Forestry Statistics 2024
Chapter 10: Sources and Methodology

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Forestry Commission

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The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, data, technical support and consultancy services.

Contents

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Accredited Official Statistics are called National Statistics in the Statistics and Registration Service Act 2007. An explanation can be found on the Office for Statistics Regulation website.

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These accredited official statistics were assessed by the Office for Statistics Regulation in 2012. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled 'accredited official statistics'.

You are welcome to contact us directly with any comments about how we meet these standards by emailing us at statistics@forestresearch.gov.uk. Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

Since the latest review by the Office for Statistics Regulation, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements:

- Introducing a quality assurance of administrative data report to provide further details on the data sources used in this release.

- Enhancing trustworthiness by reducing pre-release access.

- Including last update/review dates in supporting documents and indicating expected dates of next updates/review, to provide reassurance to users that documents remain relevant.

Introduction

This chapter provides background information on the statistics presented in this release. It covers:

- data sources and methodology used to produce the statistics;

- information on quality measures;

- information on any revisions to historic data;

- and links to further information.

Further details on quality are provided in quality reports for selected topics and for individual surveys, available from our Quality of Official Statistics web page.

Please refer to the glossary in the Introduction and Glossary chapter for an explanation of any terms used.

As an Accredited Official Statistics output, this publication concentrates on topics for which the data meet Accredited Official Statistics quality standards. However, some topics outside the scope of Accredited Official Statistics are included, to give a more rounded picture; any such tables are footnoted as "outside the scope of Accredited Official Statistics". This means that they have not been subject to Accredited Official Statistics quality assurance procedures but does not necessarily imply that they are of poorer quality. This edition of Forestry Statistics includes the following tables and charts that are outside the scope of Accredited Official Statistics:

- Table 1.2: Woodland area in the UK (time series);

- Tables 1.6 to 1.11, figures 1.3a and 1.4b: National Forest Inventory;

- Table 1.15: Felling licences;

- Tables 1.16a and 1.16b: Statutory Plant Health Notices;

- Table 1.17: Canopy Cover in England.

- Table 2.4a: Softwood availability forecasts;

- Table 2.4b: Hardwood availability forecasts;

- Table 2.30: Recycled wood used for woodfuel;

- Tables 4.1 to 4.3, Figure 4.1: Carbon;

- Tables 5.1a and 5.1b: Woodland types and habitats;

- Table 5.4 and Figure 5.4: Tree health;

- Tables 6.1, 6.2, 6.4 to 6.6, Figures 6.1 and 6.2: Social;

- Tables 9.1 to 9.6, Figures 9.1 to 9.7: International forestry.

10.1 Woodland area and planting

Introduction

This section provides detailed information on the sources and methodology for Chapter 1: Woodland Area & Planting.

The definition of woodland in UK forestry statistics is land under stands of trees with a canopy cover of at least 20% (or having the potential to achieve this), including integral open space, and including felled areas that are awaiting restocking. There is no minimum height for trees to form a woodland at maturity, so the definition includes woodland scrub but not areas with only shrub species such as gorse or *Rhododendron*.

In this chapter, statistics based on the National Forest Inventory (NFI) refer to woodlands and forests of at least 0.5 hectares, as mapped through the NFI. Previously, figures based on the National Inventory of Woodland and Trees (1995 to 1999) included sample-based estimates for woodlands and forests between 0.1 hectares and 2.0 hectares in addition to mapped areas of 2.0 hectares or over. Both definitions are slightly different than those used internationally which are based on 10% canopy cover, a minimum height at maturity of 5 metres and a minimum area of 0.5 hectares.

Integral open space is included in woodland area figures derived from the National Forest Inventory if the areas of open space are less than 0.5 hectares; larger areas are mapped out and excluded from the woodland area figures. This differs slightly from the approach used for the National Inventory of Woodland and Trees, where areas of open space of up to 1.0 hectare were included as woodland.

Woodland includes native and non-native trees, semi-natural and plantation areas. Woodland habitat types are not currently differentiated in these statistics.

Most public sector woodland is managed by Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW), or the Forest Service

Northern Ireland (FS). Woodland owned by local authorities, the Ministry of Defence, non-government organisations including the Woodland Trust and other public sector bodies are included in "private sector woodland".

The Natural Resources Wales woodland areas relate to the Welsh Government Woodland Estate. There is approximately 900 hectares of woodland on National Nature Reserves and other land managed by Natural Resources Wales that is not included in the Natural Resources Wales figures.

Trees outside woodlands (TOW) covers:

- small woods of less than 0.5 hectares and greater than 0.1 hectares in extent,

- groups of trees of less than 0.1 hectares in extent and

- lone trees, including hedgerow trees.

Orchards covers:

- Traditional orchards - areas of traditional orchard with fruit (or nut) tree canopy cover which forms greater than 50% of the canopy and an area of greater than 0.5 hectares in extent and is greater than 20% stocked; and

- Small Orchards – areas of traditional orchard with fruit (or nut) tree canopy cover which forms greater than 50% of the canopy and an area of greater than 0.1 hectares and less than 0.5 hectares in extent and is greater than 20% stocked.

This section provides more detail on the data sources and methodology used to produce statistics on woodland area and planting. For more information see the quality report on woodland statistics.

Release schedule

Woodland area, certified woodland area, new planting and restocking data are released twice a year. Canopy cover in England data are released every 5 years in

Forestry Statistics. The next update, reporting on canopy cover in England at January 2028, is expected to be published 2028/2029.

Provisional figures for woodland area and certified woodland area at March 2025 will be published on 26 June 2025 in Provisional Woodland Statistics 2025.

Final results will be published on 25 September 2025 in Forestry Statistics 2025 and Forestry Facts & Figures 2025.

10.1.1 Woodland area

Data sources and methodology

Woodland Area

Data on woodland area in the UK presented in this release are derived from the following sources:

- Forestry England, Forestry and Land Scotland and Natural Resources Wales administrative records of FE/FLS/NRW land areas;

- National Forest Inventory woodland map (Great Britain);

- Statistics on new planting in Great Britain;

- Northern Ireland Woodland Register; and

- Forest Service Northern Ireland administrative records of FS woodland areas (Northern Ireland).

Estimates of woodland area in Great Britain are based on figures produced from forest inventories. Until recently, forest inventories in Great Britain were undertaken every 15 years or so. The current National Forest Inventory, unlike previous inventories, is planned to run on a continuous 5-year cycle.

As forest inventories are generally not designed to produce annual figures, a process is required for updating the results on an annual basis to take account of changes in woodland area. The methodology currently used to calculate annual woodland area estimates is described below.

The data processing takes place in Excel. The main outputs are aggregates from the source data, or breakdowns expressed as percentages, and do not require complex data analysis techniques.

1. For Great Britain, woodland area estimates are based on the latest NFI woodland map of Great Britain available. In this release, woodland area estimates since March 2023 onwards are based on the interim NFI woodland map at March 2023

2. The map is overlaid with a map of Forestry England, Forestry and Land Scotland and Natural Resources Wales (Welsh Government Woodland Estate only) land, to enable a breakdown by ownership to be estimated. This also enables FE/FLS/NRW "other land" areas to be derived (Table 1.5). For woodland area estimates at March 2023, FE/FLS/NRW legal boundaries at March 2023 are used.

3. The woodland area breakdown by type of woodland (conifer or broadleaf) is estimated from the conifer/broadleaf breakdown of stocked woodland area, with areas of felled and open space allocated to conifer or broadleaf pro-rata. Estimates for stocked areas at March 2021 derived from NFI field survey results are updated to take into account new planting since that date, for which the conifer/broadleaf breakdown is also known. As the area of new planting is much smaller than total woodland area, the effect of this update on the overall conifer/broadleaf breakdown is very small.

The steps above are sufficient to determine woodland area estimates at March 2023, broken down by ownership and conifer/broadleaf.

To obtain estimates at March 2024, two more steps need to be performed, which are described below.

4. Net ownership transfers of woodland between private sector and FE/FLS/NRW from March 2023 to March 2024, as inferred by the differences in FE/FLS/NRW legal boundaries between those two dates, are broken down by

conifer/broadleaf. The breakdown is based on NFI Interpreted Forest Type (IFT) at those dates, derived from photographic interpretation of the NFI woodland map. The "Conifer" and "Mixed mainly conifer" (>80% conifer) IFT categories are assigned to conifers, and the "Broadleaves" and "Mixed mainly broadleaved" (>80% broadleaved) categories are assigned to broadleaves. For the other IFT categories, the conifer/broadleaf breakdown is allocated pro-rata based on the conifer/broadleaf breakdown of woodland area by ownership (private sector or FE/FLS/NRW) before transfer.

5. The woodland area figures are then updated to March 2024 by adding areas of new planting in 2023/24, broken down by ownership and type.

Information on previous methodologies can be found in the Methodology Note: Annual Woodland Estimates produced in May 2012, on the Methodology and Outputs page.

The methodology and outputs relevant to UK woodland area, planting and restocking were reviewed in 2014. For more information see the Methodology Review: Woodland Area, Planting and Restocking.

Figures for Northern Ireland (Forest Service Northern Ireland and non-Forest Service woodland) are provided by the Forest Service Northern Ireland. Woodland areas from 2012 provided in this release have been obtained from the Northern Ireland Woodland Register.

The Northern Ireland Woodland Register is based on a combined dataset derived from fourteen individual data sets from statutory bodies including Forest Service Northern Ireland, Land and Property Services, and the Northern Ireland Environment Agency, and non-statutory bodies which include Woodland Trust and National Trust. The minimum area of woodland that has been included in the register is 0.1 hectares.

The use of the Northern Ireland Woodland Register has resulted in a step change in the non-Forest Service woodland areas reported for Northern Ireland. This should

be interpreted as an improvement in the data reported, rather than an actual increase in woodland area.

Certified woodland area

Data on certified woodland areas are obtained from the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). Some certified woodland is certified under more than one scheme.

The data collected from FSC and PEFC are the areas that are certified for each certificate holder. Follow-up enquiries are then made with the larger certificate holders (with areas greater than 100 hectares) to check the certified areas and to provide a country breakdown.

As all FE/FLS/NRW/FS woodlands are certified, the total woodland area (as derived above from the NFI woodland map and FE/FLS/NRW boundaries and from Forest Service Northern Ireland administrative records) is used, rather than the area provided on the certificates.

Quality

The statistics on woodland area presented here refer to woodland as a land use rather than as a land cover, so felled areas and small areas (less than 0.5 ha) of open space are included within the definition of woodland. Some statistics on woodland area as a land cover are available from other sources (e.g., Countryside Survey [2007] and associated Land Cover Map [2021]).

