

FORESTRY STATISTICS 2002

2002

**A compendium of statistics about
woodland, forestry and primary wood
processing in the United Kingdom**

**ECONOMICS AND
STATISTICS UNIT
Forestry Commission**

EDINBURGH : FORESTRY COMMISSION



Forestry Commission

INTRODUCTION

Forestry Statistics is a compendium of statistical information about woodland, forestry and primary wood processing in the UK. Traditionally forestry statistics have focused on forests as a source of timber, and on the use of timber by wood processing industries. However, in recent years, it has been increasingly recognised that a wider range of environmental and social aspects of woodland should be reflected in the statistical information that is collected and published. This publication makes some progress in providing more information about environment and recreation, but it is still weighted towards the traditional topics that have the best quality data. A more balanced set of information is provided by the UK Indicators of Sustainable Forestry, which were subject to consultation during 2001–02, before being published in October 2002.

As a National Statistics output, this publication concentrates on topics for which the data meet National Statistics quality standards. However a few topics outside the scope of National Statistics are included, to give a more rounded picture; any such tables are footnoted or headed as ‘not National Statistics’. This means that they have not been subject to National Statistics quality assurance procedures, but does not necessarily imply that they are of poorer quality.

Where possible, statistical information in this publication covers the whole of the United Kingdom, and is broken down to give figures for England, Scotland, Wales and Northern Ireland. We would like to acknowledge the contribution of Northern Ireland’s Forest Service in providing a wide range of statistics for this publication, which has made it possible to have a more comprehensive coverage of the UK. However, there are some topics for which data are currently only available for Great Britain (excluding Northern Ireland), and these tables are labelled as being GB only.

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Notes

- Figures in the tables are individually rounded, so the constituent items may not sum to the totals given.
- .. denotes data not available
- In this report 'woodland' (defined in the glossary) refers to woods and forests of all sizes.
- In the United Kingdom there is no formal definition of 'forest'; the term is often used for large areas (especially conifers) or for old royal hunting preserves such as the New Forest or the Forest of Dean.
- Most public sector woodland is owned and managed by the Forestry Commission (FC) or, in Northern Ireland, the Forest Service (FS). Woodland owned by local authorities, the Ministry of Defence, and other public sector bodies is shown as 'non-FC/FS woodland'.



1. WOODLAND AREA AND PLANTING

This section contains information about the extent of woodland in the United Kingdom and compares the United Kingdom with other countries.

Area of woodland: 2002

Table 1.1 Area of woodland by ownership and forest type at 31 March 2002

		thousands of hectares		
		Conifers	Broadleaves ¹	Total
England	FC woodland	156	50	206
	Non-FC woodland ²	215	682	898
	Total	371	733	1 104
Scotland	FC woodland	450	25	475
	Non-FC woodland ²	603	246	849
	Total	1 053	271	1 324
Wales	FC woodland	102	11	113
	Non-FC woodland ²	64	111	175
	Total	166	122	288
Northern Ireland	FS woodland	57	4	61
	Non-FS woodland	10	13	23
	Total	67	17	84
United Kingdom	FC/FS woodland	765	90	855
	Non-FC/FS woodland	892	1 053	1 945
	Total	1 658	1 143	2 800

Source: Forestry Commission, Forest Service and 1995–1999 National Inventory of Woodland and Trees.

Notes

¹ Broadleaves include coppice and coppice with standards.

² Non-FC woodland figures for England, Scotland and Wales are based on the 1995–1999 National Inventory of Woodland and Trees (NIWT) and adjusted for new planting and sales of FC woodland, but at present no adjustment is made for woodland converted to another land use. They include non-FC publicly owned woodland. The NIWT did not include Northern Ireland.

Area of woodland: changes over time

The information for Great Britain in Table 1.2 is taken from woodland censuses from 1905 onwards (not National Statistics). Most censuses, however, used slightly different definitions of woodland, so some of the changes in area are due to changing definitions. The principal differences are:

- 1905** Felled areas and scrub were not included.
- 1924** Undertaken by questionnaire; woods smaller than 2 acres (0.8 hectares) were not included.
- 1947** Woodlands with an area of less than 5 acres (2 hectares) were not included.
- 1965** Woodlands with an area of less than 1 acre (0.4 hectares) were not included.
- 1980** Woodlands with an area of less than 0.25 hectares were not included.
- 1995–1999** Woodlands with an area of 0.1–2 hectares were included on a sample basis; some woodland missing from earlier surveys was included.

The information for Northern Ireland comes from a variety of sources. The province was not formed until 1920, so earlier estimates are based on statistics for all Ireland.

Table 1.2 Woodland area in the United Kingdom

Year	UK		England		Scotland		Wales		N Ireland	
	Woodland Area (000 ha)	% Woodland Area ¹	Woodland Area (000 ha)	% Woodland Area ¹	Woodland Area (000 ha)	% Woodland Area ¹	Woodland Area (000 ha)	% Woodland Area ¹	Woodland Area (000 ha)	% Woodland Area ¹
1086 ²				≈15						
c1350				≈10						
late 17thC				≈8		≈4 ³				≈1.5 ⁴
1905	1 140	4.7	681	5.2	351	4.5	88	4.2	20	1.5 ⁴
1924	1 211	5.0	660	5.1	435	5.6	103	5.0	13	<1
1947	1 419	5.8	755	5.8	513	6.6	128	6.2	23	1.8 ⁵
1965	1 784	7.3	886	6.8	656	8.4	201	9.7	42	3.1
1980	2 175	9.0	948	7.3	920	11.8	241	11.6	67	4.9
1995–99	2 746	11.3	1 097	8.4	1 282	16.4	287	13.8	81	6.0
2000 ⁶	2 793	11.5	1 103	8.5	1 318	16.9	289	13.9	83	6.1
2001 ^{6,7}	2 790	11.5	1 100	8.4	1 317	16.9	289	13.9	83	6.1
2002 ⁶	2 800	11.5	1 104	8.5	1 324	16.9	288	13.9	84	6.2

Notes

¹ Percentage of the total surface area including inland water. The total surface areas, including inland water, taken from the Annual Abstract of Statistics 2002 (published by the Office for National Statistics) are:

United Kingdom	24 291 000 hectares
England	13 042 000 hectares
Scotland	7 813 000 hectares
Wales	2 078 000 hectares
Northern Ireland	1 358 000 hectares

² Estimated from information in the Domesday Survey of England.

³ c.1750, from the Roy maps.

⁴ Per cent is for all Ireland, 17thC and 1908.

⁵ 1939–40 Census.

⁶ Great Britain estimates for 2000 to 2002 are based on data obtained from the 1995–99 National Inventory of Woodland and Trees, and adjusted for new planting and sales of FC woodland, but at present no adjustment is made for woodland converted to another land use.

⁷ The apparent decrease in woodland cover in 2001 is due to a reclassification of Forestry Commission open land within the forest.

The areas in Table 1.3 for non-FC woodland in GB have been projected forward from the final results of the 1995–99 National Inventory of Woodland and Trees, so differ from figures previously published.

Table 1.3 Area of woodland in the United Kingdom by ownership

Year	thousands of hectares				
	UK	England	Scotland	Wales	N Ireland
Forestry Commission / Forest Service					
1998	895	219	497	118	61
1999	891	217	496	117	61
2000	886	216	493	116	61
2001	861 ¹	208 ¹	478 ¹	115 ¹	61
2002	855	206	475	113	61
Non-FC/FS woodland					
1998	1 863	874	801	168	20
1999	1 884	880	812	171	21
2000	1 907	886	826	173	22
2001	1 929	893	839	175	22
2002	1 945	898	849	175	23
Total woodland					
1998	2 758	1 093	1 298	286	81
1999	2 775	1 097	1 308	288	82
2000	2 793	1 103	1 318	289	83
2001	2 790	1 100	1 317	289	83
2002	2 800	1 104	1 324	288	84

Source: Forestry Commission, Forest Service and 1995–99 National Inventory of Woodland and Trees.

Notes

¹ The apparent decrease in woodland cover in 2001 is due to a reclassification of Forestry Commission open land within the forest.

National Inventory of Woodland and Trees (GB)

The following tables and charts present information for Great Britain, obtained from the 1995–1999 National Inventory of Woodland and Trees (not National Statistics).

Table 1.4 Area of woodland in GB by ownership type

Ownership type	thousands of hectares			
	GB	England	Scotland	Wales
Forestry Commission	882	223	539	120
Other public body (not FC)	45	27	13	5
Local authority	80	61	11	8
Private forestry or timber business	41	7	28	6
Other private business	273	147	101	26
Personal	1 110	481	533	96
Charity	90	68	14	8
Community ownership or common land	5	4	0	1
Unclassified	18	4	13	1
Total	2 545	1 022	1 253	270

Source: 1995–99 National Inventory of Woodland and Trees (not National Statistics).

Table 1.5 Area of woodland by main tree species

Species	thousands of hectares			
	GB	England	Scotland	Wales
Scots pine	227	82	140	5
Corsican pine	47	41	2	3
Lodgepole pine	135	7	122	6
Sitka spruce	692	80	528	84
Norway spruce	79	32	35	11
European larch	23	14	9	1
Japanese/hybrid larch	111	33	56	22
Douglas fir	45	24	10	11
Other conifer	30	19	5	6
Mixed conifer	18	9	8	0
Total conifers	1 406	340	916	149
Oak	223	159	21	43
Beech	83	64	10	9
Sycamore	67	49	11	7
Ash	129	105	5	19
Birch	160	70	78	13
Poplar	12	11	0	1
Sweet chestnut	12	12	0	1
Elm	5	4	1	0
Other broadleaves	120	84	18	18
Mixed broadleaves	160	91	62	8
Total broadleaves	971	648	206	118
Total – all species	2 377	988	1 123	266
Felled	47	15	23	9
Coppice ¹	24	22	1	0
Open space ²	217	72	134	11
Total woodland	2 665	1 097	1 281	287

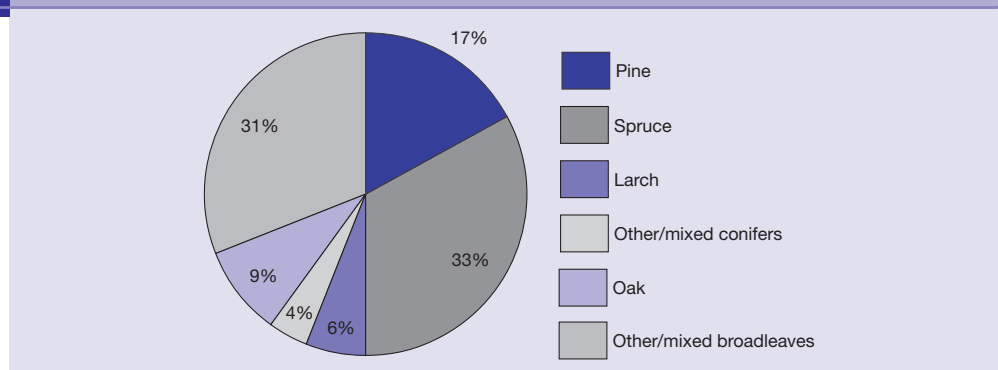
Source: 1995–99 National Inventory of Woodland and Trees (not National Statistics).

Notes

¹ Coppice includes coppice with standards.

² Areas of integral open space, each less than 1 hectare.

Figure 1.1 Main tree species in Great Britain



Source: 1995–99 National Inventory of Woodland and Trees (not National Statistics).

Table 1.6 Area of woodland¹ in GB by planting year classes²

Planting year	thousands of hectares			
	GB	England	Scotland	Wales
Conifers				
Pre-1861	6	2	4	0
1861–1900	14	5	9	0
1901–1910	3	1	1	0
1911–1920	13	6	7	0
1921–1930	22	7	13	1
1931–1940	37	16	17	4
1941–1950	89	36	43	10
1951–1960	228	67	129	33
1961–1970	314	74	203	38
1971–1980	317	59	234	24
1981–1990	273	36	215	21
1991–	89	32	41	17
Total	1 406	340	916	149
Broadleaves				
Pre-1861	46	34	12	1
1861–1900	144	89	31	24
1901–1910	27	19	5	4
1911–1920	75	55	11	9
1921–1930	85	60	16	9
1931–1940	91	56	15	20
1941–1950	126	85	25	16
1951–1960	121	80	27	15
1961–1970	90	59	22	8
1971–1980	63	42	17	4
1981–1990	52	33	15	4
1991–	50	36	11	3
Total	971	648	206	118
Total				
Pre-1861	52	35	16	1
1861–1900	157	94	40	24
1901–1910	30	21	6	4
1911–1920	88	61	18	9
1921–1930	107	67	29	10
1931–1940	128	72	31	25
1941–1950	215	121	69	26
1951–1960	350	146	156	47
1961–1970	404	133	225	46
1971–1980	380	101	251	28
1981–1990	325	70	230	26
1991–	140	68	52	20
Total	2 377	988	1 123	266

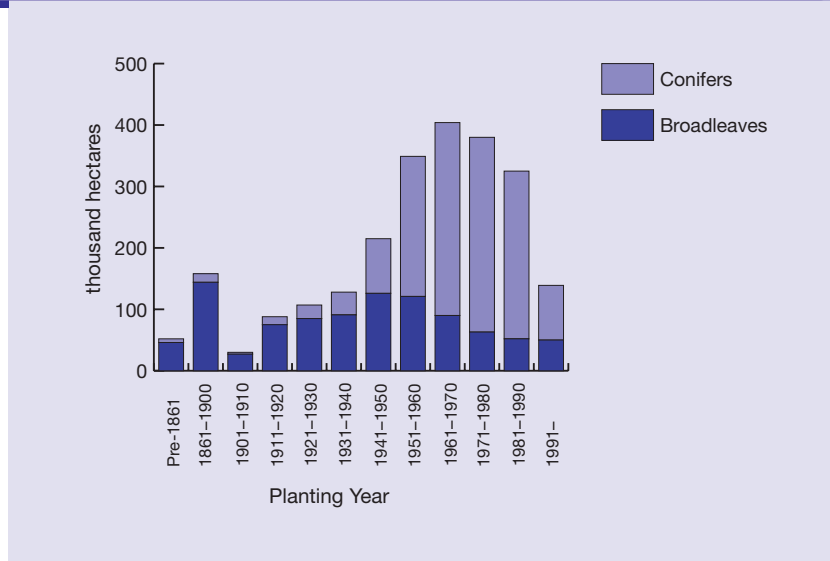
Source: 1995–99 National Inventory of Woodland and Trees (not National Statistics).

Notes

¹ Excluding felled, coppice and open space.

² Age is determined from records where these are 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.

Figure 1.2 Age profile of woodland in Great Britain



Source: 1995-99 National Inventory of Woodland and Trees (not National Statistics).

Table 1.7 Number of trees in GB

	millions of trees			
	GB	England	Scotland	Wales
Conifers (woods over 2 ha)	2 667	523	1 892	252
Broadleaves (woods over 2 ha)	857	577	188	92
Small woods and other	290	179	73	38
All trees	3 814	1 279	2 154	382

Source: 1995-99 National Inventory of Woodland and Trees (not National Statistics).

Area of farm woodland

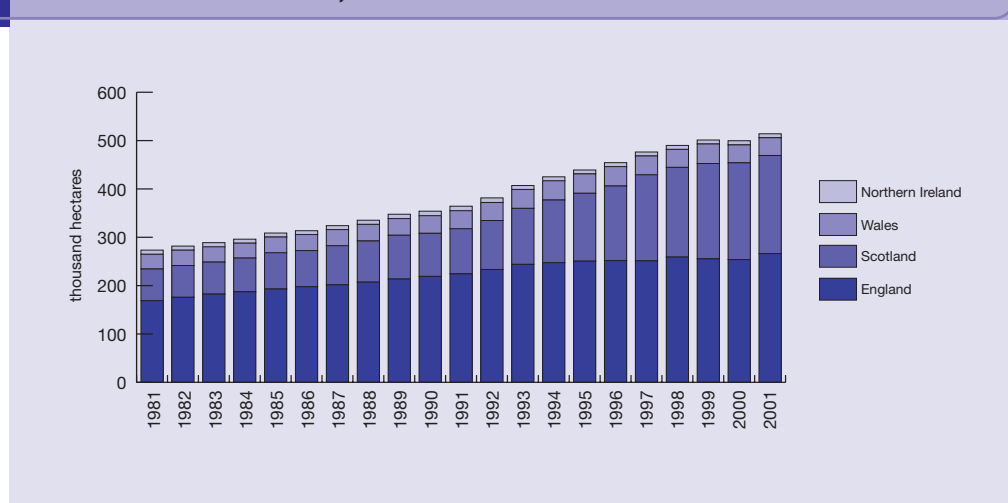
Agricultural Censuses run by DEFRA and the devolved administrations collect annual information on the land use of farms. The table below shows the area of woodland on farms.

