Forestry Commission

Code of Good Practice for Forest Carbon Projects

Draft

Code of Good Practice for UK-Based Forest Carbon Projects

How to use the Code

This Code sets out a Project Design Standard for projects that aim to sequester carbon through woodland creation and to generate voluntary emission reductions for the purposes of demonstration or sale.

For projects involving a number of separate woodland ownerships, some of the elements will apply at project level and others at a scheme or woodland level.

Highlighted text indicates some of the areas where an appropriate definition remains to be established.

The Code is set out as follows:

Principle

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

Requirement

These are the compulsory elements of the standard and are generally stated as ‘shall’. Certification bodies will check that each requirement is being met.

Means of verification

These show the type of objective evidence - documents, actions or discussions – that the certification body should consider in order to verify that the requirement is being met. The verifiers suggested are generally stated as ‘should’. They 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 should 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.

Text in grey = to be confirmed eg. Size

Code of Good Practice for UK-Based Forest Carbon Projects

1. Eligibility

1.1 Project start date

Requirement	Guidance
Projects shall have a defined start date. **Means of verification** Project documents or other written evidence.	The earliest eligible start date is [_____]. For a project already operating at the time of accreditation, the project start date may be taken as [_____] or, if later, the date of implementation of activities generating emissions reductions.

1.2 Eligible activities	
Requirement Eligible activities shall be those relating to woodland creation. **Means of verification** • Project Design Document • Land use records • Reference to historical maps, images or other sources such as the Forestry Commission planting and felling database (GLADE) or evidence from relevant experts.	**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.
1.3 Eligible land	
Requirement Legal ownership or tenure of the project area for the duration of the crediting period can be proved. **Means of verification** • A signed declaration detailing nature and location of tenure documentation • Solicitor's letter • Title deeds • Land registry records.	**Guidance** Legal ownership may be demonstrated by title deeds, a solicitor's letter, or long-term unchallenged use. See also section 4.7 relating to permanence.
2. Compliance	
2.1 Compliance with the law	
Requirement Projects shall comply with the law.	**Guidance** Certification is not a legal compliance audit. The

Means of Verification • No evidence of non-compliance • Projects greater than 100ha: a system for being aware of and implementing requirements of new legislation.	certification body will be checking that there is no evidence of non-compliance with relevant legal requirements, including: • managers and employees understand and comply with all legal requirements relevant to their responsibilities; • all documentation, including procedures, work instructions and contracts, meet requirements; and • no issues of legal non-compliance are raised by regulatory authorities or other interested parties.

3. Project governance and documents

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.

3.1 Project Design Document

Requirement	Guidance
The project shall have a Project Design Document (PDD) containing the following information: **A. General description** of the proposed project and	**General description** The project area should be clearly defined using

original conditions in the project area, including: • the project title; • its long-term objectives; • its activities; • its location and project boundary, including geographical information and physical descriptions; • the organisations and individuals involved, including roles and responsibilities in the project and contact information; • an indication of whether there is an intention to use any other certification scheme or standard; and • an indication of whether the project site covers statutory designations (i.e. SSSI, SAC, SPA, LNR), and whether this places constraints on the project design or raises additionality issues. **B. Duration** of project activity ('projects period') and type of emissions reductions to be generated (future-carbon or captured-carbon) and time intervals. **C.** Application of an approved baseline and monitoring **methodology**, including: • leakage assessment, with relevant mitigation strategy; and • evidence of additionality. **D. Estimation** of emissions reductions to be generated over the chosen crediting period. **E. Long-term management plan,** including: • an outline of the necessary inputs and resources; • a summary of operational techniques; • a chronological plan for initiation of key project activities; and • identification of **risks** to the achievement or permanence of the carbon benefit, with relevant mitigation strategies.	appropriate maps, identifying all relevant aspects of the woodland resource, including any special characteristics and/or sensitive areas. Description of the woodland resource should include all relevant aspects of physical, silvicultural, ecological, archaeological, social and landscape features and any other special characteristics, including adjacent areas that provide critical ecosystem services (e.g. hydrological services, erosion control) or habitats for any protected or threatened species. Existing types and condition of vegetation should be described. The level of detail required should be appropriate to: • the size of the area; • its environmental and social sensitivity; and • the likely impact of the activities. Further specific guidance on constituent elements of the PDD is given in sections G, H and I. Where a project is subject to the EIA (forestry) regulations, the associated Environmental Statement and stakeholder consultation will, under most circumstances, provide the

