



Forestry Commission

INVENTORY REPORT

National Inventory of Woodland and Trees



**Scotland -
Lothian Region**

Part 1 - Woodlands of 2 hectares and over





Forestry Commission

INVENTORY REPORT

National Inventory of Woodland and Trees

Scotland - Lothian Region

Part 1 - Woodlands of 2 hectares and over

Woodland Surveys, Forest Research



© Crown copyright 1999
First published 1999

ISBN 0 85538 500 6

Printed in the United Kingdom
FPD9/31-IH(ECD)-MLP/500-JUN99

Enquiries regarding this report should be directed to:

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

CONTENTS

Acknowledgements	iv
Introduction	1
Background	1
Survey Method	1
Main Points from the Lothian Results	2
Map 1 Distribution of Woodland within Lothian Region	3
Map 2 Distribution of Woodland by Ownership within Lothian 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
Comparison 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 Ken Thomson (Survey Forester) and Chris Skelton, Tony Furlong and Mark Thurston (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 Justin Gilbert, Woodland Data Officer and Douglas Wright, Head of Woodland Surveys (to Dec.1997).

INTRODUCTION

The following report presents the results of the main woodland survey for Lothian 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 1999.

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 Lothian Region ceased to exist as a local authority on 31 March 1996 its four Districts were continued as unitary authorities, namely West Lothian Council, City of Edinburgh Council, Midlothian Council and East Lothian Council.

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 Lothian 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 Lothian 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

1 hectare 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.

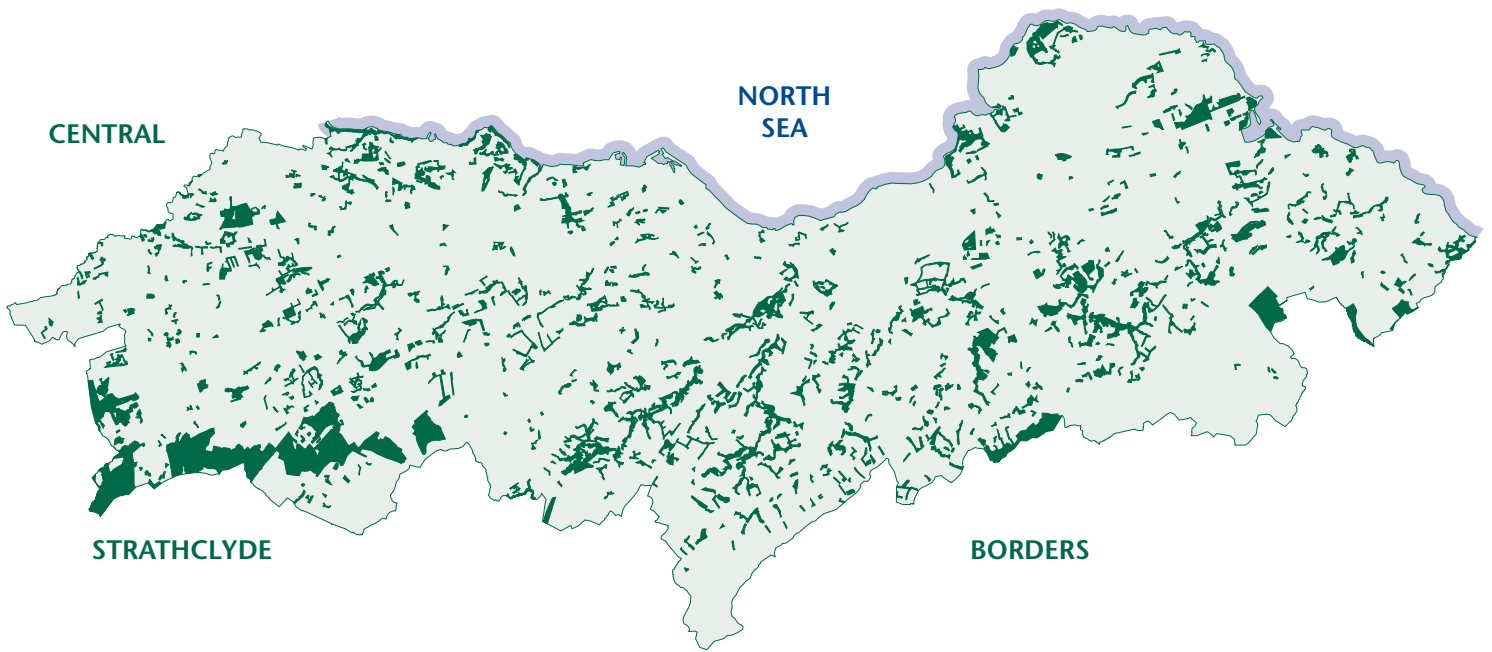
The main difference from the 1980 Census is the change in the minimum woodland area from 0.25 to 2.0 hectares. This means at this stage that the results of the main survey in the Inventory can only be compared approximately with the 1980 Census. However, when the next part of the Inventory is completed 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 LOTHIAN RESULTS

- The total area of woodland in Lothian Region is 15 944 hectares. This represents 9.3% of the land area. (Table 1)
- 1587 hectares or 10% of woodland is owned by or leased to the Forestry Commission and 14 356 hectares or 90% of woodland is in Other ownerships. (Table 1)
- Conifer woodland is the dominant forest type representing 41% of all woodland. Broadleaved woodland represents 35%, mixed woodland 11% and open space within woodlands 12%. (Table 3)
- The main conifer species is Sitka spruce covering 3535 hectares or 48% of all conifer species. 82% of all conifers are within Other ownerships. (Table 4a)
- The main broadleaved species, outside the 'mixed broadleaves' category, is sycamore covering 1366 hectares or 21% of all broadleaved species. Nearly 100% of all broadleaves are within Other ownerships. (Table 4a)
- High Forest covers 13 999 hectares or 88% of woodland. (Table 4a)
- Woodland land cover has increased by 1823 hectares from 8.0% to 9.3% of the land area since 1980. (Table 8)

