

Provisional Woodland Statistics

2022

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Country

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The research agency of the
Forestry Commission

Forest Research is the research agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research.

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

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National Statistics status

National Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards.

The continued designation of these statistics as National Statistics was confirmed in March 2012 following an assessment by the UK Statistics Authority (now the Office for Statistics Regulation) against the [Code of Practice for Statistics](#).

Since the latest assessment of these statistics in 2012, we have made improvements including:

- Adding charts, to illustrate how the statistics have changed over time.
- Expanding the release to include Woodland Carbon Code statistics and renaming the release to better reflect its content.
- Expanding the Annex to provide more detailed information on the data used in the release.



Introduction

This release contains provisional statistics for the year to March 2022 on:

- UK woodland area;
- certified woodland area;
- areas of new planting and publicly funded restocking; and
- projects registered under the Woodland Carbon Code¹.

These provisional statistics will be superseded on 29 September 2022 with the publication of final and more detailed results in Forestry Statistics 2022.

Estimates for England, Scotland, Wales and Northern Ireland are included in addition to UK totals. Figures at 31 March 2022 and for the period 2021-22 are published for the first time in this release. Some figures for earlier years have been revised from those previously released. For further details, see the Revisions section of the Annex.

Please refer to the Annex for a glossary of terms used in this release.

¹The Woodland Carbon Code is a voluntary standard, launched in July 2011, for woodland creation projects that make claims about the carbon they sequester (take out of the atmosphere).

Key findings

- The area of woodland in the UK at 31 March 2022 is estimated to be 3.24 million hectares. This represents 13% of the total land area in the UK, 19% in Scotland, 15% in Wales, 10% in England, and 9% in Northern Ireland.
- Of the total UK woodland area, 0.86 million hectares is owned or managed by Forestry England, Forestry and Land Scotland, Natural Resources Wales or the Forest Service (in Northern Ireland).
- The total certified woodland area in the UK at 31 March 2022 is 1.42 million hectares, including all Forestry England/Forestry and Land Scotland/Welsh Government Woodland Estate/Forest Service woodland. Overall, 44% of the UK woodland area is certified.
- Around 14 thousand hectares of newly created woodland were reported in the UK in 2021-22.
- Around 15 thousand hectares of publicly funded woodland restocking were reported in the UK in 2021-22.
- Woodland Carbon Code projects in the UK that were validated (including those that were also verified) at 31 March 2022 were predicted to sequester a total of 6.9 million tonnes of carbon dioxide over their lifetime of up to 100 years². This represents 5.5 million tonnes in Scotland, 1.1 million tonnes in England, 230 thousand tonnes in Wales and 11 thousand tonnes in Northern Ireland.

²Figures for carbon sequestration indicate the total projected sequestration of the projects over their lifetime of up to 100 years and include the amount claimable by a project plus the amount allocated to a shared "buffer" in case of unanticipated losses.

Area of woodland

Woodland is defined in UK forestry statistics as land under stands of trees with a minimum area of 0.5 hectares and a canopy cover of at least 20%, or having the potential to achieve this. The definition relates to land use, rather than land cover, so integral open space and felled areas that are awaiting restocking are included as woodland. Further information, including how this UK definition compares with the international definition of woodland, is provided in the Annex.

Statistics on woodland area are used to inform government policy and resource allocation, to provide context to UK forestry and land management issues and are reported to international organisations. They are also used in the compilation of natural capital accounts.

Increases in woodland area result from the creation of new woodland. This can be achieved through new planting or by natural colonisation of trees. Further information is available in the section on new planting.

Decreases in woodland area result from the conversion of woodland to other land uses. Regulatory approval is usually required before trees can be felled. Felling approval will normally require the area to be restocked, but there are some cases in which trees may be permanently removed, generally for environmental reasons. The permanent removal of trees may also be authorised under planning regulations, to enable development.

Most public sector woodland is owned and managed by Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW) and the Forest Service (FS) in Northern Ireland. Other public sector woodland (e.g., owned by local authorities) is included in privately-owned woodland as "private sector" in this release.

The Natural Resources Wales woodland areas shown in this release 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.

The area of woodland in the UK at 31 March 2022 is estimated to be 3.24 million hectares (Table 1). This represents 13% of the total land area in the UK, 19% in Scotland, 15% in Wales, 10% in England and 9% in Northern Ireland.

0.86 million hectares (27%) of woodland in the UK is owned or managed by Forestry England, Forestry and Land Scotland, Natural Resources Wales and the Forest Service (in Northern Ireland).

Conifers account for just over one half (51%) of the UK woodland area, although this proportion varies from 26% in England to 73% in Scotland.

Table 1: Area of woodland, UK, 2022

Table 1 shows the area of woodland (in thousands of hectares) in the UK at 31 March 2022. The data are shown for each country, split by public and private sector land, and conifers and broadleaves.

	England	Scotland	Wales	Northern Ireland	UK
FE/FLS/NRW/FS					
Conifers	151	426	96	55	728
Broadleaves	62	42	19	7	130
Total	214	467	115	62	858
Private sector					
Conifers	192	666	56	9	922
Broadleaves	918	353	140	47	1,457
Total	1,109	1,019	196	55	2,379
Total Woodland					
Conifers	343	1,092	152	64	1,650
Broadleaves	980	395	159	54	1,587
Total	1,323	1,486	310	118	3,237

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service, National Forest Inventory.

