

# **NATIONAL INVENTORY REPORT National Inventory of Woodland and Trees**



Part 1 - Woodlands of 2 hectares and over



# National Inventory REPORT Woodland and Trees

**Scotland** - Fife Region

Part 1 - Woodlands of 2 hectares and over

Woodland Surveys, Forest Research

. . . . . . . . . . . . . . . . . . .

#### © Crown copyright 2000 First published 2000

ISBN 0 85538 518 9

Printed in the United Kingdom PPD9/31-IH(KW)-MLP/500-MAR00

Enquiries regarding this report should be directed to:

Head of Woodland Surveys Forest Research Forestry Commission 231 Corstorphine Road Edinburgh EH12 7AT

### CONTENTS

Acknowled	dgements	iv
Introductio	on	1
Backgrou	Ind	1
Survey N	1ethod	1
Main Poi	nts from the Fife Results	2
Map 1	Distribution of Woodland within Fife Region	3
Map 2	Distribution of Woodland by Ownership within Fife Region	4
Results		5
Table 1	Summary of Areas by Ownership	5
Chart	Woodland Area by Ownership	5
Table 2a	Size Class Distribution of Woodland	6
Table 2b	Size Class Distribution of Woodland by Ownership Units	6
Table 3	Areas of Woodland by Forest Type and Ownership	7
Chart	Percentage Forest Type by Area - All Woodland	7
Table 4a	Areas of High Forest by Principal Species and Ownership	8
Graph	Areas of High Forest by Principal Species and Ownership	9
Table 4b	High Forest - Areas by Principal Species, Ownership and Category	10
Graph	High Forest Category 1 - Areas by Principal Species and Ownership	11
Graph	High Forest Category 2 - Areas by Principal Species and Ownership	11
Table 5a	High Forest Category 1 - Areas by Principal Species and Planting Year Classes	12
Graph	High Forest Category 1 - Areas by Planting Year Class	13
Table 5b	High Forest Category 1 - Forestry Commission - Areas by Principal Species and Planting Year Classes	14
Graph	High Forest Category 1 - Forestry Commission - Areas by Planting Year Class	15
Table 5c	High Forest Category 1 - Other Ownerships - Areas by Principal Species and Planting Year Classes	16
Graph	High Forest Category 1 - Other Ownerships - Areas by Planting Year Class	17
Table 6	High Forest - Principal Species by Planting Year Classes	18
Table 7	Ownership Type by Area and Percentage	18
Compariso	on of Results with the 1980 Census	19
Table 8	Woodland Areas and Ownership	19
Table 9	Comparison between 1995 Inventory and 1980 Census	
	High Forest - Areas by Principal Species	20
Graph	Comparison between 1995 Inventory and 1980 Census	
	High Forest - Areas by Principal Species	21
Graph	Comparison between 1995 Inventory and 1980 Census	
	High Forest Category 1 - Areas by Planting Year Class	21
Glossary		22

### ACKNOWLEDGEMENTS

The Forestry Commission is grateful to many people who helped in the completion of this survey. In particular, the Forestry Commission would like to thank owners and occupiers of the land selected for sampling, and the Macaulay Land Use Research Institute for their help with the digital map.

Staff concerned with the survey work were: Douglas Wright, Head of Woodland Surveys Branch (to Dec.1997), who was in overall charge. Alex Herd (Survey Officer) supervised the fieldwork which was undertaken by Nick Evans (Survey Forester) and Julia Tilson, Andrew Wright, Claire Glaister and Harriet Lindsay (Survey Assistants). Simon Gillam (Head of Statistics) provided valuable statistical advice.

Preparation of the digital cartography for the Region was carried out by Graham Bull, Woodland Survey Officer, and Woodland GIS Officers Chris Brown, Esther Whitton and Robert Beck.

The authors of this Report are Steve Smith, Head of Woodland Surveys, and Justin Gilbert, Woodland Data Officer.

### INTRODUCTION

The following report presents the results of the main woodland survey for Fife Region from the Forestry Commission National Inventory of Woodlands and Trees.

The Inventory consists of two parts:

## Part 1: the main woodland survey covering woodlands of 2 or more hectares and

# Part 2: the small woodland and trees survey covering small woodlands, groups of trees and individual trees.

The results which follow are for Part 1, the main woodland survey, with a reference date of 31 March 1995. Woodland Surveys Branch of Forest Research was responsible for carrying out the survey and for compiling the report.

Part 2 of the Inventory will be published separately in 2000.

#### BACKGROUND

The Forestry Commission has carried out a number of national woodland surveys since 1924 with the interval between surveys being 15–20 years. The most recent of these surveys was in 1979–82. With the statistics becoming increasingly out of date the Forestry Commission decided to undertake a new survey called the National Inventory of Woodland and Trees.

The aim is to complete the survey for Great Britain by March 2001. Priority is being given to Scotland followed by Southern England, Wales and Northern England.

Although Fife Region ceased to exist as a local authority on 31 March 1996 it remains a useful geographical unit for presentation and also for comparison with results from the previous survey.

#### **SURVEY METHOD**

In Scotland the main survey has been able to use the digital map from the Land Cover of Scotland (LCS) 1988 project.

For Fife Region, this digital map has been updated to 31 March 1995 and gives the extent of all woodland over 2 hectares. The total area of woodland in Fife was obtained from the digital map with ground sampling undertaken to evaluate a wide range of woodland information such as species, age and stocking.

From the digital map the area of each woodland was recorded and this information was used to determine the intensity at which any selected woodland would be sampled. The overall sampling scheme was as follows:

#### a) 2.0 ha - <100 ha : every fifth wood

- b) 100 ha <500 ha : two woods in five
- c) 500 ha and larger : all woods

1hectare square plots were used to sample the selected woodlands on the ground. This was a change of practice from all previous Census surveys, where whole woods have been selected for survey. For each of the three bands of woodland area a different sampling grid was used with the density of the squares being reduced as the woodlands increase in size. The overall aim was to sample 1% of the woodland in each size class.

