



Forestry Commission

INVENTORY REPORT

# National Inventory of Woodland and Trees



**Scotland -  
Strathclyde Region**

Part 1 - Woodlands of 2 hectares and over



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## Scotland - Strathclyde Region

### Part 1 - Woodlands of 2 hectares and over

Woodland Surveys, Forest Research



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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 Strathclyde 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 With the statistics becoming increasingly out of date the Forestry Commission decided to undertake a new survey called the National Inventory of Woodland and Trees.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 Strathclyde 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 Strathclyde 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 Strathclyde 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.

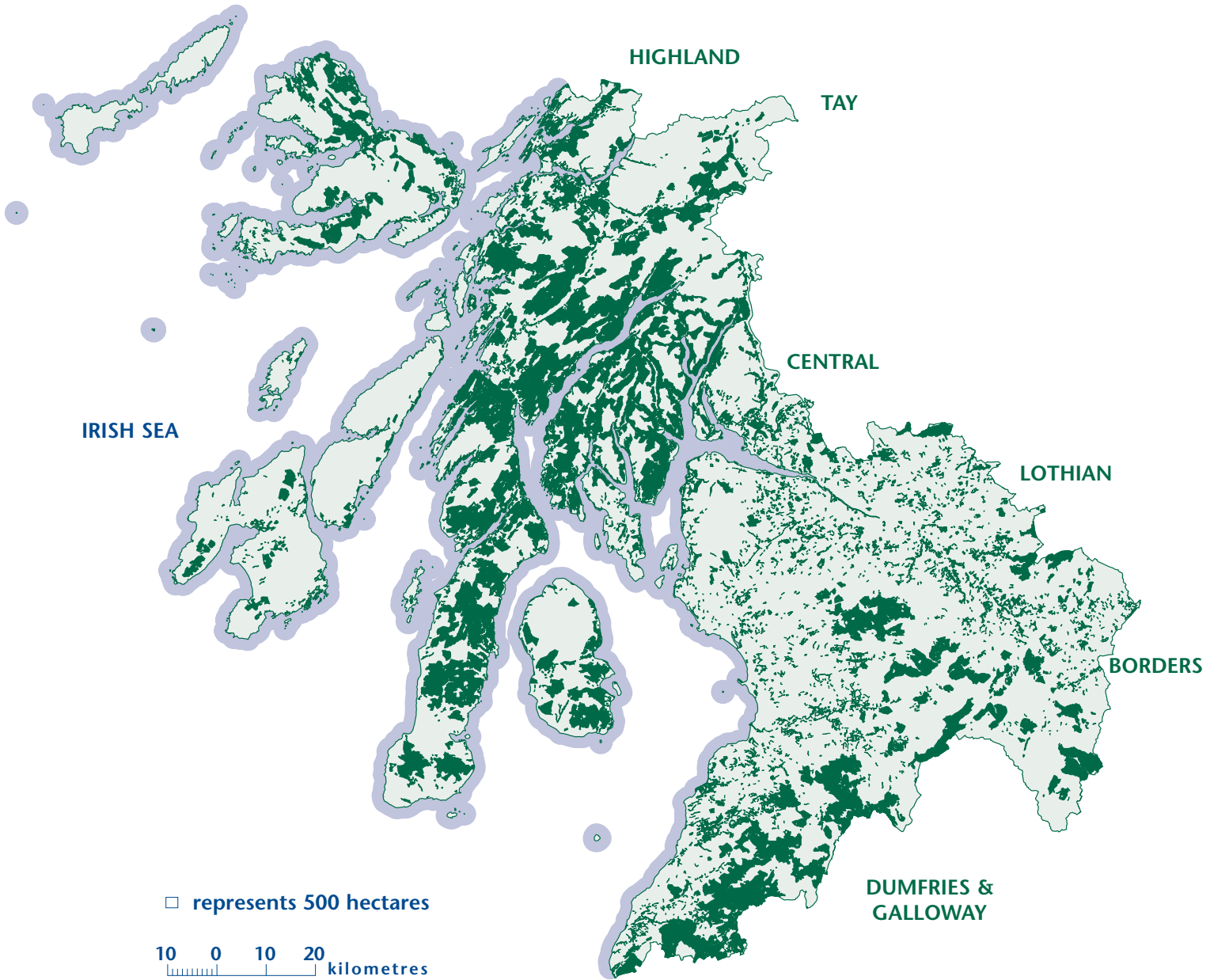
The main difference from the 1980 Census is the change in the minimum woodland area from 0.25 to 2.0 hectares. This means at this stage that the results of the main survey in the Inventory can only be compared approximately with the 1980 Census. However, when the next part of the Inventory is completed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

- The total area of woodland in Strathclyde Region is 316 393 hectares. This represents 23.2% of the land area. (Table 1)
- 155 425 hectares or 49% of woodland is owned by or leased to the Forestry Commission and 160 968 hectares or 51% of woodland is in Other ownerships. (Table 1)
- There are a total of 3400 woods over 2 hectares within Strathclyde Region with a mean wood area of 93 hectares. (Table 2a)
- Conifer woodland is the dominant forest type representing 70% of all woodland. Broadleaved woodland represents 14%, mixed woodland 2% and open space within woodlands 12%. (Table 3)
- The main conifer species is Sitka spruce covering 192 576 hectares or 85% of all conifer species. 45% of all conifers are within Other ownerships. (Table 4a)
- The main broadleaved species, outside the 'mixed broadleaves' category, is birch covering 12 351 hectares or 27% of all broadleaved species. 84% of all broadleaves are within Other ownerships. (Table 4a)
- Woodland land cover has increased by 107 626 hectares from 15.2% to 23.2% of the land area since 1980. (Table 8)