Table 1.8 Area of farm woodland, 1981 to 2001

Year	thousands of hectares				
	UK	England	Scotland	Wales	N Ireland
1981	273.5	168.9	65.5	30.4	8.7
1982	281.8	175.9	65.7	31.7	8.5
1983	288.9	182.5	66.2	31.6	8.6
1984	296.1	187.2	69.8	30.8	8.3
1985	308.8	193.0	75.0	32.5	8.3
1986	313.6	197.8	74.7	33.2	7.9
1987	324.1	201.6	81.0	33.3	8.2
1988	335.3	207.2	85.2	34.3	8.6
1989	347.7	213.6	90.6	34.5	9.0
1990	354.0	219.1	89.1	36.5	9.3
1991	364.3	224.4	93.3	37.3	9.3
1992	381.5	233.4	101.3	37.3	9.5
1993	407.1	244.0	115.8	39.1	8.2
1994	425.1	247.5	129.6	39.8	8.2
1995	439.2	250.6	140.4	40.1	8.1
1996	454.4	251.8	154.3	40.1	8.2
1997	476.4	251.2	178.1	38.9	8.2
1998	490.0	259.1	185.5	37.2	8.2
1999	501.2	255.4	197.2	40.4	8.2
2000	499.7	253.8	200.2	37.1	8.6
2001	514.1	266.3	202.9	36.7	8.2

Source: June Agricultural Census – DEFRA, SEERAD, WAG, DARDNI.

Figure 1.3 Area of farm woodland, 1981–2001



Source: June Agricultural Census – DEFRA, SEERAD, WAG, DARDNI.

Area of woodland: international comparisons

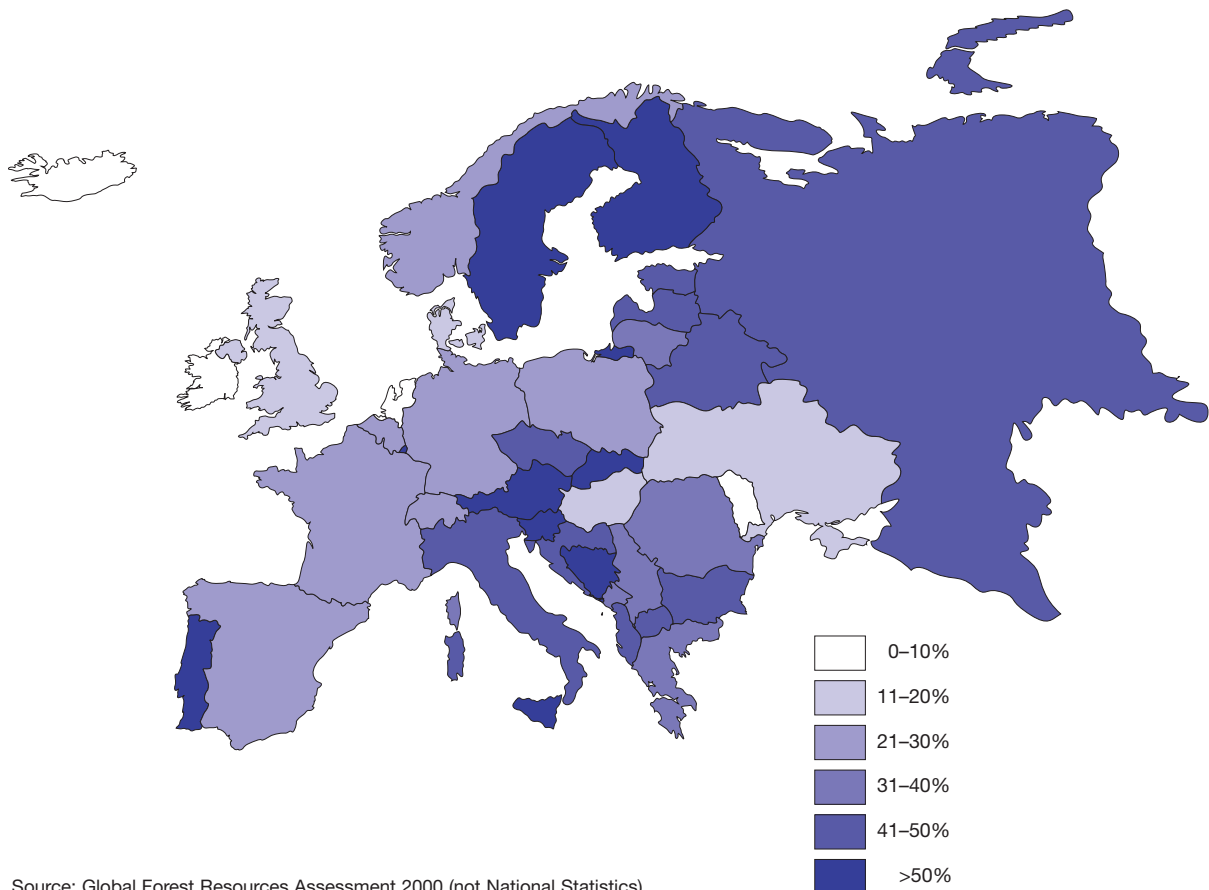
The forest areas in Table 1.9 are mostly estimates by the Food and Agriculture Organisation (FAO), projected forward from latest country data provided for the Global Forest Resources Assessment 2000, published in FAO's *State of Worlds Forests 2001* (not a National Statistics publication).

Table 1.9 Forest cover: international comparisons – 2000

Country	Forest area (thousand ha)	Total land area (thousand ha)	Forest as % of land area
United Kingdom	2 794	24 160	11.6%
Austria	3 886	8 273	47.0%
Belgium/Luxembourg	728	3 282	22.2%
Denmark	455	4 243	10.7%
Estonia	2 060	4 227	48.7%
Finland	21 935	30 459	72.0%
France	15 341	55 010	27.9%
Germany	10 740	34 927	30.7%
Greece	3 599	12 890	27.9%
Ireland	659	6 889	9.6%
Italy	10 003	29 406	34.0%
Latvia	2 923	6 205	47.1%
Lithuania	1 994	6 258	31.9%
Netherlands	375	3,392	11.1%
Norway	8 868	30 683	28.9%
Portugal	3 666	9 150	40.1%
Russian Federation	851 392	1 688 851	50.4%
Spain	14 370	49 945	28.8%
Sweden	27 134	41 162	65.9%
Switzerland	1 199	3 955	30.3%
Other Europe	55 130	206 590	26.7%
Total Europe	1 039 251	2 259 957	46.0%
China	163 480	932 743	17.5%
Japan	24 081	37 652	64.0%
Other Asia	360 232	2 114 351	17.0%
Total Asia	547 793	3 084 746	17.8%
USA	225 993	915 895	24.7%
Canada	244 571	922 097	26.5%
Other North and Central America	78 740	298 974	26.3%
Total North and Central America	549 304	2 136 966	25.7%
Brazil	543 905	845 651	64.3%
Other South America	341 713	909 090	37.6%
Total South America	885 618	1 754 741	50.5%
Total Africa	649 866	2 978 394	21.8%
Australia	154 539	768 230	20.1%
New Zealand	7 946	26 799	29.7%
Other Oceania	35 138	54 067	65.0%
Total Oceania	197 623	849 096	23.3%
World	3 869 455	13 063 900	29.6%

The Forest Resources Assessment (FRA) is a collation of forest data undertaken by the UN FAO at the global level, and by UNECE for temperate and boreal regions. The information in Table 1.9 uses *forest* area from FRA, that is, excluding 'other wooded land'; for the UK, this is very similar to the definition of 'woodland' used in previous tables. The original sources for this table have varying dates, but have been updated using whatever information was available to FAO, to give an estimate of each country's forest resources in 2000. The UK figures were updated using emerging results from the National Inventory.

Figure 1.4 Per cent woodland cover by country in Europe



Source: Global Forest Resources Assessment 2000 (not National Statistics).

New planting and restocking

New planting is the creation of new areas of woodland. Restocking is the replanting of areas of woodland that have been felled. Both new planting and restocking can use planting/seeding or natural regeneration. The figures in this section are for all types of woodland.

Information about Forestry Commission and Forest Service new planting and restocking comes from administrative systems. Information about other woodland comes principally from the Woodland Grant Scheme (WGS). The areas are those for which the second instalment of grant has been paid during the year – the second instalment is approved when woodland reaches a certain stage and density of growth, so this information corresponds approximately to the amount of new and restocked woodland created. See the following section for more information from the WGS.

Local estimates for areas of planting and restocking which are not FC and which are not grant-aided are included for England, Scotland and Wales. These estimates are relatively small (usually less than 500 hectares a year in total), and it has been assumed that all of this area is broadleaves. It is assumed that there is no non-FS non-grant aided planting and restocking in Northern Ireland.

New planting and restocking figures for the year ending 31 March 2002 may have been affected by the Foot and Mouth Disease restrictions which were in force during the year.

Table 1.10 New planting and restocking: breakdown between broadleaves and conifers

Year (ending 31 March)	New planting			Restocking			Total		
	Broadleaf	Conifer	Total	Broadleaf	Conifer	Total	Broadleaf	Conifer	Total
thousands of hectares									
UK total									
1994–95	10.8	9.4	20.2	3.6	11.0	14.7	14.4	20.5	34.9
1995–96	9.3	7.4	16.7	3.1	10.9	14.0	12.4	18.3	30.6
1996–97	9.9	7.7	17.6	3.5	11.6	15.1	13.4	19.3	32.7
1997–98	9.9	7.0	16.9	3.0	11.2	14.2	12.9	18.2	31.1
1998–99	10.4	6.6	17.0	2.8	11.3	14.1	13.2	17.9	31.1
1999–00	11.4	6.5	17.9	3.3	11.9	15.2	14.6	18.4	33.1
2000–01	13.5	5.2	18.7	3.0	12.2	15.3	16.6	17.4	34.0
2001–02	10.1	3.8	13.9	2.4	11.4	13.8	12.5	15.2	27.7
England									
1994–95	4.8	0.6	5.4	1.9	3.0	4.9	6.7	3.6	10.3
1995–96	4.3	0.4	4.7	1.5	2.7	4.2	5.8	3.1	8.9
1996–97	4.2	0.5	4.7	1.6	2.7	4.3	5.8	3.2	9.0
1997–98	3.8	0.6	4.4	1.5	2.9	4.4	5.3	3.5	8.7
1998–99	4.4	0.7	5.1	1.3	2.7	4.1	5.7	3.5	9.2
1999–00	5.2	0.7	5.9	1.4	2.5	3.9	6.6	3.2	9.8
2000–01	5.2	0.7	5.9	1.2	2.7	4.0	6.4	3.5	9.8
2001–02	4.4	0.5	4.9	0.8	2.6	3.4	5.2	3.1	8.3
Scotland									
1994–95	5.1	8.3	13.4	1.3	5.3	6.6	6.4	13.5	20.0
1995–96	4.3	6.2	10.6	1.2	5.6	6.8	5.5	11.9	17.4
1996–97	5.1	6.7	11.8	1.4	5.8	7.2	6.5	12.5	19.0
1997–98	5.5	5.9	11.4	1.0	5.3	6.3	6.5	11.3	17.8
1998–99	5.1	5.3	10.5	1.1	5.3	6.3	6.2	10.6	16.8
1999–00	5.2	5.2	10.4	1.5	6.5	8.0	6.7	11.7	18.4
2000–01	7.8	3.9	11.7	1.4	6.6	8.0	9.2	10.6	19.7
2001–02	5.0	3.0	8.0	1.2	6.6	7.8	6.2	9.6	15.8
Wales									
1994–95	0.5	0.1	0.6	0.3	2.3	2.6	0.8	2.3	3.2
1995–96	0.4	0.1	0.4	0.3	1.9	2.3	0.7	2.0	2.7
1996–97	0.4	0.1	0.4	0.4	2.6	3.0	0.8	2.6	3.4
1997–98	0.4	0.1	0.5	0.4	2.3	2.7	0.8	2.5	3.2
1998–99	0.5	0.1	0.6	0.3	2.7	3.0	0.8	2.9	3.7
1999–00	0.5	0.2	0.7	0.3	2.4	2.6	0.8	2.6	3.4
2000–01	0.4	0.1	0.4	0.3	1.9	2.2	0.6	2.0	2.6
2001–02	0.2	0.0	0.3	0.3	1.6	1.9	0.5	1.6	2.2
Northern Ireland									
1994–95	0.4	0.5	0.9	0.1	0.5	0.6	0.4	1.0	1.5
1995–96	0.3	0.7	1.0	0.1	0.6	0.6	0.3	1.3	1.6
1996–97	0.3	0.5	0.8	0.1	0.5	0.6	0.3	1.0	1.3
1997–98	0.3	0.4	0.6	0.1	0.6	0.7	0.4	1.0	1.3
1998–99	0.3	0.4	0.7	0.1	0.5	0.6	0.4	0.9	1.4
1999–00	0.4	0.4	0.8	0.1	0.5	0.6	0.5	0.9	1.5
2000–01	0.2	0.4	0.7	0.2	1.0	1.1	0.4	1.4	1.8
2001–02	0.5	0.2	0.7	0.1	0.7	0.8	0.6	0.9	1.5

Source: Forestry Commission, Forest Service and Woodland Grant Scheme.

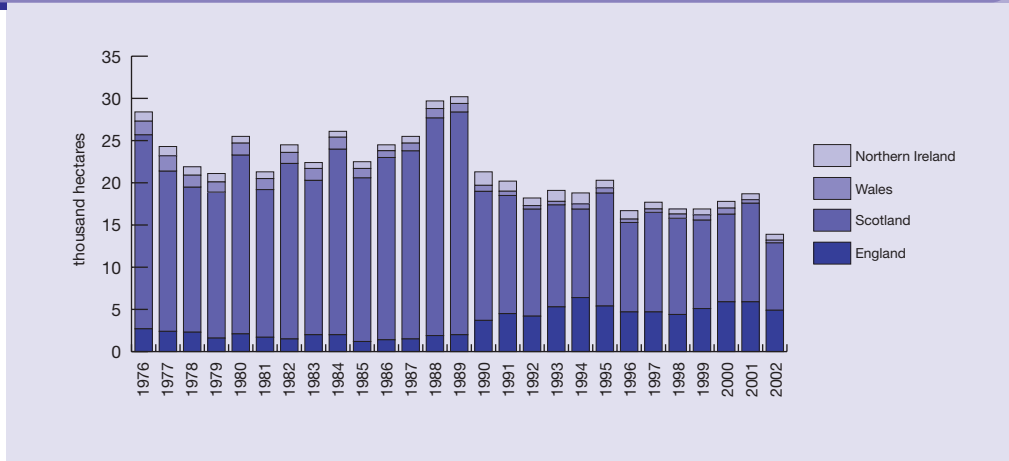
Table 1.11**New planting and restocking: breakdown between Forestry Commission / Forest Service and other woodland**

thousands of hectares

Year (ending 31 March)	New planting			Restocking			Total		
	FC/FS	Non-FC/FS	Total	FC/FS	Non-FC/FS	Total	FC/FS	Non-FC/FS	Total
UK total									
1994-95	1.2	19.1	20.2	8.4	6.3	14.7	9.6	25.3	34.9
1995-96	0.6	16.1	16.7	8.1	5.9	14.0	8.7	22.0	30.6
1996-97	0.6	17.0	17.6	8.4	6.7	15.1	9.0	23.7	32.7
1997-98	0.2	16.7	16.9	8.5	5.7	14.2	8.7	22.4	31.1
1998-99	0.2	16.8	17.0	8.5	5.6	14.1	8.7	22.4	31.1
1999-00	0.3	17.6	17.9	8.8	6.4	15.2	9.0	24.0	33.1
2000-01	0.3	18.4	18.7	8.9	6.4	15.3	9.3	24.8	34.0
2001-02	0.3	13.6	13.9	9.1	4.7	13.8	9.4	18.3	27.7
England									
1994-95	0.1	5.3	5.4	2.4	2.5	4.9	2.4	7.9	10.3
1995-96	0.0	4.7	4.7	2.2	2.0	4.2	2.2	6.7	8.9
1996-97	0.0	4.7	4.7	2.2	2.1	4.3	2.2	6.7	9.0
1997-98	0.0	4.4	4.4	2.3	2.0	4.4	2.3	6.4	8.7
1998-99	0.0	5.1	5.1	2.3	1.8	4.1	2.3	6.9	9.2
1999-00	0.1	5.9	5.9	2.2	1.7	3.9	2.2	7.6	9.8
2000-01	0.1	5.7	5.9	2.1	1.8	4.0	2.3	7.6	9.8
2001-02	0.1	4.7	4.9	2.3	1.1	3.4	2.5	5.8	8.3
Scotland									
1994-95	0.8	12.6	13.4	3.5	3.1	6.6	4.3	15.6	20.0
1995-96	0.4	10.2	10.6	3.7	3.2	6.8	4.0	13.4	17.4
1996-97	0.5	11.3	11.8	3.5	3.7	7.2	4.0	15.0	19.0
1997-98	0.1	11.3	11.4	3.6	2.7	6.3	3.7	14.1	17.8
1998-99	0.1	10.4	10.5	3.4	3.0	6.3	3.4	13.4	16.8
1999-00	0.0	10.4	10.4	4.3	3.8	8.0	4.3	14.2	18.4
2000-01	0.1	11.6	11.7	4.4	3.6	8.0	4.5	15.2	19.7
2001-02	0.1	7.9	8.0	4.9	2.9	7.8	5.0	10.8	15.8
Wales									
1994-95	0.0	0.6	0.6	2.0	0.6	2.6	2.0	1.2	3.2
1995-96	0.0	0.4	0.4	1.6	0.6	2.3	1.6	1.1	2.7
1996-97	0.0	0.4	0.4	2.2	0.8	3.0	2.2	1.2	3.4
1997-98	0.0	0.5	0.5	1.9	0.8	2.7	1.9	1.3	3.2
1998-99	0.0	0.6	0.6	2.2	0.8	3.0	2.3	1.4	3.7
1999-00	0.0	0.7	0.7	1.8	0.8	2.6	1.8	1.6	3.4
2000-01	0.0	0.4	0.4	1.4	0.8	2.2	1.4	1.2	2.6
2001-02	0.0	0.3	0.3	1.1	0.8	1.9	1.1	1.0	2.2
Northern Ireland									
1994-95	0.3	0.6	0.9	0.5	0.0	0.6	0.8	0.6	1.5
1995-96	0.2	0.8	1.0	0.6	0.0	0.6	0.8	0.8	1.6
1996-97	0.1	0.6	0.8	0.5	0.1	0.6	0.6	0.7	1.3
1997-98	0.1	0.5	0.6	0.6	0.1	0.7	0.7	0.6	1.3
1998-99	0.1	0.6	0.7	0.6	0.1	0.6	0.7	0.7	1.4
1999-00	0.2	0.6	0.8	0.5	0.1	0.6	0.7	0.7	1.5
2000-01	0.1	0.6	0.7	0.9	0.2	1.1	1.0	0.8	1.8
2001-02	0.1	0.6	0.7	0.8	0.0	0.8	0.8	0.7	1.5

