Woodland Carbon Code version 3.0 - redline

Contents

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.
- ISO14065:2020 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.

~~Background and purpose~~

~~Trees and forests can mitigate climate change through sequestering carbon. Woodland creation therefore provides an attractive option for companies, organisations and individuals wishing to reduce their carbon footprint while also delivering a range of other environmental and social benefits.~~

~~The Woodland Carbon Code sets out robust requirements for voluntary carbon sequestration projects that incorporate core principles of good carbon management as part of sustainable forest management. Landowners and their successors in title must commit to a permanent change of landuse to woodland. Specific objectives of the Code are to ensure:~~

- ~~high standards of sustainable forest management in line with the UK Forestry Standard including the elements of sustainable forest management;~~
- ~~best practice in woodland carbon accounting;~~
- ~~scientifically sound forest carbon measurement protocols that enable consistent and rigorous measurement of carbon uptake in woodlands;~~
- ~~integrity through independent quality assurance (validation and regular verification);~~
- ~~open and transparent project registration, issuance, tracking and retirement of carbon units.~~

Woodland creation can also provide many co-benefits in addition to carbon sequestration. Woodlands can improve air quality and provide wildlife habitat, timber and woodfuel as well as sites for public recreation. In the right places they can reduce flooding and improve water quality. They can also provide opportunities for community engagement, staff volunteering, education and development as well as rural business development and diversification.

Definitions

These document employs the following definitions:

- Shall: represents a mandatory requirement
- Should: represents recommendations or best practices that project developers should aim to implement in their projects
- May: represents a course of action permissible by the Woodland Carbon Code

Scope

The ode sets out design and management requirements for voluntary UK based projects that sequester carbon through woodland creation. In scope it accounts for carbon sequestration and emissions within the woodland. It does not account for carbon stored in forest products or the carbon saved when substituting wood products for other products with a larger carbon footprint.

Application Process

Registration

FromOctober 2022, Aall projects should be registered on the UK Land Carbon Registry before work begins onsite (the project implementation date). In order to register a project, a project developer/landowner should first set up an account on the registry, and then add their project(s) to their account. In order to do this, applicants also need to decide whether to use the 'Standard' or 'Small Project Process', and whether to register their project alone, or as part of a group scheme. Registration is free.

'Standard' and 'Small' sized projects

A standard 'project' can be any size and can constitute several individual blocks of woodland with planting spanning up to five consecutive planting seasons; blocks of woodland must either be part of a contiguous land ownership unit or blocks of woodland must be under the same ownership, manager and management plan.

The new woodland should have the potential to achieve at least 20% canopy cover so should achieve at least 400 stems per hectare or maximum 5 m spacing over the net project area.

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

~~For 'small' projects (same definition as a standard project, but with five hectares net planting area or less), there are optional streamlined requirements/processes which can be used for validation and verification, specifically:~~

- ~~A simplified carbon calculator for small projects.~~
- ~~Default assumptions made for some sections of the requirements (e.g. baseline and leakage).~~
- ~~If the small project calculator is used, then a less intensive 'Small Project Monitoring Protocol' from Year 15.~~

~~The WCC standard and guidance make clear where requirements differ for projects using the 'Small Project Process'.~~

~~Grouping projects for validation or verification~~

~~Projects can be registered alone, or as part of a group scheme. Grouped projects benefit from sharing costs of validation and verification. A group of projects can span no more than five consecutive planting seasons and be constituted of:~~

- ~~up to 15 'standard' projects; and~~
- ~~up to 50 hectares (net) area in 'small' projects;~~

~~There is no geographic restriction within a group.~~

~~Ideally, groups will be formed prior to validation, but it is also possible to form a group for the purposes of verification. If a group is formed for verification, the project start dates within the group should be within two years of each other (this also means their verifications will be due within two years of each other). A group requires a Group Manager and a Group Agreement (See Section 2.1). Once projects are grouped, the grouping should remain the same for each subsequent verification.~~

~~Validation~~

~~All WCC projects or group schemes must be initially validated by an independent validation/verification body accredited by the UK Accreditation Service to assess against the WCC. In order to become validated, projects or groups of projects must submit a Project Design Document with supporting evidence to a validation/ verification body. Validation should be complete within three years of registration, and can only be completed once the trees are planted, or fencing/deer control is in place for natural colonisation/regeneration.~~

~~Once validated, Pending Issuance Units will be issued on the UK Land Carbon Registry. There is a cost for validation and for unit issuance.~~

~~Regular Verification or Self-Assessment~~

~~Projects or group schemes must be regularly monitored and either third party verified or Self-Assessed at least at Year 5 and then every ten years by an independent validation/verification body.~~

~~To become verified:~~

- ~~Single projects or groups must undertake full monitoring onsite and submit a Project Progress Report and Monitoring Report with supporting evidence to a validation/verification body.~~
- ~~The process is simpler for 'small' projects from Year 15 onwards.~~
- ~~The validation/verification body will check that verification statements about predicted or actual carbon sequestration are materially correct, with a reasonable level of assurance, except at Year 5 when a limited level of assurance will be offered. Once verified, any Pending Issuance Units realised will be converted to Woodland Carbon Units. There is a cost for verification and for conversion of units.~~

~~If at any point there is no UK Accreditation Service accredited validation/verification body for the WCC, the WCC Secretariat will put temporary validation/verification arrangements in place.~~

~~To be Self-Assessed:~~

~~The project or group scheme must meet certain criteria and upload a Basic Monitoring Report and Project Progress Report to the registry which will be assessed by the WCC Secretariat.~~

~~If projects are self-assessed, units will not be converted and will remain Pending Issuance Units.~~

~~Costs and income through involvement in the Woodland Carbon Code~~

~~There are some costs of involvement in the Woodland Carbon Code. Further details are available in the online guidance.~~

- ~~Registration is free.~~
- ~~Validation incurs a cost (payable to the validation/verification body).~~
- ~~Issuance of Pending Issuance Units incurs a per unit cost (payable to the registry provider at the time of validation).~~
- ~~Verification incurs a cost (payable to the validation/verification body).~~
- ~~Conversion of units from Pending Issuance Units to Woodland Carbon units incurs a per unit cost (payable to the registry provider at the time of verification).~~

~~Carbon income from the sale of carbon units are expected to cover the costs of involvement in the programme.~~

~~Project developers should bear in mind when agreeing to sell PIUs that the WCC Carbon Calculator provides a prediction of the carbon that is likely to be sequestered, and not a guarantee that a particular woodland will sequester a certain amount. The WCC is a voluntary standard and verification does not imply endorsement by Scottish Forestry of the value of any investment.~~

~~Use of Woodland Carbon Units~~

~~Woodland carbon projects contribute to just one of a hierarchy of actions that can help to combat the effects of climate change. Before considering buying Woodland Carbon Units, businesses and other organisations should:~~

- ~~Understand and measure their carbon footprint (Scope 1, 2 and where possible Scope 3 emissions), in line with the UK Government's Environmental Reporting Guidelines;~~
- ~~Set targets to reduce emissions in line with the UK's commitment to be Net Zero by 2050;~~
- ~~Take action to reduce Scope 1, 2 and where possible Scope 3 emissions.~~

~~Once verified, carbon units created by Woodland Carbon Code projects are known as Woodland Carbon Units. Until that point they are referred to as Pending Issuance Units. One unit is one tonne of carbon dioxide equivalent (tCO2e) sequestered.~~

~~All large organisations are mandated to report their gross greenhouse gas emissions and encouraged to voluntarily reduce them and come to a Net figure. Small and medium sized companies are encouraged to report voluntarily. Verified Woodland Carbon Units are one type of 'credit' that can be used to come to a net emissions figure under UK government guidance: Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance. PAS2060: 2014 Specification for the Demonstration of Carbon Neutrality also clarifies how verified Woodland Carbon Units can be used in claims of carbon neutrality of an organisation's activities, products, services, buildings, projects or events.~~

~~The Woodland Carbon Code is also endorsed by ICROA (International Carbon Reduction and Offset Alliance).~~

~~Woodland Carbon Units can currently only be used to compensate for UK-based emissions.~~

~~Carbon sequestration resulting from projects validated/ verified to the Code will, in common with other woodland creation, contribute directly to the UK's/Scotland's national greenhouse gas emissions reduction targets (as set out in the UK Climate Change Act, 2008, and the Climate Change (Scotland) Act, 2009). Sequestration from projects will also contribute to the UK's international commitments (the UK's Nationally Determined Contribution under the Paris Agreement). Corresponding Adjustments, described in Article 6 of the Paris Agreement, are not currently made for Woodland Carbon Units. In the Clean Growth Plan (2018) the UK government commits to create a stronger and more attractive domestic carbon offset market, but Woodland Carbon Units cannot yet be used in regulatory carbon reduction mechanisms (e.g. the UK Emissions Trading System) or in CORSIA.~~

~~Governance~~

~~Scottish Forestry provide the WCC Secretariat function on behalf of the devolved forestry authorities (The Forestry Commission in England, the Welsh Government and the Northern Ireland Forest Service).~~

~~The WCC Executive Board (with representatives from the Forestry Commission, Scottish Forestry, Welsh Government and the Northern Ireland Forest Service) manage the WCC programme. They are advised by the WCC Advisory Board whose members include forestry and carbon market experts. The WCC Secretariat communicates regularly with wider carbon market stakeholders on matters relating to woodlands and carbon. A WCC Disputes Panel meet as necessary to deal with any disputes relating to interpretation of the standard.~~

~~Woodland Carbon Code logo~~

~~Landowners, project developers or carbon buyers of validated/ verified projects may use the Woodland Carbon Code logo and should do so in accordance with the Rules of Use.~~

Future changes to the code

Frequency of updates

This is version 3.0~~2.2~~ of the Woodland Carbon Code released o~~i~~n ~~April~~ 1 August 202552. Additional ~~guidance and interpretation~~information is available at www.woodlandcarboncode.org.uk.

