# UK Softwood Removals and Deliveries by Country, 2015 – 2016

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## Introduction

This publication contains experimental statistics on the destination of softwood (wood from coniferous trees) removed from UK forests. It is based on further analysis of annual statistics on UK wood production that were released in Forestry Statistics 2017.

Although data on softwood removals by country and on UK softwood deliveries by destination have been previously published, this is the first time that more detailed estimates of removals by country and destination have been produced. As such, they are being released as experimental statistics in order to obtain feedback from users to assist in their development. Further information on the feedback sought and address for responses is provided in the Next Steps section of this release.

Please refer to the Annex for a glossary of terms used in this release and for further information on the data sources and methodology used to produce these estimates.

## Key findings

The main findings are:

- Over one half (54%) of the 6.8 million green tonnes of softwood roundwood removed from forests in Scotland in 2016 was consumed by UK sawmills, 18% by panels/ pulp mills, 1% by round fencing mills and the remaining 26% was used for other purposes (including woodfuel and exports).
- Around three quarters (73%) of the 2.1 million green tonnes of softwood roundwood removed from forests in England in 2016 was consumed by UK sawmills, 13% by panels/ pulp mills, 3% by round fencing mills and the remaining 11% was used for other purposes (including woodfuel and exports).
- Two thirds (67%) of the 1.4 million green tonnes of softwood roundwood removed from forests in Wales in 2016 was consumed by UK sawmills, 11% by panels/ pulp mills, 7% by round fencing mills and the remaining 16% was used for other purposes (including woodfuel and exports).
- Around four fifths (80%) of the 0.4 million green tonnes of softwood roundwood removed from forests in Northern Ireland in 2016 was consumed by UK sawmills, 11% by round fencing mills (in the UK) and the remaining 9% was used for other purposes (including woodfuel and exports). None of the softwood roundwood removed from forests in Northern Ireland was consumed by UK panels/ pulp mills.

## Overview

Table 1, below, combines UK data on total softwood removals (Forestry Statistics 2017, table 2.1) with data on UK softwood deliveries by destination (Forestry Statistics 2017, table 2.5). The table shows the full breakdown of destinations, including an extra category to cover the difference between removals and deliveries (as reported in the Sources chapter of Forestry Statistics 2017).

Around 60% of softwood roundwood removed from UK forests was delivered to UK sawmills in 2016. A further 12% was delivered to woodbased panel mills, 4% to integrated pulp and paper mills and 3% to round fencing mills in the UK. The remainder was used for woodfuel (14%), was exported (2%), or was used for other purposes in the UK (5%, including the additional removals not accounted for in estimates of deliveries).

	Thousand green tonnes			
Delivered to:	2015	2016		
Sawmills	6,166	6,511		
Panels/ pulp:	1,769	1,671		
Pulpmills	435	423		
Woodbased panels	1,334	1,248		
Fencing	288	278		
Other uses	2,436	2,268		
Woodfuel	1,600	1,550		
Other	164	178		
Exports	276	231		
Residual (removals - deliveries) <sup>1</sup>	395	308		
Total removals 10,659 10,7				

## Table 1: UK softwood removals by destination

Source: Forestry Statistics 2017

Note:

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

In estimating removals by country and destination, figures for pulpmills and for woodbased panel mills have been combined, given the small number of processors involved. In addition, categories for which there are currently no sources of data on country breakdowns (e.g. woodfuel and exports) are combined into a single category covering all other uses.

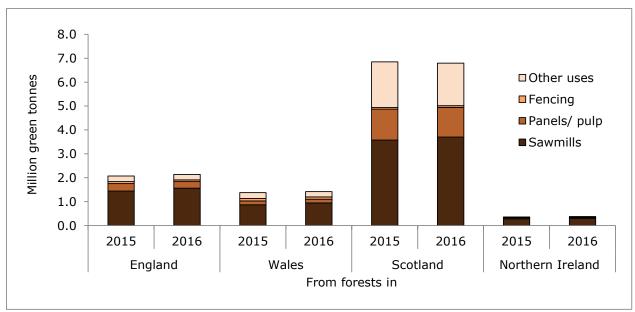
The breakdown of destinations differs across the UK, as illustrated in Figure 1, below.

Over one half (54%) of the 6.8 million green tonnes of softwood roundwood removed from forests in Scotland in 2016 was consumed by UK sawmills, 18% by panels/ pulp mills, 1% by round fencing mills and the remaining 26% was used for other purposes (including woodfuel and exports).

