

Forest Research

UNECE Forestry and Timber Market Statement for the United Kingdom 2018

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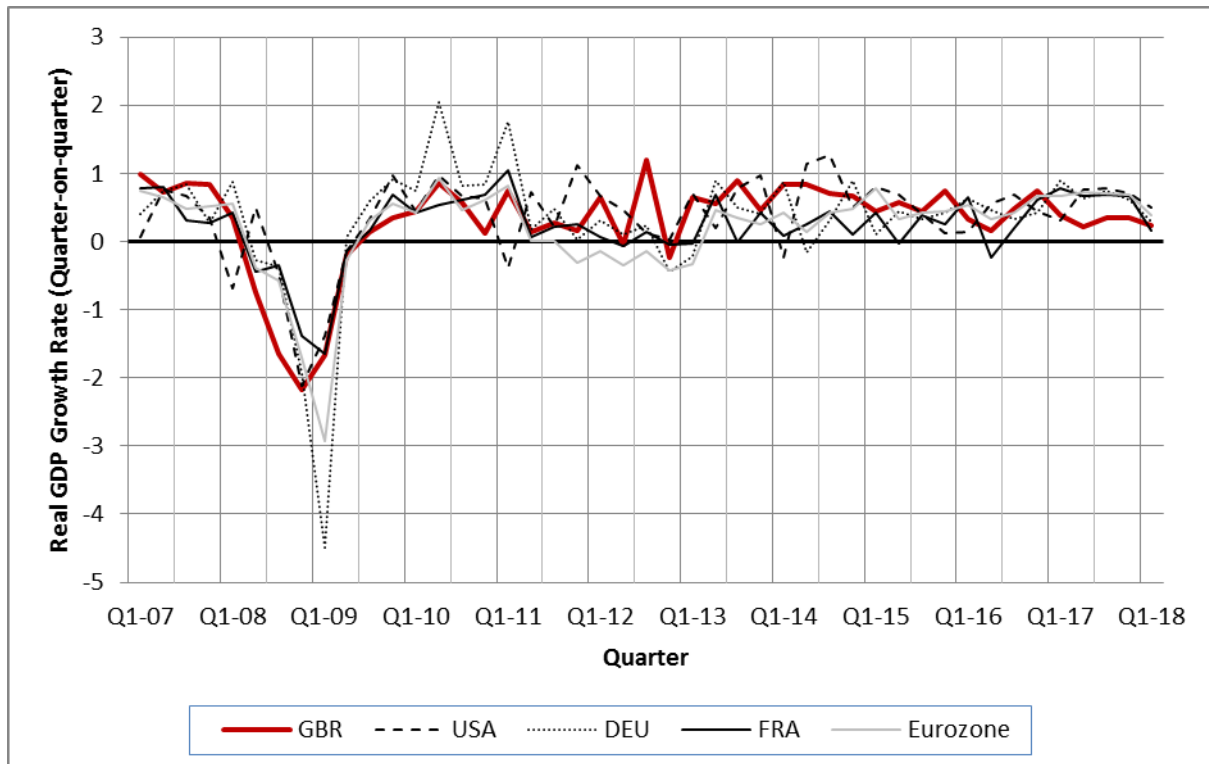
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1 General economic trends affecting forestry industries and the timber market in the UK

1.1 Overview

The UK economy has delivered moderate quarter-on-quarter growth in Q4 2017 of 0.3% and Q1 2018 of 0.2%. Growth in the UK has been relatively stable since 2010 at approximately 0.5% quarter-on-quarter (Figure 1.1).

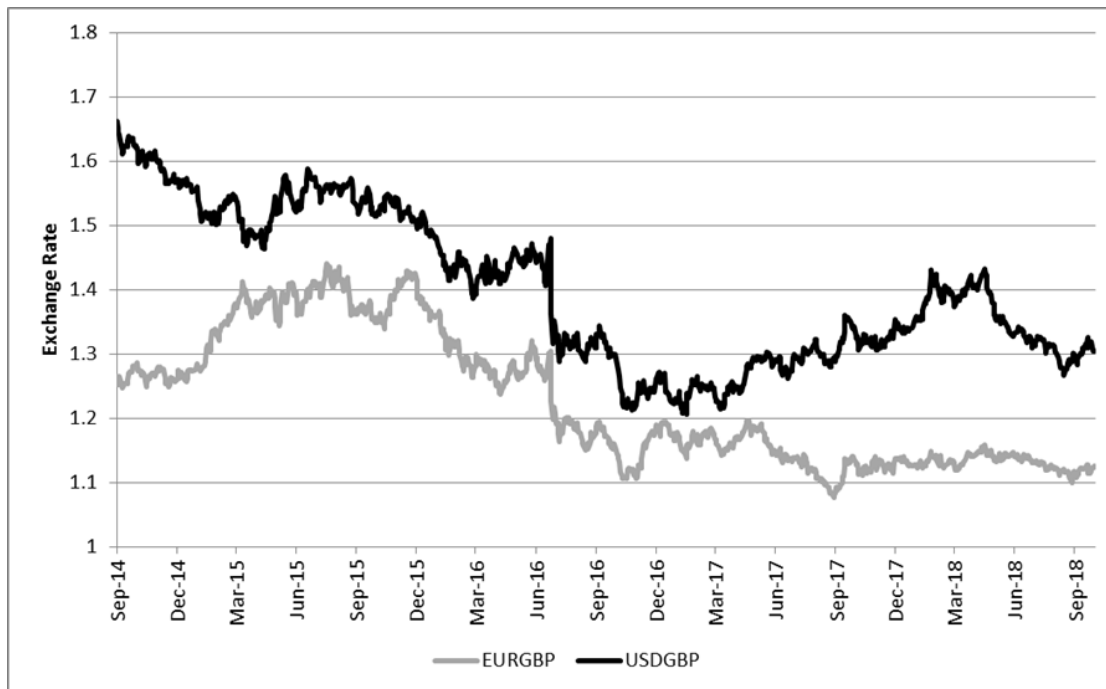
Figure 1.1 Real GDP Growth Rate 2007-2018, Selected Economies, %



Real Growth of Gross Domestic Product (GDP) (see section 0) in the UK and other selected economies over the last decade. Source: [Organisation for Economic Co-operation and Development \(OECD, 2018\) "Quarterly GDP" \(indicator\), doi: 10.1787/b86d1fc8-en](https://doi.org/10.1787/b86d1fc8-en) (Accessed on 12 July 2018).

The Pound Sterling has stabilised after a period of depreciation against the Euro, whilst the value against the US dollar has strengthened since March 2017 (Figure 1.2). The Pound Sterling substantially fell in value against the Euro and the Dollar in the days following the UK's European Union membership referendum on 23rd June 2016. Despite this fall in the Pound's value against the Euro, the UK trade deficit (Value of Exports – Value of Imports) with the Eurozone has not decreased.

Figure 1.2 Exchange Rate of EURGBP and USDGBP, 2014 to 2018



The value of the Pound Sterling over time against the Euro and the US dollar.

Source: [Bank of England \(2018\)](#), [Spot Exchange Rate \(Euro into Sterling\)](#), [Spot Exchange Rate \(Dollar into Sterling\)](#).

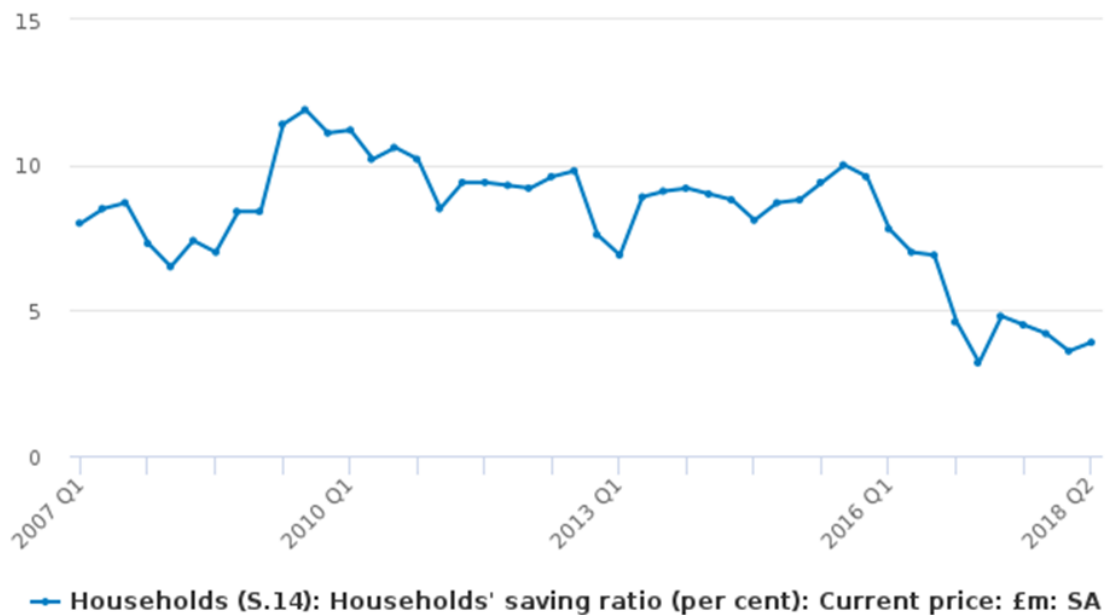
1.2 Monetary Policy

The Bank of England's Monetary Policy Committee vote on whether to raise, lower or maintain the Bank of England's Base Rate, upon which many other interest rates are based. Setting 'the interest rate' is one of the key macroeconomic instruments in monetary policy that help to achieve the Bank of England's inflation target and stimulate economic growth.

The Monetary Policy Committee voted to raise the Base Rate from an historic low of 0.25% to 0.5% in November 2017 and by a further quarter percent to 0.75% in August 2018. This rise in August 2018 is only the second rise in interest rates in a decade and interest rates are now at their highest level since 2009. According to the May 2018 Bank of England Inflation Report, the expectation is that there will be two increases of 0.25 percentage points over the next three years.

Despite low interest rates, the household savings ratio increased in the wake of the 2007-08 financial crisis as consumers chose to pay off existing debts and increase their savings rather than increasing spending using cheap credit. This had a negative effect on consumption and economic growth. In Q1 of 2018, households saved approximately 4.1% of their disposable income following a decline in the savings rate over the past decade (Figure 1.3).

Figure 1.3 Households' Savings Ratio, 2007-2018, %



Source: [ONS \(2018\), Households' saving ratio \(per cent\): Current price: £m: SA.](#)

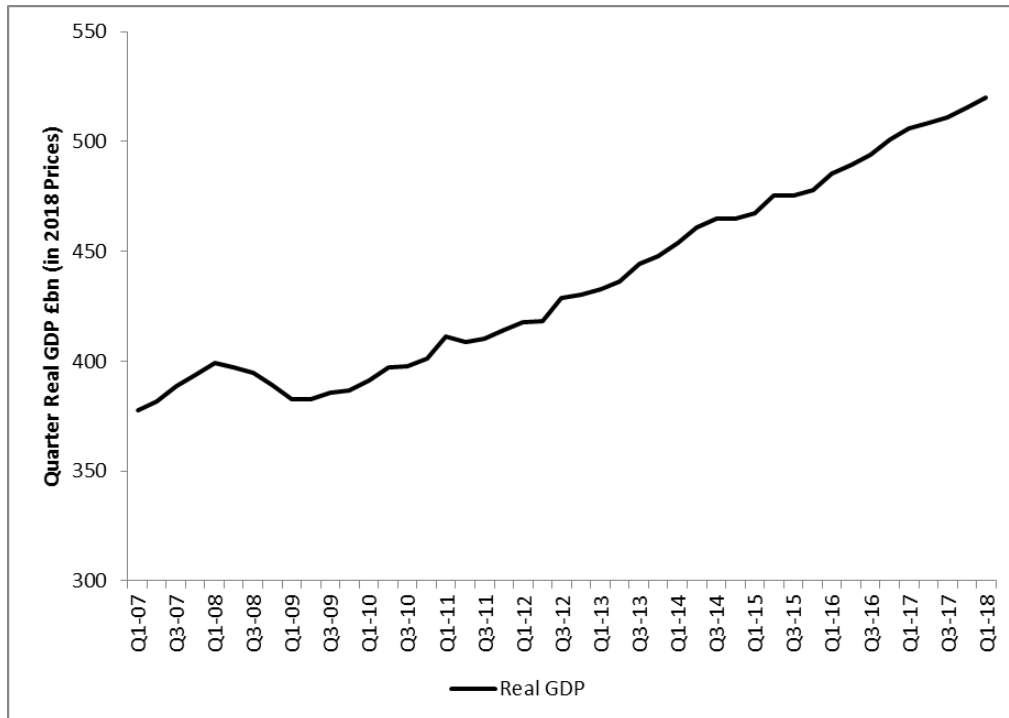
As the Pound Sterling has continued to be valued below pre-referendum levels against the Euro and the Dollar, there has been an inflationary effect on goods and services due to increased import prices. This is demonstrated in the latest Consumer Price Index (CPI) figures, which show that inflation has been above the Bank of England's 2% target since February 2017.

1.3 GDP Growth

Change in Gross Domestic Product (GDP) is the main indicator of economic growth. It measures the market value of all 'final' goods and services produced over a period of time (i.e. monthly, quarterly, or annually) in monetary terms. Real GDP also takes into account the effect of inflation, which is a measure of changes in prices. Therefore, Real GDP provides a more accurate picture of how much the UK economy produces and how this has changed over time in comparison to Nominal GDP, which does not take into account changing prices (Figure 1.4).

