

# Forestry Statistics 2022

## Chapter 2: UK-Grown Timber

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The Research Agency of the  
Forestry Commission

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## 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.

Figures for 2021 were previously published in [UK Wood Production and Trade: provisional figures](#), released on 19 May 2022. Some figures have been revised from those previously published. For further details on revisions, see the Timber section of the Sources chapter.

A copy of all UK-grown timber tables can be accessed in spreadsheet format from the [Data Downloads page](#).

## Key findings

The main findings for 2021 are (with percentage changes from 2020):

**Removals**<sup>1</sup> (harvesting) of UK roundwood:

- 10.4 million green tonnes of softwood (4%);
- 0.8 million green tonnes of hardwood (-1%);

**Deliveries**<sup>1</sup> of UK roundwood to wood processors and others:

- 11.2 million green tonnes of roundwood (softwood and hardwood), (4%), of which:
  - Sawmills: 6.3 million green tonnes (7%);
  - Wood-based panels: 1.5 million green tonnes (21%);
  - Integrated pulp and paper mills: 0.4 million green tonnes (4%);
  - Woodfuel: 2.3 million green tonnes (-10%);
  - Other uses, including round fencing, shavings and exports of roundwood: 0.7 million green tonnes (unchanged);

**Production** of wood products in the UK included:

- 3.6 million cubic metres of sawnwood (8%);
- 3.5 million cubic metres of wood-based panels (18%);
- 3.6 million cubic metres of paper and paperboard (unchanged).

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<sup>1</sup>The difference between total removals and deliveries reported here (around 0.1 million green tonnes in 2021) is likely to reflect a number of factors, including changes in stock levels and the different data sources and methodologies used.

## 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 released by the Office for National Statistics.

The data are derived from a number of sources:

- FE/FLS/NRW/FS figures are obtained from Forestry England, Forestry and Land Scotland, 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 11.2 million green tonnes of roundwood was removed from UK woodlands in 2021.

Softwood accounted for most of (93%) removals from UK woodland and totalled 10.4 million green tonnes in 2021 (Table 2.1a). This represented a 4% increase on the previous year's figure.

Hardwood removals totalled 0.8 million green tonnes in 2021 (Table 2.1b).

Private sector woodlands accounted for 62% of softwood production and 88% of hardwood production in 2021.

**Table 2.1a Softwood production, UK, 2012 to 2021**

thousand green tonnes

Year	FE/FLS/NRW/FS <sup>1</sup> woodland	Private sector <sup>2</sup> woodland	Total softwood
2012	4,836	5,259	10,095
2013	5,084	5,852	10,936
2014	4,900	6,627	11,527
2015	4,691	5,968	10,659
2016	5,011	5,734	10,745
2017	4,761	6,075	10,836
2018	4,522	6,827	11,349
2019	3,937	5,884	9,822
2020	4,616	5,437	10,053
2021	4,009	6,407	10,416

Source: Forestry England, Forest and Land Scotland, Natural Resources Wales, Forest Service, industry surveys, industry associations.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland).
2. Private sector: removals from all other woodland (including some publicly owned woodland).

Table 2.1b Hardwood production, UK, 2012 to 2021

thousand green tonnes

Year	FE/FLS/NRW/FS <sup>1</sup> woodland	Private sector <sup>2</sup> woodland	Total hardwood <sup>3,4</sup>
2012	55	478	532
2013	78	452	530
2014	71	464	535
2015	73	491	564
2016	68	527	595
2017	85	651	736
2018	88	746	834
2019	68	800	868
2020	87	742	829
2021	96	727	823

Source: Forestry England, Forest and Land Scotland, Natural Resources Wales, Forest Service, industry surveys, industry associations.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, 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.
4. The increase in hardwood removals between 2016 and 2017 is largely attributed to a revised estimate for deliveries of UK grown hardwood used for woodfuel (see Table 2.6). This new estimate should not be interpreted as an increase in a single year.

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



## 2.1.2 Origin of private sector softwood removals

It is estimated that 74% of all softwood removals from private sector woodlands were harvested in Scotland, 15% in England, 9% in Wales and the remainder in Northern Ireland in 2021 (Table 2.2).

Private sector softwood removals in the UK in 2021 were 18% higher than the 2020 figure.

**Table 2.2 Private sector softwood removals by country, UK, 2012 to 2021**

Year	thousand green tonnes				
	England	Wales	Scotland	Northern Ireland	UK
2012	847	611	3,761	40	5,259
2013	929	695	4,205	23	5,852
2014	1,165	739	4,691	33	6,627
2015	1,052	686	4,203	28	5,968
2016	1,013	643	4,043	34	5,734
2017	961	783	4,295	36	6,075
2018	1,130	628	5,022	47	6,827
2019	1,222	485	4,133	44	5,884
2020	972	550	3,837	78	5,437
2021	973	581	4,747	106	6,407

Source: Private Sector Softwood Removals Survey

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

### 2.1.3 Origin of FE/FLS/NRW/FS removals

Information on removals from Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW) and Forest Service (FS) woodlands is obtained from administrative systems.

A total of 4.0 million green tonnes of softwood was removed from FE/FLS/NRW/FS woodlands in 2021, a 13% decrease from the 2020 figure (Table 2.3).

Over one half (53%) of FE/FLS/NRW/FS softwood removals in 2021 occurred in Scotland, 22% in England, 17% in Wales and 8% in Northern Ireland.

**Table 2.3 FE/FLS/NRW/FS softwood removals by country, UK, 2012 to 2021**

Year	thousand green tonnes				
	England	Wales	Scotland	Northern Ireland	UK
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	1,023	692	2,644	333	4,691
2016	1,146	778	2,745	343	5,011
2017	1,087	660	2,666	349	4,761
2018	1,048	696	2,438	339	4,522
2019	905	525	2,143	364	3,937
2020	1,014	619	2,577	405	4,616
2021	878	668	2,123	340	4,009

Source: Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales, Forest Service (FS)

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 Download page](#).

## 2.1.4 Softwood availability forecast

The [National Forest Inventory](#) published the "25-year forecast of softwood availability" in July 2022 and the "50-year forecast of hardwood availability" was 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.

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

As the hardwood forecast was produced in 2014, the figures 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 2016.

The key assumptions underpinning the headline softwood forecast scenario include:

- For private woodlands in GB, felling generally takes place when trees in a stand have, on average, achieved a target diameter (replacing a previous assumption based on growth rates).
- The estate of Forestry England, Forestry and Land Scotland and Natural Resources Wales is managed according to current management plans; note that Forestry England, Forestry and Land 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 United Kingdom averages 16.5 million cubic metres a year over the 25-year period 2022 to 2046 (Table 2.4a). The majority (66%) of this softwood is projected to come from private sector woodland.

Table 2.4a 25-year forecast of softwood availability; average annual volumes within periods, UK, 2022 to 2046

thousand m<sup>3</sup> overbark standing

Annual average in the period	England	Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
<b>FE/FLS/NRW/FS<sup>1</sup></b>						
2022-26	1,107	1,284	3,674	6,065	498	6,563
2027-31	1,158	1,017	3,538	5,713	628	6,341
2032-36	1,097	799	3,201	5,096	698	5,794
2037-41	1,006	816	2,699	4,521	635	5,157
2042-46	1,039	457	2,610	4,107	534	4,641
<b>Private sector<sup>2</sup></b>						
2022-26	2,570	843	5,092	8,505	24	8,529
2027-31	2,616	683	6,529	9,828	42	9,870
2032-36	2,319	773	8,608	11,700	43	11,743
2037-41	2,495	870	9,609	12,974	40	13,015
2042-46	2,057	790	7,965	10,812	25	10,837
<b>Total softwood</b>						
2022-26	3,677	2,128	8,766	14,570	522	15,092
2027-31	3,774	1,700	10,067	15,541	670	16,211
2032-36	3,415	1,572	11,809	16,796	741	17,537
2037-41	3,501	1,686	12,309	17,495	676	18,171
2042-46	3,096	1,248	10,575	14,919	558	15,477

Source: National Forest Inventory: 25-year forecast of softwood availability (Forest Research, July 2022)

Notes:

1. Forecasts for the public forest estate assume that woodlands are managed according to current management plans.
2. Private woodland forecasts for Great Britain represent potential availability of softwood timber under the assumption of a management scenario of felling at a specified target diameter where viable.
3. To convert softwood 'overbark standing' into green tonnes multiply by 0.818. See the Sources chapter for more details on conversion factors.

