NATIONAL INVENTORY OF WOODLAND AND TREES

ENGLAND

County Report for

KENT

Forestry Commission

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ACKNOWLEDGEMENTS

INTRODUCTION

This report presents the results for Kent from the Forestry Commission National Inventory of Woodland and Trees (NIWT).

The Inventory consists of two separate surveys -

- The Main Woodland Survey (MWS) covering woodlands of 2 hectares and over

- The Survey of Small Woodland and Trees (SSWT) covering Small Woods, Groups of Trees, Linear Features and Individual Trees.

BACKGROUND

Since 1924 the Forestry Commission has carried out a number of national woodland surveys at intervals of between 15 and 20 years. The previous survey was carried out between 1979 and 1982. With the statistics becoming increasingly out of date the Forestry Commission decided to undertake a new survey: the *National Inventory of Woodland and Trees*.

The survey fieldwork for Great Britain was completed in July 2000. Work began in Scotland in 1994, followed by Southern England, Wales and Northern England.

SURVEY METHODS

Main Woodland Survey

In England, Woodland Surveys derived a digital map of all woodland showing Interpreted Forest Types from 1:25 000 scale aerial photography. This provided the basis for the sampling.

The digital map gives the extent of all woodland over 2 hectares and this was updated as survey work progressed. The maps on pages 4-6 show: overall woodland cover; woodland by ownership; and woodland by Interpreted Forest Type, respectively. The total area of woodland 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:

- 2.0ha - <100ha : every fifth wood
- 100ha - <500ha : two woods in five
- 500ha 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.

Survey of Small Woodland and Trees

The land area of England was stratified into coastal and inland 1 km x 1 km squares and a random sample of 1 km² plots were then selected, representing around 1% of the land area. 1:25 000 scale aerial photos were then used to identify features in each sample square. Each 1 km² was then divided into 16 parts, and two of these were selected at random for field data collection. Data was collected on Small Woodlands (0.10 - <2.00 ha), Linear Features, Groups and Individual Trees. The survey did not collect information from areas of developed land of 2 hectares or more.

MAIN POINTS FROM THE SURVEY RESULTS

- The total area of woodland of 0.1 hectares and over in Kent is 39,487 hectares. This represents 10.6 % of the land area. (Table 1)

- Broadleaved woodland is the dominant forest type representing 48.9 % of all woodland. Conifer woodland represents 8.2 %, Mixed woodland 12.0 % and Open Space within woodlands 5.2 %. (Table 2)

- The main conifer species is pine covering 2,387 hectares or 49.4 % of all conifer species. The main broadleaved species is oak covering 4,108 hectares or 18.1 % of all broadleaved species. (Table 3)

- 3,540 hectares or 10 % of woodland over 2 hectares is owned by or leased to the Forestry Commission, and 33,581 hectares or 90 % of woodland is in Other ownership. (Table 6)

- There are a total of 2,062 woods over 2 ha within Kent with a mean wood area of 18.4 hectares. (Table 7a) There are a total of 5,664 woods from 0.1 - <2.0 hectares with a mean wood area of 0.42 hectares. (Table 14)

- There are 2.0 million live trees outside woodland in Kent. (Table 15)

- Woodland land cover decreased by over 3,400 hectares from 11.4 % to 10.5 % of the land area between 1980 and 1995. (Table 19)

- The area of broadleaves increased by 43% between 1980 and 1995, with the relative proportion of broadleaves to conifers increasing from 70 % to 82 %. (Table 20)

INVENTORY REPORTS

As well as this report for Kent, reports are available for the other counties in the region as shown on the map opposite. Also available are region and county reports for England as well as a report for the country as a whole. Wales and Scotland are also covered by reports. Inventory reports can also be viewed or downloaded from the website at www.forestry.gov.uk/inventory.

Map 1 Regional and county boundaries

East Midlands Region

West Midlands Region

East of England Region

Buckinghamshire

Oxfordshire

London Region

Berkshire

South West Region

Surrey

Kent

South East Region

Hampshire

West Sussex

East Sussex

Isle of Wight

5   10   15   20   Kilometres

Based on Ordnance Survey mapping with the permission of the
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Map 2 Distribution of woodland over 2 hectares

Surrey

West Sussex

East Sussex

5   10   15   20
Kilometres

Reference Date 31 March 1995

Map 3 Distribution of woodland over 2 hectares by ownership

Forestry Commission woodland
Other woodland

Surrey

West Sussex

East Sussex

5 10 15 20 Kilometres

Map 4 Distribution of woodland over 2 hectares by Interpreted Forest Type

Broadleaves
Conifer
Mixed
Felled
Young trees & shrubs
Ground prepared for planting
Coppice

Surrey

West Sussex

East Sussex

5   10   15   20
Kilometres

Reference Date 31 March 1995

SUMMARY RESULTS FROM THE NATIONAL INVENTORY OF WOODLAND AND TREES (NIWT)

Both the Main Woodland Survey and the Survey of Small Woodland and Trees contributed to the estimate of woodland area for Kent.

Tables 1-3 show the combined woodland area from the Main Woodland Survey and the Survey of Small Woodland and Trees.

Tables 4 and 5 summarise the numbers of live trees outside woodland, and the lengths of Linear Features from the Survey of Small Woodland and Trees.

Table 1:   Woodland area by woodland size class
Table 2:   Woodland area by forest type and woodland size
Table 3:   Woodland area by principal species and woodland size
Table 4:   Numbers of live trees outside woodland by feature type
Table 5:   Lengths of Linear Features

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

Table 1   Woodland area by woodland size class

Woodland size (ha)	Woodland area (ha)	% of Woodland area
2.00 and over	37,121	94.0
0.25 - < 2.00	2,137	5.4
0.10 - < 0.25	229	0.6
Total area of woodland	**39,487**	**100.0**
% Woodland land cover	**10.6**	

1.   Area of Kent, including inland water, 373,499 ha based on digital boundaries used in the
      1991 Census of Population

Table 2 Woodland area by forest type and woodland size

Forest type	Woodland size (ha)		Total area (ha)	Percentage of total area
	2.0 and over	0.1 - <2.0		
Conifer	3,216	20	3,236	8.2
Broadleaved	17,461	1,860	19,321	48.9
Mixed	4,425	307	4,732	12.0
Coppiced	5,997	0	5,997	15.2
Copp-w-standards	3,411	0	3,411	8.6
Windblow	181	0	181	0.5
Felled	556	0	556	1.4
Open Space	1,875	179	2,054	5.2
Total	37,121	2,366	39,487	100

1.   See Glossary for definitions of forest types.

Table 3 Woodland area by principal species and woodland size

Species/Groups	Woodland size (ha)		Total area	Percentage of total area	
	2.0 and over	0.1 -<2.0	(ha)	Category*	Species**
Pine	2,327	60	2,387	49.4	8.7
Sitka spruce	46	0	46	1.0	0.2
Larch	436	16	452	9.4	1.6
Other conifers	1,356	76	1,432	29.6	5.2
Mixed conifers	459	54	513	10.6	1.9
Total conifers	**4,624**	**206**	**4,830**	**100.0**	**17.6**
Oak	3,624	484	4,108	18.1	15.0
Beech	1,511	143	1,654	7.3	6.0
Sycamore	705	80	785	3.5	2.9
Ash	3,491	272	3,763	16.6	13.7
Birch	2,782	0	2,782	12.3	10.1
Elm	12	20	32	0.1	0.1
Other broadleaves	4,022	410	4,432	19.6	16.1
Mixed broadleaves	4,513	574	5,087	22.5	18.5
Total broadleaves	**20,659**	**1,983**	**22,642**	**100.0**	**82.4**
Total all species***	**25,282**	**2,188**	**27,470**		**100.0**

  *Category - species/group percentage of conifer or broadleaved category
**Species/group percentage of all species

***Excludes the 12,018 ha of Coppice, Felled and Open space areas which were included in Table 2

1.   The standard errors of the area estimates for woodland of 2 ha and over
        for the most common species or species groups are as follows

            Conifers   8%
            Broadleaves   3%
            Pine   13%
            Oak   8%
            Ash   9%

2.   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).

Table 4 Numbers of live trees outside woodland by feature type

Feature type	Total number of features	Total number of live trees	Mean number of trees per feature	Tree density (per sq km)
Groups	62,700	409,300	7	110
Narrow Linear Features	28,100	1,479,500	53	396
Individual Trees	83,300	83,300	1	22
Total		1,972,100		528

1. Land area used to calculate tree density 373,499 ha based on digital boundaries used in 1991 Census of Population

2. The standard errors of the live tree number estimates for these feature types are:

Groups	28%
Narrow Linear Features	24%
Individual Trees	23%

3. 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).

4. See Glossary for definitions of feature types .

Table 5 Lengths of Linear Features

Feature type	Total number of features	Total length of features (km)	Density of features (m per sq km)
Wide Linear Features	684	103	27
Narrow Linear Features	28,100	2,386	639
Total		2,488	666

1. Land area used to calculate tree density 373,499 ha based on digital boundaries used in 1991 Census of Population

2. The standard errors of the length estimates for these feature types are:

Wide Linear Features	99%
Narrow Linear Features	28%

3. 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).

4. See Glossary for definitions of feature type .

RESULTS FROM THE MAIN WOODLAND SURVEY (MWS)

Survey Method

Woods were selected from the digital map of woodland of 2 hectares and over, then sampled using a random grid of 1 hectare sample plots. The density of sample plots was reduced as the sampled woodland increase in size, the general aim being to sample 1% of the woodland area. The ground sampling evaluated a wide range of data such as species, age and stocking.