A recession is defined as a period of two successive quarters of negative economic growth. Although the UK has not experienced a recession since 2009, economic growth remains modest despite the setting of low interest rates by the Bank of England in attempts to stimulate spending and thus the economy (Figure 1.5).

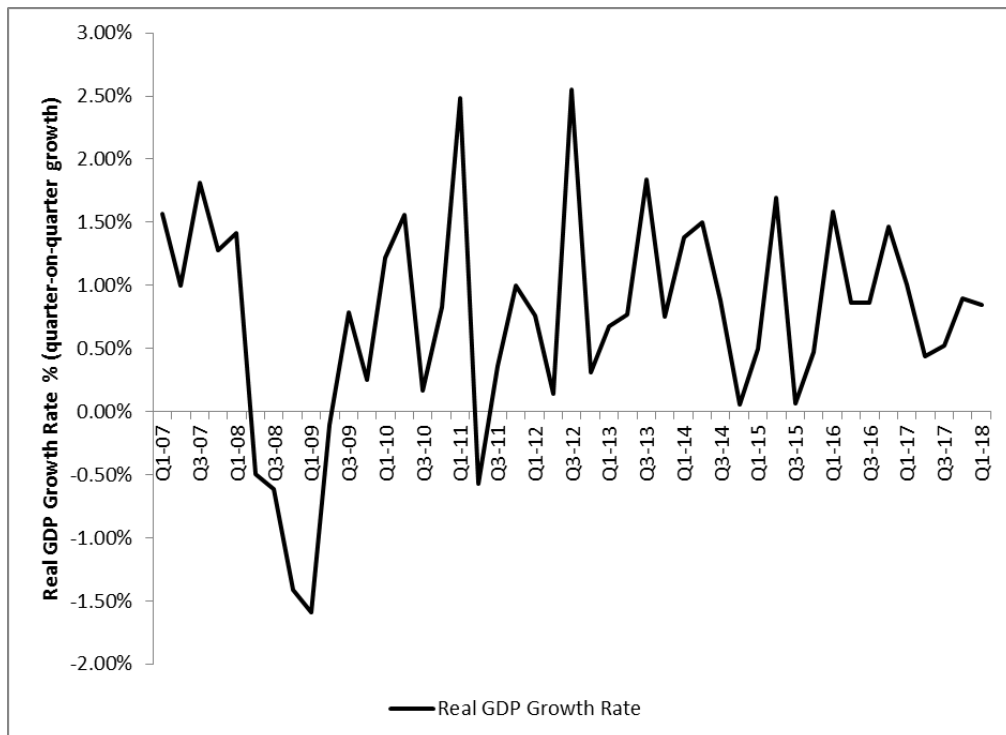
Figure 1.4 Real Gross Domestic Product (GDP) per quarter 2007 to 2018 (in 2018 prices), £bn



The value of output from the UK economy since 2007.

Source: [ONS \(2018\), Gross Domestic Product at market prices: Current price: Seasonally Adjusted £m](#)

Figure 1.5 Real Gross Domestic Product (GDP) Growth per quarter since 2007, %



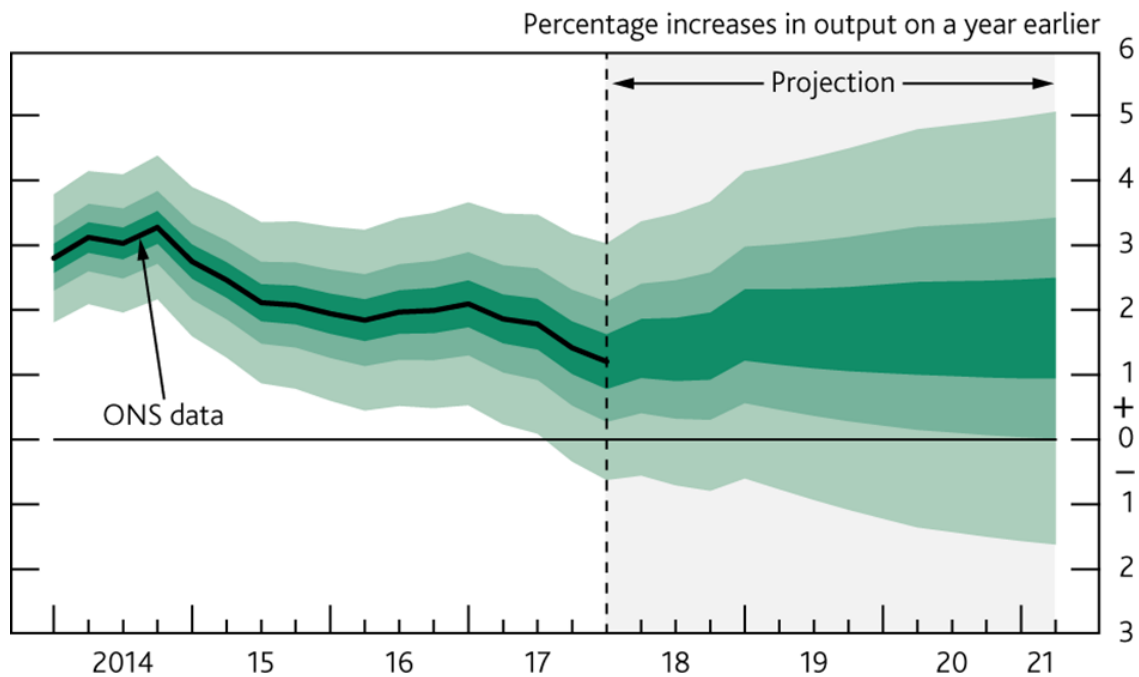
The rate at which the national economy is growing each quarter compared to the previous quarter.

Source: [ONS \(2018\), Gross Domestic Product at market prices: Current price: Seasonally Adjusted £m](#)

The Bank of England publishes a quarterly report containing updates on key economic indicators. This includes a projection of the likely path of GDP over the coming years (Figure 1.6).

The OECD (Organisation for Economic Co-operation and Development) Business Confidence Index (BCI) shows that businesses expectations for the immediate future are positive with expectations for Business in the UK being consistently more positive than the average for OECD member countries.

Figure 1.6 Gross Domestic Product (GDP) 2013 to 2017 and GDP projections 2018 to 2021



Dark green represents higher likelihood and lighter green representing lower likelihood.

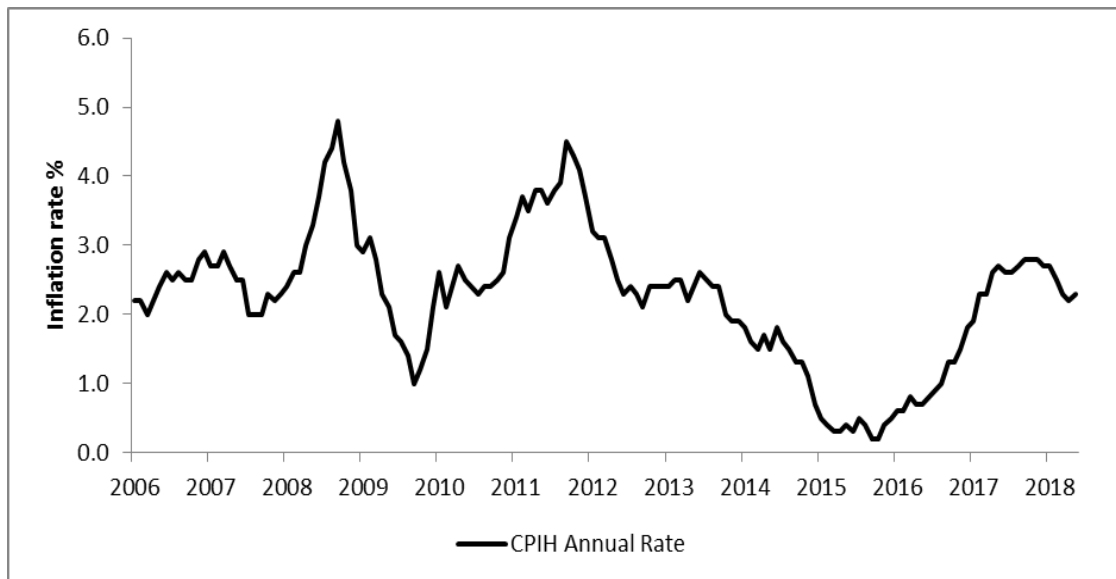
Source: Bank of England Inflation Report; published May 2018 (quarterly). ONS = Office for National Statistics.

1.4 Inflation

The Consumer Prices Index, including owner occupiers' housing costs (CPIH), shows the rate at which prices are rising, or falling, in the domestic economy (Figure 1.7). The Bank of England's (BoE) target for inflation is 2% per year. In March 2009, the BoE set interest rates at 0.5%. This was coupled with a sustained period of quantitative easing¹. A period of higher inflation in the economy followed, reaching a high of around 4.5% as credit became cheaper to obtain and demand for goods and services increased in the economy. The fall in the inflation rate between 2012 and 2015/16 is believed to have been largely caused by external factors to the UK economy, in particular a fall in energy, food and imported goods prices, which in turn were primarily due to fluctuations in exchange rates. The Bank of England Inflation Report May 2018 suggests that inflation will fall to the 2% target by the end of 2018 (Figure 1.8).

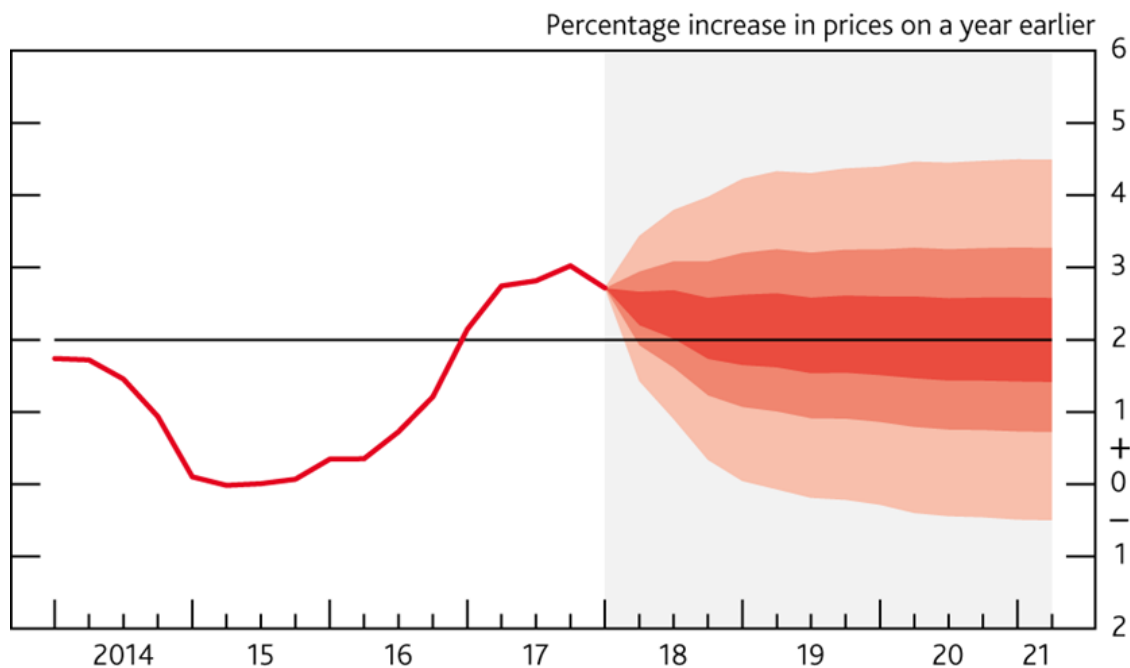
¹ The Bank of England creates new digital currency in order to purchase assets, such as government bonds. Buying assets in large quantities increases the price of these assets, which reduces the yield, or return, on that asset. This encourages owners of these assets to sell them and use the money from the sale to invest in alternative assets, such as company shares and bonds, which enables businesses to invest.

Figure 1.7 Consumer Prices Index including owner occupiers' housing costs (CPIH), 2006 to 2018, %



Source: [ONS, CPIH Annual Rate 00: All Items 2015=100](#)

Figure 1.8 Consumer Price Index (CPI) inflation projection based on market interest rate expectation: CPI Inflation Rate 2014-2018 and CPI Inflation rate Projections 2018 to 2021, UK, %



Dark red represents higher likelihood and lighter red represents a lower likelihood.
Source: Bank of England Inflation Report; published May 2018 (quarterly).

1.5 Employment

The year to Q2 2018 delivered continued increases in employment rates. Since Q3 2014, the employment rate has been at a record high, with either quarter-on-quarter stability or increases since then. The current record high of employment rate at Q1 2018 is 75.6%. For

February to April 2018, there were 32.39 million people in work, 146,000 more than for November 2017 to January 2018 and 440,000 more than for a year earlier.

The unemployment rate fell to 4.2% in the three months to April 2018, a joint record low since 1975. The unemployment level stood at 1.42 million, 38,000 fewer than the previous three months and 115,000 fewer than the previous year (Figure 1.9)

Figure 1.9 Employment and unemployment rates in the UK, 2007 – 2018



The quarterly employment and unemployment rates in the UK for the last ten years.
Source: Office for National Statistics (ONS) Labour Market; updated 12 June 2018.