These figures are outside the scope of National Statistics. For more information see the Sources chapter.

## 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 Forestry England, Forestry and Land Scotland and Natural Resources Wales is managed according to current management plans.

Under the above scenario, hardwood availability for Great Britain averages 1.6 million m<sup>3</sup> 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](#).

Table 2.4b Hardwood availability forecasts, Great Britain, 2013 to 2061

thousand m<sup>3</sup> overbark standing

Annual average in the period	England	Wales	Scotland	Great Britain
<b>FE/FLS/NRW<sup>1</sup></b>				
2013-16	126	12	9	147
2017-21	92	11	9	111
2022-26	110	17	10	137
2027-31	86	12	10	108
2032-36	99	14	15	128
2037-41	129	19	24	172
2042-46	189	56	31	276
2047-51	116	19	40	175
2052-56	134	28	45	208
2057-61	146	28	64	237
<b>Private sector<sup>2</sup></b>				
2013-16	122	20	83	225
2017-21	333	46	139	519
2022-26	538	77	193	808
2027-31	720	100	233	1,054
2032-36	825	115	262	1,202
2037-41	1,047	153	367	1,567
2042-46	1,915	243	586	2,743
2047-51	1,678	227	675	2,580
2052-56	1,254	198	554	2,006
2057-61	645	139	343	1,127
<b>Total hardwood</b>				
2013-16	249	32	92	373
2017-21	425	58	148	631
2022-26	648	94	203	945
2027-31	806	112	244	1,162
2032-36	923	130	277	1,330
2037-41	1,176	171	391	1,738
2042-46	2,104	299	616	3,019
2047-51	1,795	246	715	2,755
2052-56	1,388	227	599	2,214
2057-61	791	167	406	1,364

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

Notes:

1. The estate of Forestry England (FE), Forestry and Land Scotland (FLS) and Natural Resources Wales (NRW) 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: [forestresearch.gov.uk/tools-and-resources/national-forest-inventory/](http://forestresearch.gov.uk/tools-and-resources/national-forest-inventory/)
3. An update to these figures is due to be published in December 2021.
4. To convert hardwood 'overbark standing' into green tonnes multiply by 0.900. See the Sources chapter for more details on conversion factors.

These figures are outside the scope of National Statistics. For more information see the Sources chapter.

## 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 2021, deliveries of UK roundwood (softwood and hardwood) totalled 11.2 million green tonnes, a 4% increase from the previous year (Tables 2.5 and 2.6).

Most UK roundwood deliveries (93%) were softwood and totalled 10.4 million green tonnes in 2021 (Table 2.5). 6.3 million green tonnes (60% of UK softwood deliveries) were used by sawmills, a 7% increase from the previous year. A further 1.6 million green tonnes were used for wood fuel (a 14% decrease), 1.5 million green tonnes were used to produce wood-based panels (a 21% increase), 0.4 million green tonnes by integrated pulp and paper mills (a 4% increase), and 0.6 million green tonnes for other uses, including round fencing, shavings and exports of roundwood (a 1% increase).

**Table 2.5 Deliveries of UK-grown softwood, UK, 2012 to 2021**

Year	thousand green tonnes							
	Saw mills	Pulp mills	Wood-based panels	Fencing	Wood fuel <sup>1</sup>	Other <sup>2</sup>	Exports	Total
2012	6,084	461	1,269	338	1,000	154	535	9,842
2013	6,418	465	1,263	332	1,250	191	640	10,559
2014	6,737	465	1,283	317	1,500	176	437	10,914
2015	6,179	435	1,334	288	1,600	164	276	10,276
2016	6,522	423	1,248	277	1,550	178	231	10,430
2017	6,586	442	1,059	283	1,600	170	331	10,471
2018	6,337	486	1,210	255	1,900	174	264	10,626
2019	5,898	464	1,316	262	1,900	183	201	10,225
2020	5,837	383	1,248	258	1,850	188	140	9,904
2021	6,268	399	1,508	247	1,600	176	168	10,366

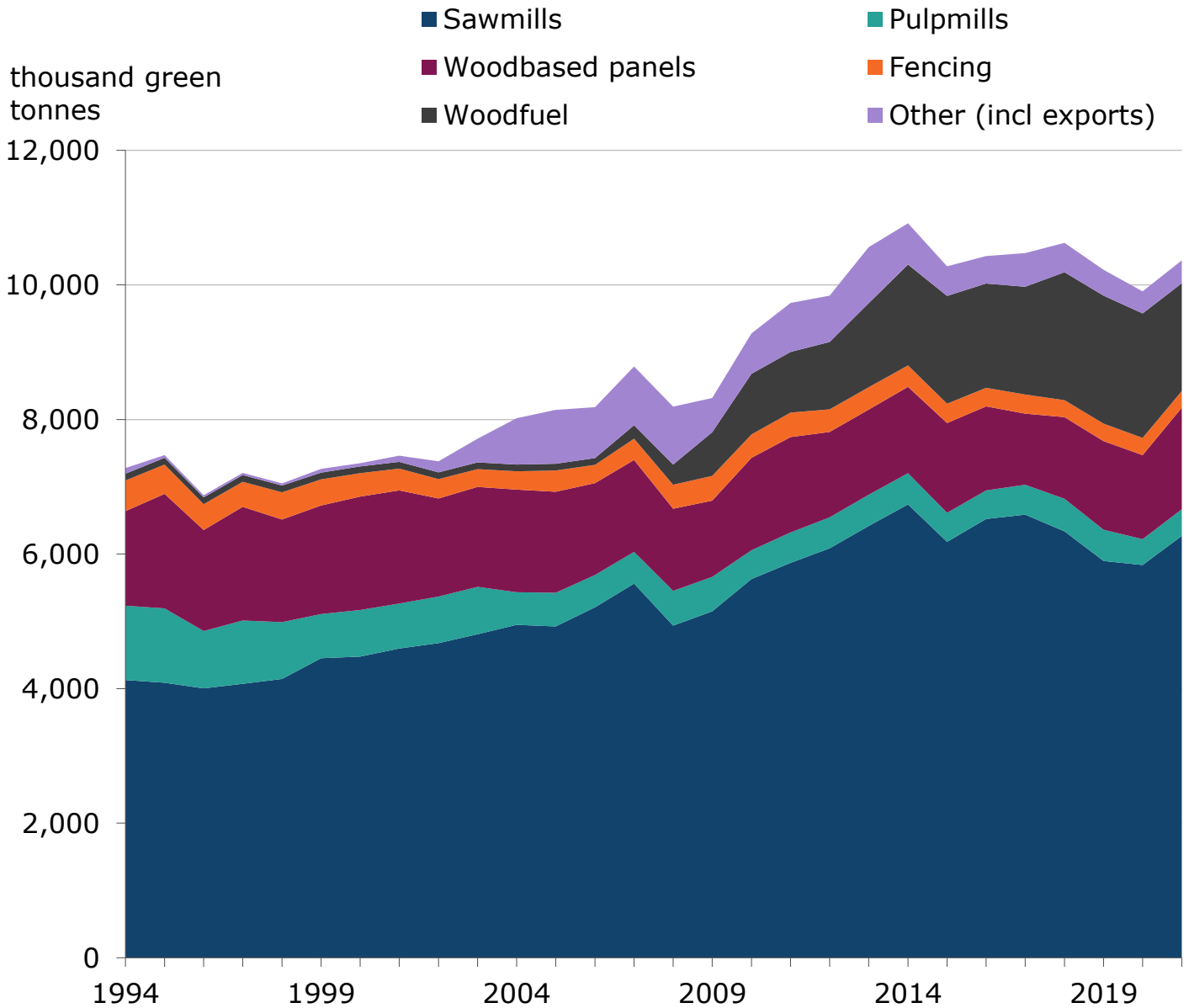
Source: industry surveys, industry associations.

