



## Woodland Carbon Code version 3.0

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## Introduction

### Background and purpose

The Woodland Carbon Code is the quality assurance standard for UK woodland carbon projects.

It empowers landowners, organisations and businesses to address **climate change** by creating and supporting **woodland** projects across the UK.

The code is delivered by Scottish Forestry on behalf of the governments of the UK, Scotland, Wales and Northern Ireland.

### Geographical scope

The Woodland Carbon Code operates across the UK only. This includes England, Scotland, Wales and Northern Ireland. It cannot be used in British overseas territories or crown dependencies.

### Procedures for the use of the standard

**Project developers** shall use an accredited **validation/verification body** to validate and verify their project according to the [validation](#) and [verification](#) processes set out on our website.

Validation/verification bodies have experience of sustainable forest management and are accredited by UK Accreditation Service to validate and verify Woodland Carbon Code projects to:

- ISO 17029:2019 Conformity assessment - General principles and requirements for validation and verification bodies.
- ISO 14065:2020 General principles and requirements for bodies validating and verifying environmental information
- ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements

They will check that statements about predicted or actual **carbon sequestration** are materially correct. Projects are verified to a reasonable level of assurance, except at year five, where it's a limited level of assurance.

If at any point there is no UK Accreditation Service accredited validation/verification body for the Woodland Carbon Code, the **Woodland Carbon Code team** will put temporary validation/verification arrangements in place.

### Disclaimer

The Woodland Carbon Code is a voluntary standard.

Woodland Carbon Code standards, tools and documents are distributed 'as is' and without warranties as to performance or merchantability or any other warranties whether expressed or implied. No responsibility for loss occasioned to any person or organisation acting, or refraining from action, as a result of any material in the

standard, tools and documents can be accepted by Scottish Forestry, the Forestry Commission, Welsh Government or Northern Ireland Forest Service.

Validation and verification do not imply endorsement by Scottish Forestry of the value of any investment.

## Interpretation of the standard

We may issue clarifications to this standard following feedback from interested parties. If any area of the requirements is not clear, please [contact us](#) to request clarification.

## Complaints and disputes

If you have a complaint about the standard of service from validation/verification bodies or disputes about the decision made by a validation/verification body, direct your complaint to the dispute process of the relevant validation/verification body in the first instance.

- [Organic Farmers and Growers](#)
- [Soil Association Certification](#)

If you have a complaint or issue with the standard itself or its interpretation, this should be raised with the [Woodland Carbon Code disputes panel](#).

Any complaints about the conduct of Scottish Forestry staff members should follow our [standard complaints procedure](#).

## Future changes to the Code

### Frequency of updates

This is version 3.0 of the Woodland Carbon Code released on 1 August 2025.

Additional information is available at [www.woodlandcarboncode.org.uk](http://www.woodlandcarboncode.org.uk).

We plan to update the standard and documents every three years to ensure they are clear and reflect best practice.

We will update the cost and income data in the cashflow annually on 1 July.

We may issue clarifications between standard updates. Clarifications are effective immediately.

The latest standard, any clarifications and supporting guidance are available at [www.woodlandcarboncode.org.uk](http://www.woodlandcarboncode.org.uk). Please refer to this website for the most up to date version.

Projects shall adhere to the most current version of the code and accompanying documents. This requirement is subject to the transition arrangements below.

## Transition periods

### Standard version and other supporting documents

For the transition to version 3.0 of the standard, projects submitting for validation or verification up to 30 June 2026 may use either version 2.2 or version 3.0 of the standard.

After this date, all projects shall use the new version.

<b>Validation submission date</b>	Before 1 August 2025	1 August 2025 to 30 June 2026	1 July 2026 to 30 June 2028
<b>Standard version</b>	V2.2	V2.2 or V3.0	V3.0

### Cashflow version

Each time we subsequently update the cashflow, there will be a year's transition period. Project developers may choose whether to use the current or new cashflow based on their implementation date.

<b>Implementation date</b>	Before 1 August 2025	1 August 2025 to 30 June 2026	1 July 2026 to 30 June 2027	1 July 2027 to 30 June 2028
<b>Cashflow version</b>	V2.2.1	V2.2.1 or V3.0	V3.0 or V3.1	V3.1 or V3.2

## Using the code

In using the code, project developers and validation/verification bodies shall also take full account of the introduction and glossary.

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For version references, the latest edition of the referenced document applies.

- Carbon calculator
- Cashflow
- Woodland benefits tool
- Survey protocol
- Year 5 monitoring report
- Year 15+ monitoring report
- Clarifications to the standard

## Structure and definition of terms

Each section of the code contains:

### Requirement

These are mandatory requirements of the code and are stated as 'shall'. Woodland carbon projects shall meet all relevant requirements and validation/verification bodies will check and verify that each requirement is being met.

### Means of validation/verification

These are examples of objective evidence that project developers may present to validation/verification bodies to demonstrate that requirements are being met. The list is not exclusive or exhaustive.

Validation/verification bodies will not always need to use all the evidence suggested and may seek verification in other ways. The validation/verification bodies will take account of the size of the project when assessing what evidence is required.

Some sections are not re-checked at verification and do not require further evidence at this stage.

### Guidance

Guidance helps the project developer to understand how the requirements should be applied in practice. Guidance could elaborate on a requirement, explain certain terms or phrases or provide examples of appropriate action.

Where guidance is stated as 'should', it indicates a recommendation or best practice that project developers should aim to implement in their projects.

Where guidance is stated as 'may' it indicates an option or a list of options permissible within the standard.

## **References and glossary**

The code also includes:

### **References**

Other documents may be referenced within each section of the standard.

### **Glossary**

The code also includes a glossary which explains terms in bold. Generally, a glossary term is only emboldened on its first occurrence in a particular section.

# 1 Eligibility

Projects should be eligible in terms of the timing and type of activity, the site type, compliance with legislation and conformance with relevant guidance. The project should also be additional.

## 1.1 Key project dates

### Requirement

From 1 October 2022, all projects (whether single or part of a **group**) shall be registered before work begins onsite (the **project implementation date**).

Between 1 July 2021 and 1 October 2022, projects had to be registered before planting began (or, for **natural regeneration**, the fence was complete or deer control to enable natural regeneration started).

Between 1 August 2013 and 1 July 2021, projects had to register within two years of the start of planting (or, for natural regeneration, within two years of the fence being completed or within two years of deer control to enable natural regeneration starting).

Before 1 August 2013, projects with a start date of 1 January 2000 could register.

Single projects shall be validated within three years of registration.

For groups, projects may be added to a group (subject to group rules) up to the point of validation. Group validation shall be carried out within three years of the date of the first registration within the group.

A validation extension may be given in extenuating circumstances. Validation statements shall only be issued once planting is completed (the **project start date**).

All projects shall have a clearly defined **project duration** of at least 40 years and shall not exceed 100 years.

Projects involving clearfelling shall have a minimum project duration equal to the shortest clearfell rotation in the project, where the shortest clearfell rotation length is more than 40 years. Projects shall undergo monitoring for the duration of the project.

The project duration shall not be extended after validation.

### Means of validation

- **Project design document**.
- Grant scheme contract.

### Means of verification

- Not required unless changes are made to the project duration.

## Guidance

### Project start date and registration

The project implementation date is the date when work begins onsite, either fencing, adoption of an enhanced herbivore/deer management plan, ground preparation or planting, whichever happens first. For a project with a combination of planting and natural regeneration, the project implementation date will be the earliest of the two dates.

The project start date is the last day of planting or, for natural regeneration, the date when fencing is complete and/or the date an enhanced herbivore/deer management plan has started to be implemented. For a project with a combination of planting and natural regeneration, the project start date will be the latest of the two dates. Carbon sequestration is claimed from the start date.

For projects validated using version 1.2 of the Woodland Carbon Code or earlier, the start date was defined as the start of planting.

For groups of projects validated together, the group start date is the latest start date within the group. Carbon sequestration is claimed from the group start date.

The **project registration date** is the date when a project moves from 'draft' to 'under development' status on the **UK Land Carbon Registry**. This is the date the project is approved by the Woodland Carbon Code secretariat and the registry provider.

### Project duration

The project duration is the time over which carbon sequestration claims are to be made. Project developers can choose a project duration between 40 years or the length of their shortest clearfell rotation, if this is longer than 40 years, and 100 years. Their choice may depend on whether it is cost effective to verify carbon sequestration from later **vintages** or how long they want to commit. Projects involving clearfelling can claim the carbon accrued in areas of the project that are not clearfelled up to the project duration.

If projects have not sold all their carbon units, they may reduce the project duration at a verification, provided it remains above the minimum duration. If the project duration is reduced, then the carbon calculation will be updated and some Pending Issuance Units will be marked 'not delivered'.

The project duration should not be confused with **permanence**. See section 2.3.

### Project end date

The **project end date** is the project start date plus the project duration. It can be up to 100 years from the start date. For example, if a project start date is 01/04/2013 and its duration is 100 years, then end date is 31/3/2113.

### Validation extensions

For single projects or groups, a validation extension will be given, for example, if your planting will span three to five planting seasons or planting is unavoidably

delayed. Extensions may last up to one year after your planting finishes. Extensions may also be given in other extenuating circumstances. [Contact us](#).

## 1.2 Eligible activities

### Requirement

Woodland creation activities shall be eligible if they take place on:

- Land that has not been wooded in the last 25 years
- Soils which are not organic (i.e. less than 30cm depth peat in England and 50cm depth peat in Scotland, Wales and Northern Ireland).

The new woodland shall have the potential to achieve at least 20 percent canopy cover. Therefore, the woodland shall achieve at least 400 stems per hectare or no more than five metre spacing over the net project **area**.

Woodlands may be established by planting, direct seeding or natural colonisation/regeneration.

For natural colonisation/regeneration

- The project developer shall demonstrate the need for action to enable woodland to regenerate naturally.
- Where the project developer wishes to claim upfront for carbon sequestration more than 50 metres from a seed source, they shall supply a seedling survey.

Where it is possible that there are **organic soils**, a peat depth survey shall be provided at validation. Where it is possible that there is a mosaic of habitat types or **priority habitats**, then soil type and vegetation (British National Vegetation Classification) surveys shall be provided at validation.

### Means of validation

For conversion of open ground to woodland:

- Statement on land use in project design document.
- Land use records.
- Reference to historical maps, images or other sources such as the Forestry Commission, Scottish Forestry, Welsh Government or Northern Ireland Forest Service planting and felling databases.
- Signed attestation from independent expert.

For natural colonisation/regeneration:

- Seedling survey for 'upfront claimable' areas of natural regeneration conducted before the project start date.
- Map of seedling density

For soil type:

- Statement on soil type in project design document.
- Results of field survey for soil type and, where necessary, surveys for peat depth and vegetation (see section 3.1).
- Soil maps.

## Means of verification

- Not required.

## Guidance

### Natural regeneration

To be eligible, the landowner needs to take some action to enable woodland to regenerate. Most commonly in the UK, this requires reducing browsing pressure.

Successful establishment and carbon sequestration by natural regeneration/colonisation can be less predictable than in planted woodlands. Due to this, we adopt a conservative approach where either a limited number of **Pending Issuance Units** are issued upfront or no Pending Issuance Units are issued upfront.

The actual sequestration at the project site will be established at verification. Any 'extra' sequestration above that issued as Pending Issuance Units will be credited as **Woodland Carbon Units**. Natural regeneration/colonisation areas should be capable of achieving at least 400 stems per hectare overall.

**Upfront claimable areas:** The area/amount of Pending Issuance Units that is 'upfront claimable' depends on evidence that successful regeneration/colonisation is likely. The following areas may be claimed upfront:

- Areas within 50m of a seed source
- Areas further than 50m from a seed source, provided a seedling survey demonstrates that there is evidence of suppressed seedlings

Eligible areas will have a seedling height on average less than 0.5m high, suppressed by browsing. Saplings between 0.5m and 1m are acceptable provided the average seedling/sapling height across the 'claimable area' of the site is less than 0.5m. See the carbon calculation guidance for further details of the seedling survey.