F. Monitoring plan outlining how performance will be monitored, including: • a chronological plan showing when monitoring will be undertaken; • the performance indicators/targets that will be used; and • the identity of the verifier/assessor. **G. Environmental impacts** of the proposed project activity, as outlined in any ES or EIA process to which the project has been subjected. **H. Socio-economic impacts** of the proposed project activity, including a brief description of communities located around the project area, as outlined in any ES or EIA process to which the project has been subjected. **I. Outcomes of stakeholder consultation** (summary of comments and feedback given) and a mechanism for ongoing consultation, as outlined in any ES or EIA process to which the project has been subjected. **Means of verification** Comprehensive PDD with relevant appendices and referenced documents.	necessary documentary evidence.
3.2 Management capacity	
Requirement The project developer shall have the management capacity necessary to carry out the planned project activities during the project-crediting period. **Means of verification** • Project Design Document which clearly defines	

how roles in the project will be fulfilled; • project team lists which identify key technical skills; and • evidence from previous project experience.	

3.3 Registry/Avoidance of double counting

Requirement	Guidance
• The afforested land within the project shall be registered with the Forestry Commission. • The project shall be registered with a carbon or emissions reduction registry where required, or shall establish a registry, through which emissions reductions are recorded and allotted to a specific purchase. • The emissions reduction register shall be publicly available. **Means of verification** • Land registered with the Forestry Commission with IACS reference. • Inclusion in a publicly available emissions reduction register. • Carbon/emissions reduction sale contracts.	A carbon registry for a project may be provided through a project website displaying emissions reductions generated and whether sold. The identity of any carbon registry must be provided to the Forestry Commission, which will make the information publicly available. For future-carbon (ex-post) projects, where no registry is available or required, this should be stated.

4. Technical Requirements

Principle

Projects need to meet the following criteria by:

- generating **verifiable** emissions reductions (i.e. measurable by an external auditing body) against a credible baseline;
- being **additional** (i.e. only possible because of the availability of carbon finance);
- measuring and **minimising any leakage** caused by the project;
- having measures for assessing and **minimising the risk of impermanence**; and

- having measures to ensure emissions reductions are **not double-counted.**

4.1 Units of calculation and sale

Requirement

Carbon sequestration shall be calculated and traded in tonnes of carbon dioxide equivalent (tCO_2e).

Means of verification

Project documentation shows all calculations and estimates of GHG reductions in tCO_2e.

Guidance

Tonnes of carbon dioxide (tCO_2), rather than tonnes of carbon (tC), are used because carbon is generally traded in this way. This allows a clear link to be made between the volume of emissions reductions purchased and the emissions at source which are being offset.

Tonnes of carbon dioxide *equivalent* (tCO_2e), rather than tCO_2, shall be used because this allows for comparison with reductions of other greenhouse gas (GHG) emissions and transparency in measurements and recording.

4.2 Baseline projections ('Business-as-usual' scenario)

Requirement

The baseline projection shall include:

- **a site description:** a full description of the original condition of project sites, including the types and condition of vegetation, a statement of soil types and tree establishment activities, with a quantification of the effects of soil disturbance;
- **a carbon baseline**: a quantification of the carbon stock at the site at the start of the project, using methodologies from the Intergovernmental Panel

Guidance

A baseline projection is the reference point from which the impact of the project can be measured. It is essentially a description of conditions in the project area with a projection of the land uses and carbon stocks that would occur in the absence of the project.

