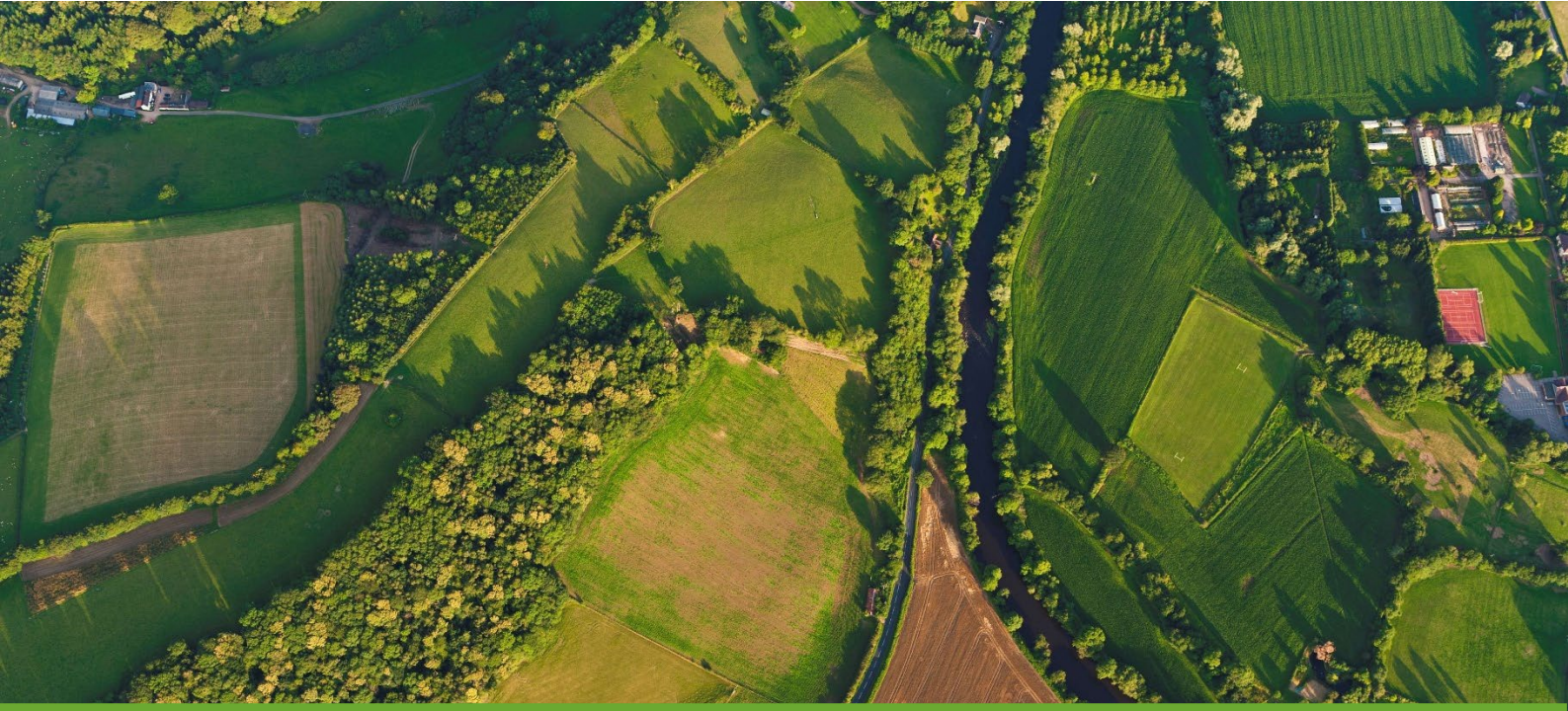

UK CARBON CODE OF CONDUCT

Approved Land Use Activities and Whole Landholding MRV Protocol

Version: 4.0

Published Consultation

UK CARBON CODE OF CONDUCT (UKCCC)
High Integrity Carbon Credit Standard 11/10/22

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OUR VISION

Remove atmospheric carbon at scale through the restoration of natural systems, contributing to climate change reversal and biodiversity increase.

OUR MISSION

To ensure carbon removal and biodiversity projects, and their related credits are of the highest integrity standards and provide environmental and social good through nature restoration.