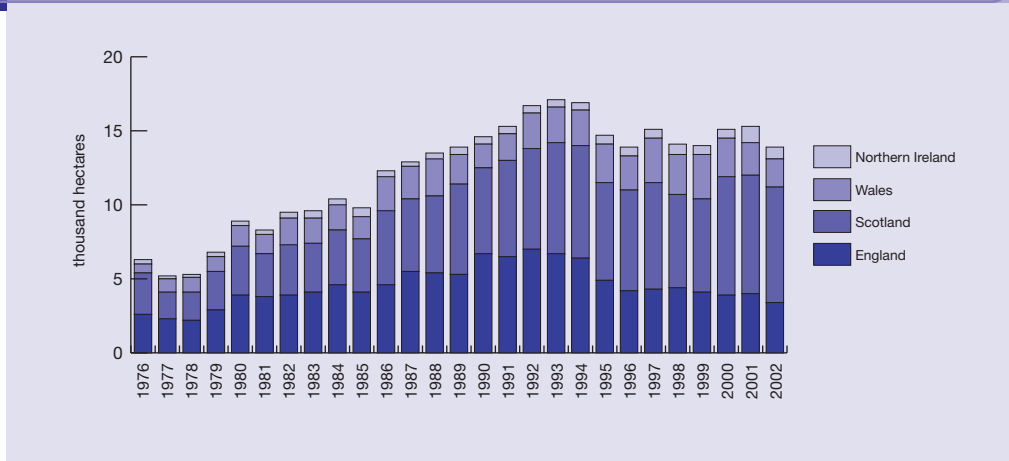
Source: Forestry Commission, Forest Service and Woodland Grant Scheme.

Figure 1.5 New planting in the UK, 1976–2002



Source: Forestry Commission, Forest Service and Woodland Grant Scheme.

Figure 1.6 Restocking in the UK, 1976–2002



Source: Forestry Commission, Forest Service and Woodland Grant Scheme.

The Woodland Grant Scheme (GB)

Non-FC woodland in Great Britain is supported by a range of grants available under the Woodland Grant Scheme, which was introduced in 1988 as tax relief was phased out. Grants are available under two main categories, for creating new woodland and managing existing woodland.

For **new woodland** areas there are two grant rates for broadleaves (for areas above and below 10 hectares) and one grant rate for conifers. The higher broadleaved rate of grant is also paid to encourage planting of Scots pine to establish new native pinewoods. These grants are paid in two instalments, the first instalment being paid when the work has been carried out to a satisfactory standard, the following payment five years later. A discretionary payment is paid for natural regeneration. This is based on the costs of the preparatory work required. When the trees are a certain height, a fixed payment equivalent to the restocking grant is paid.

Supplementary grants are available for planting on better quality agricultural land (Better Land Contribution) and to encourage the creation of new woodland close to towns and cities, where public access will be allowed (Community Woodland Contribution). A Premium is also available for planting woodland in the Community Forests and National Forest in England. Farmers may additionally apply for the Farm Woodland Premium Scheme. This scheme offers payments from the rural affairs departments to compensate for agricultural income foregone. Challenge funds, where applicants bid for the money they require to carry out the work, are also available to encourage new planting in certain targeted areas.

Grants for **existing woodland** include a restocking grant (paid in one instalment), a management grant (usually paid over a five year period) and a number of Woodland Improvement Grants. There are also Challenge funded projects to encourage certain types of work in existing woodland.

Table 1.12 shows the areas where the initial work has been carried out satisfactorily and the *first* instalment of grant has been paid – it demonstrates how much new work is being undertaken with grant aid. This differs from the non-Forestry Commission information in Table 1.11, which is from second instalment payments, and demonstrates the woodland area that has become successfully established.

Table 1.13 shows the annual management grant, but does not include the more capital-oriented woodland improvement grant.

The Forest Service in Northern Ireland operates a similar scheme, but their data are not included in this section; for more information see the Forest Service annual report.

Table 1.12 Areas receiving first instalment¹ WGS support in Great Britain in year ending 31 March 2002

	thousands of hectares			
	New planting (excluding natural regeneration)	New woodland (from natural regeneration)	Restocking (excluding natural regeneration)	Restocking (from natural regeneration)
Broadleaves				
Total grant-aided	8.1	1.5	1.0	0.0
Better land contribution	3.8	0.0		
Community woodland contribution	0.8	0.0	Additional	
Community forest premium	0.6	0.0	contributions	
Challenge funds	0.6	0.0	not available	
Tendering (National Forest)	0.0	0.0	for restocking	
Short rotation coppice locational contribution	0.0	0.0		
Conifers				
Total grant-aided	3.4	1.0	2.6	0.0
Better land contribution	1.8	0.0		
Community woodland contribution	0.1	0.0	Additional	
Community forest premium	0.2	0.0	contributions	
Challenge funds	0.9	0.0	not available	
Tendering (National Forest)	0.0	0.0	for restocking	
Short rotation coppice locational contribution	(not applicable – conifers are not used for short rotation coppice)			
Total				
Total grant-aided	11.5	2.5	3.6	0.0
Better land contribution	5.6	0.0		
Community woodland contribution	0.9	0.0	Additional	
Community forest premium	0.8	0.0	contributions	
Challenge funds	1.5	0.0	not available	
Tendering (National Forest)	0.0	0.0	for restocking	
Short rotation coppice locational contribution	0.0	0.0		

Source: Woodland Grant Scheme

Notes

¹ First instalment and supplementary payments. Supplementary payments are only available for new woodland. The Farm Woodland Premium Scheme is not included here.

Table 1.13
Woodland in Great Britain approved for management grant¹ under the Woodland Grant Scheme

Year ending 31 March	thousands of hectares			
	GB	England	Scotland	Wales
Broadleaves				
1993–94	46.9	39.3	5.8	1.9
1994–95	30.9	21.7	8.1	1.0
1995–96	21.2	15.5	4.3	1.4
1996–97	18.9	12.7	4.9	1.3
1997–98	23.6	18.5	3.9	1.2
1998–99	29.6	24.6	3.6	1.5
1999–00	30.3	24.9	4.3	1.0
2000–01	22.5	18.5	2.6	1.4
2001–02	27.5	21.1	4.3	2.1
Conifers				
1993–94	64.1	18.2	42.0	3.9
1994–95	40.7	7.6	31.3	1.8
1995–96	14.8	4.5	9.1	1.2
1996–97	8.8	3.3	5.1	0.5
1997–98	12.6	5.9	5.8	0.9
1998–99	13.6	6.2	6.6	0.8
1999–00	14.9	8.6	5.4	0.9
2000–01	11.7	4.9	6.3	0.4
2001–02	16.9	5.3	10.4	1.2
Total				
1993–94	111.1	57.5	47.7	5.8
1994–95	71.5	29.4	39.4	2.8
1995–96	36.0	20.0	13.5	2.5
1996–97	27.7	15.9	10.0	1.8
1997–98	36.1	24.4	9.7	2.1
1998–99	43.3	30.8	10.1	2.3
1999–00	45.1	33.5	9.7	1.9
2000–01	34.2	23.4	8.9	1.9
2001–02	44.4	26.4	14.7	3.3

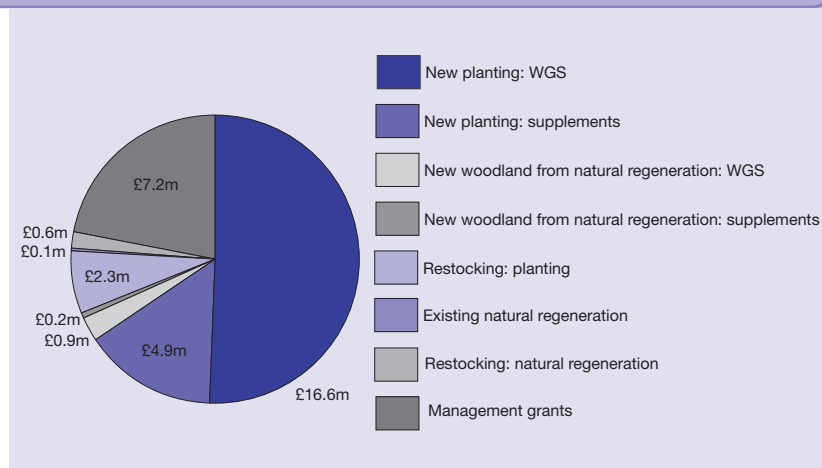
Source: Woodland Grant Scheme

Notes

¹ Standard, special and annual management grants are included. Woodland Improvement Grants are not included.

Figure 1.7 Grant money paid in year ending 31 March 2002 by type of grant

Grants for existing natural regeneration are paid to safeguard trees which are already established (for example by fencing to keep deer out), whereas grants for restocking by natural regeneration are for fencing to allow trees to establish (these categories were amalgamated in Table 1.12). Neither the Farm Woodland Premium Scheme (funded by DEFRA and the devolved administrations) nor Woodland Improvement Grants are included in this figure.



Source: Woodland Grant Scheme

The Farm Woodland Premium Scheme (GB)

The Farm Woodland Premium Scheme (FWPS) is designed to encourage the creation of new woodlands on farms. It achieves this by offering annual payments to compensate for the agricultural income forgone through establishing and maintaining woodland. The FWPS can only be given where WGS is also payable, because the environmental and silvicultural standards of the WGS must be satisfied before a FWPS application can be approved. As a result, the areas approved for FWPS grant are included in the Woodland Grant Scheme areas in previous tables.

Table 1.14 Area of woodland in GB approved for FWPS grant

Year ending 31 March	hectares			
	GB	England	Scotland	Wales
Conifers				
1995–96	3 379	327	2 976	76
1996–97	2 306	225	2 058	23
1997–98	2 608	301	2 238	68
1998–99	3 711	460	3 159	92
1999–00	4 670	563	3 913	195
2000–01	1 970	368	1 597	5
2001–02	2 368	446	1 915	8
Broadleaves				
1995–96	5 896	2 369	3 243	284
1996–97	4 515	1 486	2 907	122
1997–98	4 354	1 930	2 247	177
1998–99	5 769	2 683	2 803	284
1999–00	9 061	2 862	5 800	399
2000–01	4 882	2 795	1 919	168
2001–02	5 981	3 818	1 970	193
Total				
1995–96	9 275	2 696	6 219	360
1996–97	6 821	1 711	4 965	145
1997–98	6 962	2 231	4 485	245
1998–99	9 480	3 143	5 962	376
1999–00	13 731	3 425	9 713	594
2000–01	6 852	3 163	3 516	173
2001–02	8 349	4 264	3 885	201

Source: Woodland Grant Scheme

The Energy Crop Scheme (England)

The Energy Crop Scheme (ECS) is a new scheme run by DEFRA (Department for Environment, Food and Rural Affairs) in partnership with the Forestry Commission. The scheme, which is part of the England Rural Development Programme (ERDP), offers grants for the establishment of energy crops (Short Rotation Coppice and Miscanthus) and for the establishment of producer groups (Short Rotation Coppice only).

Table 1.15 Energy Crop Scheme: Number of applications and area of land

	Number	Area (ha)
Short rotation coppice		
Live agreements	24	412
Applications still being processed ¹	9	71
Miscanthus		
Live agreements	4	52
Applications still being processed ¹	5	53

Source: DEFRA

Notes

¹ Applications still being processed include deferred applications with postponed planting years.



2. UNITED KINGDOM GROWN TIMBER AND WOOD PRODUCTS

This section covers the production of timber and other products from woodland, and the primary processing of harvested wood to give basic wood products.

Timber originating from conifers is known as softwood and that from broadleaves is known as hardwood.

Information for Great Britain in Tables 2.1–2.9 is taken from the National Statistics publication *British Timber Statistics 2001*.

Information on employment within the forestry and primary wood processors sectors is given in section 6. Details on the number of businesses involved in forestry and primary wood processing can be found in Appendix B.

Wood production

Figures for production are expressed in standing volumes (thousand m³ overbark standing). One m³ overbark standing weighs approximately 0.82 tonnes (softwood) or 0.90 tonnes (hardwood) when freshly felled. Further information on conversion factors between cubic metres and green tonnes is in Appendix E.

Table 2.1 Wood production

Calendar year	GB Softwood			GB Hardwood ¹	N Ireland ²	UK Total
	FC woodland	Non-FC woodland	Total softwood			
1970	1 490	900	2 390	1 300	..	3 690 ³
1980	2 410	980	3 390	1 300	100	4 790
1990	3 460	2 200	5 660	1 120	210	6 960
1994	4 320	3 030	7 350	930	250	8 520
1995	4 130	3 510	7 640	970	250	8 870
1996	4 290	3 370	7 670	870	250	8 790
1997	4 570	3 790	8 360	890	260	9 520
1998	4 830	3 420	8 250	790	290	9 320
1999	5 440	3 380	8 820	740	320	9 890
2000	5 530	3 970	9 500	720	380	10 600
2001	5 140	4 460	9 600	710	400	10 710

Source: British Timber Statistics 2001 and Forest Service.

Notes

¹ Most hardwood production in Great Britain comes from non-FC woodland; the figures are estimates based on reported deliveries to wood processing industries.

² Most Northern Ireland production is from the Forest Service. The figures shown include FS estimates of non-FS production.

³ Great Britain only.

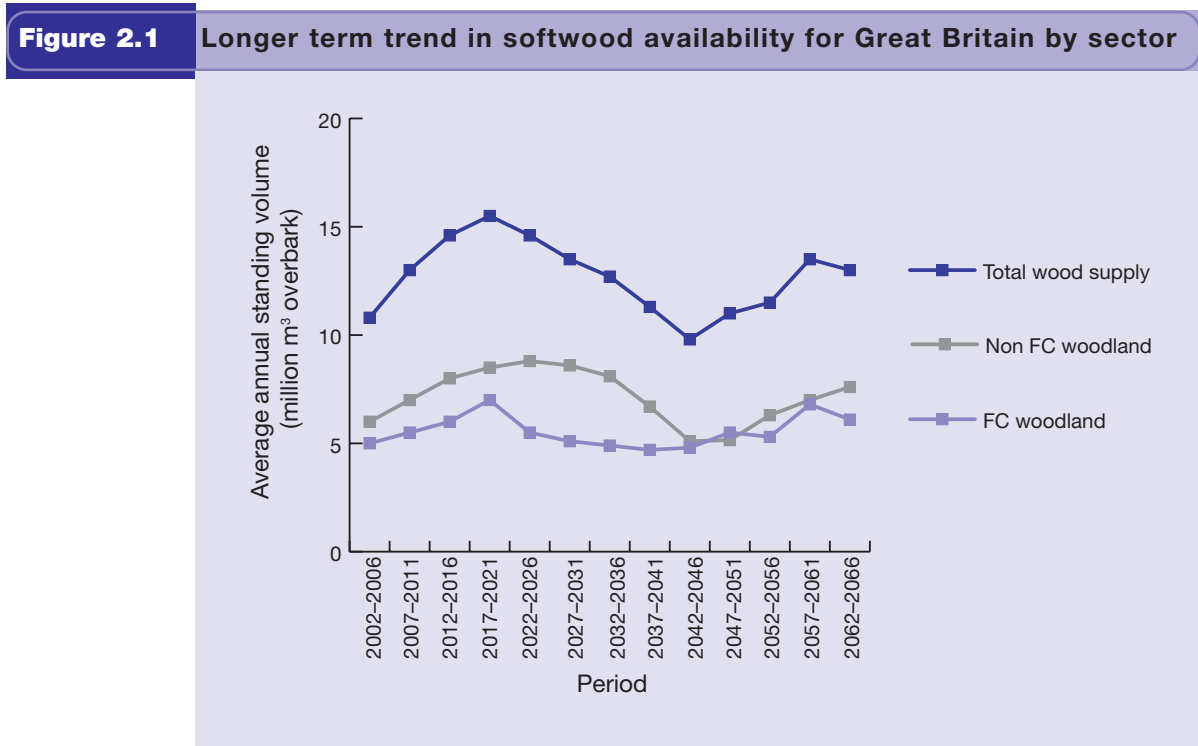
Figures before 1994 are not National Statistics.

Figures have been rounded to the nearest 10 000 m³.

