

Methodology Note:

UK Wood Production

Introduction

The Forestry Commission releases statistics on UK wood production annually. These include:

- the harvesting of timber from woodland (removals);
- the deliveries of timber to wood processors (mills); and
- the manufacture of primary wood products (such as sawnwood, paper and wood-based panels).

Provisional statistics for the preceding year are released each May in *UK Wood Production and Trade: provisional figures*. Final figures are released in September in *Forestry Statistics* and *Forestry Facts and Figures*.

The methodology and outputs relevant to UK wood production were reviewed in 2012. The review report is available at www.forestry.gov.uk/forestry/ahen-589ddl. The review identified a need to document the data analysis methods used in the production of the output.

This paper sets out the data analysis methods used to produce annual estimates of UK wood production.

Sources

The data sources used to estimate UK wood production are described in the Sources section of *Forestry Statistics 2013*:

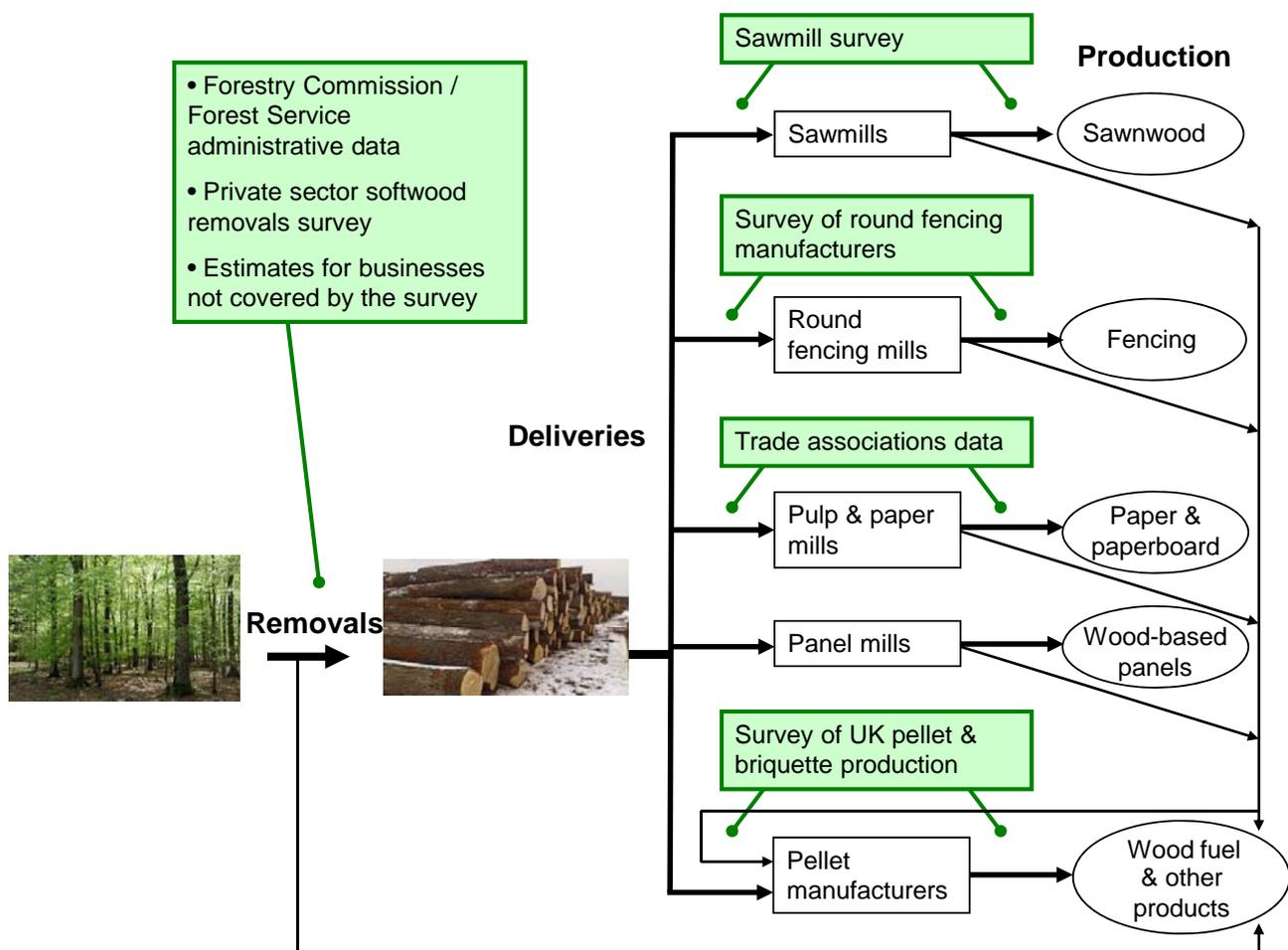
<http://www.forestry.gov.uk/website/forstats2013.nsf/TopContents?Open&ctx=9314380047FD5FFD8025731E00475FD7>. They comprise:

- Administrative records from woodland owned or managed by the Forestry Commission (in Great Britain) or the Forest Service (in Northern Ireland). Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5.
- Industry surveys run annually by the Forestry Commission: Private Sector Softwood Removals Survey, Sawmill Survey, Survey of Round Fencing Manufacturers, and Pellet and Briquette Production Survey. Details on each survey and methodology can be found at www.forestry.gov.uk/forestry/infd-6tzkzg.