Table 6:	Summary of woodland area by ownership
Chart:	Woodland area by ownership
Table 7a:	Size class distribution of woodland
Table 7b:	Size class distribution of woodland by ownership units
Table 8:	Area of woodland by forest type and ownership
Chart:	Area of woodland by forest type
Table 9a:	Area of High Forest by principal species and ownership
Graph:	Area of High Forest by principal species and ownership
Table 9b:	Area of High Forest by principal species, ownership and category
Graph:	High Forest Category 1 Area by principal species and ownership
Graph:	High Forest Category 2 Area by principal species and ownership
Table 10a:	High Forest Category 1 Area by principal species and planting year class
Graph:	High Forest Category 1 Area by planting year class
Table 10b:	High Forest Category 1 Forestry Commission: area by principal species and planting year class
Graph:	High Forest Category 1 Forestry Commission - area by planting year class
Table 10c:	High Forest Category 1 Other ownership: area by principal species and planting year class
Graph:	High Forest Category 1 Other ownership: area by planting year class
Table 11:	High Forest: principal species by planting year class
Table 12:	Ownership type by area and percentage
Chart:	Ownership type by area

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

Table 6 Summary of woodland area by ownership

Ownership	ha	% woodland
Forestry Commission	3,540	10
Other	33,581	90
Total area of woodland	**37,121**	**100**

1.   Woodland area from aerial photographic interpretation map updated to 31 March 1995

2.   See Glossary for definitions of ownership types

Woodland area by ownership

■ Forestry Commission
■ Other ownership
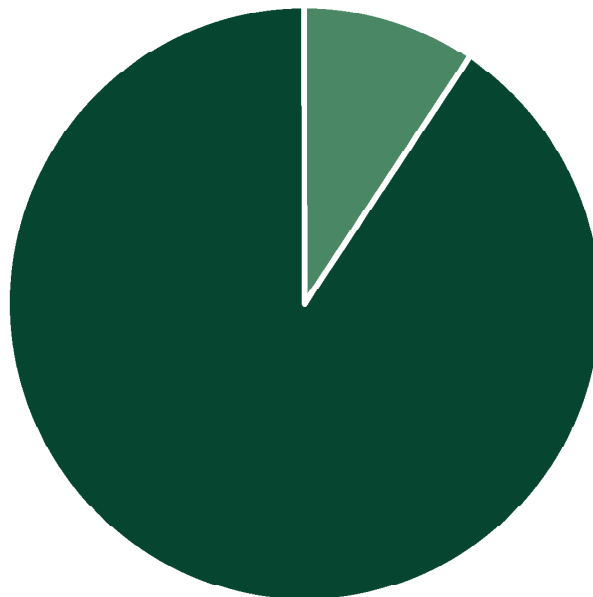
Table 7a Size class distribution of woodland

Size class (ha)	Number of woods	Total area (ha)	Percent of total area	Mean wood area (ha)
<10	1,432	6,347	17	4.4
10 - <20	298	4,240	11	14.2
20 - <50	209	6,425	17	30.7
50 - <100	69	4,747	13	68.8
<100	**2,008**	**21,759**	**57**	**10.8**
100 - <500	**44**	**9,041**	**24**	**205.5**
500 and >	**10**	**7,056**	**19**	**705.6**
All woods	**2,062**	**37,855**	**100**	**18.4**

Table 7b 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)
<10	FC	3	14	0	4.8
	O	1,483	6,466	17	4.4
10 - <20	FC	1	11	0	10.9
	O	304	4,346	11	14.3
20 - <50	FC	4	124	0	31.1
	O	211	6,481	17	30.7
50 - <100	FC	1	88	0	88.3
	O	75	5,218	14	69.6
<100	FC	9	238	1	26.4
	O	2,073	22,510	59	10.8
100 - <500	FC	7	1,972	5	281.7
	O	43	8,055	21	187.3
500 and >	FC	2	1,330	4	665.2
	O	6	3,750	10	625.0
Total	**FC**	**18**	**3,540**	**9**	**196.7**
	O	**2,122**	**34,315**	**91**	**16.2**

1.   Table 7a and 7b are based solely on the digital woodland map. The other MWS tables are derived from the field sample data

2.   The total area in Tables 7a and 7b is 734 hectares more than recorded in Table 6. This is mainly due to the field samples recording some land in other land uses not differentiated from woodland in the digital map

3.   The data available from the digital map enable the identification of woodlands according to their ownerships, Forestry Commission or Other. The entries in table 7b cannot be added to derive table 7a as some woods may consist of both Forestry Commission and Other ownership(s)

   For example, the Forestry Commission may own most of a large wood with some parts in Other ownership(s). In Table 7a the whole area would be treated as one wood and the area allocated to one size category. In Table 7b each of the ownership units would be allocated to the size category for that unit. Dividing woods by ownership can occasionaly generate part woods of less than 2 hectares

Reference Date: 31 March 1995

Table 8   Area of woodland by forest type and ownership

Forest type	Forestry Commission		Other		All ownerships	
	ha	%	ha	%	ha	%
Conifer	1,553	43.9	1,663	5.0	3,216	8.7
Broadleaved	618	17.5	16,843	50.2	17,461	47.0
Mixed	451	12.7	3,974	11.8	4,425	11.9
Coppice	648	18.3	5,349	15.9	5,997	16.2
Copp-w-Stds	38	1.1	3,373	10.0	3,411	9.2
Windblow	34	1.0	147	0.4	181	0.5
Felled	146	4.1	410	1.2	556	1.5
Open Space	53	1.5	1,822	5.4	1,875	5.1
Total	**3,540**	**100.0**	**33,581**	**100.0**	**37,121**	**100.0**

Area of woodland by forest type

- Conifer
- Broadleaves
- Mixed
- Coppice
- Coppice-w-standards
- Felled
- Open Space
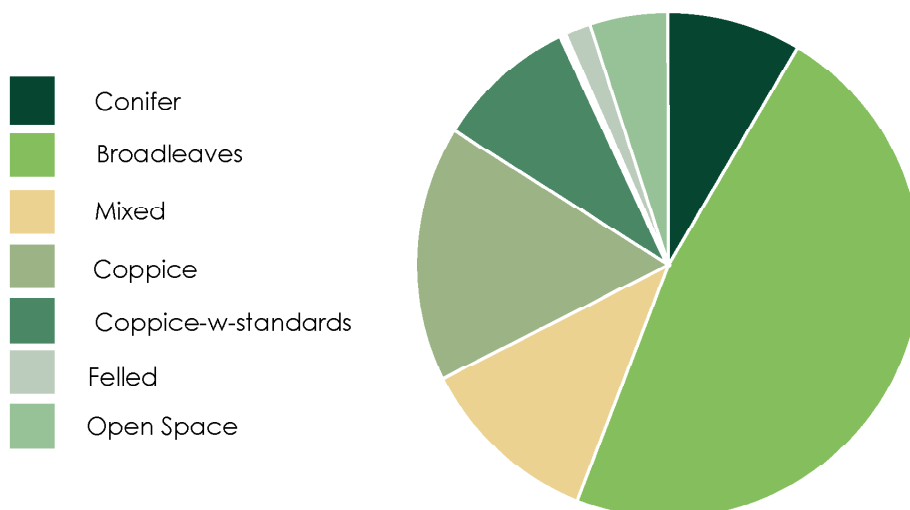
Table 9a   Area of High Forest by principal species and ownership

Species	Forestry Commission			Other			All ownerships		
	area (ha)	cat* %	spp** %	area (ha)	cat* %	spp** %	area (ha)	cat* %	spp** %
Scots pine	465	29	18	747	25	3	1,212	26	5
Corsican pine	364	23	14	751	25	3	1,115	24	4
Lodgepole pine	0	0	0	0	0	0	0	0	0
Sitka spruce	0	0	0	46	2	0	46	1	0
Norway spruce	180	11	7	301	10	1	482	10	2
European larch	4	0	0	38	1	0	42	1	0
Jap/Hybrid larch	49	3	2	345	11	2	394	9	2
Douglas fir	292	18	11	87	3	0	380	8	2
Other conifers	195	12	7	299	10	1	494	11	2
Mixed conifers	45	3	2	414	14	2	459	10	2
Total conifers	**1,595**	**100**	**60**	**3,029**	**100**	**13**	**4,624**	**100**	**18**
Oak	122	11	5	3,502	18	15	3,624	18	14
Beech	360	34	14	1,151	6	5	1,511	7	6
Sycamore	0	0	0	705	4	3	705	3	3
Ash	79	7	3	3,412	17	15	3,491	17	14
Birch	249	23	9	2,532	13	11	2,782	13	11
Poplar	0	0	0	92	0	0	92	0	0
Sweet chestnut	38	4	1	1,176	6	5	1,214	6	5
Elm	0	0	0	12	0	0	12	0	0
Other broadleaves	131	12	5	2,585	13	11	2,716	13	11
Mixed broadleaves	82	8	3	4,431	23	20	4,513	22	18
Total broadleaves	**1,061**	**100**	**40**	**19,598**	**100**	**87**	**20,659**	**100**	**82**
Total - all species	**2,656**		**100**	**22,627**		**100**	**25,282**		**100**
Felled	**146**			**410**			**556**		
Total High Forest	**2,802**			**23,037**			**25,838**		

*cat : species percentage of Conifer or Broadleaved in the ownership category
**spp : percentage of all species in the ownership category

1.   In addition to the areas shown there are 1,875 ha of other areas integral to
      the woodland not stocked with tree species.

2.   The standard errors of the all ownerships area estimates for the most common species or species groups are as follows;

      Conifers   8%
      Broadleaves   3%
      Scots pine   17%
      Oak   8%
      Ash   9%

3.   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'.

4.   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).

Area of High Forest by principal species and ownership
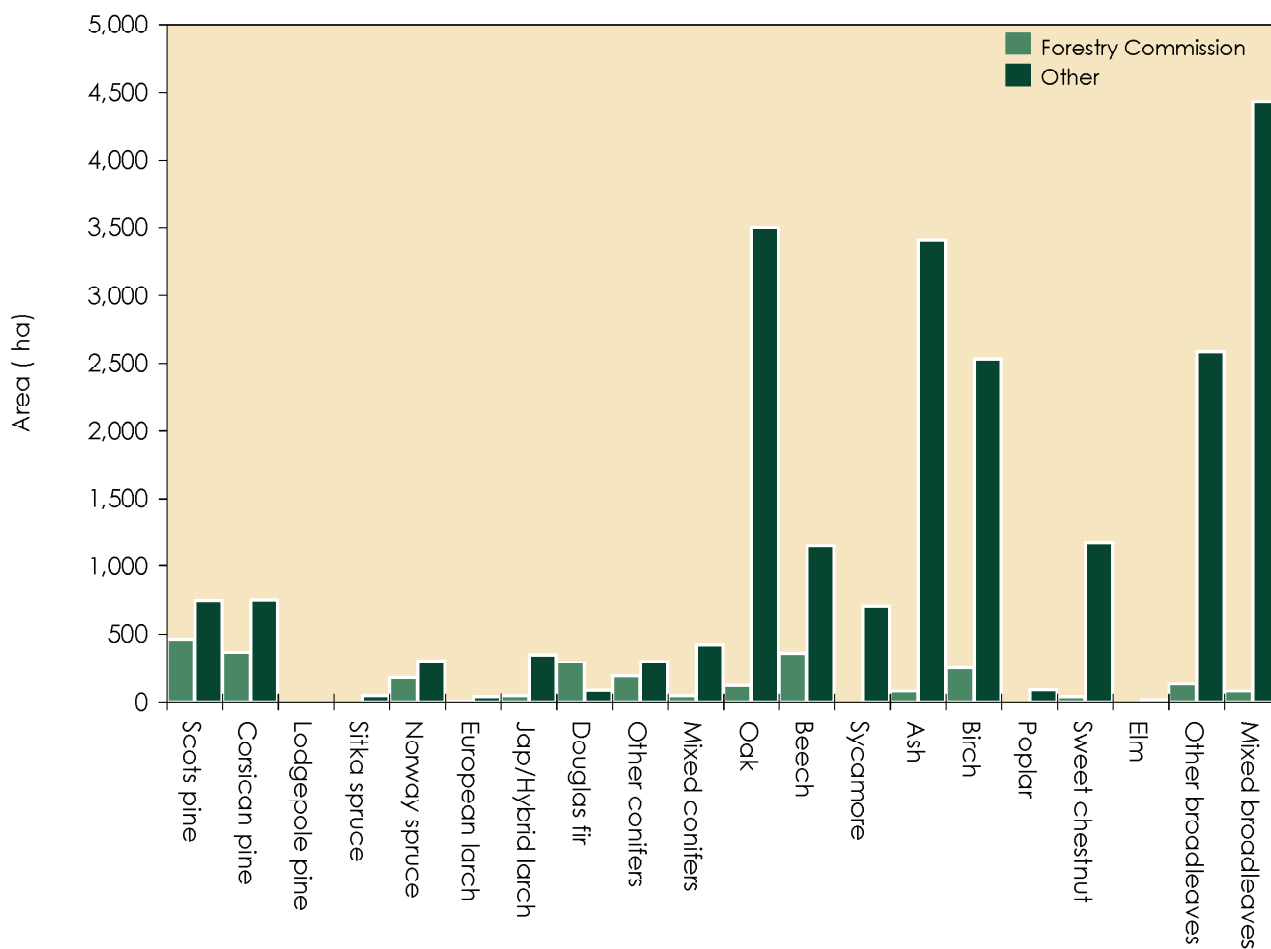
Table 9b Area of High Forest by principal species, ownership and category