## MAP 1 - DISTRIBUTION OF WOODLAND WITHIN STRATHCLYDE REGION

■ Woodland over 2 hectares



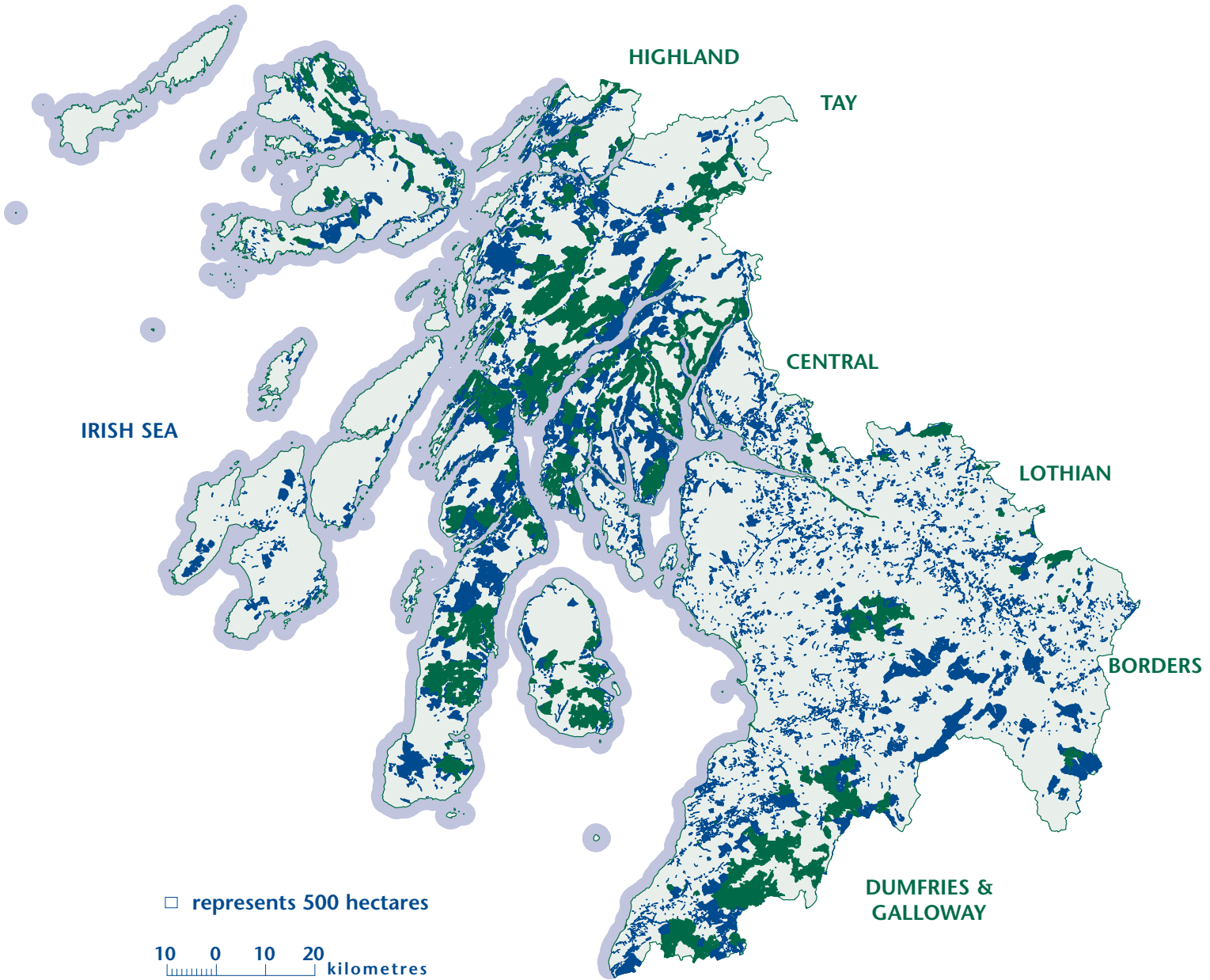
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Reference Date 31 March 1995



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

- Forestry Commission Woodland over 2 hectares
- Other Woodland over 2 hectares



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# RESULTS

**TABLE 1 SUMMARY OF AREAS BY OWNERSHIP**

<b>Area (including inland water)</b>	<b>1361746 ha</b>	
<b>Ownership</b>	<b>ha</b>	<b>% woodland</b>
<b>Forestry Commission</b>	<b>155425</b>	<b>49</b>
<b>Other</b>	<b>160968</b>	<b>51</b>
<b>Total Area of Woodland</b>	<b>316393</b>	<b>100</b>
<b>% Woodland Land Cover</b>	<b>23.2</b>	

**NOTE (Table 1)**

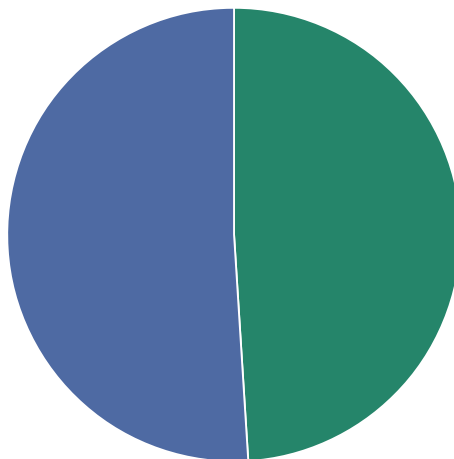
Area of Local Authority Unit based on digital boundaries used for 1991 Census of Population.

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



- FC 49%
- Other 51%

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	103	20	0	0.2
2 - < 10	2161	9907	3	4.6
10 - < 20	443	6104	2	13.8
20 - < 50	378	11894	4	31.5
50 - < 100	154	10587	3	68.7
2 - < 100	3136	38492	12	12.3
100 - < 500	175	37806	12	216.0
500 - and >	89	240561	76	2702.9
<b>All Woods</b>	<b>3503</b>	<b>316880</b>	<b>100</b>	<b>90.5</b>

**NOTE (Table 2a)**

The total area is 486ha more than that recorded in tables based on the sample data. This is mainly due to the field samples recording some land in other land uses not differentiated from woodland in the LCS map which was prepared from aerial photographs.

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	54	34	0	0.6
	Other	490	482	0	1.0
2 - < 10	FC	52	208	0	4.0
	Other	2326	10732	3	4.6
10 - < 20	FC	23	314	0	13.7
	Other	486	6762	2	13.9
20 - < 50	FC	20	620	0	31.0
	Other	421	13123	4	31.2
50 - < 100	FC	21	1450	0	69.1
	Other	165	11447	4	69.4
2 - < 100	FC	116	2593	1	22.4
	Other	3398	42063	13	12.4
100 - < 500	FC	58	14210	4	245.0
	Other	196	42597	13	217.3
500 - and >	FC	61	138632	44	2272.7
	Other	66	76268	24	1155.6
<b>Total</b>	FC	<b>289</b>	<b>155469</b>	<b>49</b>	<b>538.0</b>
	Other	<b>4150</b>	<b>161411</b>	<b>51</b>	<b>38.9</b>
<b>Grand Total</b>		<b>3503</b>	<b>316880</b>	<b>100</b>	<b>90.5</b>

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

**NOTE (Table 2b)**

The total area is 486ha more than that recorded in tables based on the sample data. This is mainly due to the field samples recording some land in other land uses not differentiated from woodland in the LCS map which was prepared from aerial photographs.

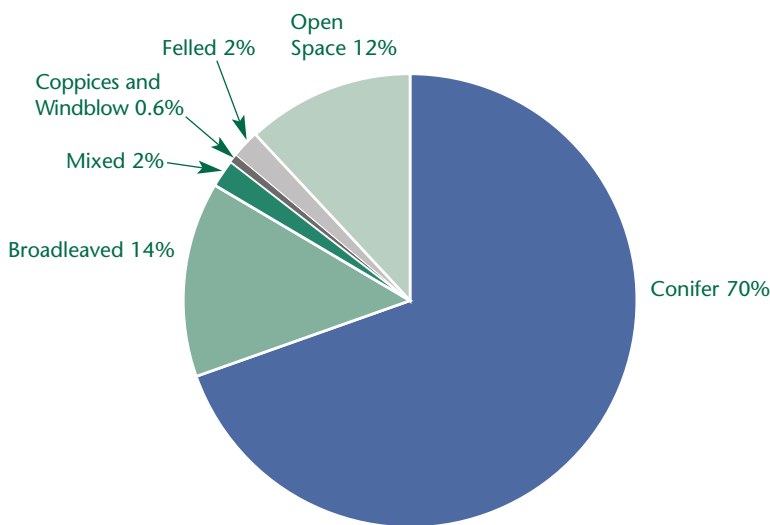
The data available from the digital map enable the identification of woodlands according to their ownerships, Forestry Commission or Other. The entries in the table cannot be added, to derive Table 2a, as some woods may consist of both FC and Other ownerships. For example, the Forestry Commission may 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 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	123585	79.5	97831	60.8	221417	70.0
Broadleaved	6497	4.2	36355	22.6	42851	13.5
Mixed	1551	1.0	5096	3.2	6646	2.1
Coppice	50	0.0	281	0.2	331	0.1
Copp-w-Stds	22	0.0	502	0.3	524	0.2
Windblow	556	0.4	273	0.2	829	0.3
Felled	3388	2.2	1764	1.1	5153	1.6
Open space	19775	12.7	18867	11.7	38642	12.2
<b>Total</b>	<b>155425</b>	<b>100.0</b>	<b>160968</b>	<b>100.0</b>	<b>316393</b>	<b>100.0</b>