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 make use of wood fuel 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, UK, 1994 to 2021



Sources: 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 make use of wood fuel 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.

## 2.2.2 Hardwood deliveries

There was a total of 0.8 million green tonnes of UK hardwood deliveries in 2021 (Table 2.6). The majority of UK hardwood deliveries (85% in 2021) were used for woodfuel.

Table 2.6 Deliveries of UK-grown hardwood, UK, 2012 to 2021

thousand green tonnes

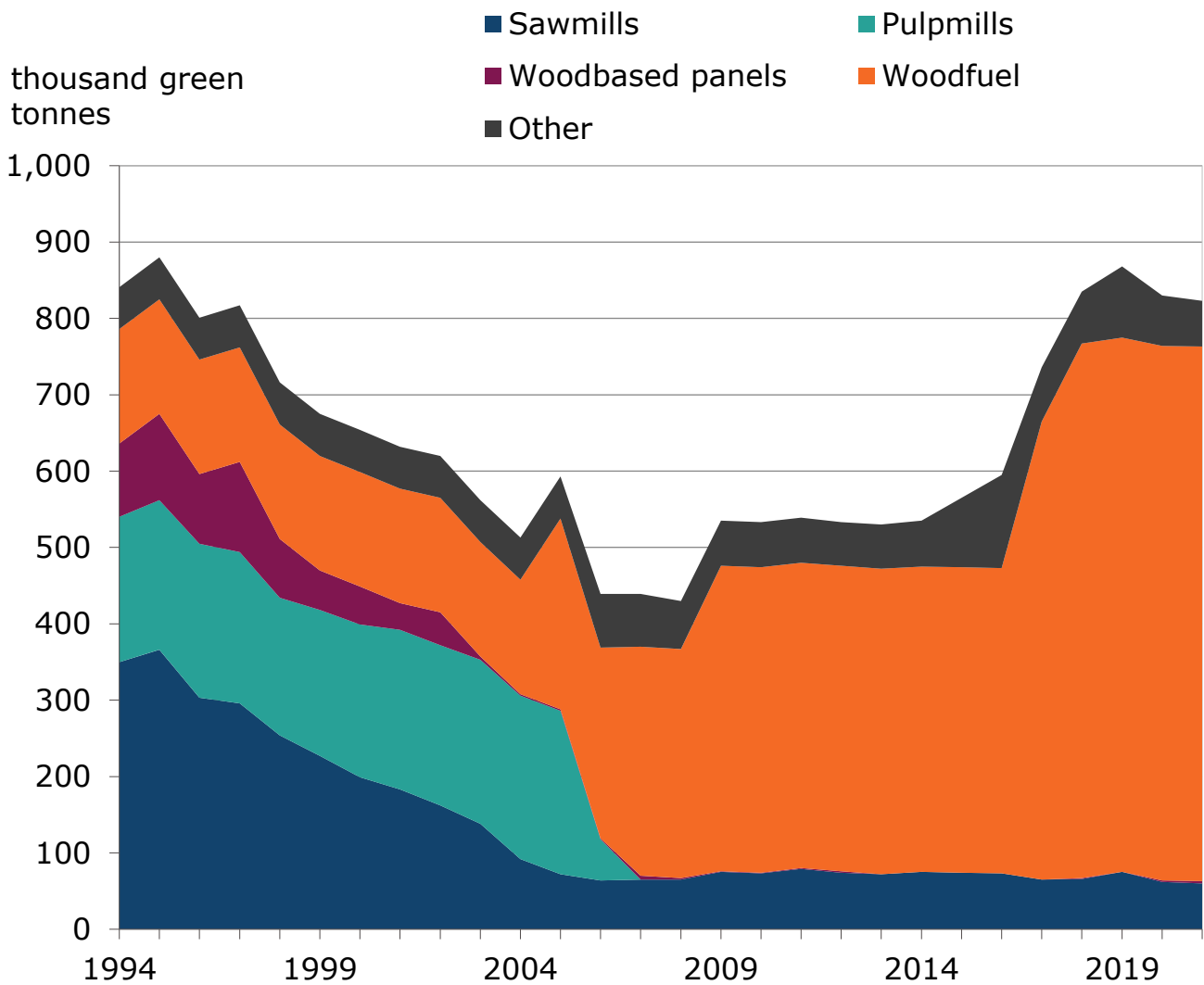
Year	Sawmills	Pulp mills	Wood-based panels	Woodfuel	Other	Total
2012	74	0	2	400	57	532
2013	72	0	0	400	58	530
2014	75	0	0	400	60	535
2015	74	0	0	400	91	564
2016	73	0	0	400	122	595
2017	65	0	0	600	71	736
2018	66	0	1	700	68	834
2019	75	0	0	700	93	868
2020	62	0	2	700	66	829
2021	60	0	3	700	60	823

Source: industry surveys, industry associations.

Notes:

1. Figures are based on processing industries' purchases of hardwood grown in the UK and estimates for woodfuel and other uses.
2. Woodfuel reported here is derived from stemwood and includes estimated roundwood use for biomass energy.
3. The apparent increase in woodfuel from 2016 to 2017 reflects a new estimate of the level of hardwood deliveries for woodfuel and should not be interpreted as an increase in a single year.
4. Other includes round fencing and roundwood exports.

Figure 2.2 Deliveries of UK-grown hardwood, UK, 1994 to 2021



Source: industry surveys, industry associations.

Notes:

1. Other includes round fencing and roundwood exports.
2. The apparent increase woodfuel from 2016 to 2017 reflects a new estimate of the level of hardwood deliveries for woodfuel and should not be interpreted as an increase in a single year.

## 2.3 Sawmills - All Mills

Data are collected by Forest Research 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. The threshold defining larger mills was changed for the collection of 2016 data, from annual sawnwood production of 10 thousand m<sup>3</sup> to annual sawnwood production of 25 thousand m<sup>3</sup>. Further information on this change is provided in the section on Larger Mills within this chapter and in the Sawmill Survey section of the Sources chapter.

Consumption units are given in green tonnes. For production, the units used are m<sup>3</sup> sawnwood. For conversion factors between different units, see the Timber section of the Sources chapter.

### 2.3.1 Summary: consumption & production

In 2021, sawmills in the UK consumed a total of 6.6 million green tonnes of softwood, an 8% increase from 2020 (Table 2.7a).

A further 0.07 million green tonnes of hardwood were consumed by UK sawmills in 2020. Most of the logs, 6.3 million green tonnes of softwood and 0.06 million green tonnes of hardwood, were grown in the UK.

Table 2.7a Consumption by sawmills, UK, 2012 to 2021

thousand green tonnes

Year	UK-grown soft wood	Imported softwood	Total softwood	UK grown hardwood	Imported hardwood	Total hardwood
2012	6,084	124	6,209	74	17	91
2013	6,418	126	6,544	72	13	86
2014	6,737	159	6,895	75	14	89
2015	6,179	182	6,361	74	14	88
2016	6,522	209	6,731	73	17	90
2017	6,586	267	6,853	65	13	78
2018	6,337	325	6,662	66	13	79
2019	5,898	343	6,242	75	13	88
2020	5,837	263	6,100	62	12	73
2021	6,268	321	6,590	60	12	72

Source: Forest Research Sawmill Survey

A total of 3.6 million m<sup>3</sup> of sawnwood was produced in the UK in 2021, an 8% increase from 2020.