CONTEXT

The UKCCC is unique in that it enables a whole landholding to be entered into a single project. The aim is to ensure the project examines all opportunities to continually reduce absolute emissions, and all opportunities to increase nature-based carbon removals through a range of land management changes and interventions.

UKCCC projects are unique and set apart in the voluntary carbon market as they insist upon a landholding and all its enterprises reaching a Net Zero status.

The UKCCC standard (The Standard) redefines the definition of high-integrity carbon credits.

The Standard allows the use of all natural capital to be used as part of the project's total carbon removals, and insists that all emissions are calculated within the project boundary and scope.

Only once a project has gone beyond Net Zero can it sell credits and therefore accurate measurements are essential. The UKCCC project process goes beyond the need for conservative estimates as the standard insists on measured not modelled scenario planning.

The Standard has set out to be the principal standard by which all UK nature-based carbon credit issuing projects can be approved and verified. It sets out to develop the code rapidly in line with consultation with UKCCC members and other interested parties, and adopt technology to improve the validation, approval and verification process efficiency. The Standard sets out to 'learn by doing' and to continually improve whilst taking immediate and pragmatic climate action in line with international goals.

The Standard is aligned with internationally agreed standards, in particular:

- ICVCM Core Carbon Principles
- Science-Based Targets Initiative–Forest, Land and Agriculture (SBTi FLAG)
- Greenhouse Gas Protocol (Land Sector Removals Guidance)
- Oxford Principles for Net Zero Aligned Carbon Offsetting
- UN Sustainable Development Goals

It can be used to generate internationally comparable statistics for the:

- Nationally Determined Contributions (NDC) under the 2015 Paris Climate Agreement
- System of Environmental Economic Accounting (SEEA)

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1.1 Approved Land Use Activities

Approved Land Use Activity for UKCCC Projects

Introduction

The UK Carbon Code of Conduct (UKCCC) supports a range of nature-based solutions to meet climate and environmental objectives. The vision of the UKCCC focuses on promoting sustainable land management practices that remove atmospheric carbon, enhance biodiversity, improve water and air quality, and contribute to climate resilience. The approved land-use activities outlined below align with the UKCCC's mission of reducing greenhouse gas emissions, removing atmospheric carbon dioxide, adapting to climate change, and improving ecosystem health.

The UKCCC enables a holistic approach where all approved nature-based solutions can be blended in a single project to maximise the opportunity to build climate resilience and reverse climate change and biodiversity collapse. Provided there is an appropriate and approved MRV protocol for the action and the net position can be measured and calculated within the whole landholding protocol then all nature-based solutions will be considered. For any activity not listed below, express permission to add other solutions must be sought from the UKCCC before a project can start.

The Land use activities in this document are aligned with internationally agreed standards, in particular:

- ICVCM Core Carbon Principles
- Science-Based Targets Initiative–Forest, Land and Agriculture (SBTi FLAG)
- Greenhouse Gas Protocol (Land Sector Removals Guidance)
- Oxford Principles for Net Zero Aligned Carbon Offsetting
- UN Sustainable Development Goals

It can be used to generate internationally comparable statistics for the:

- Nationally Determined Contributions (NDC) under the 2015 Paris Climate Agreement,
- System of Environmental Economic Accounting (SEEA), and
- Ecosystem Accounting extension (SEEA-EA) as part of the System of National Accounts (SNA).

UKCCC land use activity and protocols are for use in the UK. They can be used in other countries if the same standards of rigour, transparency and traceability can be assured.

The following list of approved activities is not exhaustive and the UKCCC will look at all and any nature-based activities that could contribute to the vision and mission of the UKCCC and global goals.

1. Transition to Regenerative Agriculture

Description:

Regenerative agriculture focuses on restoring soil health and enhancing ecosystem services. Practices include no-till farming, the introduction of livestock, cover cropping, crop rotation, integrated pest management, and organic composting. These methods improve soil structure, increase carbon sequestration, and reduce the need for chemical inputs.

Key Outcomes:

- Increased carbon removal into soils.
- Enhanced biodiversity and soil fertility.
- Improved water retention and resilience to extreme weather events.
- Reduced emissions.
- Reduced diffuse pollution .

