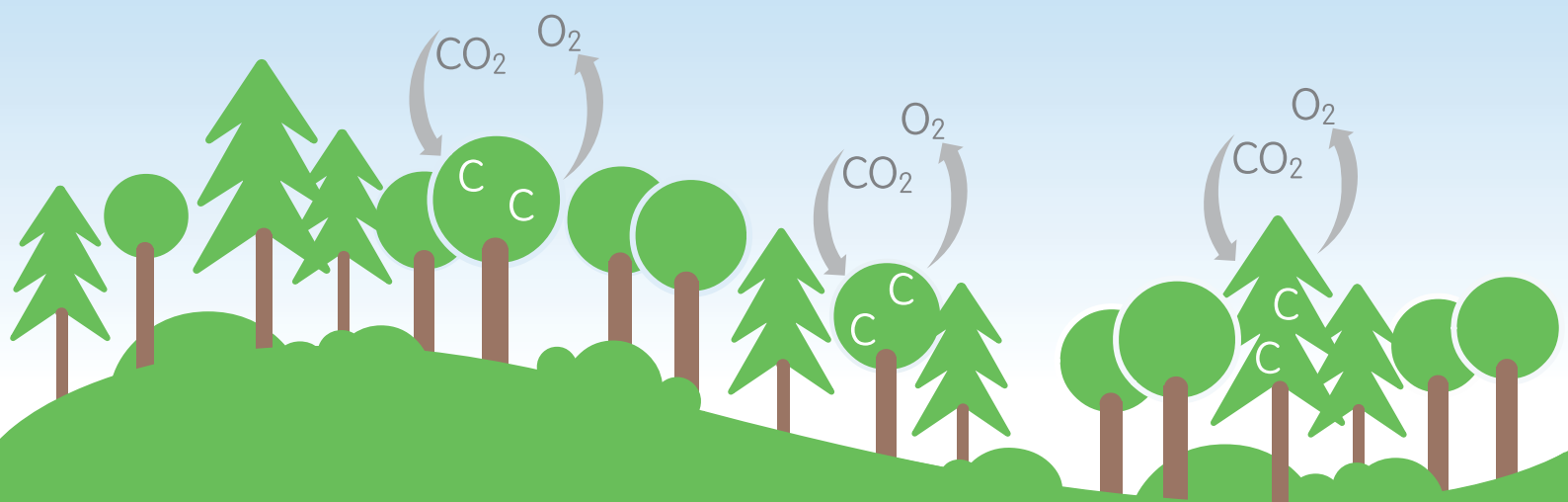


Woodland Carbon Code

Requirements for voluntary carbon sequestration projects



Version 1.3 July 2014

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Introduction

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 (WCC) sets out robust requirements for voluntary carbon sequestration projects that incorporate core principles of good carbon management as part of modern sustainable forest management. Specific objectives of the Code are to ensure:

- high standards of sustainable forest management in line with the UK Forestry Standard and supporting Guidelines for Climate Change;
- 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 business development and diversification.

Use of the Code

The Code 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.

All WCC projects must be initially validated by an independent certification body accredited by the UK Accreditation Service to assess against the WCC. Individual projects or groups of projects ('group schemes') can be validated. Projects or group schemes must be regularly verified by an independent certification body. The WCC is a voluntary standard and verification does not imply endorsement by the Forestry Commission of the value of any investment.

Woodland carbon projects contribute to just one of a hierarchy of actions that can help to combat the effects of climate change. Before considering such mitigation measures individuals, businesses and other organisations need to:

- understand their carbon footprint;
- take steps to prevent avoidable emissions;
- reduce any remaining 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. All organisations are encouraged to voluntarily measure and report their gross and net greenhouse gas emissions. Verified Woodland Carbon Units are one of three types of 'credit' that can be used to reduce a company's gross emissions 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.