Around three quarters (73%) of the 2.1 million green tonnes of softwood roundwood removed from forests in England in 2016 was consumed by UK sawmills, 13% by panels/ pulp mills, 3% by round fencing mills and the remaining 11% was used for other purposes (including woodfuel and exports).

Two thirds (67%) of the 1.4 million green tonnes of softwood roundwood removed from forests in Wales in 2016 was consumed by UK sawmills, 11% by panels/ pulp mills, 7% by round fencing mills and the remaining 16% was used for other purposes (including woodfuel and exports).

Around four fifths (80%) of the 0.4 million green tonnes of softwood roundwood removed from forests in Northern Ireland in 2016 was consumed by UK sawmills, 11% by round fencing mills in the UK and the remaining 9% was used for other purposes (including woodfuel and exports). None of the softwood roundwood removed from forests in Northern Ireland was consumed by UK panels/ pulp mills.



## Figure 1: Destination of softwood removals by country

Source: Forestry Statistics 2017, industry surveys, trade associations Note:

1. Other uses includes roundwood used directly for woodfuel and exports of roundwood.

Further detail on the underlying data and how the estimates were produced is provided in the following sections.

## UK removals of softwood roundwood

Estimates of the volume of softwood roundwood removed from UK forests is obtained from administrative systems (for removals from Forestry Commission/ Natural Resources Wales/ Forest Service woodlands) and from the Private Sector Softwood Removals Survey (for removals from private sector woodlands). Estimates by country were presented in tables 2.2 and 2.3 of Forestry Statistics 2017. Table 2 provides a summary of the data for 2015 and 2016.

A total of 10.7 million green tonnes of softwood roundwood was removed from UK forests in 2016. Most (63% in 2016) came from Scotland, 20% from England, 13% from Wales and 4% from Northern Ireland.

## Table 2: Softwood removals

				Inousand	a green tonnes			
Year		Softwood removed from forests in						
	England	Wales	Scotland	Northern Ireland	UK			
2015	2,074	1,378	6,846	360	10,659			
2016	2,138	1,421	6,791	377	10,727			

Source: Forestry Statistics 2017

## UK deliveries of softwood roundwood

## **UK Summary**

Estimates of the volume of softwood roundwood delivered to processors and for other uses is obtained from surveys of the UK timber industry, data provided by trade associations and estimates by the Expert Group on Timber and Trade Statistics. Data at a UK level was presented in table 2.5 of Forestry Statistics 2017. Table 3, below, provides an extract, covering 2015 and 2016.

A total of 10.4 million green tonnes of UK softwood roundwood was delivered to processors and for other uses in 2016. 6.5 million green tonnes (62%) were used by sawmills, 0.3 million green tonnes (3%) by round fencing manufacturers, 1.7 million green tonnes (16%) by other processors and the remaining 2.0 million green tonnes (19%) were used directly for woodfuel, were exported or were used for other purposes.

#### Table 3: Deliveries of UK softwood roundwood

						Thou	usand gree	n tonnes
Year	Saw- mills	Pulp- mills	Wood- based panels	Fencing	Woodfuel <sup>1</sup>	Other <sup>2</sup>	Exports	Total
2015	6,166	435	1,334	288	1,600	164	276	10,263
2016	6,511	423	1,248	278	1,550	178	231	10,419

Source: Forestry Statistics 2017 Note:

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 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.

The total softwood deliveries in Table 3 differs from the total softwood removals in Table 2 as a result of the different data sources used. In looking at estimates of destination by source, the volume of removals that is unaccounted for in the deliveries estimates has been added in to the "other uses" category.

The following tables and charts provide estimates of country breakdowns for the following destinations:

- Sawmills;
- Panels/ pulp (covering pulp mills and woodbased panel mills);
- Round fencing manufacturers; and
- All other uses (including woodfuel and exports).

## Sawmills

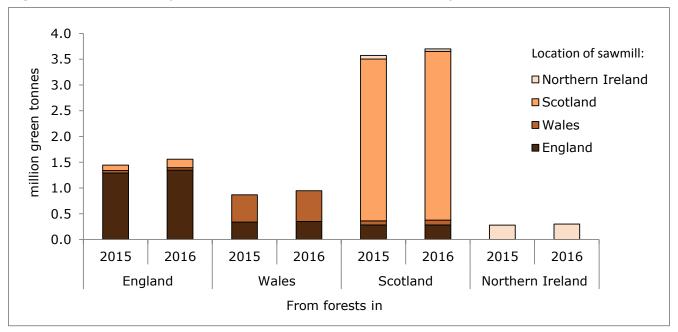
Data on roundwood consumption by location of mill and (for larger mills) on the source of softwood logs was presented in Forestry Statistics 2017. These estimates have been extended to cover all sizes of mill in Figure 2.

