	West	2,951	229	
East	7,630	201		,		
South East	1,630	772	WALES: Total	4,624	1,032	
South West	3,083	559	Conservancy:	,	_,	
New Forest	1,038	452	North	2,388	562	
Dean Forest	1,803	83	South	2,236	470	

AREAS THINNED AND FELLED

thinned was less than in the previous year by a small amount—378 acres; in England and Wales there were increases of 1,454 acres and 128 acres respectively, but in Scotland the area decreased by 1,960 acres. The decrease in Scotland was a result of the hurricane which caused so much damage to woods in North and North-East Scotland in the early part of the year, as merchants in these areas were using all their resources to clear wind blown timber, and so were unable to do as much thinning in Commission plantations as in the previous year. The area clear felled amounted to 5,098 acres —53 acres more than last year; an analysis of these fellings shows that 1,484 acres were classed as high forest, 771 acres as coppice or coppice-withstandards, and 2,843 acres as scrub or devastated woodlands being cleared for replanting.

Sales of Forest Produce

The volume of timber and smaller material sold or used for forest purposes slightly exceeded 12 million cubic feet, of which 79 per cent. was derived from the thinning of plantations.

Mining timber, which totalled $3\frac{1}{4}$ million cubic feet, was the largest individual category of produce sold and showed an increase of half a million cubic feet compared with last year. A curtailment of orders from factories using material for pulping reduced the sale of this type of material to one million cubic feet—a drop of a quarter of a million cubic feet compared with last year. There was a steady demand for fencing material which absorbed $1\frac{1}{3}$ million cubic feet; fire wood sales exceeded $1\frac{1}{3}$ million cubic feet but were slightly less than last year.

Smaller quantities of materials for a variety of purposes were also sold, such as flag poles for the Coronation decorations, poles for scaffolding, ladders and dernicks; hop and pea-harvesting poles; turnery poles and crate rods; and cord-wood for charcoal making. Small quantities of oak bark for tanning were harvested and several thousand fascines for coast protection work were also supplied.

The gross income from all classes of forest produce was $\pounds 1,956,565-a$ decrease of $\pounds 171,988$ from the previous year; sales of plants from forest nurseries, included above, brought in $\pounds 34,058$. Expenditure on the preparation and dispatch of forest produce increased to $\pounds 1,089,818$, as compared with $\pounds 883,388$ last year. (Appendix 3, page 53.)

LICENSING OF TIMBER FELLING

Licences issued during the year ended 30th September 1953 were 8,030 in number and authorised the felling of 68,760,000 cubic feet of timber. This volume was apportioned between coniferous and broadleaved species as follows:—

Counted against the quota Over 6 inches quarter-girth at breast height 30.968	-
over o menos quarter-Entit at breast height 50.308	
Non-quota Thinnings over 6 inches quarter-girth at breast height 2.206 6 inches quarter-girth and under at breast height 9.493	2.667
Broadleaved species Counted against the quota Over 6 inches quarter-girth at breast height 24.472	2.001
Non-quota 6 inches quarter-girth and under at breast height 1.621 2	6.093
Total 6	8.760

The felling quota for the year to 30th September 1953 was fixed in July 1952 at 6.9 million cubic feet of coniferous and 26 million cubic feet of broadleaved timber, but as discussed in earlier pages of this report (pages 13 to 14) the storm of January 1953 prevented the quota from being adhered to in Scotland. Inevitably the conifer quota was exceeded and felling licences for coniferous timber regulated by the quota were issued in respect of 31 million cubic feet, of which windblown timber in Scotland accounted for 26.2 million cubic feet; licences for broadleaved timber within the quota amounted to 24.5 million cubic feet—approximately 1.5 million cubic feet less than the quota. In addition, licences for the felling of timber under 6 inches quarter-girth at breast height, and so not coming within the quota, were issued in respect of 11.7 million cubic feet and 1.6 million cubic feet of coniferous and broadleaved timber respectively.

The 8,030 licences issued included 2,228 licences authorising the clear felling of 28,077 acres; 1,733 of these licences, covering the clear felling of 21,983 acres, are subject to restocking and maintenance conditions, and 170 licences for the clear felling of 2,623 acres were issued to dedicated estates. Clear felling licences to which no replanting conditions were attached (excluding those issued to dedicated estates) numbered 325; these covered the clear felling of 3,471 acres and include 1,487 acres acquired for replanting.

In addition, 22 replacement licences were issued in respect of timeexpired licences; these covered the clear felling of 465 acres, of which 241 acres carried restocking and maintenance conditions.

The administrative cost of licensing the felling of timber during the year under report was £70,528; this amount is included under superior supervision and overhead charges in Appendix 8, Special Services (page 55).

ROADS

Attention has been given to keeping specifications for new roads as low as possible consistent with the traffic they must carry; and, where conditions warrant, a simple type of road is built, such as can be formed by tipping and spreading the minimum thickness of material as found (i.e., without processing) on to the existing surface or on to a roughly shaped formation, with little or no rolling.

The progress made in the construction of forest roads in each country is shown below.

Table 23

	I				
	Com	pleted		nder ruction	Number of Forests at which work was
	Main	Feeder	Main	Feeder	undertaken
Great Britain: Total	201	126	54	26	174
England Scotland Wales	50 91 60	43 66 17	27 6 21	12 7 7	62 82 30

FOREST ROADS Year ended 30th September, 1953

A total of 201 miles of main roads were completed, along with 126 miles of feeder roads. The figures for the previous year were: main roads 213 miles, feeder roads 131 miles. At the end of the year, work was in progress on 54 miles of main and 26 miles of feeder roads; these quantities also are less than in the previous year.

Expenditure on roads amounted to £480,659, of which £383,006 was on the construction of new roads, and £97,653 on the maintenance of existing roads. Compared with last year there was a reduction in expenditure of £112,000 on new roads, and of approximately £8,000 on road maintenance.

ESTATE MANAGEMENT

Expenditure on buildings, including Forest Workers Holdings, was £870,533, as compared with £1,217,697 in the previous year, the reduction of £347,164 being due to the curtailment of the Commissioners' building programme to meet the need for national economy. Expenditure on new buildings, conversions and adaptations was £767,733, while on repairs and maintenance £102,800 was expended. Income from rents and royalties was £185,189. (Appendix 3, page 53.)

The reduction in expenditure is reflected in the number of houses completed and in course of construction; 339 houses were completed and at the end of the year work was in progress on a further 299 houses. The corresponding figures for the previous year were: 427 houses completed, with work in progress on a further 510 houses.

Attention has been given to the improvement of older properties, and emphasis has been placed on water supplies, sanitation, heating and lighting. Many of the Commissions' properties are scattered and in isolated districts, and builders willing to undertake maintenance or repair work are not always available. The position is getting easier but in some districts it is still necessary to maintain direct labour repair gangs.

Tenancies

The numbers and categories of lettable subjects managed by the Commissions' estate staff are given in Table 24 below.

		tember, 195	3.		Number	
Description	Great Britain England Scotland					
Houses for Supervisors and Forest Worke	ers	4,016	1,589	1,829	598	
Foresters' and Foremen's Houses Forest Workers Holdings Forest Workers Houses	 	470 1,211 2,335	226 538 825	196 453 1,180	48 220 330	
Other properties		3,462	1,488	1,366	608	
Agricultural, with house Agricultural, land only Houses and other premises Sporting lettings	 	517 1,492 471 982	167 642 276 403	158 577 190 441	192 273 5 138	
Miscellaneous Easements, permissions, etc		2,841	1,655	831	355	

The total number of lettable subjects at the Commission's disposal at the end of the year was 7,478; these include 4,016 holdings and houses for forest workers and local supervisors, of which 1,779 are new houses or conversions undertaken since 1947. The numbers of these by countries are: England 545, Scotland 989 and Wales 245.

STORES

Expenditure on stores including maintenance was £843,077 (Appendix 3, page 53). This includes expenditure on the purchase and maintenance of manual tools, road vehicles, tractors used for forest, nursery and road work, ploughs and other cultivating equipment, as well as road-making machinery of various types. £354,042 was spent on new equipment and £489,035 on maintenance and repairs. Compared with the previous year expenditure on new equipment increased by £79,861, and maintenance and repairs by £46,427.

MISCELLANEOUS EXPENDITURE

Miscellaneous expenditure amounted to £908,790; the major items being payments for time lost owing to bad weather (£260,575), paid holidays (£237,409), sick pay (£73,686), and upkeep of hostels and bothies (£55,219). Also included under this head are legal charges, pensions and gratuities to forest workers, farming and estate expenses, and local rates. The total expenditure, as compared with that for the previous year, shows an increase of £97,123; this increase comprises: £53,244 more for payments for time lost on account of bad weather, an increase of 26 per cent. over last year; £28,550 more for paid holidays, 13 per cent. increase; £10,295 more for sick payments, 16 per cent. increase.

PRIVATE FORESTRY

Expenditure on private forestry amounted to £432,447, the major part of this expenditure was £247,198 in respect of grants and loans under the Dedication Scheme, an increase of approximately £115,000 compared with last year. Other payments included grants for planting done outside the Dedication Scheme amounting to £51,291; thinning grants, £38,069; grants to co-operative forestry societies, £1,778; payments in connection with the Livenpool Corporation proceeds-sharing scheme at Lake Vyrnwy in North Wales, £206; and salaries and expenses of the staff administering these schemes and employed on agency and advisory work amounting to £93,905.

Income credited to this head was $\pounds 13,869$; this includes refunds of planting grants amounting to $\pounds 7,335$, payments for agency and advisory services of $\pounds 4,168$, and the Commission's share of the Liverpool Corporation proceeds-sharing scheme amounting to $\pounds 1,603$ gross ($\pounds 1,397$ net).

The Dedication Scheme

The progress of the Dedication Scheme has already been noted in the review section (page 9), and Table 25 below gives further details and shows the progress of the Scheme since its inception.

PROGRESS OF DEDICATION

	Great	Britain	England		Scotland		Wales	
	Number of Dedi- cations	Area (acres)	Number of Dedi- cations	Area (acres)	Number of Dedi- cations	Area (acres)	Number of Dedi- cations	Area (acres)
Total, 1948–53	479	225,954	261	94,619	177	121,478	41	9,857
1948 1949 1950 1951 1952 1953	1 17 35 79 120 227	1,006 12,267 23,448 37,010 75,413 76,810	1 8 11 31 67 143	1,006 4,214 9,062 12,489 24,885 42,963	9 22 41 44 61	8,053 14,165 22,779 48,226 28,255	 	 221 1,742 2,302 5,592

Table 25

Year ended 30th September

Dedications numbered 227 and resulted in the 76,810 acres being added to the area of woodlands already in this scheme; it will be noted that, while the area compared with the previous year was only some 1,400 acres more, the number of estates dedicating was almost twice as many. Deeds of dedication for a further 291 estates covering 139,731 acres were in an advanced stage of preparation, and, in addition, plans of operations were being prepared by 281 estates covering 151,196 acres.

Approved Woodlands

The term "Approved Woodlands" signifies woods on estates whose owners have decided not to dedicate but have undertaken to manage their woodlands in accordance with a plan of operations approved by the Commissioners. Approval was given to the working plans for 43 estates with woodlands extending to 16,671 acres; 34 estates with 9,335 acres of woodlands being in England, 6 estates with 6,279 acres in Scotland and 3 estates with 1,057 acres in Wales.

Planting on Private Estates

Table 26 below summarises by number and area the planting grant schemes which were inspected and passed for payment.

PLANTING UNDER STATE-AIDED SCHEMES Areas inspected and passed for payment

Table 26Year ended 30th September 1953										
		Planting under Dedication	Small Woods Planting	*Poplar Planting	Total					
Great Britain										
No. of Schemes	•••	826	455	73	1,354					
Total Area, acres		15,143	2,807	210	18,160					
Conifers Broadleaved Mixed	•••• ••••	10,312 831 4,000	1,477 226 1,104	210 (5,290 trees)	11,789 1,267 5,1 0 4					
		E	NGLAND							
No. of Schemes		553	281	62	896					
Total Area, acres		7,588	1,679	188	9,455					
Conifers Broadleaved Mixed	 	3,585 684 3,319	619 185 875	188 (5,290 trees)	4,204 1,057 4,194					
		Sc	COTLAND		<u> </u>					
No. of Schemes	•••	222	123	8	353					
Total Area, acres		7,054	806	16	7,876					
Conifers Broadleaved Mixed	 	6.407 135 512	664 7 135		7,071 158 647					
Wales										
No. of Schemes	••••	51	51	3	105					
Total Area, acres	••••	501	322	6	829					
Conifers Broadleaved Mixed	 	320 12 169	194 34 94	6	514 52 263					

* Numbers of poplar trees relate to grants made on the "per tree" basis, and are additional to trees covered by acreage grants.