Species	Forestry Commission			Other			All ownerships		
	cat. 1	cat. 2	Total (ha)	cat. 1	cat. 2	Total (ha)	cat. 1	cat. 2	Total (ha)
Scots pine	465	0	465	747	0	747	1,212	0	1,212
Corsican pine	360	4	364	747	4	751	1,107	8	1,115
Lodgepole pine	0	0	0	0	0	0	0	0	0
Sitka spruce	0	0	0	46	0	46	46	0	46
Norway spruce	180	0	180	301	0	301	482	0	482
European larch	4	0	4	38	0	38	42	0	42
Jap/Hybrid larch	49	0	49	345	0	345	394	0	394
Douglas fir	292	0	292	87	0	87	380	0	380
Other conifers	195	0	195	299	0	299	494	0	494
Mixed conifers	45	0	45	407	7	414	452	7	459
Total conifers	**1,591**	**4**	**1,595**	**3,018**	**12**	**3,029**	**4,608**	**15**	**4,624**
Oak	104	19	122	3,389	113	3,502	3,493	132	3,624
Beech	360	0	360	1,101	50	1,151	1,461	50	1,511
Sycamore	0	0	0	592	113	705	592	113	705
Ash	79	0	79	3,188	225	3,412	3,267	225	3,491
Birch	144	105	249	2,132	400	2,532	2,276	505	2,782
Poplar	0	0	0	92	0	92	92	0	92
Sweet chestnut	19	19	38	954	222	1,176	972	241	1,214
Elm	0	0	0	0	12	12	0	12	12
Other broadleaves	86	45	131	1,415	1,171	2,585	1,500	1,216	2,716
Mixed broadleaves	26	56	82	3,223	1,208	4,431	3,249	1,264	4,513
Total broadleaves	**818**	**243**	**1,061**	**16,084**	**3,514**	**19,598**	**16,902**	**3,757**	**20,659**
Total - all species	**2,408**	**247**	**2,656**	**19,102**	**3,525**	**22,627**	**21,510**	**3,772**	**25,282**

1. The standard errors of the all ownerships area estimates for the most common species or species groups (in all woodland types) are as follows

	Category 1*	Category 2*	Total High Forest	
Conifers	8%	61%	8%	
Broadleaves	4%	7%	3%	
Scots pine	17%	-	17%	
Oak	9%	36%	8%	*See Glossary for Category 1
Ash	10%	34%	9%	and Category 2 descriptions

2. Where the standard errors of these summary measures are 10% or less, the confidence intervals will be approximately symmetrical; the 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).

3. 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'.

Reference Date: 31 March 1995
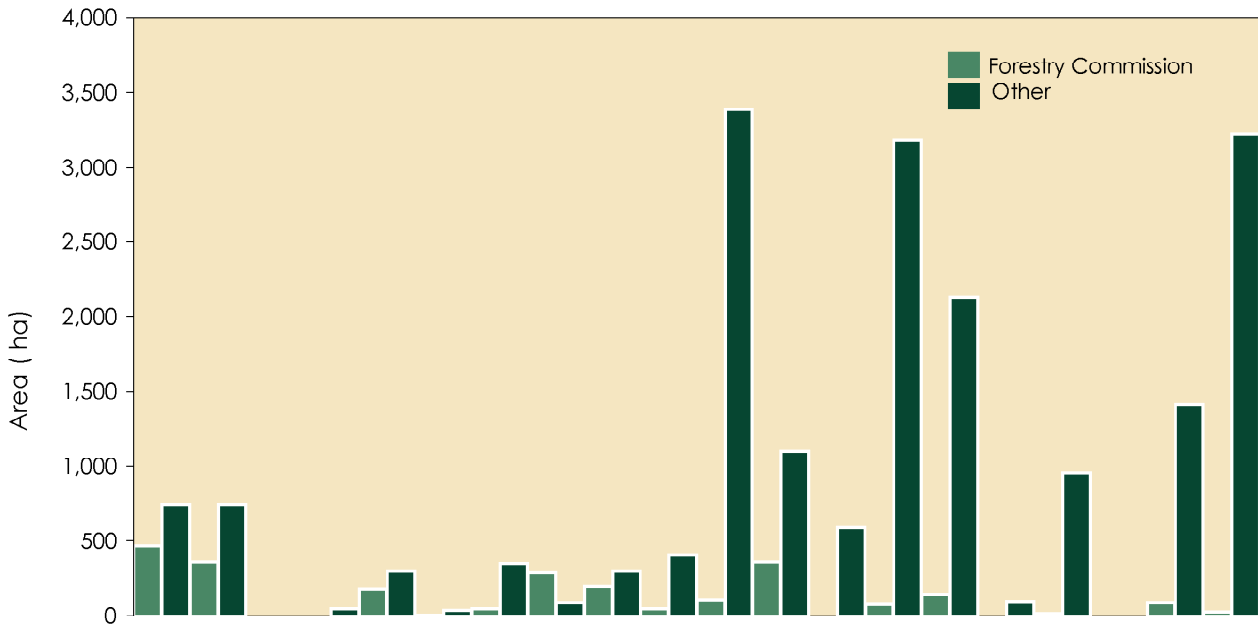
High Forest Category 1 - Area by principal species and ownership

High Forest Category 2 - Area by principal species and ownership
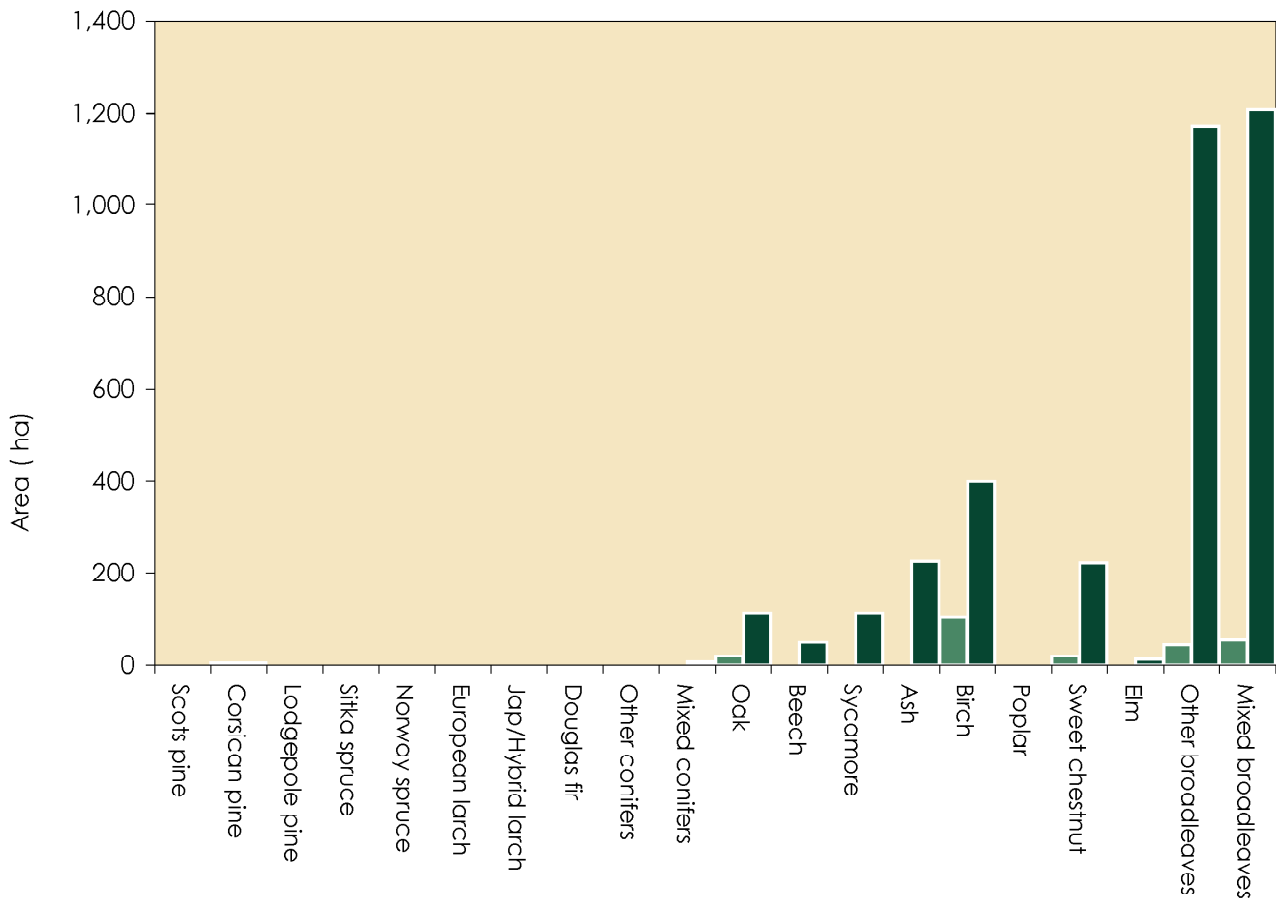
Table 10a High Forest Category 1 - Area by principal species and planting year class