Carbon sequestration resulting from projects certified to the Code will, in common with other woodland creation, contribute directly to the UK's national targets for reducing emissions of greenhouse gases (under the Kyoto Protocol and the UK Climate Change Act 2008). Woodland Carbon Units cannot currently be used in regulatory carbon reduction mechanisms (e.g. the CRC Energy Efficiency Scheme or EU Emissions Trading Scheme); or traded internationally.

Governance

The WCC Executive Board (with representatives from the Forestry Commission and Welsh Government) manage the WCC scheme. They are advised by the WCC Advisory Board whose members include forestry and carbon market experts.

Future changes to the Code

This is Version 1.3 of the Woodland Carbon Code released in July 2014. Additional guidance and interpretation is available at www.forestry.gov.uk/carboncode.

The Code is reviewed annually, to ensure the standards it contains are clear and reflect best practice.

Updates to the Code and the supporting guidance are available at www.forestry.gov.uk/carboncode. 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.

The structure of the Code

The Code sets out overarching principles and specific requirements that woodland carbon sequestration projects must incorporate in order to demonstrate best practice. Core principles and requirements for each key aspect of project design and management are addressed in turn, along with the Means of Validation/Verification and further guidance.

Principle

The overarching principle behind the requirement is stated first to establish the overall context.

Section X.X Aspect X

Requirement

These are the compulsory elements of the Code and are generally stated as 'shall'. Certification bodies will check and verify that each requirement is being met.

Means of Validation/Verification

Illustrates the type of objective evidence that the certification body will consider in order to check that the requirements are being met. These means of validation/verification are split into two categories using the following symbols:

- ▶ These items **must** be provided if they are applicable to the project.
- These items are alternatives which can be used to provide additional evidence.

The examples given are not exclusive or exhaustive – certification bodies will not always need to use all the verifiers suggested, and may seek verification in other ways.

The certification body will take into account the size of the project when assessing evidence.

Guidance

These notes help the project developer to understand how the requirements should be applied in practice. For each section, additional guidance is available online via the following link:

[Further online guidance >](#)

1 Eligibility

Principle

The project must be eligible in terms of:

- The timing of the project.
- The activity (Creating new woodland on unwooded land of a suitable site type).
- Legal ownership of the land and compliance with all relevant legislation.
- Demonstrating **additionality** (i.e. not required by law and only viable due to availability of carbon finance).

1.0 Commitment

Requirement

The landowner shall commit to:

- conform to this standard (1.0);
- permanent land-use change (1.0);
- to manage the land as per the management plan for the establishment period and as per the longer-term management intentions for the project duration and beyond - as set out in the PDD (1.0);
- comply with the law (1.4);
- re-stock where projects involve harvesting (2.4);
- replant or undertake compensatory planting should woodland area be lost due to wind, fire, pests, disease or development (2.4);
- inform future owners of the commitment to the Woodland Carbon Code and any carbon contracts (2.4);
- making true and accurate carbon statements about the project (2.7);
- abide by the WCC logo rules of use (2.8).

The project developer (who could also be the landowner or a third party) shall commit to:

- conform to this standard (1.0);
- comply with the law (1.4);
- ensure the project/group, any PIU listings, sales to carbon buyers, retirement for use of verified Woodland Carbon Units is accurately represented in the UK Woodland Carbon Registry (2.1);
- making true and accurate carbon statements about the project (2.7);
- make carbon buyers aware of the WCC guidance on carbon claims and include in contracts with buyers (2.7);
- abide by the WCC logo rules of use and make carbon buyers and landowners aware of the WCC logo rules of use (2.8).

Either the landowner or the project developer (if they are a third party) shall commit to:

- monitor and maintain verification for the project duration as per WCC guidance (1.0).

Guidance

This section brings together the commitments of the landowner and project developer from relevant sections of the standard. See also Sections 1.4, 2.4, 2.7, 2.8. These are further clarified in the online guidance.

If, at any point, there is no UKAS-accredited validation/verification body for the WCC, the Forestry Commission will put temporary verification arrangements in place to allow verification of units according to schedules.