Mapping of the project area should include relevant

on Climate Change's Good Practice Guidance (IPCC GPG) or other internationally recognised and approved methodologies (e.g. Clean Development Mechanism (CDM) methodologies). If the baseline is likely to show significant changes over time, a dynamic baseline accounting for these changes must be established; • **a deduction of lost carbon stocks:** where non-forested land (e.g. degraded land) is cleared in preparation for the project start date, the lost carbon stock shall be calculated and subtracted from the net carbon benefits claimed. **Means of verification** • Project Design Document • Appropriate maps • Evidence of relevant experts	physical, silvicultural, ecological, archaeological, social and landscape aspects and any special characteristics. Under normal circumstances the requirements of EIA regulations and the adherence to best practice should minimise such losses. Where woodland creation follows development projects, carbon losses can be presumed to be zero if they are fully described and dealt with in the baseline projection.
4.3 Project crediting period and type of credit	
Requirement Projects shall have a clearly defined crediting period that identifies whether future-carbon or captured-carbon emissions reductions are to be generated by the project activity. **Means of verification** Project Design Document.	**Guidance** A project's crediting period is the time over which project activities are to be implemented, monitored and delivered (i.e. the project's life-span). The crediting period should not exceed 100 years. Crediting periods for woodland creation projects are much longer than for energy or industrial-sector projects. This is because it takes many years for trees to sequester significant levels of carbon.

	N.b. the crediting period should not be confused with the issue of permanence. All projects conforming to this Code are expected to involve a permanent land-use change to woodland cover. See section 4.7 relating to permanence.

4.4 Project additionality

Principle

Projects wishing to generate robust emissions reductions need to demonstrate that they go beyond minimum legal requirements and that the emissions reductions would not have been generated without the availability of carbon finance.

Requirement	Guidance
Projects shall demonstrate additionality through the following tests: **1. Regulatory test** The project activities are not required under any law or regulatory framework. **2. Investment test** The project is not commercially viable in its own right. **3. Barriers test** The additionality of the land-use activities that will be implemented by the project can be demonstrated by identifying existing barriers to implementing those activities in the absence of the project. They can also be demonstrated by explaining how the project will overcome those barriers (e.g. through the provision of financial support, technical support, etc). **4. Common practice test (optional)** An investment test and barriers analysis is usually	Examples of barriers might include: • financial/budgetary barriers such as: o lack of access to capital for project finance, whether through investment, government grants or philanthropic sources; o hurdle rates of third-party investors; and o high initial capital costs and lack of access to credit; and • land-use barriers, such as agricultural activities. **Grant-aided woodland** Projects receiving grant aid under a government-funded

considered sufficient to prove the additionality of a project. However, it is useful and can support additionality claims to include a description of what land-use activities are common practice, in order to demonstrate that similar activities are not usually undertaken in the surrounding area. For example, a project might lay a heavy emphasis on re-introducing native species to an area where there is a very low proportion of native woodland cover and where other land uses predominate. **Means of verification** Inclusion of an additionality analysis in the Project Design Document including: • a statement that the project or project activities are not required by law; • a full financial analysis of the funds required for project implementation and its long-term management; and • a barriers test.	initiative are not excluded from participation provided they can satisfy the investment test, i.e. the project in its entirety could not have gone ahead without the prospect of carbon finance. However, under the requirements of this Code, the emissions reductions generated by those projects that do receive grant aid cannot be formally traded in regulated carbon markets or be claimed as 'offsets'. This is to ensure clarity about additionality and to prevent the double-counting that would otherwise occur, because grant-aided woodland creation is already reported by the UK Government under Article 3.3 of the Kyoto Protocol.
4.5 Carbon accounting methodology	
Requirement **Approval of methodologies** Projects shall either: • use existing methodologies approved by accepted bodies where they are relevant and appropriate to the project area and ecosystem/current land use (e.g. grasslands, croplands) as a basis for calculations; or • develop their own project-specific methodologies, provided they meet the criteria laid out in this section and have been peer reviewed by relevant experts.	**Guidance** Methodologies are step-by-step explanations of how changes in carbon stocks are to be estimated in line with accepted good practice. Estimations of changes in carbon stocks should be made using the methods of calculation, formulae and default values of the IPCC guidelines for AFOLU (2006), unless another methodology is being used that has been peer reviewed and accepted by the