**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	417	0	0	1978	2	1	2395	1	1
Corsican pine	100	0	0	75	0	0	175	0	0
Lodgepole pine	5670	5	4	4903	5	4	10573	5	4
Sitka spruce	108689	87	82	83888	83	60	192576	85	71
Norway spruce	2445	2	2	1824	2	1	4268	2	2
European larch	334	0	0	243	0	0	576	0	0
Jap/Hybrid larch	6321	5	5	6118	6	4	12439	6	5
Douglas fir	106	0	0	196	0	0	302	0	0
Other conifers	372	0	0	465	0	0	836	0	0
Mixed conifers	351	0	0	823	1	1	1174	1	0
<b>Total conifers</b>	<b>124804</b>	<b>100</b>	<b>94</b>	<b>100511</b>	<b>100</b>	<b>72</b>	<b>225315</b>	<b>100</b>	<b>83</b>
Oak	1091	15	1	5285	14	4	6375	14	2
Beech	339	5	0	2840	7	2	3180	7	1
Sycamore	56	1	0	3442	9	2	3498	8	1
Ash	228	3	0	1657	4	1	1885	4	1
Birch	2893	39	2	9458	24	7	12351	27	5
Poplar	0	0	0	52	0	0	52	0	0
Sweet chestnut	0	0	0	74	0	0	74	0	0
Elm	0	0	0	301	1	0	301	1	0
Other broadleaves	559	8	0	4377	11	3	4933	11	2
Mixed broadleaves	2172	30	2	11558	30	8	13730	30	5
<b>Total broadleaves</b>	<b>7336</b>	<b>100</b>	<b>6</b>	<b>39043</b>	<b>100</b>	<b>28</b>	<b>46379</b>	<b>100</b>	<b>17</b>
<b>Total - all species</b>	<b>132140</b>		<b>100</b>	<b>139555</b>		<b>100</b>	<b>271694</b>		<b>100</b>
<b>Felled</b>	<b>3388</b>			<b>1764</b>			<b>5153</b>		
<b>Total High Forest</b>	<b>135528</b>			<b>141319</b>			<b>276847</b>		

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 38642 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	1%
Broadleaves	3%
Sitka spruce	1%
Jap/Hybrid larch	7%
Birch	6%

