

**PEATLAND
CODE** 



Biodiversity Methodology Guidance Document

For the Woodland Carbon Code and Peatland Code

Draft Guidance Document for Consultation Process



Public consultation notice:

This document is still in draft form and represents a potential new methodology for biodiversity quantification in peatlands and woodlands to be used alongside the Peatland Code and Woodland Carbon Code as part of the Facility for Investment Ready Nature in Scotland (FIRNS) project.

This document is part of a 30-day public consultation from 17/01/2025 to 17/02/2025.

During this time, any relevant party may submit comments on the appropriateness of the proposed updates via a Microsoft form [Biodiversity Methodology for Peatlands and Woodlands - Public Consultation](#).

For more information on public consultations, please refer to the public consultation information on our webpage [Public Consultations | IUCN UK Peatland Programme](#).

Introduction

In December 2023, the Woodland Carbon Code (WCC) and Peatland Code (PC) began work on a parallel set of methodologies to allow projects to either quantify the biodiversity benefit of their project or potentially to produce both voluntary carbon and biodiversity credits. The voluntary biodiversity market is still young, meaning there is a high risk of getting it wrong and the WCC and PC both need to protect their reputations as high integrity standards. However, the new biodiversity quantification methodologies can be a powerful tool to unlock additional private finance for nature restoration, whilst reducing the risk to both codes.

The guidance document

The Biodiversity Methodology Guidance Document provides guidance on how woodland, and peatland projects could adopt a more explicit approach to biodiversity measurement and reporting. This guidance document includes explanations of approaches, rationales, and direction on the validation and verification process, as well as creating robust environmental datasets in the form of project biodiversity baselining. The Peatland Code and the Woodland Carbon Code are committed to continuous development and will review this guidance document as feedback is received.

This guidance document is still in draft form to support the period of consultation for the WCC/PC Biodiversity Methodology. We will use feedback from the consultation to confirm whether and how both the WCC and PC may proceed with measuring, quantifying and potentially crediting biodiversity.

The biodiversity crediting market

The carbon market is much more mature than the biodiversity market. As such, there are many integrity and transparency mechanisms that can be translated into the nascent biodiversity market. However, because biodiversity as a concept is more complex to quantify and standardise than carbon, these tools need further development in the biodiversity market.

As it currently stands, there are no international standards bodies that regulate the biodiversity market or define what is considered “high integrity”, like [ICVCM](#) or [ICROA](#) within the carbon market. However, there are some organisations that have been attempting to fill the role.

Supported by the UN, the [Biodiversity Credit Alliance](#) is actively working on defining standards within the biodiversity credits market. However, they are best known for their issue paper [defining a biodiversity credit](#). The WCC/PC biodiversity methodologies align with this guidance, which sets baseline standards for additionality, permanence, and data integrity. Additionally, the International Advisory Panel on Biodiversity Credits (IAPB) was established by the French and UK Governments to further international policy and integrity within the global biodiversity crediting market. In October 2024, the IAPB released the “[Framework on High-Integrity Biodiversity Crediting Markets](#)”. Where feasible the PC/WCC Biodiversity Crediting Methodology aligns with this guidance. The PC/WCC are in continued conversations with the UK Land Carbon Registry to ensure that the data transparency components of the IAPB guidance are in alignment with how the registry structures any future biodiversity credits or measured biodiversity uplift.

Finally, the [British Standards Institute BSI Flex 702](#), which will complete its period of public consultation in January 2025, will provide specific requirements for markets related to nature outcomes. Alongside the input from this consultation the, PC/WCC will build in feedback from the BSI Flex 702 consultation, to ensure alignment with UK policy and market integrity principles.

Biodiversity credits and the WCC/PC

Types of credits

As the biodiversity crediting market evolves, the topic of [stacking and bundling](#) is frequently discussed. This refers to different approaches of how a single restoration project can produce multiple types of credits, or units of habitat or ecosystem service uplift. For example, the same restoration project could increase biodiversity, reduce flood risk, sequester carbon or improve water quality. As multiple types of natural capital or ecosystem services become converted into sellable credits, it becomes increasingly challenging to address issues of additionality, buyer claims, and integrity within a project.