The table above does not give a complete picture of the grant-aided planting carried out during the year, because it includes schemes planted in earlier years but not inspected until the year under review, and on the other hand some areas planted in the current year have not yet been inspected.

Table 27 below, compiled from information supplied by the Conservators, provides an estimate of the planting actually done during the year on private estates, including planting without the aid of grants. The heading "State-aided" includes all types of grants for planting.

ESTIMATED TOTAL AREA OF PRIVATE PLANTING Year ended 30th Sentember 1953

A

				State-aided	Planted without the aid of Grants	Total
GREAT BRITAIN				13,000	5,200	18,200
England Scotland Wales	 	 	 	5,400 6,800 800	2,500 2,000 700	7,900 8,800 1,500

The total area planted on private estates is estimated at some 18,200 acres, of this, 13,000 acres are known to have been planted under planting grant schemes, and some 5,200 acres are estimated to have been planted on estates without any grant being asked for. Compared with last year, the areas planted with and without grants have increased respectively by 1,700 acres and 1,400 acres.

Thinning Grants

Table 27

Under present regulations a grant of £3 15s. Od. per acre is available in respect of first and second silvicultural thinnings made in stands coming within certain limits of height or alternatively, of girth. Table 28 below gives details for each country of the schemes inspected and passed for payment.

THINNING GRANTS

Schemes Inspected and Passed for PaymentTable 28Year ended 30th September, 1953							
				_	Number of Schemes	Area (acres)	Estimated Volume (cubic feet)
GREAT BRIT	AIN				845	11,373	3,088,000
England Scotland Wales	 	 	 	 	542 24 0 63	6,599 4,181 593	1,669,000 1,249,000 170,000

A comparison with last year's figures shows that there has been a slight reduction in the number of schemes put forward, and that the average area per scheme and the average out-turn per aore have also decreased. The totals for the previous year were: 887 schemes covering 14,295 acres, with an estimated yield of 4.75 million cubic feet.

RESEARCH AND EXPERIMENT

Research work and special investigations into forestry problems were continued at the Forest Research Station, Alice Holt Lodge, near Farnham, Surrey, and also in experimental areas in many forests in England, Scotland and Wales. Expenditure amounted to £215,330, as compared with £179,408 in the previous year (for details see Appendix 6, page 54). A brief outline of some of the more important work undertaken is given in the following paragraphs. Fuller accounts of research projects will be found in the *Report on Forest Research for the Year Ending March* 1953.*

The number of visitors to the Research Station amounted to 234; these included students from home universities and other institutions, and officers and other visitors from the following Commonwealth and foreign countries: Australia, Burma, Canada, Chile, Denmark, Germany, Holland, India, New Zealand, Norway, Nigeria, Pakistan, Rhodesia, Thailand, Tanganyika and Uganda.

Silviculture

Investigations into the reliability of the tetrazolium vital staining technique as a germination test for tree seeds were continued with satisfactory results in respect of Sitka spruce, Norway spruce, Scots pine, Corsican pine, European larch and Douglas fir. Tests on the effects of the pre-chilling of seed have proved that the germination period for certain species can be reduced from 40 or 50 days down to 14 days. Investigations into methods of storing seed were continued.

A large-scale steam sterilisation trial to restore the loss of soil fertility, which occurs in some old established nurseries, proved successful and emphasised the superiority of this method in comparison with the use of formalin, but the high costs involved tend to discourage its general use; trials with chemical sterilising agents have given variable results, and tests are being continued.

Other nursery investigations in hand include the use of composts and fertilisers, methods of inducing earlier germination of seeds in the seedbed, irrigation, weed control and rootpruning plants *in situ*.

Investigations into the treatment of derelict woodlands continue to be a major silvicultural project. The relative costs of methods of rehabilitation are being studied. Trials ranging from complete replanting to enrichment by planting large individual plants and the introduction of a conifer/hardwood mixture have been made. Derelict woods on clay and clay loams were the subjects of ecological studies.

The work of establishing experimental plantations of hardwoods in Scotland was continued; plots of ash, red oak, beech, gean, wych elm, lime, sycamore, and Japanese chestnut were laid down at two sites in Dumfriesshire, and an experiment to compare the value of gean, wych elm, Norway spruce and European larch as nurse species was started. Beech and Scots pine provenance trials were planted in the Chilterns and in West Scotland respectively.

An investigation into the damage caused by the gale of January 31st, 1953, indicated that in winds of such intensity all species over 45 feet in height are susceptible to windblow. Oak and sycamore proved to be the most windfirm species. Scots pine, the commonest species, suffered badly.

A study of *Rhododendron ponticum*, which has become a serious weed in many British woodlands, was made by the Ecologist, and useful information obtained on the rate of spread from seed and by vegetative means, and the factors affecting the spread. Observations on shade tolerance under tree crops were also recorded.

Experimental work on poplars was continued and expanded; the benefits derived from mulching were confirmed and the application of nitrogen fertilisers showed good results. Spacing trials were continued in the nursery,

^{*} To be published shortly by H.M.S.O.

and experiments have been started regarding the number of deaths due to root drying on being lifted from the nursery. Eight major and eleven minor poplar varietal trial areas have now been started in Great Britain.

Forest Genetics

The survey of seed stands continued and one hundred woodlands were classified in North Scotland. Two hundred "plus" trees were selected for breeding purposes, bringing the total for all species up to eight hundred.

Propagation by grafting and the rooting of cuttings to preserve the best phenotypes is in progress at Alice Holt and Grizedale nurseries. Trials in sub-irrigation to replace overhead watering are being undertaken, also tests to ascertain the best conditions in regard to temperature, humidity, lighting and media, for the striking of cuttings.

Forest Pathology

A considerable number of tree diseases have been the subject of observation, but thorough investigation has had to be restricted to a limited number of projects. Among these, group dying of Sitka spruce has received most attention; the cause of this malady remains obscure but it seems certain that it cannot be wholly attributed to inadequate rooting conditions. The fungus *Rhizina inflata* has recently been found consistently associated with the dying groups. Other problems investigated have included top-dying of Norway spruce, which in some cases is associated with drought; resin flow from Douglas fir, which so far remains unexplained; and grey-mould (*Botrytis cinerea*) on conifers.

Answers to enquiries, particularly from private estates and covering a wide range of diseases, continue to occupy a large amount of time; these enquiries indicate that, while disease remains an important factor in British forestry, no particular malady is of outstanding importance.

Studies of Growth and Yield

Fifty-six new permanent sample plots were established, but eighteen were lost through windblow in the severe winter gales in January. The total number of permanent sample plots is now 556. The following table shows their distribution between countries.

PERMANENT SAMPLE PLOTS

Table	29
-------	----

	Great Britain	England	Scotland	Wales
Number at 1st October 1952 New plots established during the year Plots abandoned (felled, blown etc.) during	518 56	229 38	208 11	81 7
the year	18 556	2 265	15 204	1 87
Remeasured during the year	90	56	34	Nil

In conjunction with the Forest Products Research Laboratory, Princes Risborough, investigations were continued into the effects of site and silvicultural treatment on timber quality. The main consignments sent to the Laboratory for tests were of Sitka spruce, but some Norway spruce, Douglas fir and *Thuja plicata*, mainly from the windblown areas of Scotland, were also sent. A start was made with a revision of the Census of Woodlands of 1947-49 on a county basis, the aim being to complete the country as a whole in 12 to 15 years. The present survey is slightly more detailed than the 1947-49 Census, but the methods used are similar. This year the counties of Rutland, Huntingdon, Cambridge and Kincardine have been completed, and work is in progress in the counties of Hereford and Angus.

Forest Entomology

The larch sawfly surveys were continued and disclosed no major infestation. The status of *Bupalus piniarius*, the Pine Looper Moth, a potential danger to pine plantations, was investigated and a survey of the bark beetle situation in the Scottish windblown areas was undertaken. The field use of a range of insecticides for the control of pine weevils was studied with encouraging results. Trials of systemic insecticides to control *Adelges cooleyi* in young Douglas fir were also undertaken. Plots to study the effects of infestations of *Neomyzaphis abietina*, the Green Spruce Aphis, on the growth of Sitka spruce were set out.

Machinery Research

The increasing use of tractor-mounted implements in agriculture has directed attention to the possibility of mounting the comparatively heavy implements used for forest ploughing; as a result, prototypes of a mounted tine-plough are now operating on tracked tractors under severe conditions in Scotland, and a light plough designed to throw a furrow to each side, and to do subsoiling work down the centre is being tested on half-tracked tractors under easier heathland conditions in England. The importance of keeping down capital cost has directed attention to devising ways in which standard machines in wide commercial production can be adapted for forestry purposes. One example is the need for tractors able to operate on very soft peat; to this end, experiments are in hand with special tracks on an otherwise almost standard medium-powered tractor.

Experiments in the use and economics of ropeways for the extraction of thinnings are still being made, and power-operated British and Swiss designs are being tested. Mechanical handling of heavy logs by winches and loaders is also under further development. A machine for weeding between transplant lines has been tested during the summer.

Utilisation Research

A meeting of the Advisory Committee on the Utilisation of Home Grown Timber was held in London when further consideration was given to problems related to the utilisation of small sized thinnings, coppice and scrub. The work undertaken during the year included an enquiry into the use of home-grown hardwoods by the Scottish wood-turning trade and a study of the use of timber in sea and river defences. Field work on the yield of chestnut coppice was completed, and a preliminary survey of oak scrub in south-west England was made to ascertain the possible out-turn of utilisable produce.

Advisory Committee on Forest Research

Two meetings for discussions of current research work and future programmes were held. The Committee met in November, 1952, in London, and in July, 1953, at Drumnadrochit, in Inverness-shire, from which visits were made to experimental areas in Inchnacardoch and other neighbouring forests.

Grants to Universities and other Institutions

The Commissioners have continued to make grants for research work on special forestry problems of a fundamental scientific nature to be carried out by universities and other institutions qualified to undertake such work. Disbursements amounted to £12,420. These included grants to Dr. Levisohn of Bedford College, London, to the Macaulay Institute, Aberdeen, to the Rothamsted Experimental Station, and to the Imperial Forestry Institute, Oxford, for research work on forest soils. Grants for research on methods of establishing shelter belts and plantations, and for an investigation of the *Megastigmus* seedfly were made to the University of Edinburgh. Grants were also made to the University of Aberdeen for botanical research work on the native Scots pine and on other conifers, and to Dr. Bruce Campbell for ornithological research. The Universities of Cambridge and Southampton received small grants for research work on the sooty bark disease of sycamore and on larch canker respectively.

EDUCATION

Expenditure on Forester Training Schools, Short Courses for forest workers, Northerwood House and the Forestry Apprenticeship Scheme was £140,456. Income amounted to £36,473, of which £24,311 represents the value of work done in Commission forests by students at the Forester Training Schools. For statement of Expenditure and Income see Appendix 7, page 55.

Forester Training Schools

Five Forester Training Schools are maintained to provide trained men for the subordinate grades of the Forestry Commission and for similar posts in private forestry. Two of these Schools are in England, two in Scotland and one in Wales. The School at Glentress, which was started in 1946 in temporary buildings, was moved to Faskally House, Pitlochry, Perthshire. Faskally House, a small mansion, provides accommodation and classrooms for forty-one students and is conveniently situated near several forests in which practical work is undertaken.

The normal course of training at these Schools extends over two years and at the beginning of the year a total of 275 men were under instruction; 154 in their first year and 121 in their second year. The two-year course was completed by 119 men, of whom 109 were awarded Forester certificates, while 10, who did not reach that standard, qualified for Foreman certificates. All but 2 took up posts in forestry, 101 with the Forestry Commission, 7 in private forestry, and 3 with the Colonial Service, while 6 students who had been nominated by the Government of Northern Ireland returned to posts in that country.

Short Courses for Forest Workers

Two short courses of six weeks duration were held at Chatsworth Estate. Derbyshire. The object of these courses is to provide selected forest workers with a basic training in the theory and practice of forestry. Fifteen men attended each course and were awarded certificates of efficiency by the Forestry Commission. In addition, at the end of these courses twenty-nine of the men entered for the Woodman's Certificate examination of the Royal Forestry Society of England and Wales and all were successful.

Arrangements to hold a similar course on the Darnaway Estate, Morayshire, had to be cancelled because of extensive damage by the January gale and the difficulty of releasing a sufficient number of men to warrant holding the course.

Northerwood House

Northerwood House in the New Forest has continued to be a useful centre for conducting refresher and other special courses.