MAP 1 - DISTRIBUTION OF WOODLAND WITHIN LOTHIAN REGION

 Woodland over 2 hectares



 represents 500 hectares

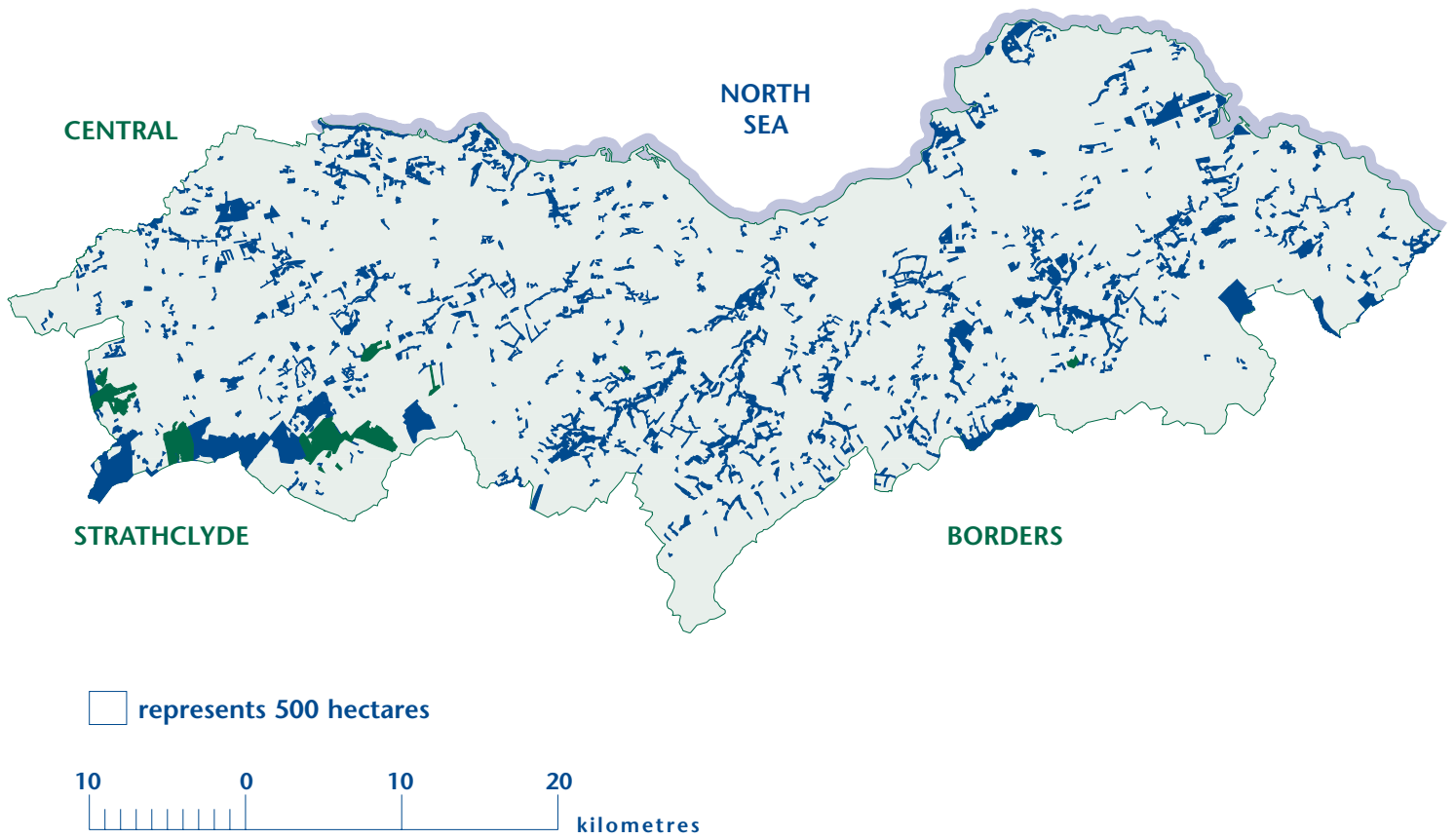
10 0 10 20 kilometres

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

Reference Date 31 March 1995

MAP 2 - DISTRIBUTION OF WOODLAND BY OWNERSHIP WITHIN LOTHIAN 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 OWNERSHIP

Area (including inland water)	172091 ha	
Ownership	ha	% woodland
Forestry Commission	1587	10
Other	14356	90
Total Area of Woodland	15944	100
% Woodland Land Cover	9.3	

NOTE (Table 1)

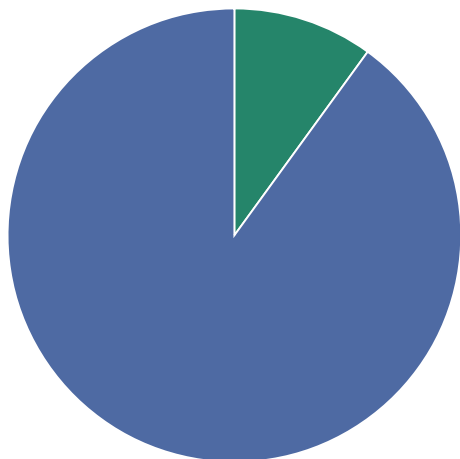
Area of Local Authority Unit based on digital boundaries used for 1991 Census of Population.

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 SIZE CLASS DISTRIBUTION OF WOODLAND

Size Class (ha)	Number of Woods	Total Area (ha)	Percent of Total Area	Mean Wood Area (ha)
0 - < 2	22	13	0	0.6
2 - < 10	552	2496	16	4.5
10 - < 20	107	1514	9	14.2
20 - < 50	84	2529	16	30.1
50 - < 100	27	2001	13	74.1
2 - < 100	770	8541	54	11.1
100 - < 500	19	4381	27	230.6
500 - and >	2	3009	19	1504.6
All Woods	813	15944	100	19.6

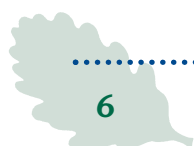
NOTE (Table 2a)

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 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	0	0	0	0.0
	Other	27	18	0	0.7
2 - < 10	FC	4	24	0	5.9
	Other	556	2511	16	4.5
10 - < 20	FC	1	11	0	11.1
	Other	108	1530	10	14.2
20 - < 50	FC	3	105	1	34.9
	Other	82	2446	15	29.8
50 - < 100	FC	1	93	1	92.6
	Other	27	2012	13	74.5
2 - < 100	FC	9	232	1	25.8
	Other	773	8499	53	11.0
100 - < 500	FC	2	648	4	323.9
	Other	18	4160	26	231.1
500 - and >	FC	1	708	4	707.6
	Other	2	1679	11	839.6
Total	FC	12	1587	10	132.3
	Other	820	14356	90	17.5
Grand Total		813	15944	100	19.6

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



NOTE (Table 2b)

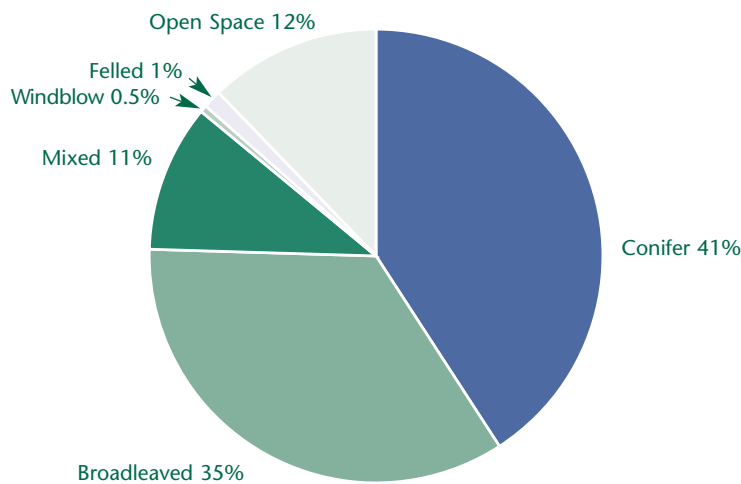
The data available from the digital map enable the identification of woodlands according to their ownerships, Forestry Commission or Other. The entries in the table cannot be added, to derive Table 2a, as some woods may consist of both FC and Other ownerships. For example, the Forestry Commission may 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 occasionally generate part-woods of less than 2 hectares.