After a period of market research and working with academic teams from SRUC, the WCC/PC determined that there may be lower reputational risk to project developers, potential buyers, and the standards themselves to focus at this stage on a bundled approach. Upon investigating the state of current bundled credits (sometimes referred to as “linked” credits), there is currently no market consensus on what is considered a robust way to provide a multi-credit bundle. In this context, a site is producing two types of credits, one of which is a predicted volume (carbon emission reductions), and one where credit volume is based on measured results (biodiversity). There is no consensus on how these credits would be combined in a high-integrity manner. One major challenge is to determine if it is a set ratio of bundled biodiversity credits to carbon, i.e., is it a 1:1 combination until one credit type is sold out or is it per vintage or per hectare. Additionally, markets become higher risk when fractional credits are issued, which is almost inevitable in a multi-credit bundle.

To allow WCC/PC projects to engage in the nascent biodiversity market without reputational risk, the WCC/PC are proposing the following approach:

For peatland restoration projects that are **ineligible** for carbon credits under the Peatland Code only (i.e., areas of shallow peat), the proposed methodology would allow these sites to generate standalone biodiversity credits. These projects will have similar requirements of a standalone carbon credit in terms of documentation, additionality requirements, registration with the registry, and independent validation and verification. These are what are known as an “**implicit bundle**”: the biodiversity is a quantified unit, and there is an assumption of other benefits (such as carbon benefits). Currently, WCC/PC carbon credits are considered an implicit bundle, because they have their carbon units quantified, but there are the implied additional benefits to nature. A credit represents a 1% uplift in the biodiversity metric per hectare.

For Woodland Carbon Code and Peatland Code projects that would like to include both biodiversity and carbon, a Carbon+ credit may be possible. This is what is known as an “**explicit bundle**” where the additional benefits beyond carbon are quantified and independently verified. With these projects, project developers would follow both the carbon and biodiversity methodology requirements. At verification, each vintage of carbon credits would have an associated percentage of biodiversity uplift. This percentage uplift would be calculated using the same biodiversity monitoring and uplift methodology as the standalone biodiversity credits. These Carbon+ credits would have an independently verified biodiversity uplift associated with the carbon credit, allowing buyers to better quantify their nature-positive impact.

Parallel standards

The original objective of the WCC/PC biodiversity crediting project was to consider whether an integrated set of standards could be developed, whereby a single standard could be used for both carbon and biodiversity calculations and credit issuance. However, integrity setters for the carbon market, such as ICROA and ICVCM do not have explicit guidelines for biodiversity markets. As such, inclusion of the biodiversity methodology within the carbon standards creates the potential risk of ineligibility within these integrity frameworks. To address this, the biodiversity methodologies are currently written as a set of parallel standards to the WCC and PC.

Project developers who are familiar with the WCC/PC documentation will notice that the structure of the Biodiversity Crediting Methodology follows the same format but is designed to quantify biodiversity uplift

instead of carbon sequestration/greenhouse gases emission reduction. The aim is to create something that is easily accessible to experienced project developers but still protects the integrity of the WCC/PC's role in the carbon market. Regarding the project design documents for biodiversity, although there are two separate documents for the carbon and biodiversity side, a Carbon+ project should be able to input identical information for many of the questions.

The Operation Wallacea Methodology

To define an explicit unit of biodiversity, existing methodologies of biodiversity crediting were reviewed. To date, there are over one hundred distinct methodologies for calculating a biodiversity credit. Methodologies were analysed based on their compatibility with the WCC/PC, their robustness within the biodiversity market, and the adoption of the method in the UK and global contexts. From this review, the [Operation Wallacea Methodology](#) was selected as the underlying framework for biodiversity uplift quantification. This method has been used domestically and internationally, and other market leaders in carbon and biodiversity have based their standard on the same methodology. The methodology is open source and is based on an idea like the Consumer Price Index; As biodiversity is too complex to reduce to a single metric, a biodiversity credit would be derived from a combined multi-metric, which brings together a range of biodiversity indicators to generate combined average values. A credit is defined as a 1% increase in combined values (the multi-metric) per hectare. The multi-metric requires a mix of structural (e.g., habitat condition, spatial complexity) and taxonomic (e.g., breeding birds, higher plant diversity) metrics.