[Further online guidance >](#)

Means of Validation/Verification

- ▶ Signed commitment from, or contracts with, the landowner or project developer to conform to the standard as detailed above and in the online guidance.
- ▶ Validation/verification statements from a UKAS-accredited body.

1.1 Start date and duration

Requirement

Projects registered after 31/7/2013: Projects shall register in the period from 2 years before to 2 years after the project implementation date.

Projects registered up to 31/7/2013: Projects with an implementation date 1 January 2000 or later may register.

All projects shall be validated within 3 years of registration. A validation extension will be given in extenuating circumstances. Validation Statements shall only be issued once planting is completed.

Projects shall have a clearly defined duration and shall not exceed 100 years.

Means of Validation/Verification

- ▶ Project Design Document.
- ▶ Grant scheme contract.
- ▶ Carbon contract.

Guidance

The **project implementation date** is the date when planting begins or fencing for natural regeneration. The **project start date** is the last date of planting and the date from which carbon sequestration is accounted for or 5 years after the project implementation date for natural regeneration.

The **project duration** begins from the 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 **registration date** is the date on which a project moves from 'Draft' to 'Under Development' status on the UK Woodland Carbon Registry.

The project duration should not be confused with permanence. All projects shall involve a permanent land-use change to woodland cover (See 2.4).

[Further online guidance >](#)

1.2 Eligible activities

Requirement

Eligible activities shall be those relating to woodland creation on soils which are not organic.

Means of Validation/Verification

For unwooded land:

- ▶ Statement on land use in Project Design Document.
- ▶ Land use records.
- ▶ Reference to historical maps, images or other sources such as the Forestry Commission planting and felling database (Grants & Licences Online Service).
- ▶ Signed attestation from independent expert.

For soil type:

- ▶ Statement on soil type in Project Design Document.
- ▶ Results of field survey for soil type (see 3.2).
- ▶ Soil maps.
- ▶ Signed attestation from independent expert.

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.

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

See 3.2 for details of field survey for soil type.

[Further online guidance >](#)

1.3 Eligible land

Requirement

Legal ownership, or tenure of the project area for the duration of the project, can be demonstrated.

Means of Validation/Verification

- ▶ Declaration in Project Design Document detailing nature and location of ownership or tenure documentation and landlords consent.
- Solicitor's letter.
- Title deeds.
- Land registry records.
- Grant contract signed by owner.
- Certified copy of lease (if leasehold).

Guidance

Legal ownership may be demonstrated by signed attestation, title deeds, a solicitor's letter, or evidence of long-term unchallenged use.

See 2.4 relating to risks and permanence.

[Further online guidance >](#)

1.4 Compliance with the law

Requirement

Projects shall comply with the law.

Means of Validation/Verification

- ▶ 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 1.0).
- No evidence of non-compliance.

Guidance

Certification is not a legal compliance audit. The certification body will check 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 and Supporting Guidelines. See also Section 1.0 for a summary of landowner commitments.

[Further online guidance >](#)

1.5 Additionality

Requirement

Additionality shall be demonstrated through the following tests. Test 1 and Test 2 plus ONE of Test 3 or Test 4 must be passed to ensure additionality.

1. **Legal test:** There is no legal requirement specifying that woodlands should be created. Compensatory planting is not eligible.
2. **Contribution of Carbon Finance test:** Carbon finance payments shall cover at least 15% of the project's planting and establishment costs.
3. **Investment test:** 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.
4. **Barrier test:** Existing barriers to the implementation of the project have been overcome. Barriers could be social, economic or environmental.

Means of Validation/Verification

- ▶ Statements in Project Design Document.
- ▶ Analysis of the actual planting, establishment and management costs and the proportion covered by carbon finance.
- ▶ A full financial analysis (including expected costs and revenues) of the funds required to implement and manage for the project duration.
- Further evidence to support barrier test if used.

Guidance

Grant-aided woodland

Projects receiving grant aid under a government-funded initiative are eligible provided additionality tests are met.