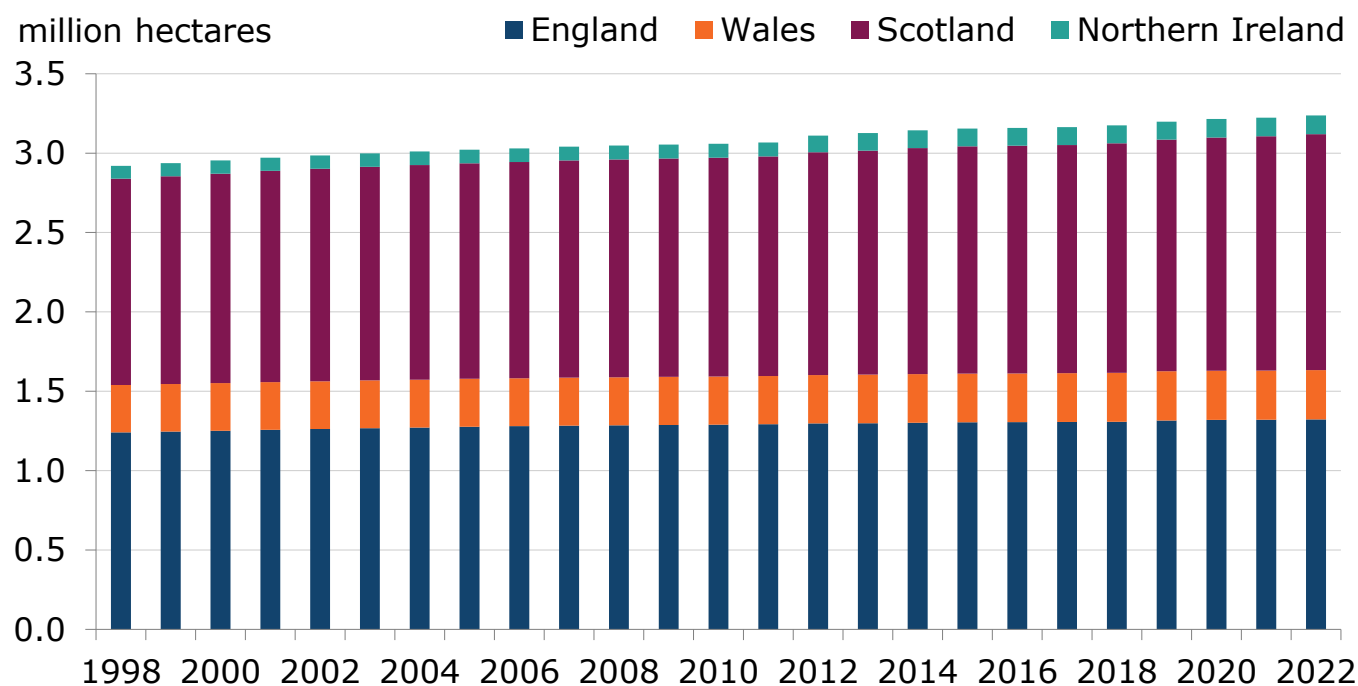
Note:

1. Figures for England, Scotland and Wales are based on data obtained from the National Forest Inventory and adjusted for new planting, but at present no adjustment is made for woodland recently converted to another land use. Further information on how the figures have been estimated is available in the Annex.
2. Figures for Northern Ireland are obtained from the Northern Ireland Woodland Register.
3. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).

4. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
5. Conifers includes mixed woodland dominated by conifer species and broadleaves includes mixed woodland dominated by broadleaf species.

Figure 1: Area of woodland, UK, 1998 to 2022

Figure 1 shows the area of woodland (in millions of hectares) in the UK³ from 1998 to 2022, and the extent to which different countries have contributed to the UK total. Woodland area has risen by 317 thousand hectares (11%) since 1998, with the largest increase in Northern Ireland.



Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service, National Forest Inventory.

Additional data are available in accompanying data set A.

³Woodland areas for England, Scotland and Wales are based on data from the [National Forest Inventory](#). The trends shown take account of areas of new planting and identifiable permanent woodland loss. Areas of woodland loss that are not yet identifiable (e.g., recent conversion of woodland for the restoration of open habitats) are not accounted for.

Area of certified woodland

Certified woodland in the UK has been independently audited against the UK Woodland Assurance Standard. Forestry certification schemes are owned by national or international non-governmental organisations and exist to promote good forest practice. They offer product labels to demonstrate that wood or wood products come from well-managed forests.

Figures for certified woodland areas are often used as an indicator of sustainable forest management. However, it should be noted that woodland that is not certified may also be managed sustainably.

Most changes to the certified woodland area figures over time are a result of new areas being certified or certificates not being renewed upon expiry. Temporary changes can also occur if there is a time lag between expiry and renewal.

The total area of certified woodland in the UK at 31 March 2022 is 1.42 million hectares. This represents 44% of the total UK woodland area, 60% of the woodland area in Scotland, 56% in Northern Ireland, 47% in Wales and 24% in England.

Table 2: Area of certified woodland, UK, 2022

Table 2 shows the area of certified woodland (in thousands of hectares) in the UK at 31 March 2022. The data are shown for each country, split by public and private sector land, alongside the percentage of total woodland area.

Country	FE/FLS/NRW/FS (thousand ha)	Private sector (thousand ha)	Total (thousand ha)	Percentage of woodland area (%)
England	214	101	315	24
Scotland	467	428	895	60
Wales	115	30	145	47
Northern Ireland	62	3	65	56
UK	858	562	1,420	44