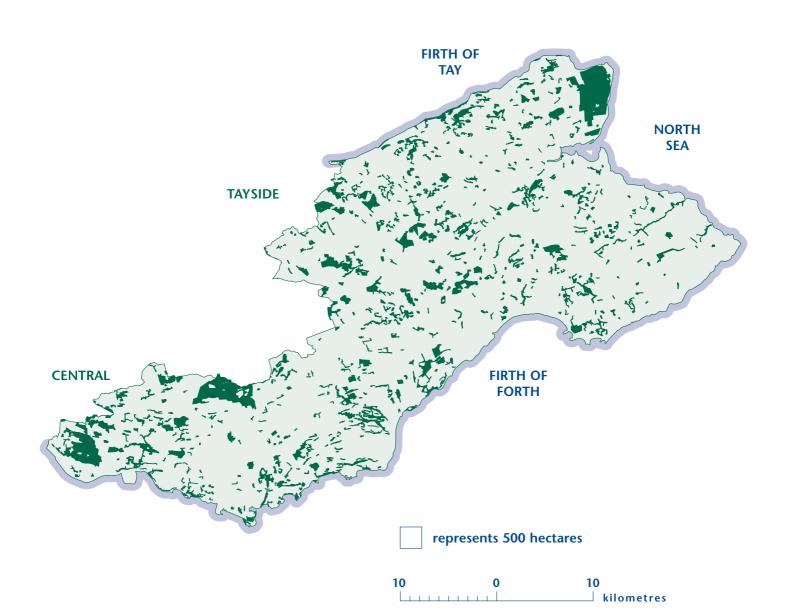
The main difference from the 1980 Census is the change in the minimum woodland area from 0.25 to 2.0 hectares. This means at this stage that the results of the main survey in the Inventory can only be compared approximately with the 1980 Census. However, when the next part of the Inventory is completed data will be available for Small Woodland between 0.25 and 2.0 hectares. This will make an analysis of change possible using comparable sets of information.

#### MAIN POINTS FROM THE FIFE RESULTS

- The total area of woodland in Fife Region is 13 661 hectares. This represents 10.3% of the land area. (Table 1)
- 4 692 hectares or 34% of woodland is owned by or leased to the Forestry Commission and 8 968 hectares or 66% of woodland is in Other ownerships. (Table 1)
- There are a total of 695 woods over 2 hectares within Fife Region with a mean wood area of 20 hectares. (Table 2a)
- Conifer woodland is the dominant forest type representing 44% of all woodland. Broadleaved woodland represents 33%, mixed woodland 13% and open space within woodlands 9%. (Table 3)
- The main conifer species is Scots pine covering 2 699 hectares or 40% of all conifer species. 42% of all conifers are within Other ownerships. (Table 4a)
- The main category of broadleaved species is mixed broadleaves covering 2 180 hectares or 39% of all broadleaved species. 89% of all broadleaves are within Other ownerships. (Table 4a)
- High Forest covers 12 430 hectares or 91% of woodland. (Table 4a)
- Woodland land cover has increased by 148 hectares since 1980; the proportion of the land area has not changed significantly from 10.3%. (Table 8)

#### MAP 1 - DISTRIBUTION OF WOODLAND WITHIN FIFE REGION





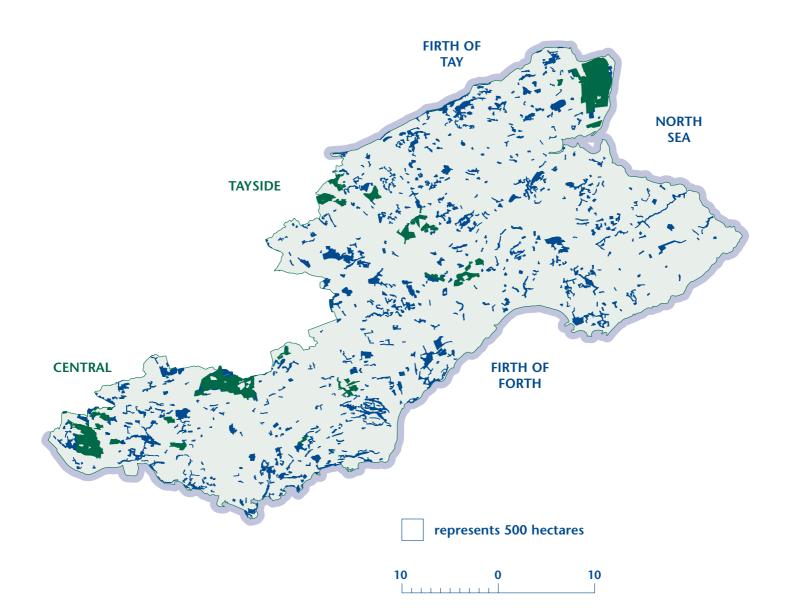
Based on Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright - Forestry Commission Licence No: GD272388

.....



#### MAP 2 - DISTRIBUTION OF WOODLAND BY OWNERSHIP WITHIN FIFE REGION

Forestry Commission Woodland over 2 hectares Other Woodland over 2 hectares



Based on Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright - Forestry Commission Licence No: GD272388

### RESULTS

TABLE 1 SUMMARY OF AREAS	BY OWNER	SHIP									
Area (including inland water) 132256 ha											
Ownership	ha	% woodland									
Forestry Commission	4692	34									
Other	8968	66									
Total Area of Woodland	13661	100									
% Woodland Land Cover	10.3										

#### NOTE (Table 1)

Area of Local Authority Unit based on digital boundaries used for 1991 Census of Population.

Woodland Area from LCS map updated to 31 March 1995.