Softwood production forecasts are taken from the 2000 softwood assessment (not National Statistics). Strictly, they are forecasts of availability rather than production, as they do not take account of financial factors or the state of markets, which may cause production to be delayed or brought forward. More information and detailed breakdowns are available in *Great Britain: new forecast of softwood availability* in the April 2001 edition of *Forestry & British Timber*

Annual average in the five years:	Softwood			Hardwood	Total (GB only)
	FC woodland	Non-FC woodland	Total softwood		
2002–2006	5 130	5 750	10 870	1 000	11 870
2007–2011	5 980	7 080	13 060	1 000	14 060
2012–2016	6 240	8 200	14 450	1 000	15 450
2017–2021	6 850	8 630	15 480	1 000	16 480

Source: 2000 softwood assessment



Source: 2000 softwood assessment

Timber deliveries

Most figures for timber deliveries (inputs to wood processing) are expressed in green tonnes. Conversion factors to underbark volumes can be found in Appendix E. Note that information in Table 2.3 relates to Great Britain, not United Kingdom. Almost all British grown roundwood is processed within Great Britain, but in some cases it is exported for processing.

Table 2.3

Deliveries of British grown roundwood to the wood processing industries in Great Britain

thousand green tonnes						
Year	Sawmills	Pulp mills	Woodbased panel mills	Miscellaneous ¹	Exports ²	Total GB ¹
Hardwood						
1994	346	190	96	205	0	837
1995	362	196	113	205	0	876
1996	282	202	91	205	0	780
1997	282	198	118	205	0	803
1998	246	180	77	205	0	708
1999	222	191	52	205	0	670
2000	195	200	50	205	0	650
2001	191	209	35	205	0	640
Softwood						
1994	3 411	1 104	1 407	542	48	6 512
1995	3 375	1 106	1 699	521	8	6 709
1996	3 472	853	1 500	471	0	6 296
1997	3 537	940	1 690	456	0	6 623
1998	3 612	844	1 527	486	0	6 469
1999	3 907	660	1 613	490	24	6 694
2000	3 887	695	1 685	427	16	6 710
2001	3 956	668	1 680	428	61	6 793
Total						
1994	3 757	1 294	1 503	747	48	7 349
1995	3 737	1 302	1 812	726	8	7 585
1996	3 754	1 055	1 591	676	0	7 076
1997	3 819	1 138	1 808	661	0	7 426
1998	3 858	1 024	1 604	691	0	7 177
1999	4 129	851	1 665	695	24	7 364
2000	4 082	895	1 735	632	16	7 360
2001	4 147	877	1 715	633	61	7 433

Source: British Timber Statistics 2001 and updated figures for pulp mills in 2001 from the United Kingdom Forest Products Association (UKFPA).

Notes

¹ These figures are estimated by, or partly composed of estimates made by, the Supply and Demand Sub-committee of the Forestry Commission Advisory Panel.

² Exports here are the quantities of wood 'exported' (in this case including transfers to Northern Ireland) without going to a wood processing industry in Great Britain.

Sawmills

The information in Tables 2.4 and 2.5 is for the sawing of logs of United Kingdom origin only. Any other activity (such as sawing of imported logs, or further processing of wood rough-sawn by other businesses) is excluded.

Data for Great Britain are collected by the Forestry Commission in an annual Sawmill Survey and published in British Timber Statistics.

Consumption is expressed as the total volume of roundwood (excluding bark) delivered. Production is expressed in terms of the volume of sawnwood produced. Conversion factors to green tonnes or overbark volumes are given in Appendix E. For more detail of Great Britain sawmills, see *British Timber Statistics 2001* or *Sawmill Survey 2000*.

Table 2.4 Consumption and production of UK timber by sawmills

	Consumption of roundwood (thousand m ³ underbark)		Production of sawn timber (thousand m ³)	
	Hardwood	Softwood	Hardwood	Softwood
1994	305	3 484	174	2 136
1995	319	3 454	184	2 115
1996	249	3 550	147	2 133
1997	249	3 619	138	2 204
1998	217	3 708	121	2 229
1999	196	4 019	114	2 390
2000	173	4 031	102	2 380
2001	169	4 107	94	2 446

Source: British Timber Statistics 2001 and UK wood production and trade 2001.

Table 2.5 Number of sawmills in the United Kingdom

Size category production	UK	England	Scotland	Wales	N Ireland
<1 000 m ³	107	62	26	11	8
1 000–4 999 m ³	95	61	25	4	5
5 000–24 999 m ³	49	23	19	6	1
25 000–49 999 m ³	10	4	3	2	1
≥50 000 m ³	15	4	8	2	1
Total	276	154	81	25	16

Source: British Timber Statistics 2001 and Forest Service.

Pulp and paper mills

The information in Tables 2.6 and 2.7 relates only to mills which use UK grown roundwood in the production of paper (integrated pulp and paper mills). These mills also use recycled newsprint (200 000 tonnes in 1997) and recycled cardboard (50 000 tonnes in 1997). [Source: Forestry Industry Handbook 1998]

Table 2.6 Inputs to integrated pulp and paper mills¹

Year	thousand green tonnes									
	UK roundwood		Imported roundwood		Imported chips		Sawmill co-products ²		Total	
	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood
1994	190	1104	3	2	..	..	18	176	211	1 282
1995	196	1106	0	4	..	..	4	284	200	1 394
1996	202	853	0	0	..	..	0	305	202	1 158
1997	198	940	0	0	0	20	0	279	198	1 239
1998	180	844	0	0	0	15	0	277	180	1 136
1999	191	660	0	0	0	9	0	295	191	964
2000	200	695	18	0	0	1	0	308	218	1 004
2001	209	668	0	0	0	0	0	323 ²	209	991

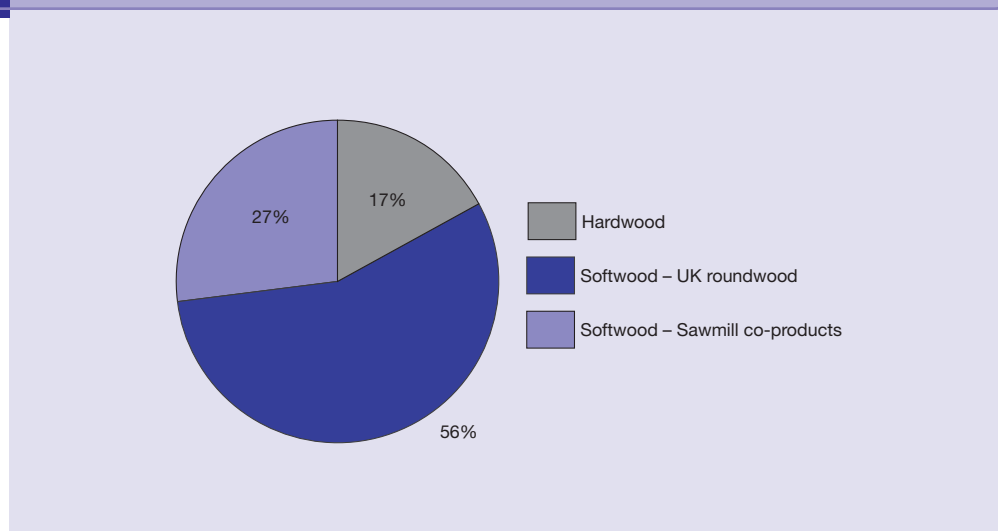
Source: British Timber Statistics 2001 and updated figures for 2001 from the UKFPA.

Notes

¹ This table excludes inputs of recycled paper and cardboard.

² Sawmill co-products for 2001 are estimated in collaboration with UKFPA, based on incomplete data.

Figure 2.2 Inputs to integrated pulp and paper mills 2001



Source: British Timber Statistics 2001 and updated figures for 2001 from the UKFPA.

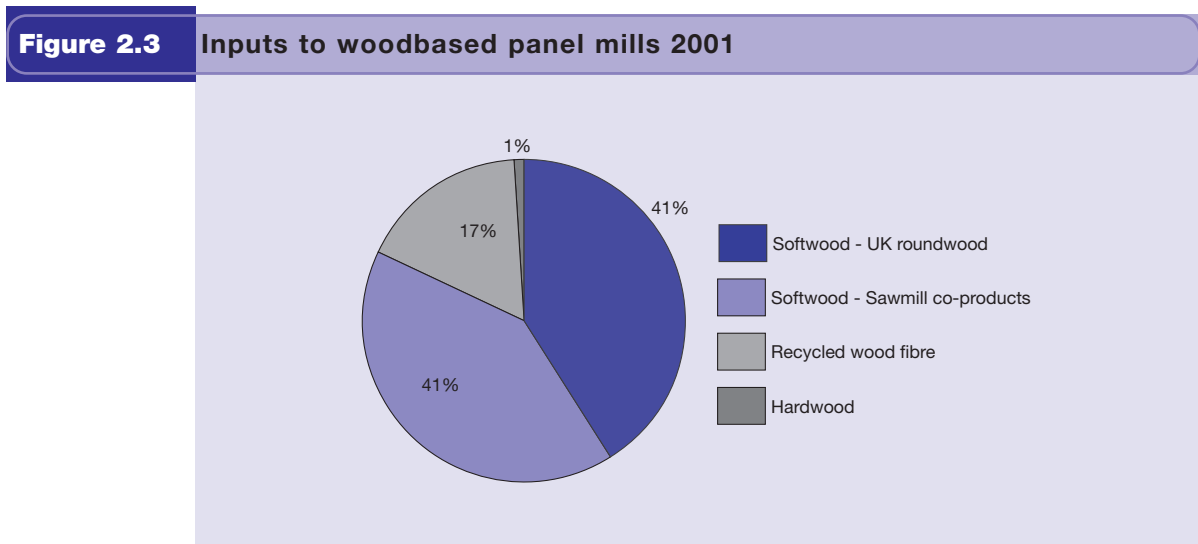
Table 2.7 gives information on the country of origin of the UK grown roundwood for all integrated pulp and paper mills in the UK. Figures are not currently available for the quantity broken down by the country in which the mill is located, which could disclose data for individual mills.

Table 2.7 UK grown roundwood used in integrated pulp and paper mills										
thousand green tonnes										
Year	UK		England		Scotland		Wales		N Ireland	
	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood
1994	190	1 104	176	184	0	668	14	252	0	0
1995	196	1 106	188	197	0	659	8	250	0	0
1996	202	853	194	175	0	478	8	200	0	0
1997	198	940	190	161	0	598	8	181	0	0
1998	180	844	..	..	..	..	..	..	0	0
1999	191	660	177	107	0	383	14	170	0	0
2000	200	695	188	86	0	479	12	130	0	0
2001	209	668	200	86	0	454	9	128	0	0

Source: British Timber Statistics 2001 and updated figures for 2001 from the UKFPA.

Woodbased panel products

Woodbased panels are oriented strand board (OSB), wood chipboard and cement bonded particleboard (which are all types of particleboard), and medium density fibreboard (MDF) and other fibreboard (which are both types of fibreboard).



Source: British Timber Statistics 2001

Table 2.8 shows the inputs used in the production of all types of woodbased panels. This table relates to Great Britain only, not United Kingdom.

Table 2.8 Inputs to woodbased panel production – Great Britain											
											thousand green tonnes
Year	British roundwood ¹		Imported roundwood		Sawmill co-products ²		Imported residues and residues from imported wood ³		GB total		
	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Recycled wood fibre ⁴
1994	96	1 407	15	65	21	1 368	10	156	142	2 996	..
1995	113	1 699	7	23	21	1 521	11	162	152	3 405	..
1996	91	1 500	0	3	28	1 542	21	160	140	3 205	..
1997	118	1 690	0	0	40	1 744	21	120	179	3 554	..
1998	77	1 527	0	0	29	1 711	29	190	135	3 428	..
1999	52	1 613	0	0	10	1 522	0	150 ⁵	62	3 285	400
2000	50	1 685	0	0	0	1 871	0	143	50	3 699	488
2001	35	1 680	5	0	0	1 675	20	132	60	3 487	675

Source: British Timber Statistics 2001

Notes

¹ British roundwood includes all material from forest operations.

² Sawmill co-products include peeled and unpeeled chips, sawdust, slabwood, shavings, postplant chips and peelings.

³ Includes chips and shavings.

⁴ Recycled wood fibre is wood fibre recovered from both pre- and post-consumer wood waste for use in woodbased panel production.

⁵ Estimate

Miscellaneous uses of British wood

Data for softwood fencing are collected by the Forestry Commission in an annual survey of round fencing manufacturers. Many of the other uses are not covered by survey or administrative sources, and the values are estimates made by representatives of the wood processing industries. This table covers Great Britain only.

Year	Fuelwood		Poles	Woodwool	Fencing		Other		GB total	
	Hardwood ¹	Softwood ¹	Softwood ¹	Softwood	Hardwood ¹	Softwood	Hardwood ¹	Softwood ¹	Hardwood ¹	Softwood ¹
	thousand green tonnes									
1994	150	100	4	7	30	406	25	25	205	542
1995	150	100	4	5	30	387	25	25	205	521
1996	150	100	4	5	30	337	25	25	205	471
1997	150	100	4	4	30	323	25	25	205	456
1998	150	100	4	4	30	353	25	25	205	486
1999	150	100	4	3	30	358	25	25	205	490
2000	150	100	4	3	30	295	25	25	205	427
2001	150	100	4	2	30	297	25	25	205	428

Source: British Timber Statistics 2001

Notes

¹ These figures are estimated by, or partly composed of estimates made by, the Supply and Demand Sub-committee of the Forestry Commission Advisory Panel.

Other forest products

Very little information is currently available on other forest products. Data (not National Statistics) for Christmas tree sales by FC and FS are given in Table 2.10. This table will be expanded in the future if more information is collected.

Year	Quantity (thousands)			Value (£ thousands)		
	FC	FS	Other	FC	FS	Other
1996–97	137	11	..	..	102	..
1997–98	155	10	..	1 100	91	..
1998–99	162	11	..	1 100	89	..
1999–00	112	10	..	1 300	97	..
2000–01	72	8	..	1 300	113 ¹	..
2001–02	65	7	..	1 200	96	..

Source: Forestry Commission and Forest Service (not National Statistics).

Notes

¹ Includes VAT.

Prices of wood and wood products

The Forestry Commission has collected information for many years on the prices of conifers sold standing by the FC to produce a Coniferous Standing Sales Price Index (CSSPI) every 6 months. The CSSPI gives values for overlapping 12 monthly periods and is available from the Forestry Commission website. There is little other information on wood prices before primary processing and no price index is available for broadleaves. Prices for outputs of primary wood processing are collected by the Office for National Statistics (ONS) in the Producer Price Indices (PPIs), and these are available in the MM22 Business Monitor which gives detailed PPIs monthly, or from the National Statistics website.

Table 2.11 Coniferous standing sales price index¹ for Great Britain

This price index is constructed from information on Forestry Commission sales only.				per m ³ overbark standing
Year ending 31 March	average price ² £	real ³ average price ² £1996	price index in nominal terms ⁴ Sep 1996 = 100	price index in real terms ³ Sep 1996 = 100
1985	10.26	17.32	66.70	112.54
1986	11.26	18.04	75.40	120.81
1987	12.62	19.60	88.70	137.82
1988	15.36	22.67	102.71	151.61
1989	15.80	21.84	109.08	150.75
1990	15.14	19.51	99.38	128.11
1991	13.75	16.37	87.33	103.99
1992	11.22	12.59	76.41	85.78
1993	12.33	13.40	82.23	89.40
1994	13.87	14.72	91.51	97.12
1995	17.28	18.09	110.85	116.05
1996	16.59	16.90	104.60	106.52
1997	15.92	15.71	96.77	95.51
1998	13.35	12.78	82.33	78.84
1999	8.44	7.86	51.13	47.63
2000	8.13	7.40	49.75	45.26
2001	7.77	6.95	47.77	42.67
2002	7.34	6.38	43.22	37.56

Source: Coniferous Standing Sale Price Index

Notes

¹ The price index is constructed from information on Forestry Commission sales only.

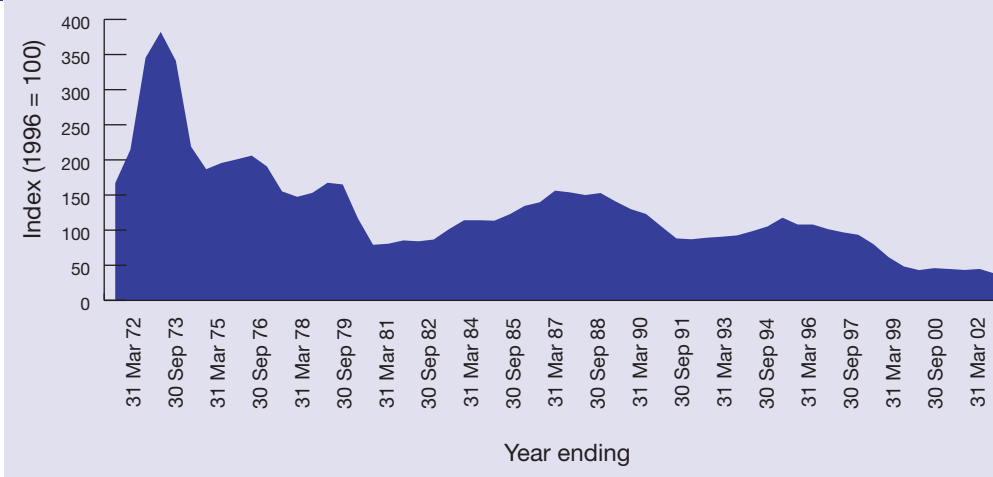
² Average prices are expressed in £ per m³ overbark standing.