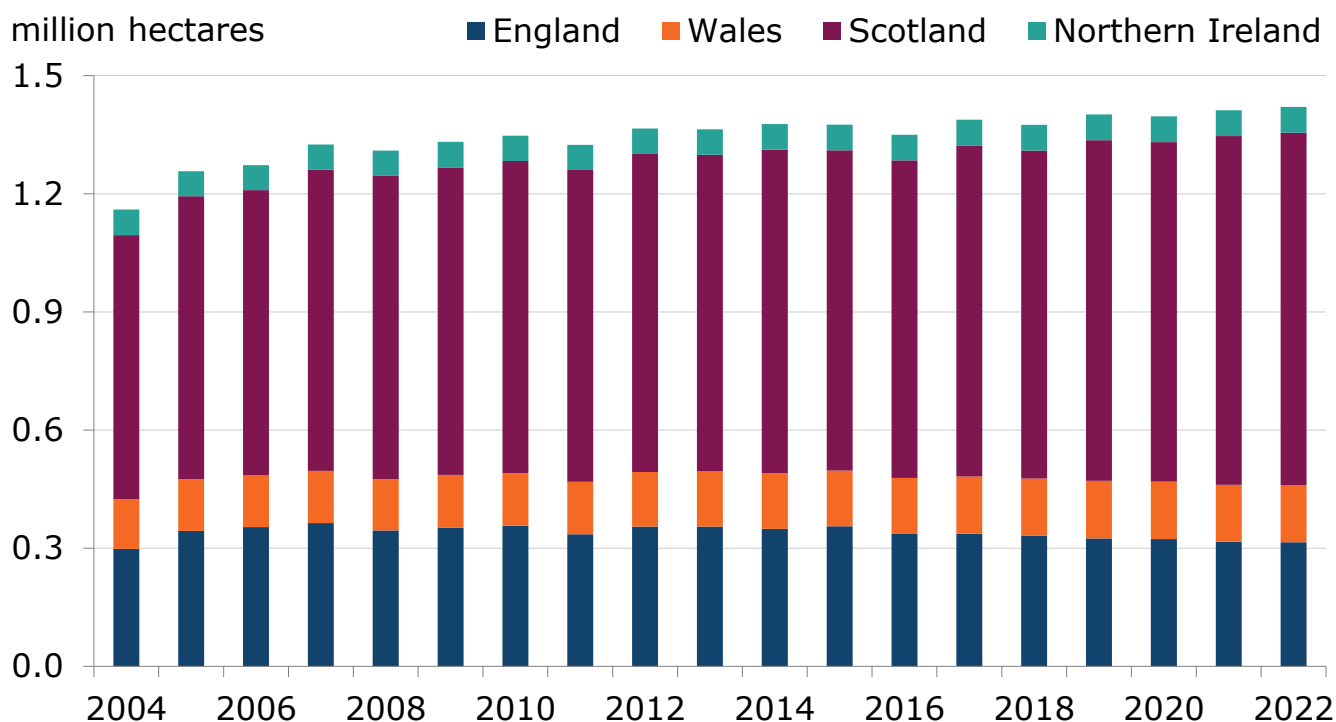
Source: Forest Stewardship Council, Programme for the Endorsement of Forest Certification, Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service.

Note:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately owned woodland.
3. All certified woodland in 2022 is certified under the Forest Stewardship Council (FSC) scheme or the Programme for the Endorsement of Forest Certification (PEFC) scheme, with many woodlands certified under both schemes.
4. The estimates are based on UK data published by FSC and PEFC, supplemented by data from individual certificates and other sources. Where possible, figures are for the woodland area certified, rather than the land area certified.
5. All Forestry England/Forestry and Land Scotland/Natural Resources Wales WGWE/Forest Service woodland is certified. The Forestry England/Forestry and Land Scotland/Welsh Government Woodland Estate/Forest Service areas are the latest areas, as shown in Table 1, rather than the areas shown on certificates.

Figure 2: Area of certified woodland, UK, 2004 to 2022

Figure 2 shows the area of certified woodland (in millions of hectares) in the UK from 2004 to 2022, and the extent to which different countries have contributed to the UK total. The area of certified woodland in the UK has increased by 261 thousand hectares (22%) since March 2004.



Source: Forest Stewardship Council, Programme for the Endorsement of Forest Certification, Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service.

Note:

1. All certified woodland is certified under the Forest Stewardship Council (FSC) scheme or the Programme for the Endorsement of Forest Certification (PEFC) scheme, with many woodlands certified under both schemes.
2. The estimates are based on UK data published by FSC and PEFC, supplemented by data from individual certificates and other sources. Where possible, figures are for the woodland area certified, rather than the land area certified.

The 1.42 million hectares of certified woodland at March 2022 represents a 0.6% increase on the previous year. Most of this increase occurred in Scotland, with a small increase in Northern Ireland and decreases in England and Wales.

This release is the first to include woodland certified by [Grown in Britain](#) (GiB). As GiB's data is new to this report, they are currently designated as experimental statistics and are not included in Figure 2 or Table 2, that present areas certified by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). Instead, the GiB certified areas are summarised below.

The total area of woodland certified by GiB is 252 thousand hectares; where 245 thousand hectares of this is also certified by FSC and/or PEFC, and 8 thousand hectares is certified by GiB only.

Of the 8 thousand hectares that are only certified by GiB, more than 99% is in England with the remainder in Wales.

Additional data are available in accompanying data set B.

New planting

New planting is the creation of new areas of woodland by planting trees on land that was not previously woodland. Trends in new tree planting rates are influenced by changes to the incentives available to landowners (in the form of grants) and the availability of land for planting. The statistics presented here also include new woodland that is created by natural colonisation of trees (where known). Statistics on new planting are used to inform government policy and resource allocation and are used in producing annual estimates of woodland area.

Table 3 shows the area of new woodland that was created in the year to 31 March 2022. The total area of new planting in the UK in 2021-22 was 13.84 thousand hectares. Conifers accounted for 50% of the total area of new planting. Most new planting (95%) took place on private sector land. Seventy-six percent of the total new planting area took place in Scotland, 16% in England, 4% in Wales and 4% in Northern Ireland.

Table 3: Area of new planting, UK, 2021-22

Table 3 shows the area of new planting (in thousands of hectares) in the UK in the year ending March 2022. The data are shown for each country, split by forest type (conifer or broadleaf) and ownership (public or private sector).