TABLE 3 AREAS OF WOODLAND BY FOREST TYPE AND OWNERSHIP						
Forest Type	FC		Other		All Woods	
	ha	%	ha	%	ha	%
Conifer	1250	78.8	5254	36.6	6504	40.8
Broadleaved	10	0.6	5508	38.4	5518	34.6
Mixed	11	0.7	1668	11.6	1679	10.5
Coppice	0	0.0	0	0.0	0	0.0
Copp-w-Stds	0	0.0	0	0.0	0	0.0
Windblow	76	4.8	9	0.1	85	0.5
Felled	41	2.6	172	1.2	213	1.3
Open space	200	12.6	1744	12.1	1944	12.2
Total	1587	100.0	14356	100.0	15944	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 SPECIES AND OWNERSHIP

Species	FC			Other			All Woodland		
	Area (ha)	cat %	spp %	Area (ha)	cat %	spp %	Area (ha)	cat %	spp %
Scots pine	21	2	2	1369	23	11	1390	19	10
Corsican pine	0	0	0	35	1	0	35	0	0
Lodgepole pine	192	14	14	501	8	4	693	9	5
Sitka spruce	862	65	64	2674	44	21	3535	48	26
Norway spruce	42	3	3	548	9	4	591	8	4
European larch	17	1	1	141	2	1	158	2	1
Jap/Hybrid larch	189	14	14	413	7	3	602	8	4
Douglas fir	4	0	0	44	1	0	48	1	0
Other conifers	0	0	0	86	1	1	86	1	1
Mixed conifers	4	0	0	208	3	2	213	3	2
Total conifers	1331	100	99	6021	100	48	7352	100	53
Oak	0	0	0	189	3	2	189	3	1
Beech	0	0	0	319	5	3	319	5	2
Sycamore	0	0	0	1366	21	11	1366	21	10
Ash	0	0	0	139	2	1	139	2	1
Birch	0	0	0	783	12	6	783	12	6
Poplar	0	0	0	0	0	0	0	0	0
Sweet chestnut	0	0	0	0	0	0	0	0	0
Elm	0	0	0	59	1	0	59	1	0
Other broadleaves	0	0	0	178	3	1	178	3	1
Mixed broadleaves	15	100	1	3387	53	27	3402	53	25
Total broadleaves	15	100	1	6420	100	52	6435	100	47
Total - all species	1346		100	12440		100	13786		100
Felled	41			172			213		
Total High Forest	1387			12612			13999		

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

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 1944 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	7%
Broadleaves	8%
Scots pine	19%
Sitka spruce	10%
Sycamore	22%
Mixed broadleaves	12%

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.