³ Real terms values are obtained by using the GDP deflator to convert to 'constant prices', (in this case prices in 1996). This allows trends in timber prices to be tracked without the influence of inflation.

⁴ Nominal prices are the actual prices at that point in time, so the nominal price index includes inflation.

Figure 2.4**Coniferous standing sales price index in real terms (September 1996 = 100)**

Note that the overlapping periods used to construct the index will make this graph in real terms appear smoother than the actual movement of prices, and remove any seasonality in the series.



Source: Coniferous Standing Sale Price Index

Financial return from forestry

Returns to the forest owner are made up of sales of timber (standing or felled), sales of other goods and services, increases in the value of the woodland (from annual increment or market factors), and the net income from subsidies (e.g. planting grants) less taxes. The owner's costs are made up of employment costs and other purchases.

Estimates of the overall return from commercial Sitka spruce plantations are produced annually in the Investment Property Databank (IPD) UK Forestry Index (not National Statistics), which is calculated from a sample of private sector plantations in mainland Britain.

Table 2.12**3 year rolling annualised returns from forestry**

	Total return	percent per annum
1992-95	4.4%	
1993-96	9.9%	
1994-97	7.9%	
1995-98	4.5%	
1996-99	-3.0%	
1997-00	-5.2%	
1998-01	-5.4%	

Source: IPD UK Forestry Index 2002



3. IMPORTS, EXPORTS AND APPARENT CONSUMPTION OF WOOD PRODUCTS

The United Kingdom imports a large proportion of the wood and wood products consumed in the United Kingdom from a range of different countries.

Information on imports and exports comes from the Overseas Trade Statistics compiled by HM Customs & Excise. The two sources are surveys of European Union (EU) internal trade (Intrastat) and customs data for trade with non-EU countries.

Quantities are given as wood raw material equivalent underbark, that is the amount of timber (underbark) required to produce these products. The factors used here differ from the factors in Table E.1, Appendix E, which convert to standing volumes overbark.

Apparent consumption is the amount of timber (measured as wood raw material equivalent underbark) used as wood and wood products by people and industries in the United Kingdom. It is calculated as total United Kingdom production plus imports, minus exports. This figure does not include any allowance for recycled wood and waste paper within the United Kingdom. Apparent consumption also differs from actual consumption by the extent of changes in the level of stocks. It is not practical to collect information on actual consumption.

Table 3.1 Apparent consumption of wood products in the United Kingdom

Year	million m ³ WRME underbark			
	UK production ¹	Imports	Exports	Apparent consumption
1991	6.5	43.2	5.0	44.8
1992	6.6	43.5	5.1	45.0
1993	6.8	42.2	4.5	44.5
1994	7.3	47.6	5.8	49.2
1995	7.6	44.3	6.0	45.9
1996	7.1	45.1	5.4	46.8
1997	7.4	47.7	6.8	48.4
1998	7.2	46.8	7.0	47.0
1999	7.4	46.9	7.6	46.7
2000	7.5	48.6	7.7	48.4
2001	7.6	49.8	7.8	49.5

Source: Overseas Trade Statistics and conversion factors to WRME.

Notes

¹ UK production is estimated from deliveries to wood processing industries, as in Table 2.3.

In Table 3.2 'wood and wood products' are summarised from the following divisions of the Standard International Trade Classification (SITC).

- 24 (cork and wood)
- 25 (pulp and waste paper)
- 63 (cork and wood manufactures (excluding furniture))
- 64 (paper, paperboard, and articles of paper pulp, of paper or of paperboard)

Table 3.2 Imports and exports (volumes)

thousand m³ WRME underbark

	Wood (round and sawn)			Paper and paperboard			Total wood and wood products
	Softwood	Hardwood	Wood-based panels	Paper	Pulp	Recovered Paper	
Imports							
1960 ¹	18 300		2 500	3 500	11 700		36 000
1970 ¹	15 900		3 400	7 300	13 700		40 300
1980 ¹	11 500		3 600	9 800	9 800		34 700
1990 ¹	20 300		5 700	13 800	8 600		48 400
1995	12 536	1 432	5 150	15 930	8 447	677	44 172
1996	13 335	1 659	5 372	16 564	7 929	250	45 107
1997	13 977	1 614	5 970	17 803	8 171	211	47 746
1998	14 070	1 514	6 312	17 244	7 542	161	46 843
1999	14 117	1 432	6 087	17 493	7 625	171	46 926
2000	15 153	1 725	6 725	16 358	8 235	399	48 594
2001	15 090	1 781	7 168	18 313	7 280	143	49 775
Exports							
1960 ¹			not compiled				800
1970 ¹							1 200
1980 ¹							2 300
1990 ¹							4 700
1995	290	81	718	3 355	158	762	5 364
1996	201	82	756	3 407	55	912	5 414
1997	203	93	985	4 193	22	1 341	6 838
1998	300	367	956	4 004	98	1 240	6 964
1999	438	298	1 364	4 050	124	1 295	7 569
2000	497	332	1 204	3 897	32	1 698	7 660
2001	611	275	1 454	3 499	12	1 992	7 844

Source: Overseas Trade Statistics and conversion factors to WRME.

Notes

¹ Data for 1990 and earlier are rounded to the nearest 100 000 m³.

In Table 3.3 'associated products' are made up of the following SITC sub divisions;

- 244 (cork, natural, raw and waste (including natural cork in blocks or sheets))
- 251.92 (pulp of other fibrous cellulosic material)
- 633 (cork manufactures)
- 641.7 (paper, paperboard, cellulose wadding/webs of fibre, coated, impregnated, painted etc, excluding group 892, in rolls or sheets, not elsewhere specified)
- 641.9 (converted paper and paperboard not elsewhere specified)
- 642 (paper and paperboard cut to size or shape, and articles of paper or paperboard).

Table 3.3 Imports and exports (current prices)

	Imports			Exports			£million
	Wood and wood products	Associated products (paper products, coated paper, cork, etc)	Total (Divs 24, 25, 63, 64)	Wood and wood products	Associated products (paper products, coated paper, cork, etc)	Total (Divs 24, 25, 63, 64)	
1995	6 797	1 735	8 532	1 335	1 325	2 660	
1996	6 409	1 697	8 106	1 252	1 400	2 653	
1997	6 116	1 645	7 761	1 273	1 415	2 688	
1998	5 832	1 709	7 541	1 214	1 327	2 541	
1999	5 807	1 958	7 765	1 299	1 273	2 572	
2000	6 247	2 080	8 327	1 338	1 321	2 659	
2001	6 561	2 145	8 706	1 322	1 361	2 683	

Source: Overseas Trade Statistics

Table 3.4 Country of origin of wood imports to the United Kingdom 1999¹

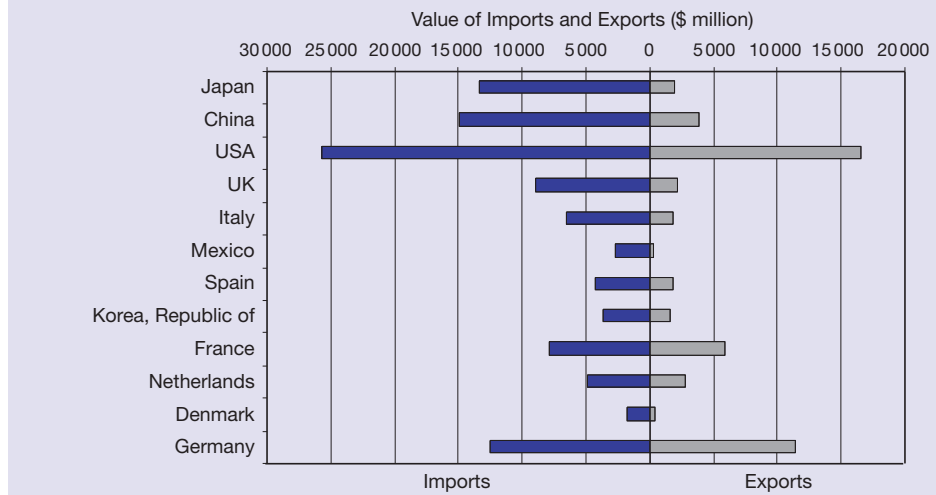
	% of total UK imports (volume) in each category						
	Sawn softwood	Sawn hardwood	Plywood	Particleboard	Fibreboard	Wood pulp	Paper and paperboard
Finland	17	1	7	7	3	11	28
Sweden	32	3	1	8	2	11	19
Germany	1	7	1	17	9	1	15
France	0	3	1	4	3	1	10
Belgium-Lux.	0	1	3	15	6	0	2
Spain	0	0	1	1	15	4	2
Ireland	1	0	0	3	29	0	1
Other EU	1	5	1	10	10	7	13
Total EU	53	21	14	64	76	35	88
USA	1	19	2	2	8	18	5
Canada	3	6	4	0	0	19	1
Latvia	25	18	4	3	2	0	0
Brazil	0	3	19	0	3	16	1
Indonesia	0	1	23	0	2	1	1
Malaysia	0	12	11	0	4	0	0
Other non-EU	19	20	22	31	4	12	5
Total non-EU	47	79	86	36	24	65	12

Source: FAO

Notes

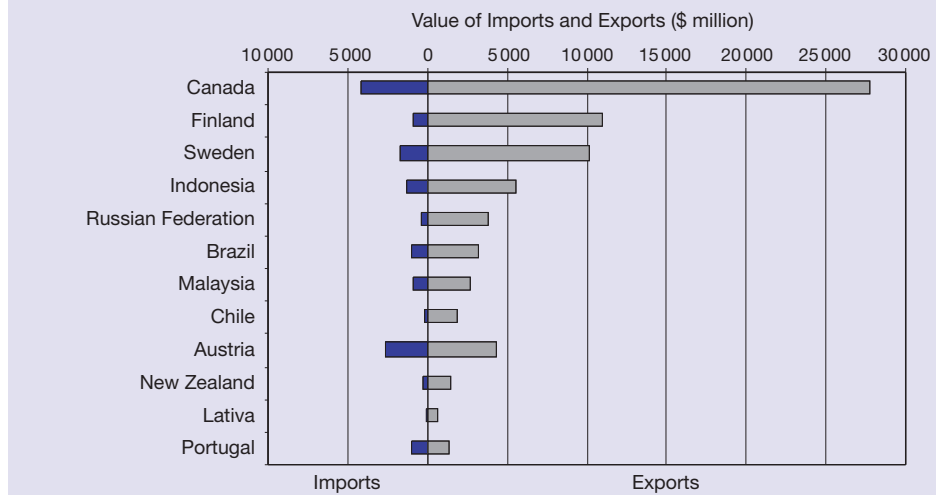
¹ Categories used above are those used by FAO in 'Forest Products Trade Flow Data', and are not fully consistent with those used in Tables 3.2 and 3.3.

Figure 3.1 World Trade in Forest Products: Largest Net Importers, 2000



Source: FAO

Figure 3.2 World Trade in Forest Products: Largest Net Exporters, 2000



Source: FAO



4. ENVIRONMENT

This section presents a range of information about the woodland environment, mostly using sources that are not National Statistics. More information on environmental aspects is included in the United Kingdom Indicators of Sustainable Forestry published in October 2002.

Protected woodland areas

The information in Tables 4.1–4.3 has been reproduced from *Protected Forest Areas in the UK* (not National Statistics). Although these are the most complete data available, they have been derived from a variety of sources, and are unlikely to give a wholly accurate inventory of protected areas in the United Kingdom. In particular, figures in italics have been approximated in the report by breaking down data for a wider area, typically using land area.

The woodland categories used in Tables 4.1–4.3 are defined as:

ASNW: (ancient semi-natural woodland) both ancient and semi-natural.

PAWS: (plantation on an ancient woodland site) ancient in the sense of continuously wooded over a long period but not semi-natural.

OSNW: (other semi-natural woodland) semi-natural but not ancient.

Table 4.1 Areas of ancient and semi-natural woodland in United Kingdom

	thousands of hectares					
	UK	GB	England	Scotland	Wales	N Ireland
ASNW	325.8	325.8	206.0	89.1	30.7	-
PAWS	224.1	224.1	135.1	59.1	29.9	-
OSNW	320.5	305.5	209.8	44.0	51.7	15.0
Total ancient	549.9	549.9	341.1	148.2	60.6	-
Total semi-natural	646.3	631.3	415.8	133.1	82.4	15.0

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

Table 4.2 Summary of woodland areas under different types of statutory protection

	thousands of hectares					
Type of protection	UK	GB	England	Scotland	Wales	N Ireland
SAC	47.0	47.0	23.8	22.1	1.0	0.04
SPA	1.3	1.3	-	-	1.3	-
NNR	30.1 ¹	29.7 ¹	9.2	19.4 ¹	1.1	0.4
A/SSSI – total	128.7	126.7	79.8	38.0 ²	8.9	2.0
<i>of which</i>						
ASNW	72.6	72.6	42.0	25.5	5.1	-
PAWS	10.5	10.5	7.9	2.0	6.0	-
OSNW	26.1	24.1	18.3	3.3	2.5	2.0
All ancient	83.1	83.1	49.9	27.5	5.7	-
All semi-natural	98.7	96.7	60.3	30.8	7.6	2.0

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

Notes

¹ The Scottish data is the area of NNR managed under the WGS, and probably underestimates the total woodland in NNRs in Scotland; this has a knock-on effect on the Great Britain and United Kingdom totals.

² There are discrepancies which mean that the categories of SSSIs for Scotland are not consistent with the total. See the full report for further details.

Table 4.3 Summary of areas under 'protective' ownership and WGS management (non-statutory protection)

		thousands of hectares					
Type of protection	UK	GB	England	Scotland	Wales	N Ireland	
Public Sector							
FC/FS ASNW	11.4	11.4	2.7	7.8	0.8	-	
PAWS	131.1	131.1	80.6	33.2	17.4	-	
OSNW	49.0	49.0	25.0	16.5	7.5	-	
A/SSSIs	40.0	37.4	21.4	12.6	3.4	2.3	
FNRs	36.2	36.0	12.6	19.4	4.0	0.2	
LNR	10.0	9.4	7.8	-	-	-	
Voluntary Sector							
NT and NTS	28.0	26.0	18.9	4.0	3.0	2.1	
Wildlife trusts	26.5	25.0	14.2	8.6	2.3	1.5	
Woodland Trust	13.5	13.5	8.4	3.7	1.4	-	
RSPB	14.2	13.4	7.6	4.6	1.2	0.8	
Management under WGS							
Total	..	918.6	445.4	421.6	51.6	..	
Public (non-FC/FS)	..	45.3	37.0	5.7	2.6	..	
Voluntary sector	..	67.3	44.7	19.4	3.2	..	

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

Carbon sequestration

Under the Kyoto protocol, additional woodland planted since 1990 contributes to the UK's carbon dioxide emissions target by removing carbon from the air. Table 4.4 (taken from the DETR publication *Climate Change: The UK Programme* (not National Statistics)) shows estimates and forecasts for the amount of carbon.

The forest sink includes carbon accumulation in forests by woody biomass, soils, litter and wood products. No wood products have yet been generated from new planting since 1990. The figures for the carbon sink due to expansion since 1990 are already included in the total forest sink.

Table 4.4 Carbon sequestration

	Forest sink (MtC/yr ¹)	Forest sink due to expansion of woodland due to trees planted since 1990 (MtC/yr ¹)
1990	2.6	0.0
1995	2.8	0.2
2000	2.9–2.9	0.3–0.3
2005	3.2–3.3	0.4–0.6
2010	3.1–3.4	0.6–0.8
2015	2.7–3.0	0.9–1.2
2020	2.4–2.8	1.2–1.6

Source: DETR publication: 'Climate Change: The UK Programme' (not National Statistics).

Notes
¹ Million tonnes carbon per year.

Damage to woodland

Compared with some other European Union member states, the United Kingdom has only small losses of woodland to forest fires. No information is collected on fire damage in non-FC/FS owned woodland.

Table 4.5 Fire damage			
Year	Forestry Commission	Forest Service	UK (FC/FS woodland only)
Number of fires			
1969–70	489	..	..
1979–80	..	82	..
1989–90	76	22	98
1995–96	888	18	906
1996–97	478	30	508
1997–98	369	6	375
1998–99	155	3	158
1999–00	78	3	81
2000–01	41	6	47
2001–02	350	13	363
Area of woodland burnt (hectares)			
1969–70	453	..	..
1979–80	..	770	..
1989–90	185	127	312
1995–96	466	94	560
1996–97	450	135	585
1997–98	310	22	332
1998–99	45	9	54
1999–00	165	6	171
2000–01	181	85	266
2001–02	141	85	226

Source: Forestry Commission and Forest Service.



5. RECREATION

The Forestry Commission obtains information about woodland visits and visitors from the UK Day Visits Survey, Public Opinion of Forestry Survey and on-site monitoring programmes.

Visits to woodland

The information in Tables 5.1 and 5.2 is taken from the UK Day Visits Survey (not National Statistics), which collected data about day trips from home during 1994, 1996 and 1998. Despite its name, it did not cover visits by people living in Northern Ireland. Visits to overseas destinations are also excluded.