	England	Scotland	Wales	Northern Ireland	UK
New planting by forest type					
Conifers	0.27	6.34	0.18	0.09	6.88
Broadleaves	1.98	4.14	0.40	0.44	6.96
All new planting	2.26	10.48	0.58	0.54	13.84
New planting by ownership					
FE/FLS/NRW/FS ¹	0.00	0.62	0.02	0.01	0.66
Private sector ²	2.25	9.85	0.55	0.52	13.18
All new planting	2.26	10.48	0.58	0.54	13.84

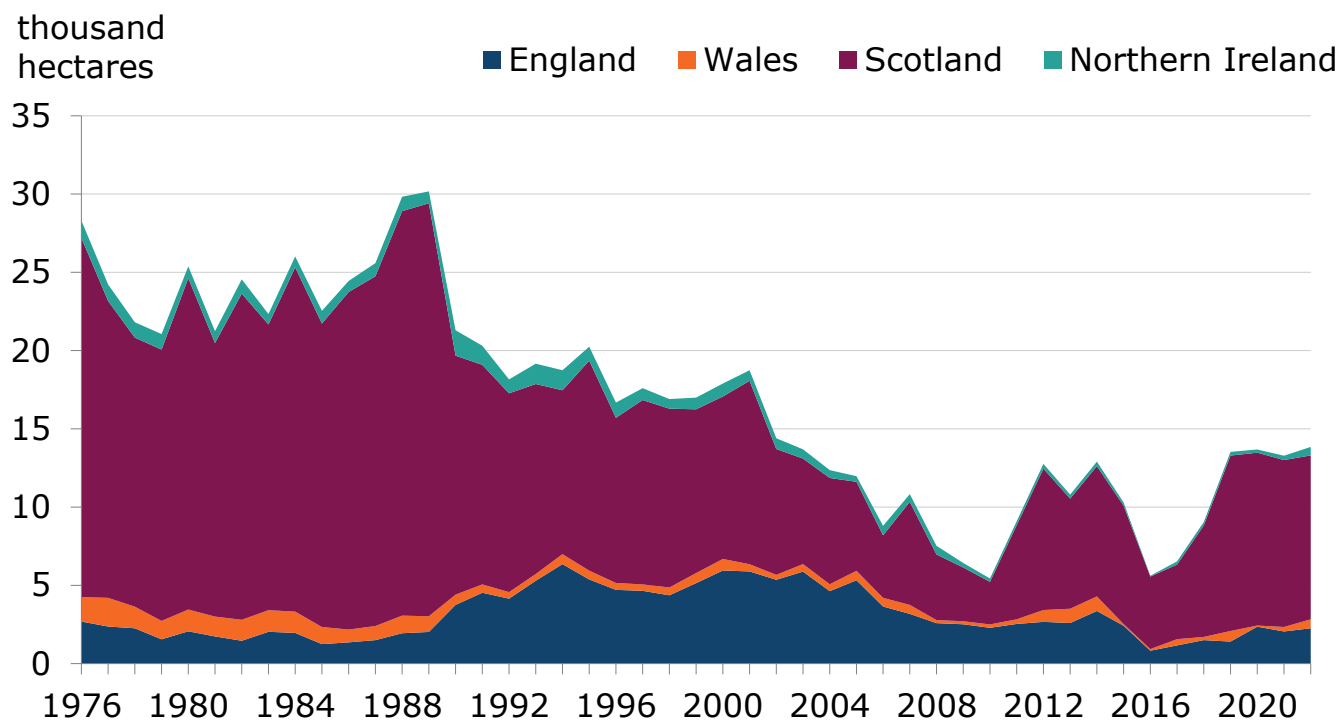
Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service.

Note:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland).
2. Private sector: all other woodland. Includes other publicly owned woodland (e.g., owned by local authorities) and privately owned woodland.
3. Figures for grant-aided planting relate to areas for which grants were paid during the year to 31 March.
4. Estimates for areas planted without grant aid are believed to be under-reported and, as a result, the reported figures are likely to under-estimate the true level of planting activity. For England, new woodland creation funded by sources other than the Countryside Stewardship Woodland Creation Grant include planting supported by the Woodland Trust, by the Environment Agency, by Natural England and land acquired by the National Forest Company. For Scotland, a small amount of new planting without grant aid was included.
5. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
6. Includes woodland formed by natural colonisation (where known).

Figure 3: Area of new planting, UK, 1976 to 2022

Figure 3 shows the area of new planting from March 1976 to March 2022, and the extent to which different countries have contributed to the UK total.



Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service.

Note:

1. Private sector figures are based on grant-supported new planting and (where possible) with estimates for areas planted without grant aid.
2. Figures for grant-aided planting relate to areas for which grants were paid during the year to 31 March.
3. Estimates for areas planted without grant aid are believed to be under-reported and, as a result, the reported figures are likely to under-estimate the true level of planting activity. For England, new woodland creation funded by sources other than the Countryside Stewardship Woodland Creation Grant include planting supported by the Woodland Trust, by the Environment Agency, by Natural England and land acquired by the National Forest Company. For Scotland, a small amount of new planting without grant aid was included for 2016-17 to 2019-20.
4. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
5. Includes woodland formed by natural colonisation (where known).

In the past 10 years, the area of new planting in the UK has ranged from under 6 thousand hectares in 2016 to more than 13 thousand hectares in 2022.

Additional data are available in accompanying data set C.

Publicly funded restocking

Restocking is the replacement of trees on areas of woodland that have been felled; this can be done either through replanting or natural regeneration. The statistics presented here include felled areas that have been restocked by both natural regeneration and replanting.

As restocking takes place on woodland that has been previously harvested and it is a condition of most felling licences that the area is restocked, restocking rates are mainly driven by harvesting levels (with a time lag, often of around 2 years, between harvesting and restocking).

Economic factors, including grant rates, may have some effect on species choice at restocking. In addition, the precise timing of restocking may be affected by weather conditions.

This release only covers publicly funded restocking, that is:

- restocking of Forestry England/Forestry and Land Scotland/Natural Resources Wales/Forest Service woodland, and
- grant-aided restocking of private sector woodland.

Grant support for restocking in Scotland has been limited since 2008. The Forestry Grant Scheme was launched in Scotland in March 2015 and does include support for restocking in most but not all circumstances. As a result, grant-aided restocking does not represent all private sector restocking in Scotland. It is therefore likely that conifer restocking in Scotland in recent years is under-reported in this release and other statistics.

Grant support in England is now provided by the Countryside Stewardship scheme, which opened for applications in early 2016. Countryside Stewardship funding for restocking is only available under limited circumstances (through the tree health grant). The restoration (and restocking with native species) of PAWS (Plantations

on Ancient Woodland Sites) is also supported by the HS2 Woodland Fund. No estimate has been made for restocking in England that is no longer supported by grants and therefore restocking in England in recent years is under-reported in this release and other statistics.