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**

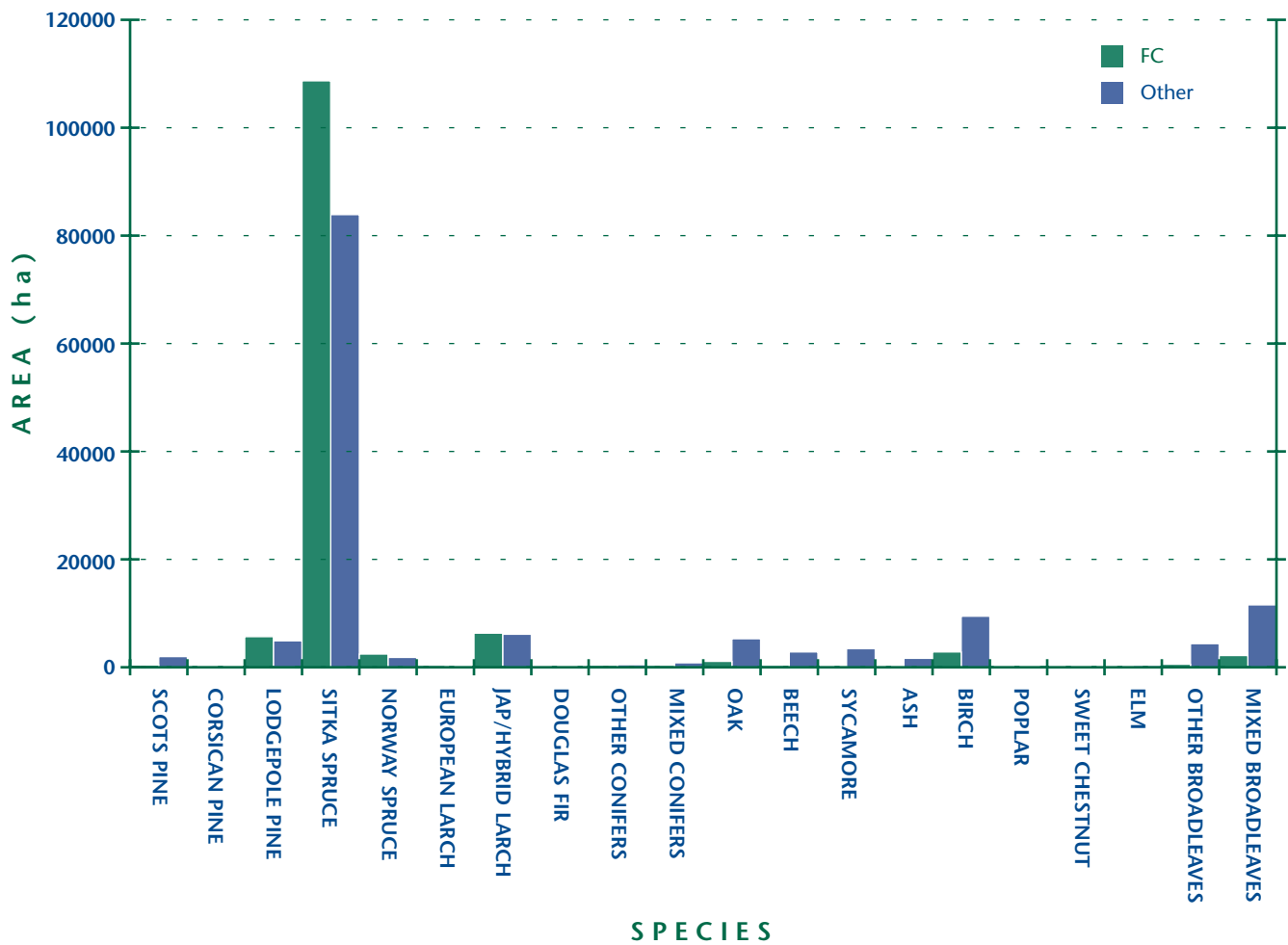


TABLE 4b AREAS OF HIGH FOREST BY PRINCIPAL SPECIES, OWNERSHIP AND CATEGORY

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	261	156	417	1519	458	1978	1780	614	2395
Corsican pine	83	17	100	45	31	75	128	47	175
Lodgepole pine	4291	1378	5670	3917	986	4903	8208	2365	10573
Sitka spruce	105595	3094	108689	82397	1491	83888	187992	4585	192576
Norway spruce	2383	61	2445	1593	230	1824	3977	292	4268
European larch	334	0	334	112	131	243	446	131	576
Jap/Hybrid larch	6010	311	6321	5695	423	6118	11705	735	12439
Douglas fir	106	0	106	196	0	196	302	0	302
Other conifers	306	66	372	350	115	465	655	181	836
Mixed conifers	251	100	351	618	205	823	869	305	1174
<b>Total conifers</b>	<b>119620</b>	<b>5184</b>	<b>124804</b>	<b>96441</b>	<b>4071</b>	<b>100511</b>	<b>216061</b>	<b>9254</b>	<b>225315</b>
Oak	172	918	1091	1572	3713	5285	1745	4631	6375
Beech	150	189	339	1135	1705	2840	1285	1894	3180
Sycamore	22	33	56	2140	1302	3442	2162	1335	3498
Ash	89	139	228	680	977	1657	769	1116	1885
Birch	400	2492	2893	1386	8073	9458	1786	10565	12351
Poplar	0	0	0	13	39	52	13	39	52
Sweet chestnut	0	0	0	74	0	74	74	0	74
Elm	0	0	0	64	236	301	64	236	301
Other broadleaves	45	514	559	797	3580	4377	841	4092	4933
Mixed broadleaves	189	1983	2172	2000	9557	11558	2189	11541	13730
<b>Total broadleaves</b>	<b>1067</b>	<b>6269</b>	<b>7336</b>	<b>9861</b>	<b>29182</b>	<b>39043</b>	<b>10928</b>	<b>35451</b>	<b>46379</b>
<b>Total - all species</b>	<b>120687</b>	<b>11452</b>	<b>132140</b>	<b>106303</b>	<b>33252</b>	<b>139555</b>	<b>226989</b>	<b>44704</b>	<b>271694</b>

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

NOTE (Table 4b)

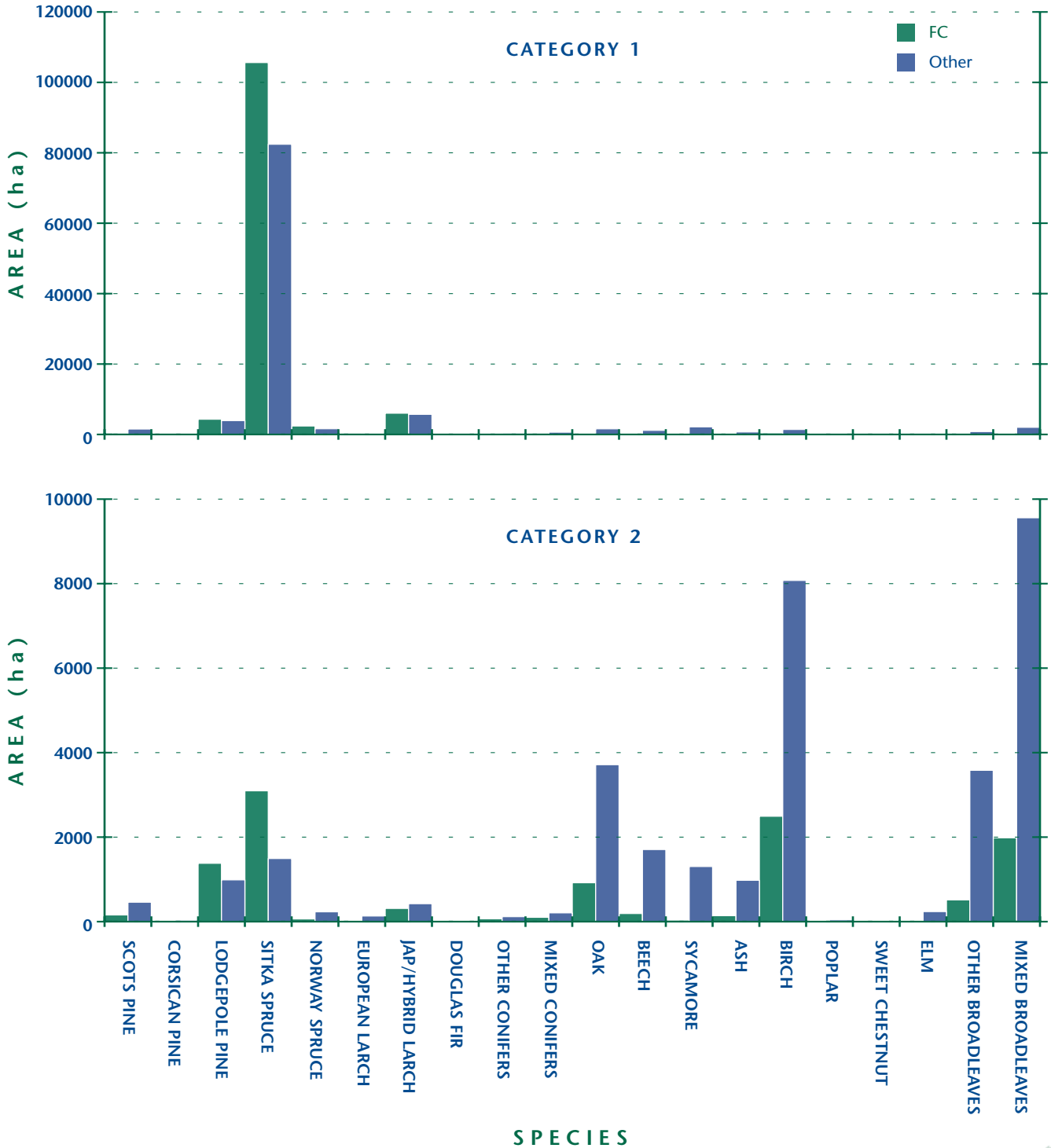
The standard errors of the area estimates for the most common species or species groups are as follows:

	Cat 1	Cat 2	Total HF
Conifers	1%	8%	1%
Broadleaves	7%	3%	3%
Jap/Hybrid larch	7%	23%	7%
Sitka spruce	1%	11%	1%
Mixed broadleaves	14%	7%	6%
Birch	16%	6%	6%