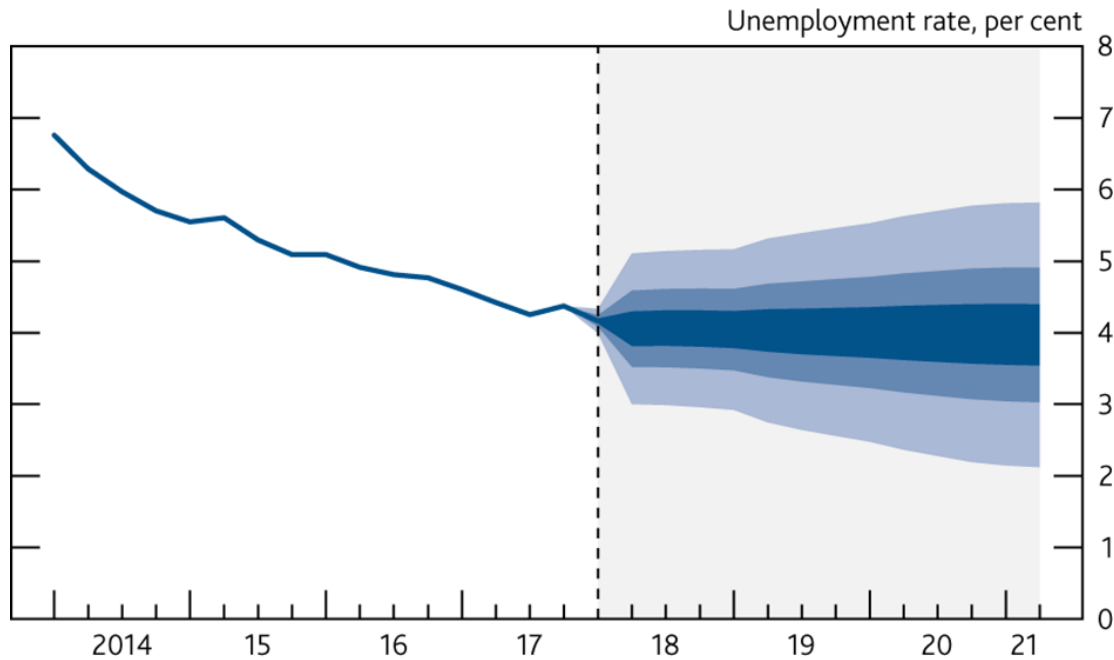
Labour productivity in the UK, as measured by output per hour is estimated to have increased by 0.9% from Q1 2017 to Q1 2018. However, UK labour productivity is estimated to have fallen by 0.4% in the first three months of 2018. This is due to continued strength in employment growth (more hours worked), combined with weaker output growth. This is the first fall in output per hour since the second quarter of 2017.

The annual increase in the number of people in employment (440,000) was mainly due to more people in full-time employment (259,000), accounting for 58.8% of the total increase.

Increases in the number of people in employment in recent years have not been matched by increases in wages. Average total pay (including bonuses) for employees in Great Britain was £490 per week before tax in real terms for April 2018 and other deductions from pay, £32 lower than the pre-downturn peak of £522 per week recorded for February 2008, however, wages are now increasing at a faster rate than inflation.

The Bank of England expects the unemployment rate to remain relatively stable over the next four years with a slight decrease expected (Figure 1.10).

Figure 1.10 Unemployment in the UK 2013-2018 and Unemployment projections 2018-2021



Dark blue represents higher likelihood and lighter blue represents a lower likelihood.
Source: Bank of England Inflation Report; published May 2018 (quarterly)

1.6 UK Economic Indicators

Table 1.1 UK Economic Indicators, 2011-2019

	2011	2012	2013	2014	2015	2016	2017	2018	2019
GDP growth (%)	1.97	1.18	2.16	2.85	2.33	1.90	1.80	1.40 ^a	1.50 ^b
Interest Rate (Base Rate at year end) (%)	0.5	0.5	0.5	0.5	0.5	0.25	0.5	1.0 ^c	1.2 ^d
Consumer Price Index	4.5	2.8	2.6	1.5	0	1.32	2.9	2.3 ^b	2.1 ^b
Unemployment Rate (%)	8.1	8	7.6	6.2	5.4	5.32	4.6	2.3 ^b	4.3 ^b
UK Housebuilding Starts (000s) ²	138.3	125.4	150.0	170.1	180.1	188.7	197.8		

All figures are percentages unless otherwise indicated. **(a)** HM Treasury, Forecast for the UK Economy: A comparison of Independent Forecasts, June 2018 **(b)** The Bank of England creates new digital currency in order to purchase assets, such as government bonds. Buying assets in large quantities increases the price of these assets, which reduces the yield, or return, on that asset. This encourages owners of these assets to sell them and use the money from the sale to invest in alternative assets, such as company shares and bonds, which enables businesses to invest. **(c)** Bank of England Inflation Report, May 2018. **(d)** Given in 2015 prices.

² [Ministry of Housing, Communities & Local Government](#); Table 212: permanent dwellings started and completed, by tenure, United Kingdom (quarterly). Accessed 09 October 2018.

2 Policy developments potentially affecting the UK timber products trade

Forest ownership in the UK remains fairly stable with around 27% state owned and 73% privately owned³.

Domestic forestry policy in the UK is a devolved matter. Some of the functions supporting domestic forestry are currently delivered on a Great Britain (GB)⁴ or United Kingdom (UK)⁵ wide basis by agreement, by the Forestry Commission. Devolution of forestry will complete in April 2019, but some cross-border collaboration will remain for a number of functions as agreed by Ministers. Scotland, England and Wales will each deliver some of these functions (commissioning and monitoring of forestry research, management of the UK Forestry Standard and Woodland Carbon Code, Plant Health (forestry) and Forest Reproductive Material functions, provision of economist advice). International forestry policy remains a reserved UK Government matter.

The Forestry Commission is the non-Ministerial government department advising on forestry policy and its implementation, with Forestry Commission England and Forestry Commission Scotland reporting directly to their respective Ministers. From April 2019, regulatory and policy support and grant-giving functions will transfer from Forestry Commission Scotland to Scottish Forestry, a new agency of the Scottish Government. In Wales, these functions have been delivered by Natural Resources Wales and by the Welsh Government Forest Resources policy team since 2013.

Both the UK Government and the devolved administrations are committed to sustainable forest management, as articulated in the Forest Europe Ministerial agreements. Sustainable forest management serves as an overarching concept and framework and the UK approach to delivery is set out in the [UK Forestry Standard](#) (fourth edition) published in 2017.

2.1 Priorities for the current UK government

2.1.1 England

Priorities in England include increasing afforestation rates; increasing the use of timber in construction; improving the resilience of trees, forests and woodland; developing a domestic carbon offset mechanism; increasing the benefits delivered by trees and woodland in and around towns and cities and strengthening the biosecurity of supply chains⁶.

In England, objectives and policies for woodland expansion are set out in the 25 Year Plan for improving the Environment⁶ which states the commitment to plant 11 million trees between 2017 and 2022 on a pathway to achieving the aspiration to increase woodland cover from 10% to 12% by 2060. The 25-Year Plan recognises the need to make woodland planting more attractive to landowners and attract private investment to fund it, through initiatives such as Forestry Investment Zones, the establishment of the Northern Forest and strengthening of Domestic Carbon Markets.

³ [Forestry Statistics \(2018\)](#) Chapter 1: Woodland Area and Planting. *Forest Research*.

⁴ Great Britain; England, Scotland and Wales

⁵ United Kingdom; England, Scotland, Wales and Northern Ireland.

⁶ For more information see [A Green Future: our 25 year plan to improve the environment](#) and [Clean Growth Strategy: leading the way to a low carbon future](#).

The Rural Development Programme for England co-financed Countryside Stewardship Woodland Creation Grant is the principal source of financial support for woodland expansion in England, with its main objectives to enhance biodiversity, improve water quality and contribute to flood risk management. The Environmental Impact Assessment (Forestry) Regulations, as they apply in England, were revised in May 2017, requiring that more information is provided by proposers of afforestation projects, while increasing the Environmental Impact Assessment threshold in areas mapped as low risk if a UK Forestry Standards woodland creation plan or the environmental and social information required to produce one is submitted. The design of larger scale productive woodlands is supported through the Woodland Creation Planning Grant (from 2015), while their establishment is supported through the Woodland Carbon Fund (from 2016).

A policy on whether to convert woods and forests to open habitats in England is in place, which includes an assessment of implications for carbon balance and requirements for compensatory planting in the process of prioritising sites for restoration.

2.1.2 Scotland

In Scotland, forestry is recognised as having an important role in contributing to emissions reduction targets through carbon sequestration which is a specific objective of woodland creation. The Scottish Government is committed to expanding this important carbon sink and the Programme for Government spells out the support to a growing forestry industry to contribute to climate change targets. [The Climate Change Plan](#) (third report on policies and proposals) sets out how the Scottish Government will meet its greenhouse gas emission reduction targets for the period 2017-2032 and includes a policy on increasing the long term annual woodland creation target from the current 10,000 hectares of new woodland per year to 15,000 hectares per year from 2024/25. To complement woodland creation, a framework to better control woodland removal is also in place with a proposed policy to further increase emissions abatement through greater use of Scottish timber in building construction and refurbishment. These targets will be taken forward in a sustainable way and require the creation of a range of different woodland types, on different sites, with different objectives. The Scottish Government is committed to supporting the creation of at least 3,000 hectares of new native woodland a year (Scottish Biodiversity Strategy: Route Map 2020).

To support the delivery of the Climate Change Plan, the Forestry Grant Scheme offers financial support for the creation of new woodland and the sustainable management of existing woodland. All applications are assessed against the UK Forestry Standard and associated guidelines.

The Scottish Government has recently passed the Forestry and Land Management (Scotland) Act to replace the 1967 Forestry Act in Scotland from April 2019. The Act includes duties on Ministers to promote sustainable forest management and to publish a forestry strategy which will set out the Government's priorities in relation to the economic, environmental and social benefits of forestry.

The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 came into force in May 2017, driven by EU Environmental Impact Assessment Directive 2014 that aims to streamline aspects of the Environmental Impact Assessment process and improve transparency and consistency in Environmental Impact Assessment practice across a number of regimes. The main changes include an increase of the threshold for

Environmental Impact Assessment determination of afforestation projects outside sensitive areas from 5 to 20 hectares to secure a more effective way in assessing woodland creation applications to contribute to emission reductions. The 2017 Regulations have been reflected in new guidance and training.

2.1.3 Wales

[Woodlands for Wales](#) is the Welsh Government's fifty-year Strategy to promote sustainable land use. The Strategy was updated in 2018 and includes an aim to plant 2,000 ha per annum from 2020 as a contribution to meeting national emissions reduction targets.

2.1.4 Northern Ireland

Forestry in Northern Ireland is undertaken by the Forest Service (FS), an Executive Agency of the Department of Agriculture, Environment and Rural Affairs (DAERA). It promotes afforestation and sustainable forestry, and is responsible for plant health matters.

The Chief Executive is responsible to the Minister for the Agency's operations and performance. The Minister determines the policy framework within which the Agency operates, the level of resources made available each year and the scope of Agency activities. The Minister also approves the annual business plan, sets key performance targets, and monitors the Agency's performance.

While a Minister was not appointed to the Department in 2017/18, the Agency business plan and budget was endorsed by the Department Board who monitored the Agency's performance during the year. No major policy decisions were required in respect of the Agency's business that could not be taken in the absence of a Minister and Executive.

The Forestry Act (Northern Ireland) 2010 requires the Department to promote afforestation and sustainable forestry, to encourage public enjoyment and recreational use of its forests. The Act defines forestry to include the production and supply of timber and other forest products, the maintenance of adequate reserves of growing trees and the management and development of forests to contribute to the protection of the environment, biodiversity and the mitigation of, or adaptation to, climate change.

Both the UK Government and the devolved administration in Northern Ireland are committed to sustainable forest management, as articulated in the Forest Europe Ministerial agreements and an expansion of woodland cover to increase the many diverse benefits that forests provide.

Northern Ireland's Forestry Strategy was published in 2006 and includes an aspiration to double woodland cover over 50 years.

2.2 Plant Health

2.2.1 Import and Export Restrictions

2.2.1.1 Import requirements for wood and wood products

The Forestry Commission keeps an updated list of restrictions and conditions on timber and wood imports and exports on their [website](#). There have been two recent publications

updating the import requirements for wood and wood products from EU⁷ and non-EU countries⁸.

2.2.1.2 Forestry Border Control Checks 2017-18

Forestry Commission Plant Health Inspectors performed 3,280 inspections of 375,569 m³ of controlled timber⁹ from non EU countries of which 15 were found to be non-compliant and remedial action was taken. Additional checks were performed where there was evidence of poor compliance including imports of sawn softwood from other parts of the EU and Russia.

Inspection continued of wood packaging material associated with steel and stone consignments from China with 1,387 inspections taking place. There was a total of 32 interceptions of non-compliant wood packaging consignments associated with these imports. A rare interception was made of an Asian longhorn beetle from dunnage associated with a bulk shipment of Chinese steel.

2.2.1.3 Statutory notification scheme for firewood imported into England and Scotland

A statutory notification scheme (SNS) was introduced for firewood imports in January 2017. During 2017 attention focused on those aspects of the firewood trade which were believed to represent the greatest risk of introducing harmful tree pests to the UK. Corrective action was taken where any firewood imports or the associated wood packaging material were inspected and did not meet GB landing requirements. The evidence about the movement of ash firewood from Eastern Europe to the UK will be used to assess the potential risk that this trade represents as a pathway for the introduction of Emerald ash borer which is a serious pest of ash trees and is present in western parts of Russia.