Species	Planting year class*												Total (ha)
	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	29	46	26	457	304	216	82	32	20	0	0	0	1,212
Corsican pine	365	304	96	289	53	0	0	0	0	0	0	0	1,107
Lodgepole pine	0	0	0	0	0	0	0	0	0	0	0	0	0
Sitka spruce	0	0	0	46	0	0	0	0	0	0	0	0	46
Norway spruce	17	5	38	274	147	0	0	0	0	0	0	0	482
European larch	0	0	22	16	0	0	4	0	0	0	0	0	42
Jap/Hybrid larch	158	0	0	124	97	11	5	0	0	0	0	0	394
Douglas fir	41	23	64	105	71	5	0	59	11	0	0	0	380
Other conifers	9	17	16	226	147	4	61	5	5	0	4	0	494
Mixed conifers	0	0	11	136	141	103	5	34	7	0	15	0	452
Total conifers	**619**	**395**	**272**	**1,673**	**960**	**339**	**157**	**131**	**44**	**0**	**19**	**0**	**4,608**
Oak	187	38	165	86	52	598	412	787	672	251	241	4	3,493
Beech	80	98	46	157	154	173	119	329	160	41	105	0	1,461
Sycamore	0	80	0	102	70	20	282	21	0	0	16	0	592
Ash	130	136	174	511	387	590	762	359	138	38	40	0	3,267
Birch	273	561	244	456	409	188	104	39	0	0	0	0	2,276
Poplar	0	12	0	0	6	59	15	0	0	0	0	0	92
Sweet chestnut	97	43	27	218	59	275	122	133	0	0	0	0	972
Elm	0	0	0	0	0	0	0	0	0	0	0	0	0
Other broadleaves	50	26	174	150	192	453	165	196	18	4	74	0	1,500
Mixed broadleaves	484	284	165	431	349	573	317	365	232	0	40	9	3,249
Total broadleaves	**1,301**	**1,278**	**995**	**2,112**	**1,678**	**2,928**	**2,300**	**2,227**	**1,220**	**334**	**516**	**13**	**16,902**
Total - all species	**1,919**	**1,673**	**1,267**	**3,785**	**2,638**	**3,268**	**2,457**	**2,358**	**1,263**	**334**	**535**	**13**	**21,510**

*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 - Area by planting year class
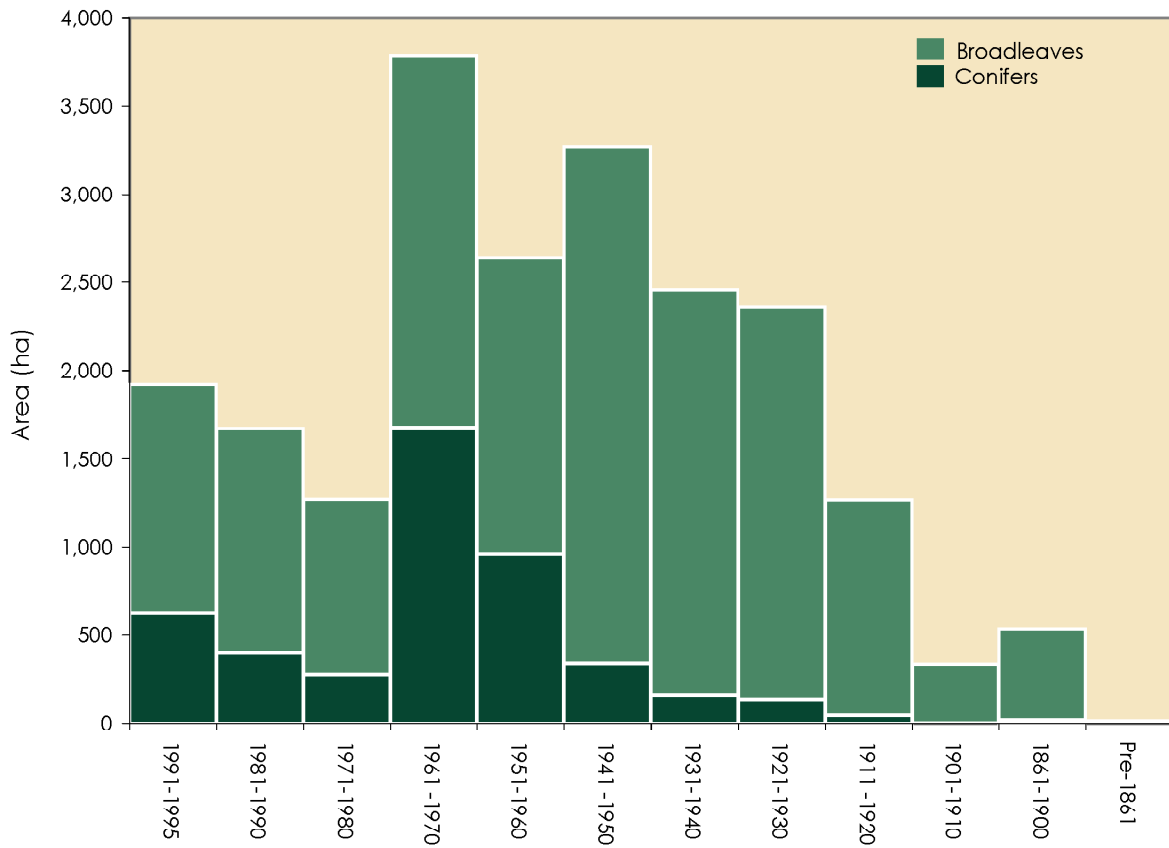
1. Most of the planting year classes cover 10 years, 1991-1995 is 5 years, and the classes prior to 1901 are 40 years or more.

Table 10b High Forest Category 1 - Forestry Commission : area by principal species and planting year classes

Species	Planting year class*												Total (ha)
	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	4	30	0	30	177	169	56	0	0	0	0	0	465
Corsican pine	105	131	23	49	53	0	0	0	0	0	0	0	360
Lodgepole pine	0	0	0	0	0	0	0	0	0	0	0	0	0
Sitka spruce	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway spruce	0	0	8	120	53	0	0	0	0	0	0	0	180
European larch	0	0	0	0	0	0	4	0	0	0	0	0	4
Jap/Hybrid larch	0	0	0	0	49	0	0	0	0	0	0	0	49
Douglas fir	41	23	64	34	71	0	0	59	0	0	0	0	292
Other conifers	0	12	4	158	23	0	0	0	0	0	0	0	195
Mixed conifers	0	0	0	45	0	0	0	0	0	0	0	0	45
Total conifers	**150**	**195**	**98**	**436**	**425**	**169**	**59**	**59**	**0**	**0**	**0**	**0**	**1,591**
Oak	0	0	50	27	11	0	0	15	0	0	0	0	104
Beech	0	0	15	38	101	132	59	8	0	8	0	0	360
Sycamore	0	0	0	0	0	0	0	0	0	0	0	0	0
Ash	0	0	53	8	0	4	15	0	0	0	0	0	79
Birch	5	53	19	41	23	0	0	4	0	0	0	0	144
Poplar	0	0	0	0	0	0	0	0	0	0	0	0	0
Sweet chestnut	0	0	8	11	0	0	0	0	0	0	0	0	19
Elm	0	0	0	0	0	0	0	0	0	0	0	0	0
Other broadleaves	0	15	68	0	0	0	4	0	0	0	0	0	86
Mixed broadleaves	0	4	15	8	0	0	0	0	0	0	0	0	26
Total broadleaves	**5**	**71**	**226**	**132**	**135**	**135**	**78**	**26**	**0**	**8**	**0**	**0**	**818**
Total - all species	**156**	**266**	**324**	**568**	**560**	**304**	**138**	**86**	**0**	**8**	**0**	**0**	**2,408**

*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.

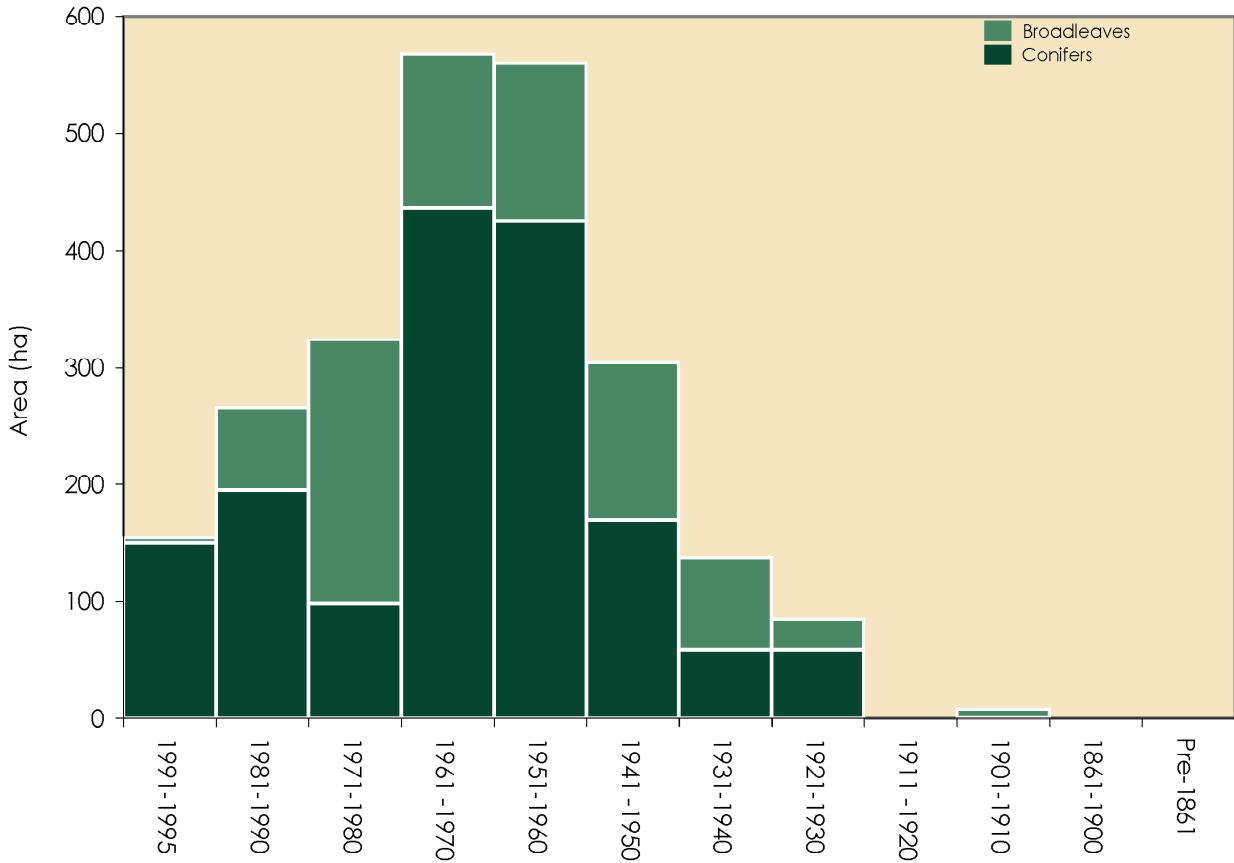## High Forest Category 1 - Forestry Commission: area by planting year class

1. Most of the planting year classes cover 10 years, 1991-1995 is 5 years, and the classes prior to 1901 are 40 years or more.

