

Forestry Statistics 2016

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



Chapter 2: UK Grown Timber

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2 UK-Grown Timber

Introduction

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

Estimates for England, Wales, Scotland and Northern Ireland are included, in addition to UK totals, where possible. International comparisons of timber production are available in the International Forestry chapter. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Timber originating from conifers is known as softwood and that from broadleaves is known as hardwood. Please refer to the Glossary for a definition of other terms used in this chapter.

Figures for 2015 were previously published in "UK Wood Production and Trade: 2015 Provisional Figures", released on 19 May 2016. Some figures for the latest year have been revised from those previously published. For further details on revisions, see the Timber section of the Sources chapter.

A copy of all timber tables is available to download as an Excel spreadsheet from the Tables for Download page. Longer time series are also available for some tables. These can be accessed from our [Data Downloads web page](#)

Key findings

The main findings for 2015 are (with percentage changes from 2014):

Removals (harvesting) of UK roundwood:

- 10.8 million green tonnes of softwood (-6%);
- 0.5 million green tonnes of hardwood (-1%).

Deliveries of UK roundwood to wood processors and others:

- Total: 10.8 million green tonnes of roundwood (softwood and hardwood) (-6%), of which:
- Sawmills: 6.2 million green tonnes (-8%);
- Wood-based panels: 1.3 million green tonnes (+4%);
- Integrated pulp and paper mills: 0.4 million green tonnes (-6%);
- Woodfuel: 2.0 million green tonnes (+5%);
- Other uses, including round fencing, shavings and exports of roundwood: 0.8 million green tonnes (-20%).

Production of wood products in the UK included:

- 3.5 million cubic metres of sawnwood (-7%);
- 3.1 million cubic metres of wood-based panels (unchanged);
- 4.0 million tonnes of paper and paperboard (-10%).

2.1 Wood production

Wood production (also referred to as removals) refers to the harvesting of roundwood (trunk and branch wood) from coniferous (softwood) and non-coniferous (hardwood) trees. Figures are generally expressed here in green tonnes (weight when freshly felled).

Removals should not be confused with deliveries, which are the quantities of UK-grown roundwood that is delivered to processors (mills) or for other uses (such as woodfuel and exports). Deliveries statistics are presented in Tables 2.5 and 2.6. A comparison of removals and deliveries of UK softwood roundwood is provided in the Sources chapter.

The figures on removals of UK roundwood are used to monitor trends in the UK forest sector. The data is also used alongside figures for standing volume (the volume of standing trees) and increment (the growth rate of standing trees) to compile natural capital accounts for inclusion in the UK Environmental Accounts.

The data are derived from a number of sources:

- FC/NRW/FS figures are obtained from Forestry Commission, Natural Resources Wales and Forest Service administrative systems;
- Private sector softwood figures are obtained from the Private Sector Softwood Removals Survey;
- Total hardwood figures are estimated from hardwood deliveries figures, which are compiled from surveys of the UK-grown timber industry, trade associations and expert estimates.

2.1.1 Summary: wood production

It is estimated that a total of 11.3 million green tonnes of roundwood was removed from UK woodlands in 2015. This represented a 6% decrease from the 2014 figure of 12.0 million green tonnes.

Softwood accounted for most (95%) removals from UK woodland and totalled 10.8 million green tonnes in 2015 (Table 2.1). This represented a 6% decrease on the previous year's figure. Hardwood removals totalled 0.5 million green tonnes in 2015, a 1% decrease from 2014.

Private sector woodlands accounted for 57% of softwood production and 87% of hardwood production.

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Wood Production

Table 2.1 Wood production, 2006-2015

Year	Softwood			Hardwood ³		
	FC/NRW/ FS ¹ woodland	Private sector ² woodland	Total softwood	FC/NRW/ FS ¹ woodland	Private sector ² woodland	Total hardwood
thousand green tonnes						
2006	4 582	3 661	8 243	45	392	438
2007	4 653	4 083	8 736	40	400	440
2008	4 415	3 823	8 238	43	388	431
2009	5 126	3 266	8 392	87	449	536
2010	4 625	4 633	9 258	70	465	535
2011	4 870	5 186	10 056	75	465	541
2012	4 836	5 259	10 095	55	478	532
2013	5 084	5 852	10 936	78	451	529
2014	4 900	6 531	11 431	71	461	532
2015	4 746	6 028	10 774	74	454	528

Source: Forestry Commission, Natural Resources Wales, Forest Service, industry surveys, industry associations.

Notes:

1. FC: Forestry Commission (England, Scotland, and until March 2013, Wales), NRW: Natural Resources Wales (from April 2013), FS: Forest Service (Northern Ireland).

2. Private sector: removals from all other woodland (including some publicly owned woodland).

3. Most hardwood production in the UK comes from private sector woodland; the figures are estimates based on reported deliveries to wood processing industries and others.

Data: Longer time series of the above table, including estimates by country (England/Wales/Scotland/Northern Ireland) are available from the [Data Downloads webpage](#).

Within the 10.8 million green tonnes of softwood removed from UK woodlands in 2015, approximately 860 thousand green tonnes were removed as required by plant health legislation. This comprised around 720 thousand green tonnes from FC/NRW/FS woodland and around 140 thousand green tonnes from private sector woodland. The total of around 860 thousand green tonnes represents a 5% increase from the 2014 estimate of approximately 820 thousand green tonnes.

Softwood removals required by plant health legislation are expected to consist mainly of Japanese larch that is suspected of being infected by *Phytophthora ramorum*. However a small volume of species other than larch is likely to be included in these figures.

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Statistics on the number of sites where a Statutory Plant Health Notice has been served in the UK, and the area required to be felled under these Notices, can be found in the Statutory Plant Health Notices section of Chapter 1.

2.1.2 Origin of private sector softwood removals

It is estimated that 70% of all softwood removals from private sector woodlands were harvested in Scotland, 18% in England, 11% in Wales and the remainder in Northern Ireland in 2015 (Table 2.2).

Over the past ten years, Wales and England have shown the biggest percentage increase, with private sector removals in 2015 around double the levels in 2006. Removals from Scotland have increased by 53% over the same period, and removals from Northern Ireland have increased by 20%.

Table 2.2 Private sector softwood removals by country, 2006-2015

Year	England	Wales	Scotland	Northern Ireland	UK
thousand green tonnes					
2006	568	315	2 755	23	3 661
2007	612	382	3 059	29	4 083
2008	638	333	2 827	25	3 823
2009	533	321	2 388	24	3 266
2010	668	429	3 479	57	4 633
2011	738	501	3 894	53	5 186
2012	843	609	3 767	40	5 259
2013	924	691	4 213	23	5 852
2014	1 082	739	4 678	33	6 531
2015	1 109	686	4 205	28	6 028

Source: Private Sector Softwood Removals Survey

Data: Longer time series of the above table, including estimates for hardwood removals and for removals from FC/NRW/FS woodlands are available from the [Data Downloads web page](#).

2.1.3 Origin of FC/NRW/FS removals

Information on removals from Forestry Commission (FC), Natural Resources Wales (NRW) and Forest Service (FS) woodlands is obtained from administrative systems.

A total of 4.7 million green tonnes of softwood was removed from FC/NRW/FS woodlands in 2015, a 3% decrease from the 2014 figure (Table 2.3). Over one half (56%) of FC/NRW/FS softwood removals in 2015 occurred in Scotland, 22% in England, 15% in Wales and 8% in Northern Ireland.

Table 2.3 FC/NRW/FS softwood removals by country, 2006-2015

Year	England	Wales	Scotland	Northern Ireland	UK
thousand green tonnes					
2006	1 152	612	2 454	364	4 582
2007	1 211	584	2 496	363	4 653
2008	1 100	556	2 362	398	4 415
2009	1 213	717	2 773	423	5 126
2010	1 142	644	2 434	405	4 625
2011	1 185	689	2 566	430	4 870
2012	1 154	663	2 627	392	4 836
2013	1 188	693	2 819	384	5 084
2014	1 064	722	2 749	365	4 900
2015	1 047	690	2 644	365	4 746

Source: Forestry Commission, Natural Resources Wales, Forest Service.

Data: Longer time series of the above table, including estimates for hardwood removals and for removals from private sector woodlands are available from the [Data Downloads web page](#).

2.1.4 Softwood availability forecast

The National Forest Inventory "50-year forecast of softwood availability" and "50-year forecast of hardwood availability" were published in April 2014. They are forecasts of potential availability rather than production, as they do not take account of management objectives, financial factors or the state of markets, all of which will affect the level of and timing of harvesting.

More information on the forecasts and detailed breakdowns are available on the National Forest Inventory web pages at www.forestry.gov.uk/inventory.

The forecasts are outside the scope of National Statistics, but are provided here to give more context to the data on wood production.

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As these forecasts were produced in 2014, they do not take into account any of the findings from the ['preliminary estimates of the changes in canopy cover in British woodlands between 2006 and 2015'](#), released in August 2016.

The key assumptions underpinning the headline softwood forecast scenario include:

- Private woodland is managed in a way that maximises total production.
- The estate of the Forestry Commission and Natural Resources Wales is managed according to current management plans; note both Forestry Commission Scotland and Natural Resources Wales intend to cap production below the level set out in Table 2.4a.

Under the above scenario, softwood availability for Great Britain averages 15.2 million cubic metres a year over the 50-year period 2013 to 2061 (Table 2.4a). The majority (66%) of this softwood is projected to come from private sector woodland.

Table 2.4a Softwood availability forecasts

Annual average in the period	England	Wales	Scotland	GB
thousand cubic metres overbark standing				
FC/NRW¹				
2013 - 2016	1 632	1 082	4 220	6 933
2017 - 2021	1 330	991	3 658	5 980
2022 - 2026	1 211	895	3 516	5 622
2027 - 2031	1 159	778	3 789	5 726
2032 - 2036	1 066	934	3 215	5 216
2037 - 2041	1 013	794	2 936	4 744
2042 - 2046	1 055	531	2 730	4 316
2047 - 2051	1 014	585	3 280	4 879
2052 - 2056	828	495	2 886	4 209
2057 - 2061	1 250	679	2 339	4 269
Private sector²				
2013 - 2016	2 945	901	5 708	9 554
2017 - 2021	3 225	949	6 997	11 171
2022 - 2026	2 903	1 087	7 830	11 820
2027 - 2031	2 986	775	8 910	12 671
2032 - 2036	2 850	736	8 847	12 433
2037 - 2041	2 224	679	8 133	11 035
2042 - 2046	1 848	490	6 527	8 865
2047 - 2051	1 523	521	4 986	7 030
2052 - 2056	1 431	734	5 679	7 845
2057 - 2061	1 603	694	5 627	7 924

Table 2.4a continues on the next page.

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Table 2.4a Softwood availability forecasts

Annual average in the period	England	Wales	Scotland	GB
Total softwood				
2013 - 2016	4 577	1 983	9 928	16 487
2017 - 2021	4 555	1 940	10 656	17 151
2022 - 2026	4 113	1 982	11 346	17 442
2027 - 2031	4 145	1 553	12 700	18 398
2032 - 2036	3 916	1 670	12 062	17 649
2037 - 2041	3 237	1 473	11 069	15 779
2042 - 2046	2 903	1 021	9 257	13 181
2047 - 2051	2 537	1 106	8 266	11 909
2052 - 2056	2 259	1 229	8 566	12 054
2057 - 2061	2 853	1 373	7 966	12 193

Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014)³

Notes:

1. The estate of the Forestry Commission and Natural Resources Wales is assumed to be managed according to current management plans; note both Forestry Commission Scotland and Natural Resources Wales intend to cap production below the level set out in Table 2.4a.

2. Private woodland is assumed to be managed in a way that maximises total production.

3. More recent softwood availability forecasts, covering a 25 year period only, are available from the NFI web pages at www.forestry.gov.uk/fr/beeH-a2uf3d.

These figures are outside the scope of National Statistics

2.1.5 Hardwood availability forecast

The key assumptions underpinning the headline hardwood forecast scenario include:

- In private woodland, harvesting is limited to areas with evidence of recent thinning activity.
- The estate of the Forestry Commission and Natural Resources Wales is managed according to current management plans.