**Future claimable areas:** Project developers may also register and validate areas they hope will naturally regenerate/colonise, but there is not yet sufficient evidence (in the form of seedlings) to claim upfront. These could be areas further from any seed source. No Pending Issuance Units will be issued for these areas, but if the project developer can demonstrate the carbon stock of these areas at verification, Woodland Carbon Units will be issued at that time.

### Soil and the Woodland Carbon Code

The carbon benefits associated with woodland creation are generally greatest on soils with lower organic matter content (such as mineral soils) and where establishment and management techniques disturb the soil as little as possible. Project developers should use ground preparation techniques with the minimum soil disturbance necessary for successful establishment.

For further advice on ground preparation and planting on organomineral soils, see:

- [Decision support framework for peatland protection \(England\)](#)

- [Scotland's guide for cultivation on upland sites](#)

## How do I confirm the soil type and peat depth on my site?

Projects should assess the soil type onsite using one of the following methods:

- Using the following maps to check for areas of peat:
  - The British Geological Survey 1:250,000 or 1:50,000 scale data for mapped areas of peat exceeding 100cm in depth.
  - Soil Survey of Scotland, Soil Survey of England and Wales and Soil Survey of Northern Ireland 1:250,000, 1:63,360, 1:50,000 and 1:25,000 data for mapped areas of peat.
  - Forestry Commission soil maps for mapped 'deep peat' soil types.
- Ascertain soil type using one of the following tools:
  - In Scotland, using [Soilfinder](#)
  - In England and Wales, using the [Land Information System Soilscapes tool](#)
- Field survey for soil type and where necessary, peat depth and vegetation

## Peat depth survey

- Where it is possible there are organic/deep peat soils, then use a peat probe to assess depth ([contact us](#) if further information required):
  - Use GPS to set out a regular 50m by 50m sampling grid across the site
  - Use a peat probe measure and record the depth at each point
  - If you need to show where the 50cm depth boundary falls, 3D modelling packages can then estimate the 50cm depth peat boundary if necessary. This can be affirmed or refined by probing on a 10m by 10m grid as above.

## 1.3 Eligible land

### Requirement

Projects shall demonstrate legal ownership or tenure of the project area

For land under **crofting and common grazing** in Scotland:

Specific requirements apply to land under crofting and common grazing in Scotland which is regulated under the [Crofters \(Scotland\) Act 1993](#) as amended by the [Crofting Reform etc Act 2007](#) (asp 7), the [Crofting Reform \(Scotland\) Act 2010](#) (asp 14) and the [Crofting \(Amendment\) \(Scotland\) Act 2013](#).

We may amend the crofting requirements once the new [Crofting and Scottish Land Court Bill](#) is introduced. If required, we will publish a clarification to version 3.0 of the code.

See section 2.1 for details of the commitments required in these circumstances.

For tenanted crofts, eligible land is land within the inbye land of the croft or common grazing land that has been permanently apportioned to the croft. Land let by subtenants is not eligible without the consent and agreement of both the main tenant and subtenant. Common grazing land that is under a termed (or time limited) apportionment to a croft is not eligible.

For common grazings, land is eligible where either:

- An application for that land has been made and approved for the use of common grazings for forestry purposes under section 50 of the Crofters (Scotland) Act 1993, or
- That land is identified within an agreement made between the landowner and common grazing shareholders and recorded with the Crofting Commission, under section 50A: Joint forestry ventures etc. of the Crofters (Scotland) Act 1993.

### Means of validation

- Contact details form
- Solicitor's letter
- Title deeds
- Land registry records
  - Land Registry (England and Wales)
  - Registers of Scotland
  - The Land Registry Northern Ireland
- Certified copy of lease and landlord's consent, if leased
- For tenanted crofts, including permanently apportioned land:
  - Register number from the Crofting Commission Register of Crofts, and
  - Register number and register plan, including all proposed land from the Registers of Scotland Crofting Register

- For use of common grazings for forestry purposes under section 50 of the Crofters (Scotland) Act 1993:
  - Confirmation of approved application
  - Register number for all participating common grazing shareholders from the Crofting Commission Register of Crofts, and
  - Copy of crofter forestry entry on Crofting Commission Register of Crofts
- For Joint forestry ventures on common grazings under section 50A of the Crofters (Scotland) Act 1993:
  - Register number for all participating common grazing shareholders and landowner from the Crofting Commission Register of Crofts, and
  - Copy of joint forestry venture entry on Crofting Commission Register of Crofts

## Means of verification

- Contact details form, with evidence as per validation if landowner or tenant has changed
- For tenanted crofts - confirmation of tenant contact details
- For use of common grazings for forestry purposes under section 50 of the Crofters (Scotland) Act 1993 – confirmation of contact details for all participating shareholders and common grazing clerk
- For joint forestry ventures etc. On common grazings under section 50A of the Crofters (Scotland) Act 1993 - confirmation of contact details for all participating shareholders, landowner and common grazing clerk

## Guidance

One way of proving ownership through the relevant land registry:

- [Land Registry \(England and Wales\)](#)
- [Registers of Scotland](#)
- [The Land Registry Northern Ireland](#)

For crofting and common grazing in Scotland, see:

- [Crofting Commission Register of Crofts](#)
- [Registers of Scotland Crofting Register](#)

## 1.4 Compliance with the law

### Requirement

Projects shall comply with the law.

### Means of validation

- Statements in project design document that the project complies with all relevant laws.
- Project design document outlines a system or procedures for being aware of and implementing requirements of new legislation.
- Signed commitment from the landowner to comply with the law (see section 2.1).
- No evidence of non-compliance.

### Means of verification

- Statements in the **project progress report** that the project continues to comply with all relevant laws.
- Other evidence as per validation.

### Guidance

Validation and verification are not a legal compliance audit. The validation/verification bodies will be checking that there is no evidence of non-compliance with relevant legal requirements and that no issues of non-compliance are raised by regulatory authorities or other interested parties.

The main legislation relevant to **sustainable forest management** is set out in the [UK Forestry Standard](#) (including the elements of sustainable forest management: climate change, soil, water, biodiversity, landscape, historic environment and people).

## 1.5 Conformance to the UK Forestry Standard

### Requirement

Projects shall conform to the [UK Forestry Standard](#), including the elements of sustainable forest management (climate change, soil, water, biodiversity, landscape, historic environment and people).

### Means of validation

- Statement in project design document that the project conforms to the UK Forestry Standard.
- Signed commitment from the landowner to conform to the UK Forestry Standard (see section 2.1).
- Certification to the UK Woodland Assurance Standard.
- No evidence of non-conformance.

### Means of verification

- Statement in project progress report that the project conforms to the UK Forestry Standard.
- Certification to the UK Woodland Assurance Standard.
- Other evidence as per validation.

### Guidance

Validation and verification are not a UK Forestry Standard conformance audit. The validation/verification bodies will be checking that there is no evidence of non-compliance with the UK Forestry Standard.

Certification to the [UK Woodland Assurance Standard](#) provides evidence that the project meets high standards of sustainable woodland management.

## 1.6 Additionality

### Requirement

Projects shall pass the legal and financial tests to demonstrate **additionality**.

#### Legal test

The woodland creation shall not be required by law. This includes woodland creation under legislation set by the EU, UK, devolved administrations or local government.

A woodland creation project shall be legally additional when there are no laws, statutes, regulations, court orders, environmental management agreements, planning decisions or other legally binding agreements that require its implementation, or the implementation of measures that would achieve equivalent levels of sequestration or other greenhouse gas emissions reductions.

**Compensatory planting** to replace areas of woodland that are felled (e.g. for development or restoration of open habitats) or areas felled due to a Statutory Plant Health Notice shall not pass the legal test.

#### Financial test

Projects shall show that, without carbon finance, woodland creation is not the most economically or financially attractive land use.

Project developers shall use the cashflow template to demonstrate how the financial test is met.

All expected income streams including carbon unit sales shall be included in the cashflow. If you do not receive a formal grant contract, [contact the Woodland Carbon Code team](#).

If further income streams are identified at a later date, evidence shall be requested to show that the project was not aware of this income opportunity or had not entered into a separate agreement at the time of validation.

If Woodland Carbon Code projects are subsequently found not to meet any of the requirements above, the project and carbon units shall be marked 'not delivered' on the UK Land Carbon Registry.

Project developers shall enter zero income from the alternative land use for areas of the carbon project which overlap with a nutrient neutrality project.

Project developers shall fully describe any nutrient neutrality scheme which overlaps the carbon project in the project design document.

Where a nutrient neutrality scheme overlaps with the carbon project, the project developer shall ensure that the woodland benefits tool score for woodlands and water only includes the benefits that are additional to those already delivered through the nutrient neutrality scheme. Only these additional benefits should be reported in the Woodland Carbon Code validation documents.

### Requirements for older projects

Projects which were registered before 1 July 2021 and registered after tree planting had started, shall supply evidence to confirm that carbon finance from selling carbon units or creating your own carbon units was considered in the planning stages of the project. Evidence may include minutes of board meetings or planning documents, cashflow or emails.

## Means of validation

- Statements in project design document.
- Cashflow.
- Further evidence of costs/incomes.
- Nutrient neutrality project documentation where applicable.

## Means of verification

- Not required.

## Guidance

### How to assess additionality

#### Legal test

Further guidance on planning decisions:

Woodland creation as a result of a planning condition under a Town and Country Planning Act or in England the Environment Act 2021 may be eligible provided:

- There is a range of possible environmental solutions and woodland creation is not specifically required.
- It is not compensatory planting to replace areas of woodland felled.
- The income from the developer/planning condition doesn't rule the project out under the financial test.

This includes:

- The Town and Country Planning Act (1990), Section 106 Planning Obligation (for England and Wales)
- The Town and Country Planning Act (Scotland) 1997, Section 75 Planning Obligations
- The Planning Act (Northern Ireland) 2011, Section 121 Planning permission to include appropriate provision for trees
- Conservation Covenants for Biodiversity Net Gain under the Environment Act 2021.

In England, woodland creation projects established to provide biodiversity credits under [Biodiversity Net Gain](#) are unlikely to be eligible for the Woodland Carbon Code as their legal agreements are likely to specify that woodland creation is required.

In some catchments in England, projects are eligible to enter a nutrient neutrality agreement.

- Nutrient neutrality agreements with a legal requirement for woodland creation fail the legal additionality test.
- Nutrient neutrality agreements which require you to stop or partially stop agricultural activity, but don't require you to create woodland, may pass the legal test. 

## Financial test

The purpose of the financial test is to demonstrate that, over the project duration, without carbon finance, woodland creation is not the most economically or financially attractive option for that area of land.

The cashflow uses standard costs incurred in woodland creation and standard carbon/timber income as well as income from the current land use. Project developers enter their actual grant and other income. The net cashflow is calculated over the project duration and is based on current prices.

If your grant includes areas such as agroforestry or hedgerow planting which are not eligible under the Woodland Carbon Code, do not include them in the grant income section of your cashflow. See the FAQs tab in the cashflow for more information.

### Changes to your grant

You should include all relevant, up-to-date grant information in "Section 3: Income" of the data entry tab when completing the cashflow at the point of validation submission.

For example, if you agreed to a maintenance payment of £300 per hectare per year for ten years through the English Woodland Creation Offer, but this is later uplifted to £400 per hectare per year for 15 years before your project is submitted for validation, you must use the higher figure. If you don't declare the uplift at validation submission and this is identified at verification, your project will be re-assessed for financial additionality. If the project fails this re-assessment, all allocated carbon units could be cancelled.

If the grant rate is uplifted after validation submission, financial additionality will not need to be re-assessed.

### Nutrient neutrality

Most nutrient neutrality agreements require the landowner to stop or partially stop farming. The Woodland Carbon Code requires the income forgone to be reduced to zero for areas where nutrient neutrality and code projects overlap. This reflects the fact that most, if not all, farming income will have stopped already as part of the nutrient neutrality agreement.