[Further online guidance >](#)

2 Project governance & documentation

Principle

Projects need an effective and transparent governance structure with clear lines of accountability and clearly documented processes so as to enable cost-effective verification and to build confidence with stakeholders. Specifically to:

- Ensure carbon sequestration is not **double sold or double certified**.
- Risks are adequately managed to sustain, in perpetuity, the carbon sequestered by the new woodland.
- Claims about carbon are **clear** and **accurate**.
- Effective **monitoring** gives **up to date information** on the project's progress.

2.1 Registry and avoidance of double counting

Requirement

Projects and carbon units shall only appear on one carbon registry – The UK Woodland Carbon Registry.

All projects, project documentation, carbon units and retirements shall be visible in the 'public view' of the UK Woodland Carbon Registry.

Upon validation, Pending Issuance Units (PIUs) shall be listed for all carbon units in the project.

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

Prior to using Woodland Carbon Units in reports, they shall be 'retired' from the UK Woodland Carbon Registry.

Means of Validation/Verification

- ▶ The landowner, project developer or group manager has an account on the UK Woodland Carbon Registry.
- ▶ Any business who has already bought carbon units has an account on the UK Woodland Carbon Registry.
- ▶ Land area is recorded on the UK Woodland Carbon Registry.
- ▶ Pending Issuance Units are listed, Woodland Carbon Units are issued and appear in the public view in the account of the current owner on the UK Woodland Carbon Registry.
- ▶ Carbon units are shown as retired from the UK Woodland Carbon Registry upon use.
- ▶ Signed commitment that the project developer will ensure the project and carbon units are accurately represented on the registry (See Section 1.0).

Guidance

The UK Woodland Carbon Registry gives details of Projects, Pending Issuance Unit listings, Woodland Carbon Unit issuances, transfers and retirement. This service is provided by [Markit Registry](#).

Prior to verification units will be defined as 'Pending Issuance' and are effectively a promise to deliver verified units. WCUs can be retired for use in a company's environmental or greenhouse gas report or in claims of carbon neutrality.

[See online guidance for registry rules of use and fees >](#)

2.2 Project design documentation

Requirement

The project or group scheme shall have a complete and accurate **Project Design Document (PDD)** containing the following information:

1. **Eligibility** (dates, legal aspects, additionality).
2. **Project governance and documentation** (registration, design document, management and monitoring).
3. **Carbon Sequestration** (including identification of risks to the achievement and permanence of the carbon benefits, along with relevant risk mitigation strategies).
4. **Environmental Quality**.
5. **Social Responsibility**.

The project shall provide electronically all relevant additional evidence requested within the PDD.

Means of Validation/Verification

- ▶ Project Design Document.
- ▶ Woodland creation grant application.
- ▶ Boundary map.
- ▶ Planting map.
- ▶ Map showing any designated areas.

Guidance

The project (or constituent projects within a group) should be clearly defined using appropriate maps, identifying all relevant aspects of the woodland resource, including any special characteristics and/or sensitive areas.

Template project and group PDDs are available. The PDD and map will be made publicly available in the UK Woodland Carbon Registry upon validation.

[Further online guidance >](#)

2.3 Management plan and capacity

Requirement

Projects shall be managed in accordance with the UK Forestry Standard, including all environmental (See 4) and social (See 5) aspects. There shall be a detailed management plan 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.

There shall be 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.

Means of Validation/Verification

- ▶ Management plan deals with all issues above and meets the requirements of the UK Forestry Standard.
- No evidence of non-compliance with the UK Forestry Standard.
- 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.

Guidance

If the project is receiving a woodland grant, an existing woodland management plan may provide sufficient evidence of the management plan for the establishment period. There should be a process for updating the management plan at the end of this period.

Longer term, a short statement is required to confirm the intended management regime of the woodland for the project duration and beyond.