AREAS OF HIGH FOREST BY PRINCIPAL SPECIES AND OWNERSHIP

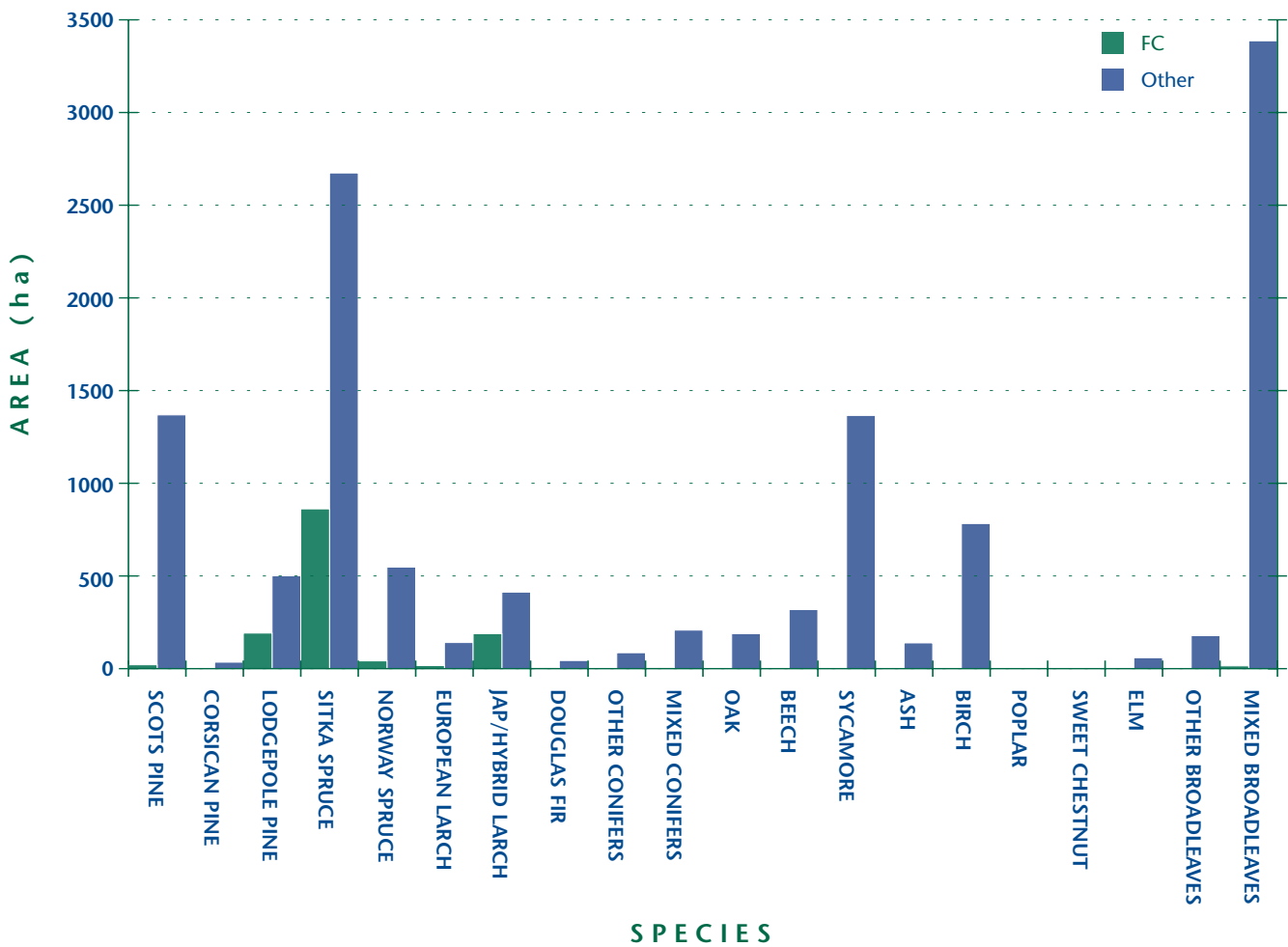


TABLE 4b AREAS OF HIGH FOREST BY PRINCIPAL SPECIES, OWNERSHIP AND CATEGORY

Species	FC			Other			All Ownerships		
	Cat 1	Cat 2	Tot HF	Cat 1	Cat 2	Tot HF	Cat 1	Cat 2	Tot HF
Scots pine	21	0	21	1130	240	1369	1150	240	1390
Corsican pine	0	0	0	35	0	35	35	0	35
Lodgepole pine	192	0	192	422	78	501	615	78	693
Sitka spruce	862	0	862	2647	27	2674	3508	27	3535
Norway spruce	42	0	42	523	25	548	565	25	591
European larch	17	0	17	87	54	141	104	54	158
Jap/Hybrid larch	189	0	189	371	43	413	559	43	602
Douglas fir	4	0	4	34	10	44	39	10	48
Other conifers	0	0	0	50	36	86	50	36	86
Mixed conifers	4	0	4	189	20	208	193	20	213
Total conifers	1331	0	1331	5488	532	6021	6820	532	7352
Oak	0	0	0	99	90	189	99	90	189
Beech	0	0	0	62	256	319	62	256	319
Sycamore	0	0	0	1022	344	1366	1022	344	1366
Ash	0	0	0	74	65	139	74	65	139
Birch	0	0	0	265	518	783	265	518	783
Poplar	0	0	0	0	0	0	0	0	0
Sweet chestnut	0	0	0	0	0	0	0	0	0
Elm	0	0	0	6	52	59	6	52	59
Other broadleaves	0	0	0	5	174	178	5	174	178
Mixed broadleaves	5	10	15	1438	1949	3387	1443	1959	3402
Total broadleaves	5	10	15	2971	3449	6420	2976	3459	6435
Total - all species	1336	10	1346	8459	3981	12440	9795	3991	13786

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

NOTE (Table 4b)

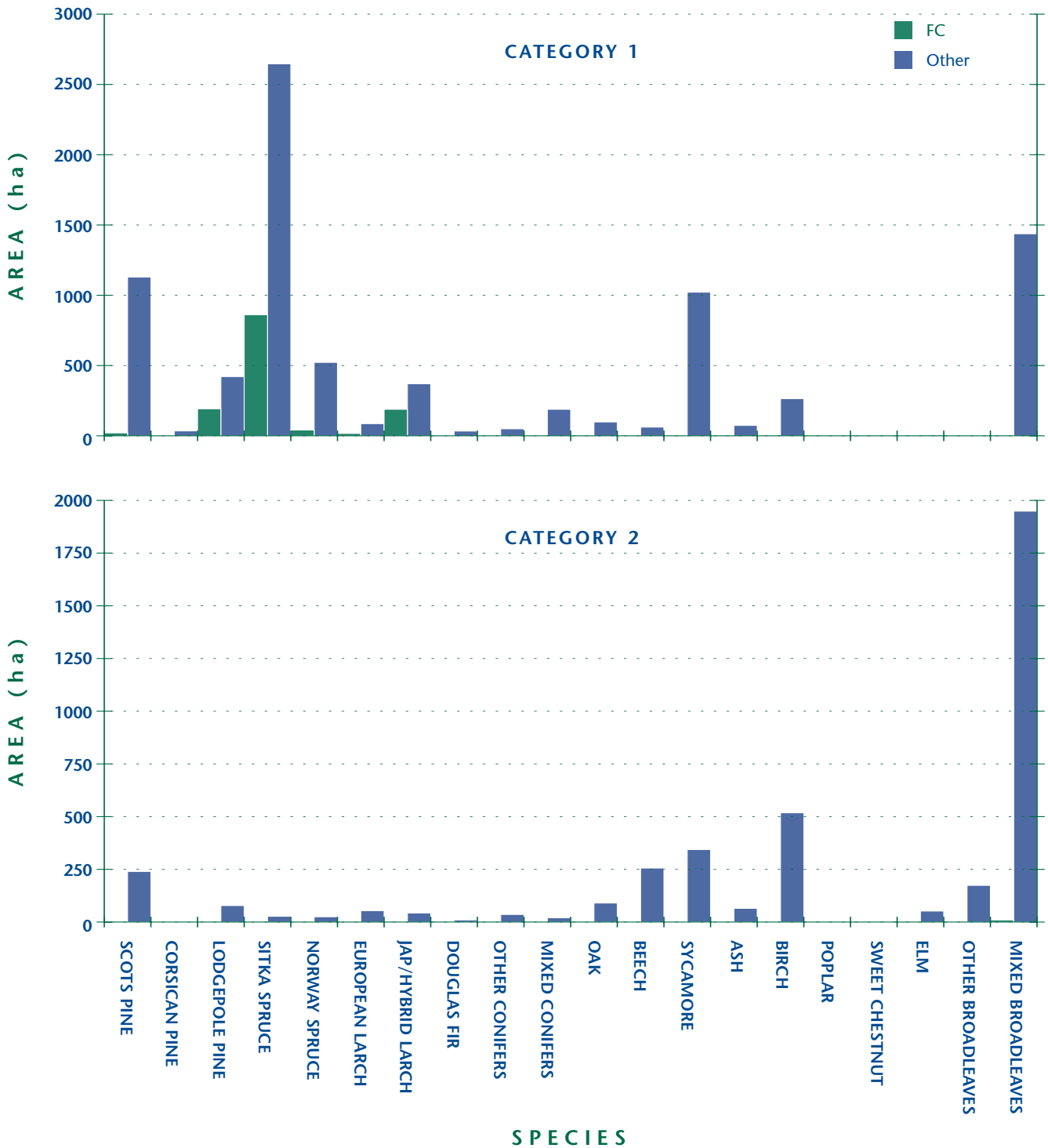
The standard errors of the area estimates for the most common species or species groups are as follows:

	Cat 1	Cat 2	Total HF
Conifers	6%	33%	7%
Broadleaves	13%	9%	8%
Scots pine	22%	37%	19%
Sitka spruce	9%	-	10%
Mixed broadleaves	21%	14%	12%

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.