If your project overlaps with a nutrient neutrality agreement, clearly describe the following in your project design document:

- The areas of your project which overlap
- All relevant terms of your nutrient neutrality agreement

The woodland benefits tool shows the wider benefits of Woodland Carbon Code projects. Only include water benefits in your woodland benefits tool which are not already provided through the nutrient neutrality agreement.

[Contact the Woodland Carbon Code team](#) to discuss your project if you are unsure whether you are eligible.

#### Land use platform - Alternative land use calculation:

Enter the land use type(s) for the assumed gross area of your project on the data entry tab in the cashflow. These values are used to calculate the income from the alternative land use for the project area.

Please use the [land use platform GB](#) or [land use platform Northern Ireland](#) to identify which land use types your project covers. You can either:

- Download the land use type shapefiles from the platform into your own GIS system, or
- Use the platform itself to calculate the project land use type composition.

Our [tutorial videos](#) explain both approaches.

First, calculate the area of each land use type for the net area of the project, whether established by planting or natural regeneration. The land use type options are cattle and sheep (less favoured area), cattle and sheep (lowland) or arable.

Then add the land use type for the assumed gross area (the extra ten percent). This should be based on the land use types within the wider gross project boundary. If there is no wider gross project area, it may be based on one of the land use types already included in the net planted area.

For example, a project has a net area of 90 hectares. You upload a shapefile of the net project area into the land use platform and run the land use analysis tool. This tells you that 50 hectares of the net area is classed as cattle and sheep (lowland) and 40 hectares is classed as arable.

However, the assumed gross area of the project in the cashflow is 100 hectares. This means there is an additional ten hectares of open ground beyond your net area that you need to account for. You should:

1. Use one of the other land classes included in your wider project boundary. You can only use as much of a class as is actually included within your wider project boundary. For example, if you had five hectares of cattle and sheep (less favoured area) within your project boundary outside of your net area, you could only use five hectares of cattle and sheep (less favoured area) and should make up the remaining five hectares with other represented land classes.

2. If your project does not include areas of open ground beyond your net area (because you have integrated open ground within the net area), use the land classes represented in your net area. In this example, you could use ten hectares of arable, ten hectares of cattle and sheep (lowland) or a combination of both.

For this example, your actual wider gross project area includes 15 hectares of arable and five hectares of cattle and sheep (lowland). You may decide how to allocate these values into the cashflow to best represent your income forgone area. For this example, you choose seven hectares of arable and three hectares of cattle and sheep (lowland). This gives you a total of 53 hectares of cattle and sheep (lowland) and 47 hectares of arable.

If you have any questions, please [contact the Woodland Carbon Code team](#) as early as you can.

## 1.7 Project size and grouping

### Requirement

#### Project size

From 1 May 2024, projects shall be at least one hectare net planted/regenerating area.

- A project shall be made up of blocks of woodland at least 0.1 hectares net planted/regenerating area, with a minimum width of ten metres.
- A project shall span up to five planting years in time.
- Blocks of woodland within a project shall be part of a contiguous land ownership unit or shall be under the same ownership, manager and management plan.
- If you are receiving grant funding, the entire grant area relevant to woodland creation shall be included in the Woodland Carbon Code project. The project shall not subdivide a planting area for the purposes of Woodland Carbon Code validation, unless:
  1. The project is planted over several planting seasons. Each seasons' planting may be a separate project provided:
    - a. Each season's planting meets all UK Forestry Standard requirements, including those for species mix and open ground.
    - b. You apportion the grant funding between each season's planting in your cashflow.
  2. One grant is split across multiple landowners. In this case:
    - a. Each landowner involved in the grant contract may make their own decision whether they register with the code.
    - b. Each landowner shall only register the area of the project they own.
    - c. Each landowner shall enter the portion of grant funding relevant for their land in their cashflow.

## Small project process

**Small projects** more than one hectare and less than or equal to ten hectares net planted/regenerating area may use the streamlined process at validation and verification, provided they use the 'small project' tab in the carbon calculator. Projects which use the small project carbon calculator may also:

- Omit a number of sections as indicated in the project design document and project progress report
- Carry out basic monitoring from year 15.

Projects up to ten hectares net planted/regenerating area which were validated as a standard project before version 3.0 may move to the small woods process at their next verification, provided they have not sold all of their pending issuance units.

Projects moving to the small woods process at verification shall complete a small woods carbon calculator. Any previously-issued pending issuance units extra to the small woods prediction will be marked 'Not delivered'.

Small projects may undertake full monitoring and verification at a future verification point to determine the actual carbon sequestration. Projects may receive extra verified Woodland Carbon Units if growth is more than predicted.

Projects which were validated under the small woods process shall undergo re-validation if they wish to move to the standard process.

Projects over ten hectares shall use the 'standard' process at validation and verification.

## Groups of projects

Projects may be grouped for validation and verification. A group shall span no more than five consecutive planting seasons and be constituted of:

- Up to 15 'standard' projects; and
- Up to 100 hectares (net) area of 'small' projects using the streamlined process

If a group is formed for verification, the project start dates within the group shall be within two years of each other. This also means their verifications will be due within two years of each other.

Ideally, groups will maintain their structure throughout the project duration, but groups which have not pooled carbon may change their structure. Groups which have not pooled carbon shall follow the '[project changes](#)' guidance if changes to the group structure are required.

Groups which have pooled carbon shall not change group structure.

## Means of validation

- Project design document.
- Map of site.
- Grant contract.

## Means of verification

- Not required.

## Guidance

### Size

Before May 2024, there was no minimum project or block size. Projects smaller than one hectare which were validated before this date remain eligible.

A project using the small woods process may undertake full monitoring and verification at any verification point, if they believe the project has sequestered more than predicted. Such projects may receive extra Woodland Carbon Units if the survey confirms this.

### Groups

There is no geographic restriction within a group.

If a group manager wishes to make a case to create and validate a group of more than 15 projects or spanning a planting period greater than five years, they should contact the preferred validation/verification body and the Woodland Carbon Code secretariat to ask for prior written approval.

Before version 3.0, groups were required to have a group agreement between the group manager and the landowners of each project. Existing group agreements remain valid.

From version 3.0, a group agreement is no longer required. For groups not pooling carbon, if there are changes to the group structure, the group agreement should be cancelled. It is not necessary to replace it.

## 2 Project governance

Projects should have an effective governance structure to ensure sustainable management, involving stakeholders where necessary, with transparent communication about the project and carbon.

### 2.1 Commitments

#### Requirement

##### Commitments on non-crofting land

For non-crofting land, the landowner (or, where land is tenanted, both landowner and tenant) shall commit to:

- Conform to this standard.
- Permanent land-use change.
- Manage land as per current management plan for the establishment period and as per longer-term management intentions for the project duration and beyond (2.3).
- Comply with the law (1.4) and conform with the UK Forestry Standard (1.5).
- Restock where projects involve harvesting (2.3).
- Replant or undertake alternative planting should woodland area be lost to wind, fire, pests, disease or development (2.3).
- Inform future landowner(s) and, where tenanted, future tenant(s) of the commitment to the Woodland Carbon Code and any carbon contracts (2.3).
- Monitor and maintain verification for the project duration as per Woodland Carbon Code guidance, unless the third-party project developer agrees to take this on (2.5).
- If there is a **loss** of Woodland Carbon Units or Pending Issuance Units which have been sold, notify the Woodland Carbon Code secretariat immediately and submit a loss report within six months of discovery (2.3).
- Ensure the project, any Pending Issuance Unit listings, sales to carbon buyers and **retirement** for use of Woodland Carbon Units is accurately represented and up to date in the UK Land Carbon Registry (2.6).
- Make true and accurate carbon statements about the project which conform with guidance (2.7).
- Abide by the Woodland Carbon Code [logo rules of use](#).

##### Commitments on crofting land in Scotland

For land under crofting and common grazing in Scotland:

- Where the land is within the inbye land of a tenanted croft or land permanently apportioned to the croft, the tenant shall make the commitment above. The landowner is not required to make the commitment.
- Where the land is within common grazings and the woodland is created under an approved application for use of common grazings for forestry purposes under section 50 of the Crofters (Scotland) Act 1993, all participating shareholders and the common grazing clerk shall make the commitment

above. The landowner is not required to make the commitment. Landowner consent will have been confirmed through approved application under section 50 of the Crofters (Scotland) Act 1993.

- Where the land is within common grazings and the woodland is created under an agreement for joint forestry ventures under section 50A of the Crofters (Scotland) Act 1993, all participating shareholders, the common grazing clerk and the landowner shall make the commitment above.

Where the land is within common grazings under section 50/50A of the Crofters (Scotland) Act 1993, all the shareholders shall also commit to maintain a common grazing committee.

### **Commitment of the project developer or group manager**

The project developer or group manager shall commit to:

- Conform to this standard.
- Comply with the law (1.4) and conform with the UK Forestry Standard (1.5).
- Monitor and maintain verification for the project duration as per Woodland Carbon Code guidance (unless the landowner has agreed to take this on – 2.5).
- Ensure the project, any Pending Issuance Unit listings, sales to carbon buyers, retirement for use of Woodland Carbon Units is accurately represented and up to date in the UK Land Carbon Registry (2.6).
- Make true and accurate carbon statements about the project which comply with guidance (2.7).
- Make carbon buyers aware of the Woodland Carbon Code guidance on carbon claims and ensure this is included in contracts with buyers (2.7).
- Abide by the Woodland Carbon Code [logo rules of use](#) and make carbon buyers and landowners aware of the rules of use.

### **Carbon sharing agreements**

If a group intends to 'pool' carbon units across a number of projects with different landowners or a project is on common grazing land in Scotland, there shall be a 'carbon sharing' agreement which sets out:

- The name and contact details of the party acting as the manager and representative for the group of projects or common grazing project and the arrangements for replacing the manager should this be necessary.
- Details of the project(s) covered by the agreement (unique IDs, project names, locations and areas).
- The commitment to maintain the group structure for the duration of the project.
- The allocation of carbon units between participating landowners (for a group of projects) or shareholders (for common grazing land in Scotland) and the project developer where appropriate, including whether by proportion, by vintage, or by specific serial number as may be appropriate.
- The group's management structure and any other group rules.

- For a group with different landowners: signatures of the group manager or representative and all the landowners.
- For a project on common grazing land in Scotland: signatures of all participating shareholders, the common grazing clerk and project developer where appropriate.

The 'carbon sharing agreement' may be included in the joint forestry ventures agreement for projects on common grazings under section 50A of the Crofters (Scotland) Act 1993.

### **Signing documents**

Where land is owned in trust or by a company, charity or partnership, then either the landowner themselves, or the legal signatory or signatories shall sign the landowner commitment statement. Where land is jointly owned, all joint owners shall sign unless one landowner has authority to sign on behalf of joint owners.

Where the signee is not the sole owner or is the legal signatory for a trust, charity or partnership, they shall confirm their authority to sign with a letter of authorisation.

All signed documents shall be in pdf format and shall be a single, coherent, legible, unaltered and complete document.

### **Means of validation**

- Signed commitment or contracts between the relevant parties to confirm their commitment to the standard as detailed above and in the online guidance.
  - For non-crofting land: Signed by the landowner and tenant where applicable.
  - For tenanted crofts: Signed by the crofting tenant.
  - For common grazing under Section 50: Signed by all participating shareholders and the common grazing clerk.
  - For common grazing under section 50A: Signed by all participating shareholders, the common grazing clerk and the landowner.
- Carbon sharing agreement where applicable.

### **Means of verification**

- Updated commitment if any parties have changed.
- Updated carbon sharing agreement if any parties or arrangements have changed.

## **Guidance**

### **Commitments**

This section brings together all the commitments of landowners, tenants project developers and group managers. Some of these commitments are referred to in more detail in other sections of the code but are shown together here for clarity.

Template commitment statements are available. See [template documents](#).

The project developer could be the landowner or a third party they contract to develop the carbon project.

A group manager is a project developer for several projects working together for validation/verification.

### **Carbon sharing agreements**

In some cases there may be more than one party responsible for the delivery of carbon units. Where responsibility is shared, there should be a 'carbon sharing agreement'. This may be where:

- Carbon units are 'pooled' across a group of projects owned by different landowners
- There are a number of shareholders in a project on common grazing land in Scotland.