We plan to update t~~T~~he standard~~Code~~ and documents ~~are reviewed~~ every three years~~annually~~ to ensure they are~~the standards it contains 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. 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.

Validation submission date	Before 1 August 2025	1 August 2025 to 30 June 2026	1 July 2026 to 30 June 2028
Standard version	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.

Implementation date	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
Cashflow version	V2.2.1	V2.2.1 or V3.0	V3.0 or V3.1	V3.1 or V3.2

~~Updates to the Code~~The latest standard, any clarifications and ~~the~~ supporting guidance are available at www.woodlandcarboncode.org.uk. Please refer to this website for the most up to date version.

~~Projects should adhere to the most current version of the code. Validated/verified projects must comply with changes within one year of their introduction.~~

Using ~~The structure of~~ 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 ~~undated~~/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
- ~~-~~

~~The Code sets out principles and requirements for best practice in woodland carbon sequestration projects. Requirements for each key aspect of project design and management are addressed in turn, along with the means of validation/verification and further guidance. Words in bold are explained in the glossary.~~

~~.~~

~~Section X.X Aspect 1~~

Structure and definition of terms

Each section of the code contains:

Requirement

These are mandatory requirements~~the compulsory elements~~ of the code and are stated as 'shall'. Woodland carbon projects shall meet all relevant requirements and v~~V~~alidation/v~~V~~erification bodies will check and verify that each requirement is being met.

Means of validation/verification

These are examples of objective~~the type of~~ evidence that project developers may present to validation/verification bodies~~y will consider~~ to demonstrate that ~~check that~~requirements are being met. The list is not exclusive or exhaustive. Validation/verification bodies will not always need to use all the ~~verifiers~~ evidence suggested and may seek verification in other ways. The validation/verification bodies will take ~~into~~ account of the size of the project when assessing what evidence is required.

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

Guidance

~~These notes~~ 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. ~~For each section, additional guidance is available online via the following link:~~

~~Further online guidance >~~

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

~~Principle~~

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. ~~All projects (whether single or part of a group) shall be registered before work begins onsite (the project implementation date).~~

Single projects shall be validated within three years of registration. For groups, projects may~~can~~ 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. ~~For single projects or groups, a.~~ A validation extension may be given in extenuating circumstances. Validation statements shall only be issued once planting is completed (the **project start date**).

All p~~P~~rojects shall have a clearly defined **project duration** of at least 40 years and shall not exceed 100~~a hundred~~ 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

~~The project implementation date is the date when work begins onsite. The project start date is the last date of planting or for natural regeneration, when measures are in place for deer or other pest control. It is the date from which carbon sequestration is accounted for(For projects validated using Version 1.2 of the WCC or earlier, the start date was defined as the start of planting).~~

~~The project duration begins from the project start date and is the time over which carbon sequestration claims are to be made.~~

~~The project end date can be up to 100 years from the start date. The project duration should not be confused with permanence.~~

~~All projects shall involve a permanent land-use change to woodland cover (See Section 2.3).~~

~~The group start date is the last date of planting (or latest project start date) within the group.~~

~~The project registration date is the date on which a project moves from 'Draft' to 'Under Development' status on the UK Land Carbon Registry.~~

~~A validation extension may be given if for example, your planting will span 3-5 planting seasons, or your planting is unavoidably delayed.~~

~~Further online guidance ></~~

~~Website 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~~control~~, ground preparation or planting, whichever happens~~occurs~~ 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 ~~has reduced deer numbers to an acceptable level for natural regeneration~~. 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 ~~of registration is~~ the date when~~on which~~ 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~~~~S&P Global~~.

Project duration

The project duration is the time over which carbon sequestration claims are to be made. ~~The duration can be up to 100 years from the project start date and, for schemes involving clearfelling, shall have a minimum project duration equal to the shortest clearfell rotation in the project. Many schemes claim carbon for a shorter period (e.g. 40 years for a conifer project managed on a 40 year rotation or 65 to 75 years for a native woodland project managed with minimum intervention). This could be because the landowner does not want to commit for a longer period or as it is not~~ 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.

~~The project duration should not be confused with permanence. All projects shall involve a permanent land-use change to woodland cover.~~

Validation extensions

For single projects or groups, a validation extension will be given ~~in extenuating circumstances~~, 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 ~~the Woodland Carbon Code secretariat~~.

1.2 Eligible activities

Requirement

Woodland Creation activities shall be e~~E~~ligible if they take place on~~activities shall be those relating to **woodland creation**~~:

- ~~on~~ land that has not been wooded in the last 25 years
- ~~on~~ 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% 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.

~~Adopting the precautionary principle,~~ W~~w~~here it is possible that there are ~~:~~

organi~~comineral~~ soils, ~~then~~ a peat depth survey shall be provided at validation.

~~where the project includes a~~Where it is possible that there is a mosaic of habitat types, or

p~~priority~~important habitats, ~~(potentially areas have been previously identified as 'species-rich' in an agri-environment scheme),~~

~~then peat depth,~~ 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

~~Woodland creation is the direct, human-induced conversion to woodland of land that has not been under tree cover for at least 25 years. The woodland can be established by planting, direct seeding or natural colonisation/regeneration.~~

~~**Organic soil consists of more than 50 cm deep organic (or peat) surface horizon overlaying the mineral layer or rock. A list of organic soils is available.**~~

~~**We encourage the use of plants from Plant Healthy-certified nurseries where possible. Plant Healthy is a certification scheme designed to ensure that people who grow and handle plants have suitable biosecurity standards in place.**~~

~~**See Section 3.1 for details of field survey for soil type.**~~

~~**Further online guidance >Website guidance**~~

~~**Woodland Creation**~~

~~**For the purposes of the Woodland Carbon Code, we define woodland creation as the human-induced conversion to woodland of land that has not been under tree cover for at least 25 years. The woodland can be established by planting, direct seeding or natural colonisation/ regeneration.**~~

~~**Project size/makeup**~~

~~**The minimum project size reflects that projects less than 1 hectare are unlikely to be cost-effective under the woodland creation methodology. If you registered a project less than 1 hectare prior to 1 May 2024 and it is not yet validated, then we will contact you to discuss options.**~~

- ~~The minimum block size, width and stocking density reflects the minimum definition of 'woodland' across the UK.~~
- ~~An agroforestry methodology is under development. It is possible that any tree planting that does not meet these criteria may be eligible under a future agroforestry methodology. It is not possible to 'pre-register' for any future methodologies.~~

~~'New' woodland creation~~

~~Projects will need to prove that the land has not been wooded in the last 25 years. The following sources of evidence are suitable:~~

- ~~Land use records~~
- ~~Historical maps or images~~
- ~~Forestry Commission England, Scottish Forestry, Welsh Government or Northern Ireland Forest Service planting/ felling databases~~
- ~~Signed attestation from an independent expert~~

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 shouldWe use~~advocate~~ ground preparation techniques with the minimum soil disturbance necessary for successful establishment.