In 2021-22, a total of 15.28 thousand hectares of restocking was publicly funded in the UK. Conifers accounted for over twelve thousand hectares (81%) of the total area of restocking. Most reported restocking (66%) took place on FE/FLS/NRW/FS land.

Sixty-five percent of publicly funded restocking in the UK took place in Scotland, 20% in England, 10% in Wales and 5% in Northern Ireland.

Table 4: Area of publicly funded restocking, UK, 2021-22

Table 4 shows the area of publicly funded restocking (in thousands of hectares) that took place in the UK in the year ending March 2022. The data are shown for each country, split by forest type (conifer or broadleaf) and ownership (public or private sector).

	England	Scotland	Wales	Northern Ireland	UK
Restocking by forest type					
Conifers	2.29	8.34	0.93	0.79	12.35
Broadleaves	0.81	1.56	0.54	0.02	2.93
All restocking	3.09	9.90	1.48	0.81	15.28
Restocking by ownership					
FE/FLS/NRW/FS ¹	2.54	5.59	1.34	0.65	10.11
Private sector ²	0.55	4.32	0.14	0.16	5.17
All restocking	3.09	9.90	1.48	0.81	15.28

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service.

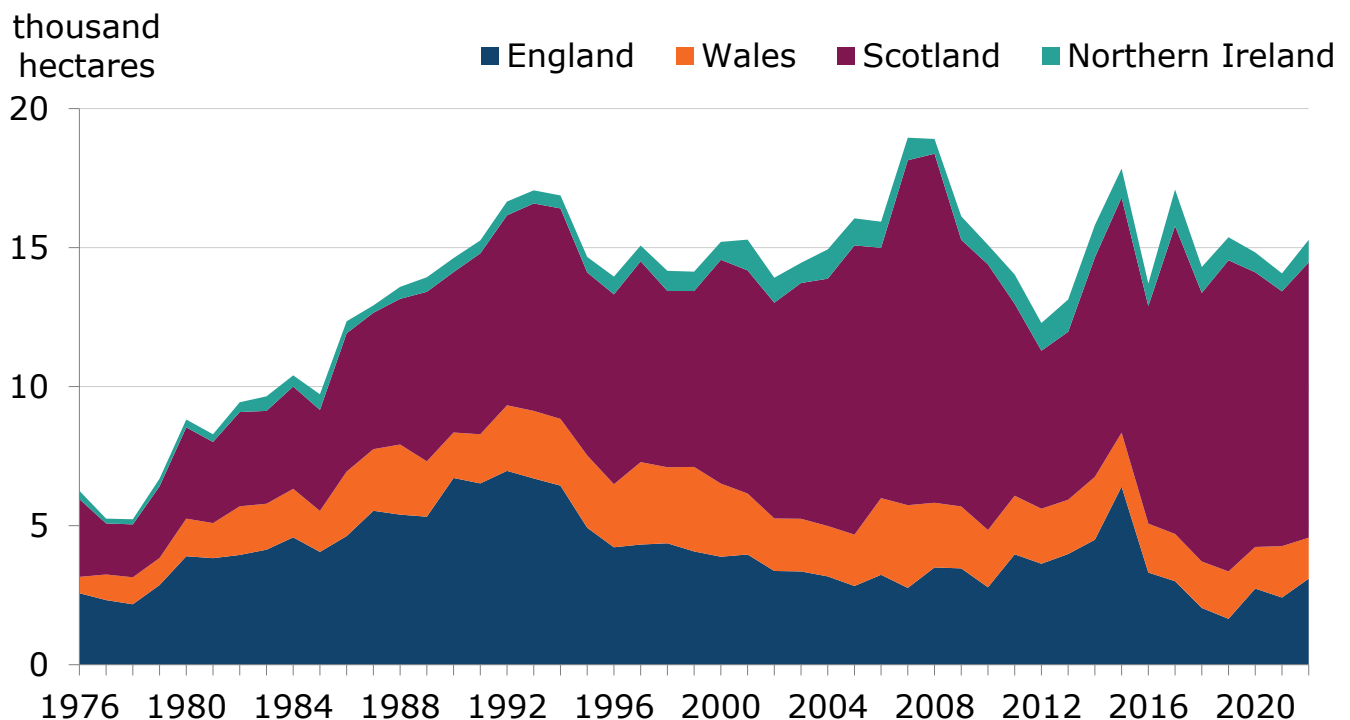
Note:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland).
2. Private sector: all other woodland. Includes other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Private sector figures are based on areas for which grants were paid during the year to 31 March. No estimate of areas planted without grant aid was included.
4. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
5. Includes woodland restocked by natural regeneration.
6. Restocking by natural regeneration in non-clearfell areas may be under-represented.

As private sector figures are based on areas receiving grants for restocking, and restocking is not supported (or only supported in limited circumstances) by some grant schemes, these figures under-estimate the true level of restocking in the UK.

Figure 4: Area of restocking, UK, 1976 to 2022

Figure 4 shows the area of publicly funded restocking from March 1976 to March 2022, and the extent to which different countries have contributed to the UK total. It indicates an overall increase in restocking rates during the period. Over the same period, there has been a general increase in UK wood production (see the latest [UK Wood Production and Trade statistics](#)).



Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service.

Note:

1. Private sector figures are based on areas for which grants were paid during the year to 31 March.
2. Estimates of areas restocked without grant aid are also included (where possible) up to 2009-10, but no estimates are available since then. As a result, the reported figures are likely to underestimate the true level of restocking activity.
3. The planting season lies both sides of 31 March, and the weather can cause restocking to be advanced or delayed.
4. Includes woodland restocked by natural regeneration.
5. Restocking by natural regeneration in non-clearfell areas may be under-represented.

The reported area of restocking fell significantly after a peak of 19 thousand hectares in 2006-07. This followed changes to grant support for restocking in Scotland, that resulted in some non-grant aided Sitka spruce restocking being excluded from the estimates.