Detailed information on the quality of the woodland area statistics presented in this publication is available in the Quality Report: Woodland Statistics. Further quality information on our Accredited Official Statistics is also available from this location.

Revisions

Updates to public sector woodland area estimates have resulted in revisions of less than 1 thousand ha to the certified woodland areas provided in Provisional Woodland Statistics 2024.

Information on significant revisions to published statistics is provided in the quality report on woodland statistics. Our revisions policy sets out how revisions and errors are dealt with.

Further information

Figures for woodland area in the UK are provided to international organisations every 4 to 5 years; to the Food and Agriculture Organisation of the United Nations (FAO) for the Global Forest Resources Assessment, and to Forest Europe for the State of Europe's Forests report.

Figures for woodland area are also used to compile the UK's Greenhouse Gas Inventory for the Land Use, Land Use Change and Forestry (LULUCF) sector, submitted to the United Nations Framework Convention on Climate Change (UNFCCC). Accredited Official Statistics on UK greenhouse gas emissions are produced by the Department for Energy Security and Net Zero.

10.1.2 Woodland Inventories

Woodland Inventories

The current National Forest Inventory is the first continuous inventory of British woodlands and is being conducted on a five-year cycle. Prior to the National Forest Inventory, a series of one-off woodland inventories took place in Great Britain every 15 years or so.

Most inventories used slightly different definitions of woodland, so some apparent changes in area over time are due to changing definitions. The principal differences for inventories since 1905 are:

- 1905 Felled areas and scrub were not included.

- 1924 Undertaken by questionnaire; woods smaller than 2 acres (0.8 hectares) were not included.

- 1947 Woodlands with an area of less than 5 acres (2 hectares) were not included.

- 1965 Woodlands with an area of less than 1 acre (0.4 hectares) were not included.

- 1980 Woodlands with an area of less than 0.25 hectares were not included.

- 1995 to 1999 Woodlands with an area of 0.1 to 2.0 hectares were included on a sample basis; some woodland missing from earlier surveys was included.

- 2010 on All woodlands with an area of 0.5 hectares or more have been included; all woodlands below 0.5 hectares have been excluded.

- Estimates of woodland area prior to 1905 have been obtained from a variety of sources, including:

- Domesday Survey of England - for information in 1086;

- Scottish Woodland History (TC Smout, 1997) - for estimate for end Middle Ages in Scotland;

- Roy maps ca. 1750 - for Scotland 17th Century estimate.

National Forest Inventory

In the latest inventory, a digital map based on aerial photography, satellite imagery and other data sources has been produced, from which estimates of total woodland areas have been derived. Data are currently being collected for one hectare sample squares, covering a wide variety of topics, including ownership type, species and age.

Initial results for 2010 were published for countries (Great Britain, England, Wales, Scotland) in Spring 2011. A series of reports, based on field survey data combined with information from the NFI map, have since been published on the National Forest Inventory page.

10.1.3 New planting & restocking

Introduction

New planting is the creation of new areas of woodland. Restocking is the replanting of areas of woodland that have been felled. New planting can use planting/seeding or natural colonisation. Restocking can also use planting/seeding or natural regeneration.

Data sources and methodology

Information about Forestry England, Forestry and Land Scotland, Natural Resources Wales and Forest Service Northern Ireland new planting and restocking comes from administrative systems. For new planting and restocking by Forestry and Land Scotland and by Natural Resources Wales, the figures obtained relate to net areas (i.e., excluding integral open space). These are converted to estimates of gross areas (i.e., including integral open space) for consistency with other planting and woodland area data, by using an assumption of 15% open space.

Information about other woodland has come principally from grant schemes, including the England Woodland Creation Offer (EWCO), Glastir in Wales, Forestry Grant Scheme in Scotland and legacy grant schemes.

Areas receiving grant are allocated to years by date of payment. For natural colonisation and regeneration, the areas are generally those for which the second instalment of grant has been paid during the year. The second instalment is approved when woodland reaches a certain stage and density of growth, so this information corresponds approximately to the amount of new and restocked woodland created.

The coverage and level of grant support differ across schemes, so that figures on grant-aided planting are not directly comparable between countries or over time. Grant support for restocking of conifers changed with the introduction of Rural Development Contracts in Scotland in 2008 and again with the introduction of the

Forestry Grant Scheme in 2015. This will have led to a reduction in the proportion of private sector restocking that is grant aided and therefore reported for Scotland.

New planting estimates for England also include areas supported by the Woodland Trust and areas funded by Natural England (Higher Level Stewardship/Countryside Stewardship). From 2016/17, the estimated area of new planting includes new woodland creation supported by the Woodland Trust under the MOREwoods and Partnerships England projects. From 2017/18, the estimated area of new planting also includes new woodland creation supported by the Environment Agency.

Areas of land acquired by the National Forest Company for new planting have been included from 2015/16. To avoid potential double counting, areas of new planting by the National Forest Company that are believed to be supported by grant aid or by the Woodland Trust (and have therefore already been included in the figures reported for these other sources) have been excluded.

Local estimates for private sector areas of planting and restocking which are not grant-aided were included for England, Wales and Scotland up to 2009/10, where possible. Estimates of non-grant-aided planting and restocking were relatively small (less than one thousand hectares annually), and it has been assumed that all of this area is broadleaves. A small estimate for broadleaved new planting without grant aid in Scotland in 2016/17 and 2018/19 to 2019/20 was also included. No estimates have been included for restocking with Sitka spruce in Scotland, or for restocking in England, which are no longer supported by grants. It is assumed that there is no private sector non-grant aided new planting and restocking in Northern Ireland.

The use of natural regeneration in non-clearfell systems may be increasing - particularly for broadleaves in England. These systems are not satisfactorily represented by measuring restocking area within any given year, and so broadleaf regeneration may be under-reported in this release and other statistics.

Figures for Northern Ireland (Forest Service Northern Ireland and private sector woodland) are provided by the Forest Service Northern Ireland.

The methodology and outputs relevant to UK woodland area, planting and restocking were reviewed in 2014.

Revisions

The following figures have been revised since "Provisional Woodland Statistics 2024:

- Area of new planting in 2023/24 for conifers in Wales have been revised upward from 0.01 thousand ha to 0.28; broadleaves in Wales have been revised downward from 0.62 thousand ha to 0.36.

- Area of restocking 2023/24 for conifers in England have been revised downward from 2.57 thousand ha to 2.43; broadleaves in England have been revised downward from 1.15 thousand ha to 1.10.

- Area of restocking 2023/24 for public sector in England have been revised downward from 2.74 thousand ha to 2.55.

- Area of restocking 2023/24 for conifers in Wales have been revised upward from 1.19 thousand ha to 1.29; broadleaves in Wales have been revised downward from 0.37 thousand ha to 0.28.

- Area of restocking 2023/24 for private sector in Wales have been revised upward from 0.17 thousand ha to 0.19.

- Area of restocking for conifers in Scotland have been revised downward from 8.02 thousand ha to 7.91; broadleaves in Scotland have been revised downward from 2.19 thousand ha to 2.16.

- Area of restocking 2023/24 for private sector in Scotland have been revised downward from 4.61 thousand ha to 4.47.

Information on significant revisions to published statistics is provided in the quality report on woodland statistics. Our revisions policy sets out how revisions and errors are dealt with.

Further information

Figures for new planting are also used to compile the UK's Greenhouse Gas Inventory for the Land Use, Land Use Change and Forestry (LULUCF) sector, submitted to the United Nations Framework Convention on Climate Change (UNFCCC). Accredited Official Statistics on UK greenhouse gas emissions are produced by the Department for Energy Security and Net Zero.

10.1.4 Felling

Introduction

Under the Forestry Act 1967 and the Forestry and Land Management Act (Scotland) 2018, it is illegal to fell trees in Great Britain without prior approval, although there are a few exceptions (for trees below a specified size, dangerous trees, and very small-scale felling operations). There is a presumption against removal of woodland and loss of forest cover in the UK, so felling licences issued under the Forestry Act (or felling permissions under the Forestry and Land Management Act in Scotland) will normally be conditional (where felling approval is granted subject to restocking). However, the permanent removal of trees may be granted (through an unconditional felling licence) for thinning woodland (a standard woodland management practice) or if there are overriding environmental considerations, for example to enable the restoration of important habitats (and consent may be required under the relevant Environmental Impact Assessment Regulations).

The removal of trees may also be authorised under planning regulations, to enable development (including for windfarms). In this case, a felling licence is not required.

The Forestry Commission, Scottish Forestry, Natural Resources Wales and Forest Service Northern Ireland may also require trees to be felled to prevent the spread of pests and diseases, by serving a Statutory Plant Health Notice (SPHN) on the affected site.

Data sources and methodology

Information about felling licences and Statutory Plant Health Notices comes from Forestry Commission, Scottish Forestry, Natural Resources Wales and Forest Service Northern Ireland administrative systems.

Data on felling licences relates to felling licences that have been issued. It does not indicate whether the felling has taken place (and if so, when).

Quality

All of the statistics on felling in this chapter are outside the scope of Accredited Official Statistics.

Revisions

Figures on felling licences and figures for Statutory Plant Health Notices in 2023/24 are released for the first time in this publication.

Our revisions policy sets out how revisions and errors are dealt with.

Further information

Some related figures for England on felling licences have been released. Data on the total area covered by felling licences (conditional and unconditional) were released on 20 June 2023 in Forestry Commission Key Performance Indicators: Report for 2023-24.

Further information on felling licences (including details of exemptions) can be found at:

- Tree felling licence guidance from the Forestry Commission (England);

- [Tree felling licence and other regulations from Natural Resources Wales (Wales)](#);

- [Felling permissions from Scottish Forestry (Scotland)](#).

Further information on [tree pests and diseases in the UK](#) is available on GOV.UK.

10.1.5 Canopy cover in England

Data sources

The data used to estimate canopy cover in England come from the following sources:

- Woodland area is estimated from the 2022 National Forest Inventory woodland map;

- The area of small woods, groups of trees and lone trees (including hedgerow trees) are estimated from the 2022 Trees outside woodland map, produced under the Natural Capital Ecosystem Assessment programme;

- The area of orchards is derived from the Natural England Priority Habitats Inventory (England) accessed February 2023, the 2022 National Forest Inventory woodland map and the 2022 Trees Outside Woodland map;

Short Rotation Forestry and Short Rotation Coppice are included within the Woodland and Trees Outside Woodlands figures, where these have been identified.

Areas of Christmas trees, commercial (or modern) orchards and hedgerow features (other than hedgerow trees) are excluded from the canopy cover metric for England.

Methodology

The first NFI woodland map was published in May 2011 (reference date 31 March 2010), with annual revisions produced since then. This primarily comprised all the woodland and forest areas identifiable in the then available aerial photography.