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**

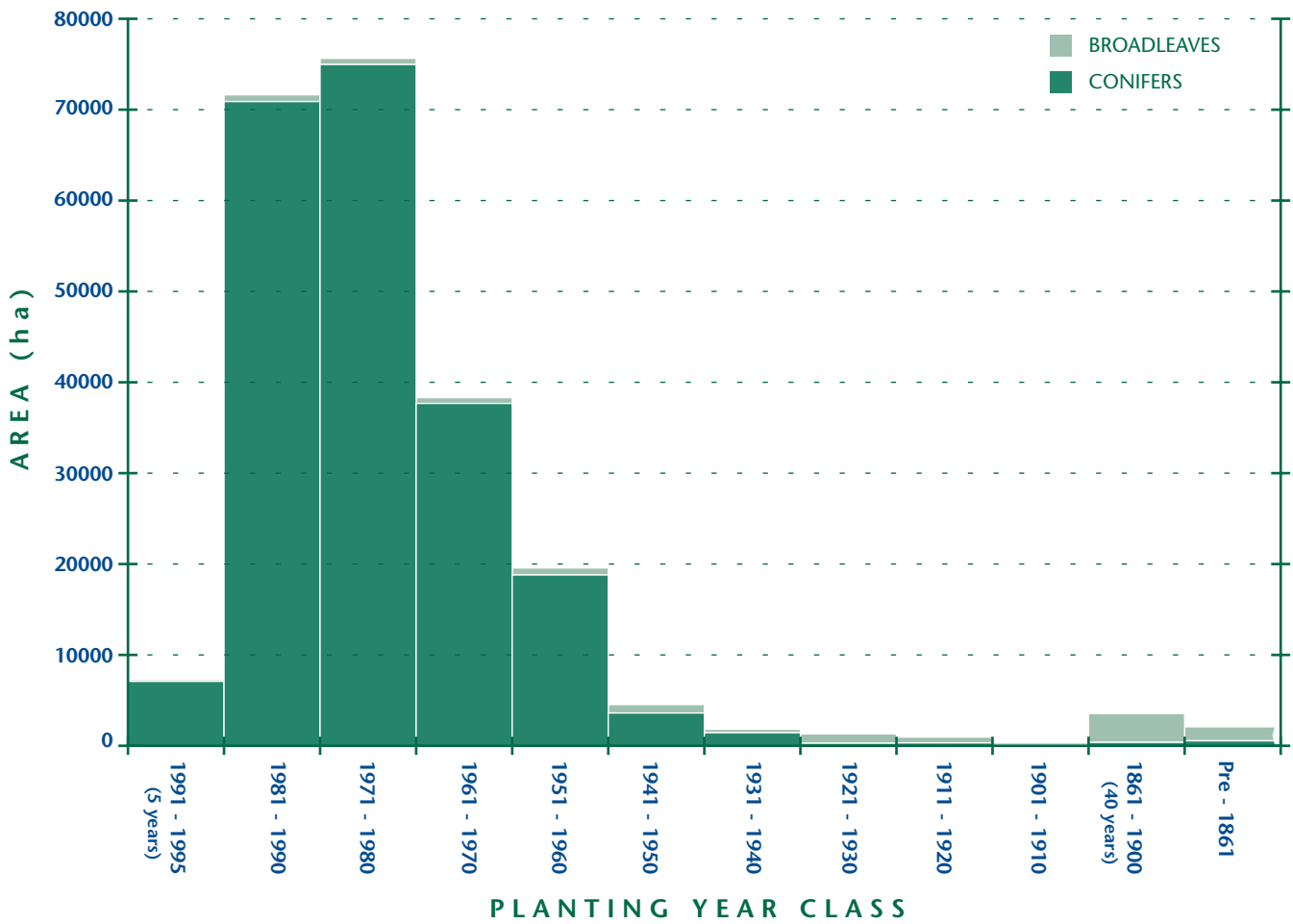
Species	PLANTING YEAR CLASS												TOTAL
	1991 -1995	1981 -1990	1971 -1980	1961 -1970	1951 -1960	1941 -1950	1931 -1940	1921 -1930	1911 -1920	1901 -1910	1861 -1900	pre - 1861	
Scots pine	76	117	134	182	485	416	175	68	40	55	32	0	1780
Corsican pine	0	45	0	0	61	0	0	22	0	0	0	0	128
Lodgepole pine	556	1996	1916	1901	1664	37	0	0	0	0	138	0	8208
Sitka Spruce	5724	64952	69277	31911	12794	2162	555	44	0	21	22	530	187992
Norway spruce	133	160	495	957	1301	380	302	11	237	0	0	0	3977
European larch	0	6	0	0	50	66	189	44	27	9	56	0	446
Jap/Hybrid larch	565	3190	2917	2549	1970	333	156	0	0	0	8	17	11705
Douglas fir	0	189	25	6	22	31	7	0	0	0	22	0	302
Other conifers	27	93	163	83	100	143	6	0	0	0	40	0	655
Mixed conifers	5	147	42	84	349	37	47	87	13	0	58	0	869
<b>Total conifers</b>	<b>7087</b>	<b>70893</b>	<b>74969</b>	<b>37672</b>	<b>18797</b>	<b>3605</b>	<b>1436</b>	<b>276</b>	<b>317</b>	<b>86</b>	<b>375</b>	<b>547</b>	<b>216061</b>
Oak	8	0	0	0	0	42	0	50	72	104	822	645	1745
Beech	0	0	0	41	8	11	123	42	127	54	517	362	1285
Sycamore	17	4	103	158	136	284	87	353	17	0	864	138	2162
Ash	19	104	8	41	113	76	0	79	49	0	243	36	769
Birch	0	264	299	206	303	283	104	166	145	0	16	0	1786
Poplar	0	0	0	0	8	0	5	0	0	0	0	0	13
Sweet chestnut	0	0	0	0	0	0	0	0	0	0	74	0	74
Elm	0	0	0	0	0	8	0	0	0	0	56	0	64
Other blvs	61	126	33	51	26	68	8	252	21	0	181	12	841
Mixed blvs	72	239	236	137	181	151	54	89	212	70	403	346	2189
<b>Total broadleaves</b>	<b>178</b>	<b>738</b>	<b>679</b>	<b>633</b>	<b>775</b>	<b>924</b>	<b>381</b>	<b>1032</b>	<b>644</b>	<b>229</b>	<b>3176</b>	<b>1540</b>	<b>10928</b>
<b>Total - all species</b>	<b>7265</b>	<b>71630</b>	<b>75649</b>	<b>38305</b>	<b>19573</b>	<b>4529</b>	<b>1818</b>	<b>1308</b>	<b>961</b>	<b>315</b>	<b>3551</b>	<b>2087</b>	<b>226989</b>