Transparent presumptions All steps of documentation shall be transparent, i.e. clearly explained, all presumptions expressly stated, all background material referenced, all formulae clearly stated, all calculations included or referenced, and all revisions documented. **Clear boundaries** The boundaries used to calculate the project baseline and emissions reductions shall be clearly stated and justified. **Carbon Pools included** The following lists show the carbon pools that shall be included in estimations and those that shall be excluded. <u>Included are:</u> • above-ground woody biomass; • below-ground woody biomass; and • any carbon pool which is expected to decrease significantly as a result of project activities. <u>Excluded are:</u> • soil and peat (small-scale projects) where the project has a minimal effect on soil carbon and/or it is uneconomic to measure, unless project activities involve a significant reduction in the soil carbon pool; • above-ground non-woody biomass; • litter; • dead wood; • wood products; and • soil and peat (where project activities involve a significant reduction in the soil carbon pool, in which case that loss must be deducted).	certification body. See Appendix 3. The IPCC guidelines can be viewed at: http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html

Means of verification Approved, peer-reviewed carbon accounting methodology.	
4.6 Leakage	
Requirement Projects shall carry out an assessment to determine whether the project activities are likely to result in significant leakage and whether that leakage can be effectively and realistically measured and monitored. Where a leakage assessment finds that significant leakage is likely to occur as a result of the project activity and can be effectively and realistically measured and monitored, the activity will be eligible. The leakage (estimated for future-carbon and measured for captured-carbon (ex-ante) projects) will be deducted from the calculation of net emissions reductions. The activity will not be eligible where a leakage assessment finds that significant leakage is likely to occur as a result of the project activity and cannot be effectively or realistically measured and monitored. **Means of verification** Project Design Document containing comprehensive leakage assessment with reference to relevant evidence. Mapping or field observation of current land uses and the likelihood of displacement of activities.	**Guidance** The presumption that harvested areas are restocked means that deforestation is unlikely to occur as a result of a project within the UK. The possibility that the displacement of agricultural activity might result in deforestation or enhanced land use-based emissions elsewhere should be assessed. Assessing leakage requires: • a defined project boundary at the project design phase; and • identification of the current land uses in the project area, and a determination of whether and to what extent net GHG-emitting activities will be displaced as a result of the project activity.
4.7 Planning for Permanence	
Principle Projects need to create a permanent, sustainable area of woodland cover.	

Requirement A project shall demonstrate a commitment to sustainability by planning for permanence with mechanisms that, as a minimum: • ensure re-stocking where projects involve harvesting; • identify risk factors, including pests, diseases, windthrow and fire, and develop mitigation strategies; and • maintain a risk buffer of unclaimed carbon credits. **Means of verification** Means of verification shall include: • a comprehensive risk assessment in the Project Design Document; . • practical experience of the project developer demonstrating sensitivity to risk factors; • field observations confirming that assessment of risk is reasonable; and • evidence of subtraction of carbon buffer.	**Guidance** Risk management should be built in at every stage of project design. See Annex 1 for more detailed information about assessing and mitigating risk. Project developers should require all future owners of the land to undertake compensatory planting should deforestation occur for development or other reasons, e.g. by amending Title Deeds. The buffer level should be specified in project technical documents based on an assessment of risks associated with the activity/area in question. The buffer may be drawn upon over time as projects achieve verification targets and risks are found to have been over-estimated.
4.8 Monitoring	
Requirement The project shall have a monitoring plan in place before the project begins, to quantify and document the delivery of carbon credits. Field measurements shall be undertaken before	**Guidance** Projects should develop monitoring protocols based on monitoring requirements set out in the PDD and methodology.

captured carbon emissions reductions are awarded/claimed. Regular monitoring of future carbon projects shall take place to demonstrate their successful establishment and that the growth rates are consistent with anticipated carbon uptake as identified in the PDD. Corrective actions shall be undertaken if establishment and/or growth rates do not meet expectations. Future-carbon projects above the area threshold shall be responsible for their own monitoring and reporting. Projects below the area threshold can opt to subscribe to a risk-based sample scheme, rather than for each project to undertake its own monitoring/verification project. The monitoring plan shall include: • the measurements to be taken; • the frequency of monitoring; and • the sampling strategy to be used. **Means of verification** • Project Design Document and other monitoring plans • Field observation.	Additional guidance on monitoring can be found in the IPPC guidelines on AFOLU (2006). Certification should provide a robust basis for any monitoring programme specific to the project.