Most photography used was taken around 2006, but smaller areas were taken at other dates ranging from 1999 to 2009. In addition to this, areas under new planting grant aid schemes were also added (where woodland was not evident in the photography – hence the description 'assumed woodland'). Grant schemes issued between 1990 and 2009 were used for this purpose. As a final check the NFI was compared to the previous FC woodland map from the 1990's (NIWT) and any valid and significant discrepancies were added (phase 1).

Subsequent to this first publication in 2011, annual revisions of the map have been undertaken and published (2012 to 2020).

The map is updated annually using a number of data sources, such as new paid grant schemes, new aerial photography and new satellite imagery.

The satellite imagery gives an independent crosscheck of woodland present and is also used to identify areas of recent canopy change, including clear felled forest, wind blow and areas where a change in land use has occurred since the last satellite image was taken.

The NFI field survey work is designed to measure detailed aspects of forests and woodlands, but it is also used as a final check to the map-based estimates of woodland and clearfell areas, wherein errors in the Earth Observation based map can be measured, calibrated and used for refining the final area estimates.

The establishment of a Canopy Cover metric for England has necessitated the construction of a NFI Orchards map, a map that could align contiguously with the NFI woodlands map and the NFI TOW map. The basis of this aligned Orchards map is the only definitive data set existing for Orchards, the Natural England Traditional Orchards data set from the Priority Habitats Inventory (England). Early results in the derivation of an NFI Orchard map found that many traditional Orchards were seriously denuded, to the point that many no longer qualified as an orchard (less than 20% stocked). This pointed to the establishment of a new derivation process,

including the need to establish fine scale aspects of a definition which could discriminate between sites that were once orchards and sites that are still orchards.

The estimate for orchards used within the canopy cover metric is based on areas:

- found within the Natural England or NFI datasets;

- with minimum 50% of species in the canopy that are food producing species (apples, pears, nuts, etc);

- with a stocking greater than 20%;

- with trees that are or are capable of reaching at least 3 metres in height.

Quality

The results from National Forest Inventory fieldwork have been used to calibrate the woodland area derived from the NFI woodland map for England. As the results were within the sampling margins of error for the fieldwork, no adjustment was made to the figure derived from the map.

The results from hand mapping of fieldwork squares have been used to calibrate the area of trees outside woodland derived from the map. This has resulted in an increase of around 7% from the estimate based solely on the map.

Further information

For further information on the canopy cover target, please refer to The Environmental Targets (Woodland and Trees Outside Woodland) (England) Regulations 2023 and to the explanatory memorandum, that sets out how the target will be reported.

Previous estimates of trees outside woodlands as at January 2016 were included in the NFI report Tree cover outside woodland in Britain, released in April 2017.

Woodland area converted to another land use, based on analysis of satellite imagery, is published in Forestry Commission annual Key Performance Indicator reports.

10.2 Timber

10.2.1 Introduction

This section provides detailed information on the sources and methodology for Chapter 2: UK-grown Timber. It covers wood production (removals) from UK woodland, and consumption and production by primary wood processors in the UK. The timber statistics presented cover both softwood (wood from coniferous trees such as spruce, pine and larch) and hardwood (wood from non-coniferous trees such as oak, birch and beech). Please refer to the glossary in the Introduction and Glossary chapter for an explanation of the terms used.

Quantities of wood can be expressed in different units. Conversion factors can be used to convert between units, see Annex 10.10.1 for details.

Detailed information on the quality of the statistics presented in this publication is available in the "Quality Report: UK Wood Production and Trade".

Further quality information on our Accredited Official Statistics, including separate reports for each of the industry surveys used in this release, is available on our Code of Practice web page.

Published figures for previous years are subject to revisions, which may reflect late updates to administrative or survey data, or corrections. Further details on any revisions made are provided by topic in Section 10.2.10.

Our revisions policy sets out how revisions and errors to these statistics are handled.

Figures for 2023 are considered final when published in "Forestry Statistics 2024". Provisional figures were previously released in "UK Wood Production and Trade: 2023 provisional figures" which also included information on revisions made since "Forestry Statistics 2023".

Forestry Statistics provides additional tables to those in provided in "UK Wood Production and Trade: 2023 provisional figures".

Timber availability forecasts are obtained from the "25-year forecast of softwood availability 2022", released in July 2022, and the "50-year forecast of hardwood availability", released in April 2014, and made available by National Forest Inventory.

See Section 10.10.2 in the Annex for information on timber statistics provided to international organisations.

Estimates are also provided by the Expert Group on Timber and Trade Statistics, noted in the relevant sections.

Release schedule

Provisional figures for 2024 will be released on 22 May 2025 in "UK Wood Production and Trade: 2024 provisional figures".

Final figures for 2024 will be released on 25 September 2025 in "Forestry Statistics 2025" and "Forestry Facts & Figures 2025".

10.2.2 Wood production

Tables

This section covers tables:

- Table 2.1a Softwood production, UK, 2014 to 2023;

- Table 2.1b Hardwood production, UK, 2014 to 2023;

- Table 2.2 Private sector softwood removals by country, UK, 2014 to 2023;

- Table 2.3 public sector softwood removals by country, UK, 2014 to 2023;

- Table 2.28a Percent of volume certified, UK, 2014 to 2023; and

- Table 2.28b Percentage of certified softwood removals by country, UK, 2023.

Data sources

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

- Administrative records of removals from the public sector; Forestry England, Forestry and Land Scotland, Natural Resources Wales and Forest Service Northern Ireland woodlands;

- the Private Sector Softwood Removals Survey for softwood removals from private sector woodlands (see next section for more details); and

- deliveries of hardwood to wood processing industries for total hardwood removals.

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

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

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

Longer time series, presenting estimates of FE/FLS/NRW/FS and private sector removals by country and by softwood/hardwood are available on our Time Series web page.

Private Sector Softwood Removals Survey

The Private Sector Softwood Removals Survey is an annual survey conducted by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Natural

Resources Wales and the Forest Service Northern Ireland) of a sample of harvesting companies in the UK.

The [questionnaire used for the Private Sector Softwood Removals Survey](#) is issued annually to around 40 harvesting companies, to collect information on:

- the quantity of softwood roundwood harvested from private sector woodlands in the UK in the current (latest) year and in the previous year;
- the quantity of softwood roundwood harvested from certified private sector woodlands;
- (from the 2008 survey) the quantity sold to bioenergy (including wood pellet manufacture);
- (for the 2013 - 2017 surveys) the quantity of softwood roundwood harvested as required by plant health legislation; and
- (from the 2018 survey) the quantity of removals by type of product.

Response rates

The questionnaire was issued to 44 harvesting companies for the collection of 2023 data, of which 31 responded, giving a response rate of 67%. These respondents are estimated to account for around 97% of all the softwood harvested by companies covered by the survey.

Private Sector Softwood Removals Survey Response Rates, 2014-2023

Year	Forms issued	Responses received	Response rate[1]	Weighted response rate[2]
2014	39	30	77%	97%
2015	40	27	68%	94%
2016	40	26	65%	94%
2017	40	31	78%	95%
2018	43	37	86%	90%
2019	40	26	65%	88%
2020	42	33	79%	94%
2021	46	33	72%	99%
2022	43	29	67%	95%
2023	44	31	70%	97%

Notes:

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

2. Weighted response rates are an estimate of the proportion of the softwood harvested by companies covered by the survey that is accounted for by respondents.

Softwood removals methodology change

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

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

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

Detailed information on the removals survey quality is available in the "Quality report: Private Sector Softwood Removals Survey" report on our Quality of Official Statistics page.

Methodology

The "Methodology note: UK wood production" sets out the data analysis methods used to produce annual estimates of UK wood production.

Figures for removals from FE/FLS/NRW/FS woodlands are converted from cubic metres to green tonnes using standard conversion factors (see Annex 10.10.1). For total softwood figures, the results from the Private Sector Softwood Removals Survey are combined with the data for FE/FLS/NRW/FS woodlands to produce total softwood removals.

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

The table below provides figures for the last 10 years.

Estimation of hardwood removals from private sector woodlands, 2014-2023

thousand green tonnes

Year	Deliveries	FE/FLS/NRW/FS removals	Private sector removals
2014	535	71	464
2015	564	73	491
2016	595	68	527
2017	736	85	651
2018	834	88	746
2019	868	68	800
2020	829	87	742
2021	823	96	727
2022	834	90	745
2023	816	86	730

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

10.2.3 Sawmill Survey

Introduction

The Sawmill Survey is an annual survey conducted by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Natural Resources Wales and the Forest Service Northern Ireland) of sawmills in the UK that are believed to use UK-grown logs. The survey comprises a short questionnaire (for smaller mills) and a detailed questionnaire (for larger mills).

The detailed survey has changed over the years, both in terms of coverage and periodicity. From 2016, the threshold for inclusion in the detailed sawmill survey has been raised to annual production of at least 25,000 cubic metres sawnwood. Information on changes prior to 2009 are available in previous editions of Forestry Statistics.

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

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

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

Longer time series, providing data on numbers of mills and on softwood consumption and production are available on our Time Series web page. The time series data feature breakdowns by size of mill, by country and by region (in England).

Figures for UK production of sawn softwood have previously been used alongside data from other sources to assess consumption of sawn softwood in the main end-user markets in the UK.

This section covers tables:

- Table 2.7a Consumption by sawmills, UK, 2014 to 2023;

- Table 2.7b Sawnwood production by sawmills, UK, 2014 to 2023;

- Table 2.8 Number of sawmills by size category of mill, UK, 2014 to 2023;

- Table 2.9 Number of sawmills by country, UK, 2014 to 2023;

- Table 2.10 Number of sawmills by type of wood sawn, UK, 2014 to 2023;

- Table 2.11 Consumption of softwood by size category of mill, UK, 2014 to 2023;

- Table 2.12 Consumption of softwood by country, UK, 2014 to 2023;

- Table 2.13 Production of sawn softwood by size of mill, UK, 2014 to 2023;

- Table 2.14 Production of sawn softwood by country, UK, 2014 to 2023;

- Table 2.15 Softwood consumption and production by larger mills, UK, 2023;

- Table 2.16a Source of softwood logs for larger mills, UK, 2023;

- Table 2.16b Source of softwood logs for larger mills, UK, 2019 to 2023;

- Table 2.17a Sawn softwood product markets for larger mills, UK, 2023;

- Table 2.17b Sawn softwood product markets for larger mills, UK, 2019 to 2023;

- Table 2.18a Other softwood products for larger mills, UK, 2023;

- Table 2.18b Other softwood products for larger mills, UK, 2019 to 2023;

- Table 2.19a Sawmill employment for larger mills, UK, 2023;

- Table 2.19b Sawmill employment for larger mills, UK, 2019 to 2023;

- Table 2.28a Percent of volume certified, UK, 2014 to 2023;

- Table 2.29 Number of sawmills with Chain of Custody certificates, UK, 2023; and

- Table 2.34 Preservative treatment of domestically sawnwood produced in the UK, 2020 to 2023.