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**

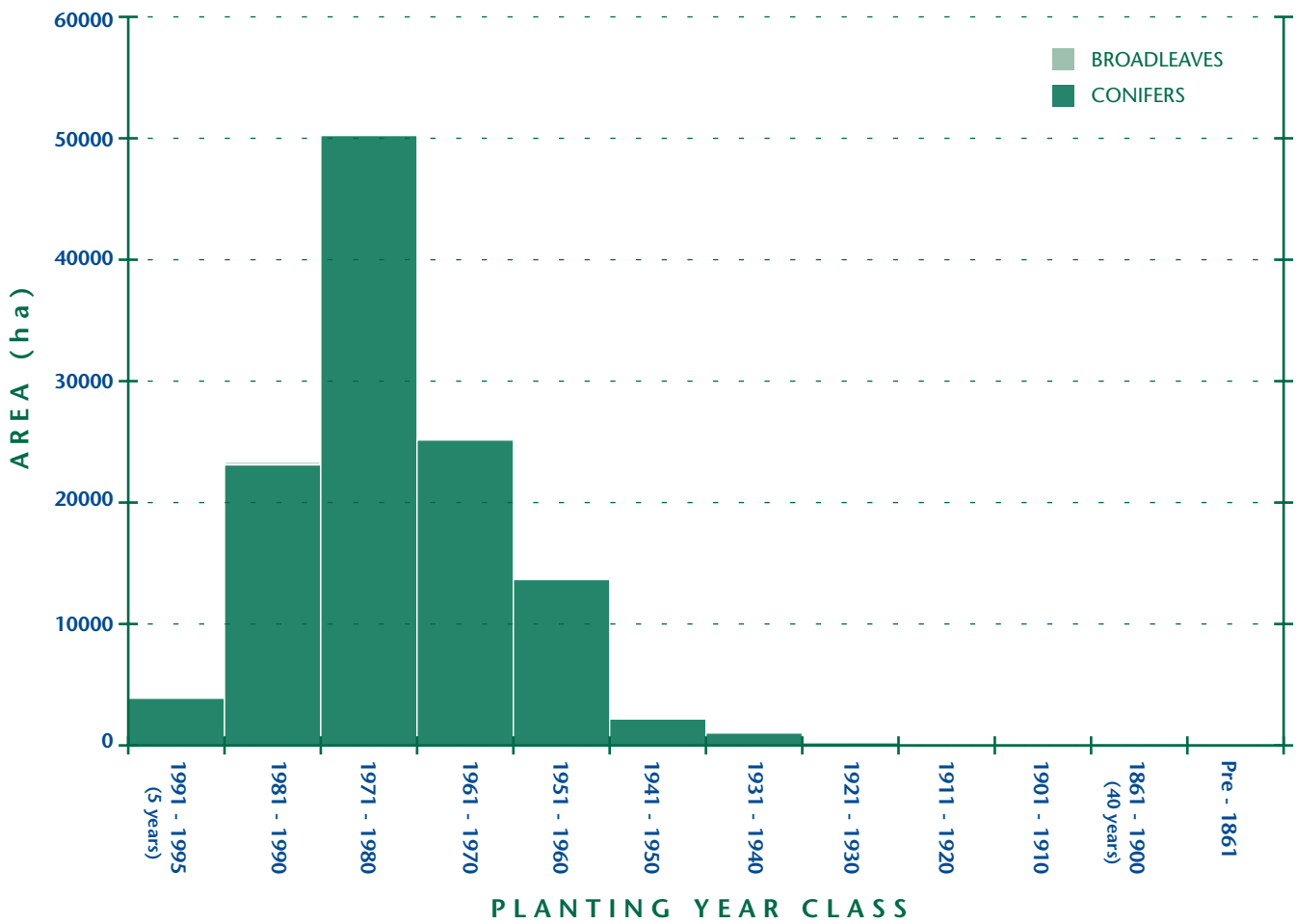
Species	PLANTING YEAR CLASS												TOTAL
	1991 -1995	1981 -1990	1971 -1980	1961 -1970	1951 -1960	1941 -1950	1931 -1940	1921 -1930	1911 -1920	1901 -1910	1861 -1900	pre - 1861	
Scots pine	0	6	0	6	111	67	0	39	0	22	11	0	261
Corsican pine	0	0	0	0	61	0	0	22	0	0	0	0	83
Lodgepole pine	6	578	1340	1256	1112	0	0	0	0	0	0	0	4291
Sitka spruce	3607	21152	46796	21800	10023	1701	406	44	0	0	22	44	105595
Norway spruce	133	61	179	484	895	345	276	11	0	0	0	0	2383
European larch	0	6	0	0	50	0	189	33	0	0	56	0	334
Jap/Hybrid larch	112	1162	1903	1479	1172	33	133	0	0	0	0	17	6010
Douglas fir	0	67	0	6	22	0	0	0	0	0	11	0	106
Other conifers	22	67	11	78	100	22	6	0	0	0	0	0	306
Mixed conifers	0	0	0	39	112	6	6	67	0	0	22	0	251
<b>Total conifers</b>	<b>3880</b>	<b>23097</b>	<b>50228</b>	<b>25146</b>	<b>13658</b>	<b>2173</b>	<b>1015</b>	<b>217</b>	<b>0</b>	<b>22</b>	<b>122</b>	<b>61</b>	<b>119620</b>
Oak	0	0	0	0	0	0	0	0	72	0	33	67	172
Beech	0	0	0	0	0	0	72	0	0	33	0	44	150
Sycamore	0	0	0	0	0	0	0	0	0	0	22	0	22
Ash	0	89	0	0	0	0	0	0	0	0	0	0	89
Birch	0	139	111	72	50	17	0	0	0	0	11	0	400
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	6	33	0	6	0	0	0	0	0	0	0	45
Mixed blvs	11	50	72	0	22	6	28	0	0	0	0	0	189
<b>Total broadleaves</b>	<b>11</b>	<b>283</b>	<b>217</b>	<b>72</b>	<b>78</b>	<b>22</b>	<b>100</b>	<b>0</b>	<b>72</b>	<b>33</b>	<b>67</b>	<b>111</b>	<b>1067</b>
<b>Total - all species</b>	<b>3891</b>	<b>23381</b>	<b>50445</b>	<b>25218</b>	<b>13736</b>	<b>2196</b>	<b>1115</b>	<b>217</b>	<b>72</b>	<b>56</b>	<b>189</b>	<b>172</b>	<b>120687</b>

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**

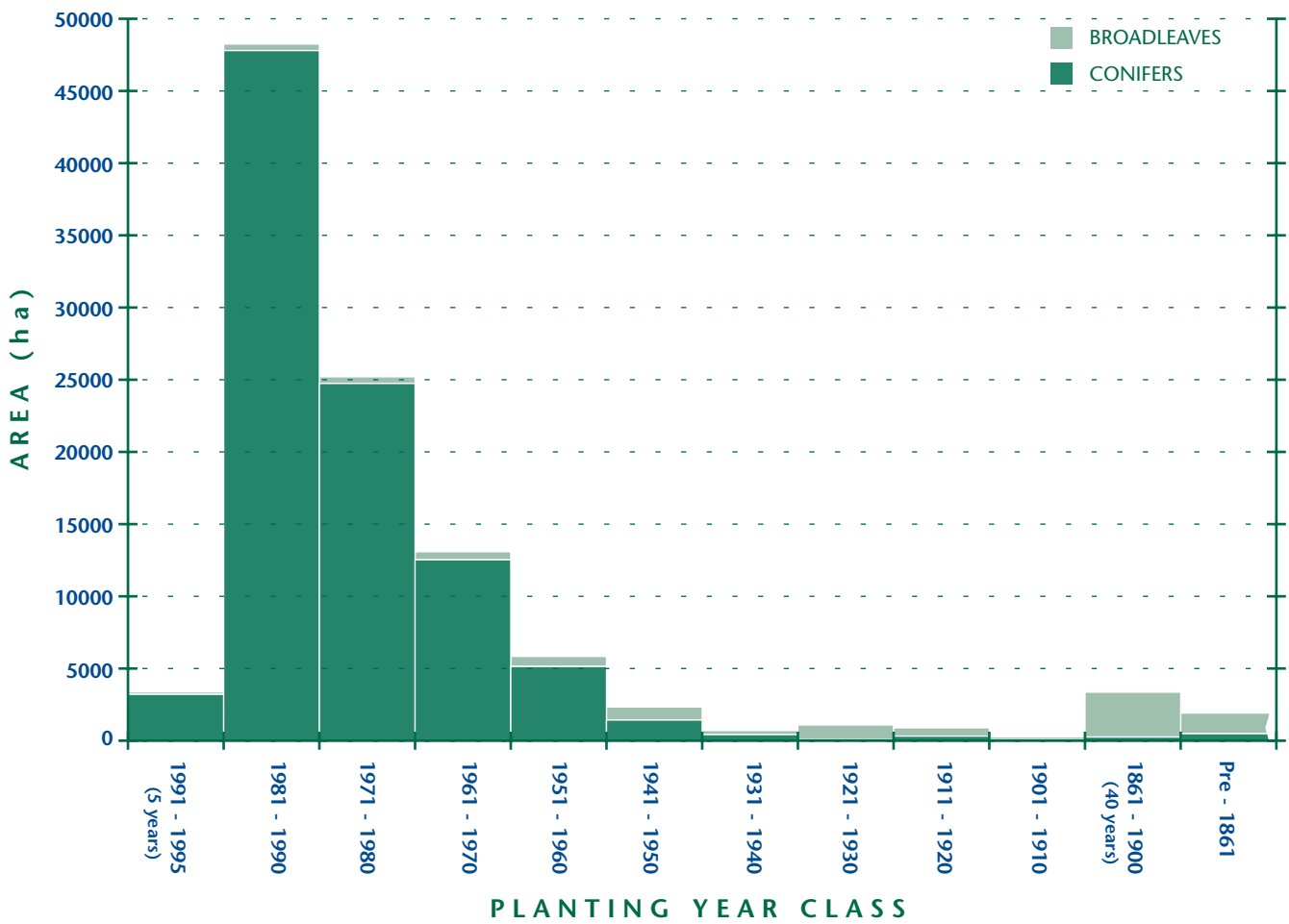
Species	PLANTING YEAR CLASS												TOTAL
	1991 -1995	1981 -1990	1971 -1980	1961 -1970	1951 -1960	1941 -1950	1931 -1940	1921 -1930	1911 -1920	1901 -1910	1861 -1900	pre - 1861	
Scots pine	76	111	134	177	373	349	175	29	40	33	21	0	1519
Corsican pine	0	45	0	0	0	0	0	0	0	0	0	0	45
Lodgepole pine	551	1418	577	645	553	37	0	0	0	0	138	0	3917
Sitka spruce	2116	43800	22481	10111	2772	461	149	0	0	21	0	486	82397
Norway spruce	0	99	317	473	406	35	26	0	237	0	0	0	1593
European larch	0	0	0	0	0	66	0	10	27	9	0	0	112
Jap/Hybrid larch	454	2028	1014	1070	798	300	22	0	0	0	8	0	5695
Douglas fir	0	122	25	0	0	31	7	0	0	0	10	0	196
Other conifers	5	26	152	5	0	121	0	0	0	0	40	0	350
Mixed conifers	5	147	42	45	237	31	42	20	13	0	36	0	618
<b>Total conifers</b>	<b>3208</b>	<b>47796</b>	<b>24741</b>	<b>12526</b>	<b>5139</b>	<b>1432</b>	<b>422</b>	<b>59</b>	<b>317</b>	<b>64</b>	<b>253</b>	<b>486</b>	<b>96441</b>
Oak	8	0	0	0	0	42	0	50	0	104	789	579	1572
Beech	0	0	0	41	8	11	51	42	127	21	517	318	1135
Sycamore	17	4	103	158	136	284	87	353	17	0	842	138	2140
Ash	19	15	8	41	113	76	0	79	49	0	243	36	680
Birch	0	125	187	133	253	266	104	166	145	0	5	0	1386
Poplar	0	0	0	0	8	0	5	0	0	0	0	0	13
Sweet chestnut	0	0	0	0	0	0	0	0	0	0	74	0	74
Elm	0	0	0	0	0	8	0	0	0	0	56	0	64
Other blvs	61	120	0	51	20	68	8	252	21	0	181	12	797
Mixed blvs	61	189	164	137	159	145	26	89	212	70	403	346	2000
<b>Total broadleaves</b>	<b>167</b>	<b>454</b>	<b>463</b>	<b>561</b>	<b>697</b>	<b>901</b>	<b>281</b>	<b>1032</b>	<b>572</b>	<b>195</b>	<b>3109</b>	<b>1428</b>	<b>9861</b>
<b>Total - all species</b>	<b>3375</b>	<b>48250</b>	<b>25203</b>	<b>13086</b>	<b>5837</b>	<b>2333</b>	<b>703</b>	<b>1091</b>	<b>889</b>	<b>259</b>	<b>3362</b>	<b>1914</b>	<b>106303</b>