AREAS OF HIGH FOREST BY PRINCIPAL SPECIES AND OWNERSHIP



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

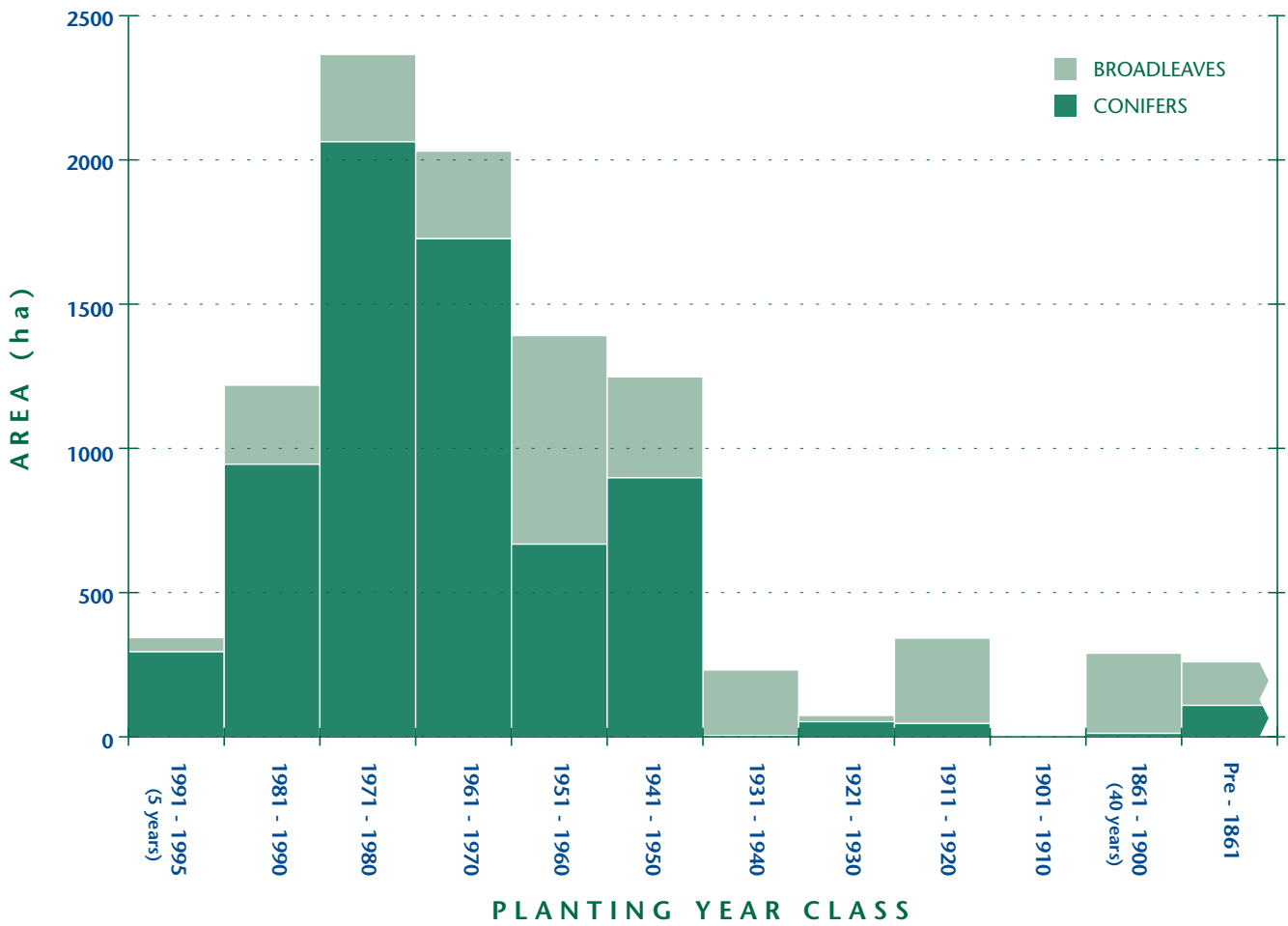
Species	PLANTING YEAR CLASS												TOTAL
	1991 -1995	1981 -1990	1971 -1980	1961 -1970	1951 -1960	1941 -1950	1931 -1940	1921 -1930	1911 -1920	1901 -1910	1861 -1900	pre - 1861	
Scots pine	0	51	156	198	133	544	0	18	46	0	4	0	1150
Corsican pine	0	0	19	0	16	0	0	0	0	0	0	0	35
Lodgepole pine	16	4	304	201	81	0	0	0	0	0	0	8	615
Sitka Spruce	214	599	1315	1005	248	52	0	0	0	0	0	76	3508
Norway spruce	65	202	55	98	62	82	0	0	0	0	0	0	565
European larch	0	0	0	30	10	47	0	17	0	0	0	0	104
Jap/Hybrid larch	0	12	133	172	58	148	0	12	0	0	0	25	559
Douglas fir	0	0	12	0	4	22	0	0	0	0	0	0	39
Other conifers	0	0	0	19	31	0	0	0	0	0	0	0	50
Mixed conifers	0	76	67	4	25	3	4	6	0	0	7	0	193
Total conifers	295	945	2063	1727	668	898	4	52	46	0	12	109	6820
Oak	0	44	0	0	0	0	0	0	13	0	24	18	99
Beech	0	0	0	0	10	45	3	0	0	0	0	4	62
Sycamore	0	25	173	57	372	120	99	0	111	0	66	0	1022
Ash	0	0	0	0	4	69	0	0	0	0	0	0	74
Birch	0	17	63	20	78	86	0	0	0	0	0	0	265
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	6	0	0	0	0	0	0	6
Other blvs	0	0	0	0	0	0	0	0	0	0	5	0	5
Mixed blvs	49	188	66	225	259	24	126	22	172	0	183	129	1443
Total broadleaves	49	274	302	303	723	350	228	22	296	0	278	151	2976
Total - all species	344	1219	2366	2030	1392	1248	232	74	342	0	289	259	9795