Data collected

Two questionnaires are used for the Sawmill Survey:

- a detailed questionnaire goes to around 30 mills that have annual production of at least 25,000 cubic metres of sawnwood; and

- a short questionnaire is sent to all other mills that are believed to use UK sawlogs (currently around 120 mills).

Both the detailed and the short questionnaires collect information on:

- the consumption of UK and imported logs;

- the production of sawnwood;

- chain of custody certificates and certified timber;

- (from the 2006 survey) sales to bioenergy;

- (from the 2008 survey) sales as firewood and internal use for heat/energy;

- (from the 2010 survey) other products;

- (from the 2008 survey) total employment;

- (for the 2018 survey only) total wood inputs; and

- (from the 2020 survey) preservative treatment of sawnwood.

In addition, the detailed questionnaire also collects information on:

- the source of UK logs (England, Wales, Scotland or Northern Ireland);

- sawnwood product markets;

- other products by type and destination; and

- sawmill employment by type.

More information on the Sawmill Survey, including copies of the questionnaires sent to businesses in recent years, are available.

Response rates

Detailed questionnaires were issued to 30 mills for the collection of 2023 data, of which 25 responded, giving a response rate of 83%. For the short questionnaire, 23 responses were received from the 109 forms issued, corresponding to a 21% response rate. This gives an overall response rate of 35%.

Overall, the 48 sawmills responding to the sawmill survey in 2023 are estimated to account for around 86% of total UK sawnwood production.

Sawmill Survey Response Rates (all questionnaires), 2014-2023

Year	Forms issued	Responses received	Response rate[1]	Weighted response rate[2]
2014	178	82	46%	84%
2015	179	84	47%	79%
2016	173	74	43%	83%
2017	170	73	43%	86%
2018	155	64	41%	79%
2019	151	57	38%	75%
2020	98	51	52%	87%
2021	149	58	39%	88%
2022	141	54	38%	86%
2023	139	48	35%	86%

Notes:

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

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

Methodology

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

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

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

Detailed information on the Sawmill Survey quality is available in the "Quality report: Sawmill Survey" report on our [Quality of Official Statistics](#) page.

10.2.4 Pulp and paper

Tables

This section covers tables:

- Table 2.20 Inputs for the integrated pulp and paper mills, UK, 2014 to 2023; and

- Table 2.21 Production of paper and paperboard, UK, 2014 to 2023.

Data collected

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

- The [Confederation of Forest Industries](#) (Confor) provides figures on inputs to the integrated pulp and paper mills and

- the [Confederation of Paper Industries](#) (CPI) provides figures on total UK pulp and paper production.

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

Figures are available at a total UK level only.

The data collected on inputs cover the type of input (roundwood, sawmill products) and the type of wood (softwood, hardwood and are collected by Confor from all such mills in the UK. The number of integrated pulp and paper mills has fallen over recent years and currently stands at two.

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

Production data covers wood pulp (mechanical or semi-chemical), recovered fibre pulp and paper and paperboard. Paper and paperboard production are available for the following categories: sanitary and household papers, packaging materials and other paper and paperboard. The production data produced by the Confederation of Paper Industries no longer includes graphic papers as a separate category. As a result, the "other" paper and paperboard category in table 2.21 now includes graphic papers.

Data are also collected on UK "production" of waste paper, which is the amount recovered from the UK for re-use in the UK or for export.

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

From 2018, data was also requested on wood inputs for energy use.

10.2.5 Wood-based panels

Tables

This section covers tables:

- Table 2.22 Softwood inputs to wood-based panel mills, UK, 2014 to 2023; and

- Table 2.23 Wood-based panel production, UK, 2014 to 2023.

Data collected

Data on the wood-based panel sector are obtained from the Wood Panel Industries Federation (WPIF) and cover all wood-based panel mills in the UK. Figures on wood consumption are collected annually. Production data (excluding waste and rejects)

are derived from quarterly returns. Response rates in recent years have been 100%.

Data are collected on inputs and on production.

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

- Production data covers all types of wood-based panels made in the UK, which currently comprises particleboard (including oriented strand board) and fibreboard (medium density fibreboard). UK production of hardboard (another type of fibreboard) ended in the UK in 1999 and production of plywood ended in 2000.

From 2008, total employment is also requested, to complement the data being collected on this topic from other primary wood processors.

From 2018, data was also requested on wood inputs for energy use.

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

10.2.6 Survey of Round Fencing Manufacturers

Introduction

The Survey of Round Fencing Manufacturers is an annual survey conducted by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Natural Resources Wales and the Forest Service Northern Ireland) of round fencing manufacturers (or mills) in the UK that are believed to consume UK-grown roundwood.

Figures are published as UK totals and by size of mill. Longer time series, providing data on numbers of mills and on softwood consumption are available.

This section covers tables:

- Table 2.25 Number of softwood round fencing manufacturers by size category, UK, 2014 to 2023; and

- Table 2.26 Total roundwood purchased by size category of softwood round fencing manufacturers, UK, 2014 to 2023.

Data collected

The questionnaire used for the Survey of Round Fencing Manufacturers is issued to around 40 mills, to collect information on the consumption of UK-grown and imported roundwood. In 2008, the survey was extended to cover woodfuel quantities (sales to bioenergy, sales as firewood and internal use for heat/ energy) and total employment. In 2010, the survey was further extended to request data on production of round fencing and other products. A breakdown of the country of origin (England, Wales, Scotland, Northern Ireland) for UK-grown roundwood is also requested. A question on total wood inputs was added for the 2018 survey but has since been dropped.

A question on the preservative treatment of round fencing production was included in the 2020 survey but has since been removed alongside removal of the certification question.

More information on the Survey of Round Fencing Manufacturers, including copies of the questionnaires sent to businesses in recent years, are available.

Response rates

The questionnaire was issued to 40 mills for the collection of 2023 data, of which 11 responded, giving a response rate of 28%. These respondents accounted for an estimated 37% of roundwood purchased by softwood round fencing manufacturers.

Survey of Round Fencing Manufacturers Response Rates, 2014-2023

Year	Forms issued	Responses received	Response rate[1]	Weighed response rate[2]
2014	62	26	42%	42%
2015	60	29	48%	54%
2016	55	23	42%	49%
2017	53	21	40%	36%
2018	53	22	42%	37%
2019	50	20	40%	45%
2020	38	15	39%	34%
2021	45	18	40%	40%
2022	45	11	24%	31%
2023	40	11	28%	37%

Notes:

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

2. Weighted response rates are an estimate of the proportion of total roundwood purchased by softwood round fencing manufacturers that is accounted for by respondents.

Methodology

Each year, figures for non-respondents that are assumed to be active are estimated by rolling forward data from previous years for these mills. In 2020, this approach was modified to assume that the change from 2019 to 2020 for non-respondents would be similar to that for respondents. This improved methodology was continued for subsequent surveys.

Detailed information on the fencing survey quality is provided in the "Quality Report: Survey of Round Fencing Manufacturers" available on our Quality of Official Statistics page.

10.2.7 Woodfuel and pellets

Tables

This section covers tables:

- Table 2.24 Miscellaneous uses of softwood roundwood, UK, 2014 to 2023;

- Table 2.30 Recycled wood used for woodfuel, UK, 2014 to 2023;

- Table 2.31 Woodfuel supply by sawmills and round fencing manufacturers, UK, 2019 to 2023;

- Table 2.32 Wood pellet production, UK, 2014 to 2023; and

- Table 2.33 Wood pellet feedstock, UK, 2019 to 2023.

Data sources

Data on woodfuel have been obtained from the following sources:

- Sawmill survey and survey of round fencing manufacturers;

- Private sector softwood removals survey and woodfuel suppliers; and

- Expert Group on Timber and Trade Statistics estimates.

The Sawmill Survey and Survey of Round Fencing Manufacturers included questions asking for the quantity of woodfuel:

- sold to bioenergy;

- sold as firewood; and

- used internally for heat/energy.

Estimates of the quantity of recycled wood used for woodfuel are produced by the Wood Recyclers' Association.

Data on UK pellet production and feedstock are obtained from the Survey of UK Pellet and Briquette Production.

For details on roundwood deliveries for woodfuel, see Section 10.2.8: Deliveries.

Figures are published as UK totals.

Survey of UK Pellet and Briquette Production

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

More information on the survey of UK pellet and briquette production, including copies of the questionnaires sent to businesses in recent years, can be found online.

Detailed information on the survey quality is available in the "Quality Report: Survey of UK Pellet and Briquette Production" available on our Quality of Official Statistics page.

Response rates

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

The 2023 survey of UK pellet and briquette production was sent to a total of 11 companies that were believed to manufacture pellets or briquettes. A total of six responded, giving a response rate of 55%. The respondents to the survey are estimated to account for around 100% of the total production of pellets and briquettes in the UK in 2023.

Survey of UK Pellet and Briquette Production Response Rates, 2014-2023

Year	Forms issued	Response received	Response rate[1]	Weighted Response rate[2]
2014	18	6	33%	91%
2015	18	5	28%	45%
2016	18	5	28%	68%
2017	17	4	24%	56%
2018	14	5	36%	89%
2019	14	5	36%	89%
2020	11	5	45%	91%
2021	11	6	55%	92%
2022	11	6	55%	100%
2024	11	6	55%	100%

Notes:

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

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

Methodology

Details of the methodology used for the sawmill survey and survey of round fencing manufacturers are available in Section 10.2.

For the survey of UK pellet and briquette production, estimates were made for non-respondents using results from previous surveys and expert advice.

Further resources

The Department for Energy Security and Net Zero publishes an annual Digest of UK Energy Statistics.

Chapter 7 of this digest covers renewable sources of energy including wood. Figures for wood use in renewable energy statistics take into account wood from all

sources (including processed wood, recycled wood and imports), not just UK-grown roundwood.

Figures for Woodfuel Demand and Usage in Scotland, covering actual and potential use of woodfuel in the commercial, industrial and electrical energy sectors, have been produced annually by Scottish Forestry.

10.2.8 Deliveries

Tables

This section covers tables:

- Table 2.5 Deliveries of UK-grown softwood, UK, 2014 to 2023;

- Table 2.6 Deliveries of UK-grown hardwood, UK, 2014 to 2023;

- Table 2.24 Miscellaneous uses of softwood roundwood, UK, 2014 to 2023; and

- Table 2.27 Summary of softwood exports, 2014 to 2023.