## 2.2 Management plan

### Requirement

Projects shall have management planning documentation, initially for the establishment period, containing:

- An outline of the necessary inputs and resources including a full financial analysis.
- A summary of operational techniques.
- A chronological plan for initiation of key project activities.
- Consideration of species selection for future climate.
- For natural regeneration/ colonisation:
  - The soil moisture/nutrient status
  - Competition with other vegetation
  - Subsequent management of regeneration
- A map that is clear and aligns with the Woodland Carbon Code mapping guidance and includes:
  - A base map
  - Scale
  - Name of project
  - Outer boundary
  - Open ground
  - Existing woodland and any other areas not accounted for
  - Fencing and other infrastructure
  - Six digit British National Grid Reference
  - Legend
  - Sub-compartments
  - Additional requirements for natural regeneration.

The management plan shall be updated on a regular basis. It shall include an outline of the longer-term management intentions for the project duration and beyond.

The land manager shall have the management capacity necessary to carry out the planned project activities for the duration of the project.

Natural colonisation/ regeneration projects shall have a herbivore or deer management plan which shows the current herbivore impacts on seedlings and how this will be managed and monitored to ensure establishment of regeneration.

For land under crofting and common grazing in Scotland:

- Where the land is within the inbye land of a tenanted croft or land permanently apportioned to the croft, the requirements remain as above.
- Where the land is within common grazings under section 50/50A of the Crofters (Scotland) Act 1993:
  - The management plan shall be consistent with and incorporated into updated Common Grazings Regulations, identifying the extent of the Woodland Carbon Code project and provisions for, or limitations on, soumings and access.

- The management plan shall also confirm the existence or appointment of Common Grazing Committee.

If there are significant changes to a project design, it may need to undergo partial revalidation. See [changes to your project guidance](#).

Additionality shall not be re-assessed during a partial revalidation.

## Means of validation

- Management planning documentation deals with all issues above.
- Project design document which clearly defines how roles in the project will be fulfilled.
- Project team lists which identify key technical skills.
- Evidence from previous project experience.
- Map of site which meets Woodland Carbon Code mapping requirements.
- For natural colonisation/regeneration projects:
  - A herbivore or deer management plan.
- For land within common grazings in Scotland:
  - Common Grazings Regulations.
  - Minutes of meeting at which current committee was appointed.

## Means of verification

- Up-to-date management planning documentation.
- Updated longer-term management intentions.
- Updated map of site (if required).
- For natural colonisation/regeneration projects
  - An updated herbivore or deer management plan.
- For land within common grazings under section 50/50A of the Crofters (Scotland) Act 1993:
  - Minutes of meeting confirming committee continues to be in place or minutes of public meeting at which new committee is appointed should prior committee's term have come to an end.

## Guidance

### Management planning documentation

If the project is receiving a woodland grant or, as it matures, has a felling licence, any existing woodland management planning documentation may provide sufficient evidence.

There should be a process for updating the management plan and the project should have an up-to-date management plan at each verification. The key aims and objectives of your project as well as the type of woodland to be created should be summarised in your project design document (and updated in your project progress report if changed).

The [UK Forestry Standard](#) (including the sustainable forest management elements of climate change, soil, water, biodiversity, landscape, historic environment and people)

sets out sustainable forest management standards for the UK and requirements for management planning.

For natural colonisation/regeneration, the management planning documentation should also consider:

- **The soil moisture/nutrient status.** The soil moisture status should usually be very moist or drier and the nutrient status very poor to rich. See carbon calculator guidance in [template documents](#).
- **Competition with other vegetation.** Consider whether light cultivation (such as light patch scarification) or vegetation control through manual or mechanical treatment, herbicide or grazing (pre-commencement, to encourage less coarse vegetation) is necessary to ensure successful regeneration/colonisation.
- **Subsequent management of regeneration.** Any plans to either respace dense regeneration or carry out enrichment planting should natural regeneration be slow to appear.

The following companies offer woodland mapping and management software and some incorporate tools that help plan carbon projects:

- [My Forest](#)
- [Rethink Carbon](#)
- [The Land App](#)

In Scotland, the Scottish Land Commission provides further guidance on land management standards in its [Good Stewardship of Land Protocol](#).

### Longer-term management intentions

At validation and verification, project developers should set out the intended management regime of the woodland for the project duration and beyond (e.g. regular thinning, clearfell with a given rotation length, continuous cover forestry or minimum intervention). This should be consistent with the management regime assumed in the carbon calculator.

### Maps

Projects should provide a clear and easily understandable map of their woodland creation project as a PDF.

If you have already produced a map for a grant application, then provided it accurately represents the planting carried out and meets these mapping rules, it can also be used for the Woodland Carbon Code.

- [Example map](#)
- [Example map with guidance notes](#)

**Maps should include:****Base map**

Ideally this should be an Ordnance Survey map, but other map formats are acceptable, provided they accurately show features such as roads, boundaries, woodlands, watercourses etc. Depending on the size of your project, you can use any appropriate scale of base map.

**Scale**

The map should show the scale of the original base map.

**Title - Name of project**

The map title should be the same name that you are using in the UK Land Carbon Registry and in your other project documents (project design document or project progress report).

**Outer boundary**

The outer boundary of your project should be clearly marked, ideally in red, and should include any land directly related to the project (for example, include the entirety of your woodland creation grant in the Woodland Carbon Code project boundary).

**Open ground**

Any open ground within the outer boundary should be clearly mapped if above 0.25 hectares. This should include open ground which is part of a grant contract as well as any other land which is not planted.

**Existing woodland and any other areas not accounted for**

Any existing woodland or young planting which are not part of the carbon project but are within the boundary should be clearly marked.

**Fencing and other infrastructure**

Where new fencing, fence upgrades, vehicle and pedestrian gates and roads/tracks will be added, please show these clearly on the map.

Please ensure this is clear where it is coincident with project or section/sub-compartment boundaries. Provide a second map if it's not possible to show everything on one page.

**Grid reference**

Your map should be labelled with a six figure British National Grid Reference. This also applies to projects in Northern Ireland. The location of the grid reference should be clearly marked on your map, within the boundary of your Woodland Carbon Code project. This should be the same grid reference you use in other documentation (e.g. project design document, UK Land Carbon Registry). If your project has several

separate components, use the grid reference of the most central or the main/largest component as the project grid reference.

### Legend

All features (area, line or point) on the map should be clearly identified in the map legend.

### Sections

Any sections within the woodland can be clearly marked and labelled (for example shaded with different colours). The woodland might be subdivided into sections based on planting mix, spacing, establishment year or site type. For example, broadleaved and coniferous planted woodland should be separated and clearly labelled. If intimate mixtures that contain both conifers and broadleaves are present, please make this clear.

If each section is dealt with separately in your carbon calculator, then use the same names for sections/sub-compartments on the map and in your carbon calculator. The sections/sub-compartments may be helpful later at the monitoring and verification stage when thinking about stratifying your site.

### Maps over multiple pages

If your map has several pages, please ensure:

- The project name appears on each page
- There is at least one component/ stand with marked grid reference on each page to enable location of the components on that page
- All pages are combined into one PDF document

### Additional maps for natural regeneration

Provide map(s) showing

- Any seed sources/existing mature trees
- Upfront claimable regeneration less than 50m from seed sources
- Upfront claimable regeneration greater than 50m from seed sources and
- Future claimable natural regeneration areas
- Open ground/non-eligible areas
- Existing woodland greater than 0.25 hectares should be mapped as a polygon. Smaller clumps or individual seed trees should be marked with a symbol.

If you are claiming Pending Issuance Units upfront for any areas more than 50m from existing seed sources, you should also provide a map of the seedling survey showing the presence of any existing seedlings on the site.

[Natural regeneration example map](#)

[Natural regeneration example map with guidance notes](#)

[Natural regeneration seedling survey example map](#)

[Natural regeneration seedling survey example map with guidance notes](#)**Plot map**

At verification, provide a plot map which helps to identify how a project is stratified and where plots will be located. See the survey protocol for more information. The plot map may be either:

- Annotated on the original map approved at validation
- A new map which shows the same features as the original map, or
- A new map which shows more detail of the areas of open ground

If a new map is provided, it should include the following elements set out above:

- A base map
- Scale
- Name of project
- Outer boundary
- Open ground
- Existing woodland and any other areas not accounted for
- Six digit British national grid reference
- Legend

## 2.3 Management of risks and permanence

### Requirement

The landowner (or, where land is tenanted, both landowner and tenant) shall demonstrate the commitment to permanence by:

- Identifying risks and developing appropriate mitigation strategies as set out in the project's risk assessment.
- Contributing 20% of carbon units to the Woodland Carbon Code **buffer**.
- Ensuring re-stocking where projects involve harvesting.
- Replanting or undertaking alternative planting should woodland area be lost due to wind, fire, pests, diseases or development.
- Managing as per the longer-term management intentions for the project duration and beyond (see section 2.2).
- Inform future landowner(s) and, where tenanted, future tenant(s) of the commitment to the Woodland Carbon Code and any carbon contracts.

Should a project experience a **loss** of Woodland Carbon Units or Pending Issuance Units which have been sold, the landowner (or, where land is tenanted, both landowner and tenant) shall:

- Notify the [Woodland Carbon Code secretariat](#) immediately.
- Submit a loss report to the Woodland Carbon Code secretariat within six months of discovery of the loss.
- Quantify the magnitude of any **reversal** of carbon sequestration at the subsequent verification and in the next project progress report.
- Replenish the buffer (i.e. repay any buffer units lost) depending on the nature of the loss:
  - Unavoidable losses: Any buffer units cancelled to cover the loss above the amount originally contributed
  - Avoidable losses: All units cancelled from the buffer to cover the loss.

### Means of validation

- Further evidence to confirm assessment of risk.
- Subtraction of carbon buffer in net carbon sequestration (section 3.4).
- Evidence of contracts with or a signed commitment statement from the landowner/tenant requiring:
  - Restocking where projects involve harvesting.
  - Replanting or alternative planting should woodland area be lost due to wind, fire, pests, disease or development.
  - Managing as per the longer-term management intentions for the project duration and beyond.
  - The landowner to inform future owners and, where tenanted, future tenant(s) of the commitment to the Woodland Carbon Code.
  - The landowner to notify the Woodland Carbon Code secretariat of any loss immediately and submit a loss report within six months (see section 2.1).

## Means of verification

- Details of any new or increased risks in the project progress report.
- Any loss reports are submitted as set out above
- The magnitude of any loss is quantified during the subsequent verification survey and in the project progress report.

## Guidance

### Managing woodland to minimise losses

Projects validated/verified to the Woodland Carbon Code can manage their woodland in a variety of ways, including periodic clearfelling. The project design document should clearly state the management intentions for the project over the project duration and beyond consistent with the carbon calculator. These management intentions should be realistic for the type of woodland as well as the conditions at the site.

Whatever the management regime, the maximum sequestration that can be claimed is the **long-term average carbon stock** of the woodland type and management on the site. Clearfelling should be carried out in line with plans set out in the project design document. Restocking should be carried out in line with any felling licence conditions.

### Addressing risks to minimise losses

The project design document includes a risk assessment at validation. Any updates to risk are given in the project progress report at each verification. The risk assessment will identify the potential risks and outline strategies to mitigate these risks. As a minimum, the following areas are considered:

- Legal/ social
- Natural disturbance: fire
- Natural disturbance: wind
- Natural disturbance: drought/ flood
- Natural disturbance: pest and disease
- Species suitability in current and future climate

## Buffer

### Purpose

The Woodland Carbon Code buffer safeguards the investment made by carbon buyers and maintains and protects the integrity of verified Woodland Carbon Units. One tonne of **carbon dioxide** sold to a company is a permanent emission reduction and would never have to be cancelled or 'paid back' should that project fail.

We will ensure there are always sufficient units in the pooled buffer to cover any unanticipated losses from individual project failures.

The buffer is a single account held in the [UK Land Carbon Registry](#) and managed by Scottish Forestry. It contains the contributions from all verified projects.