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



**TABLE 5b HIGH FOREST CATEGORY 1 - FORESTRY COMMISSION
AREAS BY PRINCIPAL SPECIES AND PLANTING YEAR CLASSES**

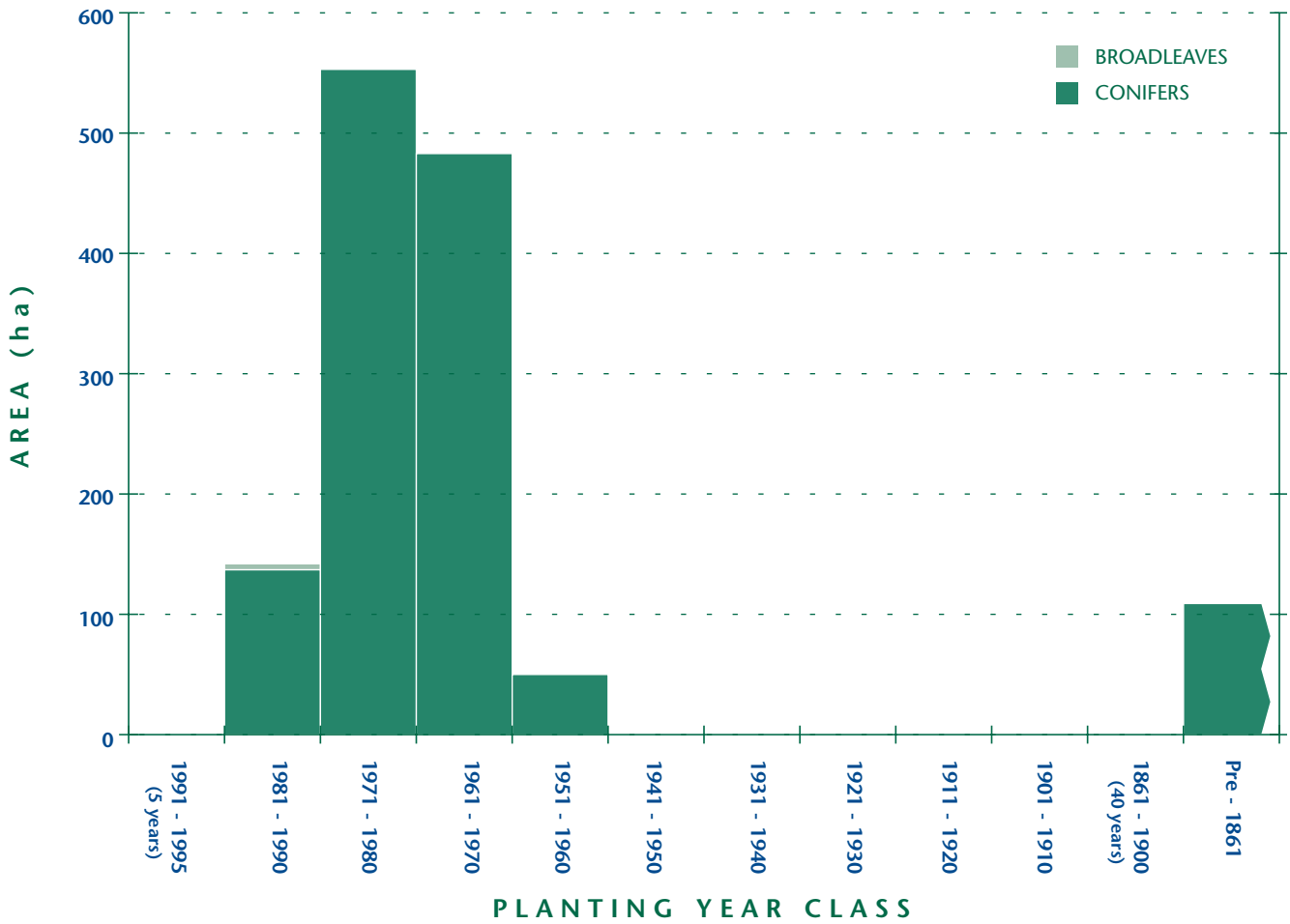
Species	PLANTING YEAR CLASS												TOTAL
	1991 -1995	1981 -1990	1971 -1980	1961 -1970	1951 -1960	1941 -1950	1931 -1940	1921 -1930	1911 -1920	1901 -1910	1861 -1900	pre - 1861	
Scots pine	0	0	16	0	4	0	0	0	0	0	0	0	21
Corsican pine	0	0	0	0	0	0	0	0	0	0	0	0	0
Lodgepole pine	0	0	21	164	0	0	0	0	0	0	0	8	192
Sitka spruce	0	92	435	246	12	0	0	0	0	0	0	76	862
Norway spruce	0	41	0	0	1	0	0	0	0	0	0	0	42
European larch	0	0	0	12	4	0	0	0	0	0	0	0	17
Jap/Hybrid larch	0	4	77	61	22	0	0	0	0	0	0	25	189
Douglas fir	0	0	0	0	4	0	0	0	0	0	0	0	4
Other conifers	0	0	0	0	0	0	0	0	0	0	0	0	0
Mixed conifers	0	0	3	0	1	0	0	0	0	0	0	0	4
Total conifers	0	137	553	483	50	0	0	0	0	0	0	109	1331
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0
Beech	0	0	0	0	0	0	0	0	0	0	0	0	0
Sycamore	0	0	0	0	0	0	0	0	0	0	0	0	0
Ash	0	0	0	0	0	0	0	0	0	0	0	0	0
Birch	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0
Mixed blvs	0	5	0	0	0	0	0	0	0	0	0	0	5
Total broadleaves	0	5	0	0	0	0	0	0	0	0	0	0	5
Total - all species	0	143	553	483	50	0	0	0	0	0	0	109	1336

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 -
AREAS BY PLANTING YEAR CLASS**



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

Species	PLANTING YEAR CLASS												TOTAL
	1991 -1995	1981 -1990	1971 -1980	1961 -1970	1951 -1960	1941 -1950	1931 -1940	1921 -1930	1911 -1920	1901 -1910	1861 -1900	pre - 1861	
Scots pine	0	51	140	198	128	544	0	18	46	0	4	0	1130
Corsican pine	0	0	19	0	16	0	0	0	0	0	0	0	35
Lodgepole pine	16	4	284	37	81	0	0	0	0	0	0	0	422
Sitka spruce	214	507	880	758	236	52	0	0	0	0	0	0	2647
Norway spruce	65	161	55	98	61	82	0	0	0	0	0	0	523
European larch	0	0	0	18	6	47	0	17	0	0	0	0	87
Jap/Hybrid larch	0	8	56	111	36	148	0	12	0	0	0	0	371
Douglas fir	0	0	12	0	0	22	0	0	0	0	0	0	34
Other conifers	0	0	0	19	31	0	0	0	0	0	0	0	50
Mixed conifers	0	76	64	4	24	3	4	6	0	0	7	0	189
Total conifers	295	807	1511	1244	619	898	4	52	46	0	12	0	5488
Oak	0	44	0	0	0	0	0	0	13	0	24	18	99
Beech	0	0	0	0	10	45	3	0	0	0	0	4	62
Sycamore	0	25	173	57	372	120	99	0	111	0	66	0	1022
Ash	0	0	0	0	4	69	0	0	0	0	0	0	74
Birch	0	17	63	20	78	86	0	0	0	0	0	0	265
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	6	0	0	0	0	0	0	6
Other blvs	0	0	0	0	0	0	0	0	0	0	5	0	5
Mixed blvs	49	183	66	225	259	24	126	22	172	0	183	129	1438
Total broadleaves	49	269	302	303	723	350	228	22	296	0	278	151	2971
Total - all species	344	1076	1813	1547	1342	1248	232	74	342	0	289	151	8459

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.