See the UK Forestry Standard and supporting Guidelines for Climate Change, Soil, Water, Biodiversity, Landscape, Historic Environment and People: www.forestry.gov.uk/ukfs

[Further online guidance >](#)

2.4 Management of risks and permanence

Requirement

The landowner shall demonstrate the commitment to permanence by:

- Identifying risk factors and developing appropriate mitigation strategies as set out in the WCC Risk Assessment.
- Calculating the level of risk according to the guidance on WCC Risk Assessment and contributing to the Woodland Carbon Code Buffer.
- Ensuring re-stocking where projects involve harvesting.
- Replanting or undertaking compensatory 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 2.3).
- Informing future landowners of the commitment to the WCC and any carbon contracts.

Should a project experience a loss of carbon, they shall:

- Notify the Forestry Commission immediately;
- Submit a Loss Report to the Forestry Commission within 6 months of discovery of the loss.

Means of Validation/Verification

- ▶ Risk Assessment.
- Further evidence to confirm assessment of risk.
- ▶ Subtraction of carbon buffer in Net Carbon Sequestration (Section 3.5).
- ▶ Evidence of contracts with or a signed statement from the landowner requiring:
 - restocking where projects involve harvesting;
 - replanting or compensatory 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 of the commitment to the Woodland Carbon Code (See Section 1.0).
- Field observations confirming that assessment of risk is reasonable.
- Any loss reports are submitted as set out above.

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 compensatory 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. The size of the WCC Buffer should be determined using the Risk Assessment guidance and specified in carbon sequestration calculations (See 3.4).

A template Loss Report is available. Any Loss Reports submitted will be publicly available in the UK Woodland Carbon Registry. See Section 1.0 for a summary of landowner commitments.

[Further online guidance >](#)

2.5 Management of group schemes

Requirement

Groups shall have a nominated Group Manager.

Groups shall have a Group Agreement which sets out details of the group, its management structure, the roles and responsibilities of the Group Manager and other group members and demonstrates where responsibility lies for ensuring compliance with the WCC.

Groups shall be constituted of no more than 15 projects with planting dates over no more than a 5-year period.

Groups being validated together should submit a single Group Project Design Document.

Means of Validation/Verification

- ▶ Group Project Design Document.
- ▶ Group Agreement.
- ▶ Evidence of group documentation control systems and processes.

Guidance

Projects may come together in a **group scheme** for the purposes of validation and verification. For group validation, the group and its constituent projects shall be entered on the registry as a master project and subprojects respectively and a single Group Project Design Document shall be produced.

[Further online guidance >](#)

2.6 Monitoring

Requirement

The project shall have a monitoring plan in place before validation to quantify and document the progress of carbon sequestration as well as ensure that the project is being managed to the UK Forestry Standard.

Projects shall be monitored 6–12 months prior to each verification due-date to allow time for verification to be carried out by the due-date. Monitoring is required to demonstrate successful woodland establishment and assess actual tree growth and carbon sequestration rates.

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

Verification shall take place 5 years, and then every 10 years, after the project start date. If there are extenuating circumstances for a delay, the project shall seek the approval of the Forestry Commission and Markit. If approval is granted, a Verification Extension Approval shall be uploaded to the UK Woodland Carbon Registry.

Means of Validation/Verification

- ▶ Monitoring plans set out in the Project Design Document.
- ▶ Signed commitment from the landowner or project developer to monitor and maintain verification (See section 1.0).
- ▶ Project Progress Report shows continuing compliance with the Woodland Carbon Code.
- ▶ Monitoring Reports show progress of carbon sequestration.
- ▶ Other evidence to show that Corrective Actions have been undertaken.
- ▶ Certification to UK Woodland Assurance Standard or other monitoring demonstrates compliance with UK Forestry Standard.
- ▶ No evidence of non-compliance with UK Forestry Standard.

Guidance

For older projects, timings for the first verification may vary. Verification is due by the date indicated on the Validation/Verification Statement.

See Section 1.0 for a summary of landowner commitments.

[Further online guidance >](#)

2.7 Carbon statements and reporting

Requirement

Landowners and project developers shall make carbon buyers aware of the WCC guidance on carbon claims.