5. Environmental and social Integrity

Principle

Projects need to be **environmentally and socially responsible,** taking into account the wider impacts on ecosystems and society to ensure that no harm is done by the project and, whenever possible, that wider benefits are created.

Requirement	Guidance

All species to be used by the project shall be identified, specifying whether they are native or non-native and indicating any likely effects they might have on the local environment, ecosystem and biodiversity. The project design shall incorporate the principles of sustainable forest management set out in the UK Forestry Standard. The project shall increase natural capital in the project area, and have due regard to the visual, cultural and ecological value and character of the wider landscape. **Means of verification** • Project Design Document • Forestry Commission-approved management plan • Environmental Impact Assessment (where required by legislation) • Certification to the UK Woodland Assurance Standard.	Biodiversity and environmental impact assessments and monitoring can be complex and costly. At the time of certification, all projects should be able to show that environmental (including biodiversity impacts) on the project area are likely to be positive. The content of an Environmental Statement and the requirements of the EIA process, should an EIA be required, will usually cover all issues associated with environmental integrity. Best practice would be to prepare an Environmental Statement following guidance given under EIA Forestry Regulations, whether or not the minimum threshold has been exceeded (5 ha, or 2 ha in a 'sensitive' area).

6. Stakeholder Involvement

Principle

Meaningful stakeholder consultation and engagement is needed to secure the long-term viability of a project, and to allow for project design to be scrutinised by multiple diverse stakeholders with local knowledge and experience.

Requirement	Guidance

The applicant 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 shall demonstrate consideration for neighbouring landowners and provide updates of key project activities as the project progresses (e.g. on local notice-boards, community spaces etc). **Means of verification** Documentation which provides evidence of the approach taken to achieve a meaningful stakeholder consultation, along with a summary of feedback and the actions taken.	Before starting a process of public involvement consideration should be given to: • the ways in which each stakeholder or group of stakeholders might best be involved in the process; • how this might change as their level of involvement develops; and • the demand this might put on the project's resources. For small projects, inclusion on the public register operated by the Forestry Commission should be advertised and details of the project plans (PDD) should be made publicly available. Where an EIA has been required, the regulatory process should usually provide the appropriate documentary evidence for stakeholder consultation and engagement. *See the UK Forests for People Guidelines for more detailed guidance on effective stakeholder involvement.*

Glossary

Accreditation – Assessment and registration of a project against the criteria of the Code of Good Practice.

Additionality – A project is 'additional' if it, and the activities supported by it, could not have happened without the carbon finance.

Afforestation – The direct, human-induced conversion to woodland of land that has not previously been forested according to historical records. The IPCC sets a threshold of a continuous absence of woodland over the previous 25 (or 50?) years.

AFOLU - Agriculture, forestry and other land use.

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

Baseline – The starting reference point from which the carbon benefits of project activities can be measured or calculated. A dynamic baseline may be required if the previous land use has not achieved a steady state in terms of carbon dynamics.

Biodiversity - The variety of ecosystems and living organisms (species), including variability and genetic variation within species, and the ecological complexes within and between ecosystems.

Buffer – A carbon pool of sufficient size to cover both uncertainty in carbon measurement and potential losses which may occur from the project over time, thus ensuring the permanence of emissions reductions.

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

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

Carbon offsetting – Calculating emissions and then purchasing 'credits' from emission-reduction projects that have prevented or removed the emission of an equivalent amount of carbon dioxide elsewhere.

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

CDM (Clean Development Mechanism) – One of the flexible mechanisms created by the Kyoto Protocol.

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

CO_2 - (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.

Crediting Period – the duration over which a project generates emissions reductions or carbon credits.

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.

Ecosystem - A community of plants and animals (including humans) interacting with one another and their environment.

Forest – See 'woodland'

FSC - Forest Stewardship Council.