#### **Ownership Categories:**

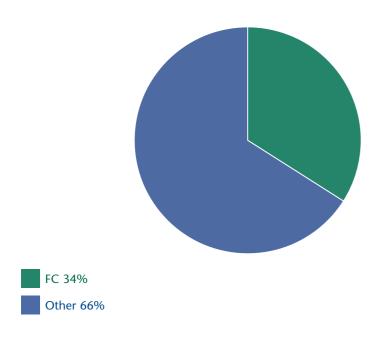
Forestry Commission

(FC) All woodland owned by, or leased to, the Forestry Commission.

Other

(O) Woodland other than FC woodland. Includes woodland owned by private individuals, partnerships trusts, business interests, local authorities, other government departments and agencies.

#### WOODLAND AREA BY OWNERSHIP



Note: The figures in many of the tables may not add due to rounding.

TABLE 2a S	TABLE 2a SIZE CLASS DISTRIBUTION OF WOODLAND												
Size Class	Number	Mean Wood											
(ha)	of Woods	Area (ha)											
0 - < 2	4	4	0	1.0									
2 - < 10	477	2175	16	4.6									
10 - < 20	103	1373	10	13.3									
20 - < 50	65	2068	15	31.8									
50 - < 100	29	2133	16	73.6									
2 - < 100	674	7749	57	11.5									
100 - < 500	18	2564	19	142.4									
500 - and >	3	3344	24	1114.5									
All Woods	699	13661	100	19.5									

NOTE (Table 2a)

Some woods, over 2 hectares, are divided by the Regional boundary and only a part of their area falls within the Region. These part-woods are included above in the appropriate size category and are often less than 2 hectares.

TABLE 2b	TABLE 2b SIZE CLASS DISTRIBUTION OF WOODLAND By ownership units												
Size Class (ha)	FC or Other	Number of Woods	Total Area (ha)	Percent of Total Area	Mean Wood Area (ha)								
0 - < 2	FC Other	0 25	0 22	0 0	0.0 0.9								
2 - < 10	FC	5	38	0	7.5								
	Other	489	2222	16	4.5								
10 - < 20	FC	3	37	0	12.4								
	Other	103	1370	10	13.3								
20 - < 50	FC	14	487	4	34.8								
	Other	63	1975	14	31.4								
50 - < 100	FC	8	578	4	72.2								
	Other	21	1532	11	73.0								
2 - < 100	FC	30	1139	8	38.0								
	Other	676	7100	52	10.5								
100 - < 500	FC	4	501	4	125.2								
	Other	13	1847	14	142.1								
500 - and >	FC	3	3052	22	1017.3								
	Other	0	0	0	0.0								
Total	FC	37	4692	34	126.8								
	Other	714	8968	66	12.6								
Grand Total		699	13661	100	19.5								

Note: The figures in many of the tables may not add due to rounding.

.....

#### NOTE (Table 2b)

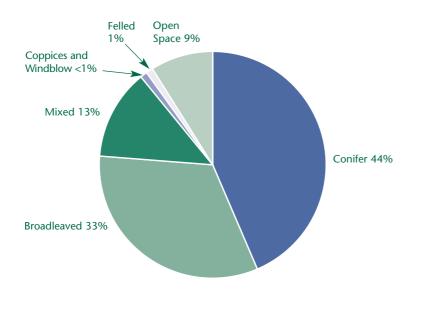
The data available from the digital map enable the identification of woodlands according to their ownerships, Forestry Commission or Other. The entries in the table cannot be added, to derive Table 2a, as some woods may consist of both FC and Other ownerships. For example, the Forestry Commission may own most of a large wood with some parts in Other ownership(s). In Table 2a the whole area would be treated as one wood and the area allocated to one size category. In Table 2b each of the ownership units would be allocated to the size category for that unit. Dividing woods by ownership can occasionally generate partwoods of less than 2 hectares.

TABLE 3 AREAS OF WOODLAND BY FOREST TYPE AND OWNERSHIP													
Forest Type	F	с	Ot	her	All Woods								
	ha	%	ha	%	ha	%							
Conifer	3757	80.1	2224	24.8	5981	43.8							
Broadleaved	380	8.1	4130	46.1	4510	33.0							
Mixed	378	8.1	1432	16.0	1810	13.2							
Coppice	0	0.0	55	0.6	55	0.4							
Copp-w-Stds	0	0.0	0	0.0	0	0.0							
Windblow	21	0.4	4	0.0	24	0.2							
Felled	24	0.5	81	0.9	105	0.8							
Open space	133	2.8	1042	11.6	1175	8.6							
Total	4693	100.0	8968	100.0	13661	100.0							

#### NOTE (Table 3)

Please refer to the Glossary on page 22 for definitions of forest types.

#### % FOREST TYPE BY AREA - ALL WOODLAND



Note: The figures in many of the tables may not add due to rounding.

. . . . . . . . . . . . . . . .

.....

# TABLE 4a AREAS OF HIGH FOREST BY PRINCIPAL SPECIESAND OWNERSHIP

.....

		FC		C	Other		All W	/oodla	nd
Species	Area (ha)	cat %	spp %	Area (ha)	cat %	spp %	Area (ha)	cat %	spp %
Scots pine	1413	36	31	1286	45	17	2699	40	22
Corsican pine	260	7	6	85	3	1	345	5	3
Lodgepole pine	428	11	9	53	2	1	482	7	4
Sitka spruce	818	21	18	401	14	5	1220	18	10
Norway spruce	276	7	6	252	9	3	527	8	4
European larch	52	1	1	157	5	2	209	3	2
Jap/Hybrid larch	539	14	12	344	12	4	883	13	7
Douglas fir	16	0	0	51	2	1	67	1	1
Other conifers	85	2	2	58	2	1	143	2	1
Mixed conifers	55	1	1	168	6	2	223	3	2
Total conifers	3941	100	87	2855	100	37	6796	100	55
Oak	4	1	0	298	6	4	302	5	2
Beech	138	23	3	331	7	4	469	8	4
Sycamore	37	6	1	968	20	12	1005	18	8
Ash	0	0	0	188	4	2	188	3	2
Birch	160	27	4	833	17	11	993	18	8
Poplar	0	0	0	9	0	0	9	0	0
Sweet chestnut	0	0	0	0	0	0	0	0	0
Elm	0	0	0	124	3	2	124	2	1
Other broadleaves	12	2	0	246	5	3	258	5	2
Mixed broadleaves	244	41	5	1936	39	25	2180	39	18
Total broadleaves	595	100	13	4934	100	63	5529	100	45
Total - all species	4536		100	7789		100	12325		100
Felled	24			81			105		
Total High Forest	4560			7870			12430		

Note: The figures in many of the tables may not add due to rounding.