Any carbon statement by the landowner, the project developer or the carbon buyer shall comply with recommended wording. Statements made prior to sequestration shall clearly state the timescale over which the carbon is to be sequestered.

Carbon shall only be reported, or used, after it is sequestered and verified (sometimes called ex-post reporting).

The legal rights of all parties to the carbon benefits of the project shall be clearly stated in the Project Design Document and shown in the ownership of carbon units in the UK Woodland Carbon Registry. Where units change ownership or are used/reported this shall be shown on the UK Woodland Carbon Registry.

Means of Validation/Verification

- ▶ Details of carbon buyers and any claims or use/reports of the carbon sequestration in Project Design Document.
- ▶ Carbon units in relevant account on UK Woodland Carbon Registry.
- ▶ Contract(s) between landowner or project developer and carbon buyer state(s) each parties' legal right to claim or report the carbon benefits of the project.
- ▶ Contract with carbon buyers confirms each buyer's intention to comply with WCC guidance on carbon statements and reports.
- ▶ References to Pending Issuance Units and Woodland Carbon Units in any project documentation or carbon statements/reports follow the WCC claims guidance.
- ▶ Signed attestation from each party to the project or group regarding the agreed approach to carbon statements or reports.

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.

Where organisations wish to **report** the carbon sequestration and emissions from woodland creation projects, they shall do so in accordance with WCC online guidance. Both the UK Government's [Environmental Reporting Guidelines: Including Mandatory Greenhouse Gas Emissions Reporting Guidance](#) and the British Standards Institute's [PA2060:2014. Specification for the Demonstration of Carbon Neutrality](#) state how verified Woodland Carbon Units can be used. In either case, the relevant number of verified Woodland Carbon Units shall be retired from the UK Woodland Carbon Registry prior to reporting them.

Anyone making carbon or other environmental claims should also refer to Defra's [Green Claims Guidance](#).

[Further online guidance >](#)

2.8 Woodland Carbon Code registered trademark

Requirement

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

Landowners and project developers shall make carbon buyers aware of the WCC logo rules of use.

Means of Validation/Verification

- ▶ Details of any use of the WCC in Project Design Document.
- ▶ Contract with carbon buyers confirms each buyer's intention to comply with WCC logo Rules of Use.
- ▶ No evidence of misuse.

Guidance

The Forestry Commission owns the registered trademark 'Woodland Carbon Code'. Anyone using the trademark shall comply with its rules of use.

See Section 1.0 for a summary of landowner commitments.'

[Further online guidance >](#)

3 Carbon sequestration

Principle

Projects need to:

- Clarify the **baseline** (business as usual) changes in carbon on the site.
- **Minimise any leakage** caused by the project.
- Predict **carbon sequestration** over and above the baseline changes.
- Set aside a carbon 'buffer' to **ensure credibility of verified Woodland Carbon Units**.
- Calculate the **net carbon benefit** of the project.

3.1 Units of carbon calculation

Requirement

Carbon sequestration shall be calculated and expressed in tonnes of carbon dioxide equivalent (tCO₂e).

1 Woodland Carbon Unit is equivalent to 1 tCO₂e sequestered by a project verified to this Code.

Positive values shall denote sequestration and negative values shall denote emissions.

Means of Validation/Verification

- ▶ Project documentation shows all carbon calculations in tCO₂e with positive values representing sequestration and negative values representing emissions.
- ▶ References to 'Woodland Carbon Units' in any project documentation are clearly related to the tCO₂e already sequestered.

Guidance

Calculations shall be undertaken in tCO₂e to ensure transparency in measurement and recording.

3.2 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.

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

Where there is significant sequestration, the carbon baseline shall be accounted for in 'net carbon sequestration' (3.5). Otherwise, the carbon baseline is assumed to be '0, no change over time'.

Guidance

A **carbon baseline** is the reference projection 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.

Means of verification

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.