Table 10c High Forest Category 1 - Other ownership: area by principal species and planting year classes

Species	Planting year class*												Total (ha)
	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	26	16	26	427	128	47	27	32	20	0	0	0	747
Corsican pine	260	173	73	241	0	0	0	0	0	0	0	0	747
Lodgepole pine	0	0	0	0	0	0	0	0	0	0	0	0	0
Sitka spruce	0	0	0	46	0	0	0	0	0	0	0	0	46
Norway spruce	17	5	31	153	95	0	0	0	0	0	0	0	301
European larch	0	0	22	16	0	0	0	0	0	0	0	0	38
Jap/Hybrid larch	158	0	0	124	48	11	5	0	0	0	0	0	345
Douglas fir	0	0	0	71	0	5	0	0	11	0	0	0	87
Other conifers	9	5	12	69	124	4	61	5	5	0	4	0	299
Mixed conifers	0	0	11	90	141	103	5	34	7	0	15	0	407
Total conifers	**468**	**200**	**175**	**1,237**	**535**	**170**	**98**	**71**	**44**	**0**	**19**	**0**	**3,018**
Oak	187	38	115	59	40	598	412	772	672	251	241	4	3,389
Beech	80	98	31	119	52	42	60	321	160	33	105	0	1,101
Sycamore	0	80	0	102	70	20	282	21	0	0	16	0	592
Ash	130	136	121	503	387	586	747	359	138	38	40	0	3,188
Birch	268	509	226	415	386	188	104	35	0	0	0	0	2,132
Poplar	0	12	0	0	6	59	15	0	0	0	0	0	92
Sweet chestnut	97	43	19	206	59	275	122	133	0	0	0	0	954
Elm	0	0	0	0	0	0	0	0	0	0	0	0	0
Other broadleaves	50	11	106	150	192	453	162	196	18	4	74	0	1,415
Mixed broadleaves	484	280	150	424	349	573	317	365	232	0	40	9	3,223
Total broadleaves	**1,295**	**1,207**	**768**	**1,980**	**1,542**	**2,793**	**2,221**	**2,201**	**1,220**	**327**	**516**	**13**	**16,084**
Total - all species	**1,764**	**1,407**	**943**	**3,217**	**2,078**	**2,963**	**2,319**	**2,272**	**1,263**	**327**	**535**	**13**	**19,102**

*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 Ownership: area by planting year class

1. Most of the planting year classes cover 10 years, 1991-1995 is 5 years, and the classes prior to 1901 are 40 years or more.
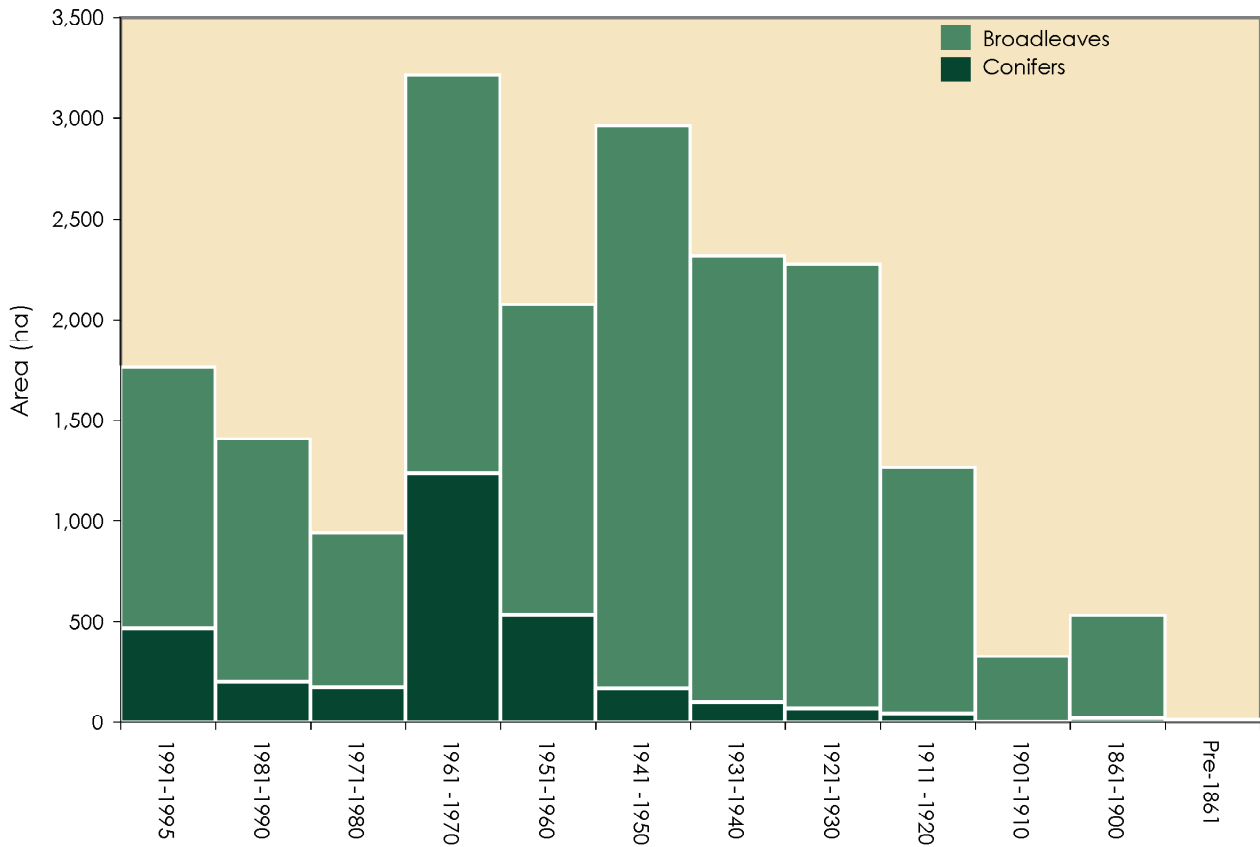
Table 11 High Forest : principal species by planting year class

Planting year class	First	%	Second	%	Third	%
1991-95	Mixed broadleaves	27	Birch	18	Corsican pine	17
1981-90	Birch	26	Mixed broadleaves	22	Other broadleaves	17
1971-80	Mixed broadleaves	26	Other broadleaves	19	Birch	18
1961-70	Mixed broadleaves	15	Ash	13	Birch	11
1951-60	Birch	15	Ash	15	Mixed broadleaves	13
1941-50	Mixed broadleaves	18	Oak	17	Ash	17
1931-40	Ash	31	Oak	17	Mixed broadleaves	12
1921-30	Oak	33	Mixed broadleaves	16	Ash	15
1911-20	Oak	52	Mixed broadleaves	20	Beech	12
1901-10	Oak	70	Beech	14	Ash	10
1861-1900	Oak	45	Beech	18	Other broadleaves	16
Pre 1861	Mixed broadleaves	45	Beech	35	Oak	20
All years	**Mixed broadleaves**	**18**	**Oak**	**14**	**Ash**	**14**

1.   Principal species as a percentage of area in the planting year class.

Table 12 Ownership type* by area and percentage

Ownership type	Area (ha)	%
Personal	24,256	65.3
Business	5,653	15.2
Forestry or timber business	0	0.0
Charity	1,168	3.1
Local Authority	2,121	5.7
Other public (not FC)	382	1.0
Forestry Commission	3,540	9.5
Community ownership or common land	0	0.0
Unidentified	0	0.0
Total	**37,121**	**100.0**

* This table is produced from data contributed on a voluntary basis by owners or their representatives.

Ownership type by area

- Personal
- Business
- Forestry or timber business
- Charity
- Local Authority
- Other public
- Forestry Commission
- Community ownership
- Unidentified
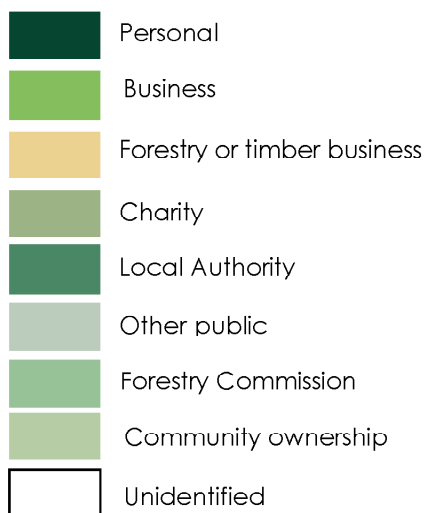
RESULTS FROM THE SURVEY OF SMALL WOODLAND AND TREES (SSWT)

Survey Method

The land area of England was stratified into coastal and inland 1 km x 1 km squares and a random sample of 1 km^2 plots were then selected, representing around 1% of the land area. 1:25 000 scale aerial photos were then used to identify features in each sample square. Each 1 km^2 was then divided into 16 parts, and two of these were selected at random for field data collection. Data was collected on Small Woodlands (0.10 - <2.00 ha), Linear Features, Groups and Individual Trees. The survey did not collect information from areas of developed land of 2 hectares or more.