A total of 3.7 million green tonnes of softwood roundwood was delivered to UK sawmills from forests in Scotland in 2016, of which 3.3 million green tonnes (89%) was delivered to mills in Scotland. A further 8% was delivered to mills in England, 3% to mills in Wales and the remainder to mills in Northern Ireland.

1.6 million green tonnes of softwood roundwood from forests in England was delivered to UK sawmills, of which 86% was delivered to mills in England, 11% to mills in Scotland and 3% to mills in Wales.

Over one third of the 0.9 million green tonnes of softwood from forests in Wales that was delivered to UK sawmills went to mills in England, with the remaining 63% going to mills in Wales.

In contrast, all of the roundwood from forests in Northern Ireland that was delivered to UK sawmills went to mills in Northern Ireland.



### Figure 2: Consumption of UK softwood roundwood by sawmills

Source: Forestry Statistics 2017, sawmill survey Note:

1. Excludes consumption of imported sawlogs.

## Panels/ pulp

Table 4 provides a breakdown of the total UK softwood roundwood consumption by woodbased panel mills and by pulp and paper mills in the UK, based on data reported by trade associations.

Around three quarters (74%) of the 1.7 million green tonnes of UK softwood roundwood consumed by woodbased panels mills and pulp & paper mills was removed from forests in Scotland. A further 16% was removed from forests in England and 9% from Wales. No softwood roundwood consumed by UK panel and paper mills was removed from forests in Northern Ireland.

# Table 4:Consumption of UK softwood roundwood by woodbased panel millsand pulp & paper mills

Thousand green tonnes

	Removed from forests in:						
Year	England	Wales	Scotland	Northern Ireland	UK		
2015	311	162	1,296	0	1,769		
2016	275	152	1,244	0	1,671		

Source: Forestry Statistics 2017, Woodbased Panel Industries Federation, UK Forest Products Association

## Round fencing mills

Table 5 presents data on consumption of UK softwood roundwood by round fencing manufacturers in the UK (as previously published in Forestry Statistics 2017) and includes a breakdown of this consumption by country of origin of the roundwood, based on additional analysis of the survey of round fencing manufacturers.

Around one third (36%) of the 0.3 million green tonnes of UK softwood roundwood consumed by round fencing manufacturers was removed from forests in Wales. A further 26% came from forests in England, 24% from forests in Scotland and the remaining 14% from forests in Northern Ireland.

# Table 5:Consumption of UK softwood roundwood by round fencing<br/>manufacturers

Thousand green tonnes

	Removed from forests in:					
Year	England	Wales	Scotland	Northern Ireland	UK	
2015	82	102	65	39	288	
2016	72	99	67	40	278	

Source: Forestry Statistics 2017, survey of round fencing manufacturers

## Other uses

Table 6 provides a breakdown of all other uses of UK softwood roundwood. This includes direct use for woodfuel, exports and all other uses. Removals that are unaccounted for in the deliveries figures, i.e. the discrepancy between removals and deliveries, (0.4 million green tonnes in 2015 and 0.3 million green tonnes in 2016) has also been included here.

The country estimates shown in table 6 have been calculated as a residual, i.e. they have been derived from total softwood removals (as reported in Table 2) less consumption by sawmills (Figure 2), panels/ pulp mills (Table 4) and round fencing manufacturers (Table 5).

Around three quarters (78%) of UK softwood roundwood that is used for other purposes was removed from forests in Scotland. A further 10% was removed from forests in England, 10% from Wales and 2% from Northern Ireland.

#### Table 6: Other uses of UK softwood roundwood

				Thousand	green tonnes			
	Removed from forests in:							
Year	England	Wales	Scotland	Northern Ireland	UK			
2015	238	246	1,911	41	2,436			
2016	229	223	1,780	36	2,268			

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Source: Forestry Statistics 2017, industry surveys, trade associations Note:

1. Other uses includes roundwood used directly for woodfuel and exports of roundwood

## Next steps

As previously indicated, the detailed estimates of softwood removals by country and destination have been produced for the first time in this release. Before incorporating these (and future) estimates into existing Official Statistics outputs, further work is needed. For example, it is notable from the figures presented in this release that there is a difference in the proportion of sawlogs reported as being produced in each country.