Voluntary biodiversity credits and Biodiversity Net Gain

Biodiversity Net Gain has recently been implemented in England. It is a statutory approach to make sure development has a measurably positive impact ('net gain') on biodiversity, compared to what was there before the development. This is considered part of a compliance market, because developers are legally required to generate or purchase credits based on their activity. As such, the units do not pass the legal additionality tests within the WCC/PC additionality criteria.

The Biodiversity Net Gain metric can facilitate restoration within the context of English planning law, because it fits within the structure of wider policy. However, many voluntary credits standards have a much higher data threshold than what is required in calculating Biodiversity Net Gain units. As such, a voluntary biodiversity credit that only uses the Biodiversity Net Gain metric is at risk of being considered low integrity when compared to the rest of the market. Feedback from academics and project developers suggests that components of the Defra metric can be incorporated into voluntary biodiversity credits for new woodland creation.

Offsetting

The IAPB framework on high-integrity markets explicitly states that offsetting should not be part of the biodiversity crediting market, and that biodiversity uplift in one place does not replace biodiversity loss in another location. Biodiversity is geographically unique and context specific at each site. We are proposing to adopt this approach - with no "like for like" trading of biodiversity - to create a high-integrity biodiversity market which would help investors in nature positive outcomes to be able to quantify their impact and communicate it in a standardised way.

Metrics and monitoring

Monitoring biodiversity in a habitat creation or restoration project must be contextualised to the site. However, a current concern in biodiversity credits is the issue of comparability between credits. If biodiversity uplift is measured and monitored using completely different approaches between two sites (even within the same standard), there can be no “apples to apples” comparison of credits, and standardisation of the credits is lost.

A potential solution to this problem is to be explicit about what is measured on projects (e.g., higher plants, bird populations, standardised habitat condition assessments), while allowing the monitoring approaches to be contextualised to each site. That way, each biodiversity uplift unit within the standards represents the same metrics.

What makes a good metric

There are programme and project-level considerations for metric selection. When considering the suitability of metrics to include, the following methodological considerations for indicator (metric) selection were recommended, based on Czúcz et al. (2021) and David et al. (2021):

- Indicators should be applicable and assessable at the appropriate scale (both temporal and spatial).
- Indicators should be sensitive and responsive to changes in condition within woodland and/or peatlands in the UK, i.e., there should be sufficient discriminatory power to distinguish differences within and among assessment sites.
- When combined, the set of indicators should minimise redundancy – indicators should provide different information on condition than other indicators.
- Indicators should be understandable and translatable.
- Methods should be repeatable and precise, i.e., can be applied consistently across independent assessment efforts conducted by different parties.
- Indicators should be able to be calibrated to reflect subtle but important differences in condition or track changes in condition over time (e.g., there is a need to consider limitations of datasets and/or data resolution).
- Efficiency – consider cost and difficulty in data collection and analysis approach (e.g., skills and knowledge needed to collect and analyse data, cost of equipment and training).
- Data collection to inform metrics should be verifiable/auditable.

A team of ecologists at SRUC reviewed specific metrics for peatlands and woodlands. These were sent to market and academic groups for feedback and were reviewed by the biodiversity advisory groups for woodlands and peatlands. Final metrics were selected by their ability to meet the above criteria of a good metric, and their capacity to be applicable across a range of UK woodland and peatland projects. The final selected metrics are included within the methodology documents.

Additional guidance for monitoring strategies

A team of experts at SRUC are currently developing a learning package to work with biodiversity methodologies. The experts will review the metrics proposed in the methodology, and methods of collection that create decision-grade, independently verifiable datasets that can be used in biodiversity crediting. This is expected to be complete in February 2025 and will offer further clarity on how the metrics can be measured and monitored with sufficient scientific robustness.