Approval Status:

Approved as it aligns with the UKCCC's goals to reduce emissions and promote sustainable food production systems.

2. Agroforestry

Description:

Agroforestry is the integration of trees and shrubs into agricultural landscapes. This practice helps mitigate climate change, improves biodiversity, enhances soil and water conservation, and supports diversified income for farmers.

Key Outcomes:

- Atmospheric carbon removal through biomass growth.
- Improved soil health and erosion control.
- Enhanced biodiversity through varied habitats and connectivity.
- Diversification of landowner income.
- Improved water flow regulation.

Approval Status:

Approved as a sustainable land use practice that balances agricultural productivity with environmental conservation.

3. Habitat Creation and Restoration

Description:

Creation and restoration of habitats such as wildflower meadows, wetlands, and grasslands to support wildlife and improve biodiversity. Habitat creation projects may be tailored to local needs and species, supporting ecosystem services like pollination and natural pest control. Re-wilding of areas of land within a project fall under this land use activity. The UKCCC does support whole

landholding re-wilding in specific cases and where land use is only suited to that purpose. Careful consideration must be given before re-wilding productive agricultural land.

Key Outcomes:

- Increase in biodiversity, connectivity and support for endangered species.
- Improved ecosystem services (e.g., pollination).
- Enhanced recreational and educational opportunities.
- Atmospheric carbon removal
- Improved water flow regulation
- Improved water quality
- Clean air

Approval Status:

Approved as a critical activity to support biodiversity and ecosystem resilience, fitting within the UKCCC's nature restoration priorities.

4. Woodland Planting (Including Wood for Products) and Active Management

Description:

Woodland creation through the planting of native and mixed-species woodlands. This includes sustainable management practices for wood products, such as timber that is embedded into the built environment thus removing and storing carbon. The UKCCC does not support wood for biomass energy production.

Undermanaged woodland represents an opportunity to bring into active management with a programme of cutting and removing, replanting and/or natural regeneration. This can dramatically increase carbon removals.

Key Outcomes:

- Significant carbon removal into woody biomass.
- Sustainable supply of wood products contributing to a circular economy.
- Enhanced biodiversity in woodlands.
- Increased resilience of ecosystems and landscapes.
- Improved woodland habitat connectivity.
- Enhanced recreational and educational opportunities.

Approval Status:

Approved, especially for projects that promote native species, sustainable timber, and long-term carbon removal and storage.

The UKCCC will approve innovative woodland and tree species planting systems, e.g. Paulownia as a nurse species in woodland creation.

5. Wetland Creation and Active Management

Description:

Wetlands are valuable carbon sinks and play a crucial role in water filtration, flood management, and biodiversity support. Wetland creation projects focus on restoring degraded wetlands or creating new wetlands in appropriate locations.

Key Outcomes:

- Significant carbon storage in wetland soils and biomass.
- Enhanced water quality and flood regulation.
- Increased habitat for aquatic and bird species.
- Natural flood management.
- Enhanced recreational and educational opportunities.

Approval Status:

Approved for its multifaceted role in carbon removal, water management, and biodiversity enhancement.

6. Enhanced Rock Weathering

Description:

Enhanced rock weathering involves spreading finely ground silicate rocks (such as basalt) on soils to accelerate natural processes that remove carbon dioxide from the atmosphere. This method not only captures carbon but also enhances soil health.

Key Outcomes:

- Direct carbon dioxide removal through mineral carbonation.
- Improvement of soil nutrient content, health and aggregation.
- Synergy with regenerative agriculture.
- Eventual alkaline effect on sea water, increasing CO_2 concentrations.

Approval Status:

Approved as an innovative carbon removal solution that supports soil health and agricultural productivity.

7. Biochar Production and Use

Description:

Biochar is a carbon-rich material produced by heating organic matter in the absence of oxygen (pyrolysis). When applied to soils, biochar enhances soil health, increases water retention, and sequesters carbon for hundreds of years.

Key Outcomes:

- Long-term carbon sequestration in soils.
- Improved soil fertility and water retention.
- Enhanced resilience of agricultural lands to extreme weather.