For avoidance of doubt, the following would not be covered by the buffer. These losses are borne by the project:

- Pending Issuance Units
- Sequestered carbon which is not yet verified

### Contributing to the buffer

From version 2.0 of the Woodland Carbon Code, projects each contribute 20 percent of the project's net carbon sequestration to the buffer. In version 1.3 and earlier, projects contributed a variable amount (15 to 40 percent) based on project risk.

At validation, 20 percent of Pending Issuance Units are transferred into the Woodland Carbon Code buffer account managed by Scottish Forestry. This indicates the potential size of the buffer over time. It will not be possible to make claims from the Pending Issuance Units in the buffer account.

On verification of each vintage/ monitoring period, Pending Issuance Units will be converted to Woodland Carbon Units. 20 percent of verified Woodland Carbon Units from that vintage will be allocated to the buffer account managed by Scottish Forestry. Verified Woodland Carbon Units in the buffer can be drawn on by the project developer in case of any losses of verified Woodland Carbon Units from a project. Buffer units are not tradable.

### Losses

A 'loss' of carbon is defined as when the woodland loses some of its standing volume, and therefore carbon due to avoidable or unavoidable circumstances.

If there is a loss of Woodland Carbon Units or Pending Issuance Units which are sold, the project should immediately inform the [Woodland Carbon Code team](#).

The project should submit a [loss report](#) within six months of discovery of the loss. The relevant number of buffer units to cover the loss will be put on hold.

The project will then conduct its next regular verification as per the verification schedule.

### Reversals

If a project reports a loss, the Woodland Carbon Code team will put the relevant number of buffer units on hold to cover any reversal.

A reversal is defined as when the net greenhouse gas benefit of the project is negative in a given monitoring period or vintage. The size of the reversal is the net carbon sequestration at the current verification minus the net carbon sequestration at the previous verification.

If at the next regular verification there has been a reversal since the previous verification:

- If desired, any unsold Woodland Carbon Units in the project-developer's account which are not part of the amount lost, can be cancelled to cover the reversal. These could be from a different project.
- Should this be insufficient to cover the reversal, the relevant number of buffer units already put on hold will be cancelled to cover the remaining proportion of the shortfall. If this number is insufficient, additional buffer units will be cancelled. If too many were put on hold, the 'surplus' will be released back into the buffer.
- The landowner should review the project and management plan with a view to taking corrective actions to make good the losses in a reasonable timeframe of, perhaps, 10 to 20 years.

If at the next regular verification there has been a net increase in carbon sequestration since the previous verification, then there is no reversal and any buffer units put on hold at the time of the loss report will be released back to the buffer.

See also [registry rules of use](#).

### **Replenishing the buffer**

An unavoidable reversal relates to a loss due to natural disaster (e.g. severe storms, flooding, drought, fire, pest and disease attacks) or man-made events over which the project has no control (e.g. terrorism, war).

If a reversal has occurred, then:

- If the reversal was avoidable (e.g. poor management or early/over-harvesting of timber) the project reimburses the buffer for all credits cancelled to compensate for the loss before further Woodland Carbon Units are issued to the project.
- If the reversal was unavoidable, the project repays the buffer for carbon units cancelled in excess of the contribution their project had previously made (e.g. if a project had contributed 50 units but 60 were cancelled to cover their loss, the project would only have to repay 10 units). Further Woodland Carbon Units can then be issued.

The project would then continue to contribute a proportion of verified carbon units into the buffer at each subsequent verification.

### **End of project duration**

At the end of a project's duration, all remaining buffer units which were contributed by that project will be cancelled and there is no further requirement to monitor the project.

### **Legal instruments to ensure permanence**

Woodland Carbon Code projects are protected by existing legislation that guards against **deforestation** or the removal of woodland.

Across the UK, the following legislation requires an **Environmental Impact Assessment** for deforestation above 0.5 hectares in sensitive areas, 1.0 hectares outside sensitive areas:

- Environmental Impact Assessment (Forestry) (England and Wales) Regulations (1999)
- Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017
- Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2006.

For more on environmental impact assessments for deforestation see:

- [EIA \(Deforestation\) - England](#)
- [EIA \(Deforestation\) - Scotland](#)
- [EIA \(Deforestation\) - Wales](#)
- [EIA \(Deforestation\) - Northern Ireland](#)

Across the UK, the following legislation prevents the felling of trees without the permission of the Forestry Commission, Scottish Forestry, Natural Resources Wales or Northern Ireland Forest Service, through a Felling Licence.

- The Forestry Act (1967)
- Forestry and Land Management (Scotland) Act 2018
- The Forestry Act (Northern Ireland) 2010

For more on felling licences see:

- [Felling Licences - England](#)
- [Felling Permissions - Scotland](#)
- [Felling Licences - Wales](#)
- [Felling Licences - Northern Ireland](#)

## 2.4 Consultation

### Requirement

Projects shall provide an opportunity for, and take account of, inputs from stakeholders and feedback from local communities during both the project design phase and over the lifespan of the project.

### Means of validation

- Consultation details in Environmental Impact Assessment or Environmental Statement/EIA Report.
- Grant application which confirms the level and outcome of consultation.
- Other documentation which provides evidence of the approach taken to achieve meaningful stakeholder consultation, along with a summary of feedback and the actions taken.
- For land within common grazings in Scotland:
  - For use of common grazings for forestry purposes under section 50 of the Crofters (Scotland) Act 1993, confirmation of approved application.
  - For joint forestry ventures on common grazings under section 50A of the Crofters (Scotland) Act 1993, confirmation of joint forestry venture agreement signed by all participating shareholders and landowner.

### Means of verification

- Documentation confirming the approach to and outcome of ongoing consultation.

### Guidance

In addition to a number of statutory consultees, communities can reasonably expect to be engaged in decisions about the use and management of land where the outcome is likely to have an impact on the community.

This engagement should be a genuine exercise in collaboration and community views should be considered to help achieve mutually beneficial outcomes. The process should be proportionate to the resources available to all parties and the impact that the decision may have on the community.

The [toolbox for public engagement in forest and woodland planning](#) can assist **forest** and woodland managers when preparing for public involvement in woodland planning and management. It helps forest managers decide the most appropriate tools and processes.

In Scotland, the Scottish Land Commission Protocols provide further guidance:

- [Community Engagement in Decisions Relating to Land](#) and
- [The Route Map for Community Engagement](#)
- [Responsible Natural Capital and Carbon Management](#)

The [Scottish Land Rights and Responsibilities Statement](#) helps guide the process of land reform in Scotland.

If a project has carried out an Environmental Impact Assessment or applied for a woodland creation grant, evidence of the consultation required as part of these processes is sufficient in most cases.

Projects which apply for grant are also placed on a public register for four weeks and comments received will be considered as part of the grant approval process.

- England: [Consultation register for grant schemes, felling licences and Environmental Impact Assessment applications](#)
- Scotland: [Public register of Forestry Grant Scheme woodland creation applications](#)
- Wales: [Register of forest management plans](#) and [register of forestry environmental impact assessments](#)
- Northern Ireland: [Public register of Environmental Impact Assessments](#)

## 2.5 Monitoring

### Requirement

Projects shall be reviewed at year 5 and then at least every 10 years after the project start date (for single projects) or the group start date (for groups).

Monitoring plans shall be set out in the project design document.

Survey plans shall be checked by the verifier prior to onsite survey work.

Monitoring surveys shall be carried out by a suitably experienced landowner, project developer or independent third party.

Monitoring and verification shall be complete by the end of the vintage/verification due date.

### Year 5

At year 5, the survey protocol (year 5 projects) shall be followed for all projects, whether 'standard' or 'small' projects.

Single projects or groups shall submit a project progress report alongside the relevant monitoring report and other supporting documents.

On verification, the single project or group will be marked verified and Pending Issuance Units realised will be converted to verified Woodland Carbon Units.

### After year 5

After year 5, there are three options for monitoring and either verification or **self-assessment**.

#### 1. Full monitoring and third-party verification (any project).

Full monitoring and third-party verification shall follow the year 15+ monitoring protocol.

Single projects or groups shall submit a project progress report alongside the relevant monitoring report and other supporting documents for third-party verification.

Full monitoring and third-party verification leads to the conversion of Pending Issuance Units to verified Woodland Carbon Units. The project will be marked as 'verified'.

#### 2. Basic monitoring and third-party verification (small projects only).

Basic monitoring and third-party verification shall only be used if:

- Your project is at least 15 years old.
- You used the 'small project' calculator at validation.
- It is not the last monitoring period of your project. At the last monitoring period you shall do full monitoring and third-party verification.
- There have been no major changes to the project since the last verification (area, management, health etc.).

Single projects or groups shall submit a project progress report alongside the relevant **basic monitoring report** for third party verification.

Basic monitoring and third-party verification leads to the conversion of Pending Issuance Units to verified Woodland Carbon Units. The project will be marked as 'verified'.

The basic monitoring process is set out in the guidance.

### **3. Basic monitoring and self-assessment (any project).**

Basic monitoring and self-assessment shall only be used if:

- Your project is at least 15 years old.
- Your latest verification received a 'green' status (if a group, all projects shall be 'green' status).
- You don't have any concerns about the growth and health of your project.
- Your latest assessment was a verification, not a self-assessment.
- It is not the last monitoring period of your project. At the last monitoring period you shall do full monitoring and third-party verification.
- There have been no major changes to the project (area, management, health etc.)

Projects intending to use this method shall contact the Woodland Carbon Code secretariat to confirm that they meet the criteria.

Single projects or groups shall submit a project progress report alongside the relevant basic monitoring report to the registry without third party verification. These shall be assessed by the Woodland Carbon Code team.

If using basic monitoring and self-assessment, Pending Issuance Units will not be converted to Woodland Carbon Units, so they shall not be used by buyers to report against their emissions. The project will be marked as 'self-assessed'.

### **Monitoring at year 10**

Projects choosing to verify at year 10 as part of the Woodland Carbon Guarantee shall do full monitoring and independent verification and shall follow either:

- The survey protocol (year 5) if most stems are less than 7 cm diameter at breast height or
- The survey protocol (year 15+). if most stems are 7 cm diameter at breast height or greater.

### **Extensions, corrective actions and remedial plans**

If there are extenuating circumstances for a delay to monitoring, the project shall seek the approval of the Woodland Carbon Code team. If approval is granted, a verification extension approval shall be uploaded to the UK Land Carbon Registry.

If a project is not verified by its verification date or any agreed extension, it shall be removed from the UK Land Carbon Registry.

Corrective actions shall be undertaken if establishment and/or tree growth and carbon sequestration rates do not meet predicted and validated amounts.

Where corrective actions are not quickly resolved, the project shall be verified 'subject to corrective actions being completed' on provision of a remedial plan.

Where required, projects shall submit a remedial plan (see [template documents](#)).

When projects are verified, they shall be given a green, amber, red or not verified rating. In a group, each project shall have its own rating. See the [verification page](#).

If verified with 'red' rating at year 5, an additional verification shall be completed at Year 10. This shall use the full monitoring and third-party verification option and shall follow the year 5 monitoring process. Any project in a group with 'red' status shall verify alone at Year 10 and the whole group shall be verified together again at year 15.

## Means of validation

- Monitoring plans set out in the project design document.
- Signed commitment from the landowner or project developer to monitor and maintain verification for the project duration (see section 2.1).

## Means of verification

- Survey plan.
- Plot map.
- Project progress report shows continuing compliance with the Woodland Carbon Code.
- Monitoring reports show progress of carbon sequestration.
- Site level photos and locations.
- Plot-based photos and locations.
- Map of site with strata and plot locations marked.
- Remedial plan where required.

## Means of self-assessment

- Project progress report shows continuing compliance with the Woodland Carbon Code.
- Basic monitoring report containing
  - Representative geotagged site-based photos.
  - One form of aerial image with the boundary of the project and planting area overlaid to confirm stocking over whole site.
  - Other evidence to confirm the extent and health of the woodland.