~~Research is still ongoing to fully understand the changes to soil carbon as a result of land use change and land management activities. We are adopt a conservative approach to soil carbon, ensuring that soil carbon emissions associated with the woodland creation project are not under-estimated and that any soil carbon sequestration associated with the woodland creation project is not over-estimated. This approach has been developed with the support of a group of soil experts from across the UK. See Soil Carbon and the Woodland Carbon Code.~~

~~What are Organic, Organo-mineral and Mineral soils?~~

~~A comparison of the soil classifications used in the soil surveys of England and Wales, Scotland and the Forest Research classification identifies which soil types are organic, organo-mineral and mineral.~~

~~**Organic soils:** In Scotland and Northern Ireland, organic soils are those with an organic layer of at least 50cm. In England and Wales they have an organic layer of at least 40cm. The Forest Research classification suggests an organic layer of > 45cm. These organic soils can also be known as peats in Scotland and Northern Ireland and deep peats in England and Wales.~~

~~**Organo-mineral soils**: In Scotland and Northern Ireland, organo-mineral soils have an organic layer of 50cm or less, and in England and Wales 40cm or less. Forest Research's classification, suggests an organic layer of < 45cm. These can include humus-iron podzols, peaty podzols, surface and ground water peaty gleys, peaty rankers and podzolic rankers.~~

~~**Mineral soils** are not defined as having an organic layer (primarily composed of decaying plant material) although they do contain an organic horizon (with higher organic content than underlying horizons). Forest Research classifies mineral soils as having an organic layer of less than 5cm. These can include brown earths, brown rankers and rendzinas, cultivated podzols, surface water and ground water mineral gleys.~~

~~Which soils are eligible for woodland creation under the Code?~~

~~On some soils with a deep organic layer the magnitude of soil carbon losses due to disturbance and oxidation can be greater than carbon uptake by tree growth over the long term. For this reason, in addition to habitat and biodiversity value, the Woodland Carbon Code does not allow any woodland creation to occur on soils with an organic (peat) layer of more than:~~

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

- ~~30cm in England (See~~ Decision support framework for peatland protection~~....in~~ (England)
- ~~50cm in Wales, Scotland and Northern Ireland (See~~ Scotland's guide for cultivation on upland sites~~)~~

~~Areas of deep peat should be excluded from the woodland creation area of the project.~~

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 the 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~~organomineral~~ 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.

~~Biosecurity~~

~~We encourage the use of plants from Plant Healthy-certified nurseries where possible. Plant Healthy is a certification scheme designed to ensure that people who grow and handle plants have suitable biosecurity standards in place.~~

~~Future Developments~~

~~We will add a comparison to the Soil Classification in Northern Ireland~~

- ~~We will develop a soil assessment protocol which, for soil type and soil carbon content~~

1.3 Eligible land

Requirement

Projects shall demonstrate l~~L~~egal ownership or tenure of the project area ~~shall be demonstrated.~~

~~Where land is tenanted, both the landowner and tenant shall commit to the WCC for the project duration and beyond (See Section 2.1).~~

For l~~L~~and 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. See section 2.1 for details of the commitments required in these circumstances.

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

- ~~Declaration in project design document detailing the nature of ownership and landowner/tenant c~~Contact details ~~form and, if leased, tenure documentation and landlord's consent.~~
- 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 (if tenanted).~~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

- ~~Confirmation of landowner/tenant c~~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

~~Land can be freehold or leasehold. If leased, landowner's consent should be presented. See Section 2.3 relating to risks and permanence.~~

~~Further online guidance ></~~

~~**Website Guidance**~~

~~Land Ownership~~

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

~~Other suitable forms of evidence of ownership include:~~

- ~~Title deeds~~
- ~~Solicitor's letter~~
- ~~If the land is leased, a certified copy of the lease~~

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/verification is not a legal compliance audit. The validation/verification body will check there is no evidence of noncompliance 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.~~

~~See also Section 2.1.~~

~~Further online guidance ></~~

~~**Website Guidance**~~

Validation and verification are not a legal compliance audit. The validation/ verification bodiesy 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

~~The validation/verification body will check there is no evidence of non-conformance with the UK Forestry Standard. See also Section 2.1.~~

~~Further online guidance ></~~

~~**Website Guidance**~~

Validation and verification are not a UK Forestry Standard conformance audit. The validation/verification ~~body~~ 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 t~~T~~he legal and financial~~Investment~~ tests ~~shall be passed~~ to demonstrate **additionality**.

Legal test: ~~There is no legal requirement specifying that any of the woodland included in the project woodlands should be created. Compensatory planting is not eligible. The legal test is assessed on an individual project level.~~

The w~~W~~oodland 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.

~~Investment~~ Financial test:

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

~~Projects shall demonstrate that without carbon finance the woodland creation project is either not the most economically or financially attractive use for that area of land or is not economically or financially viable on that land at all.~~

Project developers shall use the cashflow template ~~spreadsheet~~ to demonstrate how the financial~~Investment~~ test is met. ~~The relative proportions of each source of income shall be declared in the project design document.~~

All expected income streams including ~~/~~carbon unit~~credit~~ 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 ~~/ carbon unitcredit sales~~ 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 'n~~N~~ot delivered' on the UK Land Carbon Registry.

Requirements for older projects:

~~Older p~~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.~~ (for e~~ ~~E~~evidence may~~could~~ include ~~the inclusion in~~ minutes of board meetings or planning documents, cashflow or emails).