Double-counting – Double-counting occurs when the same carbon credit is claimed by two separate entities in respect of the same emissions, or when the same credit is sold more than once in respect of the same unit of carbon reduction or sequestration.

GHGs - Greenhouse gases. The gases which are causing the warming of the Earth's atmosphere that is leading to climate change. Six gases are defined in the Kyoto Protocol as contributing to climate change: carbon dioxide, hydrofluorocarbons,

methane, nitrous oxide, perfluorocarbons and sulphur-hexafluoride. These contribute to the 'greenhouse effect'.

ISO - International Standards Organisation.

Leakage - The unintended change of carbon stocks outside the boundaries of a project, but resulting directly from the project activity (usually thought of as being negative, although positive leakage can occur). The change might be an increase in emissions or a decrease in sequestration, resulting in a lower carbon benefit being attributable to the project.

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

Native species - A species that has arrived and inhabited an area naturally, without deliberate assistance by humans, or which would occur at the location had it not been removed through human intervention in the past.

Naturalised species - A non-native species that reproduces consistently and sustains populations over more than one life cycle without direct intervention by humans.

REDD – Reduction of emissions from degradation and deforestation.

Reforestation – Direct, human-induced establishment of forest on non-forested land that had been forested at some time in the past.

Registry - The official record of the number of carbon credits that have been sold, and of the projects (or schemes) that sold them.

Terrestrial carbon management – Any land-use management practice designed to increase net carbon benefits, either through increasing carbon stocks or protecting carbon stocks from losses over time.

UNFCCC - United Nations Framework Convention on Climate Change. An international framework convention on climate change policy.

Validation - The initial evaluation of a project against published standards (in this case, the Code of Good Practice), undertaken before registration by an expert reviewer.

Verification - The evaluation of the delivery of emissions reductions or carbon credits by a project.

VCM – Voluntary Carbon Market

VERs - Voluntary Emissions Reductions. Emission reductions made where there is no legal requirement to do so, i.e. outwith Kyoto or any other regulatory scheme.

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').

Appendix 1: Validation and Verification

a) Role of Approval Body

A lead Approval Body accredited by UKAS shall be appointed to set out the standards and requirements for:

- co-ordinating project audits;
- validating projects, verification, and monitoring reports;
- Accreditation inspection service companies (ISCs) to undertake project validation and ongoing verification to confirm compliance with the Code.

b) Role of Inspection Service Companies

Accredited ICSs will be the sole avenue for confirming projects' conformance to the Code. Their key roles will be to:

- undertake initial project validation at the request of project proponents;
- carry out periodic verification audits of project conformance;
- manage a non-conformance process;
- undertake sample project/site audits according to agreed protocols;
- provide a statement of assurance that *Captured Carbon* projects achieved the stated reductions in GHG emissions and removals as verified against the Code;
- provide a statement of assurance that estimates of emissions reductions made by a *Carbon Futures* project are Code-compliant; and
- provide assurance that ongoing project management is being carried out in accordance with the agreed Project Design Document.

c) Modus Operandi for Code Validation and Verification Process

Initial Project Validation

Step 1: Project proponent submits Project Design Document (PDD), monitoring plan, proof of title and other required information to ISC.

Step 2: ISC assesses the project against Code requirements, and produces a validation report (including a statement of Code conformance).

Step 3: ISC submits project and contact details of validated projects to the Forestry Commission for inclusion in the Forest Carbon Project Registry (FCPR).

Step 4: The Forestry Commission (automatically) checks for overlap with existing projects, and sends the project proponents an email to confirm registration of their project and providing password access (?) to edit their project and contact information. (NB: the location, unique identifier, GPS boundaries and project name will all be protected as read-only documents.)

Ongoing Verification (after Initial Project Validation and Registration)

Step 1: Project proponent submits monitoring report to ISC.

Step 2: ISC undertakes sample project field audits according to agreed schedule.

Step 3: ISC assesses the emissions reduction claims against Code requirements and the agreed PDD, and provides a verification report (including statement of Code conformance).

Step 4: ISC notifies the Forestry Commission's FCPR that a project verification report has been completed (and includes an updated statement of Code conformance status).