HIGH FOREST CATEGORY 1 - OTHER OWNERSHIPS -
AREAS BY PLANTING YEAR CLASS

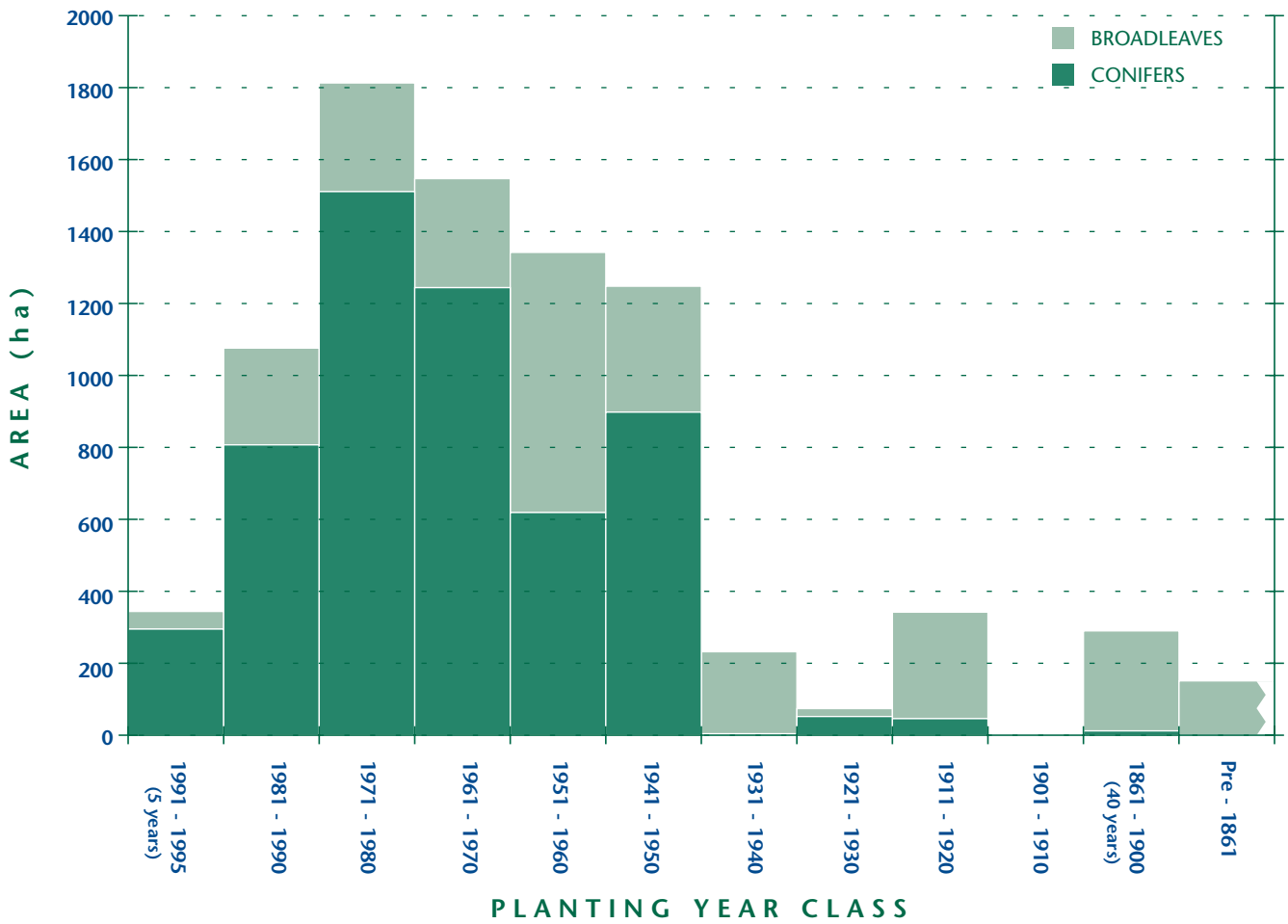


TABLE 6 HIGH FOREST - PRINCIPAL SPECIES BY PLANTING YEAR CLASSES

Planting Year Class	First	%	Second	%	Third	%
1991-1995	Mixed broadleaves	44	Sitka spruce	39	Norway spruce	11
1981-1990	Sitka spruce	45	Mixed broadleaves	22	Norway spruce	15
1971-1980	Sitka spruce	46	Lodgepole pine	11	Mixed broadleaves	10
1961-1970	Sitka spruce	38	Mixed broadleaves	18	Lodgepole pine	11
1951-1960	Mixed broadleaves	27	Sycamore	22	Sitka spruce	14
1941-1950	Scots pine	36	Sycamore	12	Mixed broadleaves	11
1931-1940	Mixed broadleaves	38	Birch	31	Sycamore	20
1921-1930	Mixed broadleaves	44	Scots pine	20	Norway spruce	9
1911-1920	Mixed broadleaves	49	Scots pine	20	Sycamore	16
1901-1910	Beech	100	-		-	
1861-1900	Mixed broadleaves	42	Sycamore	20	Beech	12
Pre 1861	Mixed broadleaves	58	Beech	18	Sitka spruce	14
All years	Sitka spruce	26	Mixed broadleaves	25	Scots pine	10

TABLE 7 OWNERSHIP TYPE BY AREA AND PERCENTAGE

Ownership Type	Area (ha)	%
Personal	11036	69.2
Private forestry or timber business	241	1.5
Other private business	911	5.7
Local Authority	666	4.2
Other public body (not FC)	680	4.3
Forestry Commission	1587	10.0
Charity	758	4.8
Community ownership or common land	0	0.0
Unclassified	64	0.4
Total	15943	100.0

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

NOTE (Table 7)

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

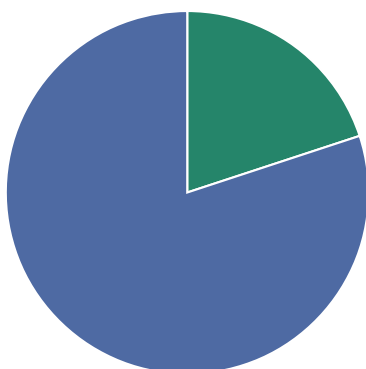
The apparent differences shown in the following tables should therefore be treated with caution, particularly where areas are small.

TABLE 8 WOODLAND AREAS AND OWNERSHIP			
	CENSUS 31/3/80	INVENTORY 31/3/95	CHANGE (%)
Area (inc. inland water)	176740	172091	-2.6
FC Woodland area	2817	1587	-43.7
Other ownership area	11304	14356	27.0
Total Area of Woodland	14121	15944	12.9
% Woodland Cover	8.0	9.3	16.0

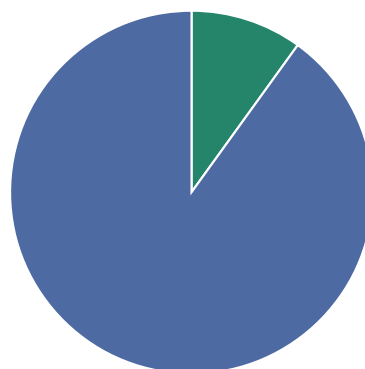
NOTE (Table 8)

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

CENSUS 1980



INVENTORY 1995



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

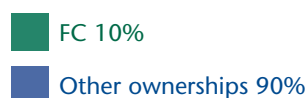
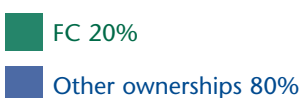


TABLE 9 COMPARISON BETWEEN 1995 INVENTORY AND 1980 CENSUS HIGH FOREST - AREAS BY PRINCIPAL SPECIES

SPECIES	1980 CENSUS	1995 INVENTORY
Scots pine	1518	1390
Corsican pine	98	35
Lodgepole pine	312	693
Sitka spruce	2708	3535
Norway spruce	492	591
European larch	414	158
Jap/Hybrid larch	772	602
Douglas fir	128	48
Other conifers	68	86
Mixed conifers	471	213
Total conifers	6980	7352
Oak	744	189
Beech	685	319
Sycamore	741	1366
Ash	440	139
Birch	602	783
Poplar	48	0
Sweet chestnut	4	0
Elm	356	59
Other broadleaves	615	178
Mixed broadleaves	786	3402
Total broadleaves	5020	6435
TOTAL - all species	12000	13786
Felled	393	213
Total - High Forest	12393	13999