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	Sitka spruce	70	Mixed broadleaves	8	Jap/Hybrid larch	7
1981-1990	Sitka spruce	88	Jap/Hybrid larch	4	Lodgepole pine	3
1971-1980	Sitka spruce	86	Lodgepole pine	4	Jap/Hybrid larch	4
1961-1970	Sitka spruce	75	Jap/Hybrid larch	6	Lodgepole pine	5
1951-1960	Sitka spruce	55	Birch	8	Jap/Hybrid larch	8
1941-1950	Sitka spruce	27	Mixed broadleaves	20	Birch	14
1931-1940	Birch	30	Sitka spruce	11	Mixed broadleaves	11
1921-1930	Birch	44	Mixed broadleaves	21	Other broadleaves	10
1911-1920	Mixed broadleaves	27	Birch	16	Oak	11
1901-1910	Mixed broadleaves	52	Oak	16	Beech	11
1861-1900	Oak	32	Mixed broadleaves	20	Beech	15
Pre 1861	Oak	44	Sitka spruce	16	Beech	14
<b>All years</b>	<b>Sitka spruce</b>	<b>71</b>	<b>Mixed broadleaves</b>	<b>5</b>	<b>Jap/Hybrid larch</b>	<b>5</b>

**TABLE 7 OWNERSHIP TYPE BY AREA  
AND PERCENTAGE**

Ownership Type	Area (ha)	%
Personal	101684	32.1
Private forestry or timber business	11348	3.6
Other private business	33066	10.5
Local Authority	5218	1.6
Other public body (not FC)	4126	1.3
Forestry Commission	155425	49.1
Charity	1796	0.6
Community ownership or common land	46	0.0
Unclassified	3864	1.2
<b>Total</b>	<b>316393</b>	<b>100.0</b>

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 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.

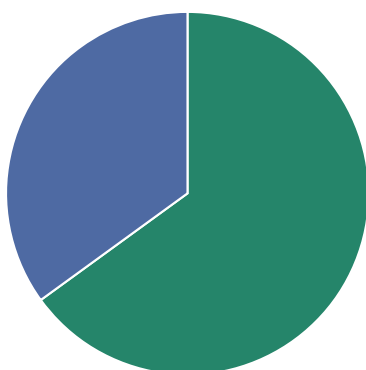
The apparent differences shown in the following tables should therefore be treated with caution, particularly where areas are small.

TABLE 8 WOODLAND AREAS AND OWNERSHIP			
	CENSUS 31/3/80	INVENTORY 31/3/95	CHANGE (%)
Area (inc. inland water)	1376789	1361746	-1.1
FC Woodland area	135640	155425	14.6
Other ownership area	73127	160968	120.1
<b>Total Area of Woodland</b>	<b>208767</b>	<b>316393</b>	<b>51.6</b>
<b>% Woodland Cover</b>	<b>15.2</b>	<b>23.2</b>	<b>53.2</b>

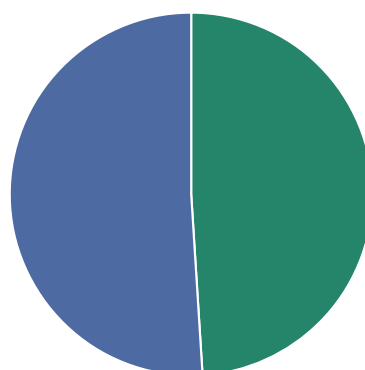
NOTE (Table 8)

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

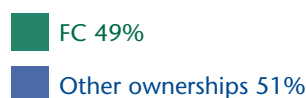
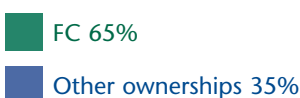
CENSUS 1980



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	4015	2395
Corsican pine	278	175
Lodgepole pine	10952	10573
Sitka spruce	115727	192576
Norway spruce	7969	4268
European larch	1220	576
Jap/Hybrid larch	9305	12439
Douglas fir	589	302
Other conifers	1615	836
Mixed conifers	2355	1174
<b>Total conifers</b>	<b>153985</b>	<b>225315</b>
Oak	4604	6375
Beech	1731	3180
Sycamore	2580	3498
Ash	870	1885
Birch	9610	12351
Poplar	48	52
Sweet chestnut	1	74
Elm	928	301
Other broadleaves	4365	4933
Mixed broadleaves	2038	13730
<b>Total broadleaves</b>	<b>26775</b>	<b>46379</b>
<b>TOTAL - all species</b>	<b>180800</b>	<b>271694</b>
Felled	2498	5153
<b>Total - High Forest</b>	<b>183297</b>	<b>276847</b>