Twenty-five courses of instruction, each lasting a week, were given. Seventeen of these were for the Commission's staff; the subjects covered were: Nursery work (1), Forest management (3), Utilisation (2), Fire Protection Methods (2), Silviculture (2), Research (2), Private Woodlands (2), Organisation and Accounting (3). Six special courses on forestry practice were given for landowners and agents and one for timber merchants' employees. A course on general forestry was again organised for school teachers interested in forestry.

In addition to these courses, parties of forestry students from five universities were accommodated at Northerwood House while studying working plan methods and silviculture in the New Forest. Students from the Universities of Edinburgh, Oxford and the University College of North Wales, Bangor, spent six to seven weeks in residence, and those from Aberdeen and Cambridge one week each, making a total period of residence by university students of twenty-one weeks.

Forestry Apprenticeship Scheme

An apprenticeship scheme for training youths between the ages of 15 and $17\frac{3}{4}$ years as skilled forest workers has been started in the Forest of Dean, Gloucestershire, with a class of twelve apprentices. After examination of the results of this scheme, consideration will be given to its extension to other selected forests.

PUBLICATIONS

Nineteen new publications for sale were issued through H.M. Stationery Office,* and two booklets for distribution free were published directly by the Commissioners; in addition, thirteen publications issued in previous years were revised or reprinted.

Priced publications comprised :---

- (1) Annual Report of the Forestry Commissioners, 1952 (H.C. 148).
- (2) Report on Forest Research, 1951.
- (3) Report on Forest Research, 1952.
- (4) Britain's Forests, Drumtochty.
- (5) Britain's Forests, Glentress.
- (6) Forest Record 16. The effects of Partial Sterilisation with Formalin on the Raising of Sitka Spruce and other Conifer Seedlings.
- (7) Forest Record 18. The use of Large Diameter Wheels and Tyres on Forest Extraction Vehicles.
- (8) Forest Record 19. The Manufacture of Wood Charcoal in Great Britain.
- (9) Forest Record 20. The Use of Chutes for the Extraction of Thinnings.
- (10) Forest Record 21. Use and Manufacture of Wood Flour.
- (11) Leaflet 30. Sooty Bark Disease of Sycamore.
- (12) Leaflet 31. The Grey Squirrel, a Woodland Pest.

^{*} Published by H.M.S.O. at the following prices: No. 1, 3s. 0d.; No. 2, 4s. 6d.; No. 3, 4s. 6d.; No. 4, 1s. 3d.; No. 5, 1s. 0d.; No. 6, 1s. 6d.; No. 7, 9d.; No. 8, 1s. 3d.; No. 9, 6d.; No. 10, 6d.; No. 11, 9d.; No. 12, 9d.; No. 13, 7s. 6d.; No. 14, 12s. 6d.; No. 15, 12s. 6d.; No. 16, 5s. 0d.; No. 17, 4s. 0d.; No. 18, 10s. 0d.; No. 19, 12s. 6d.

Two technical bulletins presenting the results of recent research work on poplars and beech were issued, namely:

(13) Bulletin 19. Poplars.

(14) Bulletin 20. Studies on British Beechwoods.

The detailed results of the recent Census of Woodlands were also published in a series of reports, namely:

- (15) Census Report No. 1. Woods of Five Acres and Over. 1947-1949.
 (16) Census Report No. 2. Hedgerow and Park Timber and Woods
- under Five Acres, 1951.
- (17) Census Report No. 3. Welsh County Details. 1947-1949.
- (18) Census Report No. 4. Scottish County Details. 1947-1949.
 (19) Census Report No. 5. English County Details. 1947-1949.

The two publications* for distribution free were a pamphlet Hints on Controlling Grey Squirrels, which was given a wide circulation among foresters and landowners, and a booklet entitled The Forestry Commission in Scotland, which describes the Department's operations in that country.

The Commissioners' staff contributed articles to the principal journals concerned with forestry, land management, and biological sciences, and also presented papers to scientific conferences, both at home and abroad.

PUBLICITY AND PUBLIC RELATIONS

The work of the Commissioners and forestry in general has been well represented in the Press, in journals concerned with the land and in B.B.C. programmes.

Press conferences were helpful, particularly in relation to the storm damage of January, 1953, in Scottish forests, and to the campaign against the grey squirrel. Representatives of the Press were again afforded facilities for seeing, at first hand, something of the Commissioners' work in various parts of the country; visits were arranged to the new forest village of Dalavich in Argyll on the occasion of its formal opening, and to a number of Commission forests throughout the country; visits were also arranged to the gale-damaged districts in north-east Scotland and to woodlands in Carmarthenshire belonging to members of the Llandovery and District Woodlands Society.

The Commissioners are particularly grateful to the Press and B.B.C. for their co-operation in drawing the attention of the public to the danger of forest fires at holiday times and for making other announcements.

It was possible to support more agricultural shows than in the previous year, comprehensive exhibits being staged at eleven major shows, including the Royal Show at Blackpool; the Royal Highland Show at Alloa; the Royal Welsh Show at Cardiff; and the Bath and West Show at Bath. In addition, displays were also arranged at the Tunbridge Wells and South Eastern Counties Show, the New Forest Show and at several of the smaller shows in Wales. It is estimated that approximately 250,000 people saw the Commission's exhibits.

There was considerable demand from various organisations for lectures on forestry and about 150 talks were given by Commission officers. Films were provided for meetings of a number of organisations. Assistance was given in the production of certain documentary films, notably on forestry in East Anglia and in the New Forest.

^{*} Copies obtainable on request from the Secretary, Forestry Commission, 25, Savile Row, London, W.1.

Numerous requests were received from students and teachers for information about forestry, and display and educational material, including films, was loaned to schools. A scheme was introduced under which certain schools "adopted" small plots on which the forest operations are to be carried out by the children.

NATIONAL FOREST PARKS

The Commissioners are pleased to record an increasing use by the public of the camping facilities provided in the seven National Forest Parks, which together now cover 290,000 acres of forest and moorland. The number of overnight stays at the camping grounds provided at five of the Parks exceeded 64,000; this of course gives only a general indication of the number of visitors as many stay at Youth Hostels and hotels in or near the Forest Parks, or visit them on day excursions.

The New Forest, Hampshire, is not included in the National Forest Parks Scheme but it also provides a substantial area of some 65,000 acres of woods and heathland for the enjoyment of the public, and close on 3,000 permits to camp in the New Forest were issued during the year.

RADNOR (Chairman).

J. M. BANNERMAN.

R. C. G. COTTERELL.

LLOYD O. OWEN.

JOHN STIRLING.

W. H. VAUGHAN.

JOHN WALTON.

STANLEY LONGHURST.

A. P. F. HAMILTON.

JOHN McNAUGHTON.

H. A. TURNER, Secretary, 25, Savile Row.

London, W.1.

APPENDICES

PAYMENTS BY HEADS OF ACCOUNT, AND RECEIPTS

Appendi	x 1				£000s
1952	PAYMENTS	30ti	Year e. h Septemi		Total 1920–1953
795	Salaries, Wages and Allowances		850		6,004
42	Headquarters Charges	•••	46		316
31	Charges of Directors of Forestry		32		344
128	Charges of Conservators		133		1,023
7,785	Forestry Operations		7,744		59,841
270	Private Forestry	•••	347		1,684
112	Research and Experiment		130		780
109	Education		99		1,548
б	Special Services	•••	40		863
9,278				9,421	72,403
2,365	RECEIPTS			2,217	18,029
6,913	NET PAYMENTS			7,204	54,374

Note.-This table shows amounts paid and received in cash during the year. (See also Note to Appendix 2.)

EXPENDITURE AND INCOME

£000s

Appendix 2

- PP-me						
1952	EXPENDITURE		30th	Year e h Septen	nded ber 1953	Total 1920–1953
8,665	Forestry Operations (Appendix 3)			8,592		66,985
346	Private Forestry (Appendix 5)			432		2,194
179	Research and Experiment (Appendix	6)		215		1,313
14 8	Education (Appendix 7)			141		1,877
90	Special Services (Appendix 8)			134		1,323
9,428					9,514	73,692
	INCOME					
2,479	Forestry Operations (Appendix 3)		•••	2,300		18,833
40	Education (Appendix 7)			37		491
58	Miscellaneous		•••	15		107
2,577					2,352	19,431
6,851	NET EXPENDITURE				7,162	54,261

Note.—This table shows the cash transactions in Appendix 1 adjusted for amounts due to or by the Commissioners at the end of the year and for non-cash transactions such as the value of produce used for forein purposes. Salaries and office charges, shown separately in Appendix 1, are here distributed over the heads of account to which they are appropriate. In Appendices 3 to 8, pages 53 to 55, the expenditure and income shown above are given in greater detail.

FORESTRY OPERATIONS : EXPENDITURE AND INCOME

-		<u> </u>
Appen	11Y	1
ADDAR	uin.	-

Appendi	x 3		£000s
1952		Year ended 30th September 1953	Total 1920–1953
	EXPENDITURE (Appendix 2)		
262	Overhead Charges	271	2,408
469	Superior Supervision	499	3,414
570	Local Supervision	581	4,360
518	Acquisition of Land, etc	469	5,636
2,615	Cultural Operations (Appendix 4)	2,579	23,441
883	Preparation and Sale of Produce	1,090	6,223
601	Roads	481	3,429
1,218	Buildings	870	6,848
717	Stores	843	4,877
812	Miscellaneous	9 0 9	6,349
8,665		8,592	66,985
	INCOME (Appendix 2)		
14	Sales of Land and Buildings	12	419
177	Rents and Royalties	185	3,093
2,128	Forest Produce	1,956	13,736
160	Other	147	1,585
2,479		2,300	18,833
6,18 6	NET EXPENDITURE	6,292	48,152

CULTURAL OPERATIONS : EXPENDITURE

Append	ix 4			£000s
1952		Year e 30th Septem		Total 1920–1953
486	NURSERIES		466	5,663
1,045 783 301	PLANTATIONS: Preparatory Work and Planting Establishment and Maintenance Forest Protection	977 809 327	2,113	7,646 7,125 3,007
2,615	TOTAL (Appendix 3)		2,579	23,441

PRIVATE FORESTRY: EXPENDITURE AND INCOME

Appendix 5

pend	ix 5				£000
1952		30th	Year e h Septen	nded ber 1953	Total 1920-19
	expenditure (Appendix 2)				
78	Administration, including Advisory Service	s	93		546
25	Planting Grants (other than under Dedicat Small Woods and Poplar planting)	ion, 	.27		775
133	Grants under Dedication Schemes		240		406
19	Small Woods Planting Grants		24		55
_	Poplar Planting Grants		1		2
<i>83</i>	Thinning Grants		38		239
2	Grants to Co-operative Forestry Societies		2		6
1	Loans		7		8
4	Proceeds-sharing scheme	•••			81
I	Agency Services	•••			76
346				432	2,194
	INCOME				
23	Refund of Planting Grants	•••	8		
30	Contribution in respect of Thinning Grants	s	_		
3	Agency and Advisory Services	•••	4		
—	Proceeds-sharing scheme	•••	2		
56				14	92
290	NET EXPENDITURE			418	2,102

RESEARCH AND EXPERIMENT : EXPENDITURE AND INCOME £000's

Appendix 6

ւրիչոս								20000
1952					30th	Year e Septen	nded 1ber 1953	Total 1920–1953
	EXPENDITURE (Appendix 2)							
9	Overhead Charges and	Super	tior Su	pervisio	n	10		93
81	Salaries and Expenses	•••				90		577
76	Labour, Stores, etc.					103		532
13	Grants to Institutions	•••				12		111
								1,313
179							215	1,515
2	INCOME						1	14
177							214	1,299
1//	NET EXPENDITURE				•••			

EDUCATION : EXPENDITURE AND INCOME

Appendi	x 7		£000's
1952		Year ended 30th September 1953	Total 1920–1953
	EXPENDITURE (Appendix 2)		
9	Overhead Charges and Superior Supervision	12	116
18	Salaries and Expenses	17	92
	Forester Schools and Short Courses:		
25	Instructors Salaries and Expenses	28	174
33	Allowances to Students	33	267
45	Rent, Stores, Fuel, Light, etc	51	365
	Forest Workers Training Scheme:		
1	Allowances to Trainees		403
3	Upkeep of Training Centres	_	291
14	Grants to Institutions	—	169
148		141	1,877
40	INCOME (Appendix 2)	37	491
108	NET EXPENDITURE	104	1,386