Means of validation

- Statements in project design document.
- Cashflow ~~spreadsheet~~.
- ~~~~Further evidence of costs/incomes.~~~~Further supporting evidence of work undertaken as required.~~

Means of verification

- Not required.

Guidance

~~WCC units provide wider benefits which are currently 'bundled' with the carbon unit at point of sale. In future, provided certain criteria are met, it may be possible to 'stack' (sell separately) units for different ecosystem services from a WCC project.~~

~~Projects with other sources of income including grant aid under a government-funded initiative, timber income or charitable donations, are eligible provided the Investment Test is passed.~~

~~Further online guidance ></~~

~~**Website Guidance**~~

~~What is additionality?~~

~~The term additionality is used to mean the 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 (in its own right or compared to an alternative non-woodland use) to one which is financially viable.~~

~~If the landowner wishes to create woodland and use the carbon units against their business' own emissions in the future, the carbon price represents the price they would otherwise have to pay to buy carbon units on the open market. See examples of those who are 'growing their own'.~~

~~Background to additionality in the UK~~

~~Levels of woodland creation across the UK are generally low at present and woodland creation targets of 30,000 hectares per year to help meet the target to be net zero emissions by 2050 are challenging. Income from carbon sales will encourage some new landowners to plant and other landowners might wish to create their own 'store' of carbon credits to use against their wider business' emissions.~~

~~The Woodland Carbon Code applies a project-based approach to assessing additionality. This guidance has been adapted from the CDM Tool for the Demonstration and Assessment of Additionality in A/R CDM Project Activities (Version 02) in order to take account of policy instruments operating in the UK.~~

~~Bundling or stacking of ecosystem service credits/units in woodland projects~~

~~*Current situation: Implicitly bundled credits/units*~~

~~With the Woodland Carbon Code, wider benefits of woodland creation projects are implicitly 'bundled' with the carbon unit when they are sold (i.e. the landowner sells the carbon unit with the other benefits of the project 'attached' or included).~~

~~*Future possibilities: stacked credits/units*~~

~~In future, it may be possible to 'stack' voluntary credits/units generated from a woodland creation project (e.g. where credits/units are generated for other ecosystem services such as biodiversity or water). Work is underway in collaboration with the Peatland Code, the UK Land Carbon Registry and each of the devolved UK Governments to consider how stacking could function in a future version of the Code.~~

~~Mechanisms are needed to ensure stacking does not compromise the integrity of the market, in particular the requirement for projects to demonstrate additionality. A programme of work is planned to develop mechanisms to enable stacking, including:~~

- ~~The existence of credible voluntary standards for each ecosystem service in the stack.~~
- ~~A mechanism to 'approve' those standards to 'stack' with the Woodland Carbon Code, potentially through the Nature Markets Framework being developed by Defra and the British Standards Institute, with approval from the Woodland Carbon Code Executive Board.~~
- ~~Methods for distinguishing bundled projects from stacked projects, including mechanisms to show this on the UK Land Carbon Registry. If other ecosystem credits are held on a different registry, then processes to make this transparent between registries. This will avoid double counting and ensure that claims of the different benefits/credits from a project are clear and explicit.~~
- ~~An updated Woodland Carbon Code Cashflow spreadsheet to include income streams from other types of credit.~~

How to assess additionality

~~Additionality is tested in two ways within the Woodland Carbon Code:~~

- ~~Legal test~~
- ~~Investment test~~

~~Both tests shall be passed to demonstrate additionality.~~

Legal test

~~Woodland creation that is required by law is not additional, whether under legislation set by the EU, UK, devolved administrations or local government. A woodland creation project passes the legal test when there are no laws, statutes, regulations, court orders, environmental management agreements, planning decisions **(see below) 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 are not additional.~~

Further guidance on ~~**~~planning decisions:

Woodland creation as a result of a planning condition under a Town and Country Planning Act or in ~~the~~ 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~~investment~~ 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 or nutrient credits under the Solent Nutrient Market or Somerset Catchment Market are unlikely to be eligible for the Woodland Carbon Code~~/voluntary carbon credits~~ as their legal agreements are likely to specify that woodland creation is required.

Financial test

The purpose of the financial~~investment~~ test is to demonstrate that, over the project duration, without carbon finance, woodland creation is ~~either:~~

not the most economically or financially attractive option for that area of land ~~(e.g. woodland creation is profitable, but less so than grazing or other likely non-woodland use) - For example the Net Present Value of woodland creation (without carbon income) could be positive, but it is less than the Net Present Value of the current/ baseline land use.~~, ~~or~~

~~a. not economically or financially viable on that land at all (e.g. woodland creation is not profitable) - For example, the Net Present Value of woodland creation (without carbon income) is negative, but adding carbon income moves the Net Present Value to nearer zero or positive.~~

~~Project developers should use the Woodland Carbon Code Cashflow Spreadsheet to set out costs/income over the project duration. See template documents. The spreadsheet~~ 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. ~~Project developers enter their actual grant and other income data.~~

~~In general, native broadleaved schemes, where there is little or no income from the woodland once established, are much more likely to pass the investment test than productive conifer schemes, where there is future income from timber. However, many schemes contain a combination of productive and non-productive elements, and each scheme is judged on its own merits.~~

~~At the time of validation, all expected income streams/credit sales should be included in the Woodland Carbon Code additionality assessment. If further income streams/ credit sales are identified at a later date, evidence may 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 may be marked 'Not Delivered' on the UK Land Carbon Registry.~~

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 must be under the same ownership, manager and management plan.
- For projects receiving grant funding, the entire grant area relevant to woodland creation shall be included in the Woodland Carbon Code project. A planting area shall not be subdivided for the purposes of Woodland Carbon Code validation.

Small project process

Small projects more than one hectare and less than or equal to five 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 ~~'small project' 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 ~~for projects~~.

Projects up to ten~~five~~ hectares net planted/regenerating area which were validated as a standard project before version 3.0 may move to the 'standard' 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.

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 105~~0~~ 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

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

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.

~~The addition of new projects after the initial group validation is only allowed to replace planted areas that have been withdrawn from the group or suffered losses due to fire, disease etc. If any such additions occur between five or ten yearly verification events, then a revised project design document needs to be prepared and the group re-validated as a whole.~~

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

~~Principle~~

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 ~~of landowners and project developers/group managers~~

Requirement

Commitments on non-crofting land

For non-crofting land, t~~T~~he 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~~woodland carbon~~, 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 ~~verified~~ Woodland Carbon Units is accurately represented and up to date in the UK Land Carbon Registry ~~(either in their own account or via the project/group manager's account)~~ (2.6).
- ~~Only sell carbon units which are validated and verified to a standard which is endorsed in the UK Environmental Reporting Guidelines (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.

~~Where larger estates are managed by trustees, then either the landowner themselves, or the legal signatory shall sign the landowner commitment statement.~~

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 ~~verified~~ Woodland Carbon Units is accurately represented and up to date in the UK Land Carbon Registry (2.6).
- ~~Only sell carbon units which are validated & verified to a standard which is endorsed in the UK Environmental Reporting Guidelines (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.

~~Groups shall have a nominated Group Manager and a formal management structure between members.~~

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' ~~Groups shall have a Group~~ a~~A~~greement which sets out: ~~The name of the group, its size and geographic scope and any other limitations on membership.~~

- 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 Group Manager should this be necessary. ~~The name and contact details of the constituent landowners (and land managers if there are any).~~
- 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. ~~Each project's liability for the group's carbon rights and commitments (including consideration of whether the carbon is sold collectively or individually).~~
- The group's management structure and any other group rules.
- ~~If not specified separately, the commitments of each landowner and the group manager as outlined above.~~
- For a group with different landowners: signatures of the group manager or representative and ~~Group Manager,~~ all the landowners ~~, and land managers if there are any.~~
- For a project on common grazing land in Scotland: signatures of all participating shareholders, the common grazing clerk and project developer where appropriate
    - ~~The roles and responsibilities of the Group Manager and the group members as set out in online guidance:~~

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 ~~from the landowner (and tenant where applicable)~~ or contracts between the relevant parties~~landowner/tenant and project developer~~ to confirm their ~~landowner's/tenant's and project developer's~~ 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~~Group Agreement~~.

Means of verification

- Updated c~~C~~ommitment ~~from new landowner/tenant if the landowner/tenant~~ if any parties ha~~ve~~s changed.
- Updated carbon sharing~~group~~ agreement if any parties or arrangements have changed~~group members (including the manager) have changed~~.

Guidance

~~This section brings together the commitments of the landowner and project developer/group manager from the relevant sections of the standard. See also Sections 1.4, 1.5, 2.3, 2.5, 2.6 and 2.7.~~

~~Further online guidance >~~

~~**Website Guidance**~~

Commitments

~~Landowner / project developer commitments~~

This section brings together ~~in one place~~ all the commitments ~~required~~ of ~~the~~ landowners, tenants and~~/or~~ project developers or 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.

~~There may be more than one party involved in the management of a Woodland Carbon Code project.~~ The project developer could be the~~A~~ landowner or~~could develop their own project or contract~~ a third party they contract to develop the carbon project.

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

~~Whichever setup applies, there are a number of commitments that each party involved in Woodland Carbon Code projects should make.The Project Developer or Group Manager needs to be legally constituted such that they can enter a service contract with the validation/verification body.~~

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.

~~The Group Agreement~~

~~Once validated as a group, it is anticipated that groups will continue to work together for the duration of their projects/the Group Agreement.~~