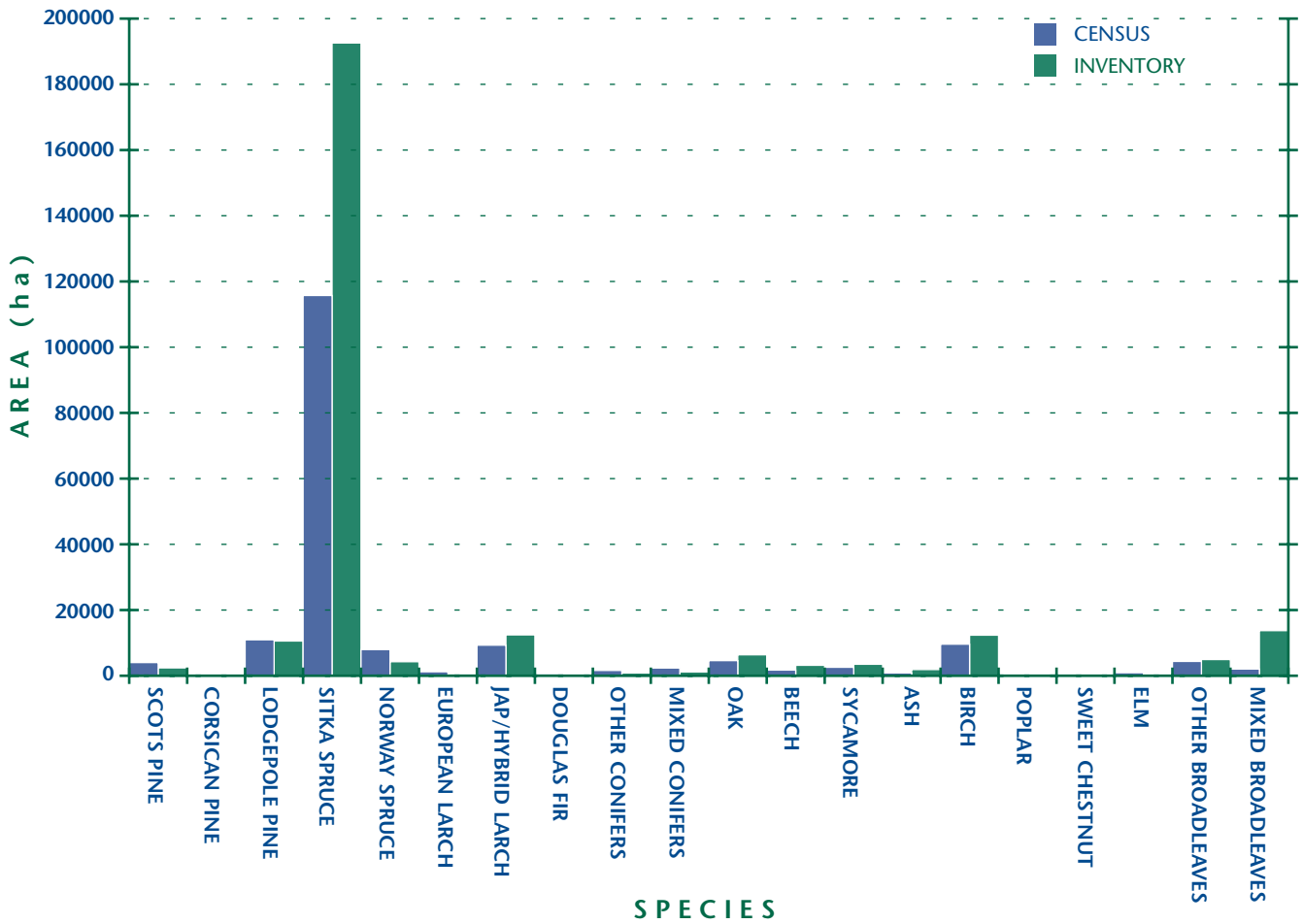
**NOTE (Table 9)**

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 12.2% (Table 3). To obtain meaningful comparisons between the two datasets the 1980 Census data have therefore been reduced by 12.2%. Area allocated to scrub has also been included in the 1980 Census data to make it comparable with the 1995 Inventory data.

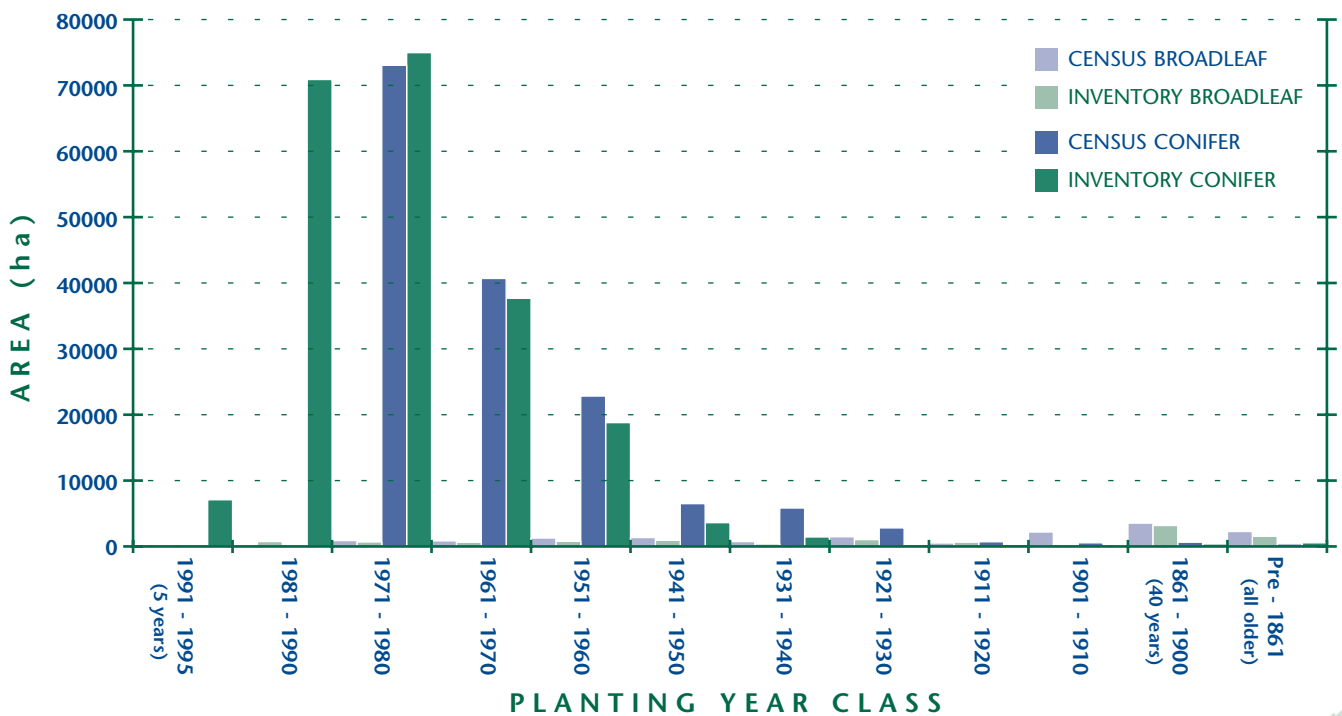
N.B. Woodlands between 0.25 and 2.0 hectares are not yet included in the 1995 Inventory figures (above). These are expected to contain a high proportion of broadleaved species.

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**

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