Under the above scenario, hardwood availability for Great Britain averages 1.6 million cubic metres a year over the 50-year period (Table 2.4b). The majority (89%) of this hardwood is projected to come from private sector woodland. If these woodlands were managed to maximise total production, the forecast would be much higher, as illustrated in the full National Forest Inventory report available at www.forestry.gov.uk/inventory.

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Table 2.4b Hardwood availability forecasts

Annual average in the period	England	Wales	Scotland	GB
thousand cubic metres overbark standing				
FC/NRW¹				
2013 - 2016	126	12	9	147
2017 - 2021	92	11	9	111
2022 - 2026	110	17	10	137
2027 - 2031	86	12	10	108
2032 - 2036	99	14	15	128
2037 - 2041	129	19	24	172
2042 - 2046	189	56	31	276
2047 - 2051	116	19	40	175
2052 - 2056	134	28	45	208
2057 - 2061	146	28	64	237
Private sector²				
2013 - 2016	122	20	83	225
2017 - 2021	333	46	139	519
2022 - 2026	538	77	193	808
2027 - 2031	720	100	233	1 054
2032 - 2036	825	115	262	1 202
2037 - 2041	1 047	153	367	1 567
2042 - 2046	1 915	243	586	2 743
2047 - 2051	1 678	227	675	2 580
2052 - 2056	1 254	198	554	2 006
2057 - 2061	645	139	343	1 127
Total hardwood				
2013 - 2016	249	32	92	373
2017 - 2021	425	58	148	631
2022 - 2026	648	94	203	945
2027 - 2031	806	112	244	1 162
2032 - 2036	923	130	277	1 330
2037 - 2041	1 176	171	391	1 738
2042 - 2046	2 104	299	616	3 019
2047 - 2051	1 795	246	715	2 755
2052 - 2056	1 388	227	599	2 214
2057 - 2061	791	167	406	1 364

Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014)

See also the notes below.

Chapter2: UK Grown Timber Deliveries of UK-Grown roundwood

Notes (Table 2.4b):

1. The estate of the Forestry Commission and Natural Resources Wales is assumed to be managed according to current management plans.

2. In private woodland, harvesting is assumed to be limited to areas with evidence of recent thinning activity. If these woodlands were managed to maximise total production, the forecast would be much higher, as illustrated in the full National Forest Inventory report available at www.forestry.gov.uk/inventory.

These figures are outside the scope of National Statistics

2.2 Deliveries of UK-grown roundwood

Figures for deliveries relate to the quantity of UK-grown roundwood that is delivered to processors (mills) or for other uses (such as woodfuel and exports). They are expressed in green tonnes (weight when freshly felled). Statistics on roundwood deliveries are used to monitor trends in the supply of, and demand for, UK-grown wood.

Deliveries should not be confused with removals, which are the quantities of roundwood that is harvested from UK woodland. Removals statistics are presented in Tables 2.1 to 2.3. A comparison of removals and deliveries of UK softwood roundwood is provided in the Sources chapter.

The data are derived from a number of sources, including surveys of the UK-grown timber industry, trade associations and expert estimates.

2.2.1 Softwood deliveries

In 2015, deliveries of UK roundwood (softwood and hardwood) totalled 10.8 million green tonnes, a 6% decrease from the previous year (Tables 2.5 and 2.6).

Most UK roundwood deliveries (95%) were softwood and totalled 10.3 million green tonnes in 2015 (Table 2.5). 6.2 million green tonnes (60% of UK softwood deliveries) were used by sawmills, an 8% decrease from the previous year. A further 1.6 million green tonnes were used for wood fuel (7% increase), 1.3 million green tonnes were used to produce wood-based panels (4% increase), 0.4 million green tonnes by integrated pulp and paper mills (a 6% decrease), and 0.7 million green tonnes for other uses (22% decrease), including round fencing, shavings and exports of roundwood.

The increase in softwood deliveries for woodfuel in recent years reflects an increase in wood use for heating and energy production in the UK (see the Sources chapter for further information).

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Deliveries of UK-Grown roundwood

Table 2.5 Deliveries of UK-grown softwood, 2006-2015

Year	Sawmills	Pulp mills	Wood-based panels	Fencing	Woodfuel ¹	Other ²	Exports	Total
thousand green tonnes								
2006	5 210	481	1 365	274	100	114	643	8 187
2007	5 565	472	1 362	319	200	113	759	8 790
2008	4 933	515	1 219	359	300	128	733	8 187
2009	5 133	511	1 135	367	650	160	347	8 304
2010	5 616	428	1 375	349	900	135	467	9 269
2011	5 859	453	1 417	363	900	145	585	9 722
2012	6 073	461	1 269	338	1 000	154	535	9 831
2013	6 407	465	1 263	332	1 250	191	640	10 547
2014	6 725	465	1 283	317	1 500	188	437	10 915
2015	6 166	435	1 334	298	1 600	164	276	10 273

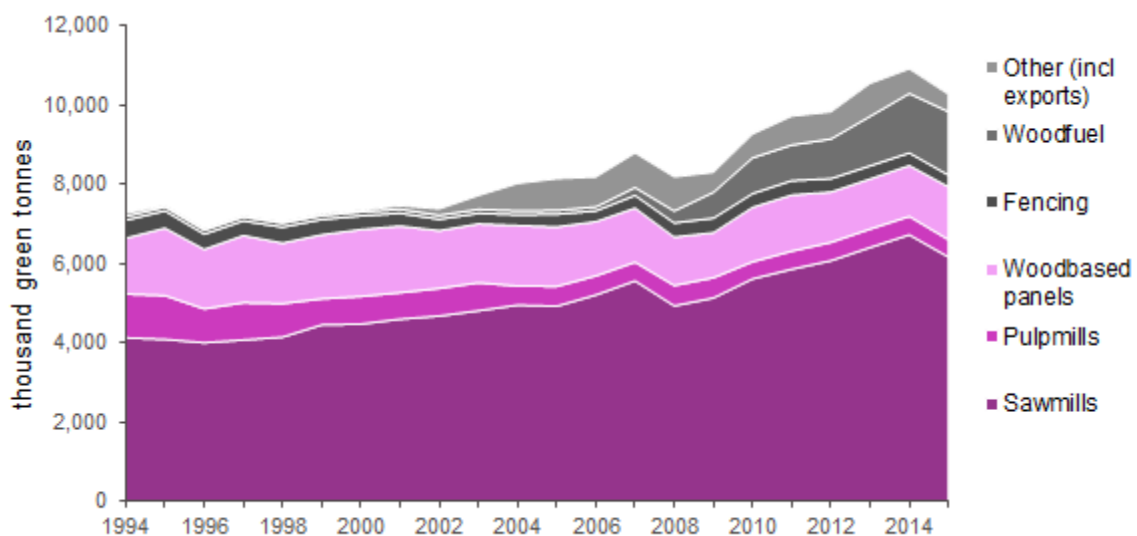
Source: industry surveys, industry associations.

Notes:

1. Woodfuel derived from stemwood, includes estimates of roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and from 2008 made use of woodfuel data reported in the Private Sector Softwood Removals Survey.

2. Includes shavings and poles. Quantities for some uses are estimates by the Expert Group on Timber and Trade Statistics.

Figure 2.1 Deliveries of UK-grown softwood



Source: industry surveys, industry associations.

2.2.2 Hardwood deliveries

There was a total of 0.5 million green tonnes of UK hardwood deliveries in 2015 (Table 2.6). The majority of UK hardwood deliveries (76% in 2015) were used for woodfuel.

Table 2.6 Deliveries of UK-grown hardwood, 2006-2015

Year	Sawmills	Pulp mills	Wood-based panels	Woodfuel ¹	Other ²	Total
thousand green tonnes						
2006	64	54	1	250	70	438
2007	66	0	5	300	69	440
2008	66	0	2	300	63	431
2009	76	0	1	400	59	536
2010	75	0	1	400	59	535
2011	81	0	1	400	59	541
2012	75	0	2	400	55	532
2013	74	0	0	400	55	529
2014	77	0	0	400	55	532
2015	73	0	0	400	55	528

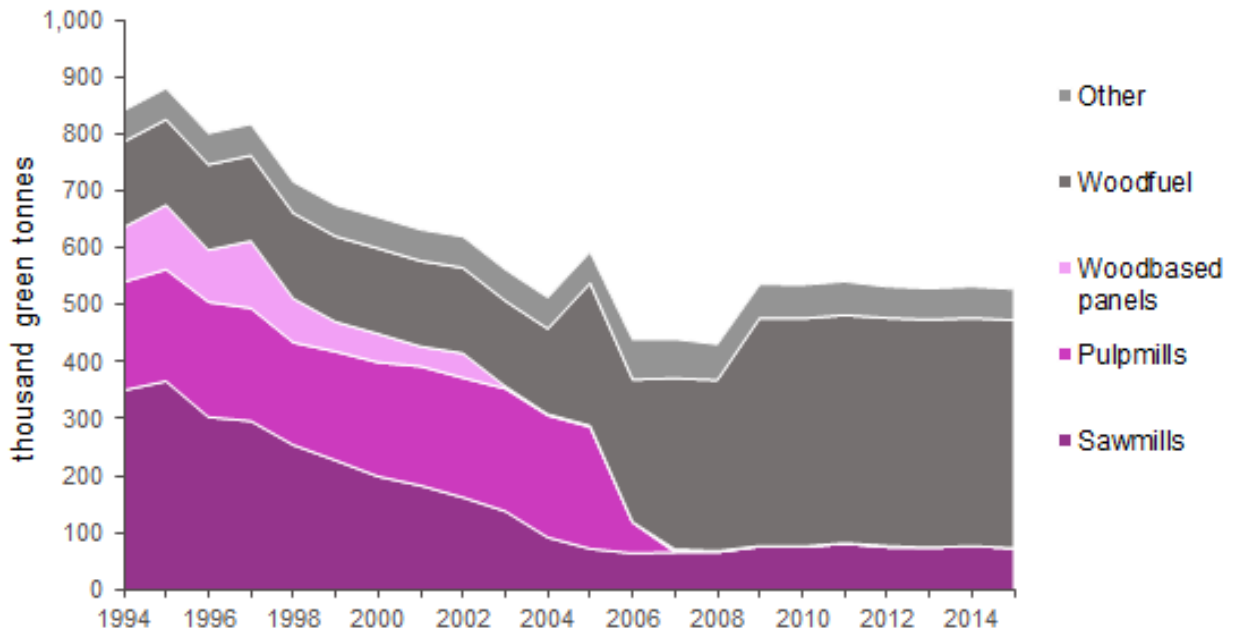
Source: industry surveys, industry associations.

Notes:

1. Woodfuel derived from stemwood, includes estimated roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics. Woodfuel includes wood for charcoal; charcoal production in the UK is estimated to be about 5 thousand tonnes, with about 7 green tonnes of wood required to make one tonne of charcoal.

2. Includes round fencing and roundwood exports. Quantities for hardwood fencing and some other uses are estimates by the Expert Group on Timber and Trade Statistics.

Figure 2.2 Deliveries of UK-grown hardwood



Source: industry surveys, industry associations.

Notes:

1. Other includes round fencing and roundwood exports.

2.3 Sawmills - All Mills

Data are collected by the Forestry Commission in an annual Sawmill Survey. The following section includes summary results, covering number of mills, consumption and production are available for all mills. In addition, there are also more detailed figures for larger mills only (sawmills producing at least 10 thousand m³ sawnwood).

Consumption units are given in green tonnes. For production, the units used are m³ sawnwood. For conversion factors between different units, see the Timber section of the Sources chapter.

2.3.1 Summary: consumption & production

In 2015, sawmills in the UK consumed a total of 6.3 million green tonnes of softwood, an 8% decrease from 2014 (Table 2.7). A further 0.1 million green tonnes of hardwood were consumed by UK sawmills in 2015. Most of the logs, 6.2 million green tonnes softwood and 0.1 million green tonnes hardwood, were UK grown.

A total of 3.5 million cubic metres of sawnwood was produced in the UK in 2015, a 7% decrease from 2014.

For softwood, there was a significant drop in roundwood consumption and sawnwood production between 2007 and 2008, following the start of the financial crisis. Sawnwood imports also decreased at this time (see table 3.4). Since then the levels of softwood consumption and sawn softwood production in the UK have recovered and, since 2011, exceed the previous peak in 2007 (although imports remain at a lower level).