The UK Day Visits Survey was a sample survey, so the results vary by chance depending on the sample achieved. For example the first line of data in table 5.2 is accurate to $\pm 1.7\%$ in England in 1998, so there is only weak evidence for a decline from 1996 to 1998; in Scotland, however, the accuracy is $\pm 2.4\%$, so a fall of 3% is significant. Similar caution should be used in assessing the other figures in the table, where the confidence limits may be wider. For more detail see *1998 UK Leisure Day Visits Survey Technical Report* (not National Statistics) published by the National Centre for Social Research.

Table 5.1 Number of day visits to woodland

	millions of visits			
	Journey starting point			
	GB	England	Scotland	Wales
1994	303	273	18	12
1996	346	308	26	11
1998	355	321	22	11

Source: UK Day Visits Survey (not National Statistics).



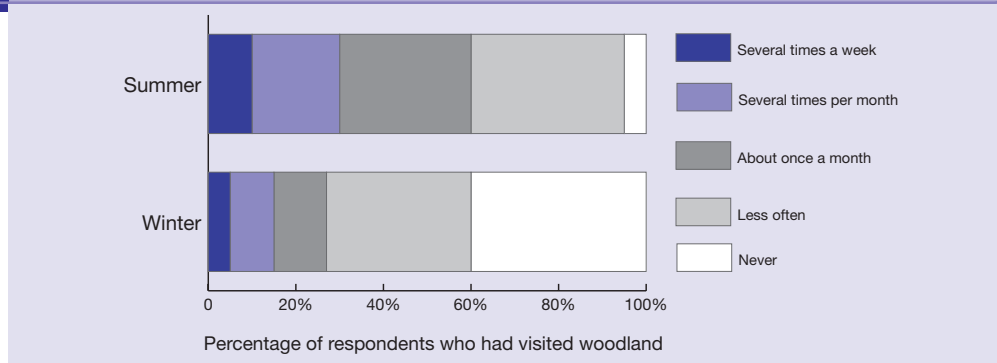
Table 5.2 Type of woodland visit

		per cent									
Question	Response categories	Journey starting point									
		GB		England		Scotland		Wales			
		96	98	96	98	96	98	96	98		
Timing of the last visit to woodland	Within last 2 weeks	11	11	12	11	12	9	8	8		
	Over 2 weeks, within last 4 weeks	6	7	6	7	6	6	6	5		
	Over 4 weeks, within last 3 months	7	8	8	8	6	6	6	7		
	Over 3 months, within last 6 months	6	6	6	6	7	5	5	5		
	Over 6 months, within last year	7	6	7	6	7	6	7	6		
	No visit in last year	63	62	60	61	61	66	69	69		
Season of year	January–March	24	33	23	34	29	25	36	43		
	April–June	31	24	32	23	29	38	22	26		
	July–September	25	23	25	23	31	28	18	19		
	October–December	18	20	19	21	12	9	23	12		
Duration of visit (round trip)	Up to 1 hour	30	35	31	35	15	29	25	35		
	Over 1 hour, up to 2 hours	29	29	29	29	29	36	34	28		
	Over 2 hours, up to 3 hours	13	11	13	11	17	10	12	18		
	Over 3 hours	28	25	27	25	38	24	29	19		
Distance travelled (round trip)	Up to 5 miles	54	59	54	58	41	61	65	64		
	Over 5 miles, up to 10 miles	19	18	19	18	18	16	12	18		
	Over 10 miles, up to 20 miles	9	10	9	10	14	6	9	6		
	Over 20 miles	18	14	18	14	27	16	14	12		
Main mode of transport	Car/van	43	32	43	32	49	32	32	30		
	On foot	48	55	48	54	37	58	61	62		
	Bicycle	7	8	7	8	7	8	3	4		
	Other	2	5	2	6	7	1	4	4		
Composition of group	One person	41	43	42	43	24	47	49	42		
	Two adults	32	25	32	25	38	31	27	25		
	Group with child(ren)	17	14	15	13	31	15	14	22		
	Other group	10	18	11	19	7	7	10	11		
Perceived owner or manager	Local Authority	43	42	43	43	38	32	30	15		
	Forestry Commission	12	10	11	9	24	19	25	20		
	Voluntary organisation	8	7	8	7	5	7	7	9		
	Private owner	17	18	16	17	20	28	27	31		
	Other	6	8	7	8	2	2	2	4		
	Don't know	14	15	15	15	10	13	9	21		

Source: UK Day Visits Survey (not National Statistics).

The Public Opinion of Forestry Survey (not National Statistics) is a sample survey of 2000 adults in Great Britain. It is carried out every 2 years and covers people's opinions on the amount of woodland, the Forestry Commission, forest management, and visits to woodland. The information in Figure 5.1 and Table 5.3 is taken from the report on the 2001 survey, which included comparisons with similar surveys in 1999, 1997 and 1995. The survey was carried out in February 2001. Results from this survey are accurate to within $\pm 2\%$ for questions where all respondents gave an answer. In the 2001 survey, 72% of respondents said they had visited woodland in the last few years. Those who had visited woodland were asked how frequently they had visited during the previous summer and winter. Figure 5.1 shows that the respondents visited much more often during the summer.

Figure 5.1 Frequency of visits to woodland



Source: Public Opinion of Forestry Survey 2001 (not National Statistics).

Respondents were also asked who they thought owned the forest or woodland they had visited (Table 5.3), with the FC and voluntary bodies (e.g. National Trust, Woodland Trust) being the most popular responses. This can be compared with the UK Day Visits Surveys, which found that more visits were to local authority woodland, but more of the infrequent visitors tended to go to Forestry Commission woodland.

Table 5.3 Ownership of woodland visited

		% of respondents who had visited woodland
For more information see <i>Public Opinion of Forestry 2001</i> .	Forestry Commission / Forest Enterprise	41
	Voluntary bodies (e.g. National Trust, Woodland Trust)	41
	Local Authorities	37
	Private owners	20
	None / Don't know	11

Source: Public Opinion of Forestry Survey 2001 (not National Statistics).

Forest Enterprise carries out a visitor monitoring programme (not National Statistics) at selected Forestry Commission woodland sites in England, Scotland and Wales. Year-on-year changes in visitor numbers are estimated by the Trends Index, which uses data from traffic counters and other counters. Information about visitors and their views on facilities are collected by national programme and by local surveys; the latest results are summarised in *Forest Visitor Surveys 2001*.

In 2001, almost one half of the visitors surveyed in the national programme lived locally (within 15 miles of the site), a further one third were holidaymakers and the remainder were on a day trip from home.

Table 5.4 Day visitors to Northern Ireland Forest Service sites¹

Year ending 31 March	N Ireland	thousands of people visiting sites
1995-96	499	
1996-97	537	
1997-98	458	
1998-99	382	
1999-00	403	
2000-01	402	
2001-02	403	

Source: Forest Service

Notes

¹ Only covers sites for which an admission charge is made.

Woodland recreation facilities (GB)

Forest Parks are areas of Forestry Commission land which are of national importance for recreation. Recreation facilities are also available at many smaller woodland sites. Information is only available for Forestry Commission woodland, but many woodland sites managed by local authorities, voluntary organisations, and other private owners also provide recreation facilities.

Table 5.5 Size of Forest Parks

		hectares
Scotland	Glenmore	3 500
	Queen's View	17 000
	Queen Elizabeth	20 000
	Argyll	21 000
	Galloway	77 000
		138 500
England	New Forest	27 000
	Forest of Dean	11 000
	Delamere	700
	Sherwood Pines	900
	Thetford	19 000
	North Riding	12 000
	Whinlatter	1 200
	Grizedale	2 500
	Kielder	61,000
		135 300
Wales	Afan Argoed	2 700
	Coed-y-Brenin	3 100
	Gwydyr	6 500
	12 300	

Source: Forestry Commission

Table 5.6 Forest Enterprise recreational facilities, 2002

Facility	at 31 March 2002			
	GB	England	Scotland	Wales
Forest Walks	704	249	401	54
Cycle Trails	211	81	117	13
Horse Riding Routes	67	45	11	11
Forest Drives	12	6	5	1
Car Parks	764	363	294	107
Picnic Sites	414	214	114	86
Toilets	104	55	32	17
Play Areas	42	28	4	10
Orienteering Courses	52	34	12	6
Visitor Centres	32	19	8	5
Wildlife Hides	22	14	5	3
Forest Classrooms	29	23	2	4
Viewpoints	32	0	32	0
X-Country Ski Routes	7	0	7	0

Source: Forestry Commission

Community Forests

England's 12 Community Forests are the product of a partnership between the Forestry Commission, the Countryside Agency and a host of other local and national partnerships. Since their inception in 1991, the Community Forests have helped to revitalise areas around many of England's towns and cities, delivering economic, social and environmental benefits to local communities. Forestry Commission sponsored planting through the Woodland Grant Scheme and the Capital Modernisation Fund resulted in a further 704 hectares of new land for community woodland development in 2001/02.

Table 5.7 England's Community Forests

Name of Forest	Area ¹ (hectares)	Population within 20km (millions)	Initial % woodland cover	Target new planting (hectares)	Achieved new planting to Mar 2002 (hectares)
Forest of Avon	57 300	1	5.9	6 726	423
Forest of Mercia	21 000	4	6.4	5 656	459
Forest of Marston Vale	15 800	0.5	3.6	4 120	818
Great North Forest	16 000	1	8	4 000	1 021
Great Western Community Forest	39 000	1	3	7 588	1 058
Greenwood Community Forest	43 800	1	11.3	5 750	1 029
Mersey Forest	92 500	4	4	8 140	2 001
Red Rose Forest	76 000	4	3.9	10 000	908
South Yorkshire	39 499	1.9	7.6	3 670	552
The Tees Forest	25 500	1	6.9	5 870	931
Thames Chase Community Forest	9 850	3	9.7	2 000	384
Watling Chase Community Forest	18 800	3	7.9	2 300	262
Total	455 049	25.4	6.5	65 820	9 846

Source: Forestry Commission

Notes

¹ Area is total area designated as extent of Community Forest. Only a limited proportion of this will ever be covered by trees.



6. EMPLOYMENT

The Forestry Commission undertakes an employment survey every 5 years.

Tables 6.1 and 6.2 show estimates obtained from the 1998/9 employment survey (not National Statistics). The report on the '1998/9 Forest Employment Survey', together with more detailed regional breakdowns, is available on the Forestry Commission website.

Table 6.1 Employment in forestry and primary wood processing industries 1998/9

Employer ¹	full-time equivalents			
	GB	England	Scotland	Wales
Forestry Commission	3 909	1 331	2 011	567
Private woodland owners	8 425	4 242	3 196	987
Forestry companies and contractors	4 598	2 077	2 223	298
Wood processing industries	10 628	5 581	2 917	2 130
Other employers	1 972	1 508	347	117
Total	29 532	14 739	10 694	4 099

Source: Forest Employment Survey 1998/9 (not National Statistics).

Notes

¹ Figures include work by contractors as well as employees

Table 6.2 Employment in forestry and primary wood processing by activity 1998/9

Activity	full-time equivalents			
	GB	England	Scotland	Wales
Forest nurseries	624	421	201	2
Establishment	2 529	1 088	1 189	252
Maintenance	3 364	1 680	1 304	380
Harvesting	4 770	2 330	1 947	493
Road construction	407	181	179	47
Other forest	982	466	372	144
Total forest	12 676	6 166	5 192	1 318
Haulage	1 061	326	593	142
Processing	11 227	5 952	3 083	2 192
Other non-forest	4 568	2 295	1 826	447
Total non-forest	16 856	8 573	5 502	2 781
Total	29 532	14 739	10 694	4 099

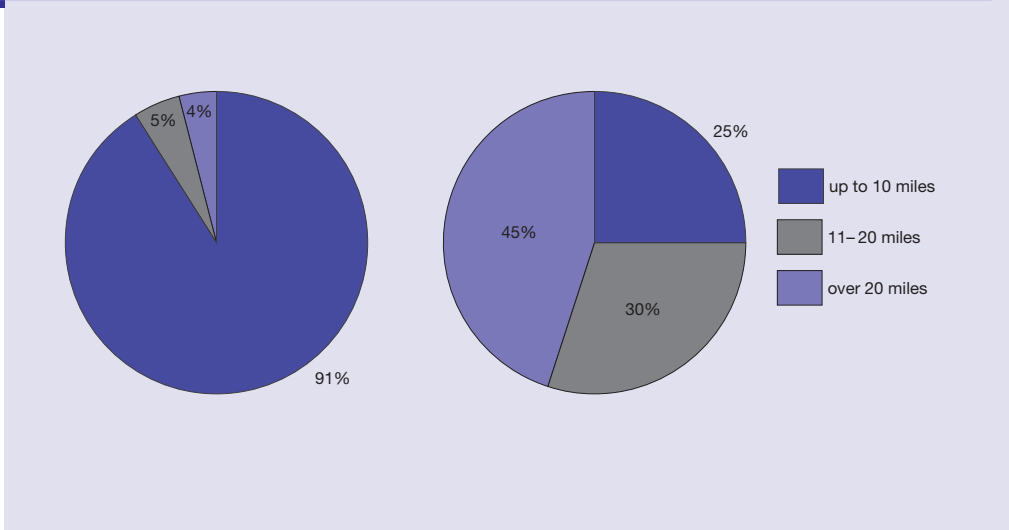
Source: Forest Employment Survey 1998/9 (not National Statistics).

Table 6.3 Percentage of forestry workers travelling less than 20 miles to their place of employment in GB

	% workers			
	England	Scotland	Wales	GB
Direct workers	97	98	80	96
Contracts workers	56	54	55	55
Total	72	68	68	71

Source: Forest Employment Survey 1998/9 (not National Statistics).

Figure 6.1 Travel to work distances for (a) direct and (b) contract employees in 1998/9



Source: Estimated from the Forest Employment Survey 1998/9 (not National Statistics).

Other studies have been commissioned to estimate the number of jobs in the wider economy (tourism, service industries, transport and so on) which depend on the existence of forestry and primary wood processing activities. Information on these studies is available from the Forestry Commission's website.



7. LAND USE, ACQUISITIONS AND DISPOSALS

This section contains information on the land use, land acquisition and land disposal activities of the Forestry Commission and the Forest Service.

Land use

Table 7.1 Land use of the Forestry Commission and Forest Service

Area as at 31 March	Woodland ¹	Other land ^{1,2}	thousands of hectares Total FC/FS land area
United Kingdom			
1980	944.8	390.2	1 335.0
1990	956.4	257.9	1 214.3
2000	886.1	242.7	1 128.7
2001 ³	861.5	267.4	1 128.9
2002	855.6	273.2	1 128.9
England			
1980	252.1	50.9	303.0
1990	235.0	39.6	274.6
2000	216.4	43.8	260.1
2001 ³	207.6	50.8	258.5
2002	206.3	51.0	257.4
Scotland			
1980	501.2	298.5	799.7
1990	532.8	190.6	723.5
2000	493.2	172.2	665.4
2001 ³	478.0	186.9	664.8
2002	474.8	191.9	666.8
Wales			
1980	137.6	23.1	160.7
1990	130.0	11.5	141.5
2000	115.7	11.6	127.3
2001 ³	114.9	15.0	129.9
2002	113.2	15.9	129.0
Northern Ireland			
1980 ⁴	53.9	17.6	71.6
1990	58.5	16.2	74.7
2000	60.8	15.0	75.8
2001	61.0	14.7	75.7
2002	61.3	14.4	75.7

Source: Forestry Commission and Forest Service.

Notes

¹ The definitions used by Forestry Commission and Forest Service have varied over time, so there are some small inconsistencies in the comparisons in Table 7.1.

² 'Other land' includes agricultural land and areas of moorland and mountain.

³ The apparent decrease in woodland cover in 2001 is due to a reclassification of Forestry Commission open land within the forest.

⁴ Area at the end of the 1979–80 planting season.

Acquisitions and disposals

Table 7.2 includes acquisitions and disposals of both woodland and other land. Before 1980–81 figures were only published for woodland (either with trees or suitable for planting), and net of disposals, since the main focus was on the acquisition of land for planting. The average annual net acquisition of woodland over the period 1969–70 to 1978–79 was 9 919 ha in Great Britain (186 ha in England, 9 091ha in Scotland and 642 ha in Wales). The disposals programme was started after 1979, and ended with the introduction of a moratorium on new large-scale disposals in 1997.

For some land, the Forestry Commission has acquired only the leasehold, or the freehold has been acquired in a later year than the leasehold. In these cases the area is included when the leasehold is acquired.