Appendix 2: Registration

a) FC Forest Carbon Project Registry (FCPR)

Compulsory for all projects, the FCPR will record project details including:

- project name, contact details and brief description;
- start and end dates;
- location and project land area, including spatial map of site(s);
- confirmation of legal ownership of land and/or carbon rights;
- project type, ie. 'future' (ex-ante) or 'captured' (ex-post) carbon;
- project status – validated/verified;
- timing and level of total net emissions reduction claimed/predicted;
- confirmation of Inspection Service Company (ISC) initial validation report;
- reference for ISC verification reports; and
- current Code conformance status.

b) Future-Carbon Projects: Legal Agreements

These will be compulsory for all Future-Carbon projects generating traded emissions reductions. This will require a formal supplier/client agreement to be in place and lodged with a solicitor. Details on FCPR as (a) above plus:

- confirmation of legal supplier and customer;
- unique agreement identifier;
- contact details for holder of agreement (provided to third parties by request).

c) Captured-Carbon Projects: Carbon Credit Registration

Compulsory for all Captured-Carbon projects generating traded emissions reductions – registration of emissions reductions with recognised international registry. Details on FCPR as (a) above plus:

- details of international emissions reduction registry;
- unique identifier/serial number;
- emissions reduction units generated/retired.

Appendix 3: Risk Management and Carbon Measurement

a) Demonstrating Commitment to Permanence

All projects will be required to provide satisfactory assurances of the permanence of their emissions reductions. This can be achieved by providing:

- evidence of compliance with the provisions of the UK Forestry Act and UK Forestry Standard;
- an agreed project risk management plan;
- a formal commitment to the long-term maintenance of sequestered carbon; and
- temporary emissions reduction crediting.

b) Risk Management and Project Failure

Risks should be assessed at the project design phase, and potential mitigation strategies identified. A breakdown of different categories of risk factor and potential mitigation strategies is set out in the table below.

Risk Factor	Potential Mitigation Strategy
Legal/Social	
Disputes caused by conflict of project aims and activities with local communities and organisations	Participatory planning and continued stakeholder consultation over project life-span. The regulatory framework in the UK (EIA regs) is likely to limit this risk.
Disputes caused by conflicting land-use interests or compliance requirements	Ensure early analysis of compliance requirements and stakeholder analysis. The regulatory framework in the UK (EIA regs) is likely to limit this risk.

Project Organisation	
Management of activities not carried out effectively	Project managers and staff adequately trained
Double-counting due to poor or bad-faith record keeping	Transparent record-keeping procedures written in project design document, and quality mapping of project activities and area; up-to-date database maintained with records of all carbon monitored and sold. The public register operated by the Forestry Commission will limit this risk.
Project not practically viable in long term due to lack of resources/skills/expertise	Careful selection of project staff and training
Economic	
Rising land-opportunity costs endangering project viability	Development of business plans (reviewed periodically) for economically viable management. UK legislation limits the risk of land-opportunity costs reversing the land-use change.
Financial failure	
Natural	
Fire	Fire management plans. Follow requirements of UKFS and supporting guidelines.
Pests and diseases	Assessment, careful selection and diversity of tree species. Follow requirements of UKFS and supporting guidelines.
Direct effects of climate change	Awareness of current climate projections and their likely impacts. Implement best practice guidance as outlined in the UKFS and

	supporting Guidelines.
Extreme climatic events	Site selection criteria; take account of wind-throw hazard class and soil types/exposure. Follow requirements of UKFS and supporting guidelines.

An adequate carbon pool reserve or 'buffer' should be in place to allow for:

- project size, length and commitment period;
- damaging events, eg. fire and wind;
- ownership type and management experience;
- technical capability;
- financial planning and opportunity costs; and
- level of political (e.g. government, local authority) endorsement.

The verification process will include overall assessment by ISC and determination of the overall project risk level (using an agreed risk evaluation procedure). The following reserved minimum buffer levels are considered appropriate when net emissions reductions are claimed.