Approval Status:

Approved as it combines carbon storage with improved agricultural productivity and soil health. Care must be taken to avoid double-counting, especially when biochar has been imported to the project. Generally carbon removal is attributed at the point of biochar production.

8. Hedgerow Planting and Active Management

Description:

Hedgerow planting involves creating linear strips of mixed native shrubs and trees along field edges. Hedgerows act as wildlife corridors, enhance biodiversity, sequester carbon, and prevent soil erosion. They also provide windbreaks and support pollinators.

Cutting, laying and coppicing hedgerows can significantly increase carbon removal.

Key Outcomes:

- Carbon sequestration in hedgerow biomass.
- Improved biodiversity by providing habitat and connectivity for birds, insects, and small mammals.
- Wind breaks, shelter and shade for livestock.
- Reduction in soil erosion and improved microclimate regulation.
- Enhanced pollination services and pest control.
- Water flow regulation.
- Clean air.

Approval Status:

Approved as a multifunctional land-use solution that supports biodiversity, carbon storage, and agricultural resilience.

9. Peatland Restoration and Active Management

Description:

Peatland restoration focuses on rewetting and rehabilitating degraded peatlands. Peatlands are some of the most efficient carbon stores on Earth, but damaged peatlands release significant amounts of carbon dioxide. Restoration projects aim to reverse this by restoring natural water levels, thereby re-establishing their function as carbon sinks. The UKCCC explicitly views peatland restoration as an emissions reduction project, and not emissions avoidance.

Key Outcomes:

- Significant carbon storage and removal on fully functioning peatbogs, and prevention of carbon loss from further degradation.
- Restoration of biodiversity, especially for species dependent on peatland ecosystems.
- Improved water regulation and flood mitigation.

Approval Status:

Approved as a critical nature-based solution to mitigate carbon emissions and restore degraded ecosystems.

10. Other Nature-Based Solutions

Description:

Additional nature-based solutions, such as coastal ecosystem restoration, urban greening, and sustainable land management practices, contribute to carbon removal, biodiversity, and climate resilience. These solutions are reviewed for alignment with the UKCCC's objectives on a case-by-case basis.

Key Outcomes:

- Carbon removal across various ecosystems.
- Improved climate resilience in both urban and rural areas.
- Enhanced biodiversity and ecosystem services.

Approval Status:

Approved when consistent with UKCCC's environmental and climate goals.

1.2 Approved Land Use MRV Protocol

UKCCC Whole landholding Measure, Report, Verification and Land Use Framework methodology

Origination date: 20/11/22 Effective date: Consultation Version: 4.0

The UKCCC whole landholding MRV protocol calculates the project's net carbon baseline (in tCO2e) by following this process:

1. **Create the project scope**. The project scope must include all activities within the project boundary under the direct control of the project host
2. **Identify the project boundary and all activities within it as per the project Scope**. The boundary must be clearly defined and sourced from a recognised authoritative mapping provider, e.g. Ordnance Survey. Land parcel information with unique field identifiers is available from national agencies such as the Rural Payment Agency (England), Rural Payments and Services (Scotland), and Rural Payments Wales. The project boundary and associated unique field parcel identifiers must be compatible with the UKCCC Single Source of Truth digital map
3. **The UKCCC may in time provide a full suite of mapping and project development templates for project developers to use**.
4. **Quantify Carbon Removal Baselines**
    - 4.1. **Above ground carbon removals**. A fully digitised habitat map of all natural capital assets within the project boundary. The habitat map shall be created to a 1 metre resolution and use the UK Hab classification. Habitats will be identified to at least Level 3. Desktop aerial photo interpretation of the latest available high-resolution imagery (e.g. 12.5cm ground resolution) shall be used to digitise and classify habitat boundaries and types. The habitat map can be enhanced with third party data (e.g. countryside stewardship, tree canopies, hedgerows etc.). Carbon removal is quantified using the IPCC AR5 100-year Global Warming Potentials embedded within the approved carbon calculators.
    - 4.2. **Alternative methods of assessing above ground biomass may be used subject to UKCCC approval**. This data can be sourced from third parties and must be peer reviewed. Data sources can include those from other Standards operating in the Voluntary Carbon Market that align with the Core Carbon Principles.
    - 4.3. **Below ground carbon removals**. A full measured soil baseline audit shall be conducted to the UKCCC soil protocol.
    - 4.4. Input the above ground and below ground carbon baseline data into an approved carbon calculator to quantify total removals within the farm boundary.
5. **Quantify Carbon Emission Baseline**
    - 5.1. A carbon audit baseline and report must be created by a third party (e.g. the project developer). The project host must provide support as appropriate (e.g. access to land and relevant data such as farm accounts).
    - 5.2. A third party (e.g. the project developer) must use an approved carbon calculator that references data sources. The methodology used must be publicly available and been subjected to peer review. The calculator must be updated regularly with the latest scientific data. Currently the approved calculators are Farm Carbon Toolkit, Agrecalc and Cool Farm Tool.
    - 5.3. Collate carbon emissions from all activities within the project boundary and scope.