Table 7.2 Land acquisitions and disposals

Year ending 31 March	hectares					
	UK (FC/FS)	GB (FC)	England	Scotland	Wales	N Ireland (FS)
Acquisitions						
average 1979–80 ¹ to 1988–89	3 672	3 172	144	2 060	968	497
average 1989–90 to 1994–95	1 471	1 099	72	1 004	23	372
1995–96	103	29	0	29	0	74
1996–97	233	22	22	0	0	211
1997–98	636	501	199	310	0	135
1998–99	665	386	385	1	0	279
1999–00	306	212	212	0	0	94
2000–01 ²	1 088	1 012	696	316	0	76
2001–02 ²	1 584	1 503	1 380	116	7	81
Disposals						
average 1979–80 ¹ to 1988–89	14 344	14 293	2 800	9 391	2 102	48
average 1989–90 to 1994–95	9 945	9 756	1 491	6 846	1 419	189
1995–96	9 260	9 088	1 897	5 889	1 302	172
1996–97	10 997	10 842	2 068	6 874	1 900	155
1997–98	12 737	12 642	2 535	8 763	1 344	95
1998–99	5 859	5 754	1 083	2 534	2 137	105
1999–00	5 305	5 265	431	3 384	1 450	40
2000–01	6 030	5 868	714	3 391	1 763	162
2001–02	3 100	3 090	613	2 060	417	10
Balance						
average 1979–80 ¹ to 1988–89	-10 672	-11 122	-2 656	-7 332	-1 134	449
average 1989–90 to 1994–95	-8 474	-8 657	-1 419	-5 842	-1 397	183
1995–96	-9 157	-9 059	-1 897	-5 860	-1 302	-98
1996–97	-10 764	-10 820	-2 046	-6 874	-1 900	56
1997–98	-12 101	-12 141	-2 336	-8 453	-1 344	40
1998–99	-5 194	-5 368	-698	-2 533	-2 137	174
1999–00	-4 999	-5 053	-219	-3 384	-1 450	54
2000–01	-4 942	-4 856	-18	-3 075	-1 763	-86
2001–02	-1 516	-1 587	767	-1 944	-410	71

Source: Forestry Commission and Forest Service.

Notes

¹ For 1979–80, figures were published for woodland only (see text for explanation).

² 2000–01 and 2001–02 figures are the acquisitions of plantation and plantable land.



Appendix A

SOURCES AND DEFINITIONS

Scope

This publication covers a wide range of forestry aspects in the United Kingdom, drawing on statistics produced by the Forestry Commission (FC) for England, Scotland and Wales, statistics from the Northern Ireland Forest Service (FS) and other sources. Information on FC and FS woodland is available from the management of their estates; information on non-FC/FS sector woodland comes from administration of grants and licences, and in Great Britain is supplemented by various FC-run surveys of the forestry and primary wood processing industries. There are no comparable surveys covering Northern Ireland, so in some cases information for NI has been taken from estimates based on local knowledge, and in some cases only data for the FS estate are shown.

Woodland

The definition of woodland in United Kingdom forestry statistics is land under stands of trees with a canopy cover of at least 20% (or having the potential to achieve this), including integral open space, and including felled areas that are awaiting restocking. A tree is defined by its species; a list of tree species in British woodland is given in Appendix C. There is no minimum height for trees to form a woodland at maturity, so the definition includes woodland scrub but not areas of gorse, *Rhododendron*, etc., outside woodland. This is a different definition than that used internationally which is based on 10% canopy cover and a minimum height at maturity of 5m, but the two definitions are estimated to give similar areas of woodland in UK.

There is no minimum size for a woodland (the National Inventory of Woodland and Trees maps all areas down to 2.0 ha, but sample-based information is also collected for smaller woods, small groups of trees and individual trees). Woodland includes native and non-native trees; semi-natural and plantation areas. Woodland habitat types are not currently differentiated in these statistics.

Integral open space is defined differently in the data sources used in this publication for woodland owned by Forestry Commission (FC) and woodland owned by others (Tables 1.1 and 1.3). FC data now come from a GIS where mappable open space is excluded from the total. Non-FC woodland (from the National Inventory of Woods and Trees, NIWT) includes open areas less than 1 ha as integral open space.

Forestry Activity

Statistics for economic aspects of forestry and primary wood processing relate to the forestry-based activities involved. So in a business with several different activities (say forestry, construction and property management), it is only the forestry part of the business which contributes to the figures. Support for forestry activities (such as office workers) is however included. The sampling frame of businesses involved in forestry and primary wood processing is mostly obtained from lists of members of trade associations. Measures are taken to avoid double counting where businesses are members of more than one organisation, but there may be a small level of undercounting for businesses which are not members of any organisation.

Business statistics in the United Kingdom are generally produced using a different classification system, where the whole of a business is classified according to its largest activity. This means that estimates in this publication are not directly comparable with the Office for National Statistics (ONS)'s Annual Business Inquiry, for example.

National Statistics

Official statistics bearing the National Statistics logo are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from political interference.

The main statistics outputs produced by the Forestry Commission were approved for inclusion in National Statistics from August 2001. National Statistics outputs include British Timber Statistics (last published in August 2002), Forestry Commission Facts & Figures (September 2002) and this publication, Forestry Statistics (November 2002). For some surveys with a long periodicity (for example the Forest Employment Survey), it may be several years before they can be considered for designation as National Statistics.

Quality of Estimates

There are several components of quality, and it is difficult and expensive to measure many of them regularly. Some indications of the quality of the estimates in this publication are given under the headings below.

Business Surveys

Frame

The frame for the business surveys here includes businesses and individuals that belong to one or more of the following associations; Forestry Contracting Association (FCA), United Kingdom Forest Products Association (UKFPA) or Forestry and Timber Association (FTA). The frame population size is reduced to account for businesses that are members of more than one association. Some businesses are identified from other sources such as FC Forest Districts. There are probably some businesses involved in forestry which are not members of any of these associations or otherwise identified, and these will not contribute to statistics. No exercise has been undertaken to try to determine the extent of this underestimation.

Non-response

Some businesses do not respond to surveys, so some compensation for their non-response is needed in compiling the statistics. If there are differences between the characteristics of businesses that respond and businesses that do not, this can lead to a bias in the results. This bias is minimised by stratifying into groups (for example by size) that might be expected to have similar characteristics, but there have been no studies to estimate the bias in the context of these surveys.

Sampling error

Sampling errors arise from taking a sample rather than surveying all the businesses. Many of the figures here are from censuses where all businesses are sampled, and in these cases the sampling error is zero. In some cases however, there are sampling errors, and these are referred to in the text.

Visitor Surveys

Frame

There is no frame for visitor surveys (that is, there is no list of visitors from which to select a sample). Most visitor surveys aim to select a representative set of sample periods, and interview the next group to pass after completing an interview. Some of the information about visitors comes from household surveys (for example the UK Day Visits Survey) that use a recognised sampling frame.



Appendix B

FORESTRY AND PRIMARY WOOD PROCESSING BUSINESSES

Number of establishments in the primary wood processing industries

Table B.1 shows the number of primary wood processors, according to the sampling frames used for Forestry Commission surveys (and Forest Service data for Northern Ireland). The figures in Table B.1 do not correspond with the VAT registration information given in Figures B.1–B.4. They count establishments (sites) rather than businesses and include those that do not need to register for VAT. They also have a different basis for classification, so some businesses which are excluded from Figs B.1–B.4 because of their VAT classification are included in this table (typically businesses where primary wood processing is a small part of their total activity), and some businesses included in Figs B.1–B.4 are excluded here (usually because they do not use British timber).

Table B.1

Number of establishments in the primary wood processing industries using UK grown roundwood

Year	Sawmills	Pulp and paper mills	Woodbased panel mills	Round fencing manufacturers (GB only)	UK total ²
1990	336 ¹	4	11	..	..
1995	449	4	11	131	595
1996	401	4	11	119	535
1997	374	4	11	103	492
1998	342	4	11	99	456
1999	320	4	10	90	424
2000	297	4	10	82	393
2001	276	4	10	80	370

Notes

¹ Excludes mills processing 1000 m³ underbark or less per year.

² A single mill may be recorded twice, as a sawmill and a round fencing manufacturer.

VAT-registered businesses involved in forestry and primary wood processing

The Standard Industrial Classification (SIC) is the United Kingdom's classification of business activities. The main heading including forestry businesses is 020: Forestry and logging. The main headings for primary wood processing are 201: Sawmilling and planing of wood, impregnation of wood; 202: Manufacture of veneer sheets; manufacture of plywood, laminboard, particleboard, fibreboard and other panels and boards; and part of 211: Manufacture of pulp, paper and paperboard. All these headings potentially include businesses *not* traditionally regarded as forestry or primary wood processing, and some businesses which are traditionally included in forestry or primary wood processing are excluded as they are classified to other headings of the SIC.

Charts B.1–B.4 (using data from *Business start-ups and closures: VAT registrations and deregistrations 1980–2000* published by the Small Business Service of the Department for Trade and Industry) show start-ups and closures and the size of the business population in these classifications. Because businesses with turnover below the VAT threshold are not required to register, many of the smallest businesses are not included in these figures. The figures are also not restricted to businesses using domestically produced timber but include businesses wholly using imports.

Figure B.1

Total number of businesses and VAT registrations and deregistrations of businesses classified to SIC 020: Forestry and logging.

Values have been rounded to the nearest 5 businesses.

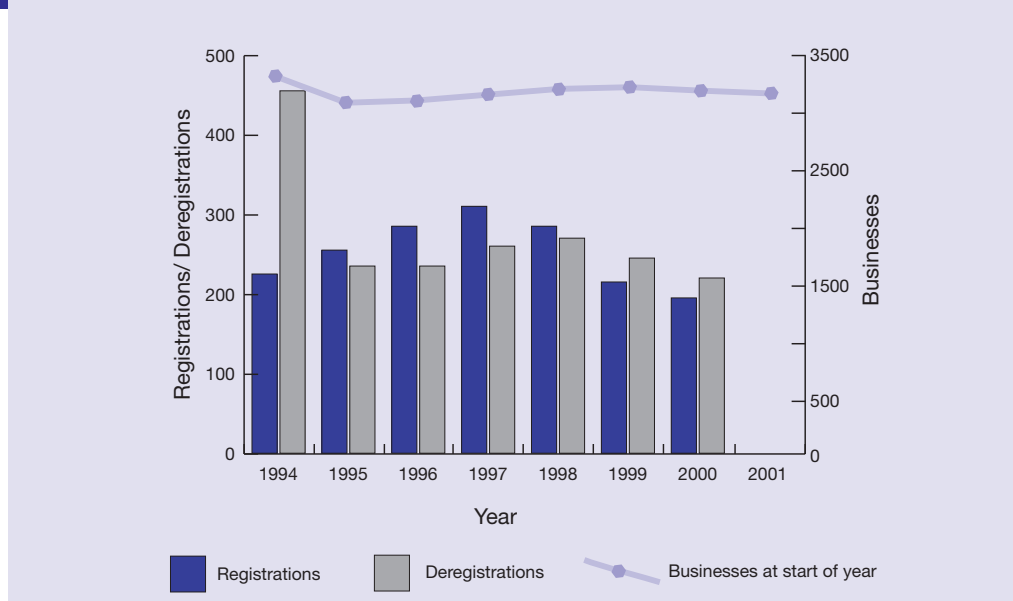


Figure B.2

Total number of businesses and VAT registrations and deregistrations of businesses classified to SIC 201: Sawmilling and planing of wood, impregnation of wood

Values have been rounded to the nearest 5 businesses.

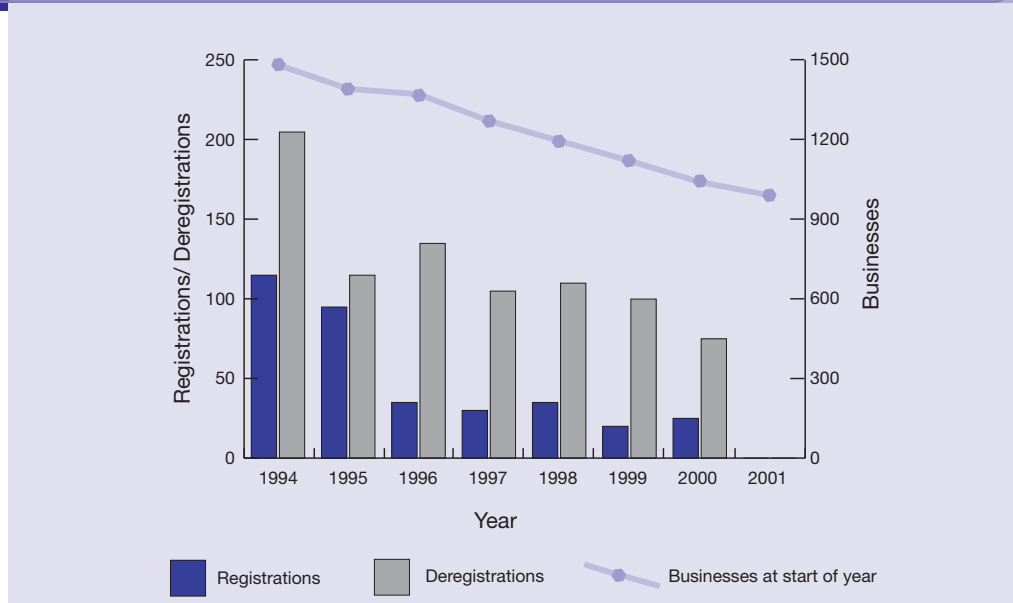


Figure B.3

Total number of businesses and VAT registrations and deregistrations of businesses classified to SIC 202: Manufacture of veneer sheets; manufacture of plywood, laminboard, particleboard, fibreboard and other panels and boards

Values have been rounded to the nearest 5 businesses.

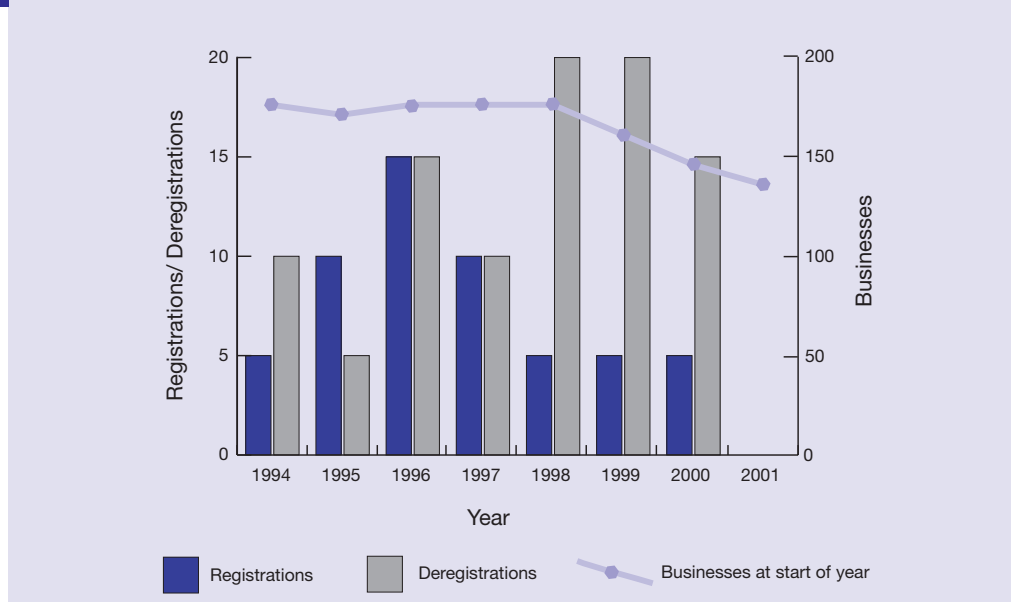
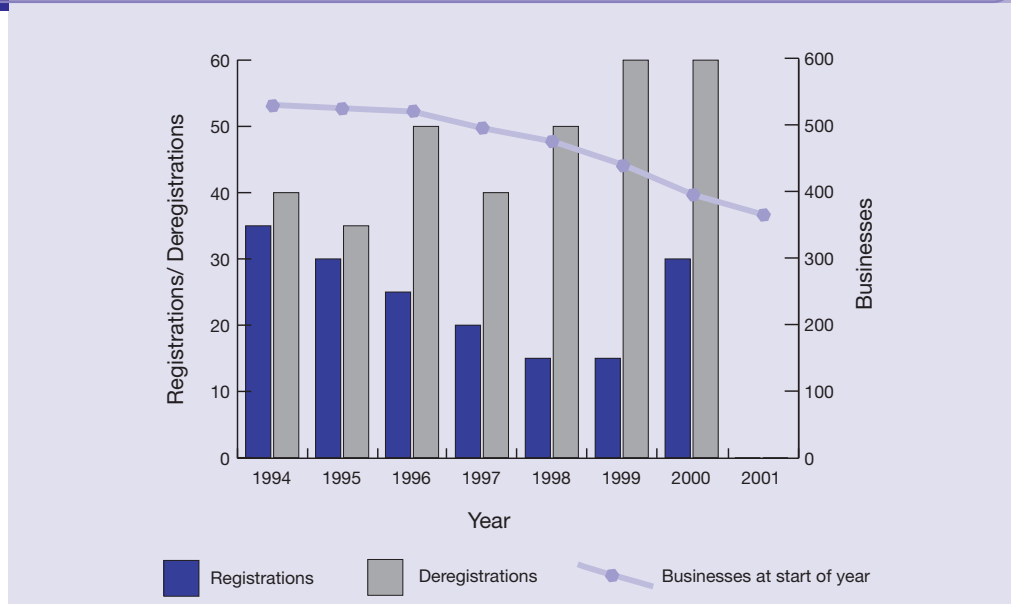


Figure B.4

Total number of businesses and VAT registrations and deregistrations of businesses classified to SIC 211: Manufacture of pulp, paper and paperboard

Values have been rounded to the nearest 5 businesses.



Notes

¹ Only integrated pulp and paper mills are normally included in primary wood processing.