Figure 4 shows a fall in the area of restocking in 2015-16, following changes to grant schemes across the UK. Reported restocking has continued to fall in England, where grant aid is now only available in very limited circumstances; however, 2021-22 saw an 8% increase on the previous year.

For further information, see the Data Sources and Methodology section of the Annex. Additional data are available in accompanying data set C.

Woodland Carbon Code

A total of 366 projects across the UK were validated at 31 March 2022 and are projected to sequester 6.9 million tonnes of carbon dioxide over their lifetime of up to 100 years (Table 5). This represents 5.5 million tonnes of carbon dioxide in Scotland, 1.1 million tonnes of carbon dioxide in England, 230 thousand tonnes in Wales and 11 thousand tonnes in Northern Ireland.

A total of 1,534 projects were registered under the [Woodland Carbon Code](#) by the end of March 2022, covering around 59 thousand hectares of woodland and projected to sequester 18.7 million tonnes of carbon dioxide over their lifetime.

Table 5: Woodland Carbon Code projects, UK, at 31 March 2022

Table 5 shows the number of projects, area of woodland and projected carbon sequestration for Woodland Carbon Code projects registered at 31 March 2022. The data are shown for each country alongside UK totals.

	England	Wales	Scotland	Northern Ireland	UK
Number of projects¹					
Awaiting validation ²	443	175	468	82	1,168
Validated ³	63	24	158	2	247
Verified ⁴	45	5	68	1	119
Total validated	108	29	226	3	366
All projects	551	204	694	85	1,534
Area of woodland (ha)					
Awaiting validation	5,381	1,385	33,618	520	40,905
Validated	1,373	466	12,275	15	14,128
Verified	638	100	3,670	9	4,416
Total validated	2,011	566	15,945	23	18,544
All projects	7,392	1,951	49,563	543	59,449
Projected carbon sequestration⁵ (thousand tonnes of carbon dioxide equivalent)					
Awaiting validation	2,235	493	8,896	236	11,860
Validated	737	181	4,001	8	4,927
Verified	349	49	1,526	3	1,927
Total validated	1,085	230	5,528	11	6,854
All projects	3,320	722	14,423	247	18,714

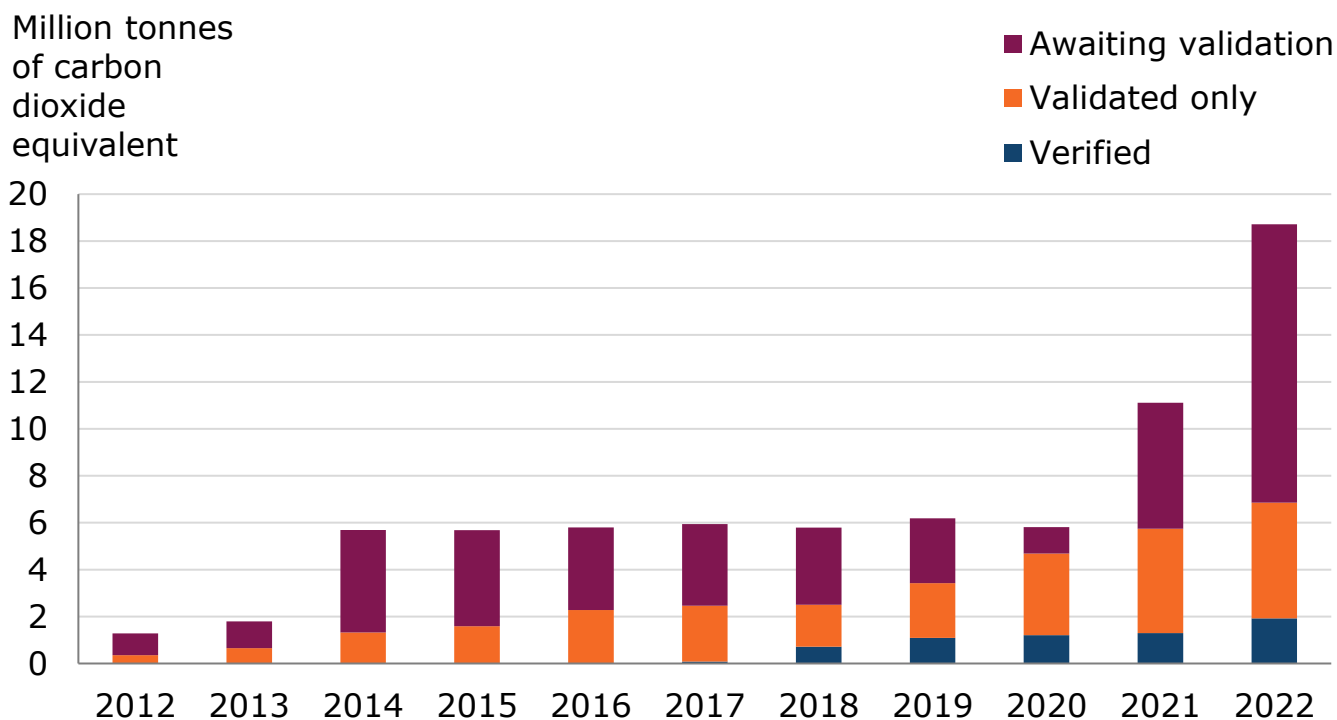
Source: UK Woodland Carbon Registry, Scottish Forestry.

Note:

1. Projects can be validated/verified individually or as part of a group. The statistics presented here show the number of projects validated or verified whether they were administered individually or as part of a group.
2. Awaiting validation: these projects are registered with the Woodland Carbon Code but have not yet been assessed by a validator.
3. 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.
4. 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.
5. Figures for carbon sequestration indicate the total projected sequestration of the projects over their lifetime of up to 100 years and include the amount claimable by a project plus the amount allocated to a shared "buffer" in case of unanticipated losses.

Figure 5: Projected carbon sequestration by Woodland Carbon Code projects, UK, 2012 to 2022

Figure 5 shows projected carbon sequestration for all Woodland Carbon Code projects in the UK from March 2012 to March 2022. From March 2014 to March 2020, total projected carbon sequestration varied little (around 6 million tonnes of carbon dioxide equivalent). The last two years have seen large increases in projected carbon sequestration, with a 68% increase from 2021 to 2022, a result of a 117% increase in the total number of projects registered.