In addition to producing sawnwood, sawmills also generate other products. Further information on other products produced by larger mills are provided in Tables 2.18 and 2.18a.

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Sawmills – All Mills

Table 2.7 Consumption and production by UK sawmills, 2006-2015

Year	Softwood			Hardwood				
consumption: thousand green tonnes, production: thousand m ³ sawnwood								
	Consumption of			Production	Consumption of			Production
	UK grown	Imported	Total		UK grown	Imported	Total	
2006	5 210	266	5 476	2 859	64	22	85	45
2007	5 565	263	5 828	3 079	66	19	85	44
2008	4 933	174	5 107	2 755	66	20	86	44
2009	5 133	158	5 291	2 809	76	19	95	48
2010	5 616	103	5 719	3 053	75	19	94	48
2011	5 859	125	5 984	3 227	81	20	100	52
2012	6 073	124	6 198	3 361	75	17	93	48
2013	6 407	126	6 532	3 536	74	13	88	46
2014	6 725	159	6 884	3 716	77	14	91	47
2015	6 166	182	6 347	3 449	73	14	86	44

Source: Sawmill Survey

2.3.2 Number of sawmills by size

A total of 171 sawmills processed UK roundwood in 2015 (Table 2.8). Around three quarters (73%) of sawmills produced less than 10 thousand m³ sawnwood (softwood and hardwood) during the year.

Over the past ten years, there has been a reduction in the number of mills producing less than 25 thousand m³ sawnwood, while the number of mills has increased in the largest size category.

Table 2.8 Number of sawmills by size of mill, 2006-2015

Year	Size of mill (total production) ¹							Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50- < 100	100+	
2006	84	59	19	21	10	13	7	213
2007	82	54	17	20	12	12	8	205
2008	76	54	17	20	11	12	7	197
2009	79	50	14	23	10	11	8	195
2010	73	52	13	24	8	10	9	189
2011	70	51	13	23	9	7	12	185
2012	69	49	14	19	11	8	11	181
2013	67	46	14	17	13	6	13	176
2014	69	41	14	17	13	8	12	174
2015	66	42	16	17	12	6	12	171

Source: Sawmill Survey. See also notes below.

Chapter2: UK Grown Timber Sawmills – All Mills

Notes (Table 2.8):

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

Data: Longer time series of the above table are available from the [Data Downloads web page](#).

2.3.3 Number of sawmills by country

Around one half (53%) of the 171 active sawmills in 2015 were in England, around one third (33%) were in Scotland, 9% in Wales and 5% in Northern Ireland (Table 2.9).

Table 2.9 Number of sawmills by country, 2006-2015

Year	England	Wales	Scotland	Northern Ireland	UK
2006	108	21	71	13	213
2007	105	20	70	10	205
2008	103	18	68	8	197
2009	101	17	68	9	195
2010	98	17	65	9	189
2011	96	16	64	9	185
2012	95	15	62	9	181
2013	92	15	60	9	176
2014	92	15	58	9	174
2015	91	15	56	9	171

Source: Sawmill Survey

Data: Longer time series of the above table, and for mills in England by region, are available from the [Data Downloads web page](#).

2.3.4 Number of sawmills by type of wood sawn

Around two thirds (65%) of the 171 active sawmills in 2015 processed softwood only (Table 2.10). A further 29% processed both softwood and hardwood, and the remaining 5% processed only hardwood.

Table 2.10 Number of sawmills by type of wood sawn, 2006-2015

Year	Softwood only	Hardwood only	Both	Total
2006	142	19	52	213
2007	134	16	55	205
2008	134	12	51	197
2009	130	10	55	195
2010	122	10	57	189
2011	120	10	55	185
2012	118	11	52	181
2013	118	11	47	176
2014	115	9	50	174
2015	112	9	50	171

Source: Sawmill Survey

2.3.5 Consumption of softwood by size of mill

Despite accounting for only 27% of all sawmills (see Table 2.8), those with total annual sawnwood production of 10 thousand cubic metres or more accounted for 94% of the total softwood consumed by sawmills in 2015 (Table 2.11).

Table 2.11 Consumption of softwood by size of mill, 2006-2015

Year	Size of mill (total production) ¹							Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 - < 100	100+	
thousand green tonnes								
2006	29	200	243	613	661	1 694	2 036	5 476
2007	30	184	203	585	840	1 639	2 346	5 828
2008	31	197	190	599	660	1 548	1 881	5 107
2009	35	183	163	664	577	1 416	2 253	5 291
2010	33	188	155	744	537	1 373	2 689	5 719
2011	32	180	156	685	615	830	3 486	5 984
2012	33	176	184	539	738	1 133	3 395	6 198
2013	36	177	177	476	804	777	4 085	6 532
2014	36	150	173	486	833	1 090	4 117	6 884
2015	31	158	204	553	795	801	3 805	6 347

Source: Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

Data: Longer time series of the above table are available from the [Data Downloads web page](#).

2.3.6 Consumption of softwood by country

Mills in Scotland consumed around one half (51%) of the 6.3 million green tonnes of softwood delivered to UK sawmills in 2015 (Table 2.12). A further 30% was consumed by mills in England, 10% in Wales and 8% in Northern Ireland.

Table 2.12 Consumption of softwood by country, 2006-2015

Year	England	Wales	Scotland	Northern Ireland	UK
thousand green tonnes					
2006	1 603	757	2 430	686	5 476
2007	1 674	759	2 683	713	5 828
2008	1 533	599	2 415	560	5 107
2009	1 548	538	2 672	532	5 291
2010	1 694	583	2 913	528	5 719
2011	1 726	634	3 082	543	5 984
2012	1 821	654	3 195	528	6 198
2013	1 879	702	3 420	532	6 532
2014	1 982	711	3 661	530	6 884
2015	1 915	655	3 247	531	6 347

Source: Sawmill Survey

Data: Longer time series of the above table, and for mills in England by region, are available from the [Data Downloads web page](#).

2.3.7 Production of sawn softwood by size of mill

UK sawmills produced a total of 3.4 million cubic metres of sawn softwood in 2015, a 7% decrease from the 2014 figure (Table 2.13).

Sawmills with total annual sawnwood production of 10 thousand cubic metres or more accounted for 94% of the total sawn softwood produced by sawmills in 2015.

Table 2.13 Production of sawn softwood by size of mill, 2006-2015

Year	Size of mill (total production) ¹							Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 - < 100	100+	
thousand cubic metres								
2006	17	118	128	326	359	880	1 031	2 859
2007	17	109	111	315	437	842	1 248	3 079
2008	18	116	104	315	369	797	1 037	2 755
2009	20	108	89	352	326	727	1 187	2 809
2010	19	109	84	395	304	693	1 450	3 053
2011	18	105	86	374	335	443	1 867	3 227
2012	18	103	95	314	393	564	1 874	3 361
2013	20	103	93	287	429	404	2 200	3 536
2014	20	88	91	282	448	563	2 224	3 716
2015	18	92	111	296	466	422	2 045	3 449

Source: Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

Data: Longer time series of the above table are available from the [Data Downloads web page](#).

2.3.8 Production of sawn softwood by country

1.8 million cubic metres (52%) of sawn softwood was produced by sawmills in Scotland in 2015 (Table 2.14). A further 31% was produced by mills in England, 9% in Wales and the remaining 8% in Northern Ireland.

Whilst production of sawn softwood by mills in Scotland and England had recovered following the financial crisis to exceeded their 2007 peak levels by 2010, production by mills in Wales and Northern Ireland continues to remain lower.

Table 2.14 Production of sawn softwood by country, 2006-2015

Year	England	Wales	Scotland	Northern Ireland	UK
2006	853	378	1 297	332	2 859
2007	884	385	1 452	359	3 079
2008	846	303	1 313	293	2 755
2009	860	267	1 413	268	2 809
2010	927	291	1 560	275	3 053
2011	954	316	1 666	291	3 227
2012	1 001	326	1 747	288	3 361
2013	1 026	349	1 873	289	3 536
2014	1 091	354	1 985	286	3 716
2015	1 055	324	1 787	284	3 449

Source: Sawmill Survey

Data: Longer time series of the above table, and for mills in England by region, are available from the [Data Downloads web page](#).

2.4 Sawmills - Larger Mills

The following, more detailed, tables are available for larger mills (those producing at least 10 thousand m³ sawnwood annually) only. These mills are estimated to account for 94% of all sawn softwood produced in 2015 (see Table 2.13).

The tables cover the following topics:

- Source of softwood logs;
- Sawn softwood product markets;
- Other softwood products; and
- Sawmill employment.

2.4.1 Softwood consumption and production

Additional information for 2015 was collected from mills that produced more than 10 thousand m³ of sawnwood.

Total softwood consumption by the 47 sawmills covered by the detailed sawmill survey was 6.0 million green tonnes in 2015 (Table 2.15). Sawn softwood production was 3.2 million m³ and other softwood products (chips, bark, sawdust, etc) amounted to 3.1 million tonnes.

Sawmills in Scotland accounted for over one half (52%) of all softwood consumption by larger mills. A further 29% was consumed by mills in England, 10% in Wales and the remaining 9% in Northern Ireland.

Table 2.15 Larger mills¹, 2015: softwood consumption and production

	England	Wales	Scotland	Northern Ireland	UK
Number of mills	16	5	23	3	47
Consumption (thousand green tonnes)	1 709	616	3 115	514	5 954
Sawnwood production (thousand m³)	937	304	1 713	275	3 229
Other products (thousand tonnes)	786	352	1 682	286	3 106

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).

2.4.2 Source of softwood logs

Of all softwood sawlogs consumed by larger sawmills in 2015, 58% came from Scotland, 21% from England, 14% from Wales and 4% from Northern Ireland (Tables 2.16 and 2.16a). The remaining 3% were imported from other countries. This was similar to the breakdown by source in previous years.

97% of softwood sawlogs used by Scottish mills in 2015 came from Scotland. The corresponding proportions of mills' log use coming from within the same country were 65% for England, 80% for Wales and 51% for Northern Ireland.

Table 2.16 Larger mills¹, 2015: source of softwood logs

Source	England	Wales	Scotland	Northern Ireland	UK
thousand green tonnes					
England	1 108	46	86	0	1 240
Wales	320	490	0	0	810
Scotland	281	80	3 029	69	3 459
Northern Ireland	0	0	0	263	263
Total UK logs	1 709	616	3 115	332	5 772
Other countries	0	0	0	182	182
Total log consumption	1 709	616	3 115	514	5 954

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).

Table 2.16a Larger mills¹, 2011-2015: source of softwood logs

Year	Source					Total
	England	Wales	Scotland	Northern Ireland	Other countries	
per cent of total softwood consumption						
2011	21	13	59	5	2	100
2012	22	13	57	5	2	100
2013	22	13	58	5	2	100
2014	22	13	58	4	2	100
2015	21	14	58	4	3	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).

2.4.3 Sawn softwood product markets

In 2015, 38% of sawn softwood produced by larger sawmills was used for fencing, 30% for packaging and pallets, 26% for construction, and the remaining 6% went to all other markets (Tables 2.17 and 2.17a).

Table 2.17 Larger mills¹, 2015 sawn softwood product markets

Product market	England	Wales	Scotland	Northern Ireland	UK
per cent of total softwood product markets					
Construction	13	16	34	36	26
Fencing	50	32	31	44	38
Packaging/ pallets	28	48	30	20	30
Other	9	4	5	0	6
Total	100	100	100	100	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).

Table 2.17a Larger mills¹, 2011-2015: sawn softwood product markets

Year	Product market				Total
	Construction	Fencing	Packaging/ pallets	Other	
per cent of total softwood product markets					
2011	28	36	33	3	100
2012	29	34	32	4	100
2013	29	34	32	5	100
2014	27	37	30	5	100
2015	26	38	30	6	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).

2.4.4 Other softwood products

Sawmills were asked to estimate the quantity of other products (excluding sawnwood) that they generated from softwood and sold to different industries. The figures presented below are based on these estimates.

Other softwood products amounted to 3.1 million tonnes in 2015 (Table 2.15). Over two fifths (44%) of other softwood products were sold to wood processing industries in the form of chips and 14% were sold to these industries in other formats (Table 2.18). A further 22% of other products were sold to bio-energy (including pellet manufacturers) and 18% were sold to others.