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

Data sources

Most sources have been described in previous sections, aside from those for shavings, exports, hardwood round fencing and other miscellaneous products which are described below.

Shavings

The data collected on shavings cover the quantity of roundwood only. They are mainly obtained from shavings manufacturers, and data are collected from the main companies known to produce shavings. In addition, a small estimate is made to cover other shavings manufacturers.

Exports

Data collected on exports includes the following categories; industrial roundwood (excluding sawlogs), sawlogs and chips.

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

Hardwood round fencing and other miscellaneous products

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

Methodology

Total deliveries are estimated from a combination of sources described in this section and previous ones:

- the Sawmill Survey;
- the Wood Panel Industries Federation;
- the Confederation of Forest Industries, Confor (for integrated pulp and paper mills);
- softwood round fencing - Survey of Round Fencing Manufacturers;
- hardwood round fencing - Expert Group on Timber and Trade Statistics estimates;
- woodfuel - Private Sector Softwood Removals Survey, woodfuel suppliers and Expert Group on Timber and Trade Statistics;

- shavings manufacturers;

- exports - exporters of roundwood and/or chips, Forest Service Northern Ireland and HM Revenue & Customs (HMRC); and

- other miscellaneous products - Expert Group on Timber and Trade Statistics estimates.

10.2.9 Comparison of removals and deliveries of UK softwood roundwood

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

The estimated total for softwood removals in the UK has generally been higher than the estimate for total UK softwood deliveries. At least some of this difference may indicate a possible undercounting of deliveries, particularly for roundwood that is used directly for woodfuel.

There was a discrepancy of 0.2 million green tonnes in 2023.

Comparison of removals and deliveries of UK softwood roundwood, 2014-2023

thousand green tonnes

Year	FE/FLS/ NRW/FS removals	Private sector removals	Total removals	Deliveries	Balance[1]
2014	4,900	6,627	11,527	10,914	613
2015	4,691	5,968	10,659	10,276	383
2016	5,011	5,734	10,745	10,430	315
2017	4,766	6,075	10,842	10,471	371
2018	4,531	6,827	11,359	10,626	733
2019	3,948	5,884	9,832	10,225	-393
2020	4,626	5,437	10,062	9,903	159
2021	4,019	6,407	10,426	10,362	64
2022	3,709	5,484	9,193	9,224	-31
2023	3,972	5,168	9,140	8,954	186

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

Notes:

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

10.2.10 Revisions

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

Topics not listed in this section are not normally revised after publication. On occasion, a provisional figure or estimate may be published, and replaced by the actual figure in a subsequent publication. Information will be provided below in a relevant section if this occurs.

Removals

Removals from FE/FLS/NRW/FS woodlands are not normally revised. Total hardwood removals (and consequently hardwood removals from private sector woodlands) are subject to annual revisions.

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

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

The following figures have been revised since "UK Wood Production and Trade: 2023 provisional figures":

- Public sector softwood removals have been revised upward from 3,932 thousand green tonnes to 3,972 thousand green tonnes (1%).

- Public sector hardwood removals have been revised upward from 63 thousand green tonnes to 86 thousand green tonnes (37%).

- Private sector hardwood removals have been revised downward from 753 thousand green tonnes to 730 thousand green tonnes (-3%).

-

Sawmills

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

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

Fencing

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

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

Deliveries

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

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

The quality report on "UK Wood Production and Trade" provides further information, including details of significant revisions to published statistics.

The estimate for hardwood used for woodfuel was revised in 2017 to reflect a perceived increase in woodfuel, but this should not be interpreted as an increase in a single year. A further increase in 2018 reflects a rise that is believed to have occurred during the year.

The following figures have been revised since "UK Wood Production and Trade: 2023 provisional figures":

-   Deliveries of other softwood have been revised upward from 176 thousand green tonnes to 209 thousand green tonnes (19%).

-   Deliveries of other hardwood have been revised downward from 70 thousand green tonnes to 63 thousand green tonnes (-10%).

Other

The following figures have been revised since "UK Wood Production and Trade: 2023 provisional figures":

-   Production of wood pellets and briquettes have been revised downward from 313 thousand green tonnes to 312 thousand green tonnes.

10.3 Trade

Introduction

This section provides detailed information on the sources and methodology for Chapter 3: Trade.

Statistics on imports and exports are based on the published overseas trade statistics produced by HM Revenue & Customs (HMRC) and available through their UK Trade Info platform.

Data on apparent consumption is derived as UK production plus imports less exports.

Detailed information on the quality of the trade statistics presented in this publication is provided in the "Quality Report: UK Wood Production and Trade". Further quality information on our Accredited Official Statistics is available in our Code of Practice.

See Section 10.10.2 in the Annex for information on trade statistics provided to international organisations.

Provisional figures for 2024 will be released on 22 May 2025 in "UK Wood Production and Trade: 2024 provisional figures".

Final figures for 2024 will be released on 25 September 2025 in "Forestry Statistics 2025" and "Forestry Facts & Figures 2025".

Data sources and methodology

The data obtained from HMRC cover quantities (weights and volumes) and values of wood and wood products imported to and exported from the UK. Data are compiled for the following products:

- roundwood - woodfuel, industrial roundwood;
- wood charcoal;

- wood pellets;

- wood chips, particles and residues;

- sawnwood;

- wood-based panels - veneer sheets, plywood, particleboard, fibreboard;

- pulp - wood pulp, other pulp;

- recovered paper;

- recovered wood;

- paper and paperboard - graphic papers (including newsprint), sanitary and household papers, packaging materials, other paper and paperboard.

For roundwood, sawnwood and wood-based panels, a softwood and hardwood breakdown is available.

The HMRC data are also available by country of origin (for imports) and destination country (for exports).

For consistency with timber deliveries data, softwood roundwood and wood chip exports figures are replaced by those compiled from companies believed to export roundwood and/or chips. For Northern Ireland, figures are provided by Forest Service Northern Ireland.

Where the HMRC reporting units for quantity differ from those shown in this publication, figures are adjusted using standard FAO/Economic Commission for Europe (ECE) conversion factors, which are listed in Annex 10.10.1

The figures may also be adjusted where an apparent inconsistency in the UK trade figures cannot be resolved before the international return is required.

Historically, HMRC wood trade figures have often necessitated adjustments, following liaison with practitioners in the trade (including the Expert Group on Timber and Trade Statistics, Wood Panel Industries Federation (WPIF) and Confederation of Paper Industries (CPI)).

The "Methodology note: UK wood imports and exports" sets out the data analysis methods used to produce annual estimates of UK wood imports and exports.

Revisions

Statistics on imports and exports are subject to revision after publication if revisions are made to the overseas trade statistics produced by HMRC. Figures may also be refined to take account of expert advice from the Expert Group on Timber and Trade Statistics and trade associations on the trade in specific products.

Figures for 2023 are final; provisional figures were previously released in "UK Wood Production and Trade: 2023 provisional figures". The following figures have been revised since "UK Wood Production and Trade: 2023 provisional figures":

- Import quantities in 2023 have been revised upwards by around 406 thousand cubic metres for sawnwood and 208 thousand cubic metres for wood-based panels, and downwards by around 162 thousand tonnes for pulp and paper, 35 thousand cubic metres for 'other wood' and 62 thousand tonnes for wood pellets;

- Import quantities in 2022 have been revised downwards by around 212 thousand cubic metres for sawnwood and 5 thousand cubic metres for wood-based panels, 590 thousand tonnes for pulp and paper, 39 thousand cubic metres for 'other wood' and 69 thousand tonnes for wood pellets;

- Export quantities in 2023 have been revised upwards by around 11 thousand cubic metres for sawnwood and 23 thousand cubic metres for wood-based panels, and downwards by around 188 thousand tonnes for pulp and paper, 39 thousand cubic metres for 'other wood' and 25 thousand tonnes for wood pellets;

- Export quantities in 2022 have been revised upwards by around 1 thousand cubic metres for sawnwood, and downwards by around 1 thousand cubic metres for wood-based panels, 283 thousand tonnes for

pulp and paper, 4 thousand cubic metres for 'other wood' and 21 thousand tonnes for wood pellets;

- Import values in 2023 have been revised downwards by around £33 million overall, comprising reductions of around £4 million for 'other wood' and £29 million for wood pellets;

- Import values in 2022 have been revised downwards by around £95 million overall, comprising reductions of around £1 million for 'other wood', £29 million for wood pellets and £99 million for sawnwood, and increases of around £34 million for wood-based panels;

- Export values in 2023 have been revised downwards by around £2 million overall, comprising reductions of around £2 million for 'other wood';

- Export values in 2022 have been revised upwards by around £1 million overall, comprising increases of around £1 million for wood-based panels and £1 million for 'other' wood, £3 million for 'other wood', and reductions of around £1 for million for wood pellets.

Information on significant revisions to published statistics is provided in the "Quality Report: UK Wood Production and Trade" report.

Our revisions policy sets out how revisions and errors to these statistics are handled.

10.4 Carbon

Introduction

This section provides detailed information on the sources and methodology for Chapter 4: Carbon.

Forests can help mitigate climate change by reducing the amount of greenhouse gases in the atmosphere. They do this by absorbing carbon dioxide, using the carbon to produce sugars for tree growth and releasing the oxygen back into the air. As trees grow, they store carbon in their leaves, twigs and trunk, and in the soil around them.

Globally, deforestation caused by the unsustainable harvesting of timber and the conversion of forests to other land uses accounts for almost 20 per cent of global carbon dioxide emissions. The amount of carbon stored can be increased by actions to reduce the amount of deforestation and to convert non-forested areas to forest. Forests can be managed as a sustainable source of wood – an alternative energy source to fossil fuels, and a low-energy construction material.

Woodlands can also help society adapt to a changing climate, by reducing the risk of flooding, providing shade for wildlife, reducing soil erosion and helping to cool down towns and cities.

All of the statistics in this chapter are outside the scope of Accredited Official Statistics, but are included here to give a broad indication of the role of UK forests in climate change.

Woodland Carbon Code Statistics for the year ending March 2025 will be released in Provisional Woodland Statistics 2025 on 26 June 2025.

Forestry Statistics 2025 and Forestry Facts & Figures 2025 will be released on 25 September 2025.

The next Public Opinion of Forestry Survey is expected to run in early 2025, with results available in summer 2025.

Data sources and methodology

Forest carbon stock

Table 4.1a is adapted from Table 2d in the final UK report submitted in April 2024 to FAO for the Global Forest Resources Assessment (FRA) 2025. Table 4.1b has been compiled using the same approach to produce estimates by country within the UK.

Units

These tables are shown in million tonnes carbon dioxide equivalent (MtCO$_2$e) rather than million tonnes carbon (MtC). To convert from CO$_2$e to C multiply by 12/44.