## Guidance

### Why monitor?

Monitoring will enable the project to demonstrate successful woodland establishment and quantify the progress of carbon sequestration. It can also ensure that the project is still managed to the UK Forestry Standard.

## **When to monitor**

To ensure verification is completed on time, projects developers should survey their project one or two growing seasons before each verification due date to:

- Demonstrate successful woodland establishment at year five, and
- Assess actual tree growth and carbon sequestration rates from year 15 onwards.

## **Monitoring at year 5**

The first verification due date is five years after the start date. For projects validated earlier than July 2013, timing of the first verification may differ.

The purpose of monitoring at year five is to ensure that the site has been suitably stocked and established (as set out in the project design document) and that the young woodland is in good health with the potential to grow and sequester carbon as predicted.

The survey protocol sets out requirements of the year five survey. The year 5 monitoring report provides template sheets for data collection as well as a summary sheet which calculates stocking density from the results of the field survey.

## **Monitoring from year 15 onwards**

Verification due-dates for subsequent assessments will be 15 years after the project start date and then at least 10-yearly up to the project end date. There are three options for monitoring:

### **1. Full monitoring and third party verification (any project)**

The purpose of monitoring from year 15 onwards is to assess the carbon stock of the site and to confirm that the woodland is in good health with the potential to grow and sequester carbon as predicted. This involves carrying out a plot-based mensuration survey for year 15 onwards following the survey protocol.

The year 15+ monitoring report provides template sheets for data collection as well as summary sheets to calculate the carbon stock of the woodland.

### **2. Basic monitoring and third party verification (small projects only)**

For projects that used the small project calculator, basic monitoring can be carried out to assess the carbon stock of the site and to confirm that the woodland is in good health.

The verifier may request other sources of information if any source supplied is not clear. If the verifier still has any concerns about the growth or health of the project, they may require that you conduct full monitoring before verification of your small project.

### **3. Basic monitoring and self-assessment (any project)**

Self-assessment involves carrying out basic monitoring and uploading your basic monitoring report and project progress report to the registry without third party verification. There will be a basic check of the evidence submitted by the Woodland Carbon Code team and your project will have the status 'self-assessed'.

If you self-assess, your carbon units will remain as Pending Issuance Units and won't be converted to Woodland Carbon Units, so they still can't be used by buyers to report against their emissions.

When reviewing a self-assessed project, the team may request other sources of information if any source supplied is not clear. If it is content with the information provided, it will approve the project as 'self-assessed'. If the team still has any concerns about the growth and health of a project that is submitted as 'self-assessed', it may require that full monitoring and third-party verification is undertaken.

## Basic monitoring requirements

- Complete the project progress report which confirms the project still meets the standard and is still on track.
- Project developer prepares a basic monitoring report containing imagery of the site as follows, to confirm the health, growth and extent of the woodland. Project developers should check proposed aerial imagery with the Woodland Carbon Code team (for self-assessment) or verifier (for verification):
  - An updated map (with planted/open/existing woodland and project boundary) if the net area on the aerial image is different to the original map. This should follow [Woodland Carbon Code mapping guidance](#). If there is greater than a 5 percent disparity in apparent net area, then full monitoring should be undertaken.
  - Representative geotagged site-based photos (minimum three to four, more if the project consists of lots of separate compartments) and
  - One form of aerial image, with the boundary of the project and planted area overlaid, to confirm stocking over whole site. This could be:
    - Satellite-based optical data (such as Copernicus/Sentinel which produces repeat images every six days. This is currently available to Forestry Commission/Forest Research/Scottish Forestry internally. Also available from <https://browser.dataspace.copernicus.eu>).
    - Drone-based video/photos
    - Plane-based aerial photos (these are available map browsers such as):
      - [England's Map Browser and Land Information Search](#)
      - [Scotland's Land Information Search in Scotland's Environment Web](#)
      - [Natural Resources Wales Interactive Mapper](#)
      - [My Forest](#) (you can upload an existing shapefile and overlay it on aerial photography)
      - [The Land App](#) (access Bing imagery or Mapbox imagery)

- [MAGIC](#)
- [Scotland's Environment Web](#)
- [Google Maps](#) or [Bing Maps](#) (although aerial photography can be older).
- Other image sources as they become available.

## 2.6 Registry and avoidance of double counting

### Requirement

Projects and carbon units shall only appear on one carbon registry - The UK Land Carbon Registry.

For group validation/verification, the group and its constituent projects shall be entered on the registry as a 'primary project' and 'subprojects' respectively.

All projects, project documentation (subject to privacy and data protection restrictions), carbon units, **assignments** and retirements shall be visible in the public view of the [UK Land Carbon Registry](#).

On validation, Pending Issuance Units shall be listed for all carbon units in the project, except for a limited number of the project types listed below. For these projects, verified Woodland Carbon Units shall be issued once the actual amount sequestered is known:

- 'Future claimable' areas of natural regeneration.
- Woodland creation projects which are planting a species where there is less information about sequestration rates and no 'carbon model' is mapped in the carbon calculator.

Any Pending Issuance Units sold in advance of verification shall either be transferred to the relevant buyer's account or 'assigned' to that buyer.

At each verification, Pending Issuance Units for that vintage shall be cancelled and the verified number of Woodland Carbon Units issued.

Before using Woodland Carbon Units in any reports, they shall be 'retired' from the UK Land Carbon Registry.

Projects shall not accept any tree donations or other sponsorship where this creates a double claim between the Woodland Carbon Code and the donation regarding the carbon benefit.

Project developers shall comply with the registry rules of use.

### Means of validation

- The landowner, project developer or group manager has an account on the UK Land Carbon Registry.
- The project is recorded on the UK Land Carbon Registry.
- Signed commitment that the project developer will ensure the project and carbon units are accurately represented on the registry (see section 2.1).

### Means of verification

- Confirmation in project progress report that the project is not verified/approved by another carbon standard and has not accepted any tree sponsorship or donations for the carbon benefit.

- Pending Issuance Units are listed, Woodland Carbon Units are issued and units appear in the public view in the account of the current owner or are assigned to the current owner on the UK Land Carbon Registry.
- Carbon units are shown as retired from the UK Land Carbon Registry on use.

## Guidance

The UK Land Carbon Registry holds details about projects and carbon units for the Woodland Carbon Code and the Peatland Code.

- See [UK Land Carbon Registry](#) for details of how to join or view the registry.
- [See the registry rules of use](#)
- [See registry fees](#)

Each Woodland Carbon Unit represents one tonne of carbon dioxide equivalent removed from the atmosphere. Pending Issuance Units are a promise to deliver a Woodland Carbon Unit in future, but they are not guaranteed. See [What you can buy](#).

Through the serialisation of units in the registry we ensure there is no **double counting** of carbon units, in the registration of projects, the issuance of units or in their use by buyers.

See the [validation](#) and [verification](#) pages for details of which documents shall be made public.

While it is currently possible to assign Pending Issuance Units to buyers, we will remove this option by 2026. In future it will only be possible to transfer Pending Issuance Units to buyers with accounts on the UK Land Carbon Registry.

## 2.7 Carbon statements and reporting

### Requirement

Landowners and project developers shall make carbon buyers aware of the Woodland Carbon Code guidance on carbon claims.

Any **carbon statement** by the landowner, the project developer or the carbon buyer shall be true and accurate and conform with recommended wording.

Statements about Pending Issuance Units made before sequestration shall clearly state the timescale over which the carbon is to be sequestered.

Only verified Woodland Carbon Units shall be reported or used in accordance with guidance. This is sometimes called ex-post reporting.

### Means of validation

- Signed commitment from the landowner/project developer to make true and accurate statements about the project/ carbon which conform to Woodland Carbon Code claims guidance (see section 2.1).
- Any statements/reports on signage/websites/leaflets or other media comply with the Woodland Carbon Code claims guidance.
- No evidence of non-compliance with the Woodland Carbon Code claims guidance.

### Means of verification

- Confirmation in the project progress report that statements made by the landowner, project developer or corporate buyer comply with Woodland Carbon Code claims guidance.
- Any statements/reports on signage/websites/leaflets or other media comply with the Woodland Carbon Code claims guidance.
- No evidence of non-compliance with Woodland Carbon Code claims guidance.

### Guidance

Our pages for sellers and buyers give more information on:

- The types of unit that our projects create - [What you can buy](#)
- Being clear about what you are selling - [Sell your carbon units](#)
- How companies should report their emissions and climate action - [Reporting emissions and climate action](#)

Governments across the UK also provide guidance on investing in natural capital such as carbon units.

- UK Government's [Voluntary Carbon and Nature Market Integrity Principles](#)
- Scottish Government's [Principles for Responsible Investment in Natural Capital](#)
- Welsh Government consultation on [Sustainable Investment Principles](#)

The [Voluntary Carbon Markets Integrity Initiative](#) provides guidance for organisations on how they can credibly make voluntary use of carbon credits as part of the climate commitments.

## 3 Carbon sequestration

Projects should follow best practice in carbon accounting.

### 3.1 Carbon baseline

#### Requirement

Projects shall describe the original condition of the project site, including details of the vegetation cover, soil type and their carbon content.

For **standard projects**, project developers shall estimate the **baseline** or changes in the carbon stock at the site for the duration of the project in the absence of the project activities (i.e. business as usual).

The following **carbon pools** shall be included in the baseline scenario:

- Tree biomass (above and below ground)
- Litter and deadwood
- Non-tree biomass (above and below ground)
- Soil

Where the carbon baseline shows significant sequestration (i.e. 5% or more of the project carbon sequestration over the duration of the project), it shall be accounted for in 'net carbon sequestration' (section 3.4). Otherwise, the carbon baseline is assumed to be 'no change over time'.

#### Means of validation

For site description:

- Appropriate maps, photographs or remotely sensed images to indicate previous land cover.
- Results of field survey for vegetation or soil type.
- Maps for soil type.

For baseline calculations:

- Carbon baseline calculations in project design document.
- More detailed calculations of carbon baseline.

#### Means of verification

- Confirmation in the project progress report of any changes to the baseline assumptions.
- Updated carbon calculator and further baseline calculations (if required).

#### Guidance

##### What is a baseline scenario?

A baseline scenario is a projection of the changes to carbon on the site over the project duration in the absence of the project (e.g. woodland creation) going ahead. It is the reference scenario from which the impact of the project can be measured.

Small projects: We assume that the baseline is 'no change in carbon stocks over time'. No assessment is necessary.

Standard projects: It is often the case with standard projects that the baseline will be 'no change in carbon stocks over time' if the project was previously grazed pasture or arable land. It would be unlikely there was any carbon sequestration in these cases and we do not allow projects to claim for the 'reduction in emissions' from stopping the previous land-use.

### **Calculating the carbon stock at the start of the project**

Refer to any maps, photographs, remotely sensed images or field survey results which confirm the condition of vegetation and soil before woodland creation. This will allow an estimate of the carbon stock onsite prior to the project taking place.

- For tree biomass - Use the survey protocol to estimate the carbon any trees already onsite contain.
- For litter and deadwood - It is unlikely that this carbon pool or changes to it will be significant.
- For non-tree biomass - Project developers should reference [Natural England's Carbon Storage and Sequestration by Habitat 2021 \(NERR094\)](#) or contact the [Woodland Carbon Code team](#) for further information on estimates of carbon stock of other shrubs and vegetation.
- For soil carbon - Unless the project has undertaken specific soil carbon assessment before tree planting, we will assume that the soil carbon content at the site at the start of the project can be derived from looking at the closest land use type. See Table 1 in [Soil Carbon and the Woodland Carbon Code](#).

### **Calculating changes to the baseline scenario over the project duration**

The baseline scenario is conservative by accounting for sequestration but not emissions. This means the net carbon sequestration (project sequestration minus baseline) will not be more than the actual sequestration of the ecosystem.