SPECIAL SERVICES : EXPENDITURE AND INCOME

Appendi	x 8					£000's
1952		ż		Year e Septen	nded 1ber 1953	Total 1920–195
	EXPENDITURE (Appendix 2)					
85	Overhead Charges and Superior Supervis	sion .		84		342
	Consultative Committee Expenses			—		1
1	Publications			3		17
4	Special Enquiries			5		140
	Relief of Unemployment		••	—		781
_	Assistance towards cost of transporting So Windblown Trees		h 	42		42
9 0					134	1,323
-	INCOME				_	1
90	NET EXPENDITURE				134	1,322

Appendix 9

PLANTATIONS MADE DURING THE YEAR

			s)				
Country or Conservancy	Total Area Planted	-	Broad-	Affor	ested	Repl	anted
-	(Acres)	Coniferous Total	leaved, Total	Conifers	Broad- leaved	Conifers	Broad- leaved
GREAT BRITAIN	. 67,610	60,661	6,949	41,716	949	18,945	6,000
ENGLAND:	. 21,508	16,307	5,201	10,822	724	5,485	4,477
Conservancy: North West	. 3,285	2,789	496	1,621	57	1,168	439
North East	. 9,050	8,548	502	7,381	175	1,167	327
East	. 2,754	1,410	1,344	950	323	460	1,021
South East	. 2,343	1,218	1,125	21	36	1,197	1,089
South West	. 2,813	1,512	1,301	585	118	927	1,183
New Forest	. 920	788	132	247	14	541	118
Dean Forest.	Dean Forest 343		301	17	1	25	300
SCOTLAND: .	34,337	33,886	451	23,085	112	10,801	339
Conservancy:							
North .	8,525	8,490	35	3,645	9	4,845	26
East	8,334	8,212	122	4,384	18	3,828	104
South .	9,080	8,877	203	7,649	31	1,228	172
West	8,398	8,307	91	7,407	54	900	37
Wales:	11,765	10,468	1,297	7,809		2,659	1,184
Conservancy:							
North .	6,219	5,609	610	3,868	64	1,741	546
South .	5,546	4,859	687	3,941	49	918	638

	ĺ		Species I	Planted, in	icluding B	eating U	p (Thousa	nds of pla	ants)		
Total plants	Scots	Corsi-	Euro- pean	Japan- ese	Douglas	Norway	Sitka	Oak	Dent	Other	Species
used	Pine	Pine	Larch	. Larch	Fir	Spruce	Spruce	Оак	Beech	Conifers	Broad leaved
118,422	22,551	8,527	479	16,001	4,298	11,786	32,298	4,352	6,025	11,401	704
35,324	4,753	5,540	7	3,311	1,787	3,498	6,196	2,622	4,570	2,621	419
5,689	1,163	612	1	949	255	222	1,444	209	314	419	101
14,281	2,494	610	1	1,694	385	2,149	4,575	241	412	1,662	58
5,184	249	2,476	. —	49	158	. 535	-	999	438	69	211
3,410	185	519	5	147	699	221	-	203	1,386	15	30
4,845	474	778	-	451	41	349	175	505	1,708	361	3
1,320	174	526	-	2	226	2	2	84	200	94	10
595	14	19	—	19	23	20	_	381	112	1	6
60,730	15,396	1,509	409	8,797	1,485	6,435	18,676	338	534	7,005	146
16,222	6,927	125	82	1,952	620	1,285	3,217	40	39	1,930	5
15,892	6,268	773	197	2,750	395	1,456	1,333	41	203	2,450	26
14,901	940	310	8	3,008	347	1,987	6,550	216	183	1,269	83
13,715	1,261	301	122	1,087	123	1,707	7,576	41	109	1,356	32
22,368	2,402	1,478	63	3,893	1,026	1,853	7,426	1,392	921	1,775	139
12,186	800	761	53	[.] 1,617	662	929	4,743	744	524	1,278	75
10,182	1,602	717	10	2,276	364	924	2,683	648	397	497	64

INDED 30TH SEPTEMBER, 1953-SUMMARY BY CONSERVANCIES

Thousands of plants

Year ended 30th September 1953

Appendix 10

SUMMARY OF SPECIES USED FOR PLANTING AND BEATING UP

					rear enueu	repremoer		6041					
		-	GREAT BRITAIN	Z,		ENGLAND			SCOTLAND			WALES	
SPECIES		Total	Planting	Beating up	Total	Planting	Beating up	Total	Planting	Beating up	Total	Planting	Beating up
All Species	:	118,422	104,428	13,994	35,324	31,261	4,063	60,730	54,385	6,345	22,368	18,782	3,586
Scots Pine	:	22,551	18,802	3,749	4,753	3,855	898	15,396	13,255	2,141	2,402	1,692	710
European Larch	: :	479	460	1,/19	0+c,c	4,JUI	4cu,1	400	401	7 2 2 2 2 2 2	1,4/8	1,040	438 11
Japanese Larch		16,001	13,961	2,040	3,311	2,994	317	8,797	7,707	1,090	3,893	3,260	633
Norway Spruce	: :	4,230	3,014 10,853	933 933	1,/0/ 3.498	3.367	131	6.435	1,34/ 5.830	138 605	1,020	910	110
Sitka Spruce	:	32,298	30,069	2,229	6,196	5,938	258	18,676	17,574	1,102	7,426	6,557	869
Tsuga heterophylla	÷	296	286	10	247	241	90	=;	=:	. 1	38	34	4,
I nuja plicata Pinus contorta	:	101 8.413	7.000	21 1.413	1.976	1,606	۹ 170	co 5 273	4 551	11	1164	91 843	101
Hybrid Larch	: :	1,172	1,044	.128	57	57	2 5	1,056	936	120	59	51	8
Lawson Cypress	:	358	228	130	147	97	50	, 32	27	5	179	104	75
Picea omorika	:	145	145			ļ]	143	143		6	7	ļ
	:	80	<u> </u>	00	46 9	4,	5	7	17		20	14	9
Spanisn Cnestnut	:	4 (4			יי י י	1			1	- :	- ;	
Birch	:	203	8/1	ر» د	677	152	11.				33	25	× j
Detecn	÷	C20,0	0,4,0	255	0/0,4 0/0,4	4,140	430	534	453	2 2 2 2 2 6	921	882	66,
Sycamore	: :	173	144	66	4,044	2,410 2,20	717	000 108	010	77	1,226,1	1,291	I01
Other Conifers		798	710	88	19	199	13	423	390		296	254	4 64
Other Broadleaved	÷	264	236	28	162	144	18	37	32	2	65	09	νv
			-							- -			ł

SUMMARY	AREA	STATEMENT	OF	LAND	USE:	BY	CONSERVANCIES
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Appendix 1	11
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At 30th September, 1953

Acres

Country or Conservancy		Planted du ended 30th 19	September,	Under Plantations	Provisional Allocation of Other Land		
	Total	Afforested	Re- planted		Plantable	Agricultural, Unplant- able, &c.	
GREAT BRITAIN	1,909,348	42,665	24,945	867,352	314,011	727,985	
ENGLAND: North West Conservancy North East Conservancy East Conservancy South East Conservancy South West Conservancy Noth West Conservancy Noth West Conservancy Dean Forest	622,453	11,546	9,962	359,728	114,711	148,014	
	102,107	1,678	1,607	56,474	21,918	23,715	
	197,329	7,556	1,494	94,922	47,172	55,235	
	103,022	1,273	1,481	73,908	10,142	18,972	
	52,808	57	2,286	33,949	16,533	2,326	
	64,945	703	2,110	43,788	15,500	5,657	
	76,549	261	659	35,760	2,499	38,290	
	25,693	18	325	20,927	947	3,819	
ScotLAND:	1,031,392	23,197	11,140	355,748	155,670	519,974	
North Conservancy	372,249	3,654	4,871	91,599	42,657	237,993	
East Conservancy	187,368	4,402	3,932	104,475	33,271	49,622	
South Conservancy	212,699	7,680	1,400	73,375	52,629	86,695	
West Conservancy	259,076	7,461	937	86,299	27,113	145,664	
Wales:	255,503	7,922	3,843	151,876	43,630	59,997	
	138,726	3,932	2,287	79,271	20,522	38,933	
	116,777	3,990	1,556	72,605	23,108	21,064	

Note.-In Appendices 12-14, former Crown Woods are indicated by asterisks.

AREA STATEMENT OF LAND USE: BY FORESTS-ENGLAND

Appendix 12

At 30th September, 1953

Acres

	110 500	a beptomo	or, 1755				
		Planted du ended 30th 19	September,	Under	Provisional Allocation of Other Land		
Forest	Total	Afforested	Re- planted	Plantations	Plantable	Agricultural, Unplant- able, &c.	
North West Conservancy: Total			4 607				
101AL	102,107	1,678	1,607	56,474	21,918	23,715	
Arden, Warwick	491			_	491	-	
Bagot, Staffs	1,221		85	367	854		
Bawtry, Notts	586			396	142	48	
Bowland, Lancs & Yorks	935	l — .	—	163	732	40	
Cannock, Staffs	6,141	14	125	5,678	414	49	
Causeway Wood, Salop	196		—	—	196		
Charnwood, Leicester	275		66	66	209		
Clipstone, Derby, Notts & Yorks	10 (41	70	207	7 220	2 000	303	
Corvedale Salar	10,641	78	297	7,329	3,009 194	22	
VOLETAVE Notte	301	16		301	69	24	
Dalton Westmontend	370	16 27	61	398	345	90	
Delamere Chashi-s*	833 1,925	21		1,899		26	
CODEFGALE Cumberland	8,409	104	1	3,324	62	5,023	
rolemark Woods Derby	390	104		5,524	384		
rouisnaw Wood Westmor-	590		_	Ű			
14110	601	1		29	572	—	
Gisburn, Yorks	2,674	327	—	1,476	1,099	99	
Greystoke, Cumberland	1,937	<u> </u>	78	1,604	90	243	
Grizedale, Lancs	5,807	378	30	4,238	593	976	
		1	1			<u> </u>	

Appendix 12-continued

		Planted de ended 30th 19	September,	Under	Provisional Allocation of Other Land	
Forest	Total	Afforested	Re- planted	Plantations	Plantable	Agricultura Unplant- able, &c.
Habberley, Salop Hardknott, Cumberland &	648		35	36	612	_
Lancs Hope, Derby	8,012 2,987	125	-	1,411	957	5,644
Inglewood, Cumberland	1,252			669 367	1,010 836	1,308
Irton, Cumberland	268		—	_	245	2
Kershope, Cumberland Kinver, Staffs	12,504 900	268	1	9,135 571	311	3,058
Long Mynd, Salop	926	129	41	481	299 312	30
Longtown, Cumberland	223		25	54	104	65
Mortimer, Hereford &	8,548		222	7.400	717	
Salop Oakamoor, Staffs	732		322 51	7,496 54	717 676	33
Packington, Warwick	288	_	54	90	198	
Sherwood, Notts	2,950	8	102	2,611	272	67
Spadeadam, Cumberland Swynnerton, Staffs	8,909 2,157	149		273 797	3,626 1,339	5,010
Thornthwaite, Cumberland	5,515	55	48	3,636	846	1,033
Walcot, Salop	1,555		86	1,434	. 103	18
North East Conservancy: Total	197,329	7,556	1,494	94,922	47,172	55,235
Allerston, Yorks	10,548	374	168	8,853	723	972
Ampleforth, Yorks	4,655 1,340	127	181	2,213	1,669	219
Arkengarthdale, Yorks Chopwell, Durham*	1,030		- 8	1,121 785	226	19
Cleveland, Yorks	3,184	_	97	328	2,762	94
Doncaster, Yorks	730 5 810	—	27	171	554	500
Hamsterley, Durham Harwood, Northumberland	5,810 5,766		123 34	5,049 1,600	197 3,264	564 902
Jervaulx, Yorks	1,470	_		113	1,353	4
Kidland, Northumberland	353	62	—	74	279	25.759
Kielder, Northumberland Knaresborough, Yorks	70,875 485	3,669 142	9 46	35,852 188	9,265 297	25,758
Knaresborough, Yorks Langdale, Yorks	14,603	91	223	4,986	1,586	8,031
Londesborough, Yorks	429	53	35	213	216	-
Ray, Northumberland	957 17,627	231 783	35	408 9,178	549 4,885	3,564
Redesdale, Northumberland Rosedale, Yorks	10,807	531	46	4,149	3,464	3,194
Rothbury, Northumberland	2,643	—	149	1,772	681	190
Scardale, Yorks	972 850	93	6	575 794	105 54	292
Selby, Yorks Slaley, Northumberland	1,500		_	1,251	21	228
Tong Woods, Yorks	183			—	183	10,100
Wark, Northumberland	36,334 1,105	1,346	2	14,174 222	11,870 825	10,290 58
Wharncliffe, Yorks Widehaugh, Northumber-	1,105	_	133		025	
land	70					70
Wynyard, Durham	1,529			76	1,448 696	5
York, Yorks	1,474		172	777		
East Conservancy: Total	103,022	1,273	1,481	73,908	10,142	18,972
	-		1,701			83
Ampthill, Beds Bardney, Lincoln	452 3,614	3	 167	369 2,680	758	176
Bernwood, Oxford	1,041	. —	110	173	868	