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.

**Table 2.7b Sawnwood production by sawmills, UK, 2012 to 2021**

Year	thousand m <sup>3</sup> sawnwood	
	Softwood production	Hardwood production
2012	3,364	48
2013	3,539	45
2014	3,719	47
2015	3,454	45
2016	3,627	46
2017	3,727	41
2018	3,625	41
2019	3,416	46
2020	3,311	37
2021	3,574	37

Source: Forest Research Sawmill Survey

## 2.3.2 Number of mills by size

A total of 141 sawmills processed UK roundwood in 2021 (Table 2.8). Most mills (80%) produced less than 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood) during the year.

Over the past ten years, the number of active sawmills has decreased by 20%. Most of this change has occurred in the smallest size categories.

**Table 2.8 Number of sawmills by size category of mill, UK, 2012 to 2021**

Number of mills by size category (thousand m<sup>3</sup>)

Year	<1	1-<5	5-<10	10-<25	25-<50	50-<100	100+	Total
2012	67	46	15	19	11	8	11	177
2013	65	43	15	17	13	6	13	172
2014	66	39	15	17	13	8	12	170
2015	63	41	17	17	12	6	12	168
2016	57	40	17	20	6	10	13	163
2017	57	40	14	22	5	10	12	160
2018	57	34	13	21	8	7	12	152
2019	53	34	14	20	8	6	12	147
2020	52	31	14	18	10	8	11	144
2021	52	28	12	21	9	7	12	141

Source: Forest Research Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m<sup>3</sup>.

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



### 2.3.3 Number of mills by country

Around one half (52%) of the 141 active sawmills in 2021 were in England, around one third (33%) were in Scotland, 9% in Wales and 6% in Northern Ireland (Table 2.9).

Table 2.9 Number of sawmills by country, UK, 2012 to 2021

Year	England	Wales	Scotland	Northern Ireland	UK
2012	93	15	60	9	177
2013	90	15	58	9	172
2014	90	15	56	9	170
2015	90	15	54	9	168
2016	87	14	53	9	163
2017	86	13	52	9	160
2018	81	12	50	9	152
2019	79	12	47	9	147
2020	77	12	46	9	144
2021	74	12	46	9	141

Source: Forest Research Sawmill Survey

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

## 2.3.4 Number of sawmills by type of wood sawn

Around two thirds (68%) of the 141 active sawmills in 2021 processed softwood only (Table 2.10). A further 26% processed both softwood and hardwood, and the remainder processed only hardwood.

Table 2.10 Number of sawmills by type of wood sawn, UK, 2012 to 2021

Year	Softwood only	Hardwood only	Both	Total
2012	117	11	49	177
2013	117	11	44	172
2014	114	9	47	170
2015	111	9	48	168
2016	108	9	46	163
2017	108	10	42	160
2018	101	9	42	152
2019	100	8	39	147
2020	97	8	39	144
2021	96	9	36	141

Source: Forest Research Sawmill Survey

## 2.3.5 Consumption of softwood by size of mill

Despite accounting for only 20% of all sawmills (see Table 2.8), those with total annual sawnwood production of 25 thousand m<sup>3</sup> or more accounted for 87% of the total softwood consumed by sawmills in 2021 (Table 2.11).

**Table 2.11 Consumption of softwood by size category of mill, UK, 2012 to 2021**

Consumption (thousand green tonnes) by size category (thousand m <sup>3</sup> )								
Year	<1	1-<5	5-<10	10-<25	25-<50	50-<100	100+	Total
2012	31	169	204	539	738	1,133	3,395	6,209
2013	33	170	197	476	804	777	4,085	6,544
2014	33	143	193	486	833	1,090	4,117	6,895
2015	29	153	224	553	795	801	3,805	6,361
2016	26	139	219	588	372	1,117	4,270	6,731
2017	26	149	172	692	339	1,352	4,122	6,853
2018	30	124	154	626	585	1,009	4,134	6,662
2019	27	124	189	639	550	831	3,881	6,242
2020	29	109	172	504	598	1,146	3,541	6,100
2021	29	105	144	605	576	931	4,200	6,590

Source: Forest Research Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m<sup>3</sup>.

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

## 2.3.6 Consumption of softwood by mills in each country

Mills in Scotland consumed around one half (51%) of the 6.6 million green tonnes of softwood delivered to UK sawmills in 2021 (Table 2.12). A further 29% was consumed by mills in England, 10% in Northern Ireland and the remainder in Wales.

Table 2.12 Consumption of softwood by country, UK, 2012 to 2021

thousand green tonnes

Year	England	Wales	Scotland	Northern Ireland	UK
2012	1,818	672	3,191	528	6,209
2013	1,876	720	3,416	532	6,544
2014	1,979	729	3,657	530	6,895
2015	1,914	673	3,243	531	6,361
2016	1,981	756	3,437	558	6,731
2017	2,086	709	3,475	583	6,853
2018	2,026	666	3,329	640	6,662
2019	1,990	580	2,994	678	6,242
2020	1,820	585	3,064	631	6,100
2021	1,925	627	3,374	664	6,590

Source: Forest Research Sawmill Survey

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

## 2.3.7 Production of sawn softwood by size of mill

UK sawmills produced a total of 3.6 million m<sup>3</sup> of softwood in 2021, an 8% increase from the 2020 figure (Table 2.13).

Sawmills with total annual sawnwood production of 25 thousand m<sup>3</sup> or more accounted for 87% of the total sawn softwood produced by sawmills in 2021.

**Table 2.13 Production of sawn softwood by size of mill, UK, 2012 to 2021**

Production (thousand m <sup>3</sup> ) by size category (thousand m <sup>3</sup> )								
Year	<1	1-<5	5-<10	10-<25	25-<50	50-<100	100+	Total
2012	17	98	104	314	393	564	1,874	3,364
2013	19	98	102	287	429	404	2,200	3,539
2014	19	83	100	282	448	563	2,224	3,719
2015	17	88	120	296	466	422	2,045	3,454
2016	16	80	115	338	186	597	2,296	3,627
2017	16	86	86	384	178	647	2,328	3,727
2018	18	71	74	355	311	468	2,327	3,625
2019	17	71	89	349	306	382	2,203	3,416
2020	17	66	81	277	321	551	1,997	3,311
2021	17	58	66	332	308	483	2,309	3,574

Source: Forest Research Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m<sup>3</sup>.

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

## 2.3.8 Production of sawn softwood by mills in each country

Sawmills in Scotland accounted for 1.9 million m<sup>3</sup> (52%) of sawn softwood produced in 2021 (Table 2.14). A further 29% was produced by mills in England, 10% in Northern Ireland and the remaining 8% in Wales.

Table 2.14 Production of sawn softwood by country, UK, 2012 to 2021

Year	thousand m <sup>3</sup>				
	England	Wales	Scotland	Northern Ireland	UK
2012	999	334	1,743	288	3,364
2013	1,024	357	1,869	289	3,539
2014	1,090	362	1,981	286	3,719
2015	1,055	332	1,783	284	3,454
2016	1,091	374	1,867	294	3,627
2017	1,157	327	1,917	326	3,727
2018	1,120	316	1,837	351	3,625
2019	1,107	275	1,684	351	3,416
2020	1,007	271	1,683	349	3,311
2021	1,050	293	1,859	371	3,574

Source: Forest Research Sawmill Survey

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

## 2.4 Sawmills - Larger Mills

The following, more detailed, tables are available for larger mills (those producing at least 25 thousand m<sup>3</sup> sawnwood annually) only.

These larger mills are estimated to account for 87% of all sawn softwood produced in 2021 (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

Total softwood consumption by the 28 sawmills covered by the detailed sawmill survey in 2021 was 5.7 million green tonnes (Table 2.15). Sawn softwood production by these mills was 3.1 million m<sup>3</sup> and other softwood products (chips, bark, sawdust, etc) amounted to 3.0 million tonnes.