Reference Date 31 March 1995

#### NOTE (Table 4a)

- cat: species percentage of conifer or broadleaved in the ownership category.
- spp: percentage of all species in the ownership category.

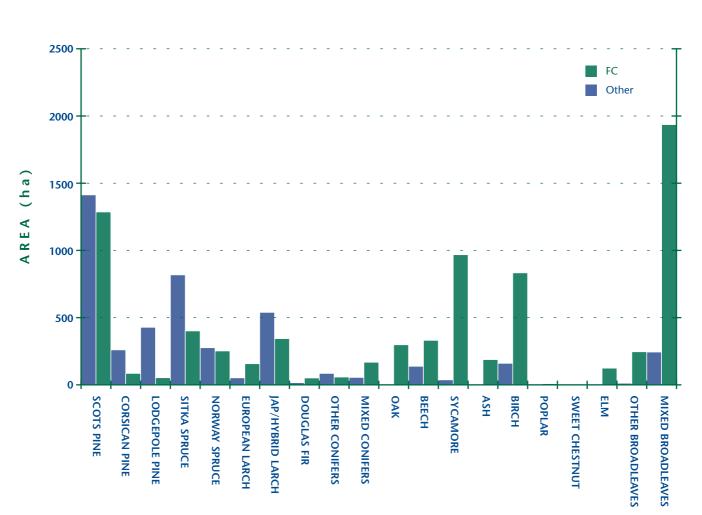
In addition to the areas shown there are 1175 hectares of other areas integral to the woodland not stocked with tree species.

The standard errors of the area estimates for the most common species are as follows:

Conifers	6%
Broadleaves	7%
Scots pine	13%
Sitka spruce	19%
Sycamore	16%
Mixed broadleaves	11%

These standard errors are for the species areas in all woodland types.

Confidence Intervals: where the Standard Errors of these summary measures are 10% or less, the Confidence Intervals will be approximately symmetrical; the true value is expected to be within +/- one Standard Error for about 68% (or about two-thirds) of all cases, and within +/- two Standard Errors for about 95% of all cases. Where percentage Standard Errors are larger, e.g. for less common species or more variable species composition, the Confidence Intervals will be less symmetrical (and wider).



#### AREAS OF HIGH FOREST BY PRINCIPAL SPECIES AND OWNERSHIP

SPECIES

# TABLE 4b AREAS OF HIGH FOREST BY PRINCIPAL SPECIES,OWNERSHIP AND CATEGORY

.....

		F	C		Other		All	Owners	nips
Species	Cat 1	Cat 2	Tot HF	Cat 1	Cat 2	Tot HF	Cat 1	Cat 2	Tot HF
Scots pine	1413	0	1413	1244	42	1286	2657	42	2699
Corsican pine	260	0	260	85	0	85	345	0	345
Lodgepole pine	387	41	428	53	0	53	440	41	482
Sitka spruce	808	10	818	392	9	401	1200	19	1220
Norway spruce	276	0	276	244	7	252	520	7	527
European larch	52	0	52	157	0	157	209	0	209
Jap/Hybrid larch	539	0	539	296	48	344	835	48	883
Douglas fir	16	0	16	45	6	51	61	6	67
Other conifers	85	0	85	40	18	58	125	18	143
Mixed conifers	51	4	55	144	24	168	195	28	223
Total conifers	3886	56	3941	2701	153	2855	6587	209	6796
Oak	4	0	4	140	158	298	144	158	302
Beech	138	0	138	137	194	331	275	194	469
Sycamore	21	16	37	427	541	968	448	557	1005
Ash	0	0	0	76	112	188	76	112	188
Birch	160	0	160	132	701	833	292	701	993
Poplar	0	0	0	0	9	9	0	9	9
Sweet chestnut	0	0	0	0	0	0	0	0	0
Elm	0	0	0	4	120	124	4	120	124
Other broadleaves	12	0	12	89	156	246	101	156	258
Mixed broadleaves	4	240	244	729	1207	1936	733	1447	2180
Total broadleaves	338	256	595	1736	3199	4934	2074	3455	5529
Total - all species	4224	312	4536	4437	3353	7789	8661	3664	12325

.....

Note: The figures in many of the tables may not add due to rounding.

#### NOTE (Table 4b)

The standard errors of the area estimates for the most common species or species groups are as follows:

	Cat 1	Cat 2	Total HF
Conifers	6%	27%	6%
Broadleaves	11%	9%	7%
Sitka spruce	19%	-	19%
Scots pine	12%	53%	13%
Mixed broadleaves	16%	14%	11%

Confidence Intervals: where the Standard Errors of these summary measures are 10% or less, the Confidence Intervals will be approximately symmetrical; the true value is expected to be within +/- one Standard Error for about 68% (or about two-thirds) of all cases, and within +/- two Standard Errors for about 95% of all cases. Where percentage Standard Errors are larger, e.g. for less common species or more variable species composition, the Confidence Intervals will be less symmetrical (and wider).

These standard errors are for the species areas in all woodland types.