1,979 notifications were received in 2017 and 81 inspections were carried out. The firewood that was inspected was generally compliant; however 25 consignments were found to be non-compliant mainly due to the presence of bark on conifer wood packaging material associated with the firewood imported from the EU. Inspections are mainly risk based and focus on regulated species. 80% of the firewood was notified as being kiln dried to below 20% moisture content.

The quantity imported in 2017 was 60,018 tonnes. Approximately 90% of firewood is imported from the EU with Latvia and the other Baltic nations as the most important suppliers.

The market is dominated by birch, ash, oak and alder which are declared as originating the EU, predominately from Latvia (67%).

⁷ [Regulated EU Trade and Plant Passporting Requirements](#). Forestry Commission.

⁸ [Importing Wood, wood products and bark: requirements for landing controlled material in Great Britain from non-EU countries](#). Forestry Commission, Edinburgh.

⁹ Controlled timber: virgin wood or wood fibre which has been verified as having a low probability of including wood from any of the following categories:(a) Illegally harvested wood;(b) Wood harvested in violation of traditional and civil rights;(c) Wood harvested in forests in which high conservation values are threatened by management activities;(d) Wood harvested in forests being converted from natural and semi natural forest to plantations or non- forest use;(e) Wood from forests in which genetically modified trees are planted. For more info refer to the [FSC website](#).

2.2.2 Tree diseases

2.2.2.1 Sweet Chestnut Blight

Since sweet chestnut blight was confirmed in England 2016, there have been cases at eight sites in Devon, a site in Dorset, eight sites in East London, a site in Berkshire, three sites in Derbyshire, and one site in Leicestershire. In all cases action was taken to limit spread of the disease from sites and determine its local distribution.

Further action will be taken on the basis of surveillance information and the best available scientific evidence.

Following the outbreak in Devon in December 2016, a prohibition was imposed on the movement of oak and sweet chestnut material, including plants, logs, bark, branches, foliage and firewood out of, or within, six zones. Five of these zones were in Devon and one in Dorset.

The prohibitions in all six zones took effect on Friday 12 May 2017 and were lifted on Tuesday 27 March 2018.

Movement restrictions at affected sites where infected trees were found continue on a site by site basis taking account of the situation in each area based on the current policy approach.

2.2.2.2 *Phytophthora ramorum*

Phytophthora ramorum has continued to be to be a major plant health issue affecting Japanese larch (*Larix kaempferi*) trees and to a lesser extent European larch (*Larix decidua*) and hybrid larch (*Larix x eurolepis*).

Flight observations of *P. ramorum* symptoms in England on larch have generally remained consistent, i.e. low-level symptoms in the vicinity of previously confirmed infection (either on larch or rhododendron). Symptoms observed have comprised mainly of small groups of trees or individuals. No observations of wide spread infection on a compartment or woodland scale were observed, nor in any significant new geographical areas.

23 Statutory Plant Health Notices (SPHN) were issued in England scheduling 43.5 hectares of larch to be felled. The average felling area for 2017 was 1.9 hectares, whereas in comparison the average felling area in 2010 was 10.7 hectares.

New infections in close proximity to the previously known extensive infections in the *P. ramorum* Management Zone of south west Scotland were limited to single trees or small groups of infected trees. In the Management Zone itself, some disease progression was observed in larch stands known to have existing infection and in general, progression appears consistent with what was observed in 2016. A total of 428 suspect larch sites across Scotland were identified for follow-up ground surveys. 62 were subsequently confirmed to have *P. ramorum* infection.

‘Outlier’ infections on Larch were confirmed in a number of areas of Scotland that are considered less climatically suitable for *P. ramorum* but were generally restricted to regions where infections had been found in previous years.

From the flight data and other local information in Wales, Natural Resources Wales (NRW) identified 2,045 hectares for further ground investigation. The majority of these sites lie

outside the Control Disease Zone in areas with only previously light infection. NRW issued Statutory Notices on 950 hectares of larch woodlands.

The reason for this significant increase is thought to be due to the combined effect of heavier than average rainfall in the summer of 2016 followed by a wetter than average and very warm winter in 2016/17 and has followed the early predictions on the Climex modelling of the high-risk areas.

In Northern Ireland the flight survey findings and follow up were similar to 2015 and 2016 with limited spread.

2.3 National Forest Inventory (NFI)

The National Forest Inventory of Great Britain (NFI) provides a record of the size and distribution of forests and woodlands in Great Britain and information on key forest attributes. This information, together with Forestry Commission growth and yield models, is used to forecast softwood and hardwood timber availability.

In 2017 a report providing an [estimate of the amount of tree cover outside NFI woodland areas¹⁰ in Great Britain](#) was published. This report estimated that there are 742 thousand hectares of tree cover outside woodland in total, representing 19.4% of all tree cover (both woodland and outside woodland) and 3.2% of land area. The findings in this report are relevant to UK policy and practice in a number of areas including tree health, ecological networks, woodfuel, carbon accounting and urban planning¹¹.

2.4 Climate Change

The UK's forests are a net sink, removing around 21 million tonnes of carbon dioxide per year in 2015, although the strength of the sink is projected to decline to around 19 million tonnes of carbon dioxide per year by 2030¹², as existing forests are harvested and restocked. The UK's LULUCF Action Progress Report (2016) sets out the relative contribution of afforestation, reducing deforestation, improved management, woodland enrichment and enhanced resilience to GHG emissions abatement, concluding that afforestation has the greatest potential as an abatement measure.

The [Clean Growth Strategy](#) (CGS) was published in October 2017 and sets out broad aspirations to increase the rate of afforestation and use of timber in construction in an illustrative pathway to meet the fifth carbon budget (2028-32) and longer term emissions reduction commitments. The 'headline scenario' includes assumptions that woodland cover will increase by 130,000 hectares in England by 2032 and by 493,000 hectares across the UK, recognising the cost-effectiveness of afforestation in emissions abatement. The role of forest biomass and new 'energy forestry' in emissions reduction is also highlighted.

The second UK Climate Change Risk Assessment was published in 2017 and identified six priority risks, two of which are relevant to forestry: risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity; new and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals. The second National Adaptation Programme (NAP) was published in 2018, with

¹⁰ Woodland is tree cover over half a hectare in extent and greater than 20 metres in width.

¹¹ For more information see the [National Forest Inventory](#).

¹² [Forestry Statistics \(2018\)](#) Chapter 4: UK Forests and Climate Change. *Forest Research*.

forestry-related actions brigaded around four goals for the five year period of the National Adaptation Programme: (1) Woodland resource is expanded and better linked to enhance its resilience at stand and landscape scale; (2) Existing woodlands are more resilient to the impacts of climate change and pests and diseases; (3) Adaptation is embedded within future forestry policy to contribute to long-term reduction of climate change risks; and (4) Woodlands are more resilient to natural hazards.

Climate change adaptation is included in the UK Forestry Standard, which underpins forest certification through the UK Woodland Assurance Standard and the Woodland Carbon Code, and meeting its requirements is a consideration of receiving grant aid in the four devolved administrations.

Resilience and climate change adaptation are at the core of the Science and Innovation Strategy for Forestry in Great Britain, with three of Forest Research's seven research programmes focussing on different aspects of resilience.

2.4.1 Carbon reduction initiatives

2.4.1.1 Woodland Carbon Code

Private sector investment in woodland creation under the Woodland Carbon Code is continuing to increase. The [Woodland Carbon Code](#), launched in July 2011, sets out requirements of voluntary woodland creation projects in the UK wishing to make claims about the carbon they sequester. Companies are able to report verified Woodland Carbon Units to compensate for their gross emissions following the Department for Environment, Food and Rural Affairs' Environmental Reporting Guidelines and use them in claims of 'Carbon Neutrality' as set out in the British Standards Institute's PAS2060: 2014 Specification for the Demonstration of Carbon Neutrality.

2.4.1.2 Carbon Markets in the Forest Sector

The Woodland Carbon Code has generated much interest among landowners and investors alike. As of 30 March 2018, 239 projects were registered with the Code; together they will create around 16,100 hectares of new woodland and are predicted to sequester around 5.8 million tonnes of carbon dioxide equivalent over their lifetime (up to 100 years)¹³. Of the 239 registered projects, 156 are now validated¹⁴ and 37 projects are now verified¹⁵ and projected to sequester 713 thousand tonnes of carbon dioxide equivalent over their lifetime.

A proportion of the revenue for each project comes from private sector investment, mainly from companies considering their Corporate and Social Responsibility. Until now, companies have paid in advance for carbon to be sequestered with well over half of the validated carbon being sold in this manner. Case studies of buyers are available on the Woodland Carbon Code [website](#).

¹³ [Woodland Carbon Code Statistics: Data to March 2018](#) Forestry Commission.

¹⁴ **Validated:** is the initial evaluation of a project or group against the requirements of the Woodland Carbon Code. Upon completion a project/group will receive a 'Validation Opinion Statement'. The project/group will then be certified for a period of up to 5 years.

¹⁵ **Verified:** Verification is the evaluation of a project as it progresses to confirm the amount of CO2 sequestered to date as well as that it continues to meet the requirements of the Code.

2.5 UK Grown Timber Initiatives

Since 2013 the not-for-profit, government backed [Grown in Britain](#) campaign has developed and promoted the case for increasing British grown timber. The Grown in Britain programme combines efforts to increase private sector forest/woodland creation and management, grow the British timber processing sector, and encourage the promotion of Grown in Britain branded products in the eyes of merchants, retailers and consumers in the UK. Grown in Britain has over 1 million tonnes of UK timber licensed to use the 'Grown in Britain' brand and over 300,000 hectares of trees, woods and forests within the scheme.

Following on from the [2016 Grown in Britain Woodstock report](#) that found that UK grown hardwood sawlog supply has the potential to double to 2050, Grown in Britain has launched an online portal. This is aimed at the non-professional owner and contains a video on valuing hardwoods along with up to date guidance of potential prices for a range of UK grown hardwoods¹⁶.

¹⁶ [Selling Hardwood Trees](#) (2017) Grown In Britain

3 Market Drivers

Timber prices remain the biggest single influence on the market value of forestry in the UK. The weaker £GBP in 2017 led to increased demand for domestic product as imports became more expensive. The value of UK manufacturers' sales of wood and wood products increased from £6.4 billion in 2016 to £6.6 billion in 2017, representing a 3.1% increase in sales¹⁷.

Demand within the construction industry also remains a large influence on the timber market within the UK. Government initiatives to meet housing needs mean that this demand within the construction industry is unlikely to diminish in the short term.

3.1 Construction, manufacturing and distributive trades

3.1.1 Construction

The value of UK manufacturer sales of builders' carpentry and joinery¹⁸ increased from £3.4 billion in 2016 to £3.7 billion in 2017, representing an increase of 7.3% (see also section 4.6 and Figure 4.6)

There has been a steady increase in the Construction Material Price index within the UK since the latter end of 2015¹⁹. The 'All Work' construction material price index increased by 6% in June 2018 compared to the same month in the previous year.

Construction output however, continued to decline in the three-month on three-month series, falling by 1.7% in May 2018; representing the third consecutive decline in this series. This decrease in construction output was driven predominantly by a fall in new work²⁰.

Construction activity has remained little changed on a year ago.

3.1.1.1 Housing Starts

Across the UK 198,000 permanent dwellings were started in 2017, compared to 189,000 in 2016, representing a 5% increase (see Table 1.1). Housing completions also increased in 2017 with 195,000 permanent dwellings completed in 2017 compared to 171,000 completed in 2016, representing a 14% increase (Figure 3.1).

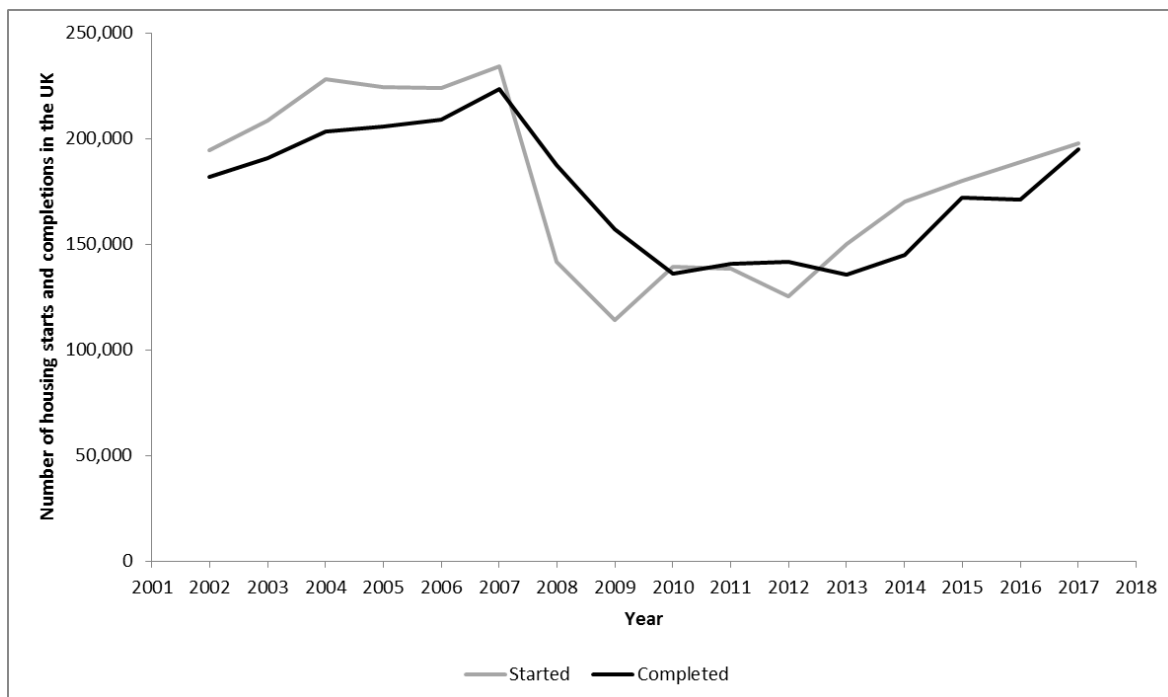
¹⁷ Referring to data from the [Office for National Statistics, PRODCOM](#), UK Manufacturers' sales by product: provisional estimates 2017 (July 2018): Data from division 16: 'Manufacture of wood and of products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials'.