5.4. Input the carbon emissions' baseline data into an approved carbon calculator to quantify total emissions within the farm boundary.

5.5. Carbon audits must be conducted to individual business level and IPCC Tier 3 granularity is desirable but Tier 2 will be accepted.

5.6. Emissions must be reported by Scope 1, 2 and 3 and by Green House Gas type, reported as tCO2e.

6. **Calculate the Net Carbon Balance**

The total current annual carbon emissions are then added to the total annual carbon removals (always reported as a negative figure) to quantify the current carbon balance, e.g.

- Total emissions from all activities is 2,000 tCO2e per year
- Total removal across all natural capital is -3,000 tCO2e per year
- Carbon balance is -1,000 tCO2e per year, i.e. the project is beyond Net Zero by 1,000 tCO2e per year.

This balance is certified and issued as high-integrity carbon credits onto the UKCCC Registry.

7. If the project host has existing baseline data as required by The Standard, this must be submitted by the project developer to the UKCCC for approval. If approval is not sought before-hand, the project may not be approved by UKCCC.

These baselines are used to design the project plan and delivery of interventions which can be found on the approved UKCCC Approved Land Use Activities.

8. When designing the project, the additional interventions that help the project continually reduce emissions and increase carbon removals shall be modelled using the approved Financial Additionality test. The project specific Financial Additionality test shall be based on data from an approved carbon calculator.

9. The project developer can add more interventions throughout the project life, but these must be approved by the UKCCC Commissioner before implementation, and preferably only at the project annual review. Changes may be considered between annual reviews, but a cost may be incurred.

10. An emissions' reduction plan shall be submitted with the project documentation and approved by the UKCCC. The plan shall demonstrate a continued pathway in reduced emissions and how this will be achieved.

11. The following documentation is to be completed:
    - Project Development Document (PDD)
        - Core project information
            - Know Your Client
            - Anti money laundering
            - Project map
        - Project development information
        - Project impacts
        - Additionality test
        - Reversal and rebound risk
        - Net emissions' calculation
        - Protection and preservation and interested parties' consultation
        - Document control
    - Financial Additionality Test Calculator
    - Approval Report
    - Annual Monitoring Plan

12. Once designed the project developer will forward all completed documentation to the UKCCC Commissioner for comment, along with a suggested uncertainty discount factor to be applied.

13. The UKCCC Commissioner will respond within 28 working days with either confirmation of project validation or a request for amendments or additional information. The UKCCC will either approve the uncertainty discount factor or impose an alternative. The UKCCC Commissioner has the final say on uncertainty discount factor values.

14. Once approved the UKCCC forwards the full project documentation to an approved Validation and Verification Body (VVB) for project validation and then passed back to the UKCCC for final verification.

15. Upon successful verification the project will achieve approved status.

16. Continued project approval can only be maintained following successful annual verification visits carried out by either the UKCCC Commissioner or an approved VVB.

17. This completes the first verification cycle (lasting 5 years). Baselines are repeated in the first year of each new five-year verification cycle.

18. All uncertainty discount factor credits (less the 3% national reserve) are released if the project has exceeded the conservative estimated net carbon removal. If the project has failed to meet expectations then the uncertainty discount factor credits are cancelled.

19. The UKCCC reserves the right to adjust the uncertainty discount factor at any time.