~~The group manager should:~~

- ~~Maintain a register of members of the group and the individual planting projects covered by the group scheme.~~
- ~~Ensure the requirements of the contract between the group manager and the constituent group members are adhered to.~~
- ~~Establish and implement a system of document control and record keeping, holding copies of documents as required by the Woodland Carbon Code.~~
- ~~Act as the main point of contact with the Woodland Carbon Code Secretariat, the validation/verification body and the UK Land Carbon Registry.~~
- ~~Register the projects in the group on the UK Land Carbon Registry and coordinate the project group design.~~
- ~~Lead on project group validation and ongoing verification including addressing corrective actions for non-conformities.~~

~~Inform group members of relevant developments.~~

- ~~Deal with complaints relevant to Woodland Carbon Code validation/verification.~~
- ~~Revise the Group Agreement (as necessary) with any changes to the group membership or terms.~~
- ~~Commit to the other terms for project developers as detailed above.~~

~~Group members should:~~

- ~~Abide by the Group Agreement.~~
- ~~Inform successor landowner(s) of their commitment to the group.~~

- ~~Allow the group manager to apply for Woodland Carbon Code validation/verification on their behalf.~~
- ~~Supply information required by the group manager and agree to internal audit by the group manager.~~
- ~~Take any corrective action required by the group manager to address non-conformities.~~
- ~~Commit to other terms for landowners as detailed above.~~

~~Group Agreements should be signed and dated by all parties.~~

2.2 Management plan

Requirement

~~There~~ Projects shall have~~be~~ 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 ~~of the areas being planted~~ that is clear and ~~,~~aligns with the Woodland Carbon Code mapping guidance~~rules~~ 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. ~~There~~ It shall ~~be~~ 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.

~~For n~~Natural colonisation/ regeneration projects~~, there~~ shall ~~be~~have an 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~~Planting map~~ which meets Woodland Carbon Code mapping requirements~~rules~~.
- 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~~planting map~~ (if~~-~~ required~~boundaries/other spatial project details have changed~~).
- 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:
  - Copy of 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

~~If the project is receiving a woodland grant (or has a felling licence), any existing woodland management plan may provide sufficient evidence of the management plan.~~

~~For further information on sustainable forest management see the UK Forestry Standard (including the sustainable forest management elements of Climate Change, Soil, Water, Biodiversity, Landscape, Historic Environment and People)~~

~~Further online guidance ></~~

~~**Website 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 ~~provides free woodland mapping and management planning software~~
- Rethink Carbon
- The Land App ~~also provides free mapping services~~

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, p~~P~~roject developers ~~need t~~should~~o~~ 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 calculatorion Spreadsheet.

Mapspping rules

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

The map forms an important part of the Woodland Carbon Code documentation. It will be uploaded to the UK Land Carbon Registry and will be a publicly available document enabling potential carbon buyers as well as validationng/verifying ication bodies to locate your project and identify the different elements within it.

If you have already produced a map, e.g. 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, please ensure you 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.~~i.e.~~ project design document, UK Land Carbon Registry). If your project has several separate components~~/stands~~, 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~~/sub-compartments~~

Any sections~~/sub-compartments~~ 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~~ion Spreadsheet~~, then use the same names for sections/sub-compartments on the map and in your carbon calculat~~ion~~or. 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~~requirements~~ 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

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 ~~factors~~ 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~~carbon~~, 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~~the loss~~ 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~~, and t~~
- The magnitude of any loss is quantified during the subsequent verification survey and in the project progress report.

Guidance

~~Permanence describes the issue of ensuring 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 and as such safeguards must be in place to minimise that risk and to guarantee replacement or alternative woodland should a reversal occur.~~

~~Risk management should be built in at every stage of project design. The purpose of the WCC Buffer is to protect the integrity of verified Woodland Carbon Units in the event of a reversal and a net loss of sequestered carbon from a project.~~

~~From Version 2.0 of the standard, all projects contribute 20% to the WCC Buffer. In Version 1.3 of the WCC and earlier, projects contributed an amount based on the level of risk of their project.~~

~~A template Loss Report is available. Any Loss Reports submitted will be publicly available in the UK Land Carbon Registry.~~

~~See Section 2.1 for a summary of landowner commitments.~~

~~Further online guidance ></~~

~~**Website Guidance**~~

~~What is 'Permanence'?~~

~~Permanence describes the issue of ensuring 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 and, as such, safeguards must be in place to minimise that risk as well as to guarantee replacement or compensatory woodland planting should a reversal occur.~~

~~Woodlands sequester carbon from the atmosphere, but can also lose carbon either through natural causes (pest and disease attacks, extreme weather events or fire) or through management (felling and not replacing the trees). Project managers need to make every effort to ensure that any claimed carbon store remains in the woodland for the duration of the project and beyond.~~

~~The measures set out below ensure that the risk of loss is minimised and that if there are any unavoidable losses, there is a process for these to be dealt with.Where there is an avoidable loss (e.g. where the management regime set out in the project design document is not followed by the landowner/manager), this can be dealt with by legal and contractual means.~~

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 calculation Spreadsheetor. 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.

Minimising Addressing risks to minimise losses

A risk assessment should be included in Tthe project design document includes a risk assessment at validation. at validation in order to insure against unforeseen losses of woodland carbon. Any updates to risk areshould be given in the project progress report at each verification. The risk assessment will identifyFor each project, the potential risks and should be identified and outline strategies developed to mitigate these risks. As a minimum, the following areas areshould be 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. Thus Woodland Carbon Units issued for a projectOne tonne of **carbon dioxide** sold to a company is a are permanent emission reduction and would never have to be cancelled or ‘paid back’ should that project subsequently 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. and These losses arewould be 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% of the project's net carbon sequestration to the buffer. In version 1.3 and earlier~~With previous versions of the standard~~, projects contributed a variable amount (15% to 40%) based on project risk.

At validation, 20% 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% 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 trees and standing volume, and therefore carbon due to avoidable or unavoidable circumstances.

~~Should~~ If there is a a loss of Woodland Carbon Units or Pending Issuance Units which are sold~~occur~~, the project should immediately inform the Woodland Carbon Code team.

The project should~~must~~ submit a loss ~~event~~ report within six months of discovery of the loss. The relevant number of buffer units to cover the loss will be put on hold.

~~Any Loss Reports submitted will be publicly available in the UK Land Carbon Registry.~~

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~~, taking into account the baseline, leakage and project carbon sequestration~~ 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.

~~Reversal:~~ 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~~loss~~, 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 project design document shall be reviewed~~ 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.

~~No reversal/increase:~~ 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 event report will be released back to the buffer.

See also ~~the~~ 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 ~~shall~~ 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 ~~is only required to~~shall 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

~~The landowner of a Woodland Carbon Code project has to commit to a permanent land use change to woodland and to maintain the woodland as a woodland carbon sink. Any unavoidable losses due to natural disturbances such as fire, pest, disease~~

~~or wind damage will be eligible to make a claim from the 'buffer' of unclaimed carbon. Avoidable losses (e.g. the landowner choosing to fell and not replace the trees) must be dealt with by legal or contractual means.~~

~~Contractual obligation Where a contract is in place with a buyer covering the landowner's obligations to provide carbon sequestration through woodlands, claims may be made by the buyer in the event of a breach of contract.~~

~~In addition to any contractual obligations set up under the~~ Woodland Carbon Code projects ~~are subject to~~ are protected by existing legislation that ~~would~~ 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

~~Future developments~~

- ~~We are developing standard terms to be included in contracts sellers and buyers.~~
- ~~We will provide further examples on avoidable and unavoidable reversals and replenishing the buffer.~~

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 etc. 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

~~A toolbox for public engagement in forest and woodland planning assists forest and woodland managers when planning for public involvement, and when considering which tools they could use to include people in forest or woodland planning.~~

- ~~In Scotland, the Scottish Land Commission Protocol on Community Engagement in Decisions Relating to Land provides further guidance.~~

~~Where an EIA was required, or a woodland creation grant was given, these processes should usually provide the appropriate documentary evidence for stakeholder consultation and engagement.~~

~~Further online guidance~~

~~**Website 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~~planning~~ for public involvement in woodland planning and management. It helps forest managers decide the most appropriate tools and processes.~~and when considering which tools would be most appropriate when including local communities and other stakeholders in forest or woodland planning and management.~~

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

- Community Engagement in Decisions Relating to Land and
- The Route Map for Community Engagement~~ provides further guidance.~~
- 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: Public register of Environmental Impact Assessment Decisions
- Northern Ireland: Public register of Environmental Impact Assessments

2.5 Monitoring

Requirement

Projects shall~~should~~ 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 ~~'year 5 monitoring~~ survey protocol (year 5 projects)~~'~~ shall be followed for all projects, whether 'standard' or 'small' projects.

~~Monitoring and verification shall be complete bystart 12 months prior to the end of the vintage/verification due date.~~

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. At the end of each vintage,~~
~~2. projects shall complete one of the following:~~
~~3.~~1. ~~undertake f~~Full monitoring and ~~third party~~third-party verification (any project)~~.~~.

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