¹⁸ Referring to data produced by the [Office for National Statistics, PRODCOM](#). Data set: UK Manufacturers' sales by product: provisional estimates 2017 (July 2018), Data from Division 16: 'Manufacture of wood and of products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials'. SIC(07) 1623 – *Manufacture of other builders' carpentry and joinery: Total UK manufacturer sales of products in this product group*.

¹⁹ [Monthly Statistics of building Materials and Components No. 517](#) (July 2018) Department for Business, Energy and Industrial Strategy.

²⁰ [Monthly Statistics of building Materials and Components; commentary](#) (July 2018) Department for Business, Energy and Industrial Strategy.

Figure 3.1 UK Housing Starts and Completions, 2002-2017



Source: Ministry of Housing, Communities and Local Government (October 2018) [Live tables on house building: new build dwellings](#). Table 211: permanent dwellings started and completed, by tenure, United Kingdom (quarterly). Accessed 09 October 2018.

Provisional data from the first quarter of 2018 suggests that both housing starts and housing completions have decreased compared to the same quarter in 2017. The majority of housing starts and completions have consistently occurred in England, accounting for over 74% of starts and completions each year for the last decade, with the latest figures suggesting this is over 85% for 2017/18²¹. The private sector dominates housing starts and completions in the UK, accounting for 82% of housing completions in the UK in 2017/18²¹. However, the greatest percentage increase in output was reported within the public housing sector, with an increase of 22% between 2016 and 2017 (Figure 3.2).

3.1.1.2 Other construction

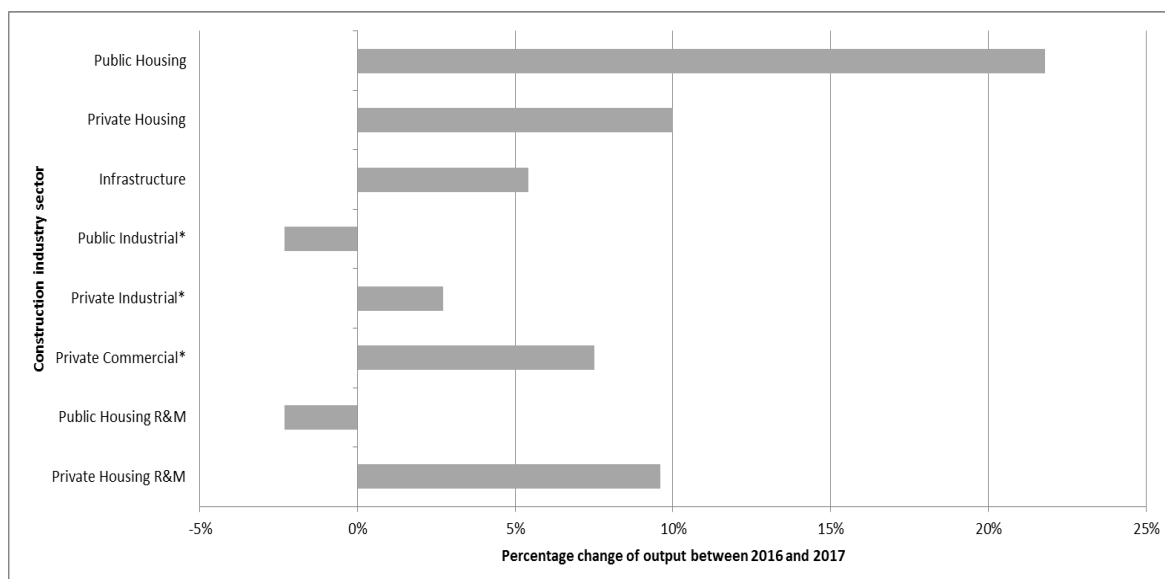
All construction industry sectors²² increased output between 2016 and 2017, with the exception of public industrial and public housing repair and maintenance (Figure 3.2).

Figure 3.2 Construction Industry Sector Output: volume seasonally adjusted, percentage change period on previous year, by sector, 2017

²¹ For detail on other countries see Ministry of Housing, Communities and Local Government (August 2018) [Live tables on house building: new build dwellings](#). Table 209: permanent dwellings completed, by tenure, and country and Table 209: permanent dwellings started, by tenure, and country. Accessed 07 August 2018.

²² Construction industry sectors refer to: public and private housing, infrastructure, public and private industrial*, private commercial*, public and private housing repair and maintenance, *excluding infrastructure.

Chapter 3: Market Drivers



Source: [Output in the construction industry: reference tables](#) ; Table 3b (May 2018) Office for National Statistics. R&M = Repair and Maintenance. * Excluding Infrastructure.

3.1.1.3 Forecast²³

The UK's construction industry is expected to experience a moderate decline in 2018, following five consecutive years of growth. The [Construction Products Association's Summer Forecasts](#) anticipate growth for the whole of 2018 to fall 0.6%, before accelerating to 2.3% in 2019 and 1.9% in 2020, with house builders the primary drivers of growth for the whole industry.

In private housing, first-time buyer demand, enabled by the government's Help to Buy scheme, continues to encourage an increase in housebuilding activity outside London. The sector's output is forecast to rise 5% in 2018 and 2% in 2019. The infrastructure sector also remains a primary driver of growth for the whole construction industry, with output forecast to hit a historic high of £23.6 billion by 2020, driven by large projects such as HS2²⁴ and Hinkley Point C²⁵.

The liquidation of Carillion plc, the second largest construction company in the UK, resulted in a poor performance for the construction industry at the start of the 2018, which combined with the bad weather, lost UK construction £1 billion of work. It is estimated 60% of this work may be recovered, but Carillion's collapse will cause further delays at two major hospitals as work on the £335 million Royal Liverpool University and Birmingham's £350 million Midland Metropolitan hospitals is on hold until at least 2019.

Overall in construction, there is forecast to be a slight decrease in activity, of -0.6%, in 2018. However, in 2019, it is anticipated there will be growth of 2.3% due to increases house building and infrastructure.

3.1.2 Manufacturing and distributive trades

UK manufacturing output rose by 2.5% between 2016 and 2017, this is the largest percentage change since 2013 to 2014 (Figure 3.3). However, manufacturing output over

²³ This section has been taken from [The Construction Products Association Summer Forecasts](#), July 2018.

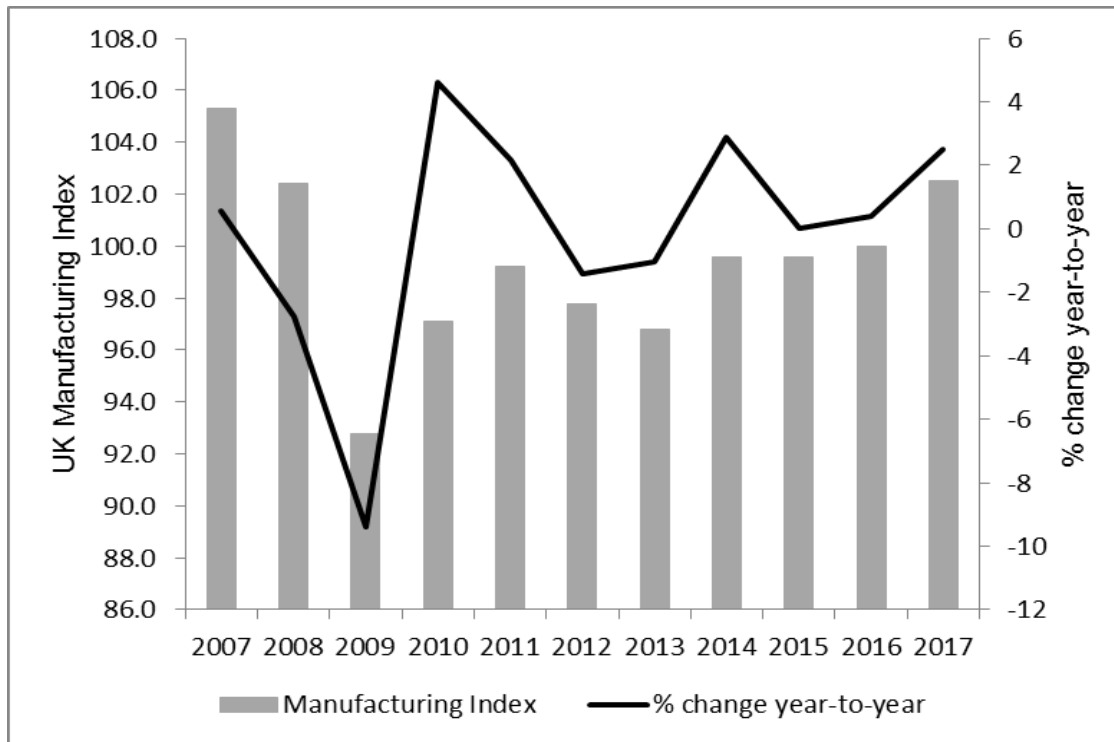
²⁴ HS2: [High Speed Two](#)

²⁵ Two new nuclear reactors are being built at [Hinkley Point C](#).

the three months to May 2018 compared with the three months to February 2018 has fallen by 1.2%, due to widespread weakness across the sector. This is the largest three-monthly decline since December 2012, when output fell by 1.8%²⁶.

The UK Index of Production²⁷ suggests that the wood, paper and printing sector has seen a 1.2% growth in March-May 2018 compared to the same three month period in 2017, although the index reports a 0.3% decrease over the three months to May 2018 compared to the three months to February 2019.

Figure 3.3 UK Manufacturing Index, 2007-2017 and percentage change year-to-year



Source: Time series: [C: Manufacturing \(Index\): CVM](#) (July 2018) Office for National Statistics. Index year 2016 = 100.

3.1.2.1 Price development; imported softwood, hardwood and plywood²⁸

There are variations in price movements among the different product groups, but the general trend of rising prices for timber and panel products has continued in 2017.

The 12 month comparison of average price for softwood imports between the two periods December 2015 to November 2016 and December 2016 to November 2017 reveals that the softwood import price rose by nearly 6%. Prices rose strongly and steadily throughout most of 2016 before a sharp correction at the beginning of 2017. However, since the spring of 2017 prices have continued to rise and the average for the whole 'basket' of softwood imports has hovered around the £200 per m³ at the end of 2017.

In contrast, the average price of hardwood imports over the same 12-month period has fallen slightly, by just over 1%. Being of much lower volume than softwood, there tends to be greater volatility in price movements of hardwood and there are distinct differences in the

²⁶ [Index of Production, UK: May 2018](#): Figure 3. Office for National Statistics.

²⁷ [Index of Production, UK: May 2018](#): Table 2. Office for National Statistics.

²⁸ This section was taken from the [Timber Trade federation Statistical Bulletin](#) (February 2018)

price movement by hardwood species. Over the 12-month period, average tropical hardwood prices rose by 5% while prices of temperate species fell by 3%, this was accompanied by a 19% increase in volume.

Hardwood plywood prices increased strongly between 2015 and 2017 (average of the period Dec 2015-Nov 2016 compared to the average for Dec 2016-Nov 2017 increased by 8.6%). As prices increased, volume showed a small decline of 2% over the same period. However, during the autumn of 2017, average prices began to fall back and by November 2017 were around 3% below the previous 12-month average.

Strong upward price movement has also been a feature of the market for softwood plywood. The highest average price increase (13.3%) of all the products shown here has been accompanied by a 5% rise in volume. Average prices of softwood plywood imports have continued to rise during the autumn of 2017 and by November 2017 had risen to the record high levels last seen in the previous November of 2016.

3.1.2.2 UK Timber Price Indices

3.1.2.2.1 Coniferous Standing Sales Price Index

There has been an overall increase in the index over the last 15 years, following an overall decrease in earlier years. The index was 28.2% higher in real terms (30.5% in nominal terms) in the year to March 2018, compared with the previous year. The average price for coniferous standing sales was £24.64 per cubic metre overbark standing in nominal terms in the year to March 2018, an increase from £19.05 in the year to March 2017²⁹.

3.1.2.2.2 Softwood Sawlog Price Index

The index was 18.8% higher in real terms (20.8% in nominal terms) in the 6 months to March 2018, compared with the corresponding period of the previous year. The average price for softwood sawlog sales was £48.36 per cubic metre overbark in nominal terms in the 6 month period to March 2018, an increase from £41.83 in the 6 months to September 2017 and £40.01 in the 6 months to March 2017.