Additionally, within the standards, there is the requirement that monitoring plans be independently reviewed during project registration to ensure that they are sufficiently robust and appropriate to the site's context. This includes the justification of invertebrate groups selected as part of a monitoring plan. Additional guidance on who can be an independent expert in the review process, their role in project design, and level of robustness required will be complete prior to March 2025. Organisations like the [Biodiversity Futures Initiative](#) could potentially provide a route.

The need for consistency is key and there should be use of a defined uniform classification system for assessment of habitat type and condition for woodlands and mosaic habitats (e.g. UK Habitat Classification). This should make use of standardised methods and record keeping templates for submission as part of validation. Evidence of surveyor competency across all metrics to a defined threshold (e.g. Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM)) should be included.

Providing surveyor competency is determined, arial imagery may then be used as a tool in validation to assess accuracy of habitat type and delineation between boundaries. Georeferenced photography would be required to support definition of baseline habitat type/ condition and species baselining methods and outputs (where possible). The use of georeferenced photography adds to the body of documentary evidence and enables an analysis of data that is consistent with what was seen at the time by the project developer and so limits the impact of seasonal variation in date of on-site assessment.

Process and documentation

Baseline validation would happen in three steps. Once a project is registered, the project's biodiversity monitoring plan in the Biodiversity Project Design Document shall be approved by the validation and verification body. Then, a site will collect their baseline biodiversity data. Finally, the baseline data shall be validated through a site visit by a validation and verification body. These are the key steps to getting a project registered and baselined, which is what is required prior to restoration activities.

Registration

Projects that would like to register shall follow the requirements set out in the WCC/PC for project registration, including uploading relevant site documentation to the registry.

Biodiversity project design validation

After a project is approved on the registry, projects shall complete a Biodiversity Project Design Document which shall outline the project information, restoration/habitat creation activities and long-term monitoring activities. This Biodiversity Project Design Document shall ensure the biodiversity monitoring strategy has been independently approved by an expert for its robustness and relevance to a site's context.

The completed Biodiversity Project Design Document shall be submitted to a validation and verification body for review. Once the Biodiversity Project Design Document has been approved, a project shall begin the baseline biodiversity monitoring which shall be completed within eighteen months of Biodiversity Project Design Document approval.

Site survey and baseline validation

The same methodology outlined in the Biodiversity Project Design Document shall be used for baselining a site as well as monitoring future biodiversity uplift.

Projects shall send the baseline information to be reviewed by the validation and verification body. The validation and verification body will visit the site. Once the baseline data has been validated, it is uploaded to the UK Land Carbon Registry.

For peatland 'standalone' biodiversity projects, the start date of a project is when the validation and verification body has validated the baseline biodiversity data. For Carbon+ projects, the start date is determined through the carbon project requirements.

Note: As restoration and habitat activities can sometimes be initially disruptive to a habitat, baselining shall occur before any restoration work or woodland creation activities have begun on site.

Verification

Year 5 verification shall follow the protocol for biodiversity monitoring outlined in the key project documents at validation. Additional guidance on this step will be included in the updated version of this document.

Clarifications

The following are points within the standards where the Guidance Document was referenced for additional clarity.

Eligible activities

The eligible activities are the same as what is under the WCC/PC: new woodland creation or peatland restoration. The only difference is that for standalone peatland biodiversity credits, eligibility criteria that are explicit carbon calculations are removed. This means that provided the site meets the definitions of peatland outlined in the methodology and the activity is explicitly peatland restoration, there is no minimum peat depth for eligibility for biodiversity-only credits.

Buyer claims

Final claims that buyers can use in statements of environmental impact will be included in the updated version of the guidance document, anticipated to be available in March 2025.

Future developments

This is the first iteration of the WCC/PC biodiversity methodologies. Continuous improvement and iterative design based on user feedback and market changes are a crucial part of maintaining market integrity and scientific robustness.