   ~~This leads to the conversion of Pending Issuance Units to Woodland Carbon Units.~~ 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 ~~Upon verification, the single project or group will be marked Verified and~~ Pending Issuance Units ~~realised will be converted~~ to verified Woodland Carbon Units. The project will be marked as 'verified'.

2. ~~undertak~~B~~e b~~asic monitoring and ~~third party~~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 ~~woods~~project' calculator~~'~~ at validation.
   - It is~~'s~~ not the last monitoring period of your project. At the last monitoring period you shall do full monitoring and ~~third party~~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.

   ~~This~~Basic monitoring and ~~third party~~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.

~~Single projects or groups shall submit a Project Progress Report alongside the relevant Basic Monitoring Report for third party Verification. Upon verification, their single project or group will be marked Verified and Pending Issuance Units will be converted to verified Woodland Carbon Units. All Pending Issuance Units will be converted provided the extent and health of the project is demonstrated.~~

3. ~~undertake b~~Basic monitoring ~~without~~ and self-assessment ~~third party verification~~ (~~standard or small~~ any project~~s~~).
   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, ~~In this case~~Pending Issuance Units will ~~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'.

~~– they will remain as 'Pending Issuance Units'. Single projects or groups shall submit their project as Self-Assessed with the relevant Project Progress Report alongside the relevant Basic Monitoring Report to the WCC Secretariat. Once checked, the project will be marked Self Assessed and no units will be converted. Projects intending to use this method shall contact the Woodland Carbon Code secretariat to confirm that they meet the criteria.~~

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~~secretariat~~. 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 f~~be f~~ull monitoring and third-party verification option and shall follow~~use~~ 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~~y~~ together again at year 15.

- ~~shouexplain the reason actions are required and detail what actions will be undertaken, including location of works, who is responsible, and when works will take place. It is important that remedial plans are timebound. If a project has received grant support, remedial plans must be approved by the relevant forestry authority.~~

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
- 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.
- ~~Other evidence as specified in the relevant monitoring protocol.~~
  ~~Other evidence to show that corrective actions have been undertaken.~~
- 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 ~~photo evidence (aerial and from the site)~~
  - Other evidence to confirm~~s~~ the extent and health of the woodland.

Guidance

~~Monitoring is required to demonstrate successful woodland establishment and assess actual tree growth and carbon sequestration rates. For projects validated under Version 1.2 of the Code or earlier, timings for the first verification may vary.~~

~~Verification is due by the date indicated on the V~~validation/~~V~~verification Statement.

~~Further online guidance ></~~

~~**Website Guidance**~~

~~Monitoring Plan~~Why monitor?

~~Each project needs to have a monitoring plan in place before validation.~~ Monitoring will enable the project to demonstrate successful woodland establishment and quantify ~~and document~~ the progress of carbon sequestration. ~~as well as~~ It can also ensure that the project is still~~is being~~ managed to the UK Forestry Standard. ~~The monitoring plan shall be set out in the project design document.~~

When to monitor

To ensure verification is completed on time, p~~P~~rojects developers should~~need to undertake the field~~ survey their project one or two growing seasons~~six to 12 months (but no more than 12 months, except in exceptional circumstances)~~ before~~prior to~~ 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.

~~Starting the monitoring six to 12 months before the due date allows sufficient time for verification to be completed before the verification due-date.~~

Monitoring at year-5

The first verification due date is five years after the start date. F~~(f~~or ~~those~~ 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 ~~trees/site are~~ in good health with the potential to grow and sequester carbon as predicted.

~~All projects should use~~ T~~t~~he ~~Woodland Carbon Code~~ survey protocol ~~V2.1.1 April 2024 (.pdf) which~~ sets out requirements of the year five survey. ~~It assesses:~~

- ~~Tree stocking density through the number of seedlings and saplings of each species~~
- ~~Actual species mix~~
- ~~Tree health, tree damage, weed growth and tree protection (shelters/fencing)~~

The ~~Woodland Carbon Code~~ year 5 monitoring report ~~V2.1.1 April 2024 (.xlsx)~~ provides template sheets for data collection as well as a summary sheet which calculates stocking density from the results of the field survey.

~~You will submit a project progress report V2.2.1 (.docx) and the year 5 monitoring report, with site-based photos to your chosen verifier. On verification, the predicted number of Pending Issuance Units will be converted to Woodland Carbon Units with no under or over delivery.~~

~~At year five, projects will be verified to a 'limited' level of assurance.~~

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 ~~trees/site are~~ 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 ~~Woodland Carbon Code~~ survey protocol~~V2.1.1 April 2024 (pdf)~~. ~~It assesses:~~

~~Carbon stock~~

~~Tree health~~

The Woodland Carbon Code year 15+ monitoring report ~~pilot V2.1 March 2021 (xlsx)~~ provides template sheets for data collection as well as summary sheets to calculate the carbon stock of the woodland. ~~You will submit a project progress report V2.2.1 April 2024 (docx) and Woodland Carbon Code year 15+ monitoring report with site-based photos to your chosen verifier. On verification, your units realised will be converted from Pending Issuance Units to Woodland Carbon Units.~~

~~2. If your survey results confirm more carbon is stored onsite than predicted, then your verification status will be 'green' and you will be issued more Woodland Carbon Units, in line with your survey results.~~
~~3. If your survey results confirm less carbon is stored onsite than predicted, then your verification status will be 'red' and any undelivered Pending Issuance Units will be cancelled.~~
~~4. If the verifier's assessment is that there is real concern for the ability of your project to sequester the predicted amount in future vintages, you will be required to re-assess your carbon prediction and Pending Issuance Units issued for future vintages will be cancelled.~~
~~5. Projects which undertake full monitoring will be verified to a 'reasonable' level of assurance.~~
~~6.~~2. Basic monitoring and third party verification (small projects only~~for projects that used the small project calculator~~)

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 ~~trees/ site are~~ in good health.

~~You will submit a project progress report V2.2.1 April 2024 (docx) and basic monitoring report for verification. On verification, it will be assumed that the predicted amount of carbon dioxide has been sequestered and your units will be converted from Pending Issuance Units to Woodland Carbon Units with no under or over delivery.~~

~~You can only undertake basic monitoring and third party verification if:~~

- ~~Your project is at least 15 years old.~~

- ~~You used the 'small woods calculator' at validation.~~
- ~~It's not the last monitoring period of your project. At the last monitoring period you will be required to do full monitoring and third party verification.~~
- ~~There have been no major changes to the project since the last verification (area, management, ownership, health etc.).~~

The verifier may~~can~~ 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~~can request~~ that you conduct full monitoring before~~prior to~~ verification of your small project.

~~7. Small projects which undertake basic monitoring will be verified to a 'limited' level of assurance.~~

~~8.~~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~~secretariat~~ 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.

~~You can only undertake self-assessment from year 15 onwards if:~~

- ~~Your latest verification received a 'green' status (if a group, all projects have to be 'green' status) and~~
- ~~Yyou don't have any concerns about the growth and health of your project.~~
- ~~Your latest assessment was a verification, not a self-assessment.~~
- ~~It's not the last monitoring period of your project. At the last monitoring period you will be required to do full monitoring and third party verification.~~
- ~~There have been no major changes to the project (area, management, ownership, health etc.)~~

~~Please contact the Woodland Carbon Code Secretariat if you intend to self-assess and we will check you meet the criteria.~~

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

~~Self-assessed projects are not verified. No Pending Issuance Units will be converted to Woodland Carbon Units.~~

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 teamsecretariat (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:
        - 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).
        - Satellite-based optical data (such as Copernicus/Sentinel ~~now~~ which produce~~s~~ repeat images every six days. This is currently available to Forestry Commission/Forest Research/Scottish Forestry internally. Also available from ~~private source~~https://browser.dataspace.copernicus.eu/~~s~~).
        - Drone-based video/photos
        - Other image sources as they become available.
    - ~~An updated map (with planted/open/existing woodland and project boundary) if the net area apparent on the aerial image is different to at odds with the original map. This should follow Woodland Carbon Code mapping guidance. If there is greater than a 5% disparity in apparent net area, then full monitoring should be undertaken.~~
    - ~~Who can undertake the assessment?~~
    - ~~The year five or year 15 survey can be carried out by a suitably experienced landowner, project developer or independent third party. The verifier may also offer to carry out the field survey on the project developer's behalf. The verification body will always visit the site at the year five verification, but will do so on a risk-based approach for subsequent verifications.~~

~~Monitoring carried out by an independent third party could be less likely to require a verification body field visit, however project developers should contact their chosen verification body to check the suitability of an independent surveyor prior to carrying out the survey.~~

~~The science behind the assessment of carbon~~

~~The Woodland Carbon Code Survey Protocol is a subset of methods outlined in the Woodland Carbon Code carbon assessment protocol (pdf) provides greater detail on monitoring the carbon stocks of woodlands(pdf). Methods of calculating the tree stem volume are detailed further in the Forest Mensuration Handbook. The methods of estimating the mass of carbon from the tree volume are given in The Carbon Content of Trees (pdf) and other Forestry Commission publications such as:~~

- ~~Forests, Carbon and Climate Change: the UK contribution (pdf).~~
- ~~Understanding the carbon and greenhouse gas balance of forests in Britain~~

~~Future Developments~~

- ~~We will develop a soil carbon assessment protocol.~~
- ~~We are investigating how technology such as instruments on drones, planes and satellites could help with verification. We will add to the protocol when such methods are acceptable and cost effective.~~

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~~master~~ 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.

~~Upon validation, Pending Issuance Units (~~On validation, Pending Issuance Units s~~s)~~ shall be listed for all carbon units in the project, except for a limited number of the project types listed below.~~s where predicting the carbon sequestration is more challenging, following project sted belowv~~ For these projects, verified Woodland Carbon Units shall be issued once the actual amount sequestered is known~~. This includes~~:

- ~~Natural regeneration projects which are very large-scale, or~~'Future claimable' areas of natural regeneration ~~where there is little or no 'baseline' evidence of seedlings regenerating~~.
- 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.

- ~~Upon validation, Pending Issuance Units (PIUs) shall be listed for all carbon units in the project, except in circumstances specified in guidance.~~

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.