Appendix	12-continued
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Forest	Planted during year ended 30th September, 1953		Under	Provisional Allocation of Other Land		
		Afforested	Re- planted	Plantations	Plantable	Agricultural, Unplant- able, &c.
Bramfield, Herts Burwell, Lincs Ditton, Cambridge Dunwich, Suffolk Gaywood, Norfolk Hazelborough, Bucks &	542 581 181 1,238 435	 106 44	74 55 	308 266 1,014 200	213 315 181 196 223	21 - 28 12
Northants* Hevingham, Norfolk Kesteven, Lincoln & Rutland The King's Forest, Suffolk Laughton, Lincoln Nassburgh, Northants Pytchley, Northants Rendlesham, Suffolk Rockingham, Northants Salcey, Bucks & Northants* Shouldham, Norfolk Swaftham, Norfolk Swanton, 'Norfolk Thetford Chase, Norfolk &	2,455 637 3,510 5,932 2,144 32 346 4,660 5,521 1,279 956 3,813 1,792	$ \begin{array}{c} - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$	$\begin{array}{c} 60\\ 999\\ 203\\ 22\\ 1\\ -\\ -\\ 10\\ 85\\ -\\ 27\\ -\\ 4\end{array}$	1,965 360 2,186 5,047 1,999 3,644 4,453 1,195 777 3,181 1,372	135 258 892 531 78 32 346 486 486 54 54 75 67 194	355 19 432 354 67 980 582 30 104 565 226
Suffolk Tunstall, Suffolk Walden, Essex Walsham, Norfolk Watlington, Oxford Waveney, Norfolk Wendover, Bucks Wigsley, Lincoln & Notts Willingham, Lincoln Yardley Chase, Beds & Northants	49,382 3,374 456 532 793 125 1,155 1,938 1,990 2,116	429 9 48 68 	101 6 48 32 25 9 62 124 61	34,329 2,649 73 189 329 76 796 1,154 1,713 1,411	2,040 9 378 343 458 39 327 427 174 9	13,013 716 5 6 10 32 357 103 696
South East Conservancy: Total	52,808	57	2,286	33,949	16,533	2,326
Abinger, Surrey Alice Holt, Hants* Alton, Hants Andover, Hants Arundel, Sussex Ashley Hill, Berks Basing, Hants Bedgebury, Kent & Sussex* Bere, Hants * Bramshill, Berks & Hants Bramshill, Berks & Hants Brightling, Sussex Bucklebury, Berks Bucklebury, Berks Challock, Kent Challock, Kent Chiddingfold, Surrey & Sussex Crawley, Hants Effingham, Surrey Friston, Sussex Gravetye, Sussex	$\begin{array}{c} 1,006\\ 2,342\\ 948\\ 1,000\\ 2,778\\ 301\\ 2111\\ 2,341\\ 1,741\\ 2.99\\ 4,483\\ 1,415\\ 207\\ 1,828\\ 1,795\\ 2,534\\ 2,195\\ 2,195\\ 2,196\\ 2,1$	2	85 20 117 39 91 41 6 57 6 39 150 	$\begin{array}{c} 260\\ 1,962\\ 624\\ 849\\ 2,180\\ 49\\ 185\\ 2,011\\ 1,426\\ 239\\ 3,840\\ 3,840\\ 1,416\\ 1,430\\ 1,411\\ 1,780\\ 3\\ 315\\ 33\\ 1,728\\ 385\\ \end{array}$	586 90 211 4 531 249 26 112 286 60 540 1,315 139 1,123 410 273 410 273 386 393 18	$ \begin{array}{c} 160\\ 290\\ 113\\ 147\\ 67\\ 3\\ -218\\ 29\\ -1\\ 103\\ 17\\ -274\\ 6\\ -\\ 5\\ -\\ 1\\ 20\\ 507\\ \end{array} $

Appendix 12-continued

		Planted du ended 30th 19.	uring year September, 53	Under	Provisiona of Oth	l Allocation er Land
Forest	Total	Afforested	Re- planted	Plantations	Plantable	Agricultural, Unplant- able, &c.
Groombridge, Sussex Havant, Hants Hemsted, Kent Highelere, Hants Lyminge, Kent Maresfield, Sussex Maresfield, Sussex Micheldever, Hants Midmay, Kent Orlestone, Kent Shipbourne, Kent Shipbourne, Kent Southwater, Sussex Southwater, Sussex Walderslade, Kent Wilderslade, Kent Wilderslade, Kent Willey Park, Surrey Woolmer, Hants* Woolmer, Hants* Wooking Office Grounds	$\begin{array}{c} 112\\ 1,257\\ 1,024\\ 2,21\\ 2,360\\ 2,495\\ 1,313\\ 434\\ 2,352\\ 2,75\\ 814\\ 354\\ 743\\ 416\\ 1,358\\ 395\\ 850\\ 200\\ 490\\ 881\\ 321\\ 580\\ 2,073\\ 4\end{array}$		99 22 136 94 7 54 125 50 12 57 86 78 87 87 73 1 1	99 34 983 21 763 2,402 760 70 1,807 76 776 156 272 190 823 308 785 13 350 189 42 126 627	$\begin{array}{c} 3\\1,221\\7\\7\\200\\1,597\\29\\552\\363\\416\\199\\36\\195\\443\\224\\535\\86\\48\\187\\130\\654\\279\\454\\1,426\\\end{array}$	$ \begin{array}{c} 10\\ 2\\ 34\\ -\\ 64\\ 1\\ 129\\ -\\ 2\\ 3\\ 28\\ 2\\ -\\ 1\\ 17\\ -\\ 10\\ 38\\ -\\ 20\\ 4\\ \end{array} $
South West Conservancy: Total	64,945	703	2,110	43,788	15,500	5,657
Bentley, Hants & Wilts Blandford, Dorset Bodmin, Cornwall Braydon, Wilts Brendon, Somerset Bruton, Somerset & Wilts	1,623 2,526 1,492 843 2,392 975	 	105 133 70 52 3 41	111 616 1,145 376 1,941 870	1,509 1,703 177 465 152 97	3 207 170 2 299 8
Charmouth, Devon & Dorset Collingbourne, Wilts Cowley Woods, Gloucester Croft Pascoe, Cornwall Dartmoor, Devon Dunster, Somerset	920 1,239 179 112 2,287 1,132	38 — — 2 66	30 74 14 50	499 1,221 	378 8 152 112 	43 10 1
Dymock, Gloucester & Hereford* Eggesford, Devon Erme, Devon Fernworthy, Devon Gardiner, Dorset & Wilts Glynn, Cornwall Haldon, Devon Harland, Devon Hartland, Devon Hartland, Devon Herodsfoot, Cornwall Honiton, Devon Lydford, Devon Molton Woods, Devon Neroche, Somerset	1,600 881 642 1,505 1,492 2,246 3,587 4,459 2,446 606 667 484 597 1,223 336 1,957	$ \begin{array}{c}$	$ \begin{array}{c} 11 \\ -35 \\ -17 \\ 153 \\ 88 \\ 18 \\ -2 \\ -7 \\ -63 \\ \end{array} $	$1,442 \\ 841 \\ 67 \\ 1,471 \\ 724 \\ 1,507 \\ 3,126 \\ 3,685 \\ 1,502 \\ 551 \\ 434 \\ 140 \\ 542 \\ 1,135 \\ 72 \\ 660 \\$	89 20 568 31 764 608 328 34 208 318 13 12 264 1,244	69 20 7 3 4 131 133 616 21 25 26 42 76

		Planted du ended 30th 193	September,	Under	Provisional Allocation of Other Land	
Forest	Total	Afforested	Re- planted	Plantations	Plantable	Agricultural Unplant- able, &c.
Okehampton, DevonPershore, WorcsPlym, DevonPoorstock, DorsetPurbeck, DorsetQuantock, SomersetSt. Clement, CornwallSavernake, WiltsSedgemoor, SomersetStanway, GloucesterStanway, GloucesterWareham, DorsetWest Woods, WiltsWilsey Down, CornwallWyre, Worcester	519 361 1,216 503 1,469 2,597 282 4,678 1,60 1,150 639 4,972 1,192 1,182 3,192	50 -16 59 -3 -41 -14 -14 -13 -35 -35	$ \begin{array}{c} 12 \\ - \\ 184 \\ 40 \\ - \\ 3 \\ 283 \\ - \\ 38 \\ - \\ 45 \\ 174 \\ - \\ 155 \\ \end{array} $	394 35 694 206 1,174 2,086 79 2,131 158 155 352 342 3,672 790 1,111 3,083	$\begin{array}{c} 85\\ 325\\ 518\\ 297\\ 187\\ 152\\ 203\\ 2,096\\ 227\\ 5\\ 154\\ 289\\ 890\\ 110\\ 8\\ 50\end{array}$	$ \begin{array}{c} 40\\ 1\\ 4\\ -\\ 108\\ 359\\ -\\ 451\\ -\\ -\\ 644\\ 8\\ 410\\ 292\\ 63\\ 59\\ \end{array} $
New Forest: Total	76,549	261	659	35,760	2,499	38,290
Brighstone, Isle of Wight Combley, Isle of Wight Ferndown, Dorset Hurn, Hants New Forest, Hants* Osborne, Isle of Wight Parkhurst, Isle of Wight* Ringwood, Dorset & Hants Shalfleet, Isle of Wight	1,530 559 1,534 1,957 65,158 134 1,312 3,962 403		1 51 505 9 39 41 13	1,067 548 989 91 28,322 59 957 3,562 165	240 — 18 1,505 275 75 50 169 167	223 11 527 361 36,561
Dean Forest: Total	25,693	18	325	20,927	947	3,819
Dean Forest, Gloucester, Hereford & Monmouth* Tidenham Chase, Gloucester	24,436 1,257	18	307 18	19,715 1,212	947 —	3,774 45