#### 1600 FC **CATEGORY** 1 Other 1200 AREA (ha) 800 400 0 1400 **CATEGORY 2** 1200 1000 ( h a ) 800 REA 600 4 **400** 200 0 POPLAR OAK BEECH SYCAMORE ASH BIRCH ELM SITKA SPRUCE **EUROPEAN LARCH** SWEET CHESTNUT **OTHER BROADLEAVES** SCOTS PINE NORWAY SPRUCE **DOUGLAS FIR OTHER CONIFERS** MIXED CONIFERS MIXED BROADLEAVES CORSICAN PINE LODGEPOLE PINE JAP/HYBRID LARCH **SPECIES**

#### AREAS OF HIGH FOREST BY PRINCIPAL SPECIES AND OWNERSHIP

#### TABLE 5a HIGH FOREST CATEGORY 1 -AREAS BY PRINCIPAL SPECIES AND PLANTING YEAR CLASSES

.....

	PLANTING YEAR CLASS													
Species	1991 -1995			1961 -1970								pre - 1861	TOTAL	
Scots pine	31	80	24	878	679	381	200	360	21	4	0	0	2657	
Corsican pine	0	0	12	69	107	0	112	44	0	0	0	0	345	
Lodgepole pine	0	0	177	252	11	0	0	0	0	0	0	0	440	
Sitka Spruce	10	222	432	255	125	72	84	0	0	0	0	0	1200	
Norway spruce	7	47	11	220	87	120	21	7	0	0	0	0	520	
European larch	0	0	21	4	61	96	28	0	0	0	0	0	209	
Jap/Hybrid larch	0	7	3	320	239	105	146	14	0	0	0	0	835	
Douglas fir	0	0	16	11	34	0	0	0	0	0	0	0	61	
Other conifers	16	21	38	0	45	0	0	0	0	0	4	0	125	
Mixed conifers	0	4	7	91	31	43	4	15	0	0	0	0	195	
Total conifers	65	381	742	2101	1419	817	594	440	21	4	4	0	6587	
Oak	16	90	0	0	6	0	17	3	7	0	0	4	144	
Beech	0	6	15	2	64	0	137	0	31	14	6	0	275	
Sycamore	0	39	0	50	204	100	31	0	24	0	0	0	448	
Ash	0	18	7	17	0	31	0	0	3	0	0	0	76	
Birch	0	63	66	52	39	26	4	42	0	0	0	0	292	
Poplar	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sweet chestnut	0	0	0	0	0	0	0	0	0	0	0	0	0	
Elm	0	0	0	4	0	0	0	0	0	0	0	0	4	
Other blvs	0	82	0	0	12	0	0	7	0	0	0	0	101	
Mixed blvs	59	169	51	61	138	59	50	51	15	10	69	0	733	
Total broadleaves	75	468	138	185	464	217	238	104	81	25	75	4	2074	
Total - all species	140	849	881	2286	1883	1034	833	543	102	28	78	4	8661	

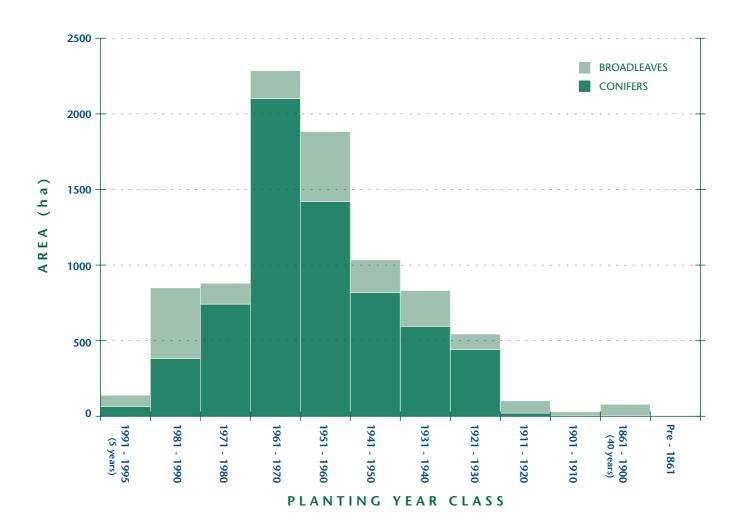
.....

Note: The figures in many of the tables may not add due to rounding.

#### NOTE (Table 5a)

Age determined from records where these were available. Where records were not available or were clearly inaccurate age-class was assigned by reference to similar crops of known age in the locality.

#### HIGH FOREST CATEGORY 1 - AREAS BY PLANTING YEAR CLASS



3

Reference Date 31 March 1995

. . . . . . . . . . . . . . . . . . .

# TABLE 5b HIGH FOREST CATEGORY 1 - FORESTRY COMMISSIONAREAS BY PRINCIPAL SPECIES AND PLANTING YEAR CLASSES

.....

	PLANTING YEAR CLASS													
Species	1991 -1995	1981 -1990		1961 -1970								pre - 1861	TOTAL	
Scots pine	16	80	0	0	497	291	179	339	10	0	0	0	1413	
Corsican pine	0	0	0	0	104	0	112	44	0	0	0	0	260	
Lodgepole pine	0	0	159	228	0	0	0	0	0	0	0	0	387	
Sitka spruce	10	163	311	114	53	72	84	0	0	0	0	0	808	
Norway spruce	0	41	0	62	32	120	21	0	0	0	0	0	276	
European larch	0	0	21	0	31	0	0	0	0	0	0	0	52	
Jap/Hybrid larch	0	0	0	248	145	0	146	0	0	0	0	0	539	
Douglas fir	0	0	16	0	0	0	0	0	0	0	0	0	16	
Other conifers	16	21	24	0	24	0	0	0	0	0	0	0	85	
Mixed conifers	0	0	0	20	31	0	0	0	0	0	0	0	51	
Total conifers	42	305	531	672	917	483	542	383	10	0	0	0	3886	
Oak	0	0	0	0	0	0	4	0	0	0	0	0	4	
Beech	0	0	8	0	8	0	122	0	0	0	0	0	138	
Sycamore	0	0	0	0	0	0	21	0	0	0	0	0	21	
Ash	0	0	0	0	0	0	0	0	0	0	0	0	0	
Birch	0	42	66	41	10	0	0	0	0	0	0	0	160	
Poplar	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sweet chestnut	0	0	0	0	0	0	0	0	0	0	0	0	0	
Elm	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other blvs	0	0	0	0	12	0	0	0	0	0	0	0	12	
Mixed blvs	4	0	0	0	0	0	0	0	0	0	0	0	4	
Total broadleaves	4	42	74	41	30	0	146	0	0	0	0	0	338	
Total - all species	46	348	605	713	948	483	688	383	10	0	0	0	4224	