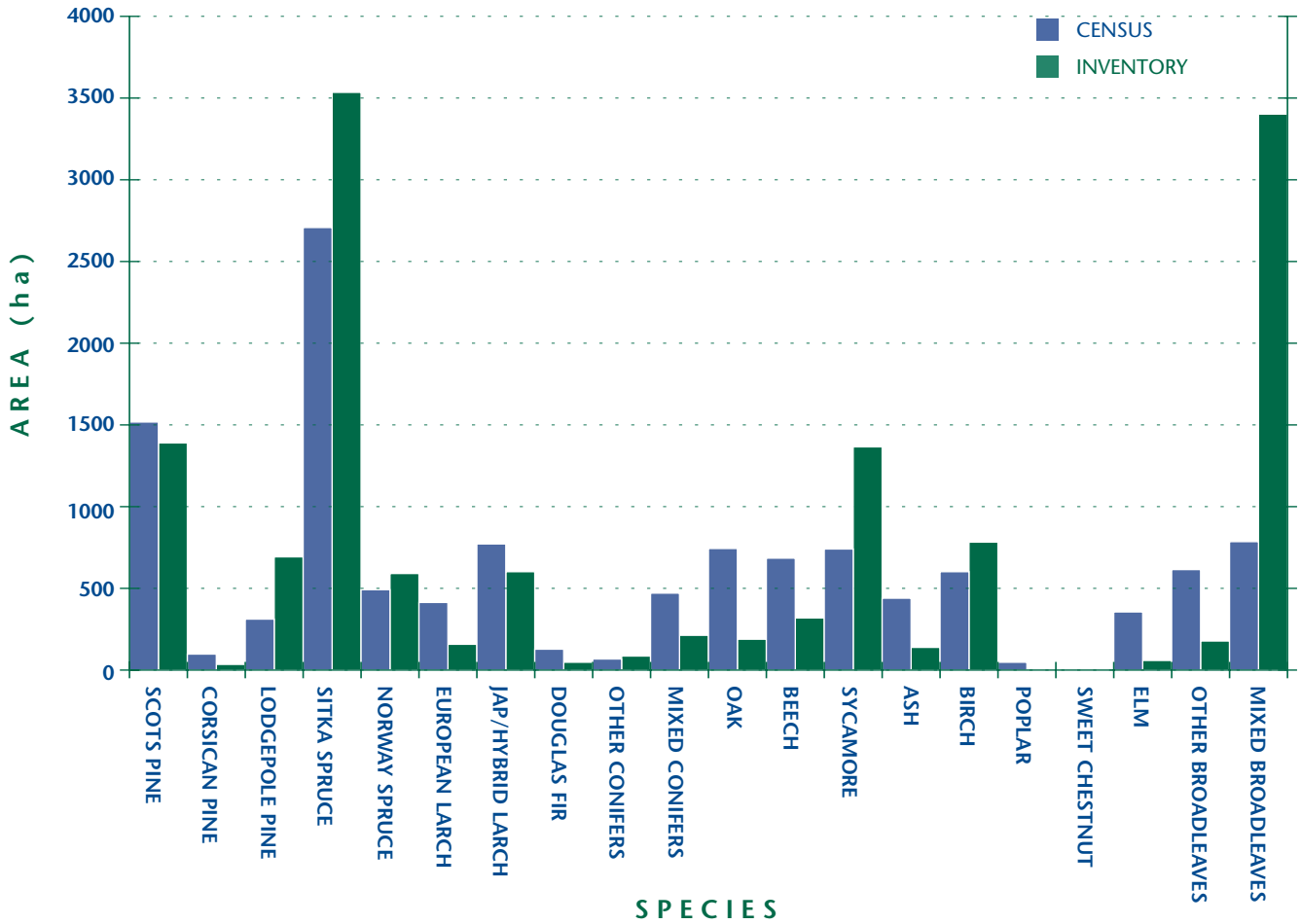
NOTE (Table 9)

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 8.7% (Table 3). To obtain meaningful comparisons between the two datasets the 1980 Census data have therefore been reduced by 8.7%. Area allocated to scrub has also been included in the 1980 Census data to make it comparable with the 1995 Inventory data.

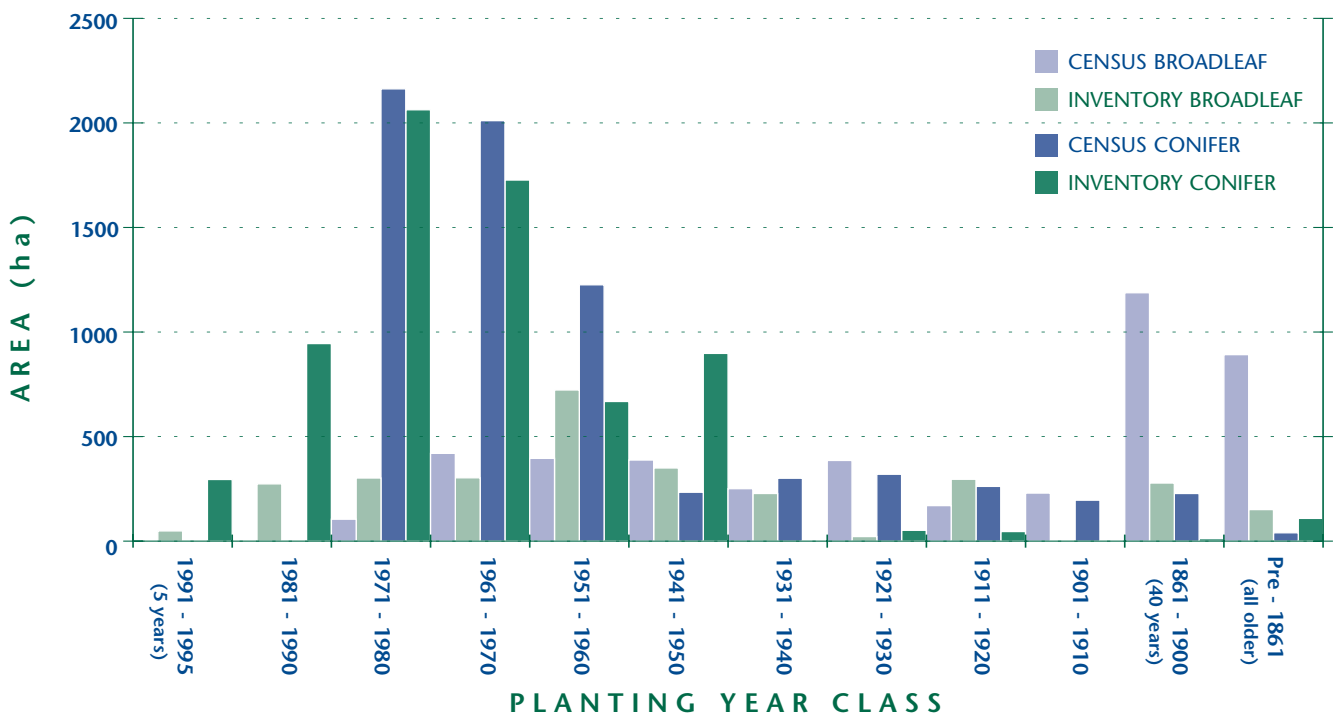
N.B. Woodlands between 0.25 and 2.0 hectares are not yet included in the 1995 Inventory figures (above). These are expected to contain a high proportion of broadleaved species.

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



COMPARISON BETWEEN 1995 INVENTORY AND 1980 CENSUS - HIGH FOREST CATEGORY 1 - AREAS BY PLANTING YEAR CLASS



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.

Mixed

A combination of broadleaved and coniferous species where each category occupies at least 20% of the canopy (see note on mixtures above).

Coppice

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.

Coppice with Standards

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.

Felled

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 will be replanted.

Windblow

Areas of blown woodland which remain uncleared and not regenerated.

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



Forestry Commission

231 Corstorphine Road
Edinburgh
EH12 7AT

£5 net

<http://www.forestry.gov.uk>