From later in 2025, we propose a wider pilot phase of measuring biodiversity baselines with a small set of interested project developers. This will help us to further test and refine the monitoring requirements, validation and verification of those requirements and the process and documentation required for either Carbon+ or standalone biodiversity projects. Projects who measure the biodiversity baseline will be able to add this information to the UK Land Carbon Registry alongside their other validation documents.

Results of this consultation will be fed back to the Woodland Carbon Code and Peatland Code Executive Boards who will consider next steps following the methodology development frameworks.

Moving forward, the following are areas that may be explored as the biodiversity market grows and evolves.

UK- or habitat-specific conservation values

Within the Operation Wallacea Methodology, “conservation values” are assigned to the results of the taxonomic monitoring. The methodology recommends using the IUCN threat levels of given species to assign these conservation values. There may be potential to establish other sources for conservation values that better reflect the context of conservation priorities in UK woodlands and peatlands. Examples include the UK Biodiversity Action Plan, RSPB resources, or the Joint Nature Conservation Committee. The aim would be a data hierarchy, where monitored species get assigned a conservation value that is most relevant to the site, and moving towards progressively broad conservation status frameworks until a conservation value can be assigned.

Self-assessments

Most other biodiversity frameworks require a site to perform biodiversity monitoring every five years, with independent verification each time. For Carbon+ projects, this will often happen on an “off year”, where a vintage of carbon is not being generated. Because biodiversity uplift and monitoring are less established than carbon calculations, biodiversity monitoring should still happen at least every five years, to ensure that biodiversity uplift is occurring. However, in the future we may explore the self-assessment approach for the years where carbon vintages are not being generated, to reduce the cost of long-term monitoring and verification.

Multi-credit bundles

Once the biodiversity and carbon markets mature to a point where there are established frameworks for a multi-credit bundle without reputational risk (i.e., the sale of two bundled or linked credits from the same activity), further work could explore moving from the Carbon+ explicit bundle to a multi-credit bundle, including whether retroactive conversion of explicit carbon bundles to multi-credit bundles would be feasible and meet additionality criteria.

Optional extra metric

It is understood that biodiversity credits cannot capture the complete biodiversity of a site. Rather, we selected metrics that can most efficiently and effectively tell the story of overall habitat uplift on a site. However, there

are some situations where a restoration or habitat creation activity might have explicit biodiversity goals that are not part of the basket of metrics used in the standards. Therefore, we are exploring the potential for projects to add one additional metric on top of the standard five. That way, the credits would still be easily understood and compared within the standards, but speciality projects can show their unique biodiversity impacts. An example would be including mammal monitoring as a metric in projects where beaver or lynx reintroduction is the primary goal, or lichen monitoring in woodland creation that is focused on Atlantic rainforest.

Biodiversity score as a scale

Although percent uplift is common in biodiversity crediting methodologies, it is not without its problems. For example, a ten percent improvement from an extremely degraded baseline does not necessarily represent the same impact of a ten percent improvement from a site with a less degraded baseline condition. To address this, the capability of converting the results of biodiversity monitoring to a 0-100 scale is being investigated. This requires significant reference data to create this scale, but it would have many benefits to the overall process. Data between sites could be more easily compared, baselining and estimating habitat uplift would be more straightforward, and improvements in overall habitat condition would be better scaled across the life of a project. The scale would also allow us to anticipate the upper limit of potential biodiversity uplift of a site, at which point an assumed dynamic equilibrium of biodiversity would occur. It is important to understand where this limit is to know the expected lifespan of credit generation.

Uncertainty

Quantifying the degree of uncertainty in biodiversity monitoring is a challenge. When better reference libraries exist, a better understanding of uncertainty will allow for improved understanding of biodiversity buffer pools and the specific claims buyers can make.

Improved alignment between carbon and biodiversity

Although the parallel methodology approach was designed to create potential synergies in project development and registration across biodiversity and carbon, there are still aspects of overall project management that do not usefully align between the two standards. In a commitment to continuous improvement, the methodologies will be investigated repeatedly to ensure that any possible synergies between the two processes are explored, to reduce cost and time for project developers.