Source: UK Woodland Carbon Registry, Scottish Forestry.

Note:

1. Figures for carbon sequestration indicate the total projected sequestration of the projects over their lifetime of up to 100 years and include the amount claimable by a project plus the amount allocated to a shared "buffer" in case of unanticipated losses.
2. Awaiting validation: these projects are registered with the Woodland Carbon Code but have not yet been assessed by a validator.
3. 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.
4. 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.

The data presented here represent net changes in projects (i.e., additions less deletions).

Projects can be removed from the register if they do not meet the Code's standards, planned woodland creation projects do not go ahead, or the landowner no longer wishes to claim the carbon benefit of the project.

These changes in the latest year reflect increases in both the number of projects registered and the number validated between March 2021 and March 2022.

Additional data, including quarterly estimates to March 2018, are available in accompanying data set D.

Annex

Introduction

This annex provides background information on the woodland area, new planting, publicly funded restocking and Woodland Carbon Code statistics presented in this release. It covers the data sources and methodology used to produce the statistics, information on quality measures and on any revisions to historic data and links to further information.

Glossary

Broadleaves

Trees that do not have needles or cones, such as oak, birch and beech. A few, such as alder, have cone-like structures for their seeds which are not true cones.

Clearfell areas

Sites where all trees have been felled at once. In non-clearfell areas, only some of the trees are felled at any one time.

Conifers

Trees with needles and cones, such as spruce, pine and larch.

Coppice

Trees that are cut near ground level (or sometimes higher, in which case they are called pollards), causing them to produce many small shoots. These shoots are harvested every few years at a relatively early age for products such as staves, fencing, fuel and charcoal. "Coppice with standards" includes scattered trees that are left to grow as normal ("standards").

Establishment

The first five to ten years or formative period that ends once young trees are of sufficient size that, given adequate protection, they are likely to survive at the required stocking.

Forest

In the United Kingdom, there is no formal definition of “forest”; the term is often used for large woodland areas (especially conifers) or for old Royal hunting preserves such as the New Forest or the Forest of Dean.

Forest Research (FR)

The Forestry Commission agency responsible for forestry and tree related research (including statistics).

Forest Service (FS)

An executive agency of the Department of Agriculture, Environment and Rural Affairs (DAERA). Forest Service fulfils DAERA’s legal obligations for forestry in Northern Ireland.

Forestry and Land Scotland (FLS)

The Scottish Government agency responsible for managing the national forests and lands in Scotland, created on 1 April 2019.

Forestry Commission (FC)

The government department responsible for forestry matters in England. The Forestry Commission’s functions in Wales transferred to the Welsh Government and to Natural Resources Wales on 1 April 2013. The Forestry Commission’s functions in Scotland transferred to Scottish Forestry and to Forestry and Land Scotland on 1 April 2019. The Forestry Commission is supported by two agencies; Forestry England and Forest Research.

Forestry England (FE)

The Forestry Commission agency responsible for managing the national forests in England. Prior to April 2019, Forestry England was known as Forest Enterprise England.

FSC

Forest Stewardship Council.

Great Britain (GB)

England, Scotland and Wales.

Hectare (ha)

Unit of area defined as 10,000 square metres (100 m by 100 m), approximately equivalent to 2.47 acres.

Natural colonisation

The creation of new woodland by natural means, i.e., without sowing or planting.

Natural regeneration

The regeneration of existing woodland by natural means, i.e., without sowing or planting.

Natural Resources Wales (NRW)

The organisation responsible for advising the Welsh Government on the environment, created on 1 April 2013.

New planting

Establishing woodland on ground that was not woodland in the recent past.

NFI

National Forest Inventory.

NIWT

1995-99 National Inventory of Woodland and Trees.

PEFC

Programme for the Endorsement of Forest Certification.

Restocking

The replacement of trees on areas of woodland that have been felled; this can be done either through replanting or natural regeneration.

Scottish Forestry

The Scottish Government agency responsible for forestry policy, support and regulations, created on 1 April 2019. Scottish Forestry also has responsibility for managing the UK Woodland Carbon Code on behalf of the Forestry Commission in England, the Welsh Government and the Northern Ireland Forest Service.

Tonne of carbon dioxide equivalent (tCO₂e)

Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO₂) equivalent. To convert from tonnes CO₂ to tonnes carbon multiply by 12/44.

United Kingdom (UK)

Great Britain and Northern Ireland.

Validated

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.

Verified

Verification is the evaluation of a Woodland Carbon Code 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.

Woodland

Land under stands of trees with a minimum size of 0.5 hectares and a canopy cover of at least 20% (25% in Northern Ireland), or having the potential to achieve this, including integral open space, and including felled areas that are awaiting restocking. Generally (including the UK) woodland is defined as having a minimum area of 0.5 ha.

Data sources and methodology

Area of woodland

The woodland area statistics provided in this release (see Figure 1) are based on the NFI provisional woodland area map of Great Britain at March 2021. The map is overlaid with a map of Forestry England land, Forestry and Land Scotland land and the Welsh Government Woodland Estate, to enable a breakdown by ownership type to be estimated, and the figures derived from these maps are then updated to March 2022 by adding areas of new planting in 2021-22. Initial estimates of conifer stocked area and broadleaved stocked area at March 2012, derived from NFI interim field survey results, were used to estimate the breakdown by type of woodland. More information can be found on our [Methodology and Outputs page](#).

The provisional 2021 woodland map differs from the figures for woodland area provided in the NFI report on tree cover outside woodland in Great Britain, that were based on the NFI 2013 map and the National Tree Map™ (NTM™), the latter in combination with samples of visual aerial photograph interpretation and field sampling outside of areas on the NFI map. The estimates in the tree cover report

include estimates of woodland area outside the NFI map derived from the other sources. Work is ongoing to calibrate the figures, and the NFI woodland map for 2021 incorporates amendments made to date as a result of the calibration (as well as additional areas of woodland creation since 2013). More information on the NFI methodology and results from previous woodland area estimates can be found on the [National Forest Inventory page](#).