Sawmills in Scotland accounted for around one half (53%) of all softwood consumption by larger mills. A further 28% was consumed by mills in England, 11% in Northern Ireland and the remaining 8% in Wales.

**Table 2.15 Softwood consumption and production by larger mills, UK, 2021**

<b>Large mills</b>	<b>England</b>	<b>Wales</b>	<b>Scotland</b>	<b>Northern Ireland</b>	<b>UK</b>
Number of mills	10	2	14	2	28
Consumption (thousand green tonnes)	1,585	479	3,021	622	5,707
Sawnwood production (thousand m <sup>3</sup> )	875	216	1,661	348	3,101
Other products (thousand tonnes)	740	268	1,612	353	2,972

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).



## 2.4.2 Source of softwood logs

Of all softwood sawlogs consumed by larger sawmills in 2021, 59% came from Scotland, 18% from England, 13% from Wales and 5% from Northern Ireland (Tables 2.16 and 2.16a). The remaining 6% were imported from other countries.

98% of softwood sawlogs used by Scottish mills in 2021 came from Scotland. The corresponding proportions of mills' log use coming from within the same country were 57% for England, 77% for Wales and 48% for Northern Ireland.

Table 2.16a Source of softwood logs for larger mills<sup>1</sup>, UK, 2021

thousand green tonnes

Source	England	Wales	Scotland	Northern Ireland	UK
England	910	42	75	0	1,026
Wales	352	367	0	0	719
Scotland	324	70	2,946	0	3,340
Northern Ireland	0	0	0	300	300
<b>Total UK logs</b>	<b>1,585</b>	<b>479</b>	<b>3,021</b>	<b>300</b>	<b>5,386</b>
Other countries	0	0	0	321	321
<b>Total log consumption</b>	<b>1,585</b>	<b>479</b>	<b>3,021</b>	<b>622</b>	<b>5,707</b>

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).

Table 2.16b Source of softwood logs for larger mills, UK, 2017 to 2021  
percent of total softwood consumption

Year	England	Wales	Scotland	Northern Ireland	Other countries	Total
2017	20	14	57	4	5	100
2018	20	13	57	5	6	100
2019	21	13	54	6	7	100
2020	21	11	57	6	5	100
2021	18	13	59	5	6	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).

### 2.4.3 Sawn softwood product markets

In 2021, 39% of sawn softwood produced by larger sawmills was used for fencing, 27% for construction, 25% for packaging and pallets, and the remaining 9% went to all other markets (Tables 2.17 and 2.17a).

**Table 2.17a Sawn softwood product markets for larger mills<sup>1</sup>, UK, 2021**  
per cent of total softwood product markets

<b>Product market</b>	<b>England</b>	<b>Wales</b>	<b>Scotland</b>	<b>Northern Ireland</b>	<b>UK</b>
Construction	13	9	37	28	27
Fencing	58	33	30	45	39
Packaging/pallets	23	40	22	28	25
Other	6	18	10	0	9
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).

**Table 2.17b Sawn softwood product markets for larger mills<sup>1</sup>, UK, 2017 to 2021**

per cent of total softwood product markets

<b>Year</b>	<b>Construction</b>	<b>Fencing</b>	<b>Packaging/pallets</b>	<b>Other</b>	<b>Total</b>
2017	32	36	24	8	100
2018	33	36	24	7	100
2019	30	37	26	7	100
2020	27	43	24	6	100
2021	27	39	25	9	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> 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 3.0 million tonnes in 2021 (Table 2.15). Over one third (37%) of other softwood products were sold to wood processing industries in the form of chips and 17% were sold to these industries in sawdust and other formats (Table 2.18). A further 18% of other products were sold to bio-energy (including pellet manufacturers), 21% were sold to others and 6% were used internally for heat or energy.

Table 2.18a Other softwood products for larger mills, UK, 2021  
per cent of total other softwood products

Destination and type of product	England	Wales	Scotland	Northern Ireland	UK
<b>Sold to wood processing industries</b>					
Wood chips	32	61	44	0	37
Bark	0	0	0	0	0
Sawdust & other	18	26	19	0	17
<b>Total</b>	<b>50</b>	<b>87</b>	<b>64</b>	<b>0</b>	<b>55</b>
<b>Sold to bio-energy</b>					
Wood chips	10	3	11	34	13
Bark	0	0	1	0	1
Sawdust & other	0	0	4	20	5
<b>Total</b>	<b>10</b>	<b>4</b>	<b>16</b>	<b>54</b>	<b>18</b>
<b>Other Sales</b>					
Wood chips	20	0	5	2	8
Bark	9	8	7	10	8
Sawdust & other	8	0	5	2	5
<b>Total</b>	<b>37</b>	<b>9</b>	<b>18</b>	<b>14</b>	<b>21</b>
<b>Internal use for heat/energy</b>					
Wood chips	2	0	2	31	5
Bark	0	0	0	0	0
Sawdust & other	0	0	1	0	1
<b>Total</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>32</b>	<b>6</b>

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).

The proportion of other products that were reported as sold to bio-energy have shown an overall reduction over the last five years (Table 2.18b).

**Table 2.18b Other softwood products for larger mills, UK, 2017 to 2021**  
per cent of total other softwood products

<b>Year</b>	<b>Sold to wood processing industries</b>	<b>Sold to bio-energy (incl. pellet manufacturers)</b>	<b>Other sales</b>	<b>Internal use for heat/energy</b>	<b>Total<sup>2</sup></b>
2017	56	22	19	3	100
2018	46	24	25	5	100
2019	53	20	19	8	100
2020	54	20	19	7	100
2021	55	18	21	6	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).
2. Total includes sales of firewood and other products disposed of as waste.

## 2.4.5 Sawmill employment

There were estimated to be 3.0 thousand full-time equivalent staff employed directly by sawmills producing at least 25 thousand m<sup>3</sup> of sawnwood in 2021 (Tables 2.19a and 2.19b).

Table 2.19a Sawmill employment for larger mills<sup>1</sup>, UK, 2021

full-time equivalents

Employment type	England	Wales	Scotland	Northern Ireland	UK
<b>Direct</b>	<b>1,058</b>	<b>149</b>	<b>1,457</b>	<b>299</b>	<b>2,963</b>
Line & production workers	842	136	1,265	226	2,469
Managerial & administrative staff	149	13	175	71	408
Haulage of logs to the mill	67	0	17	2	86
<b>Others<sup>2</sup></b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>12</b>
Line & production workers	0	0	12	0	12
Managerial & administrative staff	0	0	0	0	0

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).
2. 'Others' refers to others undertaking work for the sawmill, including contractors and their employees.
3. The results exclude any employment on harvesting, and any employment at the site not directly related to the sawmill (e.g., exclude work producing pallets or other wood products from sawn wood).
4. Excludes haulage employment on contract.

Table 2.19b Sawmill employment for larger mills<sup>1</sup>, UK, 2017 to 2021  
full-time equivalents

Employment	Line & production workers	Managerial & administrative staff	Haulage of logs to the mill	Total employment
<b>Direct</b>				
2016	2,369	428	79	2,875
2017	2,368	416	75	2,859
2018	2,220	395	76	2,691
2019	2,268	380	82	2,730
2020	2,469	408	86	2,963
<b>Others<sup>2</sup></b>				
2016	76	3	x	79
2017	50	0	x	50
2018	76	0	x	76
2019	76	5	x	81
2020	12	0	x	12

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m<sup>3</sup> sawnwood (softwood and hardwood).
2. Excludes haulage employment on contract.
3. x 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 Confederation of Forest Industries (Confor).

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 2021, a 3% increase from the 2020 total (Table 2.20).

UK roundwood represented 83% of the inputs for the integrated pulp & paper mills in 2021, with the remaining 17% coming from sawmill products.