- For tree biomass. In the baseline scenario, any trees already present on the site will continue to accumulate carbon without the project going ahead and this should be accounted for. This can be done by:
  - Assessing the density of trees present and their current age
  - Converting this to an equivalent area of woodland of a given age at a given planting spacing
  - Using the carbon lookup tables to estimate the likely changes to that stock over time
- For litter and deadwood. It is unlikely that this carbon pool or changes to it will be significant. Projects can assume that, in the baseline scenario, there is no change over time to this carbon pool.
- For non-tree biomass. In the baseline scenario, non-tree biomass could accumulate or it could be in equilibrium over the project duration (in which case no changes over time will be accountable). This depends largely on the type of vegetation present. Crops and established grass can be assumed to

be in equilibrium and therefore there will be no change over the project duration in the carbon stock of non-tree biomass. However, other biomass may still be growing and sequestering carbon and projects should account for the change to the carbon stock over the duration of the project. Projects should refer to the [IPCC 2003 Good Practice Guide for LULUCF](#).

- For soil carbon. It is hard to predict what soil carbon changes would have occurred in a given baseline scenario. However, given that gains to soil carbon in the non-wooded baseline scenario are unlikely to be significant (greater than or equal to 5% of the project carbon sequestration over the duration of the project) for sites with mineral or organomineral soil, projects can assume that there is no change over time to soil carbon in the baseline scenario.

## 3.2 Carbon leakage

### Requirement

The land manager shall confirm any intention to change or intensify the use of land elsewhere on the holding as a consequence of the woodland creation.

For standard projects, if **leakage** (land use change/intensification outside the project boundary but within the UK) is proposed, then projects shall carry out an assessment to determine whether this will result in greenhouse gas emissions.

If significant greenhouse gas emissions occur (e.g. 5% or more of the project carbon sequestration over the duration of the project), they shall be quantified for the duration of the project and accounted for in 'net carbon sequestration' (see section 3.4). Otherwise, leakage is assumed to be 'no change over time'.

Carbon pools shall include:

- Tree above and below ground biomass
- Litter and deadwood
- Non-tree above and below ground biomass
- Soil
- Greenhouse gas emissions to manage the land which has changed use

### Means of validation

- Statement in project design document of intention by the landowner to replace the previous land use or activity elsewhere.
- Leakage assessment in project design document.
- Map of site and surrounding area with leakage risks highlighted.
- Carbon calculator incorporating further leakage calculations.

### Means of verification

- Confirmation in the project progress report of current assessment of level of leakage from the project.
- Updated carbon calculator and further leakage calculations (if required)

### Guidance

Leakage is greenhouse gas emissions outside the project boundary as a result of the project (e.g. displacement of agricultural activities might result in deforestation or intensification of use of non-wooded land elsewhere).

### Approach to leakage

Due to the existing legislation in the UK which protects semi-natural habitats, biodiversity and protects against deforestation, the Woodland Carbon Code assumes that in most cases there will be no leakage (i.e. leakage equals zero, no change over time) in woodland creation projects.

Projects using the small project calculator can assume that there is no leakage.

Standard projects should consider whether the project will result in more intensive use of another area of land elsewhere in the UK. If so, then any significant greenhouse gas emissions through changes in land use or management of the area of land should be accounted for over the project duration (significant is more than 5% of the project carbon sequestration over the duration of the project). Leakage assessments are likely to be project specific. The following guidance should help define the scope of the assessment.

1. Any land use change or intensification within the UK which can be attributed to the project going ahead should be accounted for.
2. Only significant greenhouse gas emissions need to be accounted for in the project's net carbon sequestration. Emissions are considered significant if they amount to more than 5% of the project carbon sequestration over the duration of the project.
3. Projects can refer to the [IPCC 2003 Good Practice Guide for Land Use, Land-Use change and Forestry](#) and [IPCC 2006 Guidelines for national greenhouse gas inventories](#) for guidance.

### **3.3 Project carbon sequestration**

#### **Requirement**

Project developers shall use the carbon calculator (standard or small project tab) to predict the project carbon sequestration.

Emissions resulting from the preparation of a site before planting shall be calculated and subtracted from the project carbon sequestration at Year 1. This includes losses of carbon through removal of vegetation (trees or other biomass) and disturbance of the soil.

Carbon sequestration in woodland biomass shall be restricted to the long-term average carbon stock that is projected to accumulate on the site.

At verification, if any changes to your project mean there is 5% or more reduction to the predicted sequestration of your project over time, the carbon calculator shall be updated.

At verification, you may update your carbon calculator if changes to your project result in less than a 5% reduction in units or increases. Extra Pending Issuance Units shall not be issued until the next verification if your project receives a 'red' rating.

Updated carbon calculators shall include a comparison between the new and old calculation.

The current version of the carbon calculator shall be used where changes are made.

#### **Means of validation**

- Carbon calculator.
- Ecological site classification report(s).
- Other evidence to justify growth rates.

#### **Means of verification**

- Updated carbon calculator, with comparison of old and new prediction of units by vintage if required.

#### **Guidance**

##### **What is 'project carbon sequestration'?**

Project carbon sequestration is the change in carbon stocks due to woodland creation over the project duration as a direct result of the project.

##### **Accounting for project carbon sequestration**

Projects should account for project carbon sequestration using the carbon calculator and associated guidance. The calculator includes the following:

- Emissions from establishment activities, ongoing management and clearfell
- Emissions from soil disturbance
- Emission from removal of non-tree above and below ground biomass (at project outset)

- Sequestration in tree biomass, litter and deadwood
- Sequestration in soil in a limited number of scenarios

Small projects may use the 'small project carbon calculator'. It is easier to complete and conservative.

Standard projects should use the 'standard project carbon calculator'.

Where a project is split across two or more carbon calculator tabs, split the emissions from establishment across the tabs based on the project area on each tab.

Divide infrastructure features (such as roads, gates or fences) proportionally between the tabs unless a feature clearly applies to a specific section. For example, if only one compartment is fenced, record all the fence on the relevant tab, but, if the fence encloses all compartments, divide it proportionately.

### **Vegetation removed at start of project**

If any vegetation is removed before the start of the project, this should be accounted for (both tree and non-tree biomass).

Projects should use [Natural England's Carbon Storage and Sequestration by Habitat](#) or [contact us](#) for further information on estimates of the carbon stocks of non-tree biomass.

They may also refer to the [IPCC 2003 Good Practice Guide for Land Use, Land-Use change and Forestry](#) and the [IPCC 2006 Guidelines for national greenhouse gas inventories](#) for guidance on estimating the carbon stock of existing vegetation.

### **Carbon in the soil**

[Soil Carbon and the Woodland Carbon Code](#) sets out the code's methodology for organomineral and mineral soils. The carbon calculator includes assumptions about the likely soil disturbance and soil greenhouse gas emissions.

Soil carbon accumulation may currently only be claimed for projects on a mineral soil where the previous land use was arable and the woodland will be managed as minimum intervention. This is included within the carbon calculator.

### **When should I update my carbon calculator?**

If changes to your project result in a 5% or more reduction in units (based on the carbon calculator you used at the time), you should update the carbon calculator at verification.

If changes to your project result in less than a 5% reduction in units or increases, you may update your carbon calculator at verification. However, if your project is rated 'red', no further Pending Issuance Units will be issued until the next verification.

The following changes to your project may make it necessary to update your carbon calculator

- Changes in species composition or areas of open ground

- Stocking density (at year 5) or predicted growth rates (from year 15+) not achieved
- Extensive beat-up
- Change to long-term management intentions
- Where the project has suffered a reversal since the previous verification (from year 15+)

If there is a reduction in units in an updated carbon calculator at verification, Pending Issuance Units will be marked 'not delivered'. There is no cost to mark Pending Issuance Units 'not delivered'. However, you should consider how you will compensate any buyers of affected units.

If there is an increase in units in an updated carbon calculator at verification, extra Pending Issuance Units may be issued, unless your project is rated 'red'. There is a cost to issue new Pending Issuance Units at verification. See [registry fees](#).

## 3.4 Net carbon sequestration

### Requirement

Projects shall calculate the net project carbon sequestration within the relevant worksheet (standard project or small project) of the carbon calculator. The calculator estimates the [total project carbon sequestration \(3.3\)](#) adjusted for [leakage \(3.2\)](#) and [baseline \(3.1\)](#).

The predicted number of carbon units by vintage shall be identified according to the project's verification schedule. These shall be divided into the contribution to the Woodland Carbon Code buffer and the claimable carbon sequestration.

At verification, the monitoring report shall confirm the net carbon sequestered since the project start date and the carbon sequestered in the current vintage/monitoring period.

If the 'self-assessment' option has been used, then no Pending Issuance Units shall be converted to Woodland Carbon Units. They will remain pending until the next third-party verification. See [2.5 Monitoring](#).

### Means of validation

- Carbon calculator.
- Pending Issuance Units by vintage in project design document.

### Means of verification

- Confirmation of carbon sequestered to date and carbon sequestered in current vintage from monitoring report.
- Updated carbon calculator, with comparison of old and new prediction of units by vintage, if required.

### Guidance

Net carbon sequestration is the total amount of carbon sequestered by the project which can be converted into carbon units. These are divided between the proportion that will contribute to the shared Woodland Carbon Code buffer and the claimable carbon sequestration which is the amount the project can sell or claim.

Net carbon sequestration equals the [project carbon \(3.3\)](#) plus [leakage \(3.2\)](#) minus the [baseline \(3.1\)](#).

## 4 Environmental quality

Projects should be of high environmental quality, including habitats, species, soil and water environments, as well as landscapes.

### Requirement

The project shall have woodland design planning documentation which incorporates the environmental aspects of sustainable forest management set out in the UK Forestry Standard and supporting guidelines for climate change, soil, water, biodiversity, landscape and historic landscape.

These standards shall be maintained throughout the duration of the project.

Projects shall demonstrate whether or not an Environmental Statement/EIA Report is required under the Environmental Impact Assessment Forestry Regulations. They shall provide:

- The Environmental Statement/EIA Report if one was required; or
- Other evidence that environmental impacts of the project are likely to be positive if no EIA is required.

### Means of validation

- Environmental quality statements in project design document.
- Design planning documentation.
- Environmental Statement/EIA Report or confirmation that one is not required under EIA regulations.
- Woodland benefits tool.
- Other relevant documentation.

### Means of verification

- Evidence confirming the environmental benefits of the project to date.

### Guidance

#### Safeguarding / ensuring no harm is done - Environmental Impact Assessment

By adhering to the UK Forestry Standard, projects ensure safeguards are in place so they can show that any environmental impacts on the land area concerned are likely to be positive.

An Environmental Impact Assessment and Environmental Statement/EIA Report (where required) will usually cover all issues associated with environmental integrity.

- [Environmental Impact Assessment England](#)
- [Environmental Impact Assessment Scotland](#)
- [Environmental Impact Assessment Wales](#)
- [Environmental Impact Assessment Northern Ireland](#)

If no Environmental Impact Assessment is required due to the scale or nature of the project and site, projects should demonstrate in their project design document:

- Any likely environmental impacts
- Any rare or endangered species in the project area and how these are accounted for in the project design
- Any statutory designations in the project area and how these are accounted for in the project design
- The design has given due regard to the visual, cultural value and character of the local environment

Where a woodland creation grant has been applied for, the information supplied for a grant application will help.

Useful map-based tools in each country can show designated areas or features on or near the project site:

- [Land information search England](#)
- [Land information search Scotland](#)
- [NRW Mapping, Wales](#)
- Northern Ireland [map viewers](#)

### **Monitoring and making statements about the environmental benefit of a project**

Project developers use the woodland benefits tool to present the likely water and biodiversity outcomes of their projects. Projects are scored out of five in each area at validation.

It is optional to monitor environmental benefits over time.

From version 3.0 the code is piloting the measurement of biodiversity baseline data. Project developers have the option to measure their biodiversity baseline using the methods outlined in the Facility for Investment Ready Nature in Scotland biodiversity project. This may be uploaded to the registry and checked by the validator at validation.

The Woodland Carbon Code does not yet have a methodology to monitor other benefits over time.

## 5 Social responsibility

Projects should be socially responsible and, where possible, offer benefits to local communities and other interested forest users or stakeholders.

### Requirement

The project shall have design planning documentation which incorporates the social aspects of sustainable forest management set out in the UK Forestry Standard and supporting guidelines for people.