Risk Class	Proposed Buffer
Fail	---------
High	40%
Medium	20%
Low	5%

c) Carbon Estimation and Measurement

An appropriate limit will be placed on the proportion of the total estimated emissions reduction that can be reported or claimed. This will serve to account for the variable confidence limits that apply to alternative estimation or measurement methods.

Carbon Measurement Methodologies

The following three tools or methodologies will be made available for use in estimating and measuring forest carbon:

Woodland Type Look-Up Tables

On-line access to a 'New Woods Tool' generating carbon default values for the woody biomass element (above and below-ground carbon). It will incorporate a fixed and limited range of alternative woodland types and management regimes. *(NB: The use of the New Woods Tool default values will be the only method available to Carbon Futures projects.)*

Carbon Models

On-line access to a woodland carbon model generating site-specific carbon values. Underlying data based on existing Yield Tables for a wide range of tree species and management regimes. *(NB: initially covering above and below-ground woody biomass-based carbon only - may not be available by scheme launch date.)*

Woodland Inventory

A suite of published protocols outlining sample plot procedures for field inventory of woodland carbon. Initially a protocol will be available to cover tree-based carbon only, followed by publication of a soil carbon protocol. *(Potential to extend range of published protocols in future to include litter, harvested wood products and substitution.)*

Confidence in Carbon Estimates

To account for the variability in the confidence limits that can be applied to the results of the three alternative methods, the following limits are proposed to restrict the maximum percentage of the total estimated carbon that can be claimed under the scheme:

Measurement Method	Proposed Cap/Limit
Look-up Tables	60% of Total C
Carbon Models	75% of Total C
Woodland Inventory	95% of Total C

Appendix 4: Grant Aid

National Carbon Accounting and The Kyoto Protocol

The UK's Kyoto Protocol commitments mean that the carbon savings resulting from any UK-based woodland creation project that has been grant-aided by public funds are automatically counted as part of national GHG accounting procedures. This means that under these circumstances regulatory market carbon credits, such as those associated with the Clean Development Mechanism, cannot be claimed.

Voluntary Carbon Schemes

Voluntary emissions reductions can, however, be generated by grant-aided schemes under certain circumstances. Where woodland creation schemes attract co-funding from voluntary sources, it is proposed that limits are set on the intervention rates applicable to such schemes.

Co-Financing of Woodland Carbon Schemes

The limits would apply to the overall grant contribution to agreed costs rather than restricting eligibility for specific grant elements such as establishment or maintenance grants.

The proposed funding arrangements for co-funded carbon schemes are to introduce:

1. a hurdle rate of => 20% carbon co-finance, i.e. designated forest carbon projects must attract at least this proportion of the total agreed project finance required from carbon-related (non-grant-aided) sources;

2. a requirement for a breakdown of agreed project costs to be included within the Project Design Document. Costs may be based on FC-approved standard costs or via the provision of detailed project-specific cost estimates; and

3. a lower limit on grant aid for carbon co-financed schemes, i.e. public funding of co-financed forest carbon projects would be restricted to a maximum percentage of the total agreed project cost.

Appendix 5: Linkage to other Carbon Schemes

International Voluntary Carbon Standards

Where possible, opportunities will be sought to maximise the alignment of methodologies and cross-compliance with the leading international voluntary carbon standards (e.g. VCS, CCBS) through the development of mutual recognition agreements.

UK Quality Assurance Scheme for Carbon Offsetting

The Department for Energy & Climate Change (DECC) has launched a UK Quality Assurance Scheme (UKQAS) to help guide consumers by giving a quality mark to offsets that meet a number of criteria. The scheme accepts credits from the compliance market, but not voluntary/VER credits. DECC intends to review the scope for expanding the scheme to potentially include voluntary credits in the light of a new international climate change agreement.

Current national greenhouse gas accounting procedures within the UK and other Kyoto Protocol Annex 1 countries mean that it is not currently possible for domestic projects to generate compliance market offsets or internationally tradable voluntary offsets. This situation might change in future with the advent of a new international climate change agreement. As and when new developments occur, opportunities will be sought to align the Forest Carbon Code of Good Practice with the requirements of the UKQAS and international offset market regulations.