Table 13:   Summary of information from the Survey of Small Woodland and Trees
Table 14:   Woodland area by feature type and woodland size
Table 15:   Numbers of live trees outside woodland by species and feature type
Table 16 :   Numbers of dead trees outside woodland by species and feature type
Table 17:   Numbers of live trees outside woodland by species and height band
Table 18:   Numbers of Groups by group size

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

Table 13 Summary of information from the Survey of Small Woodlands and Trees

Feature type	Number of features	Total	Unit
Small Woods	4,980	2,161	Area (ha)
Wide Linear Features	684	205	Area (ha)
Wide Linear Features	684	103	Length (Km)
Narrow Linear Features	28,100	2,386	Length (Km)
Narrow Linear Features	28,100	1,479,500	Number of live trees
Groups	62,700	409,300	Number of live trees
Individual Trees	83,300	83,300	Number of live trees

1.   See Glossary for definitions of feature types.

Table 14 Woodland area by feature type and woodland size

Feature type	Woodland size (ha)		Total area	Number of	Mean size
	0.1 - <0.25	0.25 - <2.0	(ha)	features	(ha)
Small Woods	229	1,932	2,161	4,980	0.43
Wide Linear Features	0	205	205	684	0.30
Total	229	2,137	2,366	5,664	0.42

1.   See Glossary for definitions of feature types.

Table 15 Numbers of live trees outside woodland by species and feature type (000's trees)

Species	Feature type				Total live trees	Percent of total trees	
	Boundary Trees	Middle Trees	Groups	Narrow Linear Features		Category	Species
Pine	3.2	0.8	0.8	8.2	13.0	53.9	0.7
Spruce	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Larch	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cypress	0.0	0.0	3.2	0.0	3.2	13.3	0.2
Other conifers	0.8	0.8	0.8	5.5	7.9	32.8	0.4
Total conifers	**4.0**	**1.6**	**4.8**	**13.7**	**24.1**	**100.0**	**1.2**
Oak	23.8	0.0	86.5	147.8	258.1	13.2	13.1
Beech	1.9	3.7	28.6	59.5	93.7	4.8	4.8
Sycamore	4.0	0.0	28.6	70.5	103.1	5.3	5.2
Ash	12.7	2.4	84.1	203.2	302.4	15.5	15.3
Birch	0.0	0.8	0.0	78.7	79.5	4.1	4.0
Poplar	3.2	0.0	14.3	125.9	143.4	7.4	7.3
Sweet chestnut	0.0	0.0	5.6	10.9	16.5	0.8	0.8
Horse chestnut	2.4	0.0	1.6	6.2	10.2	0.5	0.5
Alder	0.0	0.0	0.0	212.1	212.1	10.9	10.8
Lime	0.0	0.0	0.0	0.7	0.7	0.0	0.0
Elm	0.0	0.0	8.7	32.8	41.5	2.1	2.1
Willow	0.0	0.0	4.8	4.8	9.6	0.5	0.5
Other broadleaves	18.2	4.8	142.0	512.5	677.5	34.8	34.4
Total broadleaves	**66.2**	**11.7**	**404.6**	**1,465.8**	**1,948.3**	**100.0**	**98.8**
Total - all species	**70.2**	**13.3**	**409.4**	**1,479.5**	**1,972.1**		**100.0**

1.   Percentages

         Category : species percentage of conifer or broadleaved.
         Species : percentage of all species.

2.   The standard errors of the total tree number estimates for these feature types are:

         Individual Trees   23%
         Groups   28%
         Narrow Linear Features   24%

3.   See Glossary for definitions of feature types.

Table 16 Numbers of dead trees outside woodland by species and feature type (000's trees)

Species	Feature type				Total dead trees	Percent of total trees	
	Boundary Trees	Middle Trees	Groups	Narrow Linear Features		Category	Species
Pine	0.0	0.0	0.0	2.7	2.7	100.0	9.2
Spruce	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Larch	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cypress	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other conifers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total conifers	**0.0**	**0.0**	**0.0**	**2.7**	**2.7**	**100.0**	**9.2**
Oak	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Beech	0.0	0.0	0.8	0.7	1.5	5.7	5.1
Sycamore	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ash	0.0	0.0	0.0	4.1	4.1	15.5	14.0
Birch	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Poplar	0.0	0.0	0.0	0.7	0.7	2.6	2.4
Sweet chestnut	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Horse chestnut	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alder	0.0	0.0	0.0	3.4	3.4	12.8	11.6
Lime	0.0	0.8	0.0	0.0	0.8	3.0	2.7
Elm	0.0	0.0	0.0	13.0	13.0	49.1	44.5
Willow	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other broadleaves	0.0	0.0	1.6	1.4	3.0	11.3	10.3
Total broadleaves	**0.0**	**0.8**	**2.4**	**23.3**	**26.5**	**100.0**	**90.8**
Total - all species	**0.0**	**0.8**	**2.4**	**26.0**	**29.2**		**100.0**

1.   See Glossary for definitions of feature types.

Table 17 Numbers of live trees outside woodland by species and height band (000's trees)

Species	Height band (m)				Total live trees
	2-5	5-15	15-20	>20	
Pine	3.5	2.4	7.1	0.0	13.0
Spruce	0.0	0.0	0.0	0.0	0.0
Larch	0.0	0.0	0.0	0.0	0.0
Cypress	3.2	0.0	0.0	0.0	3.2
Other conifers	4.1	3.0	0.8	0.0	7.9
Total conifers	**10.8**	**5.4**	**7.9**	**0.0**	**24.1**
Oak	121.4	109.2	23.7	3.7	258.0
Beech	33.9	10.1	9.0	40.6	93.6
Sycamore	22.7	62.4	17.9	0.0	103.0
Ash	82.1	127.8	86.2	6.3	302.4
Birch	74.7	4.8	0.0	0.0	79.5
Poplar	0.0	118.9	2.4	22.1	143.4
Sweet chestnut	5.6	10.9	0.0	0.0	16.5
Horse chestnut	2.4	7.7	0.0	0.0	10.1
Alder	0.0	212.1	0.0	0.0	212.1
Lime	0.7	0.0	0.0	0.0	0.7
Elm	32.8	8.7	0.0	0.0	41.5
Willow	3.2	6.4	0.0	0.0	9.6
Other broadleaves	488.2	189.3	0.0	0.0	677.5
Total broadleaves	**867.7**	**868.3**	**139.2**	**72.8**	**1,947.9**
Total - all species	**878.5**	**873.7**	**147.0**	**72.8**	**1,972.1**

Table 18 Number of Groups by group size

Number of trees per Group*	Number of Groups (000's)
2	13
3-5	21
6-10	16
11-20	6
21-50	6
51-100	2
>100	0
Total	**63**

*The size of the group is determined by the total number of trees, live plus dead.

COMPARISON OF RESULTS WITH THE 1980 CENSUS AND PREVIOUS SURVEYS

Survey Method

The 1980 Census and 1995 Inventory were undertaken using very different sampling methods.

Inventory practice and technology have moved on since the 1980 Census; this has led to changes in sampling methodology, scope and woodland definitions. For example, the Main Woodland Survey used the digital woodland map, created from aerial photos as a basis for sampling whereas the 1980 Census relied only on the woodland shown on the 1:50,000 Ordnance Survey map. Also in contrast to the 1980 Census, the Survey of Small Woodland and Trees did not record information within developed land e.g. residential or industrial areas of 2 or more hectares.

Where possible adjustments have been made to both the 1980 Census and the Inventory to achieve the nearest available comparison. The apparent changes indicated in the following tables and charts should therefore be treated with caution, particularly where areas are small.

Table 19:   Comparison of woodland area
               between 1980 Census and 1995 Inventory
Table 20:   Comparison of High Forest area by species
               between 1980 Census and 1995 Inventory
Chart: Comparison of High Forest area by species
               between 1980 Census and 1995 Inventory
Table 21:   Comparison of High Forest Category 1 area by planting year class
               between 1980 Census and 1995 Inventory
Chart: Comparison of High Forest Category 1 area by planting year class
               between 1980 Census and 1995 Inventory
Table 22:   Comparison of numbers of live trees outside woodland
               between 1980 Census and 1995 Inventory
Table 23:   Comparison of density of non-woodland features
               between 1980 Census and 1995 Inventory

Woodland cover

Chart   Change in woodland cover through time (1890 – 2000)
Maps: Woodland by county through time (1895 – 1998)

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

Table 19 Comparison of woodland area between 1980 Census and 1995 Inventory

Woodland size (ha)	1980 Census woodland area		1995 Inventory woodland area		Change (%)
	(ha)	(%)	(ha)	(%)	(%)
2.0 or more	40,063	93.9	37,121	94.6	-7
0.25 - <2.0	2,601	6.1	2,137	5.4	-18
Total	42,664		39,258		-8
% Woodland land cover	11.4		10.5		

1.   Differences in sampling methodology may account for some of the apparent differences.

2.   The above figures from the 1995 Inventory exclude
         woodland between 0.1 and <0.25 ha, thereby matching the scope of the 1980 Census.
         The 1995 figures above will therefore not match those in the previous sections of the report.

3.   Land area used to calculate woodland cover percent (1995), 373,499 ha,
         was based on the 1991 Census of Population digital boundaries.

4.   Land area used to calculate woodland cover percent (1980), 373,063 ha,
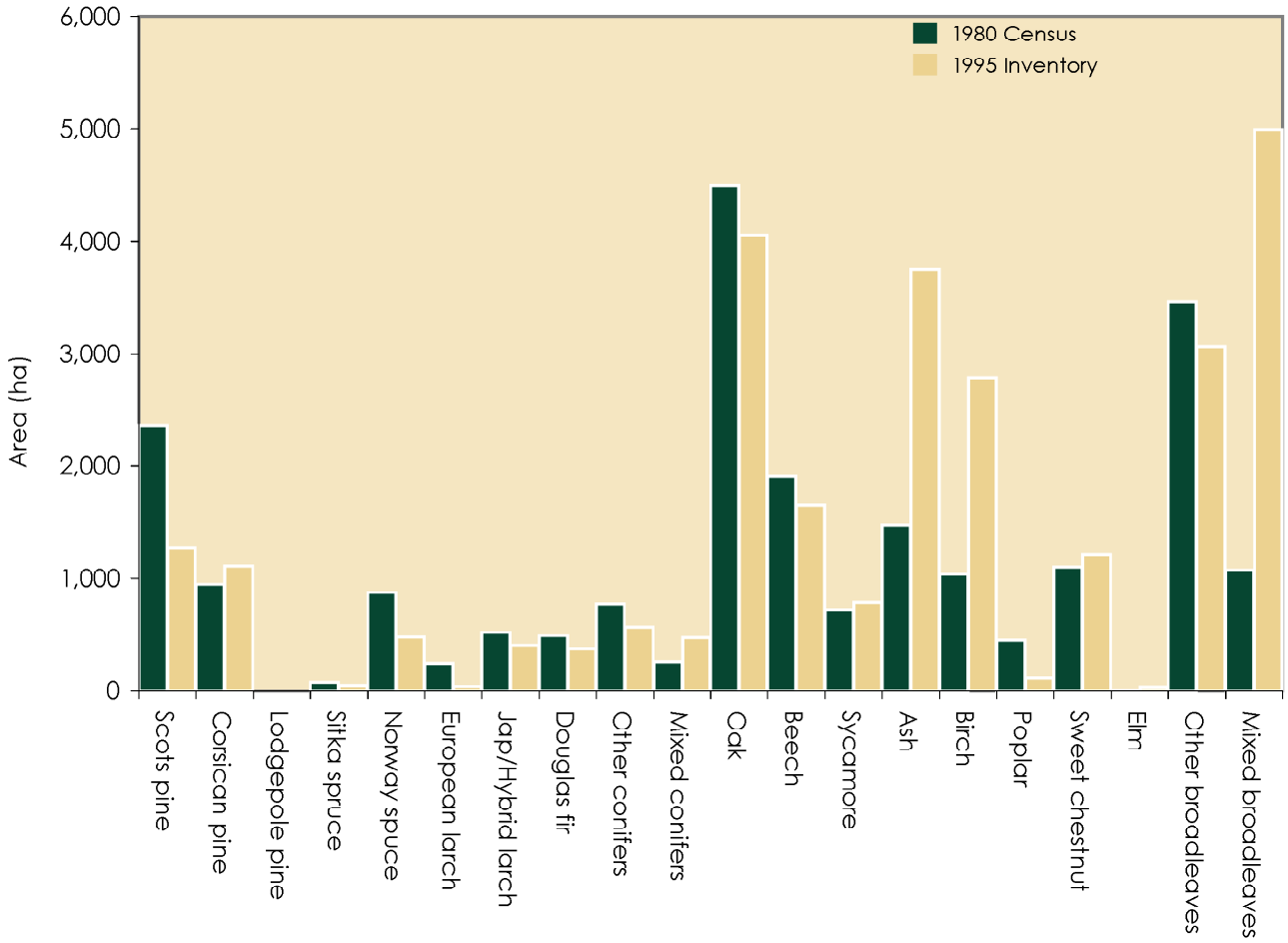
         (Ordnance Survey data)