Table 2.18 Larger mills¹, 2015: other softwood products

Destination and type of product²	England	Wales	Scotland	Northern Ireland	UK
per cent of total other softwood products					
Sold to wood processing industries					
Wood chips	52	60	44	0	44
Bark	0	0	1	0	0
Sawdust & other	13	18	16	0	14
Total	65	78	61	0	59
Sold to bio-energy (incl pellet manufacturers)					
Wood chips	14	3	14	53	16
Bark	1	0	0	4	1
Sawdust & other	2	3	6	21	6
Total	17	6	19	78	22
Other sales					
Wood chips	3	0	5	13	5
Bark	8	8	9	6	8
Sawdust & other	7	5	4	2	5
Total	17	14	18	22	18

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).
2. The table does not show internal use for heat/energy, sales of firewood and other products disposed of as waste, which together accounted for around 1% of other softwood products.

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The proportions of other products that were sold to different industries have changed little over the last five years (Table 2.18a).

Table 2.18a Larger mills¹, 2011-2015: other softwood products

Year	Destination				Total
	Sold to wood processing industries	Sold to bio-energy (incl pellet manufacturers)	Other sales	Other ²	
per cent of total other softwood products					
2011	60	20	19	1	100
2012	59	21	18	1	100
2013	61	21	17	2	100
2014	57	23	18	2	100
2015	59	22	18	1	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).
2. Other includes internal use for heat/energy, sales of firewood and other products disposed of as waste.

2.4.5 Sawmill employment

There were estimated to be 3.2 thousand full-time equivalent staff employed directly by sawmills producing at least 10 thousand m³ of sawnwood in 2015 (Tables 2.19 and 2.19a). This represented a 3% decrease on the total for 2014, but was higher than in previous years.

Table 2.19 Larger mills¹, 2015: sawmill employment

Employment type	England	Wales	Scotland	Northern Ireland	UK
full-time equivalents					
Direct					
Line & production workers	875	248	1 336	251	2 710
Managerial & administrative staff	178	27	178	62	444
Haulage of logs to the mill	31	0	19	4	54
Total direct employment	1 084	275	1 533	317	3 208
Others²					
Line & production workers	36	6	23	1	66
Managerial & administrative staff	1	0	0	0	1
Total contract employment	37	6	23	1	67

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).
2. Excludes haulage employment on contract.

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Table 2.19a Larger mills¹, 2011-2015: sawmill employment

Employment	Line & production workers	Managerial & administrative staff	Haulage of logs to the mill	Total employment
full-time equivalents				
Direct				
2011	2 486	435	71	2 992
2012	2 573	426	67	3 065
2013	2 552	413	53	3 018
2014	2 805	440	57	3 302
2015	2 710	444	54	3 208
Others²				
2011	86	3	..	89
2012	69	1	..	70
2013	108	2	..	110
2014	127	2	..	129
2015	66	1	..	67

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m³ sawnwood (softwood and hardwood).

2. Excludes haulage employment on contract.

.. Denotes data not available.

2.5 Pulp & paper

Statistics on inputs to the pulp & paper industry only cover the integrated pulp & paper mills in the UK that use UK roundwood. There were four such mills until 2003, three from 2004 and two from spring 2006. Figures on inputs are provided by the UK Forest Products Association.

Figures on production of pulp and paper are provided by the Confederation of Paper Industries, and cover all paper production in the UK, not just from mills using UK roundwood.

2.5.1 Inputs for the integrated pulp & paper mills

The integrated pulp & paper mills in the UK consumed a total of 0.5 million tonnes of material (all softwood) in 2015, a 5% decrease from the 2014 total (Table 2.20).

UK roundwood represented 81% of the inputs for the integrated pulp & paper mills in 2015, with the remaining 19% coming from sawmill products.

Table 2.20 Inputs for the integrated pulp & paper mills¹, 2006-2015

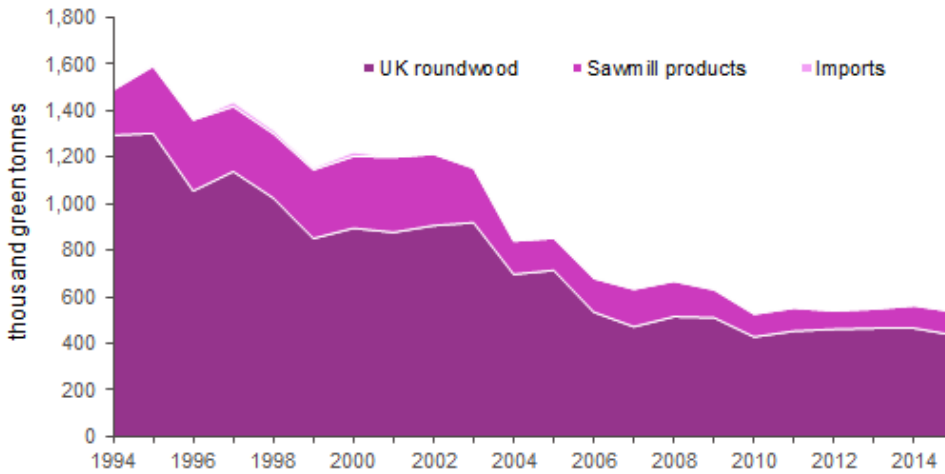
Year	UK roundwood ²		Sawmill products		Total	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
2006	481	54	145	0	626	54
2007	472	0	161	0	633	0
2008	515	0	152	0	667	0
2009	511	0	120	0	631	0
2010	428	0	98	0	526	0
2011	453	0	99	0	552	0
2012	461	0	79	0	540	0
2013	465	0	83	0	548	0
2014	465	0	97	0	562	0
2015	435	0	101	0	536	0

Source: UK Forest Products Association

Notes:

1. Excludes inputs of recycled paper and cardboard.
2. UK roundwood derived from stemwood.

Figure 2.3 Inputs to integrated pulp and paper mills



Source: UK Forest Products Association

2.5.2 Production of paper

Figures for the production of paper (Table 2.21) are provided by the Confederation of Paper Industries. They cover all paper production from UK mills, not just those using UK roundwood. Most UK paper production uses recovered waste paper or imported pulp.

A total of 4.0 million tonnes of paper and paperboard was produced in the UK in 2015, a decrease of 10% from the previous year. Packaging materials accounted for 48% of the total UK paper production in 2015, graphic papers (including newsprint) for 27%, and sanitary and household papers for 19%.

Table 2.21 Production of paper and paperboard, 2006-2015

Year	Graphic papers (incl newsprint)	Sanitary & household papers	Packaging materials	Other	Total paper & paperboard
thousand tonnes					
2006	2 483	805	1 999	301	5 588
2007	2 229	834	1 852	313	5 228
2008	2 063	783	1 838	299	4 983
2009	1 609	736	1 702	246	4 293
2010	1 637	729	1 640	294	4 300
2011	1 669	766	1 600	307	4 342
2012	1 616	795	1 798	271	4 480
2013	1 636	802	1 851	272	4 561
2014	1 544	768	1 801	284	4 397
2015	1 053	772	1 894	251	3 970

Source: Confederation of Paper Industries

2.6 Wood-based panels

Wood-based panels include 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).

Statistics on wood-based panels are provided by the Wood Panel Industries Federation (WPIF).

2.6.1 Inputs for wood-based panel products

Table 2.22 and Figure 2.4 show the inputs to mills that produce wood-based panels in the UK. The mills used a total of 3.9 million tonnes of material in 2015, unchanged from 2014. The inputs in 2015 comprised 1.3 million green tonnes of roundwood (34%), 1.7 million green tonnes of sawmill products (43%) and 0.9 million tonnes of recycled wood fibre (22%).

Table 2.22 Inputs to wood-based panel mills, 2006-2015

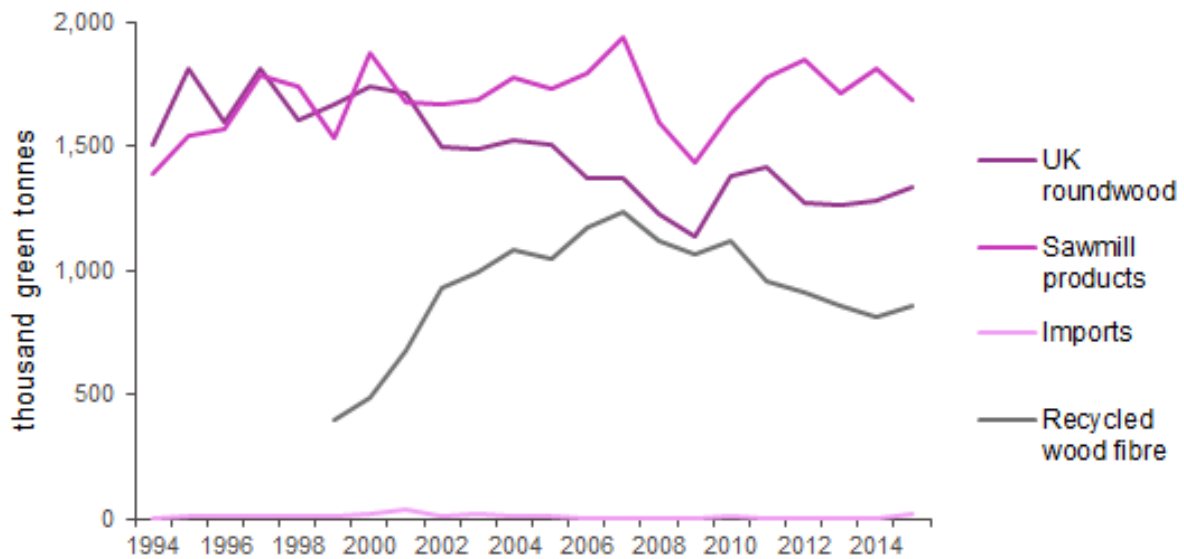
Year	UK roundwood ¹		Sawmill products		Imports ²		Total		
	Soft wood	Hard wood	Soft wood	Hard wood	Soft wood	Hard wood	Soft wood	Hard wood	Recycled wood fibre ³
thousand green tonnes									
2006	1 365	1	1 794	0	3	0	3 162	1	1 173
2007	1 362	5	1 940	0	2	0	3 304	5	1 230
2008	1 219	2	1 591	0	0	0	2 810	2	1 119
2009	1 135	1	1 435	0	0	0	2 570	1	1 065
2010	1 375	1	1 631	0	7	1	3 013	2	1 120
2011	1 417	1	1 779	0	0	0	3 196	1	952
2012	1 269	2	1 851	0	0	0	3 120	2	909
2013	1 263	0	1 709	0	0	0	2 972	0	853
2014	1 283	0	1 809	0	0	0	3 092	0	812
2015	1 334	0	1 687	0	12	5	3 033	5	852

Source: Wood Panel Industries Federation

Notes:

1. UK roundwood derived from stemwood.
2. Imports include roundwood, wood products and products from imported wood.
3. Recycled wood fibre is wood fibre recovered from both pre- and post-consumer wood waste for use in woodbased panel production. Quantities are as delivered.

Figure 2.4 Inputs to wood-based panel mills



Source: Wood Panel Industries Federation

Note:

1. Recycled wood fibre data not available before 1999.

2.6.2 Production of wood-based panel products

Total production of wood-based panels in 2015 was 3.1 million cubic metres, unchanged from 2014 (Table 2.23). Three quarters (75%) of wood-based panel products produced in the UK in 2015 were particleboard (including oriented strand board (OSB)). The marked decrease between 2011 and 2012 largely results from the closure of a panel mill in 2012.

Table 2.23 Wood-based panel production, 2006-2015

Year	Particleboard ¹	Fibreboard ²	Total
2006	2 626	872	3 498
2007	2 684	865	3 549
2008	2 431	709	3 140
2009	2 370	660	3 030
2010	2 594	776	3 370
2011	2 625	759	3 384
2012	2 215	788	3 003
2013	2 276	756	3 032
2014	2 319	749	3 068
2015	2 324	756	3 080

Source: Wood Panel Industries Federation

Notes:

1. Includes Oriented Strand Board (OSB).

2. Includes Medium Density Fibreboard (MDF).

2.7 Miscellaneous products

Softwood

Data for softwood fencing are obtained from the Survey of Round Fencing Manufacturers. Figures for other uses are reported by manufacturers or are estimated by representatives of the wood processing industries.