Table 2.20 Inputs for the integrated pulp & paper mills<sup>1</sup>, UK, 2012 to 2021

thousand green tonnes

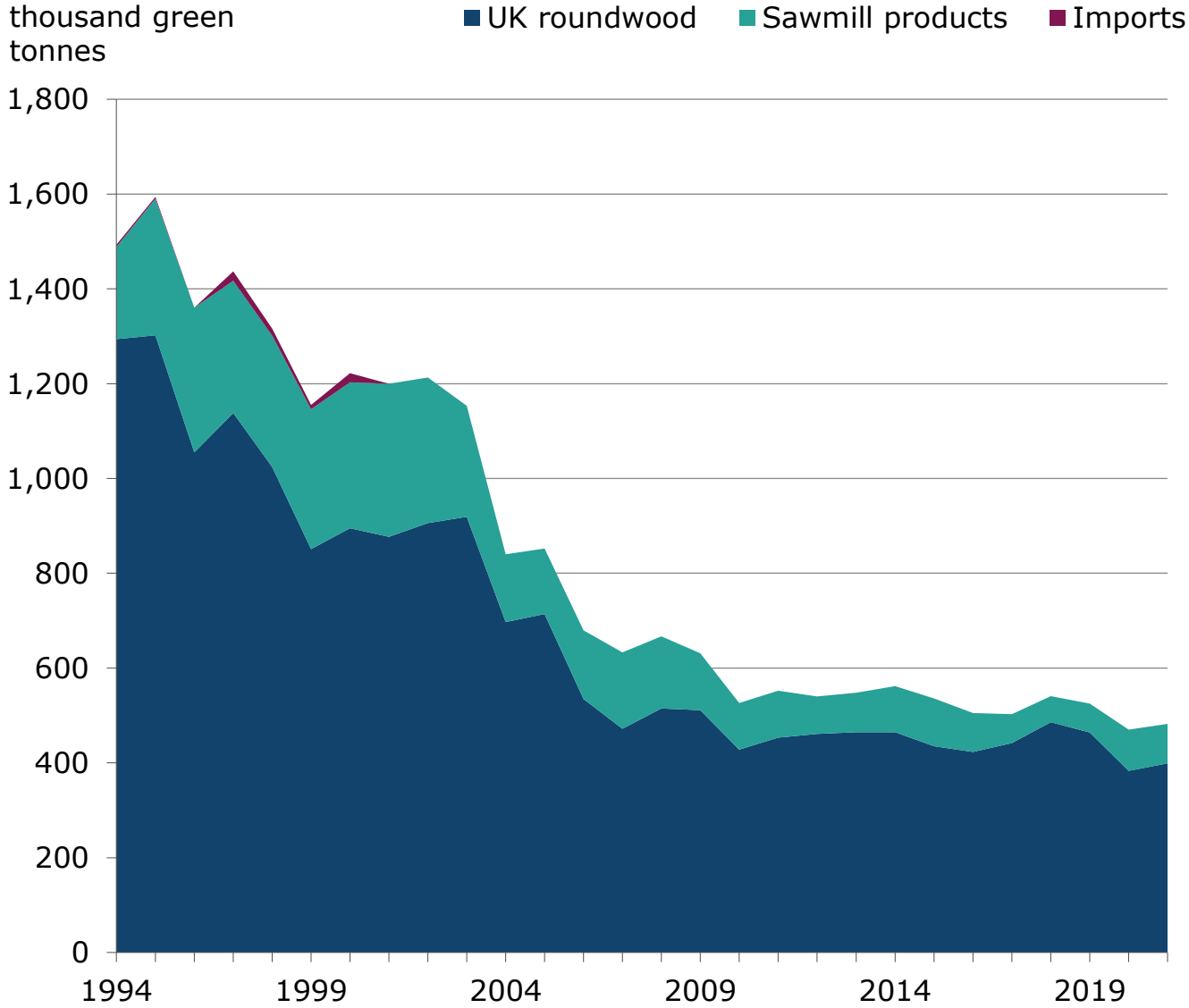
<b>Year</b>	<b>UK roundwood<sup>2</sup></b>	<b>Sawmill products</b>	<b>Total</b>
2012	461	79	540
2013	465	83	548
2014	465	97	562
2015	435	101	536
2016	423	82	505
2017	442	61	503
2018	486	55	541
2019	464	61	525
2020	383	87	470
2021	399	83	482

Source: Confor

Notes:

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

Figure 2.3 Inputs to integrated pulp and paper mills, UK, 1994 to 2021



Source: Confor

## 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 3.6 million tonnes of paper and paperboard was produced in the UK in 2021, similar to the level in the previous year. Packaging materials accounted for 52% of the total UK paper production in 2021, sanitary and household papers for 19% and other paper and paperboard (including graphic papers) for 29%.

**Table 2.21 Production of paper and paperboard, UK, 2012 to 2021**

thousand tonnes

Year	Sanitary & household papers	Packaging materials	Other (including graphic papers)	Total paper & paperboard
2012	795	1,798	1,887	4,480
2013	802	1,851	1,908	4,561
2014	768	1,801	1,828	4,397
2015	772	1,894	1,304	3,970
2016	730	1,800	1,147	3,677
2017	734	1,935	1,188	3,858
2018	738	1,904	1,253	3,894
2019	762	1,884	1,205	3,851
2020	742	1,917	972	3,631
2021	689	1,898	1,053	3,640

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 provide statistics on the inputs to mills that produce wood-based panels in the UK. The mills used a total of 4.1 million tonnes of material in 2021, an 8% increase from 2020. The inputs in 2021 comprised 1.5 million green tonnes of roundwood (36%), 1.5 million green tonnes of sawmill products (37%), 1.1 million tonnes of recycled wood fibre (26%) and 0.03 million tonnes of imports (1%).