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- Data from trade associations, including the Wood Panel Industries Federation, the UK Forest Products Association and the Confederation of Paper Industries.
- Other data requests to relevant businesses concerning wood shavings manufacture, brash removals, roundwood and chip exports, and wood fuel.
- Estimates from the Expert Group on Timber and Trade Statistics: www.forestry.gov.uk/forestry/infd-5rabj3.

Flow chart of wood production and main data sources



Note: For simplicity, some minor data sources, products (such as shavings) and exports are not shown.

The chart shows the flow of wood production, from the forest, to wood processors and others, through to primary products. The associated data sources are shown in green, highlighting the stage in the process that data are collected.

Methodology

Administrative records and data from trade associations are usually received in Microsoft Excel format. Data from the main surveys (private sector softwood removals survey, sawmill survey and survey of round fencing manufacturers) are collected through paper, Microsoft Word and online questionnaires. Data from the survey of UK pellet & briquette production are received in Excel format.

Online survey data are recorded into an IBM Domino database and exported to Excel before being transferred to SAS, a statistical software package (www.sas.com). Paper and Word returns from the industry surveys are entered manually into SAS.

Data processing and analysis takes place in SAS and Excel. The processing steps are documented as comments within the SAS code and in the Excel spreadsheets. For the main surveys, data from the online and paper returns are first combined within SAS, before being merged with historical data. The outputs of interest are calculated and finally exported to Excel.

The main outputs are aggregates from the source data, such as total production or consumption of a given wood product, or breakdowns expressed as percentages, and do not require complex data analysis techniques.

A number of QA checks, corrections and imputations are carried out at several stages of the data processing and analysis. They include testing for errors in data entry, completeness (missing, duplicate or incomplete records), consistency between categories (such as consumption and production), consistency with historical data and comparison with other data sources.

For large suspected errors or missing data, the data providers are contacted where possible and asked to check their submission. Failing this, or for minor discrepancies, manual amendments or imputations are made by the statistics team based on historical data. The Expert Group on Timber and Trade Statistics (www.forestry.gov.uk/forestry/inf-d-5rabbj3) may also provide estimates for large non-respondents to the industry surveys. When current year data are unavailable and no other information is known, previous year data are rolled forward.

The Sawmill Survey, the Survey of Round Fencing Manufacturers and the Pellet and Briquette Production Survey are thought to cover nearly all operating businesses and can be considered as censuses.

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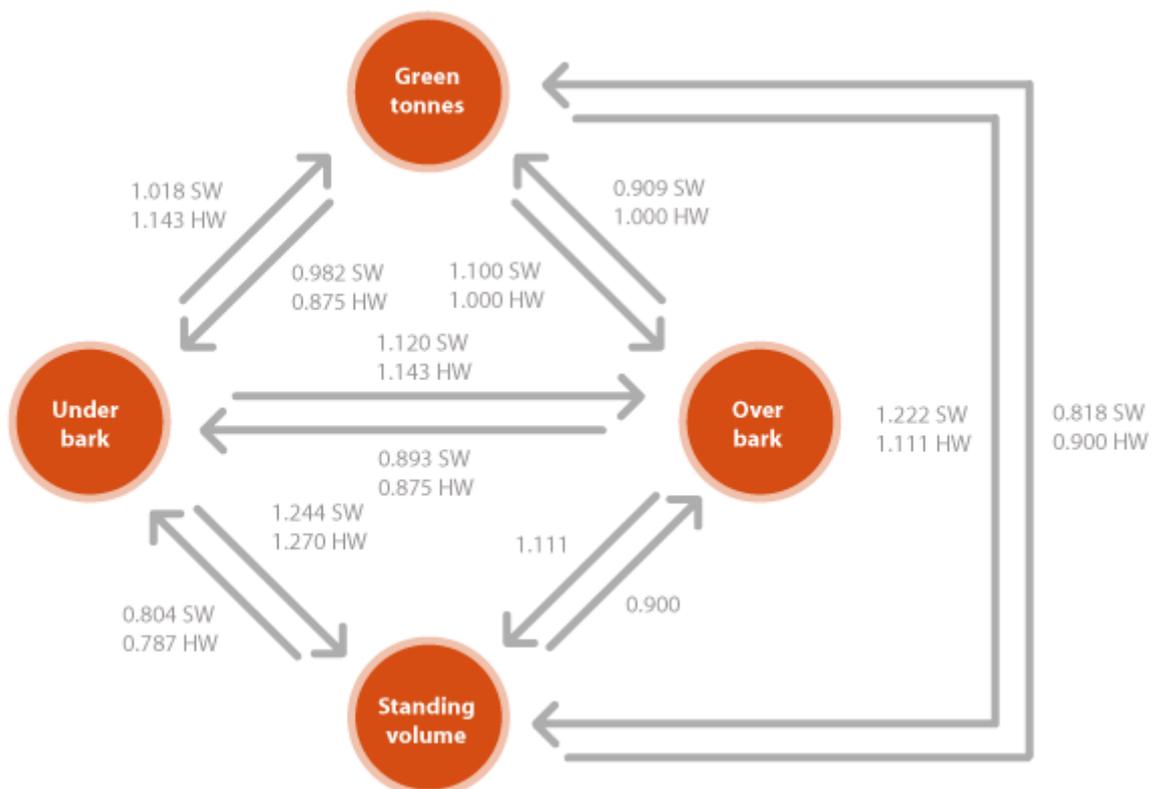
However, a significant proportion of private sector softwood removals (currently estimated by the Expert Group on Timber and Trade Statistics at 15%) are thought to be carried out by businesses not covered by the Private Sector Softwood Removals Survey. Therefore, 15% is added to the survey results (both for respondents and imputed data for non-respondents) to give overall estimates of private sector softwood removals. This methodology was adopted after a methodological review undertaken in 2011-2012. The paper "Methodology Review of Softwood Removals from Non-FC/FS Woodland" provides further information on the change on methodology and is 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).