Around 1.6 million green tonnes of UK softwood were estimated to have been used directly for woodfuel (including biomass energy) in 2015, an increase of 7% from the previous year (Table 2.24). A further 298 thousand green tonnes of UK softwood were consumed by round fencing manufacturers and 164 thousand green tonnes for other uses in 2015.

Table 2.24 Miscellaneous uses of UK softwood roundwood, 2006-2015

Year	Fencing	Woodfuel ¹	Other ²	Total
2006	274	100	114	488
2007	319	200	113	633
2008	359	300	128	787
2009	367	650	160	1 178
2010	349	900	135	1 384
2011	363	900	145	1 408
2012	338	1 000	154	1 492
2013	332	1 250	191	1 773
2014	317	1 500	188	2 004
2015	298	1 600	164	2 062

Source: Survey of Round Fencing Manufacturers, industry associations.

Notes:

1. Woodfuel derived from stemwood. Includes estimates of roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and from 2008 made use of woodfuel data reported in the Private Sector Softwood Removals Survey.

2. Includes shavings and poles. Quantities for some uses are estimates by the [Expert Group on Timber and Trade Statistics](#).

Hardwood

An estimated 400 thousand green tonnes of UK hardwood were used for woodfuel (including biomass energy) in 2015. A further 30 thousand green tonnes were estimated to have been consumed by round fencing manufacturers and 25 thousand green tonnes for other uses, including exports.

2.7.1 Softwood round fencing manufacturers

There were 52 active round fencing manufacturers in 2015 (Table 2.25).

Around two thirds of round fencing manufacturers (67%) consumed less than 5 thousand green tonnes of softwood annually.

Table 2.25 Number of softwood round fencing manufacturers, 2006-2015

Year	Size category (consumption) ¹				Total
	< 1	1 - < 5	5 - < 10	10 +	
2006	25	31	7	6	69
2007	29	28	10	8	75
2008	22	27	11	7	67
2009	22	26	13	7	68
2010	22	24	13	6	65
2011	22	24	10	8	64
2012	22	21	11	7	61
2013	21	22	11	7	61
2014	19	21	10	7	57
2015	16	19	10	7	52

Source: Survey of Round Fencing Manufacturers

Notes:

1. Categories are based on total softwood consumption, in thousand green tonnes.

Data: Longer time series of the number of softwood round fencing manufacturers, by size category and by country (England/Wales/Scotland/Northern Ireland) are available from the [Data Downloads web page](#).

2.7.2 Roundwood purchased by softwood round fencing manufacturers

A total of 328 thousand green tonnes of softwood (UK grown and imported) was purchased by softwood fencing manufacturers in 2015 (Table 2.26). This represents a decrease of 2% from the 2014 total of 336 thousand green tonnes.

Table 2.26 Total roundwood purchased by softwood round fencing manufacturers, 2006-2015

Year	Size category (consumption) ¹				Total
	< 1	1 - < 5	5 - < 10	10 +	
thousand green tonnes					
2006	9	83	52	156	301
2007	11	67	66	201	345
2008	8	68	70	239	385
2009	7	66	82	239	394
2010	7	63	86	213	369
2011	8	65	60	250	383
2012	8	57	69	226	360
2013	7	57	79	204	347
2014	7	54	74	201	336
2015	6	46	79	196	328

Source: Survey of Round Fencing Manufacturers

Notes:

1. Categories are based on total softwood consumption, in thousand green tonnes.
2. This table includes purchases of both UK grown and imported softwood, whereas table 2.24 relates to UK grown softwood only.

Data: Longer time series of the number of softwood round fencing manufacturers, by size category and by country (England/Wales/Scotland/Northern Ireland) are available from the [Data Downloads web page](#).

2.8 Exports

UK softwood exports in 2015 consisted of 75 thousand green tonnes of industrial roundwood (excluding sawlogs) and 202 thousand green tonnes of sawlogs, giving a total of 276 thousand green tonnes of roundwood (Table 2.27). The quantity of softwood roundwood exports decreased by 37% between 2014 and 2015.

The UK also exported 86 thousand tonnes of softwood chips in 2015, a 43% decrease from the previous year.

Table 2.27 Summary of softwood exports, 2006-2015

Year	Roundwood			Chips
	Industrial roundwood ¹	Sawlogs	Total	
2006	505	138	643	214
2007	588	171	759	251
2008	556	176	733	176
2009	244	104	347	125
2010	301	166	467	136
2011	415	171	585	158
2012	405	130	535	142
2013	379	260	640	126
2014	228	209	437	151
2015	75	202	276	86

Source: industry associations

Notes:

1. Includes all roundwood other than sawlogs.

2.9 Certification

Forest certification assesses forest management practices against an agreed standard and awards a label to those forest products that meet the standard. In order for products to achieve certification, both forest management practices and the Chain of Custody, which tracks timber from forest to retail outlet, must be assessed.

The following tables provide information on the level of certified wood produced in the UK (Table 2.28) and the number of sawmills and round fencing manufacturers holding Chain of Custody certificates (Table 2.29). Information on areas of certified woodland is provided in Chapter 1.

2.9.1 Volume certified

Respondents to Forestry Commission surveys were asked to report on volumes certified. 69% of private sector softwood removals in 2015 were from certified sources (Table 2.28). The percentage of private sector softwood removals that are certified has fluctuated over recent years, reflecting a general reduction in the level of certification amongst smaller estates and an increase in production from larger estates.

As nearly all removals from Forestry Commission, Natural Resources Wales and Forest Service woodland are certified, this equates to around 83% of all softwood removals in 2015 from certified sources. 80% of sawmills' roundwood consumption in 2015 was certified. For round fencing manufacturers, 71% of total softwood consumption was certified.

Table 2.28 Per cent of volume certified, 2006-2015

Year	Removal		Sawmills	Round fencing manufacturers
	Softwood from Private sector woodland	Total softwood (including all removals from FC/NRW/FS woodland)	Consumption (softwood and hardwood)	Consumption (softwood)
2006	67	86	81	46
2007	74	88	77	54
2008	65	84	82	62
2009	68	88	82	51
2010	73	87	83	62
2011	71	85	80	61
2012	69	84	82	60
2013	75	87	83	55
2014	71	83	80	69
2015	69	83	80	71

Source: industry surveys

2.9.2 Chain of custody certificates

Sawmills and round fencing manufacturers were also asked whether they held a Chain of Custody certificate. 68% of sawmills for which the certification status was known held a Chain of Custody certificate in 2015 (Table 2.29). This proportion varied with size of mill, from 39% for mills producing less than 5 thousand m³ sawnwood to 100% for those producing 25 thousand m³ sawnwood or more. The majority (61%) of round fencing manufacturers for which the certification status was known held a Chain of Custody certificate.

Table 2.29 Chain of custody certificates, 2015

	Mills holding certificate	Mills without certificate	Certification status not known	Total¹
Sawmills² (size of mill³)				
< 5	14	22	72	108
5 - < 25	17	6	10	33
25 +	29	0	1	30
All sawmills	60	28	83	171
Round fencing manufacturers	14	9	29	52

Source: industry surveys

Notes:

1. Includes non-respondents to survey in current year.
2. For large sawmills (those producing at least 10 thousand m³) that did not report whether or not they held a certificate or did not respond to the 2015 survey, the certification status was obtained from the FSC database, where possible.
3. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

2.10 Woodfuel and pellets

Wood from various sources can be used for fuel, including roundwood, chips and sawdust from wood processing, specific products such as pellets and briquettes, and recycled wood.

The following pages provide data on:

- recycled wood used for woodfuel (Table 2.30 below);
- woodfuel supply by sawmills and round fencing manufacturers (Table 2.31); and
- wood pellet production (Table 2.32).

In addition, estimates of roundwood used directly for woodfuel are provided in tables 2.5 and 2.6.

Results from a survey of woodfuel suppliers, run in Spring 2009, were provided in Forestry Statistics 2009.

Recycled wood used for woodfuel

Estimates of recycled wood used for woodfuel have been obtained from the Wood Recyclers' Association. In 2013, it is estimated that 825 thousand tonnes of recycled wood were used for woodfuel, an increase of 9% from the 2012 estimate of 759 thousand tonnes.

Table 2.30 Recycled wood used for woodfuel, 2009-2013

Year	Total
	thousand tonnes
2009	495
2010	551
2011	594
2012	759
2013	825

Source: Wood Recyclers Association

These figures are outside the scope of National Statistics.

2.10.1 Woodfuel supply by sawmills and round fencing manufacturers

An estimated 670 thousand green tonnes (mainly softwood) of woodfuel were supplied by sawmills in 2015 and a further 60 thousand green tonnes were supplied by round fencing manufacturers (Table 2.31). 91% of the total woodfuel supplied was sold to bioenergy.

Table 2.31 Woodfuel supply¹ by sawmills and round fencing manufacturers, 2011-2015

	Sales to bioenergy	Sales as firewood	Used internally for heat/energy	Total
Sawmills				
2011	491	14	26	531
2012	540	14	43	597
2013	542	17	55	614
2014	676	27	71	773
2015	613	13	45	670
Round fencing manufacturers				
2011	56	5	1	61
2012	71	4	1	76
2013	60	5	0	66
2014	55	5	1	61
2015	51	7	2	60

Source: Sawmill Survey, Survey of Round Fencing Manufacturers

Notes:

1. Material reported as sales/use for woodfuel, but may have been used for other purposes.

2.10.2 Wood pellet production

Wood pellets and briquettes are processed wood products that can be made from roundwood, sawmill products and/or recycled wood. Some of the wood used to make wood pellets and briquettes will be accounted for elsewhere in this release (e.g. in Tables 2.30 and 2.31). Wood pellets and briquettes are often used for woodfuel, but pellets may also be used for other purposes (such as horse bedding or cat litter).

A total of 343 thousand tonnes of wood pellets and briquettes are estimated to have been produced in the UK in 2015. This represents a 3% decrease from the 2014 estimate of 354 thousand tonnes.

Table 2.32 Wood pellet production, 2009-2015

Year	Total
	thousand tonnes
2009	118
2010	197
2011	244
2012	278
2013	301
2014	354
2015	343

Source: Survey of UK Pellet and Briquette Production

Sources: UK Grown Timber

Introduction

This page provides an overview of the sources for the timber statistics presented in Chapter 2; more detailed information is provided on the following pages.

The chapter covers wood production (removals) from UK woodland, and consumption and production by primary wood processors in the UK. The timber statistics presented cover both softwood (wood from coniferous trees such as spruce, pine and larch) and hardwood (wood from non-coniferous trees such as oak, birch and beech). Please refer to the Glossary for an explanation of the terms used.

Quantities of wood can be expressed in different units. Conversion factors can be used to convert between units.

Data sources and methodology

Statistics on timber are obtained from a number of sources. For wood production (removals), data are compiled from:

- Forestry Commission (FC), Natural Resources Wales (NRW) and Forest Service (FS) administrative records of removals from FC/NRW/FS woodlands;
- the Private Sector Softwood Removals Survey for softwood removals from private sector woodlands and
- deliveries of hardwood to wood processing industries (see below) for total hardwood removals.

There is no source of data for hardwood removals from private sector woodlands, so these are estimated to be:

- deliveries of hardwood to wood processing industries (see below) less
- hardwood removals from FC/NRW/FS woodlands.

Timber availability forecasts are obtained from the "50 year forecast of softwood availability" and the "50 year forecast of hardwood availability", released in April 2014 and available at www.forestry.gov.uk/inventory.

Deliveries are estimated from the following sources:

- the Sawmill Survey;
- the Wood Panel Industries Federation (for wood-based panels);
- the UK Forest Products Association (for integrated pulp and paper mills);
- the Confederation of Paper Industries (for paper production);
- the Survey of Round Fencing Manufacturers;
- the Private Sector Softwood Removals Survey (for softwood deliveries to woodfuel);
- shavings manufacturers;
- companies believed to export roundwood and/or chips.

Estimates are also provided by the Expert Group on Timber and Trade Statistics: www.forestry.gov.uk/forestry/infd-5rabj3.

The [Methodology note: UK wood production](#) sets out the data analysis methods used to produce annual estimates of UK wood production.

Quality

Detailed information on the quality of the statistics presented in this publication is available in the "Quality Report: UK Wood Production and Trade" at www.forestry.gov.uk/forestry/infd-7zhk85.