Table 2.22 Softwood inputs to wood-based panel mills, UK, 2012 to 2021

thousand green tonnes

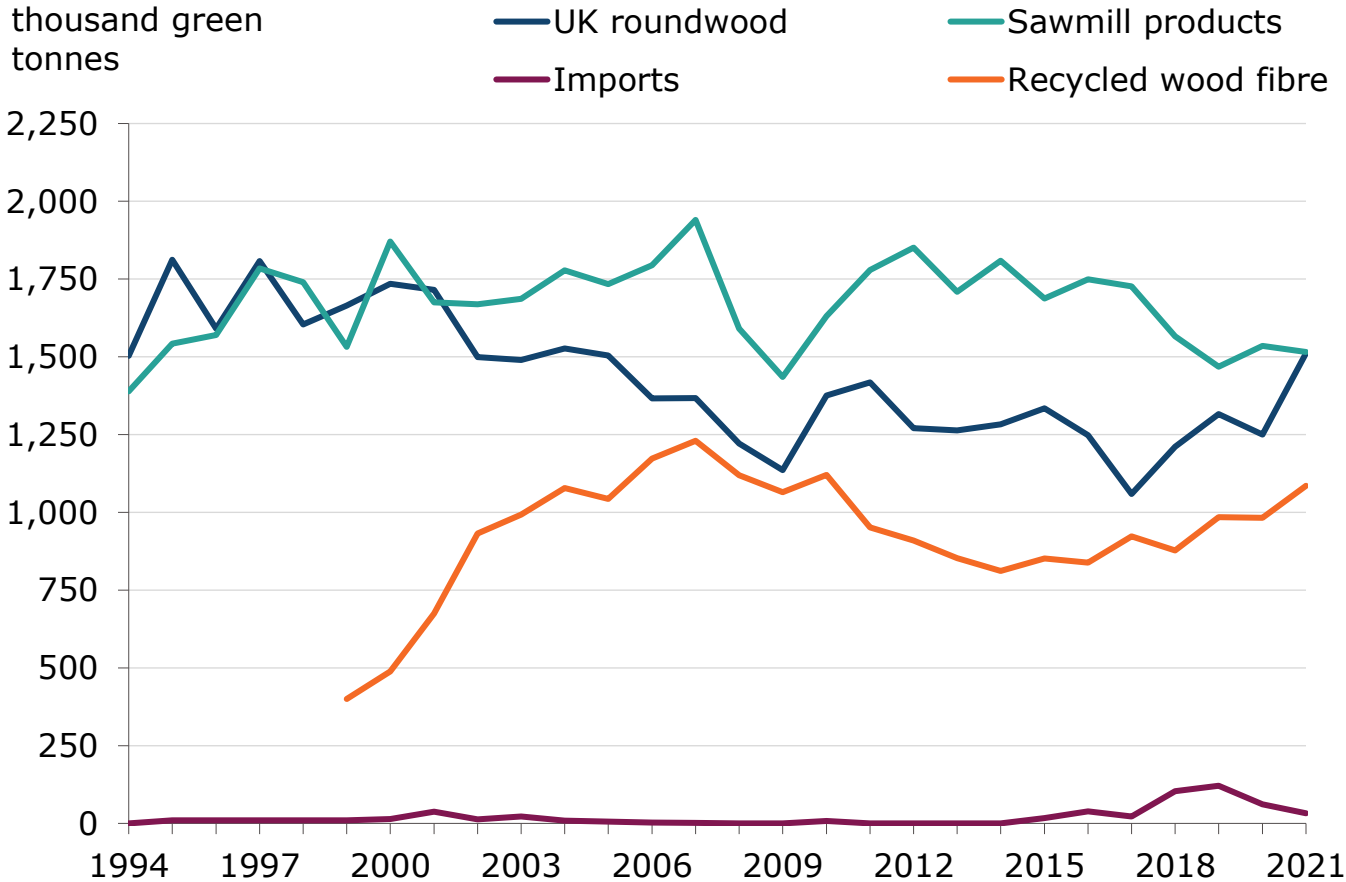
Year	UK round-wood <sup>1</sup> softwood	UK round-wood <sup>1</sup> hardwood	Sawmill products	Imports <sup>2</sup> softwood	Imports <sup>2</sup> hardwood	Recycled wood fibre <sup>3,4</sup>
2012	1,269	2	1,851	0	0	909
2013	1,263	0	1,709	0	0	853
2014	1,283	0	1,809	0	0	812
2015	1,334	0	1,687	12	5	852
2016	1,248	0	1,749	10	29	838
2017	1,059	0	1,726	0	22	923
2018	1,210	1	1,566	30	74	877
2019	1,316	0	1,468	43	78	984
2020	1,248	2	1,535	22	39	982
2021	1,508	3	1,516	33	0	1,085

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 wood-based panel production. It comprises wood originally grown in the UK and wood originally grown in forests outside the UK.
4. Quantities are as delivered, with an assumed average moisture content of 25%. To convert to green tonnes (assuming moisture content of 52%), multiply by 1.56.

Figure 2.4 Inputs to wood-based panel mills, UK, 1994 to 2021



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 2021 was 3.5 million m<sup>3</sup>, an 18% increase from 2020 (Table 2.23). Over three quarters (77%) of wood-based panel products produced in the UK in 2021 were particleboard (including oriented strand board (OSB)).

Table 2.23 Wood-based panel production, UK, 2012 to 2021

	thousand m <sup>3</sup>		
<b>Year</b>	<b>Particleboard<sup>1</sup></b>	<b>Fibreboard<sup>2</sup></b>	<b>Total</b>
2012	2,215	788	3,003
2013	2,276	756	3,032
2014	2,319	749	3,068
2015	2,324	756	3,080
2016	2,349	684	3,033
2017	2,501	675	3,176
2018	2,355	724	3,079
2019	2,495	751	3,246
2020	2,296	656	2,952
2021	2,688	798	3,486

Source: Wood Panel Industries Federation

Notes:

1. Includes Oriented Strand Board (OSB).
2. Includes Medium Density Fibreboard (MDF).
3. Changes in the mix of materials used and type of product produced can result in apparent discrepancies between the trends for inputs (Table 2.22) and production.



## 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.

1.6 million green tonnes of UK softwood were estimated to have been used directly for woodfuel (including biomass energy) in 2021, a 14% decrease from the previous year (Table 2.24). A further 247 thousand green tonnes of UK softwood were consumed by round fencing manufacturers and 176 thousand green tonnes for other uses in 2021.

Table 2.24 Miscellaneous uses of softwood roundwood, UK, 2012 to 2021

Year	thousand green tonnes			
	Fencing	Woodfuel <sup>1</sup>	Other <sup>1</sup>	Total
2012	338	1,000	154	1,492
2013	332	1,250	191	1,773
2014	317	1,500	176	1,992
2015	288	1,600	164	2,052
2016	277	1,550	178	2,006
2017	283	1,600	170	2,053
2018	255	1,900	174	2,329
2019	262	1,900	183	2,346
2020	258	1,850	188	2,296
2021	247	1,600	176	2,022

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 make use of wood fuel 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 700 thousand green tonnes of UK hardwood were used for woodfuel (including biomass energy) in 2020. A further 30 thousand green tonnes were estimated to have been consumed by round fencing manufacturers and 30 thousand green tonnes for other uses, including exports.

## 2.7.1 Softwood round fencing manufacturers

There were 45 active round fencing manufacturers in 2021 (Table 2.25).

Over three fifths of round fencing manufacturers (62%) consumed less than 5 thousand green tonnes of softwood annually.

Table 2.25 Number of softwood round fencing manufacturers by size category<sup>1</sup>, UK, 2012 to 2021

Year	<1	1-<5	5-<10	10+	Total
2012	21	21	11	7	60
2013	20	22	11	7	60
2014	18	21	10	7	56
2015	15	19	10	6	50
2016	17	16	11	6	50
2017	16	17	9	7	49
2018	15	15	10	6	46
2019	14	16	10	6	46
2020	15	15	9	6	45
2021	16	12	11	6	45

Source: Survey of Round Fencing Manufacturers

Notes:

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

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

## 2.7.2 Roundwood purchased by softwood round fencing manufacturers

A total of 273 thousand green tonnes of softwood (UK grown and imported) was purchased by softwood fencing manufacturers in 2021 (Table 2.26). This represents a decrease of 2% from the 2020 total of 279 thousand green tonnes.

Table 2.26 Total roundwood purchased<sup>2</sup> by size category<sup>1</sup> of softwood round fencing manufacturers, UK, 2012 to 2021

Year	thousand green tonnes				Total
	<1	1-<5	5-<10	10+	
2012	8	57	69	226	360
2013	7	57	79	204	346
2014	7	54	74	201	335
2015	6	46	79	185	316
2016	7	41	78	177	303
2017	6	45	71	185	307
2018	6	37	71	162	276
2019	6	40	76	166	288
2020	6	38	69	166	279
2021	6	32	75	159	273

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.

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

## 2.8 Exports

UK softwood exports in 2021 consisted of 145 thousand green tonnes of sawlogs and 23 thousand green tonnes of industrial roundwood (excluding sawlogs), giving a total of 168 thousand green tonnes of roundwood (Table 2.27). The quantity of softwood roundwood exports increased by 20% between 2020 and 2021.

The UK also exported 51 thousand tonnes of softwood chips in 2021, an 8% decrease from the previous year.

Table 2.27 Summary of softwood exports, 2012 to 2021

thousand green tonnes

Year	Industrial roundwood <sup>1</sup>	Roundwood sawlogs	Total roundwood	Chips
2012	405	130	535	142
2013	379	260	640	126
2014	228	209	437	151
2015	75	202	276	86
2016	48	183	231	51
2017	124	207	331	92
2018	67	197	264	112
2019	46	154	201	109
2020	29	110	140	55
2021	23	145	168	51

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).

Estimates of the certified softwood removals in the UK by country, are also provided (Table 2.28a). As these figures are relatively new and the quality of data at this level is still improving, these estimates are currently labelled as experimental statistics.

Information on areas of certified woodland is provided in Chapter 1.