Carbon pools included:

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

[Further online guidance >](#)

3.3 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.

If leakage (land use change/intensification) outside the project boundary but within the UK is proposed, then projects shall carry out an assessment to determine whether this will result in additional GHG emissions.

If significant GHG emissions occur they shall be quantified for the duration of the project and accounted for in 'net carbon sequestration' (3.5). Otherwise leakage is assumed to be '0, no change over time'.

Means of Validation/Verification

- ▶ Statement in Project Design Document of intention by the land owner 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.
- Further calculations of leakage.

Guidance

Leakage is GHG 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 $\geq 5\%$ 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 >](#)

3.4 Project carbon sequestration

Requirement

Where land is cleared of trees or other vegetation in preparation for the project implementation date, the lost carbon stock shall be calculated and subtracted from the project carbon sequestration at year 1.

Predictions of the changes in relevant carbon pools due to the project over its duration shall be made using the Carbon Lookup Tables.

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

Means of Validation/Verification

- ▶ Carbon Calculation Spreadsheet.

Guidance

A template Carbon Calculation Spreadsheet is available. Carbon Calculations will be publicly available in the UK Woodland 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

The purpose and rules of the WCC buffer are given in 2.4.

[Further online guidance >](#)

3.5 Net carbon sequestration

Requirement

Net project carbon sequestration shall be calculated within the Carbon Calculations Spreadsheet (includes total project carbon sequestration (3.4) adjusted for leakage (3.3) minus baseline (3.2)).

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 WCC PIU buffer and the claimable carbon sequestration.

Means of Validation/Verification

- ▶ Carbon Calculations Spreadsheet.
- ▶ Pending Issuance Units by vintage in Project Design Document.

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 risk-based proportion that will contribute to the shared WCC Buffer, and the claimable carbon sequestration which is the amount the project can sell or claim.

[Further online guidance >](#)

4 Environmental quality

Principle

Projects need to be of high **environmental quality**, taking into account the wider impacts on ecosystems to ensure that no harm is done by the project and that wider benefits are created. These benefits could include improvements to wildlife habitat, air or water quality as well as flood reduction.

Requirement

The project design shall incorporate the environmental aspects of sustainable forest management set out in the UK Forestry Standard and these standards shall be maintained throughout the duration of the project (See 2.3 and 2.6).

Means of Validation/Verification

- ▶ Environmental Quality statements in Project Design Document.
- ▶ Environmental Impact Assessment/Environmental Statement or confirmation that EIA is not required.
- ▶ Other relevant documentation.

Guidance

All projects should be able to show that any environmental impacts on the land area concerned are likely to be positive.

Online guidance gives further information about tools to consistently describe the environmental benefits of WCC projects.

See the UK Forestry Standard and supporting Guidelines for Climate Change, Soil, Water, Biodiversity, Landscape and Historic Environment: www.forestry.gov.uk/ukfs

Where required, the content of an Environmental Statement and the requirements of the Environmental Impact Assessment process will usually cover all issues associated with environmental integrity.

[Further online guidance >](#)

5 Social responsibility

Principle

The project shall be **socially responsible** and where possible offer benefits to local communities and other interested forest users or stakeholders. Such benefits could include public recreation, community engagement, volunteering or education as well as business development throughout the timber supply chain and business diversification. Stakeholders (local communities and others) shall be consulted and engaged in plans to create and manage new woodland.

Requirement

The project 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 life-span of the project.

The project design shall incorporate the social aspects of sustainable forest management set out in the UK Forestry Standard and these standards shall be maintained throughout the lifetime of the project (See 2.3 and 2.6).

Means of Validation/Verification

- ▶ Social Responsibility statements in Project Design Document.
- ▶ Consultation details in Environmental Impact Assessment or Environmental Statement.
- ▶ 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.

Guidance

Online guidance gives further information about tools to consistently describe the social benefits of WCC projects.