Further quality information on FC Official Statistics, including separate reports for each of the industry surveys used in this release, is available at: www.forestry.gov.uk/forestry/infd-7zhk85.

Revisions

Figures for 2015 and earlier years have been previously published. They are however subject to revisions from those published in "UK Wood Production and Trade: 2015 provisional figures" and previous publications, to reflect late updates to administrative or survey data. Further details on any revisions made are provided in the following pages.

Information on significant revisions to published statistics is provided in the quality report on UK Wood Production and Trade, available from our Quality web page at www.forestry.gov.uk/forestry/infd-7zhk85.

The Forestry Commission's revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at: [www.forestry.gov.uk/pdf/FCrevisions.pdf/\\$FILE/FCrevisions.pdf](http://www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf).

Further information

Most of these statistics are used to compile data that are sent to international organisations in the Joint Forest Sector Questionnaires, in some cases giving more detail than in this release. These returns are published as Official Statistics on the FC website; provisional figures in May and final figures in September/October. The statistics are used by Eurostat Forestry Statistics, UNECE Timber Bulletins, and UN/FAO Forest Product Statistics and are published on the FAOSTAT database (<http://faostat3.fao.org>). Summary results from the FAOSTAT database are provided in the International Forestry chapter.

The definitions used in this publication are consistent with the international definitions, as given in Eurostat's "Forestry in the EU and the World 2011": <http://ec.europa.eu/eurostat/documents/3217494/5733109/KS-31-11-137-EN.PDF>.

The United Nations Economic Commission for Europe (UNECE) Committee on Forests and the Forest Industry (previously the UNECE Timber Committee) also collects, on an annual basis, estimates for the current year and projections for the following year of wood production, imports and exports. Results are available on the UNECE website (www.unece.org/forests/fpm/timbercommittee.html). Copies of UK returns for the UNECE Timber Forecast Questionnaire are available at www.forestry.gov.uk/forestry/inf-d-7aqjql.

The Department for Business, Energy and Industrial Strategy (previously the Department for Energy and Climate Change) publishes an annual Digest of UK Energy Statistics (www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes). Chapter 7 of this digest covers renewable sources of energy including wood. Figures for wood use in renewable energy statistics take into account wood from all sources (including processed wood, recycled wood and imports), not just UK-grown roundwood.

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Wood production

Sources

Figures on UK wood production (or removals) are compiled from a variety of sources:

- Forestry Commission (FC), Natural Resources Wales (NRW) and Forest Service (FS) administrative records - for all removals from FC/NRW/FS woodlands;
- the Private Sector Softwood Removals Survey - for softwood removals from private sector woodlands and
- statistics on deliveries - for total hardwood removals.

The compilation of data on wood production was extended in 2004 to include Northern Ireland.

These sources cover removals of roundwood (trunk and branch wood) only. A survey was introduced in 2009 to collect data on removals of brash (branch wood and leaf material) and stumps (above-ground base part of trees). The collection of stump removals was discontinued in 2012.

The software used to record Forestry Commission sales has included some sales of mixed softwood and hardwood as softwood in previous years.

Further information on administrative sources can be found at:

www.forestry.gov.uk/forestry/infd-832ey5.

Methodology

Figures for removals from FC/NRW/FS woodlands are converted from cubic metres (m³) to green tonnes using standard conversion factors. For total softwood figures, the results from the Private Sector Softwood Removals Survey are combined with the data for FC/NRW/FS woodlands to produce total softwood removals.

For hardwood figures, the total hardwood removals are assumed to equal the total hardwood deliveries (obtained from industry surveys and industry associations; see subsequent pages for further information on these sources). Hardwood removals from FC/NRW/FS woodlands are then subtracted to give an estimate of the amount of hardwood removed from private sector woodlands.

Softwood removals methodology change

The methodology used to estimate the quantity of UK softwood removals from private sector woodland was revised for the release of provisional 2011 estimates in "UK Wood Production and Trade: 2011 provisional figures". Details of the change in methodology and its impact on the figures are available in the "Methodology Review of Softwood Removals from Non-FC/FS Woodland" paper, available at [www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/\\$FILE/rem_methodology_rev2011-12.pdf](http://www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/$FILE/rem_methodology_rev2011-12.pdf).

Revisions

Private sector softwood removals are subject to revision annually (see following page, on the Private Sector Softwood Removals Survey). Removals from FC/NRW/FS woodlands are not normally revised. Total hardwood removals (and consequently hardwood removals from private sector woodlands) are subject to annual revisions (see notes on deliveries for further information).

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures". Figures for 2015 have been revised from those provided in "UK Wood Production and Trade: 2015 provisional figures" to take account of additional returns and quality assurance checks. Figures for earlier years have not been revised.

Information on revisions made since "Forestry Statistics 2015" are provided in "UK Wood Production and Trade: 2015 provisional figures".

Further information

Figures are published as UK totals. Country breakdowns (England, Wales, Scotland, Northern Ireland) are also published for softwood in table 2.2 for private sector removals and table 2.3 for FC/NRW/FS removals. Approximate country breakdowns are also estimated for hardwood removals.

Longer time series, presenting estimates of FC/NRW/FS and private sector removals by country and by softwood/hardwood are available from the [Data Downloads web page](#).

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Private Sector Softwood Removals Survey

Introduction

The Private Sector Softwood Removals Survey is an annual survey conducted by the Forestry Commission (in association with the Forest Service) of a sample of harvesting companies in the UK.

The survey, which previously covered harvesting companies in Great Britain only, was extended in 2004 to include harvesting companies in Northern Ireland. Figures for Northern Ireland in earlier years have therefore been estimated, based on responses to the 2004 survey.

Figures are published as UK totals and by country (England, Wales, Scotland, Northern Ireland).

Data collected

The questionnaire used for the Private Sector Softwood Removals Survey (available at www.forestry.gov.uk/forestry/infd-94ujw2) is issued annually to around 40 harvesting companies, to collect information on:

- the quantity of softwood roundwood harvested from private sector woodlands in the UK in the current (latest) year and in the previous year;
- the quantity of softwood roundwood harvested from certified private sector woodlands and
- (from the 2008 survey) the quantity sold to bioenergy (including wood pellet manufacture).
- (from the 2013 survey) the quantity of softwood roundwood harvested as required by plant health legislation.

Response rates

In 2015, the questionnaire was issued to 40 harvesting companies, of which 27 responded, giving a response rate of 68%. These respondents are estimated to account for around 94% of all the softwood harvested by companies covered by the survey.

Private Sector Softwood Removals Survey Response Rates, 2006-2015

Year	Forms issued	Responses received	Response rate ¹	Weighted response rate ²
2006	43	35	81%	..
2007	43	34	79%	..
2008	41	35	85%	100%
2009	40	30	75%	92%
2010	40	30	75%	97%
2011	37	26	70%	96%
2012	37	27	73%	95%
2013	40	28	70%	96%
2014	39	30	77%	97%
2015	40	27	68%	94%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates have been calculated from the 2008 survey onwards. They are an estimate of the proportion of the softwood harvested by companies covered by the survey that is accounted for by respondents.

.. Denotes data not available.

Methodology

A review of the methodology used to estimate total private sector softwood removals (including businesses not covered by the survey) was undertaken in 2011-2012.

The "Methodology Review of Softwood Removals from Non-FC/FS Woodland" paper presents the results from this review and the implications of the change in methodology. It can be found at

[www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/\\$FILE/rem_methodology_rev2011-12.pdf](http://www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/$FILE/rem_methodology_rev2011-12.pdf)

Sources: UK Grown Timber
Private Sector Softwood Removals Survey

In the current methodology, businesses not covered by the survey are assumed to represent 15% of the total softwood removals from private sector woodland. This fixed percentage is applied from 2006 onwards.

Quality

Detailed information on the survey quality is available in the "Quality Report: Private Sector Softwood Removals Survey" at [www.forestry.gov.uk/pdf/qrremovsur.pdf/\\$FILE/qrremovsur.pdf](http://www.forestry.gov.uk/pdf/qrremovsur.pdf/$FILE/qrremovsur.pdf).

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85.

Revisions

Results from the Private Sector Softwood Removals Survey may be revised between the provisional figures published in the First Release "UK Wood Production and Trade: provisional figures" and the final data published in "Forestry Facts & Figures" and "Forestry Statistics", to take account of late returns and the results of additional data quality checking procedures.

In order to use the most accurate information possible in estimating total private sector softwood removals, figures for non respondents in earlier years are estimated wherever possible, using their responses in previous and in subsequent years. This may cause the estimates for all previous years to be revised when new data are received from a former non-respondent. This process reduces the potential over-inflation of estimated removals which can be caused by harvesting companies tending to respond when removals have increased but being less likely to do so when their removals have reduced.

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures".

Since the publication of "UK Wood Production and Trade: 2015 provisional figures", softwood private sector production 2015 was revised upwards from 6,023 to 6,028 thousand green tonnes, and this resulted in an upward revision of total softwood production, in 2015, from 10,769 to 10,774 thousand green tonnes (Table 2.1).

Information on other revisions made since "Forestry Statistics 2015" are provided in "UK Wood Production and Trade: 2015 provisional figures".

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Sawmill Survey

Introduction

The Sawmill Survey is an annual survey conducted by the Forestry Commission (in association with the Forest Service) of sawmills in the UK that are believed to use UK-grown logs. The survey comprises a short questionnaire (for smaller mills) and a detailed questionnaire (for larger mills).

The survey, which previously covered sawmills in Great Britain only, was extended in 2004 to include sawmills in Northern Ireland. Figures for Northern Ireland in earlier years have therefore been estimated, based on responses to the 2004 survey.

The detailed survey has changed over the years, both in terms of coverage and periodicity. For 1996 and earlier, detailed questionnaires were issued triennially to mills producing at least 1,000 m³ of sawnwood. From 1998 to 2004, the questionnaires were issued every two years to mills producing at least 5,000 m³ of sawnwood. From 2005, the detailed questionnaires have been issued annually, to mills producing at least 10,000 m³ of sawnwood.

Statistics reported for each year are limited to mills that are known to use UK roundwood, but also include any imported logs used by these mills.

Tables for softwood are broken down by country (England, Wales, Scotland, Northern Ireland) and by size of mill. Given the low number of sawmills using UK hardwood, tables for hardwood are presented at a total UK level only.

The number of active mills (those that produced sawnwood in the reporting year) is presented in tables 2.8 to 2.10.

Longer time series, providing data on numbers of mills and on softwood consumption and production are available from the [Data Downloads web page](#). The time series data feature breakdowns by size of mill, by country and by region (in England).

Sources: UK Grown Timber
Sawmill Survey

Data collected

Two questionnaires are used for the Sawmill Survey:

- a detailed questionnaire goes to around 50 mills that have annual production of at least 10,000 m³ of sawnwood, and
- a short questionnaire is sent to all other mills that are believed to use UK sawlogs (around 130 mills in 2015).

Both questionnaires collect information on:

- the consumption of UK and imported logs,
- the production of sawnwood,
- chain of custody certificates and certified timber,
- (from the 2006 survey) sales to bioenergy,
- (from the 2008 survey) sales as firewood and internal use for heat/energy,
- (from the 2010 survey) other products and
- (from the 2008 survey) total employment.

In addition, the detailed questionnaire also collects information on:

- the source of UK logs (England, Wales, Scotland or Northern Ireland),
- sawnwood product markets,
- other products by type and destination and
- sawmill employment by type.

More information on the Sawmill Survey, including copies of the questionnaires sent to businesses in recent years, can be found at www.forestry.gov.uk/forestry/infd-94pgy5.

Response rates

In 2015, detailed questionnaires were issued to 50 mills, of which 35 responded, giving a response rate of 70%. For the short questionnaire, 49 responses were received from the 127 forms issued, corresponding to a 39% response rate. This gives an overall response rate of 47%.

Overall, the 84 sawmills responding to the sawmill survey in 2015 are estimated to account for around 79% of total UK sawnwood production.