We would therefore welcome feedback from users, as follows:

- 1. Do the estimates by country and destination seem reasonable, based on your knowledge of the sector?
- 2. Are the estimates by country and destination useful?
- 3. Do you have any views on the methodology and assumptions used to produce these estimates (see Annex for further details)?
- 4. Do you have any suggestions for reducing any major uncertainties in the estimates?
- 5. Do you have any other suggestions for further development?

Please send your comments by Monday 30 April 2018 to the IFOS: Statistics team in Forest Research at <u>statistics@forestry.gsi.gov.uk</u>.

## Annex

## Introduction

This annex provides background information on the experimental statistics presented in this release. It covers the data sources and methodology used to produce the statistics, information on quality measures and links to further information.

## Glossary

Deliveries The quantities of UK-grown roundwood that is delivered to processors (mills) or for other uses (such as wood fuel and exports). Note that for sawmills and round fencing mills, the deliveries figure reported is actually the quantity of roundwood consumed by the mill, which may differ from the true deliveries figure if the levels of input stocks vary.

Forest Service (FS) The agency of the Northern Ireland Department of Agriculture, Environment and Rural Affairs responsible for forestry matters in Northern Ireland.

Forestry Commission (FC) The government department responsible for forestry matters in England, Scotland and (until March 2013) Wales. The Forestry Commission's functions in Wales transferred to a new organisation, Natural Resources Wales, on 1 April 2013. The responsibility for forestry is devolved.

Great Britain (GB) England, Wales and Scotland.

Green tonne The weight measurement of timber freshly felled before any natural or artificial drying has occurred.

Hardwood The wood of broadleaved trees, such as oak, birch and beech; a term sometimes used for the broadleaved trees themselves.

Natural Resources Wales (NRW) The organisation responsible for advising the Welsh Government on the environment, created on 1 April 2013. NRW is responsible for the functions previously carried out by the Environment Agency in Wales, the Countryside Council for Wales and Forestry Commission Wales.

Roundwood Trunk or branch wood, generally with a top diameter of 7 cm or more. Can be in the form of logs (14 cm top diameter or more) or small roundwood (7 to 14 cm).

Sawlogs Material of at least 14 cm top diameter that is destined to be sawn into planks or boards.

Softwood The wood of coniferous trees, such as spruce, pine and larch; a term sometimes used for the coniferous trees themselves.

## Data sources and methodology

#### Data sources

The data used in this release come from a range of sources, including

- Administrative records held by the Forestry Commission, Natural Resources Wales, or the Forest Service (in Northern Ireland);
- Surveys of the UK timber industry (private sector softwood removals survey, sawmill survey and survey of round fencing manufacturers);
- Data provided by trade associations (Wood Panel Industries Federation, UK Forest Products Association) and others (e.g. shavings manufacturers, companies exporting roundwood); and
- Estimates by the Expert Group on Timber and Trade Statistics.

Further details on the data sources used are provided in Forestry Statistics 2017 at www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE 0004B2CF1 and at www.forestry.gov.uk/forestry/infd-832ey5 (for administrative data sources) and www.forestry.gov.uk/forestry/infd-6tzkzg (for surveys).

### Methodology

The UK deliveries data presented in this release (Table 3) and figures for total softwood removals by country (Table 2) are as reported in Forestry Statistics 2017. Further details on the methodology used in Forestry Statistics 2017 are available at <a href="https://www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE">www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE</a> <a href="https://www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE">www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE</a> <a href="https://www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE">www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE</a> <a href="https://www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE">www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE</a> <a href="https://www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE">www.forestry.gov.uk/website/forstats2017.nsf/LUContents/FADA6C1902F3876B80257FE</a> <a href="https://www.forestry.gov.uk/website/forstats2017.nsf/Lucontents/FADA6C1902F3876B80257FE">www.forestry.gov.uk/website/forstats2017.nsf/Lucontents/FADA6C1902F3876B80257FE</a>

Country breakdowns by destination have been estimated as follows:

### Sawmills and round fencing mills:

The sawmill survey and the survey of round fencing manufacturers have included a question on consumption of roundwood by country for some time. Results for large sawmills (those producing 10,000 m3 sawnwood or more for the 2015 and earlier surveys; those producing 25,000 m3 sawnwood or more from 2016) have previously been published in Forestry Statistics (tables 2.16 and 2.16a).