Timescales

Carbon stock is estimated for 1990, 2000, 2010, 2015, 2020 and 2025.

Living biomass

Carbon in living biomass is based on data from NFI report Carbon in live woodland trees in Britain (Forestry Commission, May 2014), uprated from Great Britain to UK estimates based on estimated volumes of growing stock. A "root to shoot ratio" (below ground biomass = 0.36 x above ground biomass) is used to estimate the breakdown between above- and below-ground biomass (Levy et al., 2004). Updated estimates of growing stock over time (making use of data from the National Forest Inventory) have been used.

Deadwood

Estimates of deadwood volume per hectare are taken from National Forest Inventory estimates. These are rated up by woodland area estimates for FRA 2025 assuming a density of 0.45 ODT/cubic metres, and an average carbon content of 50% is applied.

Litter

Estimates of the carbon content of the litter layer are available from Morison et al. (2012). These are rated up by woodland area estimates for FRA 2025 to provide a consistent time series.

Soil carbon

Estimates of the carbon content of soil 0 to 100 cm for England, Wales and Scotland are available from Morison et al. (2012). An estimate of the carbon content of soil for Northern Ireland is taken from Bradley et al. (2005) and rated downward to reflect the generally lower carbon content found in Morison et al. (2012). The soil carbon estimates are then rated up by woodland area estimates for FRA 2025 to provide a consistent time series. This soil estimate does not take account of soil carbon accumulation. It also assumes that the soil carbon content of afforested (and previously unwooded) land has the same soil carbon content as woodland soils, whereas in practice this may vary.

Comparison with other data sources

Figures in this updated table are broadly similar to the estimates made in Morison et al. (2012).

Future updates

This table will be updated once further information is available from the National Forest Inventory.

Carbon sequestration

The information in Table 4.2 is taken from inventory and projections of UK emissions by sources and removal by sinks due to land use, land use change and forestry, produced by CEH for the National Atmospheric Emissions Inventory (NAEI) which incorporates all air pollutants including greenhouse gases.

Figure 4.1 shows annual estimates of carbon accumulation by country, taken from the same source but shows carbon in living forest biomass only; it excludes carbon

in litter, soils and forest products. Future predictions of carbon uptake assume that commercial conifer plantations will be replanted when felled, and that planting of new woodland will follow a central projection whereby planting up to 2020 is determined by the available grants for woodland creation (i.e., policy and funding in place), and after that planting rates drop to 10% of the baseline projection, reflecting the lack of funding beyond the current Rural Development Plan.

For more information, please refer to the National Atmospheric Emissions Inventory (NAEI).

Emissions and sequestration can be presented as tonnes of carbon or tonnes of carbon dioxide (CO_2). To convert from tonnes of CO_2 to tonnes of carbon multiply by 12/44.

Woodland Carbon Code

The Woodland Carbon Code is a voluntary standard, initiated in July 2011, for woodland creation projects that make claims about the carbon they sequester (take out of the atmosphere). All projects must be placed on the UK Woodland Carbon Registry. Their claims about potential carbon sequestration are validated by an independent certification body. Validated projects are then verified on a regular basis to confirm the progress of carbon sequestration.

Information about Woodland Carbon Code projects comes from the UK Woodland Carbon Registry, housed on the Markit Environmental Registry. The register is a live database and summary data are extracted annually.

Further information on the Woodland Carbon Code is available at the UK Woodland Carbon Code website.

Public opinion on climate change

Public Opinion of Forestry surveys have been run every 2 years by Forest Research on behalf of the Forestry Commission/Forestry England/Defra, Scottish Forestry, Welsh Government/Natural Resources Wales and every 4 years on behalf of the Forest Service Northern Ireland. The surveys cover public attitudes to forestry and

forestry-related issues. In the UK/England survey, respondents are asked two questions on climate change: one asking about ways in which forests and woodlands can impact on climate change and one asking about how UK forests should be managed in response to the threat of climate change (Table 4.4). Further information on the Public Opinion of Forestry surveys, including methodology and quality statement, can be found in the Annex section in each report.

References

Bradley, R.I., Milne, R., Bell, J., Lilly, A., Jordan, C., Higgins, A. (2005) "A soil carbon and land use database for the UK", Soil Use and Management 21 (363-369), DOI: 10.1079/SUM2005351.

Broadmeadow, M., Matthews, R. (2003) "Forests, Carbon and Climate Change: the UK Contribution", Forestry Commission, Edinburgh.

Department for Business, Energy and Industrial Strategy (2022) "Final UK greenhouse gas emissions national statistics: 1990 to 2020".

Levy, P.E., Hale, S.E., Nicoll, B.C. (2004) "Biomass expansion factors and root: shoot ratios for coniferous tree species in Great Britain", Forestry, Vol 77, No 5, DOI: 10.1093/forestry/77.5.421.

Morison, J. et al (2012) "Understanding the Carbon and GHG balance of UK Forests", Forest Research.

Revisions

Most of the statistics in this chapter have been previously released. Data have not been revised from previous releases.

Our revisions policy sets out how revisions and errors to these statistics are dealt with, and is available on our Quality of Official Statistics web page.

10.5 Environment

Introduction

This section provides detailed information on the sources and methodology for Chapter 5: Environment.

The statistics presented in the Environment chapter of this release cover:

- woodland types and habitats;

- populations of wild birds;

- populations of woodland butterflies;

- public opinion on tree health.

Limited data are currently available on the environmental aspects of woodlands. Other than Wild Bird Populations, all of the statistics in this chapter are outside the scope of Accredited Official Statistics, but are included here to give a broad indication of the woodland environment.

The next Public Opinion of Forestry survey is expected to run in early 2025, with results available in summer 2025.

Forestry Statistics 2025 and Forestry Facts & Figures 2025 will be released on 25 September 2025.

For information on the release schedules of statistics produced by others, see the relevant websites in the next section, Data sources and methodology.

Data sources and methodology

Woodland types and habitats

Data on woodland types and habitats comes from the National Forest Inventory Woodland Ecological Condition in Great Britain: Statistics report. Published in February 2020, the report presents data from the first field survey cycle which ran from 2010 to 2015. The accompanying report on NFI Woodland Ecological Condition Scoring Methodology provides more detailed information on definitions and methodology.

Populations of wild birds

Population indices for wild birds are a framework indicator for sustainable development. The data published here are based on those published in the Wild bird populations in the UK, 1970 to 2022 statistical release (published in November 2023), rescaled here to give year 2010 = 100 instead of year 1970 = 100. The report, produced by the Department for Environment, Food and Rural Affairs (Defra), the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Joint Nature Conservation Committee (JNCC).

The index for woodland specialists was recalculated in 2007 to include 4 additional species; this affected the indices for total woodland birds and (to a lesser extent) all birds. A further change in 2015 resulted in the removal of one woodland specialist species from the index.

Populations of woodland butterflies

Population trends for pollinating insects form one of the UK's biodiversity indicators. The data published here are based on the Butterflies in the United Kingdom: habitat specialists and species of the wider countryside, published in December 2022 (revised in May 2023) by Defra, Butterfly Conservation, UK Centre for Ecology and Hydrology, BTO and JNCC. The index has been rescaled to give year 2010 = 100, instead of year 1990 = 100, in order to match the woodland bird index (see above).

The all-species butterfly index includes 50 species, of which 24 are commonly found in woodland.

In addition to the unsmoothed index (black line in Figure 5.3), a smoothed index (blue line) is presented along with 95% confidence intervals (grey shaded area) to show the overall trend over time.

Public opinion on tree health and diseases

Public Opinion of Forestry surveys have been run every 2 years by Forest Research on behalf of the Forestry Commission/Forestry England/Defra, Scottish Forestry, Welsh Government/Natural Resources Wales and every 4 years on behalf of the Forest Service Northern Ireland. The surveys cover public attitudes to forestry and forestry-related issues. In the UK/England survey, respondents are asked whether or not they agree with a number of statements related to tree health and diseases (Figure 5.4). Further information on the Public Opinion of Forestry surveys, including methodology and quality statement, can be found in the Annex section in each report.

References

NFI woodland ecological condition in Great Britain: Statistics, Forest Research (2020).

Wild bird populations in the UK, 1970 to 2022, Department for Environment, Food and Rural Affairs (2023).

UK Biodiversity Indicators 2023, Joint Nature Conservation Committee (2023).

Revisions

Statistics on the environment obtained from others are subject to revision whenever the source data are revised.

Our revisions policy sets out how revisions and errors to these statistics are dealt with, and is available on our Quality of Accredited Official Statistics web page.

10.6 Social

Introduction

This section provides detailed information on the sources and methodology for Chapter 6: Social.

The data presented in the Social chapter are based on general population surveys of individuals. This approach is employed for the People and Nature Surveys that run in England and in Scotland, the National Survey for Wales and the Public Opinion of Forestry surveys. (Tables 6.1 to 6.5).

For information on the release schedules of statistics produced by others, see relevant websites (above).

The next Public Opinion of Forestry survey is expected to run in early 2025, with results available in summer 2025.

Forestry Statistics 2025 and Forestry Facts & Figures 2025 will be released on 26 September 2025.

Further information is available from the Forest Research website on the social statistics and the Public Opinion of Forestry pages.

Data sources and methodology

Household surveys

The information shown in Table 6.1 has been obtained from the following general population household surveys:

- Monitor of Engagement with the Natural Environment (England, 2009/10 to 2017/18),

- People and Natural Survey (England, 2020/21 onwards),

- Welsh Outdoor Recreation Survey (2014/15),

- National Survey for Wales (2016/17 to present),

- Scottish Recreation Survey (2012/13),

- Scotland's People and Nature Survey (2013/14, 2017/18 and 2019/20),

The People and Natural Survey for England has also been used to provide information on visitor characteristics in Table 6.2.

Scotland's People and Nature Survey, produced by NatureScot, has replaced the Scottish Recreation Survey.

The National Survey for Wales has replaced the Welsh Outdoor Recreation Survey and provides statistics on visitor characteristics (Table 6.3).

Public Opinion of Forestry Survey

Public Opinion of Forestry surveys have been run every 2 years by Forest Research on behalf of the Forestry Commission/Forestry England/Defra, Scottish Forestry, Welsh Government/Natural Resources Wales and every 4 years on behalf of the Forest Service Northern Ireland. The surveys cover public attitudes to forestry and forestry-related issues, including visits to woodland (Tables 6.4 to 6.5 and Figure 6.1), and were last run in March 2023. For more information on the Public Opinion of Forestry surveys, including methodology and quality statement, see the Annex section in each report.