Sources: UK Grown Timber
Sawmill Survey

Sawmill Survey Response Rates (all questionnaires), 2006-2015

Year	Forms issued	Responses received	Response rate ¹	Weighted response rate ²
2006	264	161	61%	..
2007	243	149	61%	..
2008	227	133	59%	90%
2009	219	122	56%	87%
2010	211	93	44%	85%
2011	200	84	42%	82%
2012	196	86	44%	84%
2013	191	83	43%	80%
2014	178	82	46%	84%
2015	179	84	47%	79%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates have been calculated from the 2008 survey onwards. They are an estimate of the proportion of total UK sawnwood production that is accounted for by respondents.

.. Denotes data not available.

Methodology

Each year, figures for non respondents are estimated by rolling forward data from previous years for these mills. For larger mills, these estimates may be modified to take account of advice from the Expert Group on Timber & Trade Statistics.

Time series data for the detailed sawmill survey

From one year to another, some mills may have moved above or below the threshold for inclusion in the detailed sawmill survey. This may affect the trends over time in tables 2.16a to 2.19a.

The total volume of roundwood consumed and sawnwood and other products produced by sawmills covered by the detailed sawmill survey varies over time, so a change in the percentages shown in tables 2.16a to 2.18a does not necessarily reflect a change in volumes.

Quality

Detailed information on the survey quality is available in the "Quality Report: Sawmill Survey" at [www.forestry.gov.uk/pdf/qrsawsur.pdf/\\$FILE/qrsawsur.pdf](http://www.forestry.gov.uk/pdf/qrsawsur.pdf/$FILE/qrsawsur.pdf).

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/inf-d-7zhk85.

Revisions

Results from the Sawmill Survey may be revised between the provisional figures published in the First Release "UK Wood Production and Trade: provisional figures" and the final data published in "Forestry Facts & Figures" and "Forestry Statistics" to take account of late returns and the results of additional data quality checking procedures.

All the main results (number of mills, consumption, production) are subject to revision annually, as information becomes available about mills opening or closing, or new information becomes available for previous non-respondents. The most common revisions are relatively small downward changes, but this can vary from year to year as special exercises are run to validate the survey population. Information about new mills opening can on occasion cause much larger upward revisions to softwood volumes. Results from the survey of larger mills, which provides more detailed information, may be revised to take account of new information for previous non-respondents.

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures". Figures for 2015 have not been revised since the publication of "UK Wood Production and Trade: 2015 provisional figures".

Information on other revisions made since "Forestry Statistics 2015" are provided in "UK Wood Production and Trade: 2015 provisional figures".

Further information

Figures for UK production of sawn softwood have been used alongside data from other sources to assess consumption of sawn softwood in the main end-user markets in the UK. Reports are available at www.forestry.gov.uk/forestry/inf-d-7fgkh4.

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Pulp & paper

Introduction

Data on the pulp and paper sector are obtained from two sources:

- The UK Forest Products Association (UKFPA, www.ukfpa.co.uk) provides figures on inputs to the integrated pulp and paper mills and
- the Confederation of Paper Industries (CPI, www.paper.org.uk) provides figures on total UK pulp and paper production.

Integrated pulp and paper mills are paper mills that use UK roundwood to produce pulp (an intermediate product in the production of paper). Inputs for other paper mills are not covered in the input statistics reported. The figures for production cover all UK paper mills.

Figures are available at a total UK level only.

Data collected

The data collected on inputs cover the type of input (roundwood, sawmill products) and the type of wood (softwood, hardwood).

Production data covers wood pulp (mechanical or semi-chemical), recovered fibre pulp and paper & paperboard. Paper & paperboard production are available for the following categories: graphic papers, sanitary & household papers, packaging materials and other paper & paperboard. Data are also collected on UK "production" of waste paper, which is the amount recovered from the UK for re-use in the UK or for export.

From 2008, total employment at integrated pulp and paper mills is also requested, to complement the data collected on this topic from other primary wood processors.

Methodology

The data on inputs to integrated pulp and paper mills are collected by the UKFPA from all such mills in the UK. The number of integrated pulp and paper mills has fallen over recent years and currently stands at 2.

The CPI collects production and raw material data from members and non-members, which accounts for the majority of UK production. The remainder is estimated by CPI using a variety of sources.

Revisions

The statistics on pulp and paper are not normally revised after publication. On occasion, a provisional figure or estimate may be published, and replaced by the actual figure in a subsequent publication.

Sources: UK Grown Timber
Pulp and Paper

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures".

Figures for 2015 and earlier years have not been revised from those in "UK Wood Production and Trade: 2015 provisional figures". Information on revisions made since "Forestry Statistics 2015" are provided in "UK Wood Production and Trade: 2015 provisional figures".

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Wood-based panels

Introduction

Data on the wood-based panel sector are obtained from the Wood Panel Industries Federation (WPIF, www.wpif.org.uk) and cover all wood-based panel mills in the UK.

Statistics reported for each year are available at a UK level only.

Data collected

Data are collected on inputs and on production.

The data collected on inputs covers the type of input (roundwood, sawmill products, imports, recycled wood fibre) and the type of wood (softwood, hardwood).

Production data covers all types of wood-based panels made in the UK, which currently comprises particleboard (including oriented strand board) and fibreboard (medium density fibreboard). UK production of hardboard (another type of fibreboard) ended in the UK in 1999 and production of plywood ended in 2000. From 2008, total employment is also requested, to complement the data being collected on this topic from other primary wood processors.

Methodology

The data on wood-based panels are collected by the WPIF, which represents all UK wood panel manufacturers. Figures on wood consumption are collected annually. Production data (excluding waste and rejects) are derived from quarterly returns. Response rates in recent years have been 100%.

Revisions

The statistics on wood-based panels are not normally revised after publication. On occasion, a provisional figure or estimate may be published, and replaced by the actual figure in a subsequent publication.

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures".

Figures for 2015 and earlier years have not been revised from those in "Forestry Statistics 2015".

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Sources: UK Grown Timber
Wood-Based Panels

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Survey of Round Fencing Manufacturers

Introduction

The Survey of Round Fencing Manufacturers is an annual survey conducted by the Forestry Commission (in association with the Forest Service) of round fencing manufacturers (or mills) in the UK that are believed to consume UK-grown roundwood.

The survey, which previously covered mills in Great Britain only, was extended in 2004 to include those in Northern Ireland. Figures for Northern Ireland in earlier years have therefore been estimated, based on responses to the 2004 survey.

Figures are published as UK totals and by size of mill.

Longer time series, providing data on numbers of mills and on softwood consumption are available from the [Data Downloads web page](#). The time series data feature breakdowns by size of mill and by country.

Data collected

The questionnaire used for the Survey of Round Fencing Manufacturers is issued to around 60 mills, to collect information on the consumption of UK-grown and (from 2006) imported roundwood. In 2008, the survey was extended to cover woodfuel quantities (sales to bioenergy, sales as firewood and internal use for heat/ energy) and total employment. In 2010, the survey was further extended to request data on production of round fencing and other products. A breakdown of the country of origin (England, Wales, Scotland, Northern Ireland) for UK-grown roundwood is also requested.

More information on the Survey of Round Fencing Manufacturers, including copies of the questionnaires sent to businesses in recent years, can be found at www.forestry.gov.uk/forestry/inf-d-94uk7h.

Sources: UK Grown Timber
Comparison of removals and deliveries of UK Softwood Roundwood

Response rates

In 2015, the questionnaire was issued to 60 mills, of which 29 responded, giving a response rate of 48%. These respondents accounted for an estimated 54% of roundwood purchased by softwood round fencing manufacturers.

Survey of Round Fencing Manufacturers Response Rates, 2006-2015

Year	Forms issued	Responses received	Response rate ¹	Weighed response rate ²
2006	109	61	56%	..
2007	103	67	65%	..
2008	87	55	63%	88%
2009	82	42	51%	56%
2010	79	34	43%	46%
2011	72	26	36%	58%
2012	68	26	38%	53%
2013	67	27	40%	51%
2014	62	26	42%	42%
2015	60	29	48%	54%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates have been calculated from the 2008 survey onwards. They are an estimate of the proportion of total roundwood purchased by softwood round fencing manufacturers that is accounted for by respondents.

.. Denotes data not available.

Methodology

Each year, figures for non respondents are estimated by rolling forward data from previous years for these mills.

Quality

Detailed information on the survey quality is available in the "Quality Report: Survey of Round Fencing Manufacturers" at [www.forestry.gov.uk/pdf/qrfensur.pdf/\\$FILE/qrfensur.pdf](http://www.forestry.gov.uk/pdf/qrfensur.pdf/$FILE/qrfensur.pdf).

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85.

Revisions

Results from the Survey of Round Fencing Manufacturers may be revised between the provisional figures published in the First Release "UK Wood Production and Trade: provisional figures" and the final data published in "Forestry Facts & Figures" and "Forestry Statistics" to take account of late returns and the results of additional data quality checking procedures.

All figures are subject to revision annually, as information becomes available about mills opening or closing, or new information becomes available for previous non-respondents. Such revisions are generally quite small.

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures". Figures for 2015 and earlier years have not been revised from those in "UK Wood Production and Trade: 2015 provisional figures".

Information on revisions made since "Forestry Statistics 2015" are provided in "UK Wood Production and Trade: 2015 provisional figures".

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Other deliveries

Introduction

Data on other deliveries comprise the following:

- shavings - mainly obtained from shavings manufacturers;
- woodfuel - private sector softwood removals survey, woodfuel suppliers and Expert Group on Timber & Trade Statistics estimates;
- hardwood round fencing - Expert Group on Timber & Trade Statistics estimates;
- other miscellaneous products - Expert Group on Timber & Trade Statistics estimates and
- exports of roundwood and chips - companies believed to export roundwood and/or chips and Forest Service (for exports from Northern Ireland).

The figures, which previously covered Great Britain only, were extended in 2004 to include Northern Ireland. Figures for exports prior to 2004 relate to Great Britain only.

Statistics reported for each year are available at a UK level only.

Data collected

The data collected on shavings, woodfuel and other miscellaneous products cover the quantity of roundwood only.

Data collected on exports includes the following categories; industrial roundwood (excluding sawlogs), sawlogs and chips. For 2004 and earlier years, these figures were provided by the UK Forest Products Association (UKFPA, www.ukfpa.co.uk).

Methodology

For shavings, data are collected from the main companies known to produce shavings. In addition, a small estimate is made to cover other shavings manufacturers.

There are currently no reliable sources for data on hardwood round fencing and other miscellaneous products. As a result, estimates (that are rarely changed) are made by the Expert Group on Timber & Trade Statistics to attempt to take account of these other uses of UK roundwood.

The estimate for hardwood used for woodfuel was revised in 2005 to reflect a perceived increase in woodfuel, but this should not be interpreted as an increase in a single year. From 2007, an estimate of roundwood use for biomass energy was included in the woodfuel figures, based on data reported by suppliers and Expert Group on Timber & Trade Statistics estimates. In 2008, the private sector softwood removals survey was extended to ask how much of the removals reported were believed to be for woodfuel use. Estimates of softwood used for

Sources: UK Grown Timber
Comparison of removals and deliveries of UK Softwood Roundwood

woodfuel for recent years are therefore considered to be more reliable than those for earlier years.

For exports, data are requested from companies believed to have exported roundwood or chips in the last year. Forest Service provides data on behalf of companies exporting from Northern Ireland. If required, a small estimate is made for any non respondents or to cover other companies that may have exported roundwood during the year.

Revisions

Figures for deliveries of softwood for woodfuel may be revised whenever revisions are made to the Private Sector Softwood Removals Survey.

The statistics on other deliveries are not normally revised after publication. On occasion, an estimate may be revised in a subsequent publication, to take account of expert advice on perceived changes in the market for roundwood.

The quality report on UK Wood Production and Trade provides further information, including details of significant revisions to published statistics and is available at www.forestry.gov.uk/forestry/infd-7zhk85.

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures". Figures for 2015 and earlier years have not been revised from those in "UK Wood Production and Trade: 2015 provisional figures".

Information on revisions made since "Forestry Statistics 2015" are provided in "UK Wood Production and Trade: 2015 provisional figures".

Release schedule

Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Comparison of removals and deliveries of UK softwood roundwood

The table below provides a comparison between the figures for removals (obtained from Forestry Commission, Natural Resources Wales, Forest Service and Private Sector Removals Survey) and deliveries (obtained from industry surveys and trade associations) of UK softwood roundwood.