## 2.9.1 Volume certified

71% of private sector softwood removals in 2021 were from certified woodlands (Table 2.28). The percentage of private sector softwood removals that are certified has fluctuated over recent years; industry experts have indicated 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 England, Forestry and Land Scotland, Natural Resources Wales and Forest Service woodland are certified, this equates to around 82% of all softwood removals in 2021 from certified sources.

77% of sawmills' roundwood consumption in 2021 was certified. For round fencing manufacturers, 68% of total softwood consumption was certified.

**Table 2.28a Per cent of volume certified, UK, 2012 to 2021**

per cent certified volume

<b>Year</b>	<b>Softwood removals from Private sector woodland</b>	<b>Total softwood removals<sup>1</sup></b>	<b>Consumption (softwood and hardwood) by sawmills</b>	<b>Consumption (softwood) by round fencing manufacturers</b>
2012	70	84	81	60
2013	76	87	83	55
2014	72	84	80	69
2015	69	83	80	71
2016	66	82	80	70
2017	76	87	79	71
2018	71	82	77	61
2019	65	79	77	69
2020	67	82	78	64
2021	71	82	77	68

Source: industry surveys

Notes:

1. Includes all removals from FE/FLS/NRW/FS woodland.

Experimental statistics providing a country breakdown of softwood removals from certified woodlands in 2021 indicate that 87% of softwood removals from woodlands in Wales were certified, 85% from Scotland, 77% from Northern Ireland and 69% from England.

Table 2.28b Percent of volume certified by country<sup>1</sup>: softwood removals, UK, 2021

Country	percent certified volume	
	Softwood removals from Private sector woodland	Total softwood removals <sup>2</sup>
England	41	69
Wales	73	87
Scotland	79	85
Northern Ireland	2	77
UK	71	82

Source: Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW), Forest Service (FS), Private Sector Softwood Removals Survey

Notes:

1. These figures are currently experimental statistics.
2. Includes all removals from FE/FLS/NRW/FS woodland.



## 2.9.2 Chain of custody certificates

Sawmills and round fencing manufacturers were also asked whether they held a Chain of Custody certificate. 74% of sawmills for which the certification status was known held a Chain of Custody certificate in 2021 (Table 2.29). This proportion varied with size of mill, from 15% for mills producing less than 5 thousand m<sup>3</sup> sawnwood to 100% for those producing 25 thousand m<sup>3</sup> sawnwood or more. 56% of round fencing manufacturers for which the certification status was known held a Chain of Custody certificate.

Table 2.29 Chain of custody certificates, UK, 2021

Mills	number of mills			
	Mills holding certificate	Mills without certificate	Certification status not known <sup>1</sup>	Total <sup>1</sup>
<b>Sawmills<sup>2</sup> (size of mill<sup>3</sup>)</b>				
<5	2	11	67	80
5-<25	10	3	20	33
25+	28	0	0	28
<b>Total</b>	<b>40</b>	<b>14</b>	<b>87</b>	<b>141</b>
<b>Round fencing manufacturers</b>	<b>10</b>	<b>8</b>	<b>27</b>	<b>45</b>

Source: industry surveys

Notes:

1. Includes non-respondents to survey in current year.
2. For large sawmills (those producing at least 25 thousand m<sup>3</sup>) that did not report whether or not they held a certificate or did not respond to the 2021 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 m<sup>3</sup>.

## 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) and feedstock (Table 2.33).

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

## 2.10.1 Recycled wood used for woodfuel

Estimates of recycled wood used for woodfuel have been obtained from the Wood Recyclers' Association. In 2021, it is estimated that around 2.5 million tonnes of recycled wood were used for woodfuel, a 2% increase from the previous year.

Table 2.30 Recycled wood used for woodfuel<sup>1</sup>, UK, 2012 to 2021

million tonnes

Year	Total
2012	0.76
2013	0.83
2014	1.34
2015	1.45
2016	1.55
2017	1.66
2018	2.17
2019	2.49
2020	2.48
2021	2.54

Source: Wood Recyclers Association

Notes:

1. Post consumer recovered wood, comprising wood originally grown in the UK and wood originally grown in forests outside the UK.
2. Figures from 2014 relate to capacity, rather than consumption.
3. Quantities are as delivered, with an assumed average moisture content of 25%. To convert to green tonnes (assuming moisture content of 52%), multiply by 1.56.

These figures are outside the scope of National Statistics.

## 2.10.2 Woodfuel supply by sawmills and round fencing manufacturers

An estimated 819 thousand green tonnes (mainly softwood) of woodfuel were supplied by sawmills in 2021 and a further 81 thousand green tonnes were supplied by round fencing manufacturers (Table 2.31). Around three quarters (74%) of the total woodfuel supplied was sold to bioenergy.

Table 2.31 Woodfuel supply<sup>1</sup> by sawmills and round fencing manufacturers, UK, 2017 to 2021

thousand green tonnes					
Type of processor	2017	2018	2019	2020	2021
<b>Sawmills</b>					
Sales to bioenergy	620	633	533	569	621
Sales to firewood	15	7	17	23	12
Used internally for heat/energy	96	152	206	180	186
<b>Total</b>	<b>731</b>	<b>792</b>	<b>757</b>	<b>772</b>	<b>819</b>
<b>Round fencing manufacturers</b>					
Sales to bioenergy	55	52	43	43	44
Sales to firewood	7	8	10	10	9
Used internally for heat/energy	3	4	25	27	28
<b>Total</b>	<b>66</b>	<b>65</b>	<b>77</b>	<b>79</b>	<b>81</b>

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.

### 2.10.3 Wood pellets

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 304 thousand tonnes of wood pellets and briquettes are estimated to have been produced in the UK in 2021. This represents a 2% increase from the 2020 estimate of 298 thousand tonnes.

Table 2.32 Wood pellet feedstock, UK, 2012 to 2021

thousand tonnes

<b>Year</b>	<b>Total</b>
2012	278
2013	301
2014	354
2015	343
2016	329
2017	287
2018	279
2019	298
2020	298
2021	304

Source: Forest Research Survey of UK Pellet and Briquette Production

A total of 611 thousand tonnes of feedstock was used to produce wood pellets in the UK in 2021, a 5% decrease from the total for 2020 (Table 2.33).

**Table 2.33 Wood pellet feedstock, UK, 2017 to 2021**

thousand tonnes<sup>2</sup>

<b>Year</b>	<b>Roundwood</b>	<b>Sawmill products<sup>1</sup></b>	<b>Total</b>
2017	354	295	648
2018	453	226	679
2019	307	263	570
2020	390	254	644
2021	363	248	611

Source: Forest Research Survey of UK Pellet and Briquette Production

Note:

1. May also include wood from other sources (e.g., energy crops, arboriculture arisings and recycled wood).
2. Tonnes as delivered.

## 2.11 Experimental statistics on preservative treatment of sawnwood and round fencing

In 2020, a new question on the use of preservative treatment was added to both the Sawmill Survey and the Survey of Round Fencing Manufacturers. This question was continued in the 2021 surveys.

39% of sawnwood and 82% of round fencing produced in the UK that was reported by respondents to the 2021 surveys was preservative treated. In addition, 25% of the preservative treated sawnwood and 95% of the preservative treated round fencing was suitable for use in ground contact.

Table 2.34 Preservative treatment of domestically sawnwood and round fencing produced in the UK, 2020 to 2021

<b>Preservative treatment</b>	<b>2020</b>	<b>2021</b>
Sawnwood production		
Percent of total production that was preservative treated	42%	39%
Percent of preservative treated production that was suitable for use in ground contact	27%	25%
Round fencing production		
Percent of total production that was preservative treated	77%	82%
Percent of preservative treated production that was suitable for use in ground contact	92%	95%

Source: Sawmill Survey, Survey of Round Fencing Manufacturers

Note:

1. These figures are currently experimental statistics.
2. Figures relate to respondents only.

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