AREA STATEMENT OF LAND USE: BY FORESTS-SCOTLAND

Appendix 13

At 30th September, 1953

Acres

Assich, Nairn 1,119 25 3 Balblair, Sutherland & Ross 1,536 — — Battan, Inverness 1,036 21 — Boblainy, Inverness 2,895 154 44 Borgie, Sutherland 2,704 160 — Ceannacroc, Inverness 18,458 205 — Clunes, Inverness 1922 — 9 Craig nan Eun, Inverness 1,208 — 27 Culloden, Inverness 1,208 — 27 Culloden, Inverness 2,421 46 30 Dornoch, Sutherland 727 — — Farigaig, Inverness 7,525 65 8 Ferness, Nairn 1,538 23 13 Findon, Ross 2,367 — —	r, Under Plantations		al Allocation her Land
AfforestedRe- plantedNORTH CONSERVANCY: TOTAL $3,654$ 4,87Achnashellach, Ross $19,674$ — Aigas, Inverness— $1,593$ Ardross, Ross $1,9674$ — $4xsich, Nairn$ — $1,119$ Ardross, Ross $1,593$ — $4xsich, Nairn$ — $1,119$ Balblair, Sutherland & Ross $1,536$ — $2x855$ Battan, Inverness $1,036$ 211 Boblainy, Inverness $2,895$ 154 Ad Borgie, Sutherland. $2,704$ 160 Ceannacroc, Inverness $18,458$ 205 Clach Liath, Ross $5,852$ — 	1	ļ	Agricultural
TOTAL $372,249$ $3,654$ $4,87$ Achnashellach, Ross $19,674$ Aigas, Inverness $1,593$ Ardross, Ross $4,252$ 54 4 Assich, Nairn $1,119$ 25 3 Balblair, Sutherland & Ross $1,536$ Boblainy, Inverness $1,036$ 21 -Boblainy, Inverness $2,895$ 154 44 Borgie, Sutherland $2,704$ 160 -Ceannacroc, Inverness $18,458$ 205 -Clunes, Inverness $5,852$ -9Clunes, Inverness $1,922$ Craig nan Eun, Inverness $1,208$ - 27 Culloden, Inverness $1,208$ - 27 Culloden, Inverness $2,421$ 46 30 Dornoch, Sutherland 727 Farigaig, Inverness $7,525$ 65 8 Ferness, Nairn $1,538$ 23 13 Findon, Ross $2,367$			Unplant- able, &c.
Aigas, Inverness 1,593 — — Ardross, Ross … 4,252 54 4 Assich, Nairn … 1,119 25 3 Balblair, Sutherland & Ross 1,536 — — Battan, Inverness … 1,036 21 — Boblainy, Inverness … 2,895 154 44 Borgie, Sutherland 2,704 160 — Ceannacroc, Inverness … 18,458 205 — Clach Liath, Ross … 5,852 — 9 Craig nan Eun, Inverness … 1,208 — 27 Craigs, Ross … 1,208 — 27 Culloden, Inverness … 1,208 — 27 Culloden, Inverness … 2,421 46 30 Dornoch, Sutherland … 727 — — Farigaig, Inverness … 7,525 65 8 Ferness, Nairn … 1,538 23 13 Findon, Ross … …<	1 91,599	42,657	237,993
Glen Loy, Inverness 2,546 — — Glen Righ, Inverness 5,883 196 — Glen Shiel, Ross 3,653 — — Glen Shiel, Ross 3,653 — — 25 Guisachan, Inverness 16,043 — 25 Guisachan, Inverness 9,145 43 — Inchnacardoch, Inverness 9,145 43 — — — Inshriach, Inverness 2,298 21 11 Inverinate, Ross 1,233 — — Kessock, Ross 1,208 7 — Kilcoy, Ross 3,423 — 44 Lael, Ross 2,344 — — Laiken, Nairn 845 — 21 Leanachan, Inverness 7,546 356 —	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 34\\ 901\\ 310\\ 72\\ 159\\ 610\\ 1,575\\ 249\\ 2,387\\\\ 69\\\\ 1,450\\ 171\\ 100\\ 1,724\\ 5,805\\ 102\\ 2,168\\ 661\\ 909\\ 101\\\\ 2,270\\ 1,297\\ 397\\ 191\\\\ 56\\ 117\\ 15\\ 313\\ 3,153\\ \end{array}$	able, &c.
Loch Ericht, Inverness 933 — — Longart, Ross … 1,264 — — Millbuie, Ross … 1,264 — — Millbuie, Ross … … 6,939 9 24 Morangie, Ross … … 6,196 397 13 Nevis, Inverness … 7,659 — — North Strome, Ross … 1,969 — — Oykell, Ross & Sutherland 1,717 — 17 Portclair, Inverness … 5,500 — — TheQueen'sForest, Inverness 12,500 41 18	08 2,523 981 873 70 214 2,353	$ \begin{array}{c} 506 \\ \\ 2,096 \\ \\ 1,388 \\ \\ 433 \end{array} $	244 119 606 1,577 6,678 1,095 115 3,147 9,197
Ratagan, Inverness & Ross 2,481 Rumster, Caithness 2,362 165	32 423 1,558 554 20 2,855 98 1,360 702 702	96 	196 923 1,462 5,283 11,352 452

Appendix	13—continued
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	Tetal	Planted during year ended 30th September, 1953		Under	Provisional Allocation of Other Land	
Forest	Total	Afforested	Re- planted	Plantations	Plantable	Agricultural, Unplant- able, &c
South Laggan, Inverness South Strome, Ross Strath Conon, Ross Strath Dearn, Inverness Strath Mashie, Inverness Strath Nairn, Inverness Strathy, Sutherland Struie, Ross Sunart, Argyll Torrachilty, Ross Urray, Ross Hoy Experiments, Orkney	4,110 3,556 7,201 2,357 2,612 4,314 504 757 1,475 3,620 1,039 30		 170 106 162 154 158 	1,127 1,160 1,265 947 260 1,218 	3 1,041 527 1,797 840 281 215 875 51 215 30	2,983 2,393 4,895 883 555 2,256 223 139 260 3,107 70
East Conservancy: Total	187,368	4,402	3,932	104,475	33,271	49,622
Allean, Perth Alltailleach, Aberdeen Bin, Aberdeen Blackcraig, Perth Blackcraig, Perth Blackhall, Kincardine Blairadam, Fife & Kinross Carden, Fife Clashindarroch, Aberdeen Craigvinean, Perth Countesswells, Aberdeen Countesswells, Aberdeen Culbin, Moray & Nairn Dallas, Moray Forest of Deer, Aberdeen Delgaty, Aberdeen Drumnond Hill, Perth Drumnond Hill, Perth Drumtochty, Kincardine Faskally, Perth Glen Devon, Perth & Kinross Giendoll, Angus Glenerrochty, Perth Glenlivet, Banff Hallyburton, Angus & Perth Inglismaldie, Kincardine Kinfauns, Perth Kinfauns, Aberdeen Kinfauns, Aberdeen	$\begin{array}{c} 2,939\\ 3,834\\ 5,987\\ 2,048\\ 3,622\\ 1,911\\ 546\\ 20,006\\ 1,914\\ 703\\ 4,463\\ 7,515\\ 2,073\\ 2,251\\ 1,148\\ 5,791\\ 9,998\\ 4,002\\ 1,701\\ 242\\ 8,773\\ 1,558\\ 915\\ 3,713\\ 2,440\\ 10,483\\ 5,580\\ 1,940\\ 1,175\\ 1,705\\ 1,227\\ 827\\ 1,954\\ 1,37\\ 1,904\\ 1,340\\ 4,344\\ 2,430\\ 175\\ 1,928\\ 5,247\end{array}$	$\begin{array}{c} 226 \\$	$\begin{array}{c} 3 \\ - \\ 190 \\ 52 \\ 4 \\ - \\ 203 \\ 80 \\ 119 \\ 42 \\ 34 \\ 218 \\ 46 \\ - \\ 86 \\ 98 \\ - \\ 25 \\ - \\ 44 \\ 106 \\ 188 \\ - \\ 25 \\ - \\ - \\ 44 \\ 106 \\ 188 \\ - \\ 224 \\ - \\ 93 \\ - \\ 15 \\ - \\ - \\ - \\ 74 \\ 23 \\ 116 \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ 15 \\ - \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ 15 \\ - \\ - \\ - \\ 15 \\ - \\ - \\ - \\ 15 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ $	$\begin{array}{c} 1,237\\ 3,623\\ 5,162\\ 1,524\\ 2,144\\ 1,650\\ 521\\ 9,215\\ 849\\ 561\\ 3,111\\ 5,854\\ 903\\ 2,077\\ 550\\ 3,788\\ 2,644\\ 3,588\\ 1,379\\ 130\\ 3,588\\ 1,379\\ 130\\ 3,588\\ 1,379\\ 130\\ 3,588\\ 1,379\\ 130\\ 3,588\\ 1,379\\ 130\\ 3,803\\ 872\\ 1,141\\ 1,540\\ 1,77\\ 736\\ 1,379\\\\ 1,576\\ 802\\ 3,640\\ 2,302\\\\ 3,640\\ 2,302\\\\ 983\\ 2,425\\ \end{array}$	840 94 69 34 1,333 21 3 738 866 110 430 1,049 402 21 594 402 21 596 10 10 90 2,557 900 	$\begin{array}{c} 862\\ 117\\ 756\\ 490\\ 145\\ 240\\ 22\\ 10,053\\ 199\\ 32\\ 922\\ 612\\ 768\\ 153\\ 4\\ 1,700\\ 4,494\\ 273\\ 151\\ 63\\ 2,666\\ 478\\ 399\\ 2,235\\ 839\\ 6,026\\ 1,373\\ 12\\ 7\\ 44\\ 18\\ 1\\ 140\\ 137\\ 207\\ 298\\ 358\\ 43\\ 175\\ 387\\ 1,180\\ \end{array}$

Appendix 13—continued

		Planted di ended 30th 19	September,	Under Plantations	Provisional Allocation of Other Land	
Forest	Total	Afforested	Re- planted		Plantable	Agricultural, Unplant- able, &c.
Rannoch, Perth Rosarie, Banff Roseisle, Moray Scootmore, Banff & Moray Speymouth, Moray Strathord, Perth Teindland, Moray Teindland, Moray Tentsmuir, Fife Tilliefoure, Aberdeen Tornashean, Aberdeen Whitehaugh, Aberdeen	3,786 4,729 2,322 820 9,142 1,156 2,372 4,331 3,542 9,278 1,576	200 40 2 108 61 	83 194 762 37 176 8 236 152 	1,619 2,481 2,038 815 5,569 1,103 1,285 3,614 2,361 1,329 1,198	1,770 1,174 4 2,683 48 671 14 189 2,270 5	397 1,074 280 5 890 5 416 703 992 5,679 373
South Conservancy: Total	212,699	7,680	1,400	73,375	52,629	86,695
Forest of Ae, Dumfries Auchenroddan, Dumfries Bareagle, Wigtown Brownmoor, Dumfries Caim Edward	10,708 777 1,239 464	1,114 	6 	7,600 706 210 256	1,858 46 711 200	1,250 25 318 8
Cairn Edward, Kirkcudbright Cardrona, Peebles Carrick, Ayr Castle O'er, Dumfries Changue, Ayr Castle O'er, Dumfries Changue, Ayr Castle O'er, Dumfries Corriedoo, Kirkcudbright Craigieburn, Dumfries Corriedoo, Kirkcudbright Dalbeattie, Kirkcudbright Dalbeattie, Kirkcudbright Dalbeattie, Kirkcudbright Dundeugh, Kirkcudbright Duns, Berwick Uuns, Berwick Elibank, Peebles & Selkirk Fleet, Kirkcudbright Glengap, Kirkcudbright Glentress, Peebles Glen Trool, Kirkcudbright Greskine, Dumfries Kilgranmie, Ayr Kilsture, Wigtown Kirroughtree, Kirkcudbright Leithope, Roxburgh Mabie, Kirkcudbright Leithope, Roxburgh Mabie, Kirkcudbright Stellow, Roxburgh Mabie, Kirkcudbright Stellow, Roxburgh Mabie, Kirkcudbright Stellow, Roxburgh Stellow, Roxburgh Stellow, Selkirk Stenton, East Lothian Tinnisburn, Dumfries &	$\begin{array}{c} 15,032\\ 1,860\\ 33,072\\ 2,887\\ 2,389\\ 639\\ 1,022\\ 586\\ 4,250\\ 4,404\\ 1,455\\ 1,004\\ 432\\ 1,712\\ 5,594\\ 1,438\\ 1,914\\ 2,236\\ 2,349\\ 55,507\\ 2,445\\ 5,68\\ 511\\ 10,873\\ 4,405\\ 1,165\\ 2,726\\ 3,554\\ 5,430\\ 230\\ 1,013\\ 540\\ \end{array}$	888 3 841 	$\begin{array}{c} 60\\ -\\ 101\\ -\\ 43\\ 1\\ 12\\ -\\ 49\\ 33\\ 49\\ -\\ 75\\ 13\\ -\\ 12\\ 12\\ 26\\ 85\\ -\\ 111\\ 110\\ 9\\ 67\\ 108\\ -\\ 85\\ -\\ 5\\ -\\ 91\end{array}$	$\begin{array}{c} 7,223\\ 1,387\\ 3,140\\ 2,302\\ 1,582\\ 504\\ 955\\ 530\\ 2,286\\ 3,963\\ 552\\ 202\\ 1,457\\ 1,35\\ 1,084\\ 1,881\\ 1,052\\ 1,350\\ 1,086\\ 1,939\\ 6,409\\ 982\\ 356\\ 503\\ 3,521\\ 1,611\\ 518\\ 1,865\\ 3,284\\ 782\\ 46\\ -\\ -\\ 180\\ \end{array}$	$\begin{array}{c} 4,134\\\\ 3,711\\ 223\\ 159\\ 130\\ 21\\ 5\\ 1,283\\ 38\\ 803\\ 782\\ 3,048\\ 295\\ 133\\ 782\\ 3,048\\ 295\\ 133\\ 782\\ 3,048\\ 295\\ 133\\ 782\\ 212\\ 44,145\\ 1,769\\ 647\\ 391\\ 102\\ 3,091\\ 183\\\\ 346\end{array}$	3,675 473 26,221 362 648 5 46 51 681 403 100 20 1,459 2 495 1,734 208 216 470 36,338 225 - 4 3,207 1,025 - 470 168 1,557 1,013 14
Roxburgh Twiglees, Dumfries Wauchope, Roxburgh Yair Hill, Selkirk Bush Nursery, Midlothian	1,404 5,137 11,769 1,991 4	55 591 139		1,274 4,711 3,339 612 —	69 5,720 1,177	130 357 2,710 202 4