Unit conversion factors are documented in the *Sources: Timber* section of *Forestry Statistics 2013*:

www.forestry.gov.uk/website/forstats2013.nsf/LUContents/8B4784E90B2A535480257361005015C6.

For convenience, the conversion factors between cubic metres and green tonnes are reproduced below for softwood (SW) and hardwood (HW) timber:



Disclosure

All results are checked for potential disclosure. These checks are more extensive for the more detailed breakdowns published from the sawmill survey data, where there is greater potential for disclosure. A paper describing the statistical disclosure control checks undertaken for the sawmill survey can be found at:

[www.forestry.gov.uk/pdf/disc_control_for_fc_surveys.pdf/\\$file/disc_control_for_fc_surveys.pdf](http://www.forestry.gov.uk/pdf/disc_control_for_fc_surveys.pdf/$file/disc_control_for_fc_surveys.pdf)

There are only two active pulp and paper mills in the UK. Their consent is sought before publishing potentially disclosive data on inputs to the integrated pulp and paper mills and employment by these mills.

Revisions

Statistics from surveys of the timber industry are subject to annual revision, as new information becomes available. This usually happens as a result of late notification of mills closing or new mills opening, but can also occur when reported data for the most recent year suggest that the imputed values since the last reported data (made as a result of non response to surveys in intervening years) are unrealistic. Further details are provided in the quality reports for each survey. Other data are not normally revised.

The Forestry Commission's revisions policy sets out how revisions and errors to 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)

More specific information on revisions to UK wood production statistics can be found in the quality report on *UK Wood Production and Trade* at

[www.forestry.gov.uk/pdf/ukwptqrpt.pdf/\\$FILE/ukwptqrpt.pdf](http://www.forestry.gov.uk/pdf/ukwptqrpt.pdf/$FILE/ukwptqrpt.pdf) ; and in the quality report on *Forestry Statistics* and *Forestry Facts and Figures* at:
[www.forestry.gov.uk/pdf/qrfss_fff.pdf/\\$FILE/qrfss_fff.pdf](http://www.forestry.gov.uk/pdf/qrfss_fff.pdf/$FILE/qrfss_fff.pdf).

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Statistics, Forestry Commission
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Glossary

Brash Branch wood and leaf material that is generally too small in diameter to be considered part of the timber product from a harvesting site.

Briquettes Similar to wood pellets (see below) but larger, briquettes are made from compressed wood fibres and used for heating.

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.

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.

Forest Service (FS) An agency of the Northern Ireland Department of Agriculture and Rural Development.

Great Britain (GB) England, Wales and Scotland.

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

Pulp Fibrous material produced by mechanically or chemically reducing wood into its component parts from which pulp, paper and paperboard sheets are formed after proper slushing and treatment or used for dissolving purposes (dissolving pulp or chemical cellulose) to make rayon, plastics, and other synthetic products. Sometimes called wood pulp.

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).

Sawnwood Sawn timber - timber that has been cut into planks or boards from logs.

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

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United Kingdom (UK) Great Britain and Northern Ireland.

Wood pellets Sawdust or wood shavings compressed into uniform diameter pellets to be burned for heat or energy.