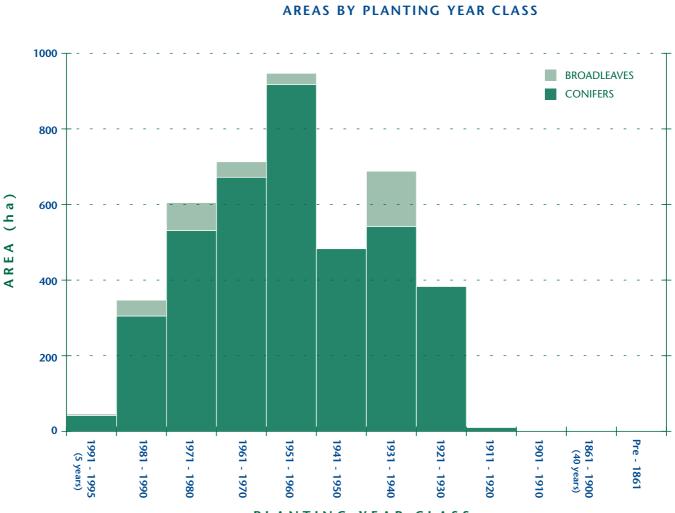
.....

Note: The figures in many of the tables may not add due to rounding.

#### NOTE (Table 5b)

Age determined from records where these were available. Where records were not available or were clearly inaccurate age-class was assigned by reference to similar crops of known age in the locality.

HIGH FOREST CATEGORY 1 - FORESTRY COMMISSION -



PLANTING YEAR CLASS

15

Reference Date 31 March 1995

. . . . . . . . . . . . . . . . . . .

#### TABLE 5c HIGH FOREST CATEGORY 1 - OTHER OWNERSHIPS AREAS BY PRINCIPAL SPECIES AND PLANTING YEAR CLASSES

.....

	PLANTING YEAR CLASS													
Species	1991 -1995			1961 -1970					1911 -1920			pre - 1861	TOTAL	
Scots pine	15	0	24	878	181	90	21	21	10	4	0	0	1244	
Corsican pine	0	0	12	69	4	0	0	0	0	0	0	0	85	
Lodgepole pine	0	0	18	25	11	0	0	0	0	0	0	0	53	
Sitka spruce	0	58	121	142	72	0	0	0	0	0	0	0	392	
Norway spruce	7	6	11	158	55	0	0	7	0	0	0	0	244	
European larch	0	0	0	4	30	96	28	0	0	0	0	0	157	
Jap/Hybrid larch	0	7	3	72	95	105	0	14	0	0	0	0	296	
Douglas fir	0	0	0	11	34	0	0	0	0	0	0	0	45	
Other conifers	0	0	14	0	21	0	0	0	0	0	4	0	40	
Mixed conifers	0	4	7	71	0	43	4	15	0	0	0	0	144	
Total conifers	22	76	211	1429	502	335	52	57	10	4	4	0	2701	
Oak	16	90	0	0	6	0	13	3	7	0	0	4	140	
Beech	0	6	7	2	56	0	15	0	31	14	6	0	137	
Sycamore	0	39	0	50	204	100	10	0	24	0	0	0	427	
Ash	0	18	7	17	0	31	0	0	3	0	0	0	76	
Birch	0	21	0	11	29	26	4	42	0	0	0	0	132	
Poplar	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sweet chestnut	0	0	0	0	0	0	0	0	0	0	0	0	0	
Elm	0	0	0	4	0	0	0	0	0	0	0	0	4	
Other blvs	0	82	0	0	0	0	0	7	0	0	0	0	89	
Mixed blvs	55	169	51	61	138	59	50	51	15	10	69	0	729	
Total broadleaves	71	426	64	144	433	217	92	104	81	25	75	4	1736	
Total - all species	94	501	275	1573	936	552	144	160	92	28	78	4	4437	

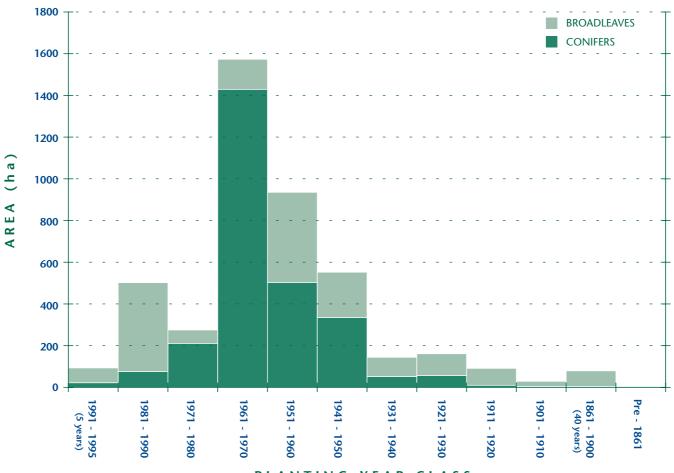
.....

Note: The figures in many of the tables may not add due to rounding.

#### NOTE (Table 5c)

Age determined from records where these were available. Where records were not available or were clearly inaccurate age-class was assigned by reference to similar crops of known age in the locality.