The annual NFI maps take account of changes since the previous map. These changes include new planting in the latest year, permanent observed woodland loss and other changes (e.g., arising from the work to calibrate the NFI map with the data from other sources that was used in the NFI report on tree cover outside woodland in Great Britain). These revisions do not take account of woodland loss that may arise when woodland is converted to open habitats.

In the time series presented in Figure 1, woodland area estimates for years before 2011 were revised from those originally published for consistency with results from the National Forest Inventory, to enable comparisons over time.

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.

Figures for Northern Ireland (Forest Service and non-Forest Service woodland) are provided by the Northern Ireland Forest Service. County breakdowns are available from the [Forest Service Woodland Register](#).

Certified area

Data on certified woodland areas are obtained from the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification (PEFC) and contact with individual land owners and managers. Some of the certified woodland

has dual certification, i.e., it is certified under both the FSC scheme and the PEFC scheme.

The data collected from FSC and PEFC are the areas that are certified for each certificate holder. Follow-up enquiries with larger certificate holders are used to check the certified areas and to provide a country breakdown.

As all Forestry England/Forestry and Land Scotland/Natural Resources Wales (Welsh Government Woodland Estate)/Forest Service woodland is certified, the areas used are those provided in Table 1, rather than the areas shown on the certificates.

New planting and restocking

New planting is the creation of new areas of woodland. Restocking is the replanting of existing 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.

Information about Forestry England, Forestry and Land Scotland, Natural Resources Wales and Forest Service 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 Countryside Stewardship and the England Woodland Creation Offer (EWCO) in England, Glastir and the Woodland Investment Grant (TWIG) in Wales, and the Forestry Grant Scheme in Scotland.

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 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.

From 2018-19, the estimated area of new planting includes new woodland creation by the Woodland Carbon Fund, HS2 Woodland Fund and Northern Forest. From 2020-21, the estimated area of new planting includes new woodland creation by the Community Forest Trust. This year is the first to include new woodland creation funded by the England Woodland Creation Offer (EWCO).

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 to 2019-20 was also included. No estimates have been included for restocking with Sitka spruce in Scotland, or for restocking in England, that are no longer supported by grants. It is assumed that there is no non-FS 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.

Planting estimates for Wales in 2015-16 to 2018-19 have been revised following the addition of further grant schemes that had not been previously covered and revisions to the methodology for reporting on Rural Payments Wales data.

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

The [methodology and outputs relevant to UK woodland area](#), planting and restocking were reviewed in 2014.

Woodland Carbon Code data

Information about Woodland Carbon Code projects comes from the [UK Land Carbon Registry](#).

Quality

The statistics on woodland area presented here refer to woodland as a land use rather than a land cover, so felled areas and newly planted areas are included within the definition of woodland. Some statistics on woodland area as a land cover are available from other sources (e.g., [Land Cover Map](#)).

Note, at time of publication, data on new planting funded by the Sustainable Management Scheme in Wales was not available. Similarly, due to data quality concerns, new planting in England by National Highways is not included.

Detailed information on the quality of the statistics presented in this publication is available in the [quality report on woodland statistics](#).

Revisions

Statistics at March 2022 and for 2021-22 are provisional and published for the first time in this release.

Woodland area figures at March 2020 and at March 2021 have been revised from those provided in Forestry Statistics 2021 to take account of updates to the NFI woodland area map. A revision to the 2020 NFI woodland map to reflect land use change and mapping errors have resulted in a decrease in the woodland area estimate for 2020 of 1.2 thousand hectares in England, and an increase of 0.2 thousand hectares in Scotland and 0.2 thousand hectares in Wales. Revisions to the 2021 woodland map have resulted in an increase in the woodland area estimate for 2021 of 4 thousand hectares in Scotland and 0.5 thousand hectares in Wales, and a decrease of 0.5 thousand hectares in England. Revised woodland areas at March 2020 (obtained from the NFI revised woodland area map of Great Britain at March 2020) and at March 2021 (obtained from the NFI provisional woodland area map of Great Britain at March 2021), are provided in the accompanying spreadsheets.

As the woodland area estimates are also used to estimate certified area for FE/FLS/NRW/FS woodland, the certified woodland area figures for 2020 and 2021 have also been revised, resulting in revisions of up to 0.7%.

Other figures have not been revised from those previously published in Forestry Statistics 2021.

Our [revisions policy](#) sets out how revisions and errors to these statistics are dealt with.

Further information

[Supplementary tables to this release](#) provide longer time series data by country for woodland area, certified woodland area, new planting, publicly funded restocking and Woodland Carbon Code project information.

Further information on woodland area in Great Britain is produced by the [National Forest Inventory](#).

Previous woodland area statistics are available in [Forestry Statistics](#) 2021 (published September 2021) and [Forestry Facts & Figures](#) 2021 (published September 2021).

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

Figures for woodland area in the UK are provided to international organisations; the Food and Agriculture Organisation of the United Nations (FAO) for the 5-yearly [Global Forest Resources Assessment](#), and Forest Europe for the 4-yearly [State of Europe's Forests](#). The most recent results use UK data submitted in early 2019.

Woodland area and new planting data 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). [Statistics on UK greenhouse gas emissions](#) are published by the Department of Business, Energy and Industrial Strategy (BEIS).

The international definition of forests differs slightly from the UK definition of woodland in terms of the minimum canopy cover threshold. For the UK, there is a requirement for canopy cover of at least 20%, whilst the international definition specifies a minimum of 10% canopy cover.

Supplementary data are available in the [accompanying spreadsheets](#).

Further information on carbon on the [Woodland Carbon Code homepage](#) and in [Forestry Statistics](#) 2021.

Release schedule

Final results for (the year to) March 2022 will be published on 29 September 2022 in Forestry Statistics 2022 and Forestry Facts & Figures 2022.

Provisional Woodland Statistics for the year to 31 March 2023 will be published on 15 June 2023.

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