Appendix	13—continued
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		Planted during year ended 30th September, 1953		Under	Provisional Allocation of Other Land		
Forest	Total	Afforested	Re- planted	Plantarions	Plantable	Agricultural Unplant- able, &c.	
West Conservancy: Total	259,076	7,461	937	86,299	27,113	145,664	
Ardgartan, Argyll Asknish, Argyll Barcaldine, Argyll Benmore, Argyll Carron Valley, Stirling Corlarach, Argyll Devilla, Fife & Clackmanna Fearnoch, Argyll Garadhban, Stirling Garelochhead, Dunbartor Glenbranter, Argyll Glencoe, Argyll Glendaruel, Argyll Glendaruel, Argyll	1,342 1,297	30 18 494 270 197 479 451 252 24 58 210 135 91	$ \begin{array}{c} - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$	1,676 4,277 3,289 3,703 2,753 3,370 4,458 1,323 1,144 1,106 1,969 336 3,366 122 1,190 2,485 2,751	900 447 182 590 1,229 66 990 1,283 20 177 371 368 192 1,832 132 410	293 12,949 2,165 121 6,404 6,714 2,116 3,197 79 216 51 126 4,992 66 3,974 5,702 5,551	
Inverinan, Argyll Inverliever, Argyll* Kilmichael, Argyll Kilmory, Argyll Knapdale, Argyll Lenox, Stirling Loch Ard, Perth & Stirlin Loch Eck, Argyll Rowardennan, Stirling Saddell, Argyll St Fillans, Perth Strathlachlan, Argyll Strathlachlan, Argyll Torrie, Perth Torrie, Perth	1,660 12,796 29,522 12,689 3,169 19,702 580	206 368 458 928 16 643 	$ \begin{array}{c} - \\ 47 \\ 44 \\ 30 \\ - \\ 129 \\ 4 \\ 164 \\ - \\ - \\ 8 \\ 56 \\ 119 \\ 2 \\ 40 \\ - \\ \end{array} $	277 3,862 5,265 3,400 370 6,231 535 12,410 2,412 2,314 840 1,423 1,423 1,423 1,6 1,995 5,585 846 —	$\begin{array}{c} 262\\ 1,867\\ 1,570\\ 1,520\\ 1,732\\ 460\\\\ 5,308\\ 30\\ 1,068\\ 2,521\\ 45\\ 2,521\\ 45\\ 245\\ 1,272\\ 24\\\\\\\\\\\\\\\\\\\\ -$	$\begin{array}{c} 1,121\\ 7,067\\ 22,687\\ 7,769\\ 1,067\\ 13,011\\ 45\\ 14,272\\ 3,060\\ 1,786\\ 6,103\\ 3,449\\ 65\\ 4,349\\ 4,855\\ 130\\ 112\\ \end{array}$	

AREA STATEMENT OF LAND USE: BY FORESTS-WALES

Appendix 14

At 30th September, 1953

Acres

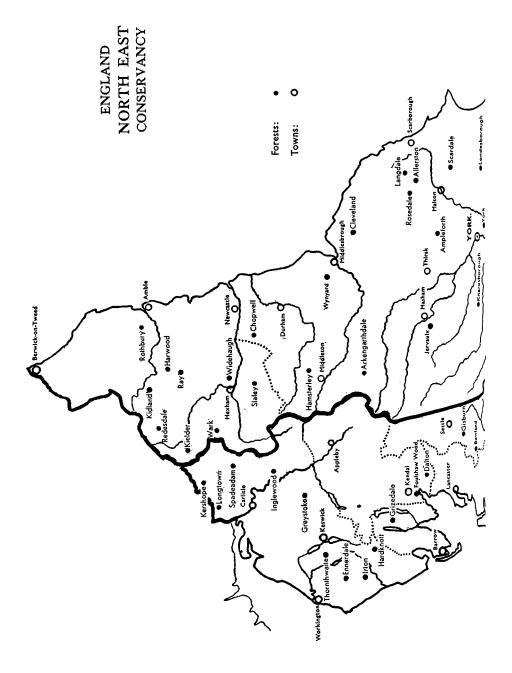
Under	Provisional Allocation of Other Land	
Forest Total Afforested Re- planted Plantations Plantations	Agricultural, Unplant- able, &c.	
North Conservancy:		
TOTAL 138,726 3,932 2,287 79,271 20,5	38,933	
Aberhirnant, Merioneth 6,399 190 31 1,603 1,3	65 3,431	
	21 7	
Bechan, Montgomery 348 – 64 235 1	13 _	
Beddgelert, Caernarvon 2,771 — 21 1,698	12 1,061	
	62 236	
	87 58	
Clocaenog, Denbigh &		
Merioneth 15,258 657 18 9,572 2,4		
	68 360	
Coed Penllyn, Merioneth 1,806 61 68 583 1,0 Coed Sarnau, Radnor 4,650 239 28 3,090 3		
	71 1,189 87 2	
Coed y Brenin, Merioneth17,893215808,8931,9Coed y Goror, Denbigh &	7,050	
Salop 988 – 84 780 1	83 25	
Commins Coch,	05 25	
Montgomery 1,073 51 52 753	63 257	
Cwmeinion, Cardigan 966 33 49 609	28 329	
Cynwyd, Merioneth 1,829 — 72 1,640	74 115	
Dovey, Merioneth &		
Montgomery 14,650 544 146 10,994 1,3	67 2,289	
Dyfnant, Montgomery 4,544 371 48 2,237 1,1	76 1,131	
Elwy, Denbigh 61	61 —	
	73 16	
Gwydyr, Caernarvon &		
	96 7,628	
Hafod Fawr, Merioneth* $1,367$ — — 623	11 733 34 2,738	
Hafren, Montgomery 10,637 364 60 6,065 1,8	54 2,130	
Kerry, Montgomery & Salop 2,403 — 77 2,276 —	127	
	23 2	
	44 37	
Myherin, Cardigan 10,359 42 204 5,404 1,4		
Newborough, Anglesey $2,536$ 262 — 960 9	07 669	
	36 81	
	86 1,296	
	55 92	
Tarenig, Cardigan &	1 0 00	
Montgomery 2,614 29 - 1,539	6 1,069	
Chirk Depot, Denbigh 4	. 4	
SOUTH CONSERVANCY: TOTAL 116.777 3.990 1.556 72.605 23,1	08 21,064	
TOTAL \dots 116,777 3,990 1,556 72,605 23,1	21,000	
Abergavenny, Monmouth 22 — — —	22 -	
	52 3,593	
	11 295	
	31 1,019	
Chepstow, Monmouth $1,600$ – 24 $1,388$ 2	10 2	
Cilgwyn, Carmarthen 673 8 47 274 3	98 1	
Coed Caerdydd, Glamorgan 640 — 59 133 4	80 27	
Coed Taf Fawr, Brecon 2.342 129 - 658 1,0	54 630 18 13	
Coed y Brithdir, Glamorgan 131 — 191 — 191	10 11	
Coed y Rhaiadr, Brecon 1,053 93 781 2	31 41	

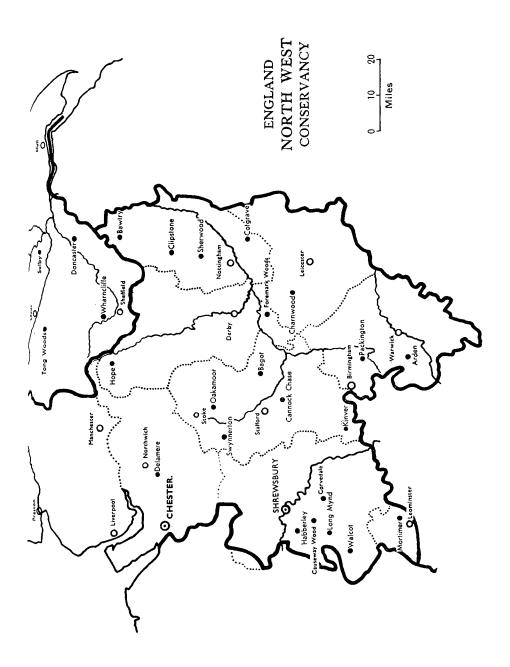
Appendix	14—continued
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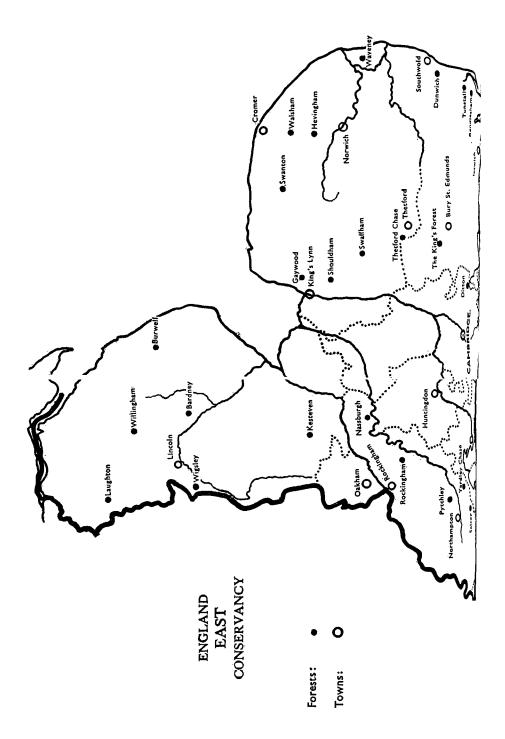
Forest	Total	Planted during year ended 30th September, 1953		Under	Provisional Allocation of Other Land	
		Afforested	Re- planted	Plantations	Plantable	Agricultural Unplant- able, &c.
Crychan, Brecon & Carmarthen Carmarthen Cwmogwr, Glamorgan Daugleddau, Pembroke Derry Ormond, Cardigan Draethen, Glamorgan Dunraven, Glamorgan Ebbw, Monmouth Gamrhiw, Brecon Giedd, Brecon Giedd, Brecon Glasfynydd, Brecon Goytre, Monmouth Hay, Brecon & Hereford Iffon, Brecon Llandowror, Carmarthen Llandeilo, Carmarthen Llandeilo, Carmarthen Llandeilo, Carmarthen Llandeilo, Carmarthen Margam, Glamorgan Michaelston, Glamorgan Michaelston, Glamorgan Mynydd Ddu, Brecon & Monmouth Pembrey, Carmarthen Sithowy, Monmouth Sithowy, Monmouth Tair Onen, Glamorgan Tair Onen, Glamorgan Taironen, Monmouth Towy, Cardigan & Brecon	$\begin{array}{c} 10,832\\ 3,966\\ 42\\ 1,315\\ 342\\ 4,816\\ 472\\ 504\\ 746\\ 3,064\\ 151\\ 354\\ 925\\ 854\\ 296\\ 922\\ 2,900\\ 1,404\\ 5,703\\ 5,785\\ 1,212\\ 3,085\\ 4,500\\ 14,164\\ 3,597\\ 469\\ 1,654\\ 1,131\\ 189\\ 2,780\\ 464\\ 4,969\\ 4,175\\ 1,162\\ \end{array}$	$\begin{array}{c} 361\\ 108\\ -\\ -\\ -\\ 511\\ -106\\ -\\ 93\\ -\\ -\\ 93\\ -\\ -\\ -\\ 47\\ 77\\ 14\\ -\\ -\\ 85\\ 234\\ -\\ -\\ 185\\ 234\\ -\\ -\\ 185\\ 234\\ -\\ -\\ 185\\ 234\\ -\\ -\\ -\\ 164\\ 11\\ 1\\ 169\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\ -\\$	$\begin{array}{c} 23 \\ 9 \\ -52 \\ 73 \\ 17 \\ 87 \\ 28 \\ -1 \\ 27 \\ -2$	$\begin{array}{c} 6,817\\ 2,115\\ \hline\\ 860\\ 260\\ 1,229\\ 277\\ 196\\ 581\\ 2,848\\ 45\\ 257\\ 827\\ 339\\ 94\\ 236\\ 2,564\\ 1,193\\ 3,211\\ 3,269\\ 436\\ 1,755\\ 1,728\\ 10,903\\ 2,740\\ 71\\ 1,903\\ 2,740\\ 711\\ 596\\ 1,021\\ 522\\ 1,343\\ 169\\ 4,338\\ 229\\ 1,001\\ \end{array}$	$1,472 \\ 267 \\ 42 \\ 249 \\ 69 \\ 69 \\ 2,173 \\ 181 \\ 272 \\ 24 \\ 113 \\ 106 \\ 93 \\ 91 \\ 445 \\ 154 \\ 379 \\ 111 \\ 112 \\ 1,570 \\ 1,688 \\ 688 \\ 602 \\ 632 \\ 1,423 \\ 156 \\ 215 \\ 1,016 \\ 5 \\ \\ 1,351 \\ 295 \\ 189 \\ 3,573 \\ 145 \\ 151 \\ 151 \\ 295 \\ 189 \\ 3,573 \\ 145 \\ 151 \\ 151 \\ 295 \\ 189 \\ 3,573 \\ 145 \\ 151 \\ 151 \\ 295 \\ 189 \\ 3,573 \\ 145 \\ 151 \\ 151 \\ 295 \\ 189 \\ 3,573 \\ 145 \\ 151 \\ 1$	$\begin{array}{c} 2,543\\ 1,584\\ \hline 206\\ 13\\ 1,414\\ 14\\ 36\\ 141\\ 103\\ \hline 4\\ 7\\ 70\\ 48\\ 307\\ 225\\ 99\\ 922\\ 828\\ 88\\ 728\\ 2,140\\ 1,838\\ 701\\ 183\\ 88\\ 701\\ 183\\ 42\\ 105\\ 137\\ 86\\ \hline 442\\ 373\\ 16\\ \end{array}$