PLANTING YEAR CLASS

Reference Date 31 March 1995

TABLE 6 HIGH FOREST - PRINCIPAL SPECIES BY PLANTING YEAR CLASSES						
Planting Year Class	First	%	Second	%	Third	%
1991-1995	Mixed broadleaves	43	Scots pine	22	Oak/Other conifer*	11
1981-1990	Sitka spruce	25	Mixed broadleaves	21	Oak	10
1971-1980	Sitka spruce	33	Mixed broadleaves	18	Birch	14
1961-1970	Scots pine	29	Jap/Hybrid larch	12	Mixed broadleaves	10
1951-1960	Scots pine	36	Birch	15	Mixed broadleaves	15
1941-1950	Mixed broadleaves	24	Scots pine	23	Sycamore	12
1931-1940	Mixed broadleaves	17	Scots pine	17	Beech	13
1921-1930	Scots pine	50	Mixed broadleaves	21	Oak	6
1911-1920	Sycamore	30	Scots pine	20	Beech	19
1901-1910	Mixed broadleaves	56	Beech	35	Scots pine	4
1861-1900	Mixed broadleaves	68	Beech	17	Other conifer	6
Pre 1861	Oak/Other conifer*	50	-		-	
All years	Scots pine	22	Mixed broadleaves	18	Sitka spruce	10

\*Areas of Oak and Other conifer for the planting year classes 1991-1995 and Pre 1861 were equal.

# TABLE 7 OWNERSHIP TYPE BY AREA AND PERCENTAGE

Ownership Type	Area (ha)	%
Personal	5484	40.1
Private forestry or timber business	0	0.0
Other private business	1688	12.4
Local Authority	560	4.1
Other public body (not FC)	455	3.3
Forestry Commission	4693	34.4
Charity	780	5.7
Community ownership or common land	0	0.0
Unclassified	0	0.0
Total	13661	100.0

Note: The figures in many of the tables may not add due to rounding.

18

NOTE (Table 7)

Please refer to the Glossary on page 22 for definitions of ownership types.

.....

### **COMPARISON OF RESULTS WITH THE 1980 CENSUS**

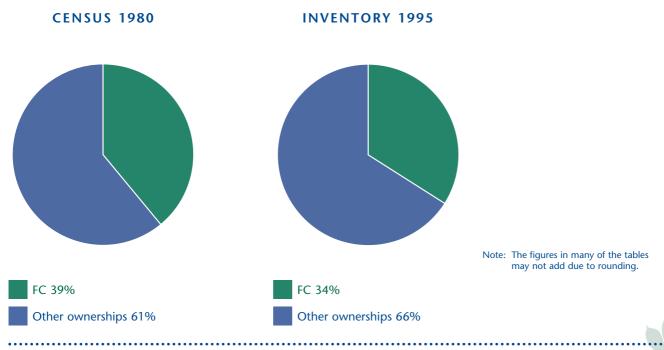
The 1980 Census and 1995 Inventory were undertaken by very different sampling methods. The comparison with the 1980 Census of Woodlands and Trees is not yet complete because of the difference in minimum area for woodland. Within the 1980 Census the minimum area of woodland was 0.25 hectares whilst in the National Inventory of Woodland it is 2 hectares. The total area of woodland within the Inventory will be revised to include an estimate of the area between 0.25 - 2.0 hectares once the Small Woodlands and Trees Survey is completed.

The apparent differences shown in the following tables should therefore be treated with caution, particularly where areas are small.

TABLE 8 WOODLANI	D AREAS AND	D OWNERSHI	Р
	CENSUS 31/3/80	INVENTORY 31/3/95	CHANGE (%)
Area (inc. inland water)	131734	132256	0.4
FC Woodland area	5265	4692	-10.9
Other ownership area	8248	8968	8.7
Total Area of Woodland	13513	13661	1.1
% Woodland Cover	10.3	10.3	0.7

#### NOTE (Table 8)

Area (including inland water)-in the interval between the two surveys the Regional boundary was revised. The method of measurement has also undergone development.



Reference Date 31 March 1995

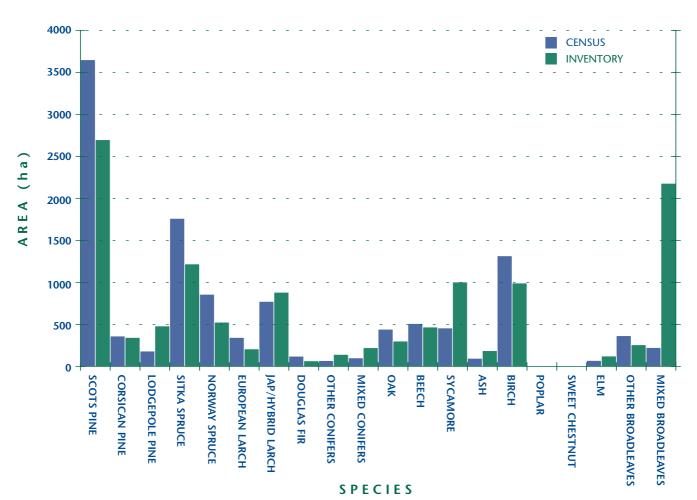
TABLE 9 COMPARISON BETWEEN 1995 INVENTORY AND 1980 CENSUS HIGH FOREST - AREAS BY PRINCIPAL SPECIES		
SPECIES	1980 CENSUS	1995 INVENTORY
Scots pine	3651	2699
Corsican pine	362	345
Lodgepole pine	183	482
Sitka spruce	1762	1220
Norway spruce	859	527
European larch	345	209
Jap/Hybrid larch	774	883
Douglas fir	122	67
Other conifers	70	143
Mixed conifers	102	223
Total conifers	8231	6796
Oak	443	302
Beech	511	469
Sycamore	458	1005
Ash	97	188
Birch	1317	993
Poplar	6	9
Sweet chestnut	0	0
Elm	71	124
Other broadleaves	366	258
Mixed broadleaves	225	2180
Total broadleaves	3494	5529
TOTAL - all species	11725	12325
Felled	626	105
Total - High Forest	12351	12430

#### NOTE (Table 9)

In the 1980 Census the areas assigned to species included any associated open space such as roads and rides. In the Inventory open spaces are separately identified and the overall proportion is 8.6% (Table 3). To obtain meaningful comparisons between the two datasets the 1980 Census data have therefore been reduced by 8.6%. Area allocated to scrub has also been included in the 1980 Census data to make it comparable with the 1995 Inventory data.