~~Prior to u~~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 ~~and shall only sell carbon units which are validated & verified to a standard which is endorsed in the UK Environmental Reporting Guidelines~~.

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~~, and that the project developer only sells carbon units which are validated & verified to a standard which is endorsed in the UK Environmental Reporting Guidelines~~ (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.
- ~~No evidence from the landowner or project developer's websites that they are selling carbon sequestration/emissions reduction which is not validated/verified to a standard which is endorsed in the UK Environmental Reporting Guidelines.~~
- Carbon units are shown as retired from the UK Land Carbon Registry on use.

Guidance

~~The UK Land Carbon Registry gives details of Projects, Pending Issuance Unit listings, Woodland Carbon Unit issuances, transfers, assignments and retirement. This service is provided by S&P Global.~~

~~Prior to verification, units will be defined as 'Pending Issuance' and are effectively a promise to deliver verified units. These can be transferred or assigned to a buyer in advance of delivery. Verified Woodland Carbon Units can be retired for use in a company's environmental or greenhouse gas report or in claims of carbon neutrality. See Section 2.7 on carbon claims. See online guidance for registry rules of use and fees.~~

~~Further online guidance >~~

~~**Website Guidance**~~

The UK Land Carbon Registry holds details about projects and carbon units for ~~is managed by S&P Global on behalf of~~ 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.

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.

~~Carbon removals~~ Only verified Woodland Carbon Units shall ~~only~~ be reported, or used~~, after carbon is sequestered and verified (i.e. Woodland Carbon Units)~~ 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 project documentation or carbon statements/reports follow the WCC 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

~~A carbon statement is simply 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. Carbon units can only be reported (used) by the buyer/owner, after verification by the landowner.~~

~~Both the UK Government's Environmental Reporting Guidelines: Including Mandatory Greenhouse Gas Emissions Reporting Guidance and the British Standards Institute's PAS2060:2014 Specification for the Demonstration of Carbon Neutrality state how verified Woodland Carbon Units can be used. Anyone making carbon or other environmental claims should also refer to Defra's Green Claims Guidance.~~

~~See Section 2.6 on how carbon units are represented in the UK Land Carbon Registry.~~

~~Further online guidance >~~

~~Website 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

~~It is vital to the reputation of the code that any claims made about carbon are true and accurate and that carbon from a given project is not used or accounted for more than once. As a general principle, carbon can only be used once the trees have grown, carbon is sequestered and verified. Companies using verified Woodland Carbon Units should demonstrate their use in an annual report (environmental, greenhouse gas or financial) as well as in other promotional claims. Landowners, project developers and carbon buyers should make every effort to ensure the appropriateness and accuracy of any claims.~~

~~The UK Land Carbon Registry, a carbon unit registry for the Woodland Carbon Code and Peatland Carbon Code, hosted by S&P Global. This contains units in two forms:~~

- ~~Pending Issuance Units of a given 'vintage'/time-period (essentially a promise to deliver carbon units in a given timeframe; not guaranteed) and~~
- ~~Verified Woodland Carbon Units of a particular vintage/time-period (verified carbon sequestration which can be used or reported; guaranteed).~~

~~All units are linked to the project they belong to and are publicly visible with their current status and owner. When units are retired from the registry for use, this will be publicly visible on a 'retirement' page. This will provide clarity and transparency of carbon owners and claims that are made. It is possible for project developers to 'assign' a Pending Issuance Unit to a buyer if the buyer doesn't wish to have their own account. Assignment is irreversible and assigned credits will be automatically retired once they are converted to verified Woodland Carbon Units upon verification.~~

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~~provide further guidance for those thinking of buying carbon units or buying land to create carbon units~~.
- Welsh Government consultation on Sustainable investment principles~~Find out more about the statements/ claims that can be made about Pending Issuance and Woodland Carbon Units~~

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

~~Principle~~

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**, p~~P~~roject 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).

~~Not required.~~

Guidance

~~A carbon baseline is the reference sequestration over time from which the impact of the project can be measured. It is based on a continuation of the current land use in the absence of the project.~~

~~Changes to baseline are significant if they are ≥5% of the project carbon sequestration over the duration of the project.~~

~~Carbon pools included:~~

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

~~Further online guidance ></~~

~~**Website 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 ~~(5 ha net planting area or less)~~: We assume that the baseline is 'no change in carbon stocks over time'. No assessment is necessary.

Standard projects ~~(over 5 ha net planting area)~~: 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. ~~However, standard projects should consider whether there would have been significant sequestration in the 'baseline' scenario.~~

~~Which carbon pools do I include?~~

~~The Woodland Carbon Code is adopting a conservative approach to the construction of the baseline scenario, meaning greenhouse gas emissions from the land use prior to woodland creation (e.g. from livestock, fertiliser or burning) cannot be included in the baseline.~~

~~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~~

Calculating the carbon stock at the start of the project

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

- For tree biomass - ~~The carbon assessment protocol should be~~ Uuse the survey protocol to ~~d to survey the trees already existing onsite and~~ estimate the carbon any trees already onsite~~they~~ 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 r~~R~~eference Natural England's Carbon Storage and Sequestration by Habitat 2021 (NERR094) or contact the Woodland Carbon Code team ~~secretariat~~ 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 in the table Soil Carbon estimate prior to planting. W~~Note w~~e recognise these figures are the mean mass of soil carbon across each land use and country and, in reality, there is a large variation.

Calculating changes to the baseline scenario over the project duration

~~If likely to be significant (i.e. ≥ 5% of the project carbon sequestration over the duration of the project), projects need to calculate how carbon stocks on the site would have changed over the project duration had the project not gone ahead (the 'baseline' or 'business as usual' scenario).~~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.

~~If the change to the carbon pools is not significant (i.e. < 5% of the project carbon sequestration over the duration of the project) then it can be assumed that the baseline scenario is 'no change of carbon stocks over time'. However, projects should clearly lay out in the project design document how they came to this conclusion.~~

- 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~~an organic/peat layer 50 cm or less~~, projects can assume that there is no change over time to soil carbon in the baseline scenario.

~~Future Developments~~

- ~~We will publish estimates of the carbon stock of other types of non-tree vegetation.~~
- ~~We will update the table Soil Carbon Estimate Prior to Planting with information by soil grouping (organic, organo-mineral and mineral) or, where possible, by soil type to increase the accuracy of these predictions.~~
- ~~In future for Scotland more soil type-specific carbon stock information may be available from the Soil Information for Scottish Soils website.~~
- ~~We will publish a Soil Carbon Assessment Protocol to allow projects to undertake a field assessment to estimate the soil carbon stock at the site.~~

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, i~~I~~f **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.
- ~~Mapping or field observation of current land uses and the likelihood of displacement of activities.~~
- Map of site and surrounding area with leakage risks highlighted.
- Carbon calculator incorporating f~~F~~urther leakage calculations ~~of leakage~~.

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).

~~Leakage is significant if it results in GHG emissions of magnitude ≥5% of the project carbon sequestration over the duration of the project.~~

~~Carbon pools included:~~

- ~~Tree above and below ground biomass~~
- ~~Litter and deadwood~~
- ~~Non-tree above and below ground biomass~~

- Soil
- GHG emissions to manage the land which has changed use

Further online guidance >

Website Guidance

What is 'Leakage'?

Many international carbon standards involve assessments of leakage or changes to carbon stocks outside of the project boundary as a result of the project going ahead. International carbon standards describe two main types of leakage and their relevance in terms of a woodland creation project is described below:

- Activity-shifting leakage: When the activity (agriculture or other) which was taking place on the project site is moved and causes land-use change elsewhere. In some countries there is concern that this might cause deforestation away from the project site or degradation of other semi-natural habitats. These emissions from deforestation or intensification of use of non-wooded land are normally accounted for.
- Market leakage: If the presence of the project causes production of a product to be stopped on the project site, forcing additional production elsewhere to ensure the market demand is met. This tends to be used where a project involves accounting for changes to woodland management and timber production on the project site is stopped or postponed. In the case of new woodlands, this is not likely to occur since there is no woodland product produced at the site prior to planting.

Likelihood of leakage of emissions in the UK

Given that the Woodland Carbon Code only deals with woodland creation, only activity-shifting leakage would appear to be relevant. However, there are a number of laws governing the protection of semi-natural habitats and existing woodlands so that any activity-shifting leakage within the UK (in terms of intensification of use of land outside the project boundary) is highly unlikely.

For deforestation:

- Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999 and the Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999. Requires an Environmental Impact assessment for any deforestation over 1ha (0.5ha in sensitive areas).
- Forestry Act 1967. Requires a felling licence for deforestation. Unconditional (i.e. no restocking required) felling licences are rare. There are some exceptions including:
    - Very small volumes of timber felled annually by the woodland owner
    - Development granted under the Town and Country Planning Act 1990 or the Town and Country Planning (Scotland) Act 1997
    - Electricity operator

~~For protection of biodiversity and other semi-natural habitats:~~

- ~~Wildlife and Countryside Act 1981 and amendments~~
- ~~Countryside and Rights of Way Act (England and Wales) 2000, Nature Conservation (Scotland) Act 2004, The Conservation Regulations (Northern Ireland) 1995~~

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 s~~S~~mall project calculator~~s (5 ha net planting area or less): C~~ can assume that there is no leakage.

Standard projects ~~(over 5 ha net planting area): S~~ should consider whether the project will result in more intensive use of another area of land elsewhere in the UK~~under the same ownership or lessee~~. 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. The following carbon pools shall be included:~~

~~Tree above and below ground biomass~~

~~Litter and deadwood~~

~~Non-tree above and below ground biomass~~

~~Soil~~

~~Increased emissions from management of the land~~

1~~2~~. Any land use change or intensification within the UK which can be attributed to the project going ahead should be accounted for.