3.1.3 Wooden Pallets

In 2017 in the UK 39 million new pallets were sold, representing an 11% decrease since 2016. This follows a slow but steady decline in sales since 2014. This decline is likely to be linked to the increase in sale of refurbished and recycled pallets. In 2017 37 million refurbished pallets were sold, representing a 13% increase since 2016³⁰.

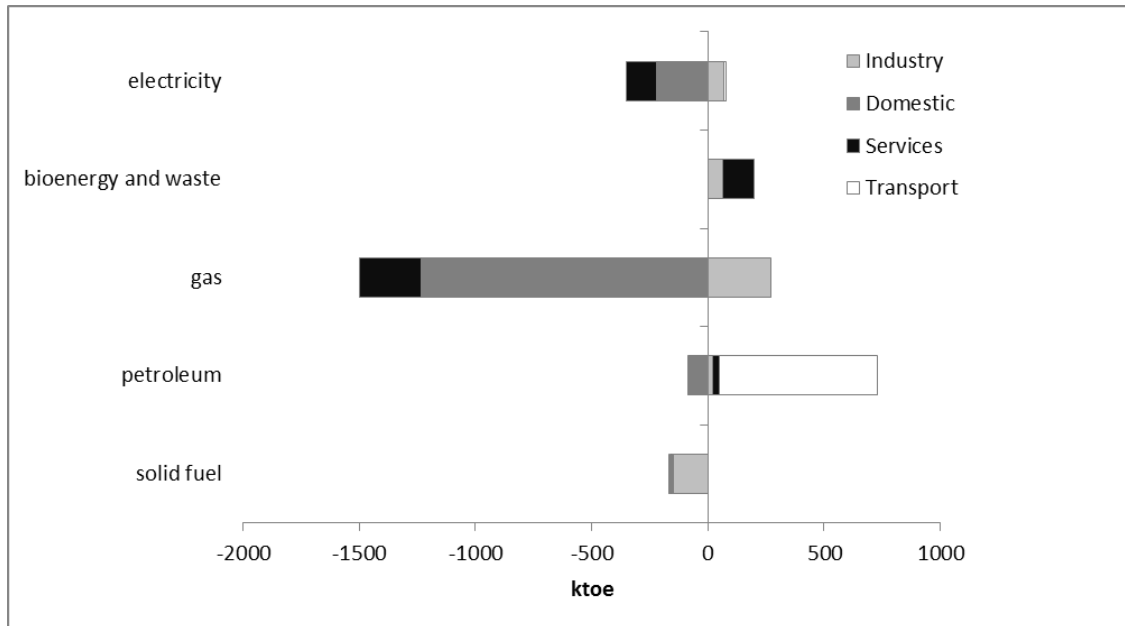
3.2 Energy Markets

Final energy consumption in the UK in 2017 was 141,175 ktoe (tonne of oil equivalent), this represents a 0.7% decrease since 2016. The decrease in consumption was mostly due to a decrease in gas consumption in the domestic sector resulting from warmer average temperatures, particularly in the winter. Therefore, when corrected for temperature, energy consumption in 2017 in the UK actually increased by 0.9%. The transport sector accounted for 40% of the final energy consumption in 2017, with the domestic, industry and services sectors using 28%, 17% and 15% respectively.

²⁹ For more information see [Timber Price Indices: data to March 2018](#). Forest Research, IFOS-Statistics.

³⁰ For more information see [UK manufacturers' sales by product](#) (July 2018) Office for National Statistics. Division 16: Manufacture of Wood and of Products of Wood and Cork, except Furniture, Manufacture of Articles of Straw and Plaiting Materials.

Figure 3.4 The change in energy consumption from 2016 to 2017 split by fuel and sector



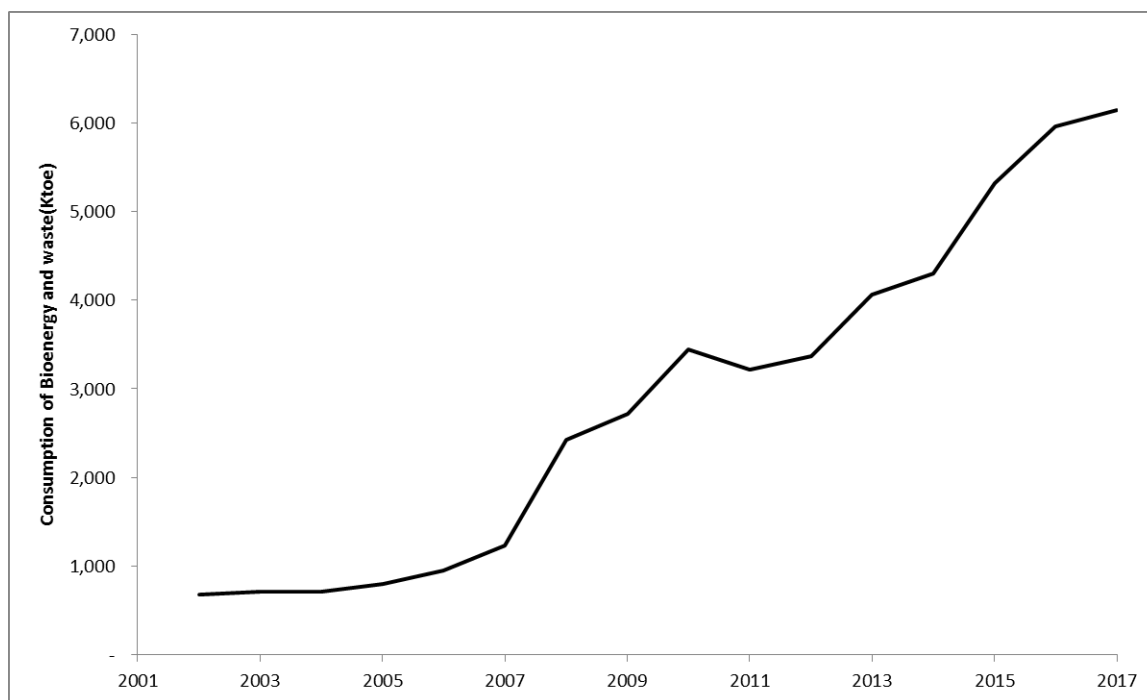
Ktoe = thousand tonnes of oil equivalent: this is a common unit of energy measurement which enables different fuels to be directly compared and aggregated. One tonne of oil equivalent is set equal to 41.868 Giga Joules (GJ) or 11,630 kilo Watt hours (kWh). Source: [Energy Consumption in the UK](#) (July 2018) Department for Business, Energy and Industrial Strategy.

The sectors that saw the largest increase in use of bioenergy and waste³¹ between 2016 and 2017 were industry and services although the domestic sector is also a significant user of bioenergy but there was very little change in usage between 2016 and 2017. Since 2012, the share of solid fuels in the UK fuel mix has decreased rapidly; its share in 2012 was 20%, now reduced to just 5.3%. During this period, the contribution of bioenergy and waste has increased from 4.1% in 2012 and has now overtaken solid fuel³² at 8.3%. The UK consumed 6,145 Ktoe of bioenergy and waste in 2017 compared to 682 Ktoe in 2002 (Figure 3.5).

Figure 3.5 The consumption of bioenergy and waste in the UK, 2002-2017

³¹ Bioenergy and waste are predominantly used for renewable heat; includes liquid biofuels from 2006.

³² Solid fuels include coal, manufactured solid fuels, benzole, tars, coke, oven gas and blast furnace gas. Wood and wood waste is included in renewable fuels and waste.



Source: [Energy Consumption in the UK](#) (July 2018) Department for Business, Energy and Industrial Strategy. Figures are weather corrected; details of the methodology for these adjustments can be found in articles in [Energy Trends \(June 2011 and September 2011 editions\)](#). Bioenergy and waste are predominantly used for renewable heat; includes liquid biofuels from 2006. Ktoe = thousand tonnes of oil equivalent: this is a common unit of energy measurement which enables different fuels to be directly compared and aggregated. One tonne of oil equivalent is set equal to 41.868 Giga Joules (GJ) or 11,630 kilo Watt hours (kWh).

Total renewable energy increased by 1,824 ktoe (9.9 per cent), from 18,392 in 2016 to 20,216 ktoe in 2017. The increase in interest in renewable energy in the UK, and the increasing number of wood fuelled installations used in the commercial and public sector has resulted in a rapidly expanding UK market for biomass.

3.2.1 Renewable electricity

Renewable electricity accounted for 27.9 per cent of total generation (as measured using the RED³³ methodology), an increase of 3.5% compared to 2016. Renewable electricity generation increased by 16.2 TWh (19%) to 99.3 TWh in 2017³⁴. In 2017 plant biomass (including wood pellets) accounted for 20% of the electricity generation from renewable sources in the UK.

3.2.2 Renewable heat

Renewable heat accounted for 7.7% of total heat consumption, an increase of 0.5% on 2016. Despite the increase in heat pump generation, domestic wood consumption in the UK in 2017 held the largest share of renewable heat at 39%, down 11% compared to 2016. Plant biomass (including wood pellets) accounted for 24% of renewable heat and industrial wood accounted for 6.1%³⁴.

³³ [Renewable Energy Directive](#) establishes an overall policy for the production and promotion of energy from renewable sources in the EU

³⁴ See [Renewable Energy in 2017](#)

3.2.3 Forecast

The domestic Renewable Heat Incentive (Domestic RHI)³⁵, introduced in April 2014, is a government incentive to homeowners. The scheme offers a financial incentive for homeowners producing clean, green renewable heat. There is also a non-domestic RHI that has been running since November 2011. The main renewable sources used by individuals within these schemes are: air and ground source heat pumps, solar thermal and biomass; wood pellets form a large component of this biomass sector. The number of installations receiving payment since the introduction of these schemes was 17,913 non-domestic and 64,528 domestic³⁶.

Analysis of future investment in renewables showed that substantial cuts were made in 2016, reducing by £1.1 billion over the course of the year. These cuts will impact wind, solar, biomass power and waste-to-energy projects, future investment is predicted to decrease by 95% by 2020. Many of the current renewable energy subsidy schemes and projects are dependent on EU emissions target legislation.

³⁵ [The Domestic Renewable Heat Incentive](#)

³⁶ [Renewable Heat Incentive Statistics](#)

4 Developments in forest products markets

The forest industries, including forest products, are a significant sector within the UK and with more importance being placed on sustainability within the construction industry and energy production sectors, the need for enhanced water management, and the wider government agendas to build more housing, create jobs and encourage growth, means there may be great potential for more growth within this sector³⁷.

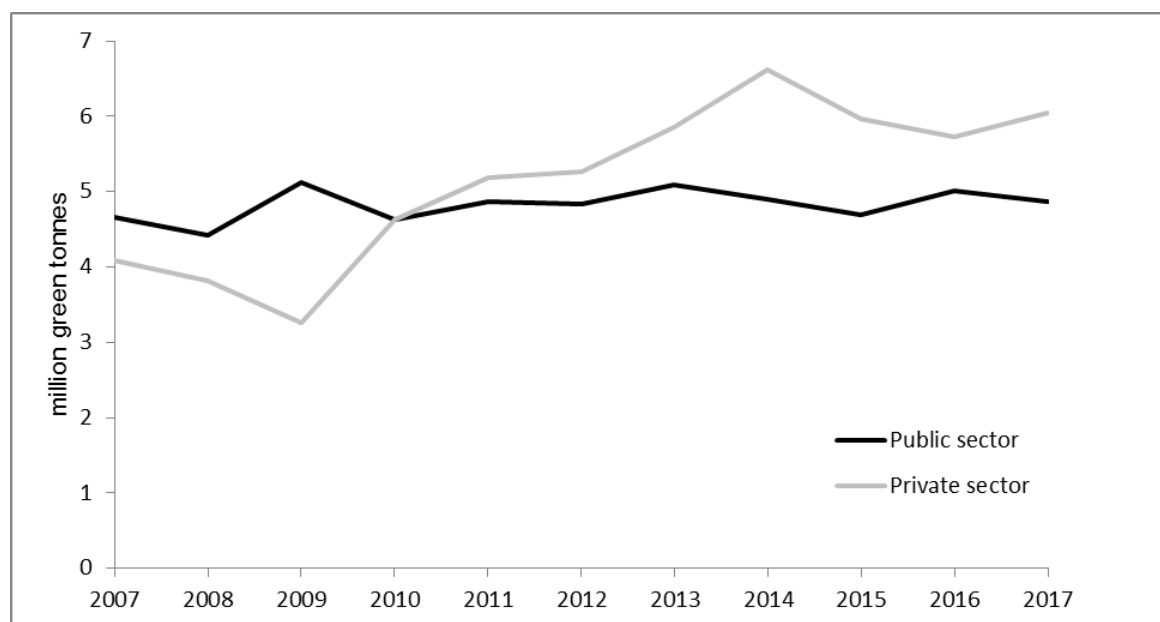
4.1 Wood Raw Materials

4.1.1 Removals of roundwood

Removals refers to the harvesting of roundwood (trunk and branch wood) from coniferous (softwood) and non-coniferous (hardwood) trees. It is estimated that a total of 11.7 million green tonnes of roundwood was removed from UK woodlands in 2017 (Table 1), a 3% increase from the level in 2016. Softwood accounted for the majority (94%) of removals from UK woodland and totalled 10.9 million green tonnes in 2017, up 2% from 2016 (Figure 4.1). Hardwood removals totalled 0.7 million green tonnes in 2017³⁸.

There has been an overall increase in the level of UK private sector softwood removals in the last decade; in comparison, softwood removals by the public sector (FC/NRW/FS³⁹) have been relatively stable over the last decade (Figure 4.1).