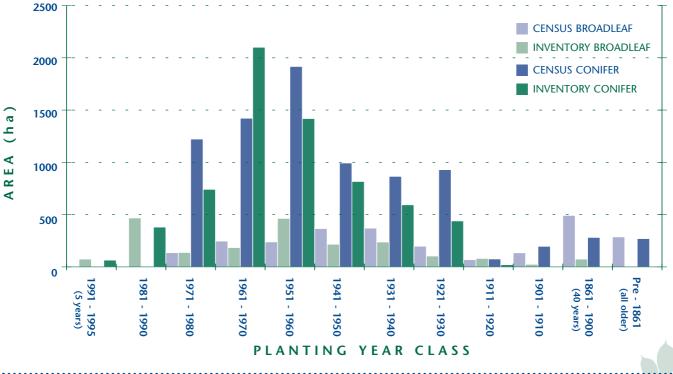
N.B. Woodlands between 0.25 and 2.0 hectares are not yet included in the 1995 Inventory figures (above). These are expected to contain a high proportion of broadleaved species.

Note: The figures in many of the tables may not add due to rounding.



#### COMPARISON BETWEEN 1995 INVENTORY AND 1980 CENSUS -HIGH FOREST - AREAS BY PRINCIPAL SPECIES





### GLOSSARY

•••••

Woodland	In the United Kingdom woodland is defined as land under stands of trees with, or the potential to achieve, tree crown cover of more than 20%; areas of open space integral to the woodland are also included. Intervening land- classes such as roads, rivers or pipelines are disregarded if less than 50 m in extent. 'Scrubby' vegetation is not included as a separate category but as conifer, broadleaved or mixed tree types. There is additional information on the quality of woodland within the inventory database. Woodland of 2 hectares and over, and with a minimum width of 50 m, is included in the main woodland survey, Part 1 of the Inventory; other woodland and trees are assessed in Part 2, the small woodland and trees survey.
High Forest	All woodland with the exception of stands managed as coppice or coppice with standards with, or the potential to achieve, a tree cover of more than 20%. Two categories of High Forest are recognised:
High Forest Category 1	Stands which are, or could become, capable of producing wood of a size and quality suitable for sawlogs and small roundwood.
High Forest Category 2	Stands of lower quality than High Forest Category 1.
Mixtures	Where possible the species in mixtures have been separately recorded. Where this has not been possible they were described as 'mixed conifers' or 'mixed broadleaves'.
	FOREST TYPES
Conifer	Woodland containing more than 80% by area of coniferous species.
Broadleaved	Woodland containing more than 80% by area of broadleaved species.
Broadleaved Mixed	Woodland containing more than 80% by area of broadleaved species. A combination of broadleaved and coniferous species where each category occupies at least 20% of the canopy (see note on mixtures above).
	A combination of broadleaved and coniferous species where each category
Mixed	A combination of broadleaved and coniferous species where each category occupies at least 20% of the canopy (see note on mixtures above). Crops of marketable broadleaved species that have at least 2 stems per stool and are either being worked or are capable of being worked on rotation. With the exception of hazel coppice more than half the stems
Mixed Coppice	<ul> <li>A combination of broadleaved and coniferous species where each category occupies at least 20% of the canopy (see note on mixtures above).</li> <li>Crops of marketable broadleaved species that have at least 2 stems per stool and are either being worked or are capable of being worked on rotation. With the exception of hazel coppice more than half the stems should be capable of producing 1m timber lengths of good form.</li> <li>Two-storey stands where the overstorey consists of at least 25 stems per hectare that are older than the understorey of worked coppice by at least</li> </ul>
Mixed Coppice Coppice with Standards	<ul> <li>A combination of broadleaved and coniferous species where each category occupies at least 20% of the canopy (see note on mixtures above).</li> <li>Crops of marketable broadleaved species that have at least 2 stems per stool and are either being worked or are capable of being worked on rotation. With the exception of hazel coppice more than half the stems should be capable of producing 1m timber lengths of good form.</li> <li>Two-storey stands where the overstorey consists of at least 25 stems per hectare that are older than the understorey of worked coppice by at least one coppice rotation.</li> <li>Woodland areas that have been felled or stands where the stocking has been reduced to less than 20% and where it is expected that these areas</li> </ul>

Open Space	Areas within a woodland that are not covered by trees but are integral to the woodland such as open areas, streamsides, deer glades, rides and forest roads.
	OWNERSHIP TYPES
Other Ownerships	Woodland other than that owned by, or leased to, the Forestry Commission
Personal	Types of private occupation, e.g. individuals, private family trusts and family partnerships.
Private Forestry or Timber Business	Owned by wood processing industry. This category does not include forest management companies.
Other Private Business	Occupiers, e.g. companies, partnerships, syndicates and pension funds.
Local Authority	Region, County, District or other Council.
Other Public Body (not FC)	Government department/agency, nationalised industry, etc.
Charitable	Organisations funded by voluntary public subscription, e.g. National Trust, churches and colleges.
Community Ownership or Common Land	The common property of all members of the community.
Forestry Commission	Land owned by or land leased to the Forestry Commission.

•••••

#### .....

### NOTES



Reference Date 31 March 1995



231 Corstorphine Road Edinburgh EH12 7AT

http://www.forestry.gov.uk

£5 net