See the UK Forestry Standard and supporting Guidelines for Forests and People www.forestry.gov.uk/ukfs

'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 www.forestry.gov.uk/toolbox

Where an EIA has been required, the regulatory process should usually provide the appropriate documentary evidence for stakeholder consultation and engagement.

[Further online guidance >](#)

Glossary

Additionality – A project is ‘additional’ if it, and the activities supported by it, are not legally required and could not have happened without carbon finance.

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.

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 credits is ‘PIU Reserve’ or ‘WCU Reserve’.

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 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 Woodland 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 (CO₂) – 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. This involves calculating emissions and then purchasing Kyoto compliant ‘credits’ from emission-reduction projects elsewhere. Kyoto compliant woodland creation can currently only occur outside the UK.

Carbon sink – A carbon pool that is expanding, e.g. a growing forest.

Certification – Validation or verification of a project against the criteria of the Code by an independent body accredited by UK Accreditation Service.

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).

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 the use of a carbon unit registry.
- **Double certification** – The same carbon project is certified 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 in an Annex 1 country is monetised once as a voluntary unit by a

project and a second time by the project host-country's government as an allowance (Assigned Amount Unit or Removal Unit). This is an issue in most Annex 1 countries.

- **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/Natural Resources Wales/Forest Service considers that project proposals may have a significant effect on the environment then 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) – Greenhouse gases. The gases which are causing the warming of the Earth's atmosphere that is leading to climate change. The Kyoto Protocol deals with 6 of these: carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons and sulphur-hexafluoride. These contribute to the 'greenhouse effect'.

Group Scheme – A group of projects that work together to gain certification. 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.

Kyoto Protocol – the Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it set binding targets for 37 industrialised countries and the EC for reducing GHG emissions in the first accounting period of the Protocol (2008 and 2012). In 2012 the Durban Agreement has set accounting rules for the second accounting period (2013–2020). www.unfccc.int

Leakage – is GHG 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).

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, then 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 prior to clearfelling.

Mitigation – Implementing activities or policies to reduce greenhouse gas emissions and/or enhance carbon sinks.

Organic Soil – Soil which contains more than 50cm deep organic (or peat) surface horizon overlaying the mineral layer or rock.

Pending Issuance Unit – The purpose of these units is to demonstrate the quantity of potential future sequestration. PIU's 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 and as such safeguards must be in place to minimise that risk and to guarantee replacement or compensatory woodland should a reversal occur.

Project – Individual woodland creation project under the same ownership and management. A project will normally be a continuous woodland area but can include multiple areas separated by up to 1 km.

Project Design Document (PDD) – A document created by a project developer to describe how the project meets the requirements of the Code.

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

Project Duration – begins from the start date and is the time over which carbon sequestration claims are to be made. Projects can be up to 100 years duration.

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

Project Implementation Date – The date when planting begins (or fencing/deer control for natural regeneration).

Project Start Date – The date when the project begins to account for carbon sequestration. This is normally the last date of planting, or 5 years after the implementation date for natural regeneration.

Quoted Company – A company that is UK incorporated and whose equity share capital is listed on the Main Market of the London Stock Exchange UK or in an EEA State, or admitted to trading on the New York Stock Exchange or Nasdaq (385(2) of the Companies Act 2006).

Registration date – the date on which a project moves from 'Draft' to 'Under Development' status on the UK Woodland Carbon Registry.

Retire – Moving a Woodland Carbon Unit on the UK Woodland 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.

UK Woodland 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.

Verification – The ongoing evaluation of a project against the standards of the Woodland Carbon Code, undertaken by a certification body accredited by the UK Accreditation Service to assess against the WCC. Verification shall first take place within 5 years of validation and thereafter at periods of 10 years or less. It will assess the carbon sequestration that has actually occurred as well as continuing management to the UK Forestry Standard.

WCC – Woodland Carbon Code.

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). (This definition is also applicable to 'forest').

Woodland Carbon Unit – When a project is verified, PIU's which have been confirmed as sequestered will be transferred to WCU's. These units can be considered as full carbon 'credits', and as such 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.