Appendix C

TREE SPECIES IN BRITISH WOODLAND

As reported for Forest Resources Assessment 2000

Table C.1 Tree species in British woodland

Main species		Other species	
Common name	Latin name	Common name	Latin name
Native (indigenous) tree species occurring on forest and other wooded land			
Scots pine	<i>Pinus sylvestris</i>	Yew	<i>Taxus baccata</i>
Oak - sessile	<i>Quercus robur</i>	Wild cherry (gean)	<i>Prunus avium</i>
Oak - pedunculate	<i>Quercus petraea</i>	Bird cherry	<i>Prunus padus</i>
Ash	<i>Fraxinus excelsior</i>	Whitebeam	<i>Sorbus aria</i>
Downy birch	<i>Betula pubescens</i>	Elm	<i>Ulmus</i> spp
Silver birch	<i>Betula pendula</i>	Lime	<i>Tilia</i> spp
Beech	<i>Fagus sylvatica</i>	Field maple	<i>Acer campestre</i>
Rowan	<i>Sorbus aucuparia</i>	Willow	<i>Salix</i> spp
Holly	<i>Ilex aquifolium</i>	Poplar	<i>Populus</i> spp
Hawthorn	<i>Crataegus monogyna</i>	Aspen	<i>Populus tremula</i>
Common alder	<i>Alnus glutinosa</i>	Juniper	<i>Juniperis communis</i>
Hazel	<i>Corylus avellana</i>	Hornbeam	<i>Carpinus betulus</i>
Elder	<i>Sambucus nigra</i>	Crab apple	<i>Malus domestica</i>
		Strawberry tree	<i>Arbutus unedo</i>
		Service tree	<i>Sorbus torminalis</i>
		Other <i>Sorbus</i>	<i>Sorbus</i> spp
		Black poplar	<i>Populus nigra</i>
Introduced tree species on forest and other wooded land			
Sitka spruce	<i>Picea sitchensis</i>	Other pines	<i>Pinus</i> spp
Lodgepole pine	<i>Pinus contorta</i>	Other spruces	<i>Picea</i> spp
Larches	<i>Larix</i> spp	Western red cedar	<i>Thuja plicata</i>
Douglas fir	<i>Pseudotsuga menziesii</i>	Cypresses	<i>Chamaecyparis</i> spp
Sycamore	<i>Acer pseudoplatanus</i>	Grand fir	<i>Abies grandis</i>
Norway spruce	<i>Picea abies</i>	Noble fir	<i>Abies procera</i>
Corsican pine	<i>Pinus nigra var maritima</i>	Silver fir	<i>Abies alba</i>
Western hemlock	<i>Tsuga heterophylla</i>	Japanese cedar	<i>Cryptomeria japonica</i>
		Coast redwood	<i>Sequoia sempervirens</i>
		Wellingtonia	<i>Sequoiadendron giganteum</i>
		Cedars	<i>Cedrus</i> spp
		Monkey puzzle	<i>Araucaria araucana</i>
		Other oaks	<i>Quercus</i> spp
		Roble	<i>Nothofagus obliqua</i>
		Raoul	<i>Nothofagus nervosa</i>
		Other alders	<i>Alnus</i> spp
		Filbert	<i>Corylus maxima</i>
		Horse chestnut	<i>Aesculus hippocastanum</i>
		Sweet chestnut	<i>Castanea sativa</i>
		English walnut	<i>Juglans regia</i>
		Norway maple	<i>Acer platanoides</i>
		Other maples	<i>Acer</i> spp
		Tree of heaven	<i>Ailanthus altissima</i>
		Balsam poplars	<i>Populus</i> spp
		Other willows	<i>Salix</i> spp
		London plane	<i>Platanus x hispanica</i>
		Peach	<i>Prunus persica</i>
		Almond	<i>Prunus dulcis</i>
		Other cherries	<i>Prunus</i> spp
		Apple	<i>Malus domestica</i>



Appendix D

GLOSSARY

Ancient woodland	Woodland which has been in continuous existence since 1600 (1750 in Scotland)
ASNW	Ancient Semi-Natural Woodland
ASSI	Area of Special Scientific Interest – the Northern Ireland equivalent of SSSI
Boreal region	Region of forest areas of the Northern Temperate Zone: dominated by coniferous trees such as spruce, fir and pine
Broadleaf	Trees which do not have needles or cones (a few, such as alder, have cone-like structures for their seeds which are not true cones)
Cement bonded particleboard	Sheet material manufactured under pressure, based on wood and other vegetable particles bound with hydraulic cement and possibly containing additives
Chipboard	(see Particleboard)
Coated	A term applied to any type of paper whose surface has been treated in such a way as to apply a coating in order to enhance its finish characteristics. The coating consists of a layer of coating materials such as clay, various pigments and/or special substances in combination with adhesives of some type, varnish or lacquer. The coating is used to improve the surface characteristic of the paper, e.g., opacity, smoothness, colour, printing quality
Conifer	Trees with needles and cones
Coppice	trees which are cut near ground level (or sometimes higher in which case they are <i>pollards</i>), causing them to produce many small shoots. These shoots are harvested every few years at a relatively early age for products such as staves, fencing, fuel and charcoal. 'Coppice with standards' includes scattered trees that are left to grow as normal ('standards')
Co-products (sawmill)	Materials including wood chips, sawdust and bark which arise during the conversion of logs to sawn timber. Most used as inputs to other wood processing industries, or sold for other uses. Formerly called sawmill residues
DARDNI	Department of Agriculture and Rural Development, Northern Ireland
DEFRA	Department for Environment, Food and Rural Affairs
ECS	Energy Crop Scheme
ERDP	England Rural Development Programme
Establishment	The first five to ten years or formative period that ends once young trees are of sufficient size that, given adequate protection, they are likely to survive at the required stocking.
FAO	United Nations Food and Agriculture Organisation
FC	Forestry Commission: the government department responsible for forestry matters in Great Britain. The responsibility for Forestry is devolved to ministers in the Scottish Parliament and Welsh Assembly, but the executive functions are exercised throughout Great Britain by the FC
FE	Forest Enterprise: the agency of the Forestry Commission responsible for managing the FC forest estate
Fibreboard	Panel material with thickness equal to or greater than 1.5mm, manufactured from lignocellulosic fibres with application of heat and/or pressure. The bond is derived either from the felting of the fibres and their inherent adhesive properties or from a synthetic binder added to the fibres
FNR	Forest Nature Reserve
FRA	Forest Resources Assessment
FS	Northern Ireland Forest Service (an agency of the Department for Agriculture and Rural Development)

FWPS	Farm Woodland Premium Scheme
GB	Great Britain: England, Scotland and Wales
GIS	Geographic Information System
Green tonne	Weight measurement of timber fresh felled before any natural or artificial drying has occurred.
ha	hectare (2.471 acres)
Hardwood	The wood of broadleaved trees, a term sometimes used for the broadleaved trees themselves
High forest	Trees capable of growing to be suitable for timber production (compare with <i>coppice</i>)
LNR	Local Nature Reserve
MDF (medium-density fibreboard)	Wood fibreboard made by a dry process in which the primary bond is derived from a bonding agent, and having a density usually exceeding 600 kg/m ³
Miscanthus	Woody, perennial rhizomatous grasses originating from Asia
Native species	Species that have arrived and inhabited an area naturally, without deliberate assistance by man. For trees and shrubs in the United Kingdom usually taken to mean those present after post-glacial recolonisation and before historic times. Some species are only native in particular regions – hence locally native
Natural regeneration	Regeneration of woodland by natural means, i.e. without sowing or planting
New planting	Establishing woodland on ground that was not woodland in the recent past
NGO	Non-government organisations
NI	Northern Ireland
NIWT	National Inventory of Woodland and Trees
NNR	National Nature Reserve
NT	National Trust
NTS	National Trust for Scotland
ONS	Office for National Statistics
Origin	The original natural genetic source
OSB (oriented strand board)	Multi-layered board made from strands of wood of a predetermined shape and thickness together with a binder. The strands in the external layers are aligned and parallel to the board length or width
OSNW	Other (not ancient) Semi-Natural Woodland
Overbark	The volume of wood including the bark. Can be either standing volume or felled volume
Particleboard (also chipboard)	Panel material manufactured under pressure and heat from particles of wood (wood flakes, chips, shavings, sawdust) in particle form, with the addition of an adhesive
PAWS	Plantation on an ancient woodland site
Plywood	Woodbased panel consisting of an assembly of layers bonded together with the direction of the grain in adjacent layers, usually at right angles. (Not made in the UK)
Pulp	A fibrous material produced by mechanically or chemically reducing wood into their component parts from which pulp, paper and paperboard sheets are formed after proper slushing and treatment or used for dissolving purposes (dissolving pulp or chemical cellulose) to make rayon, plastics, and other synthetic products. Sometimes called wood pulp
Recovered	Either industrial process by-products (e.g. offcuts or fines from a board manufacturing mill, furniture factory, joinery or construction) or from post-consumer waste wood (e.g. pallets, construction waste) after the stage of recovery or reclamation for purposes of recycling
Residues	An older term that was used to describe sawdust, wood chips, slab wood, offcuts, bark etc. that arise from sawmilling and wood processing. The term is deprecated. See co-products
Restocking	The replanting of an area after trees are removed
Roundwood	Logs and small branches (small roundwood)

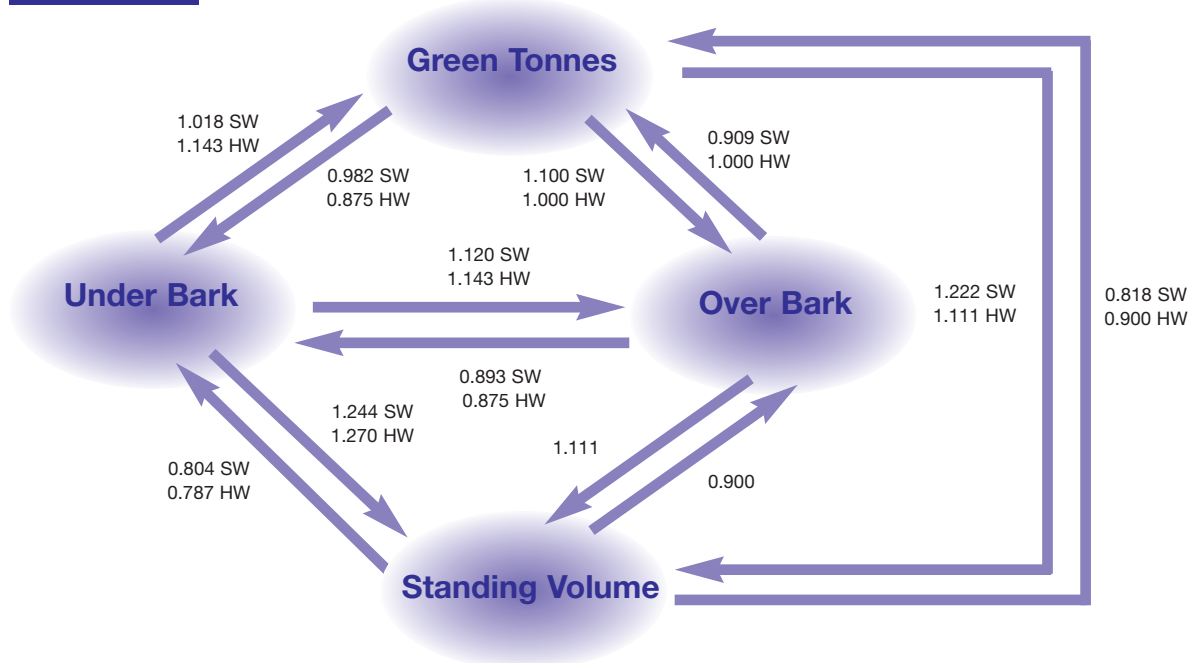
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
Sawlogs	Material of at least 14 cm top diameter that is destined to be sawn into planks or boards
Sawnwood	Sawn timber – timber that has been cut into planks or boards from logs
Scrub	Area of poorly formed trees or bushes unsuitable for conversion to timber
SEERAD	Scottish Executive Environment and Rural Affairs Development
Semi-natural	Woodland with natural characteristics (predominantly native species of trees, ground plants and animals) where wood production is not a primary objective; this term is used rather than natural because the woodland may have originally been planted or have been managed for wood production in the past
Silviculture	The care and cultivation of forest trees
Softwood	The wood of coniferous trees or conifers themselves
SPA	Special Protection Area
SRC	Short rotation coppice (either willow or poplar)
SSSI	Site of special scientific interest (the equivalent designation in Northern Ireland is ASSI)
Standing volume	Measurement of quantity before trees are felled. Usually expressed as cubic metres overbark standing
Thinning	A proportion of stems removed in order to give the best stems space and light to grow into a more valuable crop. This is usually carried out some time after canopy closure and may be repeated at intervals. It is a necessary operation in the production of quality timber. A temporary reduction in standing volume will result
UK	United Kingdom: Great Britain and Northern Ireland
UKFPA	United Kingdom Forest Products Association
UN ECE	United Nations Economic Commission for Europe, responsible for the Temperate and Boreal Forest Resource Assessment and for compiling international statistics on production and trade of wood products
Underbark	The volume of wood excluding the bark
Veneer	A thin layer of wood, produced by peeling or slicing, used for decorative purposes. Veneers are usually applied to less expensive or less attractive substitutes including solid timber, woodbased sheet materials, etc.
WAG	Welsh Assembly Government
WGS	Woodland Grant Scheme.
Woodland	Land under stands of trees with a canopy cover of at least 20% (25% in Northern Ireland), or having the potential to achieve this, including integral open space, and including felled areas that are awaiting restocking
WRME	Wood Raw Material Equivalent – the volume of trees required to produce a wood product. Can be measured underbark or overbark



Appendix E

CONVERSION FACTORS

Figure E.1 Conversion factors between cubic metres and green tonnes



A revised set of factors that indicates the volume of standing tree crop (wood raw material equivalent – WRME) needed to produce one unit of a final product was published in FC Technical Paper 19 *Revised Forecasts of the Supply and Demand for Wood in the UK*. The factor for paper products includes an allowance for the proportion of recycled paper manufactured in the United Kingdom. The factors are shown in Table E.1.

Table E.1 Conversion factors to WRME (standing volume)

Product	Measurement Unit	Factor to WRME
Fuelwood and charcoal	m ³	1.25
Other industrial roundwood	m ³	1.25
Softwood sawnwood	m ³	2.13
Hardwood sawnwood	m ³	2.09
Newsprint	tonnes	4.30
Printing and writing paper	tonnes	
Other paper and paperboard	tonnes	
Plywood	m ³	3.67
Fibreboard	m ³	2.35
Particleboard	m ³	1.61
Veneer sheets	m ³	3.67

Notes

- ¹ The charcoal conversion factor is for volume to volume. About 7.8 m³ of wood is required to make one tonne of charcoal, but one tonne of charcoal is equal to about 6 m³ in volume.
- ² The conversion factor for oriented strand board (OSB) is higher than for other types of particleboard, and the average for particleboard has been constructed by assuming that OSB is 25% of the total.

These factors were not used for Tables 3.1 and 3.2, which used an older set of factors to convert to WRME underbark.



Appendix F

FURTHER INFORMATION

Useful addresses

Economics and Statistics Unit
Forestry Commission
231 Corstorphine Road
Edinburgh
EH12 7AT
www.forestry.gov.uk/statistics

Forest Service
Dundonald House
Upper Newtownards Road
Belfast
BT4 3SB
www.forestryserviceni.gov.uk

Office for National Statistics
1 Drummond Gate
London
SW1V 2QQ
www.statistics.gov.uk

Timber Section
UN/ECE Trade Division
Palais des Nations
CH - 1211 GENEVA 10
Switzerland
www.unece.org/trade/timber/

Forestry Department
Food and Agriculture Organization
of the United Nations
Viale delle Terme di Caracalla
00100 Rome
Italy
www.fao.org/forestry/

European Forest Institute
Torikatu 34
FIN-80100 Joensuu
Finland
www.efi.fi

References and Bibliography

Forestry Commission Economics and Statistics Unit publications

British Timber Statistics 2001 (2002)
Forest Employment Survey 1998/9 (2001)
Forestry Facts and Figures 2002 (2002)
Forest Visitor Surveys 2001, Summary Report (2002)
Public Opinion of Forestry 2001 (2001)
Sawmill Survey 2000 (2001)
UK Indicators of Sustainable Forestry (2002)
First Release: Coniferous Standing Sales Price Index (2002)
First Release: UK Wood Production and Trade (2002)
First Release: Woodland area, planting and restocking (2002)

Other Forestry Commission / Forest Service publications

FC Technical Paper 19; A Whiteman, (1996)
GB: New forecast of Softwood availability; S Smith, J Gilbert & R Coppock, (2001)
1995-99 National Inventory of Woodland & Trees; S Smith & J Gilbert, (2001)

Forest Service Annual Report 2000-2001; Forest Service, (2001)

Other publications

Forest Products Trade Flow Data 1998-1999, Timber Bulletin, ECE/TIM/BULL/53/5, Volume LIII (2000), No. 5;
United Nations Economic Commission for Europe and Food and Agriculture Organization of the United Nations

IPD UK Forestry Index 2002; Investment Property Databank

Overseas Trade Statistics (OTS Q, Fourth Quarter 2001 and OTS 1, December 2001); HM Customs and Excise, published by, and available from, The Stationery Office

Protected Forest Areas in the UK, (2001), for World Wide Fund for Nature and Forestry Commission;
S Pryor & G Peterken.

State of Worlds Forests 2001, Food and Agriculture Organization of the United Nations

1998 UK Leisure Day Visits Survey Technical Report, for a consortium of national agencies responsible for recreation and tourism in the UK; National Centre for Social Research.