For any mills that have not responded to the survey in the relevant year, the country breakdown has been estimated from other years (if available). If no estimates for any years are available (either the mill has never responded to the survey or has never provided a country breakdown), it has been assumed that the mills have obtained the material locally and therefore all consumption has been assigned to the location of the mill. The tables below indicate the extent to which country breakdowns have been estimated (either from data reported in other years or from location of mill). For sawmills (table A1), the level of estimation is relatively low for consumption from Scotland (no more than 11%) and from Northern Ireland (0%). Estimation levels are higher for consumption from England (up to 37%) and Wales (up to 34%) but, in terms of volume, these are broadly similar to the quantity of consumption from Scottish forests that is estimated.

# Table A1: Level of estimation in country breakdowns for UK softwood consumption by sawmills

Thousand green tonn								
	UK s	UK softwood consumption from forests in						
	England Wales Scotland Northern Total Ireland estimated							
Quantity estimated								
2015	527	299	409	0	1,236			
2016	562	270	254	0	1,086			
% Estimated								
2015	37%	34%	11%	0%	20%			
2016	36%	28%	7%	0%	17%			

Source: Sawmill survey

For round fencing mills (table A2), levels of estimation are much higher in percentage terms for consumption from forests in England, Wales and Scotland. However, given the much lower volumes of softwood consumed by round fencing mills, the quantities estimated are much lower for all countries (no more than 60 thousand green tonnes).

# Table A2: Level of estimation in country breakdowns for UK softwood consumption by round fencing mills

Thousand green tonnes								
	UK s	UK softwood consumption from forests in						
	England Wales Scotland Northern Total Ireland estimated							
Quantity estimated								
2015	38	60	40	0	138			
2016	47	58	49	0	153			
% Estimated								
2015	46%	58%	62%	0%	48%			
2016	65%	58%	72%	0%	55%			

Source: Survey of round fencing manufacturers

#### **Other processors:**

Country breakdowns of consumption by other processors has been provided by:

- Wood Panel Industries Federation for consumption by woodbased panel mills; and
- UK Forest Products Association for consumption by integrated pulp & paper mills.

Given the limited number of pulp & paper mills (2) and woodbased panel mills (6) in the UK, results for these mills have been combined when presenting country breakdowns.

#### Other uses:

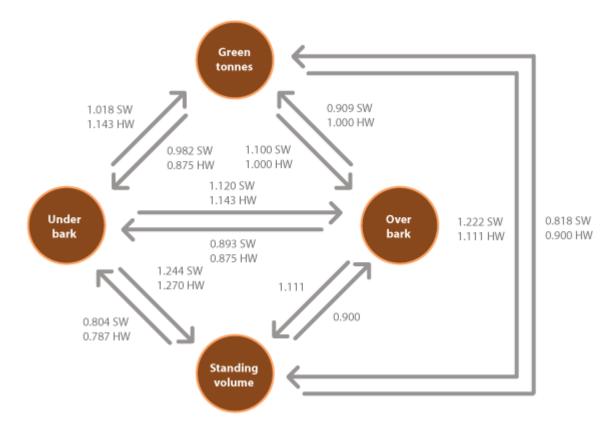
No data sources are currently available to provide a breakdown by country for softwood roundwood used by woodfuel, for other uses or exported. The country breakdown for all other uses has therefore been calculated as a residual, i.e.

All other uses

- es = total softwood removals - consumption by:
  - sawmills,
  - round fencing mills,
  - woodbased panel mills and
  - pulp & paper mills

## Conversion factors

The following factors have been used in this release to convert between cubic metres  $(m^3)$  and green tonnes:



Further information on conversion factors is available in the Sources section of *Forestry Statistics 2017*:

www.forestry.gov.uk/website/forstats2017.nsf/LUContents/00CEB7C418F56FC8802 57FE0004B2D05

## Quality

Detailed quality information on FC Official Statistics, including separate reports for each of the industry surveys used in this release, is available at: <a href="https://www.forestry.gov.uk/forestry/infd-7zhk85">www.forestry.gov.uk/forestry/infd-7zhk85</a>

## Revisions

Estimates of softwood removals by country and destination are published for the first time in this release.

Other figures (softwood removals by country and UK softwood deliveries) have been previously published. They are unchanged from those published in *Forestry Statistics* 2017.

## Further information

Figures in tables have been independently rounded, so may not add to the totals shown.

More statistics on UK roundwood removals and deliveries can be found in *Forestry Statistics 2017*, available at <u>www.forestry.gov.uk/forestry/infd-7aqdgc</u>.

## Release schedule

This is an ad hoc release. Estimates will be included in future editions of Forestry Statistics, if they are considered to be of appropriate quality.

## **Official Statistics**

This is an Official Statistics publication. For more information about Official Statistics and the UK Statistics Authority visit <u>www.statisticsauthority.gov.uk</u>.