2~~3~~. 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~~4~~. 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 ~~relevant template~~ carbon calculatorion ~~spreadsheet~~ (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 calculatortion ~~Spreadsheet (Standard or Small Project worksheet)~~.
- Other evidence to justify growth rates.

Means of verification

- Updated carbon calculati~~on~~or with comparison of old and new prediction of units by vintage ~~Spreadsheet (Standard or Small Project worksheet)~~, if required.

Guidance

~~The template WCC Carbon Calculatorion Spreadsheet refers to the Biomass and Soil Carbon Lookup Tables. There is~~ contains a ~~'Standard~~

~~Project' and 'Small Project' version. Carbon Calculations will be publicly available in the UK Land Carbon Registry.~~

~~Carbon pools included:~~

- ~~Tree above and below ground biomass~~
- ~~Litter and deadwood~~
- ~~Non-tree above and below ground biomass (at project outset)~~
- ~~Soil~~
- ~~GHG emissions from woodland management~~

~~Further online guidance ></~~

~~**Website 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.

~~This page outlines how to predict changes to carbon stocks that will occur over the duration of the project. The monitoring section explains how to assess actual carbon stocks later on in the project once the trees are growing and carbon has been sequestered.~~

~~Project developers should bear in mind when agreeing to sell Pending Issuance Units that the tools here provide a prediction of the carbon that is likely to be sequestered and not a guarantee that a particular woodland will sequester a certain amount.~~

Accounting for project carbon sequestration

Projects should account for project carbon sequestration using the carbon calculator~~ion Spreadsheet version 2.4.1 April 2024 (xlsx) following the~~ and associated guidance ~~(pdf)~~. 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~~(and~~ in a limited number of scenarios~~, soil)~~

Small projects ~~(5 hectares net planting or less): M~~ may~~Can~~ use the 'small project' calculator~~'. which~~ It is easier~~simpler~~ to complete and conservative. ~~Projects using this prediction tool can use the less intensive 'basic monitoring' from year 15 onwards.~~

Standard project~~s s: S~~should use the 'standard project carbon calculator'.

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~~can~~ 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~~can~~ 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. ~~Alternatively, projects can make a soil carbon assessment prior to tree planting with repeat assessments as the project progresses.~~

Soil carbon accumulation maycan currently only be claimed for projects on a mineral soil where the previous land use was arable or rotational grass 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.

~~Future developments~~

- ~~Tree biomass: Data behind the Carbon Calculator is being reviewed and revised to incorporate new growth and yield models and to refine estimates of contributions from root and branch biomass. The revised estimates for some tree species may be more conservative than current predictions, particularly for the early growth period of broadleaved species. The Carbon Calculator already subtracts 20% from modelled predictions and it is anticipated that these revisions will fall within this threshold.~~
- ~~Tree biomass: We will develop our Carbon Calculator to include a wider selection of spacings and to account for the carbon stored in roots and stumps when clearfelling.~~
- ~~Non-tree biomass: We will publish estimates of the carbon stock of other types of non-tree vegetation.~~
- ~~Soil. There will be a number of developments:~~

- ~~We will update the soil carbon methodology using results of ongoing research. This will allow us to say with more certainty both the amount of soil carbon lost on woodland establishment as well as the rate of accumulation of soil carbon as the woodland grows and matures.~~
- ~~We will establish a soil carbon assessment protocol to enable projects to consistently assess the soil carbon content of their soil.~~
- ~~Ongoing research will help us better understand the changes to soil carbon due to woodland creation and management.~~

3.4 Net carbon sequestration

Requirement

Projects shall calculate the ~~N~~net project carbon sequestration ~~shall be calculated~~ within the relevant worksheet (standard project or small project) of the carbon calculator~~ion Spreadsheet~~. The calculator estimates the ~~(includes~~ total project carbon sequestration (3.3) adjusted for leakage (3.2) and~~minus~~ 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 t~~T~~he net carbon sequestered ~~to~~since the project start date and the carbon sequestered in the current vintage/monitoring period ~~shall be confirmed in the monitoring report~~. ~~At year 5, this is based on the projected carbon sequestration. From year 15 onwards, this is based on field survey measurements.~~

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.~~there is no update to the actual carbon sequestration of a project at verification; this section shall~~will not be completed.~~

Means of validation

- Carbon calculator~~ion Spreadsheet~~.
- 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 calculati~~on~~or ~~Spreadsheet~~, with comparison of old and new prediction of units by vintage, if required.

Guidance

~~Net Project 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 WCC Buffer, and the claimable carbon sequestration which is the amount the project can sell.~~

~~Further online guidance ></~~

~~**Website 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. The number of units will be set out by vintage or monitoring period in the project design document.

Net carbon sequestration equals the project carbon (3.3) plus leakage (3.2) minus the baseline (3.1)

~~The Woodland Carbon Code Carbon Calculation Spreadsheet helps project developers to calculate their net carbon sequestration. See 3.3 Project carbon sequestration.~~

4 Environmental quality

~~Principle~~

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

Requirement

The projectre shall havebe woodland design planning documentation which incorporatesconsiders 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.

Tand 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.

~~Website~~ Guidance

Safeguarding / ensuring no harm is done - Environmental Impact Assessment

~~In order to show that the creation of a Woodland Carbon Code project 'does no harm', Through adherence~~ By adhering to the UK Forestry Standard,~~all~~ projects ~~should~~ 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 ~~taken into~~ accounted for in the project design
- Any statutory designations in the project area and how these are ~~taken into~~ 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~~, and MAGiC mapping tool~~
- Land information search Scotland
- NRW Mapping, Wales
- Northern Ireland map viewers

~~UK Forestry Standard: In order to show that the project is managed with the best possible outcomes for the environment, the project design shall incorporate the environmental aspects of sustainable forest management as set out in the UK Forestry Standard and supporting Guidelines for Climate Change, Soil, Water, Biodiversity, Landscape and Historic Environment. These standards shall be maintained throughout the duration of the project.~~

~~BS8632:2021: BSI's standard for Natural Capital Accounting for Organisations: This is a tool to measure changes in the stock of natural capital. Landowners may be interested in considering this approach, though it does not form a part of the Woodland Carbon Code.~~

Monitoring and making statements about the environmental benefit of a project

Project developers use the woodland benefits tool to present the likely water and ~~wildlife~~environmental~~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 ~~the~~ benefits over time.


Wildlife 5
Wildlife haven
Community 4
Community asset
Water 5
Freshwater friendly
Economy 3

5 Social responsibility

~~Principle~~

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

Requirement

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

Tthese standards shall be maintained throughout the durationlifetime 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 economicsocial benefits of the project to date.

Guidance

~~See the UK Forestry Standard and the Forests and People element of sustainable forest management. The Woodland Benefits Tool provides scores for the Biodiversity, Water, Community and Economy benefits of projects. It is optional to monitor the social benefits of projects over time~~

~~**Website Guidance**~~

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

~~Through adherence~~ By adhering to the UK Forestry Standard, projects ensure safeguards are in place so that~~: In order to safeguard against negative social outcomes and ensure~~ no harm is done and any ~~as well as to manage for positive~~ social outcomes~~,~~ of the project are positive. ~~needs to incorporate the social aspects of sustainable forest management as set out in the UK Forestry Standard and supporting Guidelines for Forests and People.~~

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

~~Scottish Government's Interim Principles for Responsible Investment in Natural Capital provide further guidance for those thinking of creating carbon units on their land.~~ 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~~social~~ outcomes of their projects. Projects are scored out of five in each area at validation.~~for the likely benefits in the following areas:~~

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 (~~in its own right or~~ 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.

~~**Barrier – Any obstacle to reaching a goal that can be overcome by a project or measure.**~~

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 ~~sell~~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_2e) - 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 reporting – This involves a carbon owner or organisation reporting carbon sequestration in their annual environmental or greenhouse gas report. This can only be done once, after the carbon is sequestered, and the relevant number of units should have been 'retired' from the UK Land Carbon Registry. See Carbon statement.**~~

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. ~~See Carbon reporting.~~

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 offsetting – A way of compensating for greenhouse gas emissions by making an equivalent carbon dioxide saving elsewhere. Only verified Woodland Carbon Units can be used to offset current emissions.**~~

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).

~~**Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) – A global scheme to reduce and offset international aviation emissions. It was developed by the International Civil Aviation Organsiation**~~**Organisation** ~~**(ICAO) and was adopted in 2016.**~~

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 https://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'.

~~**Greenhouse gases (GHGs) – The gases which are causing the warming of the Earth's atmosphere that is leading to climate change. The six most common Greenhouse Gases are: carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons and sulphur-hexafluoride. These contribute to the 'greenhouse effect'.**~~

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 ~~Colonisation/~~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 ~~more than 50 cm deep~~ 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.

~~**Paris Agreement – This Agreement is the legally binding international treaty on climate change, adopted by 196 parties in 2015, and entered into force in 2016. Its goal is to limit global warming to well below 2, preferably 1.5 degrees Celsius, compared to pre-industrial levels. Countries set 'Nationally Determined Contributions' in 2020 – National level plans to reduce greenhouse gas emissions in order to reach the goals of the Paris Agreement. These are reported on and reviewed every 5 years, with the expectation countries will set more ambitious plans in subsequent rounds. www.unfccc.int**~~

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~~must~~ 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 p~~P~~roject 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~~control~~, 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 ~~control is in place~~) 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.

Self-assess~~ed~~ment – 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~~five~~-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 must be part of contiguous land ownership unit or shall ~~must~~ 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). E~~; e~~ach time period is known as a vintage.

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

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.