Figure 4.1 Softwood removals from UK forests by private and public sectors, 2007-2017



Source: Forestry Statistics (2018) Forest Research

Public sector: FC: Forestry Commission (England, Scotland, and until March 2013, Wales), NRW: Natural Resources Wales (from April 2013), FS: Forest Service (Northern Ireland). Private sector: removals from all other woodland (including some publicly owned woodland).

4.1.2 Deliveries of roundwood

Figures for deliveries relate to the quantity of UK-grown roundwood that is delivered to wood processors and other users. There is a difference between reported softwood removals and

³⁷ Roots to prosperity: a strategy and action plan see <http://www.ukfpa.co.uk/publications/>

³⁸ For more information see [Forestry Statistics \(2018\)](#) Forest Research, IFOS-Statistics

³⁹ FC: Forestry Commission; NRW: Natural Resources Wales; FS: Forest Service (Northern Ireland)

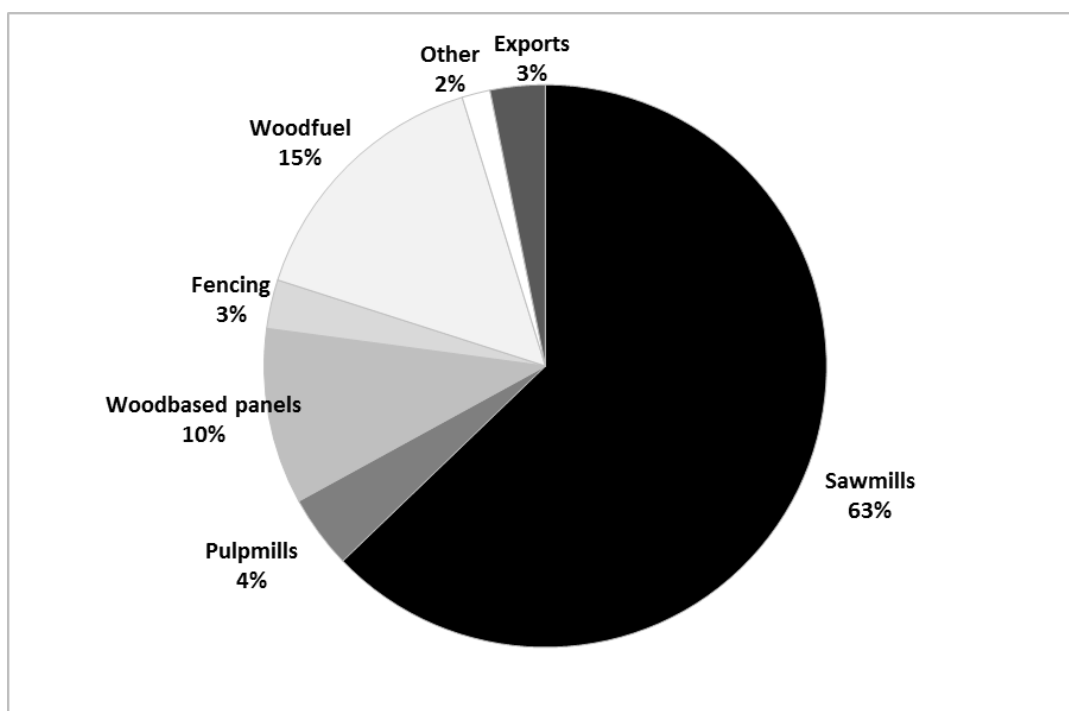
deliveries which can be caused by variations in the level of stocks between harvesting and delivery to the wood processor, and/or by the differences in data sources and methodologies used to compile removals and deliveries statistics⁴⁰.

In 2017, deliveries of UK roundwood totalled 11.2 million green tonnes, representing a 2% increase from the previous year. Most roundwood deliveries (93%) were softwood⁴⁰.

Softwood deliveries totalled 10.5 million green tonnes in 2017. 6.6 million green tonnes (63% of UK softwood deliveries) were used by sawmills, a 1% increase from the previous year. A further 1.6 million green tonnes were used for wood fuel (3% increase), 1.1 million green tonnes were used to produce wood-based panels (15% decrease), 0.4 million green tonnes by integrated pulp and paper mills (a 4% increase), and 0.8 million green tonnes for other uses (16% increase), including round fencing, shavings and exports of roundwood⁴⁰ (Figure 4.2).

The increase in softwood deliveries for woodfuel in recent years reflects an increase in wood use for heating and energy production in the UK.

Figure 4.2 Deliveries of softwood from UK forests to user industries, 2017



Source: [Forestry Statistics \(2018\)](#) Forest Research

Woodfuel: Wood fuel derived from stemwood. Includes estimates of roundwood use for biomass energy. Other: Includes shavings and poles. For more information refer to the Source.

There was a total of 0.7 million green tonnes of UK hardwood deliveries in 2017. The majority of UK hardwood deliveries (81% in 2017) were used for woodfuel.

⁴⁰ For more information see [Forestry Statistics \(2018\)](#) Forest Research

4.2 Wood Energy

4.2.1 Consumption and production

The European Union has collectively set a target for 20% of total energy generation to be from renewable sources by 2020. The share of this target is split across different member states and translates into a 15% target for the UK's total energy generation, which is legislated through the Climate Change Act (Climate Change Act, 2008). This 15% target for renewable generation can be separated into: 30% of electricity, 10% of fuel and 12% of heat⁴¹.

Wood used for energy generation includes sawmill products (including wood chips, sawdust and bark), recycled wood and wood pellets. The main incentives for wood pellet use in the UK are through climate change targets, renewable energy targets and subsidy initiatives that support these⁴². Wood pellet consumption in electricity generation in the UK has increased significantly in line with the support provided through the Renewables Obligation (RO)⁴³. Imports of wood pellets into the UK were around 6.9 million tonnes in 2017⁴⁴, a 2% increase from 2016. Consumption of wood pellets has continued to increase with over 7 million tonnes of wood pellets consumed in 2017. Over the last decade there have been multiple changes made to the RO and more recently the UK government introduced the Contracts for Difference (CfDs)⁴⁵. Currently there are no further policies planned to incentivise the use of wood pellets in bioenergy and current support under the RO is due to end in 2027, meaning that any new conversion projects would be limited to a 10 year period in which to recover the investment required to convert. This limited time frame on the current policies may have a significant impact on future investment in of biomass use in the UK.

⁴¹ [Renewable Energy Directive, 2009](#)

⁴² For more information see [Global Wood Pellet Industry and Trade Study 2017](#)

⁴³ For more information <https://www.ofgem.gov.uk/environmental-programmes/ro>

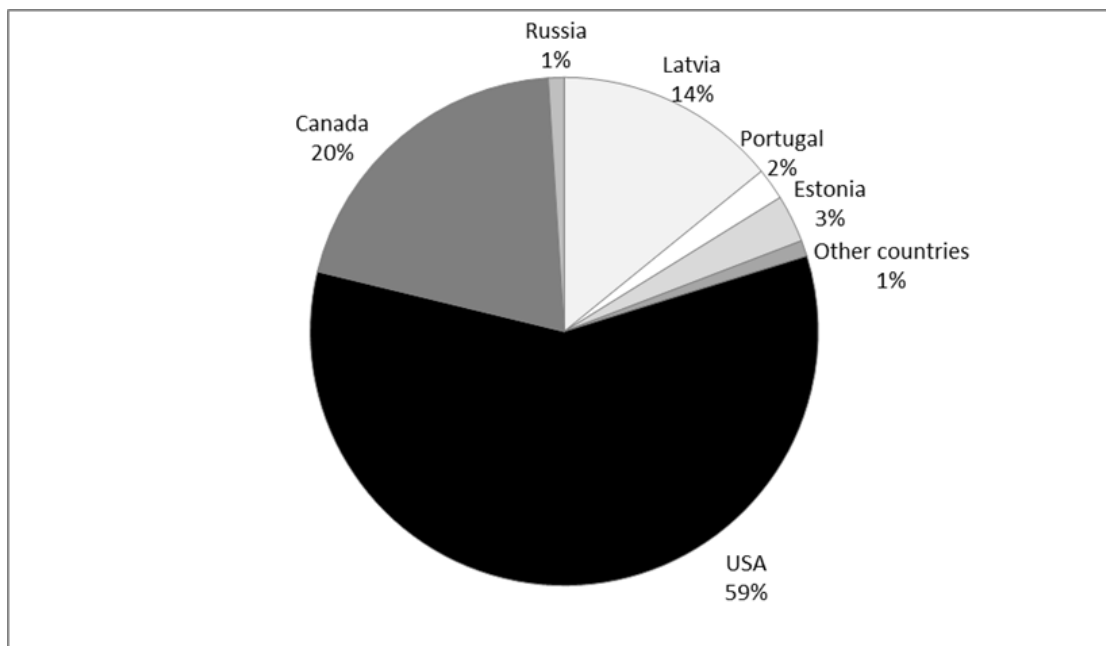
⁴⁴ HM Revenue and Customs; UK overseas trade statistics

⁴⁵ See <https://www.gov.uk/government/publications/contracts-for-difference/contract-for-difference>

4.2.2 Imports of wood pellets

The majority of wood pellet imports into the UK in 2017 came from the USA (61%), and within the EU Latvia provided the largest proportion of wood pellet imports (11%) (Figure 3.4)

Figure 4.3 Country of origin of wood pellet imports to the UK, 2017



Source: UK overseas trade statistics (HM Revenue & Customs), industry associations. See [Forestry Statistics 2018](#).

4.3 Certified forest products

As of March 2018, the total area of certified woodland⁴⁶ in the UK stood at 1.38 million hectares, with 43% of all woodland area certified⁴⁷. The majority (70%) of the wood (softwood and hardwood) consumed by UK sawmills was certified in 2018⁴⁸.

[The Forest Stewardship Council \(FSC\)](#) and the [Programme for Endorsement of Forest Certification \(PEFC\)](#) are the two major international schemes that oversee and promote development of forest certification. UK government policies and EU legislation⁴⁹ also play a key role in promoting sustainable forest management (see also section 4.4.2.1).

⁴⁶ All certified woodland in 2018 is certified under the Forest Stewardship Council (FSC) scheme. The estimates are based on UK data published by FSC, supplemented by data from individual certificates and other sources. Where possible, figures are for the woodland area certified, rather than the land area certified.

⁴⁷ Area of certified woodland includes; FC: Forestry Commission (England and Scotland), NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to woodland formerly owned/managed by FC Wales. Private sector: all other woodland, includes woodland previously owned/managed by the Countryside Council for Wales and the Environment Agency in Wales, other publicly owned woodland (e.g. owned by local authorities) and privately owned woodland.

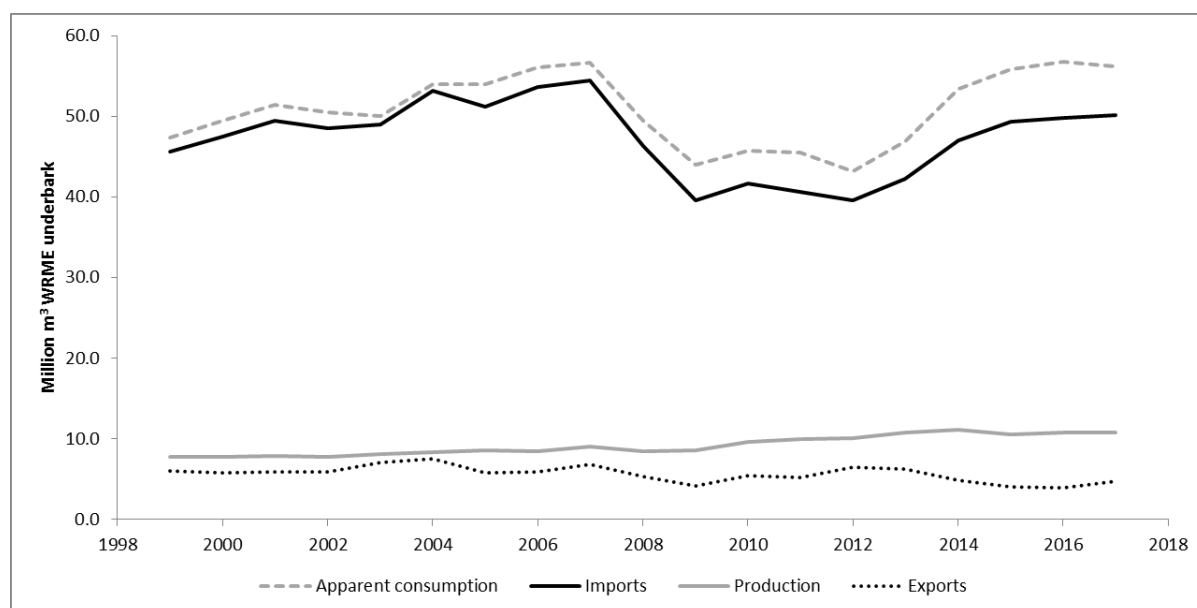
⁴⁸ See [Forestry Statistics 2018](#) for more information.

⁴⁹ See the [EU's Forest Law Enforcement Governance and Trade \(FLEGT\) Action Plan](#), which has developed a number of initiatives, e.g. [EU Timber Regulation \(EUTR\)](#), [Voluntary Partnership Agreements \(VPA\)](#), and [Central Point of Expertise on Timber \(CPET\)](#).