The estimated total for softwood removals in the UK in the last 2 years has been around 0.5 million green tonnes higher than the estimate for total UK softwood deliveries. At least some of this difference may indicate a possible undercounting of deliveries, particularly for roundwood that is used directly for woodfuel.

Comparison of removals and deliveries of UK softwood roundwood, 2006-2015

Year	FC/NRW/FS removals	Private sector removals	Total removals	Deliveries	Balance ¹
thousand green tonnes					
2006	4 582	3 661	8 243	8 187	56
2007	4 653	4 083	8 736	8 790	-54
2008	4 415	3 823	8 238	8 187	51
2009	5 126	3 266	8 392	8 304	88
2010	4 625	4 633	9 258	9 269	-11
2011	4 870	5 186	10 056	9 722	334
2012	4 836	5 259	10 095	9 831	265
2013	5 084	5 852	10 936	10 547	388
2014	4 900	6 531	11 431	10 915	516
2015	4 746	6 028	10 774	10 273	501

Source: Forestry Commission, Natural Resources Wales, Forest Service, industry surveys, industry associations

Notes:

1. The difference between reported removals and deliveries can be caused by variations in the level of stocks between harvesting and delivery to the wood processor, and/or by the differences in data sources and methodologies used to compile removals and deliveries statistics.

The methodology used to estimate the quantity of UK softwood removals from private woodland was revised for the release of provisional 2011 estimates in "UK Wood Production and Trade: 2011 provisional figures". Details of the change in methodology and its impact on the figures are available in the "Methodology Review of Softwood Removals from Non-FC/FS Woodland" paper, available at: [www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/\\$FILE/rem_methodology_rev2011-12.pdf](http://www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/$FILE/rem_methodology_rev2011-12.pdf).

Sources: Estimation of hardwood removals from private sector woodlands

Figures for hardwood removals from private sector woodlands are derived from total hardwood deliveries (obtained from industry surveys and trade associations) less hardwood removals from FC/NRW/FS woodlands. The table below provides figures for the last 10 years.

Estimation of hardwood removals from private sector woodlands, 2006-2015

Year	Deliveries	FC/NRW/FS removals	Private sector removals
2006	438	45	392
2007	440	40	400
2008	431	43	388
2009	536	87	449
2010	535	70	465
2011	541	75	465
2012	532	55	478
2013	529	78	451
2014	532	71	461
2015	528	74	454

Source: Forestry Commission, Natural Resources Wales, Forest Service, industry surveys, industry associations

Sources: Woodfuel and pellets

Introduction

Data on woodfuel have been obtained from the following sources:

- Sawmill survey and survey of round fencing manufacturers;
- Private sector softwood removals survey and woodfuel suppliers;
- Expert Group on Timber & Trade Statistics estimates.

Estimates of the quantity of recycled wood used for woodfuel are produced by the Wood Recyclers' Association (www.woodrecyclers.org).

Data on UK pellet production are obtained from the survey of UK pellet and briquette production.

For details on roundwood deliveries for woodfuel, see the Sources: other deliveries page.

Figures are published as UK totals.

Data collected

The sawmill survey and survey of round fencing manufacturers included questions asking for the quantity of woodfuel:

- sold to bioenergy,
- sold as firewood and
- used internally for heat/energy.

All 3 questions have been included in the detailed sawmill survey (sent to sawmills believed to produce at least 10 thousand m³ sawnwood annually) for some time. The sawmill survey (for smaller mills) was extended in the 2006 survey to cover quantities sold to bioenergy and again in the 2008 survey to cover firewood sales and use for heat/energy. All three questions were included in the round fencing survey for the first time in 2008.

The survey of UK pellet and briquette production was run for the first time for the collection of 2009 data. The questionnaire asks for data on the total quantity of pellets and briquettes produced, the source of fibres used, the origin of wood used and product markets.

More information on the survey of UK pellet and briquette production, including copies of the questionnaires sent to businesses in recent years, can be found at www.forestry.gov.uk/forestry/infd-94ukb2.

Response rates

Response rates for the sawmill survey and survey of round fencing manufacturers are available on the relevant sources pages.

Sources: UK Grown Timber
Woodfuel and Pellets

The 2015 survey of UK pellet and briquette production was sent to a total of 18 companies that were believed to manufacture pellets or briquettes. A total of 5 responded, giving a response rate of 28%. The respondents to the survey are estimated to account for around 82% of the total production of pellets and briquettes in the UK in 2015.

Whilst the low response rates to this survey are of some concern, it is believed that many of the non-respondents are not (currently) producing pellets or briquettes. This is reflected in the much higher weighted response rates and the figures produced are believed to give a reasonable estimate of the true level of UK pellet production.

Survey of UK Pellet & Briquette Production Response Rates, 2009-2015

Year	Forms issued	Response received	Response rate ¹	Weighted Response rate ²
2009	33	17	52%	89%
2010	27	12	44%	95%
2011	22	10	45%	92%
2012	21	5	24%	75%
2013	18	8	44%	91%
2014	18	6	33%	91%
2015	18	5	28%	82%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates are an estimate of the proportion of total UK pellet and briquette production that is accounted for by respondents.

Methodology

Details of the methodology used for the sawmill survey and survey of round fencing manufacturers are available on the relevant sources pages.

For the survey of UK pellet and briquette production, estimates were made for non respondents using results from previous surveys (including the 2008 woodfuel suppliers survey) and expert advice.

Quality

Detailed information on the pellet survey quality is available in the "Quality Report: Survey of UK Pellet & Briquette Production" at [www.forestry.gov.uk/pdf/ukpelletqrpt.pdf/\\$FILE/ukpelletqrpt.pdf](http://www.forestry.gov.uk/pdf/ukpelletqrpt.pdf/$FILE/ukpelletqrpt.pdf).

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85.

Revisions

All figures are subject to revision annually, as new information becomes available.

Figures for 2015 are final; provisional figures were previously released in "UK Wood Production and Trade: 2015 provisional figures".

Further information

Figures for Woodfuel Demand and Usage in Scotland, covering actual and potential use of woodfuel in the commercial, industrial and electrical energy sectors, are produced annually by Forestry Commission Scotland and available at <http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/climate-change-renewable-energy/woodfuel-and-bio-energy>.

The Department for Business, Energy and Industrial Strategy (previously the Department of Energy and Climate Change) publishes an annual Digest of UK Energy Statistics (www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes). Chapter 7 of this digest covers renewable sources of energy including wood. Figures for wood use in renewable energy statistics take into account wood from all sources (including processed wood, recycled wood and imports), not just UK-grown roundwood.

Release schedule

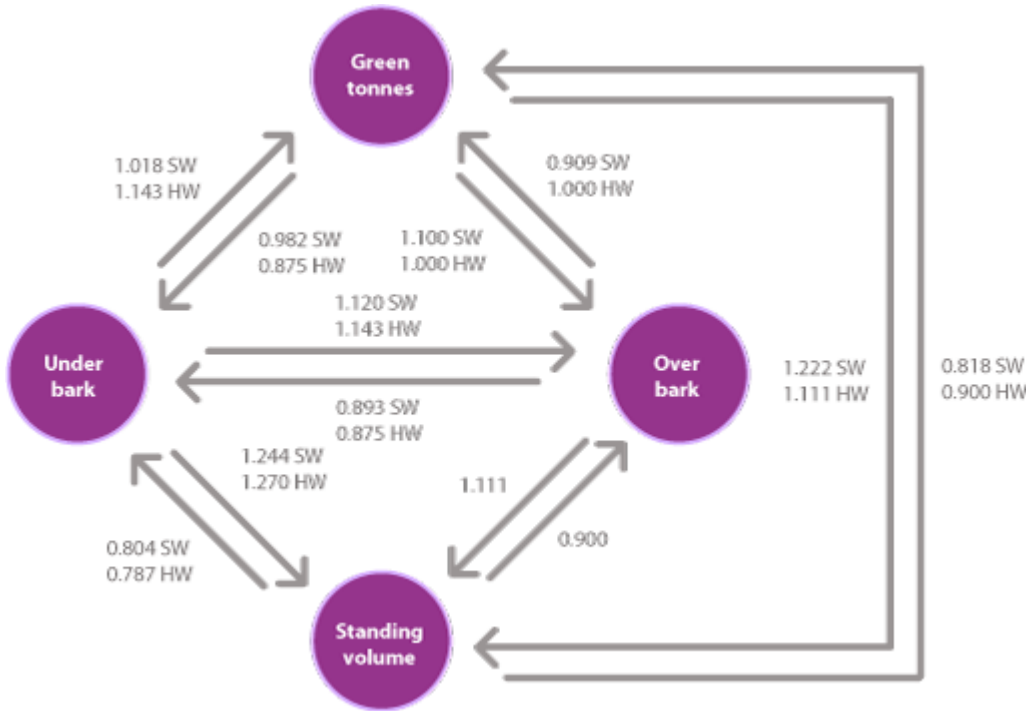
Provisional figures for 2016 will be released on 18 May 2017 in "UK Wood Production and Trade: 2016 provisional figures".

Final figures for 2016 will be released on 28 September 2017 in "Forestry Statistics 2017" and "Forestry Facts & Figures 2017".

Sources: Conversion factors

Conversion factors between cubic metres and green tonnes

The following factors have been used in Chapter 2 (Timber) to convert between cubic metres (m³) and green tonnes:



The diagram shows separate conversion factors to use when converting softwood (SW) and hardwood (HW) with arrows to indicate the direction of conversion. For example, to convert 1,000 green tonnes of SW into an under bark volume, the 1,000 green tonnes should be multiplied by the conversion factor of 0.982 to give 982m³ underbark. There is no difference between the softwood and hardwood conversion factors for converting between standing volume and overbark volumes.

Sources: UK Grown Timber
Conversion Factors

The following factors have been used in Chapter 3 (Trade) to convert between cubic metres (m³) and metric tonnes:

In this case, all the factors are expressed as volumes (in m³) per weight (in tonnes). Therefore, to convert 1,000 tonnes of sawn softwood into a volume, the 1,000 tonnes should be multiplied by 1.82 to give 1,820 m³.

Conversion factors between cubic metres and metric tonnes

Product	m³ / tonne
Fuelwood, including wood for charcoal	1.38
Wood chips, sawdust, etc	1.48
Industrial roundwood (wood in the rough) - softwood	1.43
Industrial roundwood (wood in the rough) - hardwood	1.25
Sawnwood - softwood	1.82
Sawnwood - hardwood	1.43
Veneer sheets	1.33
Plywood, particleboard	1.54
Hardboard	1.053
MDF (medium density fibreboard)	1.667
Insulating board - density 0.35-0.5 g/cm ³	1.667
Insulating board - other	4.00

Sources: UK Grown Timber
Conversion Factors

The following factors have been used in Chapter 3 (Trade) where required to convert to wood raw material equivalent, which indicates the volume of wood (in m³ underbark) needed to produce one unit of a final product:

Conversion factors to Wood Raw Material Equivalent (wrme) underbark

Product	Measurement unit	Factor to wrme underbark
Fuelwood	tonnes	1.20
Wood charcoal	tonnes	6.00
Chips, sawdust, etc	tonnes	1.20
Industrial roundwood (rough, treated)	m ³	1.10
Industrial roundwood (in the rough)	m ³	1.00
Sleepers	m ³	1.58
Softwood sawnwood	m ³	2.00
Hardwood sawnwood	tonnes	2.50
Wastepaper	tonnes	2.80
Mechanical pulp	tonnes	2.50
Chemical dissolving pulp	tonnes	2.50
Sulphate pulp, unbleached	tonnes	6.00
Sulphate pulp, bleached	tonnes	4.50
Sulphite pulp	tonnes	5.00
Semi-chemical woodpulp	tonnes	2.75
Veneer (< 6mm)	tonnes	3.45
Other wood-based panels	tonnes	2.50
Woodwool, woodflour	tonnes	1.70
Packing cases, pallets	tonnes	2.00
Other manufactured wood	tonnes	2.50
Newsprint	tonnes	2.80
Writing & printing paper, uncoated	tonnes	3.50
Other paper & paperboard	tonnes	2.50

Notes:

1. A revised set of figures was produced in FC Technical Paper 19, "Revised Forecasts of the Supply and Demand for Wood in the UK" (Forestry Commission, 1996), but these have not been used in this publication.