These standards shall be maintained throughout the duration of the project.

### Means of validation

- Social responsibility statements in project design document.
- Design planning documentation.
- Woodland benefits tool.

### Means of verification

- Evidence confirming the community or economic benefits of the project to date.

### Guidance

#### Safeguarding / ensuring no harm is done and managing for positive social outcomes

By adhering to the UK Forestry Standard, projects ensure safeguards are in place so that no harm is done and any social outcomes of the project are positive.

Where a woodland creation grant has been applied for, the information supplied for a grant application will help.

Governments across the UK also provide guidance on investing in natural capital such as carbon units.

- UK Government's [Voluntary Carbon and Nature Market Integrity Principles](#)
- Scottish Government's [Principles for Responsible Investment in Natural Capital](#)
- Welsh Government consultation on [Sustainable Investment Principles](#)

The [Scottish Land Rights and Responsibilities Statement 2022](#) helps guide the process of land reform in Scotland.

### Monitoring and making statements about the social benefit of a project

Project developers use the Woodland Benefits Tool to present the likely community and economic outcomes of their projects. Projects are scored out of five in each area at validation.

It is optional to monitor the social benefits of the project over time. The Woodland Carbon Code does not yet have a methodology to monitor social benefits over time.

## Glossary

**Additionality** – Additionality refers to carbon sequestration over and above that which would have happened anyway in the absence of a given project or activity. Buyers of carbon units want to know that their input has enabled more carbon sequestration than would otherwise have happened under existing legal, financial and business circumstances. Under the financial consideration, a project is only additional if it requires carbon income to turn it from a project which is not financially viable/ worthwhile (compared to an alternative non-woodland use) to one which is financially viable.

**Area** – Carbon can be claimed for the net woodland area, rather than the gross area. Net woodland area is the area of a project planted with trees or allowed to colonise/regenerate naturally. It excludes any designed or other open areas. Gross woodland area is the area of a project including any open areas. This can include designed open ground as well as other open land or water bodies.

**Assignment** – Labelling/assigning a Pending Issuance Unit on the UK Land Carbon Registry with the name of the buyer. Assigned units cannot be re-sold, but they can be used and ‘retired’ once they are verified.

**Baseline** – The projected changes to carbon on the site if the project weren’t to go ahead (the ‘business as usual’ scenario). This is a reference projection to which the carbon benefits of project activities can be compared over the project lifetime.

**Basic monitoring report** – A report summarising the results of basic monitoring carried out for projects where the small project calculator was used or by standard projects where self-assessment is carried out.

**Buffer** – A carbon pool of ‘unclaimed carbon’ to cover unavoidable potential losses which may occur from the project over time, thus ensuring the permanence of verified Woodland Carbon Units. The unit type for buffer units is PIU Reserve or WCU Reserve.

**Carbon dioxide** – A naturally occurring gas and by-product of burning fossil fuels or biomass, land-use changes and industrial processes. It is the principal anthropogenic (caused by human activity) greenhouse gas that affects the Earth’s climate.

**Carbon dioxide equivalent (CO<sub>2</sub>e)** - A measure used to compare the emissions from various greenhouse gases based on their global warming potential. It converts the amounts of other greenhouse gases to the equivalent amount of carbon dioxide that would have the same warming effect. This standardisation simplifies the understanding and comparison of the total impact of different greenhouse gases on climate change.

**Carbon pool** – A system that can store and/or accumulate carbon, e.g. above-ground biomass, leaf/needle litter, dead wood and soil organic carbon.

**Carbon sequestration** – Direct removal of carbon dioxide from the atmosphere through land-use change, afforestation, reforestation and/or increases in soil carbon.

**Carbon statement** – A statement of what a project will sequester or has sequestered to date. It can be restated by more than one party with an interest in a project.

**Climate change** – Change or changes in the climate which can be directly or indirectly attributed to human activity (UNFCCC Article 1).

**Compensatory planting** – New woodland created to compensate for woodland lost elsewhere which provides at least the equivalent woodland-related net public benefit embodied in the woodland which was removed (e.g. for development (windfarms or in urban areas) or where woodland is removed to restore open habitats).

**Crofting and common grazing** – Crofting and common grazings are forms of land tenure and occupation unique to Scotland. The rights and obligations of landowners, tenant crofters and of shareholders in common grazings are defined and regulated under the Crofters (Scotland) Act 1993 as amended by the Crofting Reform etc Act 2007 (asp 7), the Crofting Reform (Scotland) Act 2010 (asp 14), and the Crofting (Amendment) (Scotland) Act 2013. More information is available from the Crofting Commission at [www.crofting.scotland.gov.uk](http://www.crofting.scotland.gov.uk)

**Deforestation** – Permanent or long-term removal of woodland; the direct, human-induced conversion of forested land to another land use, or the long-term reduction of the tree canopy cover below the minimum 20% threshold.

**Double counting** – There are a number of issues which might result in double counting:

Double selling – The same carbon unit is sold more than once to different parties. The incidence of this can be minimised by using a carbon unit registry.

Double certification – The same carbon project is validated/verified against two or more carbon standards. The incidence of this can be minimised by insisting that projects only use one registry and carbon registries ensure that a project is not already registered on another carbon registry.

Double monetisation – A carbon unit is monetised once as a voluntary unit by a project and a second time as a national-level Greenhouse Gas allowance.

Double claiming – An organisation or government makes a claim about the same unit of carbon reduction as another organisation. It may be perceived as satisfactory that an organisation claims ‘we created a carbon neutral product’ and another organisation claims ‘we sell a carbon neutral product’ or government claims ‘we reached our emissions reduction target’.

**Environmental Impact Assessment (EIA)** – These regulations apply to forestry related projects. If the Forestry Commission, Scottish Forestry, Natural Resources Wales or Northern Ireland Forest Service considers that project proposals may have a significant effect on the environment, the proposer must obtain consent for the work from the relevant body and submit an Environmental Statement as part of the application for consent.

**Forest** – See ‘woodland’.

**Group** – A group of projects that work together to gain validation/verification. These projects will be coordinated and overseen by a group scheme manager. The group scheme manager is responsible for ensuring that all projects within the group conform to the code.

**Leakage** – Any greenhouse gas emissions outside the project boundary as a result of the project (e.g. displacement of agricultural activities might result in deforestation or intensification of use of non-wooded land elsewhere).

**Loss of carbon** - When the woodland loses some of its standing volume and, therefore, carbon due to avoidable or unavoidable circumstances.

**Long-term average carbon stock** – The mean carbon stock over the long-term in a woodland, averaged over several whole rotations, if clearfelling. For projects where there is no clearfelling, the long-term average is assumed to be no less than the carbon predicted to be sequestered by Year 100, for a given scenario. For sites where clearfelling is proposed, the long-term average is calculated over several whole rotations of a given length, where the carbon stock onsite varies from zero at the start of each rotation to a maximum just before clearfelling.

**Natural regeneration** – Plants growing on a previously unwooded site as a result of natural seedfall or suckering. The term is also used to describe the silvicultural practices used to encourage natural seeding and establishment.

**Organic soil** – Soil which contains organic (or peat) surface horizon overlaying the mineral layer or rock. Organic soils have 30cm or more depth peat in England and 50cm or more depth peat in Scotland, Wales and Northern Ireland.

**Pending Issuance Unit** – The purpose of these units is to demonstrate the quantity of potential future sequestration. Pending Issuance Units will help to keep track of up-front sales/ purchases, but they cannot be retired or used/reported.

**Permanence** – The issue of ensuring that removal of carbon dioxide from the atmosphere is permanent and not reversed at a future point in time. Woodland projects carry a risk of reversibility so safeguards shall be in place to minimise that risk and guarantee replacement or alternative woodland should a reversal occur.

**Project design document** – A document created by the project developer for validation to describe how the project meets the requirements of the code at the outset.

**Priority habitat or species** - Habitats and species that have been listed as priorities for conservation action in biodiversity strategies.

**Project developer** – The individual or company who represents a project/group through the validation/ verification process or in the UK Land Carbon Registry. The project developer could be the landowner, a third party representing the landowner or the group manager.

**Project duration** – The time over which project activities are to be monitored, verified and carbon sequestration claims are to be made. Projects can be up to 100 years in duration.

**Project end date** – The last day a project accounts for carbon sequestration. The project end date is the project start date plus the project duration. If the start date is 01/04/2013 and project duration is 100 years, then the end date is 31/03/2113.

**Project implementation date** – The date when work begins onsite – either fencing, adoption of an enhanced herbivore/deer management plan, ground preparation or planting, whichever occurs first.

**Project progress report** – A report created by the project developer for verification to demonstrate how the project continues to meet the requirements of the code.

**Project registration date** – The date when a project moves from ‘draft’ to ‘under development’ status in the UK Land Carbon Registry.

**Project start date** – The date planting is complete (or for natural colonisation/regeneration, the date that fencing is completed and/or herbivore/deer management plan has begun to be implemented) and the project starts to account for carbon sequestration.

**Retirement** – Moving a Woodland Carbon Unit on the UK Land Carbon Registry to a publicly available ‘retirement’ account to show it has been taken out of circulation and cannot be used again.

**Reversal** – A reversal is when the net greenhouse gas benefit of a project, taking into account the baseline, leakage and project carbon sequestration, is negative in a given monitoring period. The size of the reversal is the net carbon sequestration at the current verification minus the net carbon sequestration at the previous verification.

**Seed tree** - A tree which is mature enough to produce seed. The age varies by species.

**Self-assessment** – A project is marked as self-assessed if a project progress report and basic monitoring report are uploaded to the registry at a monitoring point after year 15. In this case, no Pending Issuance Units will be converted to Woodland Carbon Units. Self-assessment can only be used in a limited number of cases.

**Small project** – A single project with ten-hectare net planting area or less where the small project process is used.

**Soumings** – The number and type of stock an individual croft can graze on a common grazings.

**Standard project** – Single woodland creation project which can be any size and can constitute several individual blocks of woodland with planting spanning up to five consecutive planting seasons. Blocks of woodland shall be part of contiguous land ownership unit or shall be under the same ownership and management plan. See also small project.

**Sustainable forest management** - The stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity and vitality, as well as their potential to fulfil, now and in the

future, relevant ecological, economic and social functions at local, national and global levels, and that does not cause damage to other ecosystems.

**UK Land Carbon Registry** – The official record of the location of projects, the predicted and actual carbon sequestration as well as the owners and retirement of carbon units.

**Validation** – The initial evaluation of a project against the standards of the Woodland Carbon Code, undertaken by a certification body accredited by the UK Accreditation Service.

**Validation/verification body** – Independent third-party organisations accredited by the UK Accreditation Service to validate or verify Woodland Carbon Code projects.

**Verification** – The ongoing evaluation of a project against the standards of the Woodland Carbon Code, undertaken by a verification body accredited by the UK Accreditation Service. Verification assesses the carbon sequestration that has actually occurred as well as continuing sustainable forest management.

**Vintage** – The time period in which units are delivered. For the Woodland Carbon Code, the delivery of carbon is predicted and verified in five or ten-yearly blocks (e.g. 2020 to 2030). Each time period is known as a vintage.

**Woodland Carbon Code team** – The secretariat function is provided by Scottish Forestry on behalf of the governments of the UK, Scotland, Wales and Northern Ireland.

**Woodland** – Land under stands of trees with a canopy cover of at least 20% (25% in Northern Ireland) or having the potential to achieve this. This definition includes integral open space and felled areas that are awaiting restocking (replanting). Consistent with the UK Forestry Standard, this includes short rotation coppice and short rotation forestry, but does not include individual trees, orchards, ornamental or garden trees, tree nurseries or the management of Christmas trees. (This definition is also applicable to 'forest').

**Woodland Carbon Unit** – When a project is verified, Pending Issuance Units which have been confirmed as sequestered will be converted to Woodland Carbon Units. These units can be considered as guaranteed, delivered carbon units so can be retired and used/reported.

**Woodland creation** – The direct, human-induced conversion to woodland of land that has not previously been forested according to historical records. The code sets a threshold of a continuous absence of woodland over the previous 25 years.