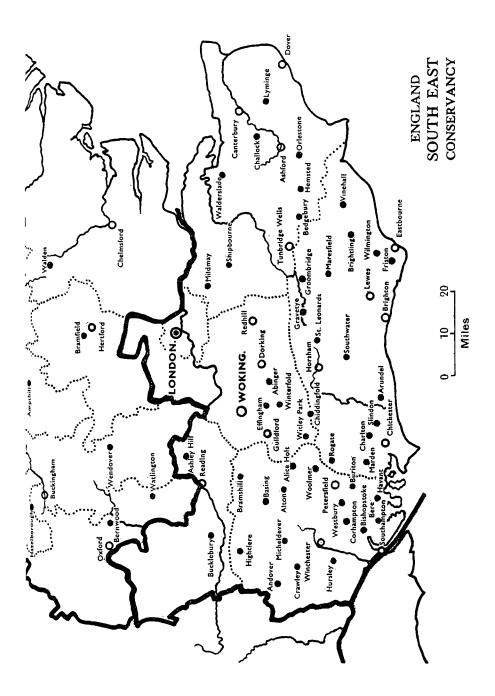
MAPS

Outline maps showing the distribution of the Commission forests, and the boundaries of the Conservancies, as at 30th September 1953, follow on pages 72 to 83.

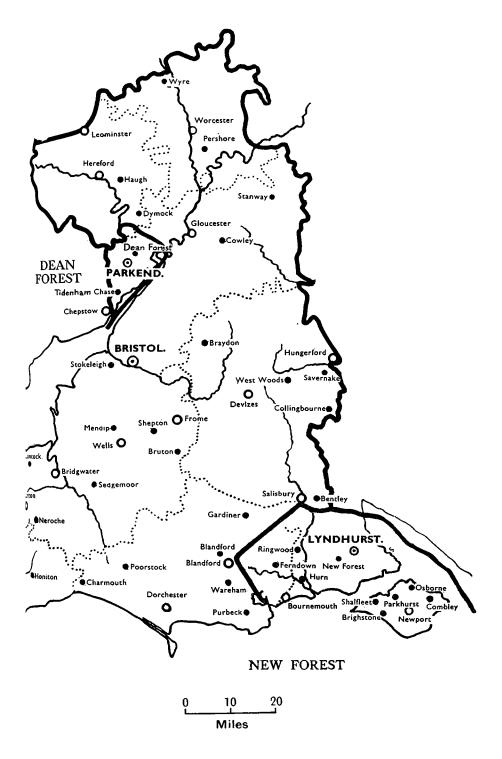


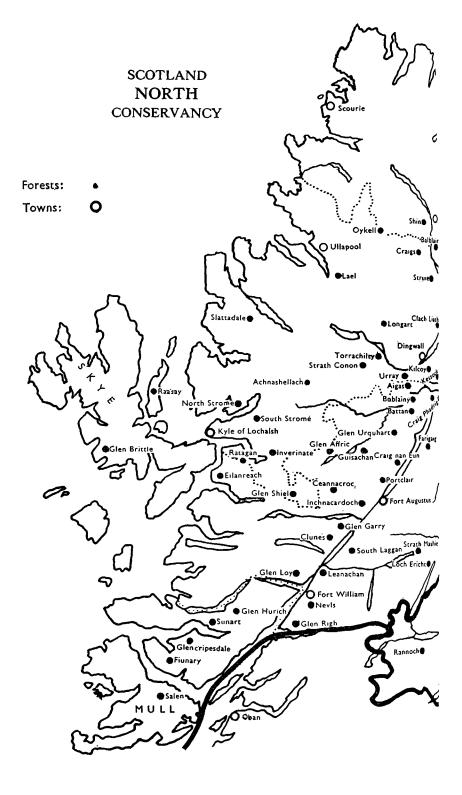


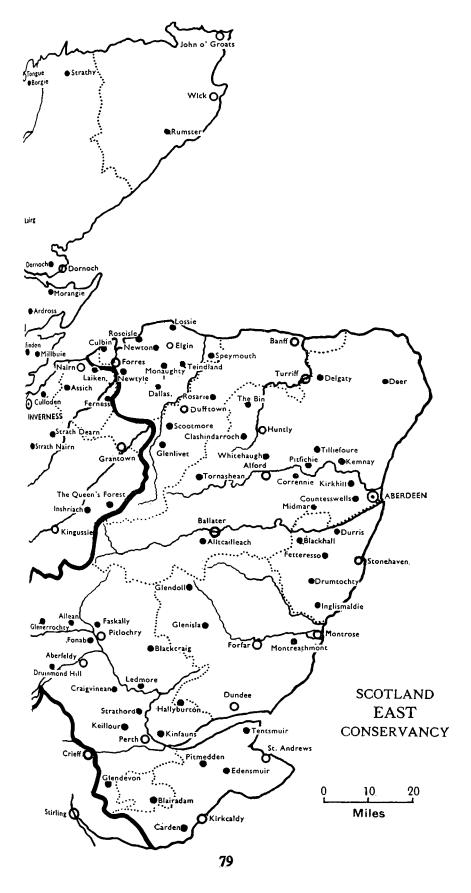


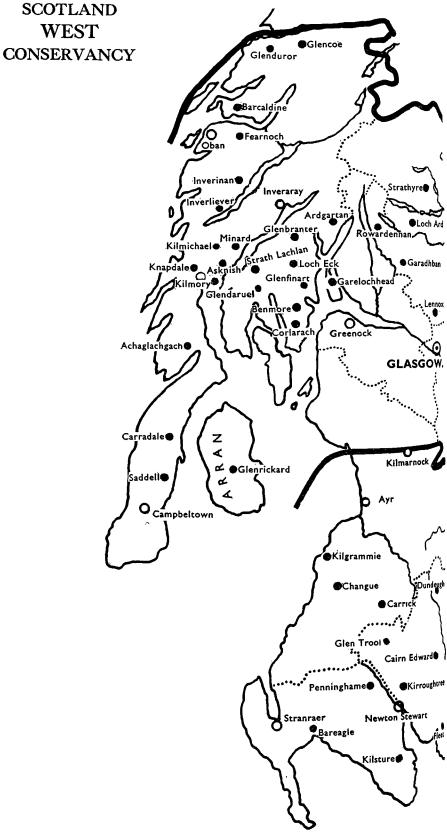


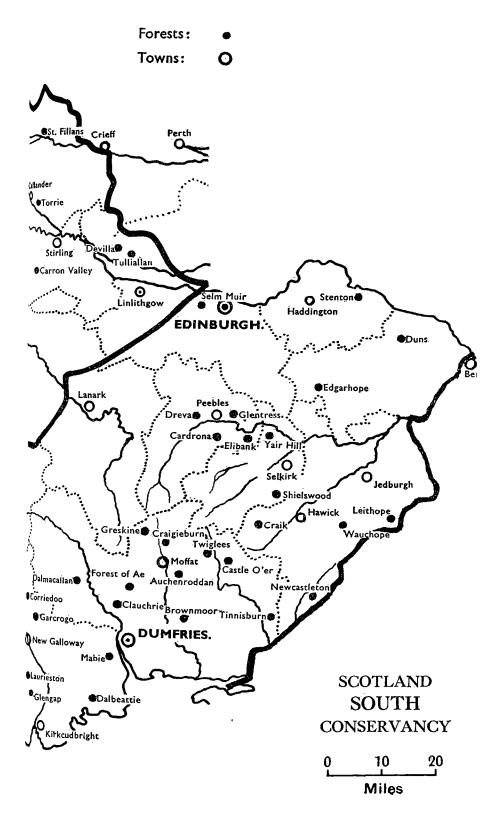


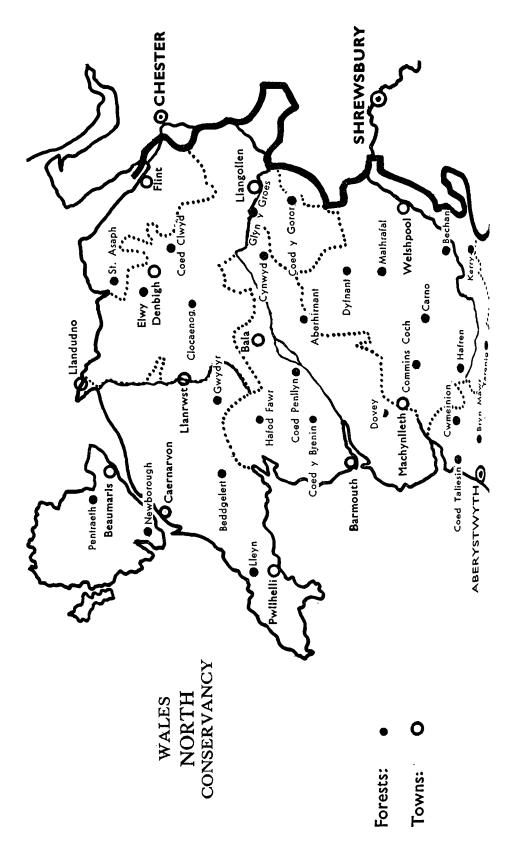


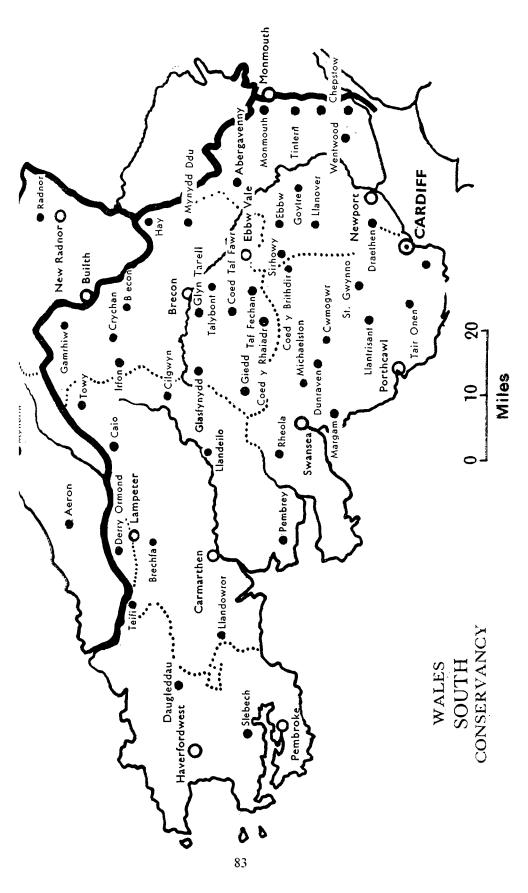












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Conservancy Offices

England:

North-West: Upton Grange, Upton Heath, Chester. (Chester 24006-7).

North-East: Briar House, Fulford Rd., York. (York 4684).

East: Brooklands Avenue, Cambridge. (Cambridge 54495).

South-East: Danesfield, Grange Rd., Woking. (Woking 2270-1).

South-West: Flowers Hill, Brislington, Bristol 4. (Bristol 78041-5).

New Forest: The Queen's House, Lyndhurst, Hants. (Lyndhurst 300).

Dean Forest: Whitemead Park, Parkend, Lydney, Glos. (Whitecroft 305).

Scotland:

North: 60, Church St., Inverness. (Inverness 223, 608-9).

East: 6, Queen's Gate, Aberdeen. (Aberdeen 33361).

South: Greystone Park, Moffat Rd., Dumfries. (Dumfries 1156).

West: 112, West George St., Glasgow, C.2. (Douglas 7261-2-3).

Wales:

North: 15, Belmont, Shrewsbury. (Shrewsbury 4071-2).

South: St. Agnes Road, Gabalfa, Cardiff. (Cardiff 33051).