Table 20 Comparison of High Forest area by species between 1980 Census and 1995 Inventory

Species	1980 Census woodland area (ha)	1995 Inventory woodland area (ha)	Change (%)
Scots pine	2,364	1,272	-46
Corsican pine	949	1,115	18
Lodgepole pine	1	0	-100
Sitka spruce	75	46	-39
Norway spuce	874	482	-45
European larch	242	42	-83
Jap/Hybrid larch	524	410	-22
Douglas fir	494	380	-23
Other conifers	773	570	-26
Mixed conifers	261	479	84
Total conifers	**6,556**	**4,796**	**-27**
Oak	4,498	4,057	-10
Beech	1,909	1,654	-13
Sycamore	724	785	8
Ash	1,474	3,751	154
Birch	1,032	2,782	169
Poplar	456	112	-75
Sweet chestnut	1,101	1,214	10
Elm	4	32	744
Other broadleaves	3,460	3,068	-11
Mixed broadleaves	1,072	4,993	366
Total broadleaves	**15,731**	**22,448**	**43**
Total all species	**22,287**	**27,244**	**22**
Felled	**1,175**	**556**	**-53**
Total High Forest	**23,463**	**27,800**	**18**

1. Differences in sampling methodology may account for some of the apparent differences.

2. 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 5.2% (Table 2). To obtain meaningful comparisons between the two datasets the 1980 Census data have therefore been reduced by 5.2%.

3. The above figures from the 1995 Inventory exclude woodland between 0.1 and <0.25 ha, thereby matching the scope of the 1980 Census.
The 1995 figures above will therefore not match those in the previous sections of the report.

4. The 1980 figures include scrub to enable comparison

Comparison of High Forest area by species between 1980 Census and 1995 Inventory

Table 21 Comparison of High Forest Category 1 area by planting year class
between 1980 Census and 1995 Inventory

Planting year class	1980 Census woodland area (ha)	1995 Inventory woodland area (ha)	Change (%)
1991-1995	0	2,081	see note
1981-1990	0	1,673	see note
1971-1980	1,201	1,363	13
1961-1970	2,704	4,027	49
1951-1960	3,790	2,877	-24
1941-1950	3,034	3,426	13
1931-1940	1,539	2,457	60
1921-1930	480	2,577	437
1911-1920	1,560	1,324	-15
1901-1910	738	334	-55
1861-1900	2,823	585	-79
Pre 1861	1,455	47	-97
Total all years	**19,323**	**22,771**	**18**

1. The first two classes, 1991-1995 and 1981-1990, cover the period since the 1980 Census and no comparison is therefore available.

2. The definition of High Forest Category 1 in the Inventory does not fully coincide with High Forest as defined in the 1980 Census.

Comparison of High Forest Category 1 area by planting year class between 1980 Census and 1995 Inventory
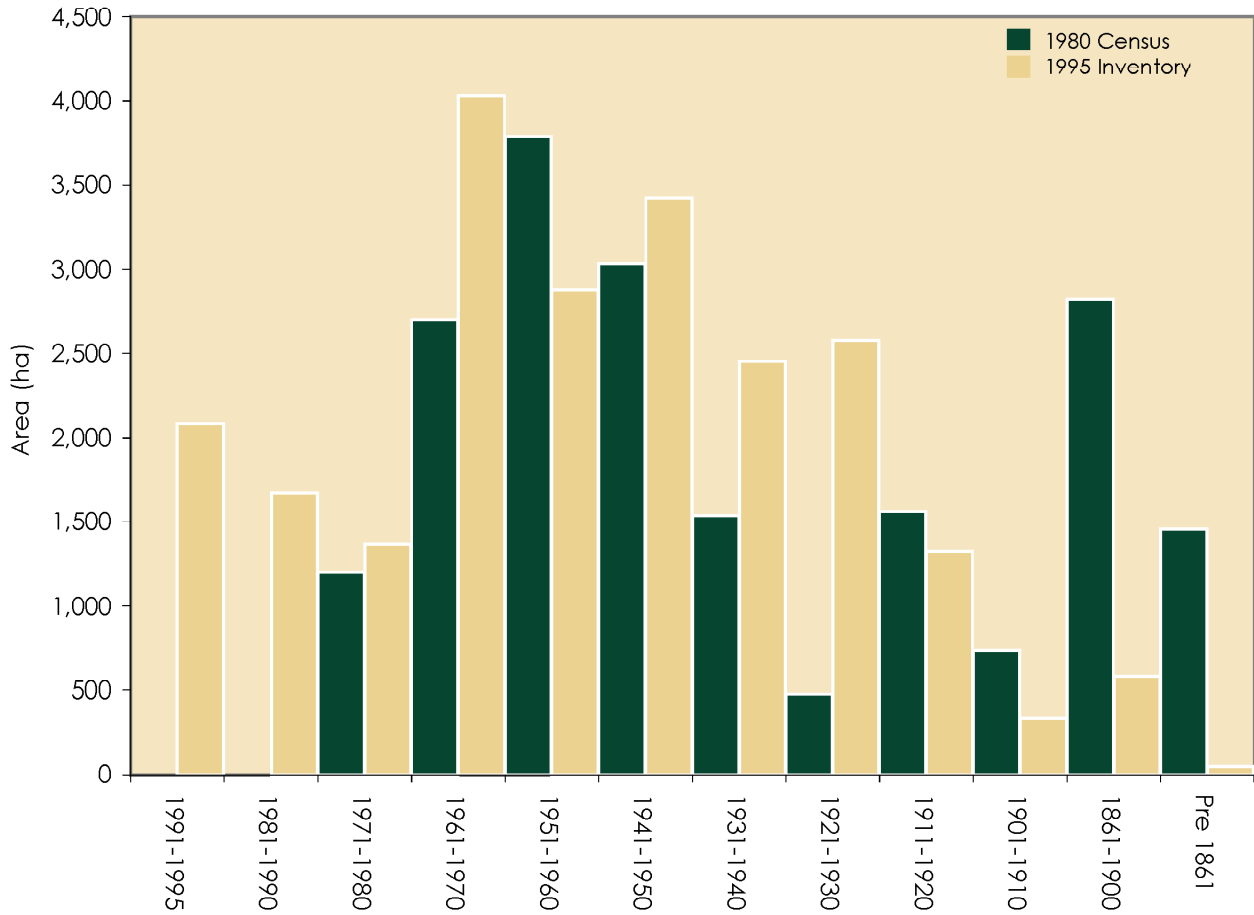
Table 22 Comparison of numbers of live trees outside woodland
between 1980 Census and 1995 Inventory   (000's)

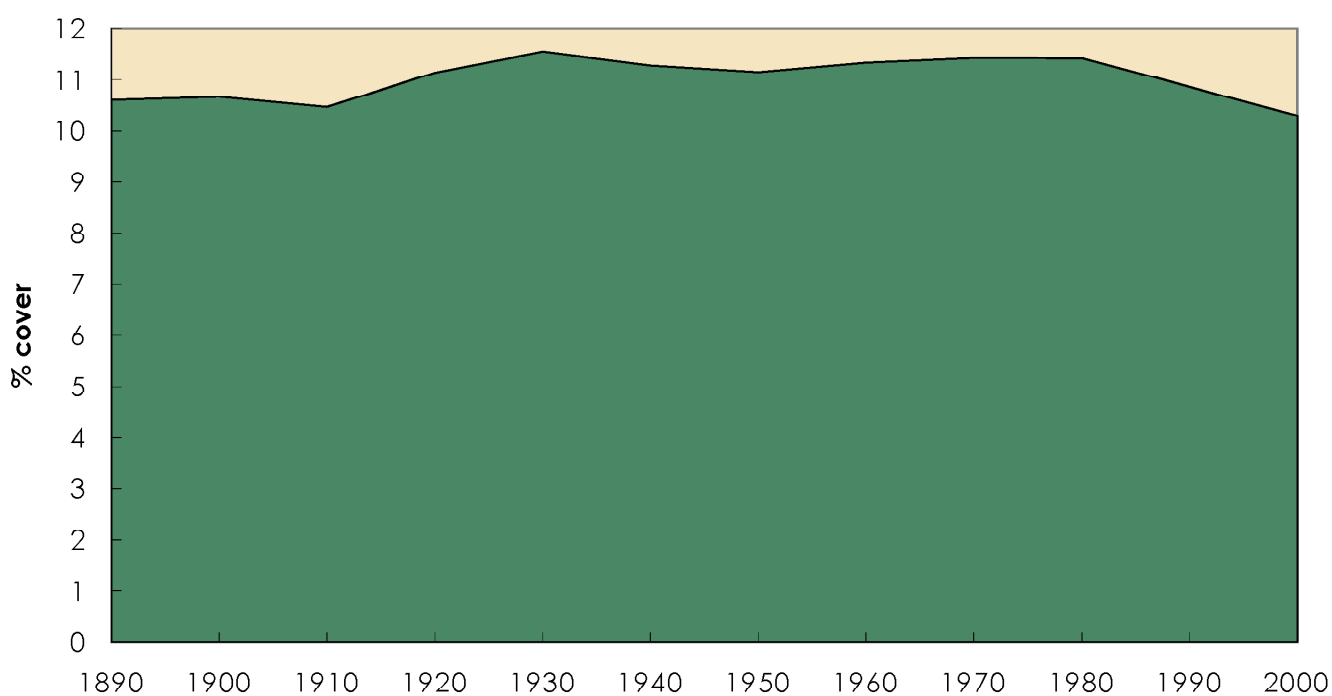| Feature type	1980 Census	1995 Inventory	Change (%)
Boundary Tree	85	69	-18
Middle Tree	137	11	-92
Total Individual Trees	221	81	-63
Groups	378	312	-17
Linear Features	902	1,097	22
Total	1,502	1,490	-1

1.   The Survey of Small Woodland and Trees did not record information referring to tree features (I.e. Individual trees, Groups and Narrow Linear Features) within developed land.