Quality

It is notable from Table 6.1 that different surveys have provided some quite different estimates of the aggregate number of visits to woodlands. It is likely that differences in survey design and methodology have contributed to a considerable proportion of the differences in results between these surveys. As the scope of the surveys has evolved over time, the figures in Table 6.1 should not be interpreted as time trends but instead as separate results from each survey.

In common with all sample-based surveys, the results from each survey are subject to the effects of chance, depending on the particular survey method used and the sample achieved, thus confidence limits apply to all results from these surveys. For

example, the range of uncertainty around the estimated 357 million visits to woodland in England (by English residents) in 2012 should be within ±8%, i.e., the true figure is likely to be between around 328 and 385 million.

Technical reports, providing further information on household surveys run or commissioned by other organisations, are available from relevant websites (see above).

Revisions

Figures for earlier years have not been revised from those published in Forestry Statistics 2023.

Our revisions policy sets out how revisions and errors to these statistics are dealt with, and is available on our Quality of Accredited Official Statistics web page.

10.7 Employment and businesses

Introduction

This section provides detailed information on the sources and methodology for Chapter 7: Employment and businesses.

"Forestry Statistics 2025" and "Forestry Facts & Figures 2025" will be released on 25 September 2025.

For information on the release schedules of statistics produced by others, see the relevant websites in the next section, Data sources and methodology.

Data sources and methodology

Statistics on employment are obtained from:

- The Business Register and Employment Survey of the ONS, an annual survey of UK businesses;

- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations (Confor, Wood Panel Industries Federation) - for employment in primary wood processing; and

- Confederation of Paper Industries (CPI).

Statistics for accidents to employees are obtained from Health & Safety Executive statistics for Great Britain.

Numbers of businesses are estimated from:

- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations (Confor, Wood Panel Industries Federation) - for businesses believed to be using UK-grown roundwood; and

- UK Business: Activity, Size and Location (Office for National Statistics) - for VAT and/or PAYE registered.

Standard Industrial Classification (SIC)

The Annual Business Survey, statistics on health and safety and statistics on VAT and/or PAYE registrations classify businesses by UK Standard Industrial Classification (SIC) code.

Businesses are classified to SIC codes according to their main activity. The SIC codes are revised periodically to take account of changes in the global economy.

See Annex 10.10.3 for a list of SIC codes that were used.

Quality

The forestry and wood processing businesses covered by the Annual Business Survey (Table 7.1), accidents to employees (Table 7.3) and VAT and/or PAYE registered businesses (Table 7.5) differ from those covered by the timber industry surveys and enquiries (Chapter 2, Tables 7.2a, Table 7.2b and 7.4), as follows:

- Businesses below VAT and PAYE thresholds are excluded from the SIC-based statistics;

- businesses whose main activity is not forestry or wood processing will be allocated to other SIC codes and therefore excluded from the relevant tables on the Annual Business Survey, accidents and VAT and/or PAYE businesses;

- businesses that do not use UK-grown roundwood are excluded from Forest Research's timber industry surveys and enquiries; and

- businesses involved in secondary wood processing are excluded from Forest Research's timber industry surveys and enquiries.

Reporting requirements for accidents have changed, with absences of at least 3 days to be reported until March 2012 and absences of at least 7 days to be reported from April 2012. As a result, accident data from 2012-13 are not fully consistent with figures for earlier years.

Revisions

Statistics on employment and businesses obtained from others are subject to revision whenever the source data are revised.

Statistics from timber industry surveys and enquiries are subject to revision whenever the timber statistics are revised (see Section 10.2 for further information on revisions to industry surveys and enquiries).

Our revisions policy sets out how revisions and errors to these statistics are handled.

10.8 Finance and prices

Introduction

This section provides detailed information on the sources and methodology for Chapter 8: Finance & Prices.

The statistics presented in the Finance and Prices chapter of this release cover:

- timber prices;

- gross value added (GVA);

- government expenditure on forestry; and

- grant schemes.

Tables providing longer time series of the Coniferous Standing Sales Price Index and the underlying data used to produce it, are available.

For information on the release schedules of statistics produced by others, see relevant websites (above).

Timber price indices are published every six months, in May for data to end March and in November for data to end September. The next editions will be released on the following dates:

"Timber Price Indices: Data to September 2024" will be released on 14 November 2024;

"Timber Price Indices: Data to March 2025" will be released on 22 May 2025.

"Forestry Statistics 2025" and "Forestry Facts & Figures 2025" will be released on 25 September 2025.

Data sources and methodology

Data sources for timber price indices

The Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index (and sub-indices) are both based on sales of softwood (conifers) by Forestry England, Forestry and Land Scotland and Natural Resources Wales; they do not include any private sector data. They only cover roundwood from woodland; they do not cover sawmill products or other end products. The Small Roundwood Price Index is also based on roundwood sales by Forestry England, Forestry and Land Scotland and Natural Resources Wales, but can include hardwood (broadleaves) as well as softwood.

The Coniferous Standing Sales Price Index (CSSPI) is based on administrative data for standing sales of conifers (softwood) by Forestry England/ Forestry and Land Scotland/ Natural Resources Wales. Around 60% of Forestry England/ Forestry and Land Scotland/ Natural Resources Wales softwood is sold standing, with the purchaser responsible for harvesting. The standing sales cover a full range of sizes, as they include thinning and removal of trees for environmental reasons, as well as harvesting of mature trees. The data used to compile the index covers volumes sold and values by average tree size.

The Softwood Sawlog Price Index (SSPI) is based on administrative data for sales of softwood sawlogs by Forestry England/ Forestry and Land Scotland/ Natural Resources Wales. The data used to compile the index covers volumes and values. Direct production by Forestry England/ Forestry and Land Scotland/ Natural Resources Wales (where the softwood is sold after harvesting) also covers a range of sizes, but the price statistics reported are limited to sales of logs (over 14 cm diameter).

The Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index (and sub-indices) and the Small Roundwood Price Index include sales by long term contract, where the volume of roundwood covered by the contract is sold over a

period of more than one year. To take account of changes in price over the term of the contract, price adjustments are made periodically, as part of the contract. The Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index include roundwood sales by long term contract but, at present, price adjustments are not fully accounted for in the indices.

The data for the indices are obtained from Forestry England's and Forestry and Land Scotland's Sales Recording Packages (SRP). SRP was also used by Natural Resources Wales until February 2017. The indices exclude sales by Natural Resources Wales from April 2017 to March 2021 (for coniferous standing sales) and from April 2017 to September 2021 (for sales of sawlogs) and for all time periods to September 2021 for small roundwood and sawlog sub-indices.

Further information on the data sources used are available in the Quality Assurance of Administrative Data report on timber sales data.

Methodology for Coniferous Standing Sales Price Index

The Coniferous Standing Sales Price Index (CSSPI) is an index of the average prices per cubic metre overbark standing achieved for standing sales of conifers by FE/FLS/NRW. It covers all conifer standing sales (open market and negotiated) by FE/FLS/NRW over the twelve-month period. All thinning and clearfell data are combined within the index. It includes all species, tree sizes, working practices and conditions. It does not include any private sector data.

The Coniferous Standing Sales Price Index (CSSPI) is calculated using a Fisher index with 5-yearly chain linking. By using a Fisher index, distortions in the average price caused by variations in the average tree size over time are corrected. Applying chain linking at regular intervals (in this case, every 5 years) ensures that the index remains relevant over time. Other factors that may affect price (e.g. working conditions, timber quality or species) are not taken into account when constructing the index.

The methodology used to calculate the Coniferous Standing Sales Price Index was reviewed in 2008, with the Fisher index with 5-yearly chain linking introduced from the November 2008 publication. Further information on the methodology used to calculate the Coniferous Standing Sales Price Index is provided in the paper Methodology for the Coniferous Standing Sales Price Index, available from the Statistical Methodology and Outputs page on the Forest Research website.

The average prices and the index are expressed in nominal terms (i.e. the actual prices at the time of sale) and in real terms (i.e. the prices converted to 2021). The GDP (Gross Domestic Product at market prices) deflator, produced by the Office for National Statistics, is applied to the nominal figures to derive real average prices and the index in real terms. The GDP deflator data can be downloaded from the ONS Quarterly National Accounts.

Methodology for Softwood Sawlog Price Index

The Softwood Sawlog Price Index is calculated from data covering separate 6-month periods to September and March. This means that the changes reported are not covering the same periods as the Coniferous Standing Sales Price Index.

The index measures the average price per cubic metre overbark of sawlog sales, with no adjustment for any change in size mix, as it covers a more limited range of sizes than the Coniferous Standing Sales Price Index. All lengths of log are included.

The index is expressed in nominal terms (i.e. based on the actual prices at the time of sale) and in real terms (i.e. based on the prices converted to 2021 prices, by removing the effects of general inflation). As for the Coniferous Standing Sales Price Index, the GDP (Gross Domestic Product at market prices) deflator is used to convert from nominal to real terms.

For consistency with the Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index is rebased every 5 years; in this release, the period to September 2021 = 100.

Methodology for Small Roundwood Price Index

The Small Roundwood Price Index is calculated from data covering separate 6-month periods to September and March, similar to the Softwood Sawlog Price Index. The index measures the average price per cubic metre overbark of small roundwood sales.

The index is expressed in nominal terms (i.e. based on the actual prices at the time of sale) and in real terms (i.e. based on the prices converted to 2021 prices, by removing the effects of general inflation). As for other indices, the GDP (Gross Domestic Product at market prices) deflator is used to convert from nominal to real terms.

For consistency with other indices, the Small Roundwood Price Index is rebased every 5 years; in this release, the period to September 2021 = 100.

Gross Value Added

Gross value added (GVA) measures the contribution to the economy of each individual producer, industry or sector in the UK.

Statistics on gross value added are obtained from the Annual Business Survey (Office for National Statistics, ONS), an annual survey of UK businesses. Further information on the Annual Business Survey is available on the Annual Business Survey webpage.

The Annual Business Survey uses the UK Standard Industrial Classification (SIC) to classify businesses to industries according to their main activity. Detailed information on the SIC is available through the ONS' Classification and Standards. For further information on the SIC codes used in this release, see Annex 10.10.3.

Government expenditure

Information about government expenditure on forestry is obtained from administrative records held by the Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, the Welsh Government and Natural Resources Wales. Expenditure by other organisations is currently excluded.

More detailed financial data are published annually in each organisation's Annual Report and Accounts.

Data on grant expenditure are obtained from administrative records for woodland grant schemes across the UK.

Quality

The Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index and the Small Roundwood Price Index are the only Accredited Official Statistics published for roundwood prices in the UK. So, although they are limited to sales by Forestry England, Forestry and Land Scotland, and Natural Resources Wales, they are sometimes used as indicators of price trends for other UK softwood. In recent years, softwood has accounted for more than 90% of all timber harvested in Great Britain, and Forestry England/ Forestry and Land Scotland/ Natural Resources Wales has accounted for around 40% to 50% of all softwood sold.