4.4 Apparent consumption and production of wood in the UK

UK production of roundwood totalled 10.9 million m³ WRME⁵⁰ underbark in 2017. A further 50.3 million m³ WRME underbark of wood and wood products were imported to the UK and 4.2 million m³ WRME underbark were exported, giving apparent consumption⁵¹ of 57.0 million m³ WRME underbark (Figure 4.4). This represented a 1% increase in apparent consumption from the previous year⁵². Imports accounted for 82% of all wood (production + imports) in the UK in 2017.

Figure 4.4 Apparent consumption of wood in the UK, 1999-2017



Source: [Forestry Statistics 2018](#). Figures exclude recovered paper. UK production of roundwood is estimated from deliveries to wood processing industries and others, refer to the Source for more information.

4.4.1 Sawn softwood

Over the last decade apparent consumption of sawn softwood in the UK has steadily increased. In 2017 apparent consumption of UK sawn softwood was 10.6 million m³⁵³, (although this figure is not directly comparable to earlier years due to a change in the coverage).

4.4.2 Sawn hardwood

Apparent consumption of sawn hardwood in the UK in 2017 was 0.81 million m³ (although this figure is not directly comparable to earlier years due to a change in the coverage). Compared to sawn softwood, UK production and export of sawn hardwood is relatively low. The majority of sawn hardwood consumed in the UK is imported, with imports estimated to

⁵⁰ Wood Raw Material Equivalent.

⁵¹ Apparent consumption is the amount of timber used as wood and wood products by people and industries in the United Kingdom. It is calculated as total United Kingdom production plus imports, minus exports. Apparent consumption differs from actual consumption by the extent of changes in the level of stocks. It is not practical to collect information on actual consumption.

⁵² These figures exclude recycled wood and recovered paper (see [Forestry Statistics 2018](#), table 3.3 for statistics on recovered paper).

⁵³ This figure differs from that described in section 4.4 in terms of both coverage (the apparent consumption figure in section 4.4 covers a wider range of wood and wood products, including secondary processed products) and in terms of units (wood raw material equivalents in section 4.4, compared to volumes of product detailed here).

be 0.795 million m³ in 2017 compared to UK production of sawn hardwood estimated to be 0.042 million m³ in 2017.

4.4.2.1 Illegal logging

Illegal logging is of concern with regards to hardwood production. FLEGT (Forest Law Enforcement, Governance and Trade) plays a core role in aiming to reduce illegal logging by strengthening sustainable and legal forest management, improving governance and promoting trade in legally produced timber. FLEGT has projects operating in Africa, Asia, Central and South America, and has been instrumental in setting up Voluntary Partnership Agreements (VPA), which are legally binding trade agreements between the EU and external timber-producing countries. By signing up to these agreements the EU can ensure that purchased timber products are legally sourced and help timber producing countries improve regulation and governance of the forest sector while enabling sales of these timber products within the EU.

4.4.3 Wood-based panels

Particleboard (including OSB) and MDF consumed in the UK are both produced domestically and imported, while all veneer sheets, plywood and other hardboards consumed in the UK are imported. In 2017 UK apparent consumption of wood-based panel products increased from 6.1 million m³ in 2016 to 6.2 million m³ in 2017. This follows a period of continual increase in apparent consumption of wood-based panel products since 2012.

UK imports of wood-based panel products in 2017 were estimated to be 3.4 million m³, representing a 1% increase compared to 2016. UK production of wood-based panel products in 2017 rose by 5% compared to 2016. Exports of panel products from the UK increased to 0.38 million m³ in 2017.

4.4.4 Paper and paperboard

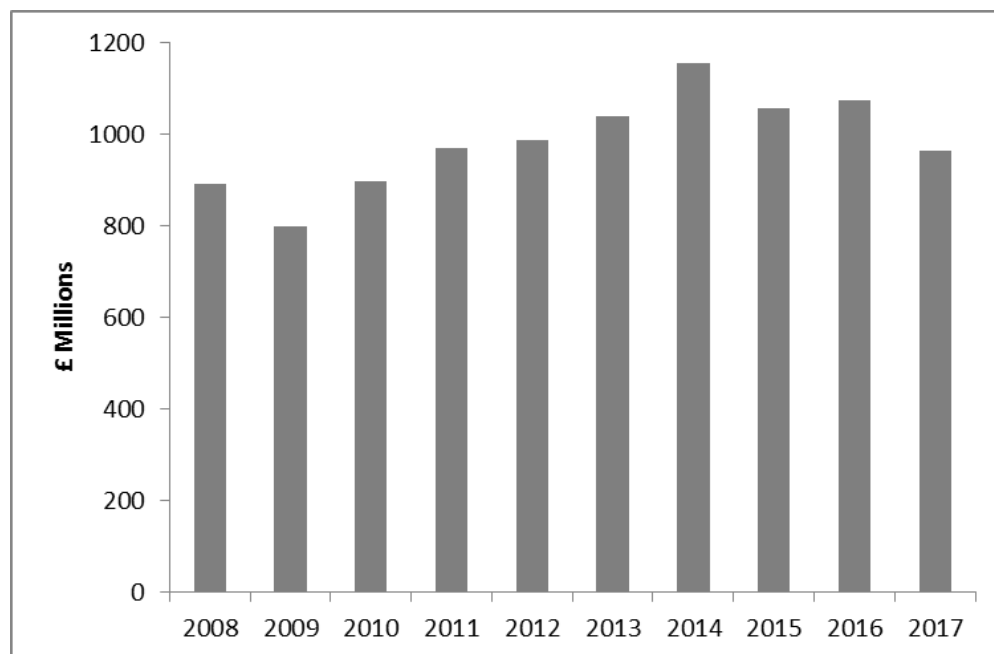
Apparent consumption of paper and paperboard in the UK decreased by 1% in 2017 to 8.7 million tonnes. UK production of paper and paperboard was estimated to be 3.9 million tonnes in 2017, representing a 5% increase compared to 2016, while imports were estimated to be 5.6 million tonnes in 2017, representing a 5% decrease compared to 2016.

4.5 Value-added forest products and engineered wood products

4.5.1 Sales of UK manufactured wood products

Sales of milled and planed wood in 2017 were valued at £1 billion representing a 10% decrease from 2016⁵⁴ (Figure 4.5).

Figure 4.5 Total UK Manufacturer Sales of Milled and Planed Wood, 2008-2017



Source: [Office for National Statistics, PRODCOM](#), UK Manufacturers' sales by product: provisional estimates 2017 (July 2018): Data from division 16: 'Manufacture of wood and of products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials': SIC(07) 1610 Sawmilling and planing of wood – Total UK manufacturer sales of products in this product group.

4.6 High performance wood construction

There have been a number of developments in the field of engineered wood products⁵⁵. The aim of many of these products is to decrease on-site construction time, reduce the material to strength ratio and to give increased durability to non-durable timbers. The rise in demand for these products is also driving manufacturing factory capacity in the UK. There are a number of organisations within the UK promoting the use of these innovative wood products⁵⁶ and a market research report released in 2016 forecast the global engineered wood products market to grow at a compound annual growth rate of 26.5% up to 2020⁵⁷. Housing targets⁵⁸ and commitments to carbon reduction⁵⁹ set by the UK government mean

⁵⁴ Sales information for UK manufactured wood products is available online from the [Office for National Statistics \(ONS\) PRODCOM](#) and includes various divisions in which wood type products are sub-divided. Division 16 relates to the 'Manufacture of wood and of products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials'. This includes figures on sawmilling and planing of wood products, manufacture of veneer sheets and wood-based panels and manufacture of other builder's carpentry and joinery.

⁵⁵ Engineered wood products include; cross laminated timber (CLT), parallel strand lumber (PSL), glued laminated timber (glulam), i-joists and prefabricated panelling systems.

⁵⁶ For example [Wood for good](#) ran a series of conferences in 2016 aiming to influence current thinking about the use of timber and timber products/systems

⁵⁷ [Global Engineered Wood Products 2016-2020](#)

⁵⁸ [House of Lords Select Committee on Economic Affairs, 1st Report of Session 2016-17: Building more homes.](#)

⁵⁹ [Carbon budgets; Department for Business Energy and Industrial Strategy](#)

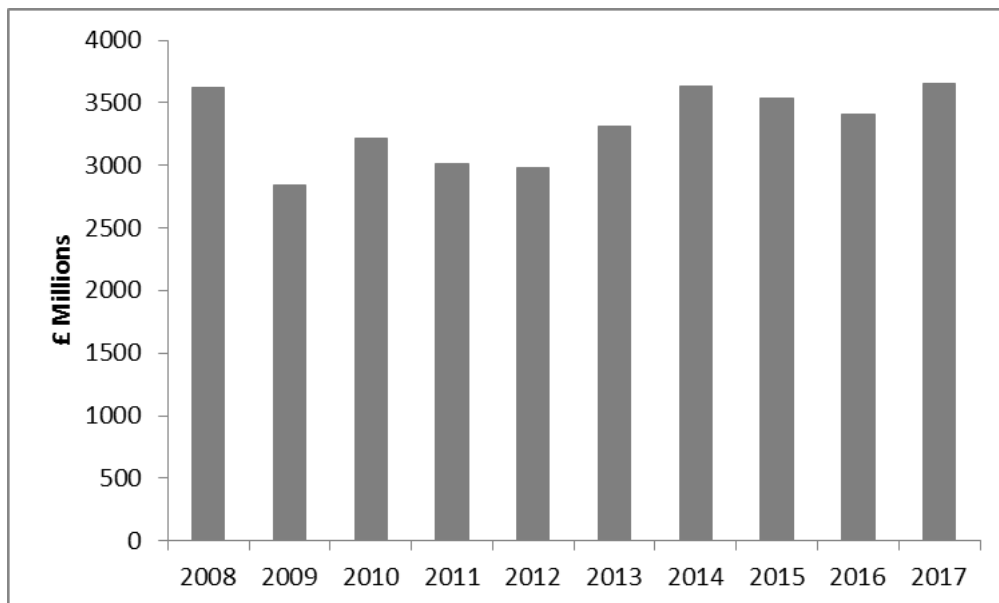
that demand for these products in the UK is likely to increase in the future following the forecast global trend.

4.6.1 Housing and construction

At present the demand for housing in the UK outstrips the current level of supply. Therefore the UK government has made a commitment to build 300,000 homes a year⁵⁸. The use of modular buildings is being considered to meet this demand because they require less onsite time and use less energy to build and heat, and are faster⁶⁰, cheaper and easier to construct compared to other traditional methods. Timber and timber products are commonly incorporated within this method of construction, therefore if modular building is adopted to meet housing demands this will lead to an increase in sales within the timber and timber products markets in the UK.

Total UK manufacturer sales of builders' carpentry and joinery over the last decade indicate that sales of some timber products used in the construction industry have shown a steady increase since the large decrease reported in 2008 (Figure 4.6). This trend is likely to be directly related to growth within the UK construction industry. In 2017 total UK sales of builders' and carpentry and joinery were estimated to be £3.7 billion, matching sales reported in 2008.

Figure 4.6 Total UK Manufacturer Sales of Builders' Carpentry and Joinery



Source: [Office for National Statistics, PRODCOM](#), Data set: UK Manufacturers' sales by product: provisional estimates 2017 (July 2018), Data from Division 16: 'Manufacture of wood and of products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials'. SIC(07) 1623 – Manufacture of other builders' carpentry and joinery: Total UK manufacturer sales of products in this product group.

4.6.1.1 Harvested wood products contribution to Carbon reduction targets

The UK government has set ambitious to reduce emissions of carbon dioxide in the UK⁵⁹. Through the [Climate Change Act 2008](#) the government has committed to reduce emissions

⁶⁰ Willmott Dixon are also advocates of the use of offsite manufacturing, having delivered over 7,000 units to date, with projects of this nature programmed and constructed around 20-30% faster than traditional construction.

by at least 80% of 1990 levels by 2050 and contribute to global emission reductions⁶¹.

Increasing the use of engineered wood products in the UK could contribute towards a shift to a more emission-efficient production of construction materials, substituting carbon and energy intensive concrete and steel-based building construction materials with engineered timber products. However, although there is growth with the UK construction industry for engineered wood products, it is still very much a niche market⁶².

4.6.2 Related Barriers and Incentives for the Use of Engineered Wood Products

Current policy and market preferences will steer the direction of investment in innovation for producing construction materials. In the UK government targets including housing starts and reduction in carbon dioxide emissions may drive advancement in timber products for construction in the short-term with the benefits realised in the long-term. In the last two decades technical innovations of engineered wood products and their production processes, in addition to newly adopted building regulations (i.e. fire protection) have facilitated the construction of building's made from wood⁶². However a report by the European Environment Agency (EEA)⁶³ suggests that there are still barriers to overcome to develop the market further across the European Union, namely, resilience of the current technology, lack of knowledge about the applications of timber products, lack of investment, insufficient incentives for replacing old technology with new, high cost and, subsequently, insufficient market demand. To really drive the use of engineered wood products in UK construction policy specifically adapted to the current economic, political and cultural landscape of the UK is likely required.

⁶¹ [Committee on Climate Change](#): Independent advice to government on building a low-carbon economy and preparing for climate change.

⁶² [Hidebrandt et al. \(2017\)](#) The contribution of wood-based construction materials for leveraging a low carbon building sector in Europe. *Sustainable Cities and Society* 34: 405-418

⁶³ European Environment Agency (2014) [Resource-efficient green economy and EU policies](#). EEA report 2/2014, Publications Office of the European Union, Luxembourg.