2.   In the 1980 Census hazel, hawthorn, blackthorn and goat willow were excluded, the 1995 Inventory figures have been adjusted accordingly.
The 1995 figures above will therefore not match those in the previous sections of the report.

3.   Changes stated in this table are indicative only. Even with adjustments to the 1995 Inventory, the two surveys are not directly comparable - 1980 used 7cm diameter at breast height, and 1995 used 2m height, as minimum criteria for inclusion.

4.   See Glossary for definitions of feature type.

Table 23 Comparison of density of non-woodland features between 1980
Census and 1995 Inventory

Feature type	1980 Census	1995 Inventory	Change (%)
Individual Trees (per sq km)	59.4	21.7	-64
Groups (per sq km)	20.8	15.1	-28
Linear Features (m per sq km)	1,468.9	638.7	-57

1.   The Survey of Small Woodland and Trees did not record information referring to tree features (I.e. Individual trees, Groups and Narrow Linear Features) within developed land.

2.   In the 1980 Census hazel, hawthorn, blackthorn and goat willow were excluded, the 1995 Inventory figures have been adjusted accordingly.
The 1995 figures above will therefore not match those in the previous sections of the report.

3.   Changes stated in this table are indicative only. Even with adjustments to the 1995 Inventory, the two surveys are not directly comparable - 1980 used 7cm diameter at breast height, and 1995 used 2m height, as minimum criteria for inclusion.

4.   See Glossary for definitions of feature type.

WOODLAND COVER

Woodland area data is available from Ministry of Agriculture surveys since 1871, and from Forestry Commission national woodland inventories since 1924. The following chart and maps show the changes in woodland area through time.

The maps use the old County structure data of England, as reported on in 1895 and 1947. The data from these counties could not be re-worked for different geographic areas. In contrast, the digital woodland map, which forms the basis of the current inventory, can be analysed for any geographic area.

Change in county woodland cover through time (1890 – 2000)

Map 5   Woodland Cover in England by County through time (1895–1998)

% woodland cover

0–1.9	12–13.9
2–3.9	14–15.9
4–5.9	16–17.9
6–7.9	18–19.9
8–9.9	20–21.9
10–11.9	22–23.9

1895

1947

1998
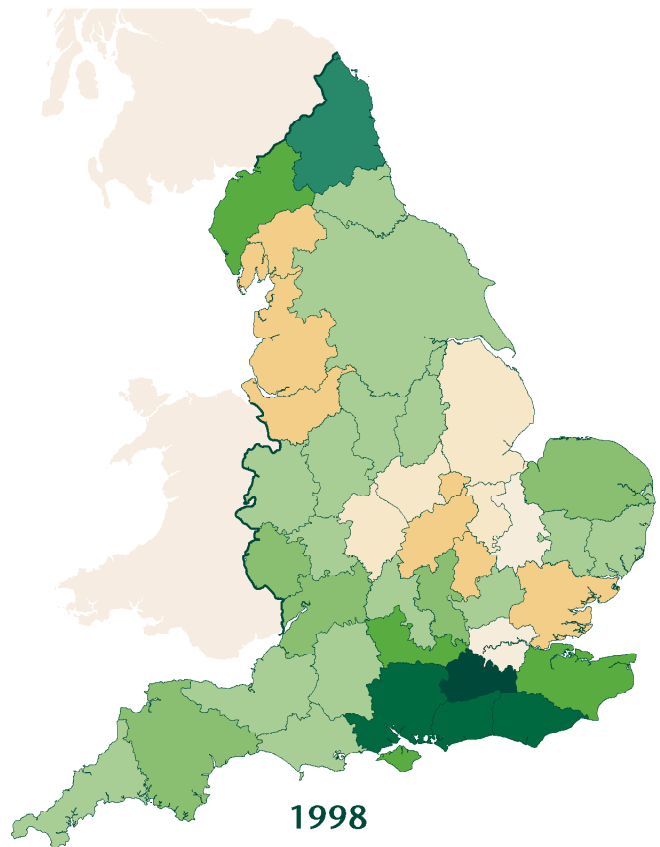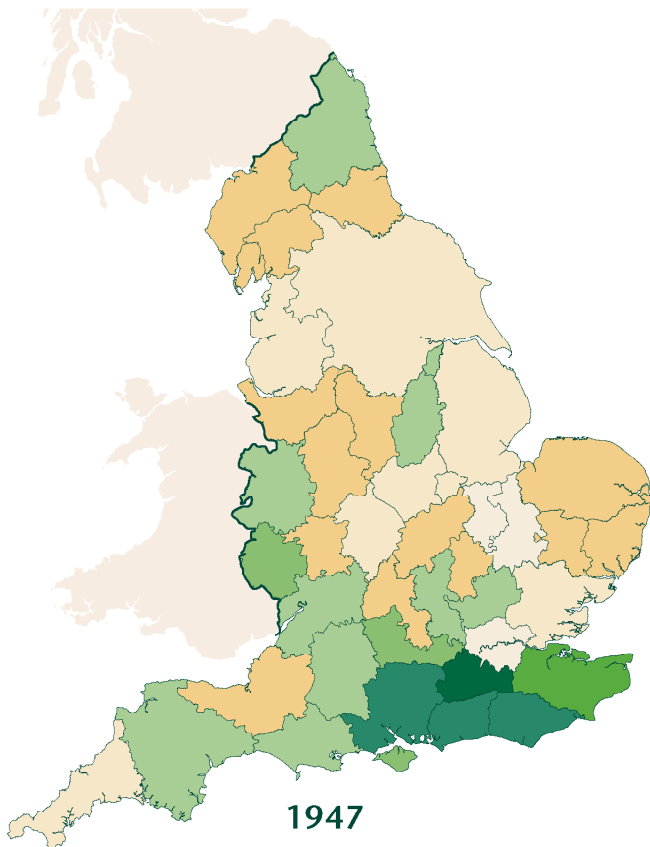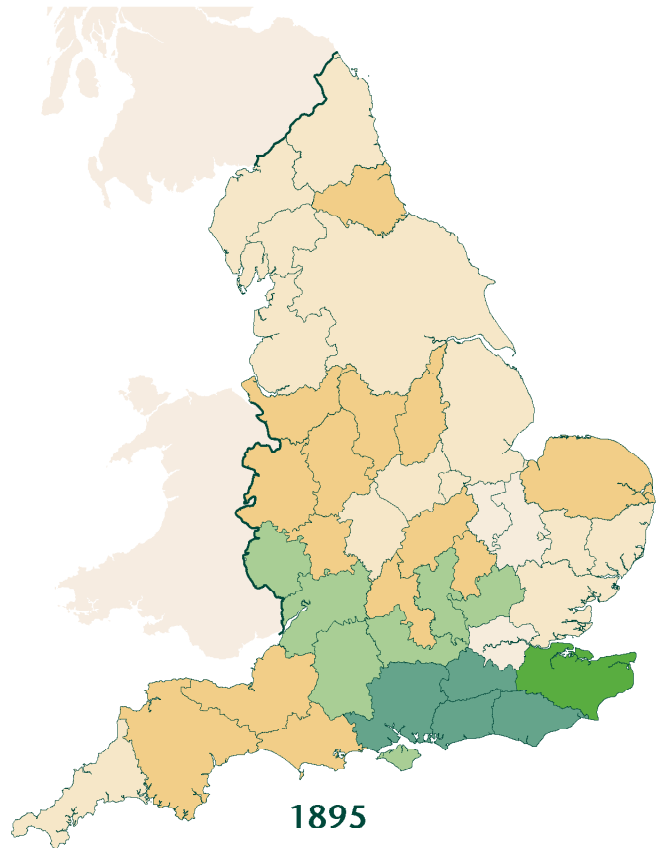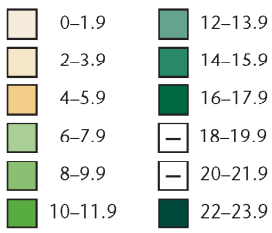
GLOSSARY

Woodland

In the United Kingdom woodland is defined as land with a minimum area of 0.1 ha 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. Orchards and urban woodland between 0.1 and 2 ha are excluded. Intervening land-classes such as roads, rivers or pipelines are disregarded if less than 50m 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 ha and over, and with a minimum width of 50m, is included in the Main Woodland Survey; other woodland and trees are assessed in the Survey of Small Woodland and Trees.

Interpreted Forest Types

The woodland map derived from aerial photographs is differentiated into Interpreted Forest Types (IFTs) which are: Conifer, Broadleaved, Mixed, Coppice, Coppice-with-Standards, Shrubs, Young Trees, Ground Prepared for Planting and Felled. Note that forest types (see below) based on ground survey data are used for reporting purposes because they are more reliable.

High Forest

All woodland except stands managed as Coppice or Coppice-with-Standards with, or with 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.

- **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 ha 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 Ownership**

  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 bodies (not FC)

  Government department/agency, nationalised industry, etc.

  - Charitable organisations

  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

Feature types

- **Small Wood**

  A woodland with an area of 0.1 ha or over but less than 2 ha.

- **Group**

  A group containing two or more trees with an area less than 0.1ha.

- **Individual Tree**

  A tree the crown of which has no contact with any other tree crown and which is at least 2m tall. Two types of individual tree are recognised:

  - Boundary Tree (an Individual Tree on any boundary)

  - Middle Tree (an Individual Tree not on a boundary)

- **Linear Feature**

  A feature with a length of 25 m or more, and one which is at least four times as long as it is broad. It can be up to 50m wide or as narrow as a single line of trees. Two types of Linear Features are recognised:

  - Narrow Linear Features (with a width of 16 m or less)
  - Wide Linear Features (with a width greater than 16 m)

NOTES

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