For the Coniferous Standing Sales Price Index, data cover a 12-month period (i.e. data for the year to March and data for the year to September). As these periods overlap, comparisons of values should be made with the same period a year earlier.

Unlike the Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index and the Small Roundwood Price Index covers 6-month periods (i.e. data for the period October to March and data for the period April to September), so there is no overlapping.

Detailed information on the quality of the statistics presented in this publication is available in the "Quality Report: Timber Price Indices".

Revisions

Most of the statistics presented in the Finance & Prices chapter have been previously released.

Timber price indices are unchanged from the figures provided in "Timber Price Indices: data to March 2024".

Data on Gross Value Added (GVA) are subject to revision whenever Annual Business Survey data are revised by the Office for National Statistics.

Data on Government expenditure are not normally revised but may be subject to revision if revisions are made to the financial accounts of the Forestry Commission, Welsh Government/ Natural Resources Wales, Scottish Forestry/ Forestry and Land Scotland or Forest Research.

Our revisions policy sets out how revisions and errors are handled.

10.9 International forestry

Introduction

This section provides detailed information on the sources and methodology for Chapter 9: International Forestry.

The statistics presented in the International Forestry chapter of this release cover:

- woodland area;

- carbon stocks;

- wood removals;

- production and apparent consumption of wood products; and

- trade in forest products.

International data on wood production and trade in 2024 will be released on 25 September 2025 in "Forestry Statistics 2025" and "Forestry Facts & Figures 2025".

For information on the release schedules of statistics produced by others, see the relevant websites in the next section, Data sources and methodology.

Data sources and methodology

International data on forest area and carbon stocks are obtained from the Global Forest Resources Assessment (FRA) 2020, compiled by the United Nations FAO. The information in Table 9.1 uses forest area from FRA 2020, excluding "other wooded land"; for the UK, this is very similar to the definition of "woodland" used in other tables.

International data on production, imports and exports are obtained from the FAO. Data are collected via the Joint Forest Sector Questionnaire for FAO and other international organisations and published on the FAOSTAT database. Data on apparent consumption is derived as production plus imports less exports.

Data for the European Union (EU) presented in this edition of Forestry Statistics relate to the countries that were EU members at September 2024. The UK is therefore excluded from the EU figures for all years.

Quality

The UK data on forest area and carbon stocks are as submitted by Forest Research to FAO in early 2019. More recent estimates of UK woodland area are provided in the Chapter on Woodland Area and Planting. A copy of the full UK return for the 2020 Forest Resources Assessment is available on the FRA website.

The UK data on production, imports and exports were submitted by Forest Research to the United Nations Economic Commission for Europe (UNECE) in May 2024. More recent UK estimates are provided in the Chapters on UK-grown Timber and Trade. Copies of all UK returns for the Joint Forest Sector Questionnaire are available.

Revisions

International statistics compiled from FRA are subject to revision every five years, when a new collection is undertaken.

International statistics compiled from FAOSTAT may be subject to revision after publication if revisions are made to the data produced by individual countries.

Our revisions policy sets out how revisions and errors to these statistics are handled.

Further information

Statistics on international forestry are reported here at a regional level. Further data (including figures for individual countries) are also available from the original sources (see above).

Statistics on forest resources are also collected every 4-5 years at a European level by Forest Europe. The State of Europe's Forests 2020 was released in December 2020.
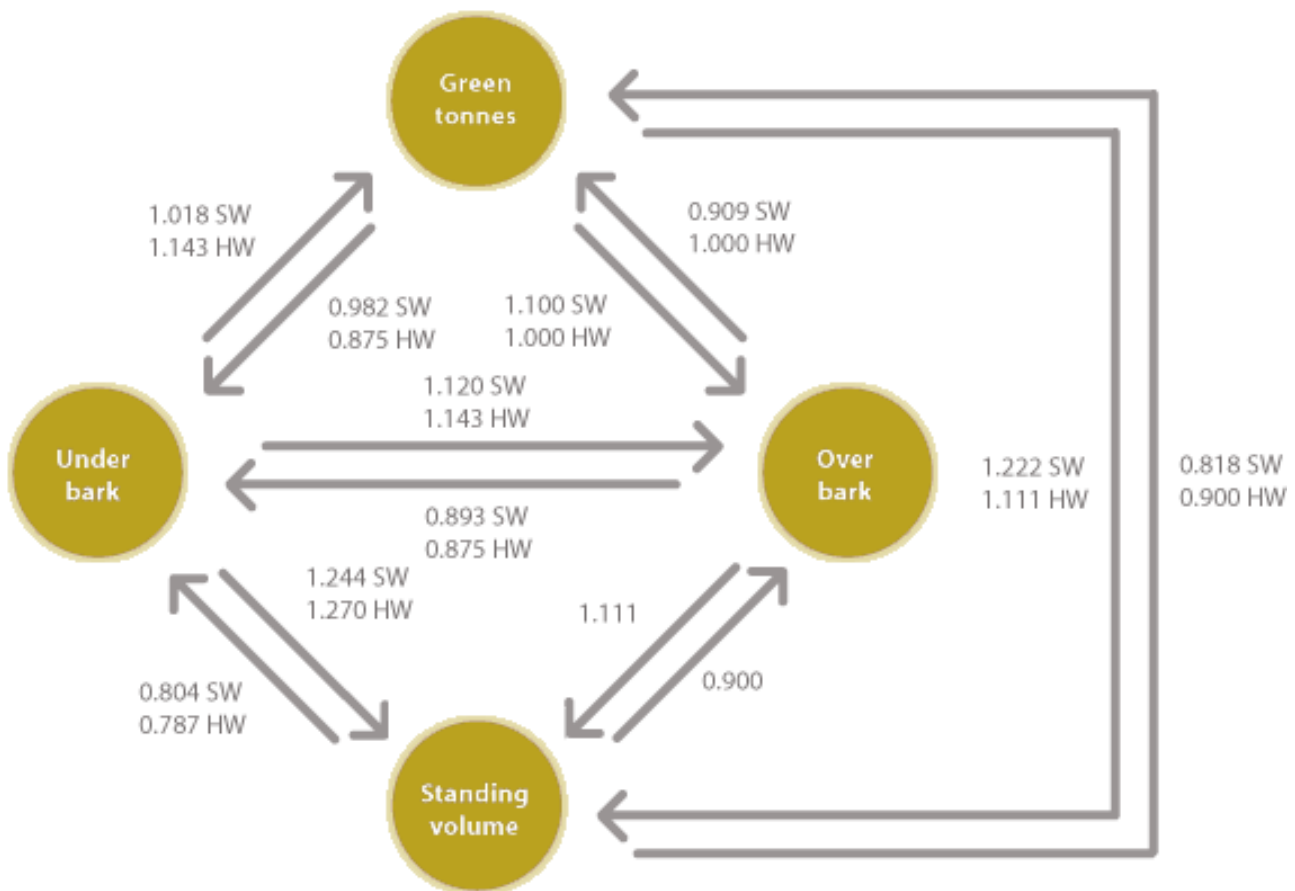
The UNECE Committee on Forests and the Forest Industry also collects, on an annual basis, estimates for the current year and projections for the following year of wood production, imports and exports. Results are available on the UNECE Timber Committee webpage. Copies of UK returns for the UNECE Timber Forecast Questionnaire are available.

10.10 Annex

10.10.1 Annex 1: Conversion factors

Conversion factors between cubic metres and green tonnes

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

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

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

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

Conversion factors between cubic metres and metric tonnes

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

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

Conversion factors to Wood Raw Material Equivalent (WRME) underbark

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

Notes:

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

10.10.2 Annex 2: Timber statistics for international organisations

Most of these statistics are used to compile data that are sent to international organisations in the Joint Forest Sector Questionnaires, in some cases giving more detail than in this release. These returns are published as Accredited Official Statistics on the Forest Research website; provisional figures in May and final figures in September/October. The statistics are used by UNECE Timber Bulletins and UN/FAO Forest Product Statistics and are published on the FAOSTAT database. Summary results from the FAOSTAT database are provided in the International Forestry chapter (Chapter 9).

The definitions used in this publication are consistent with the international definitions, as given in the Joint Forest Sector Questionnaire definitions.

The UNECE Committee on Forests and the Forest Industry also collects annual estimates of wood production, imports and exports for the current year and projections for the following year.

Results are available on the UNECE's Timber Committee webpage. Copies of previous UK returns for the UNECE Timber Forecast Questionnaire are available online.

The Department for Energy Security and Net Zero publishes an annual Digest of UK Energy Statistics. Chapter 6 of this digest covers renewable sources of energy including wood. Figures for wood use in renewable energy statistics take into account wood from all sources (including processed wood, recycled wood and imports), not just UK-grown roundwood.

10.10.3 Annex 3: Standard Industrial Classification (SIC)

The following codes from SIC 2003 and SIC 2007 have been used in this edition of Forestry Statistics:

Title	SIC 2003	SIC 2007
Forestry	02 (forestry, logging and related services)	02 (forestry and logging)
Wood products	20 (manufacture of wood and wood products)	16 (manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials)
Sawmilling	20.1 (sawmilling and planing of wood, impregnation of wood)	16.1 (sawmilling and planing of wood)
Panels	20.2 (manufacture of veneer sheets, manufacture of plywood, laminboard, particleboard and other panels and boards)	16.21 (manufacture of veneer sheets and wood-based panels);
Secondary products	Other SIC 20 (manufacture of builders' carpentry and joinery, wooden containers, and other products of wood, straw and plaiting materials)	Other SIC 16 (manufacture of assembled parquet floors, other builders' carpentry and joinery, wooden containers, and other products of wood, straw and plaiting materials)
Pulp, paper and paper products	21 (manufacture of pulp, paper and paperboard).	17 (manufacture of paper and paper products)
Pulp and paper	21.1 (manufacture of pulp, paper and paper products)	17.1 (manufacture of pulp, paper and paperboard)
Articles of paper and paperboard	21.2 (manufacture of articles of paper and paperboard)	17.2 (manufacture of articles of paper and paperboard)
Total wood processing	SIC 20 + SIC 21	SIC 16 + SIC 17

Title	SIC 2003	SIC 2007
Total primary wood processing	SIC 20.1 + SIC 20.2 + SIC 21.1	SIC 16.1 + SIC 16.21 + SIC 17.1

In addition, Figure 7.1, covering accidents to employees, also uses the following SIC 2003/2007 codes:

- Agriculture etc: 01/01 (agriculture, hunting) + 02/02 (forestry, logging & related services) + 05/03 (fishing, excluding sea fishing);

- Manufacturing: 15-37/10-33 (all categories of manufacturing).

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