



## **Cambois Connection – Onshore Scheme**

### **Biodiversity Net Gain Indicative Design Stage Report**



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## Biodiversity Net Gain Indicative Design Stage Report

Berwick Bank Wind Farm Limited

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## Basis of Report

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**Appendix 02 Baseline Habitats Plan & Post Construction Habitats Plan**



## 1.0 Introduction

Berwick Bank Wind Farm Limited (BBWFL) is a wholly owned subsidiary of SSE Renewables (SSER) (hereafter referred to as 'the Applicant'). The Applicant is proposing the development of Offshore Export Cables, Onshore Export Cables, an Onshore Converter Station and associated grid connection at Blyth Substation in Northumberland, known as the 'Cambois Connection' ('the 'Project'). The onshore components of the Project, landward of Mean Low Water Springs (MLWS) comprise the Onshore Scheme.

The purpose of the Onshore Scheme (and the Project) is to facilitate the export of green energy from the generation assets associated with the Berwick Bank Wind Farm (BBWF), located in the outer Firth of Forth. A separate grid connection to Branxton, East Lothian, has been included as part of the Applicant's application for consent for BBWF, currently being determined separately<sup>1</sup>. The Project will enable the BBWF to reach full generating capacity by the early 2030's.

For the purposes of this assessment, which is to be submitted alongside the outline planning application, the calculation of biodiversity values, both before and after development, is necessarily indicative as detailed designs for the Onshore Scheme are not yet available. The assessment includes multiple indicative design options, of which the option with the greatest biodiversity value has been used to inform potential Biodiversity Net Gain (BNG) requirements (the worst-case scenario). The BNG assessment will be updated at the detailed design stage, based on the detailed scheme design (see Section 1.6). Biodiversity values at the detailed design stage are likely to vary from the calculations provided here and may be slightly higher or lower than the indicative values presented here. However, by assessing multiple indicative design options and excluding any specific design mitigation that may be able to be adopted at the detailed design stage, it is considered unlikely that BNG requirements at the Approval of Reserved Matters stage would significantly exceed the indicative requirements identified here.

The Project comprises two distinct proposals, or 'Schemes', which will require three separate consents. For the Onshore Scheme (all activities and infrastructure landward of MLWS) consent will be sought via a planning application to Northumberland County Council (NCC) as the local planning authority (LPA) under Section 57 of the Town and Country Planning Act 1990.

The offshore components of the Project seaward of Mean High Water Springs (MHWS) ('the Marine Scheme') are located within both Scottish and English waters. In Scotland, the Marine Scheme is entirely within offshore waters (i.e., between the 12 nautical miles (nm) limit and the Scottish Exclusive Economic Zone). In England, the Marine Scheme is within offshore waters and inshore waters.

SLR Consulting was initially commissioned by Berwick Bank Wind Farm Limited, in April 2023 to undertake the onshore ecological work necessary to inform the Environmental Impact Assessment (EIA). This report sets out an approach to the evaluation of current biodiversity value, and possible opportunities in order to achieve Biodiversity Net Gain (BNG) for the Onshore Scheme. It has been prepared using the project description information detailed in Volume 2, Chapter 5: Project Description of the ES, and the baseline data gathered as part of the Ecological Impact Assessment, which is reported in full in Chapter 9, also of the ES.

It has also been prepared following discussion of the proposed approach with Northumberland County Council, as set out in Section 2.0.

The 'Site' is considered to include all habitats within the red line boundary. The 'BNG boundary' comprises the development area within the Site based on indicative design options, as per the agreement set out in section 2. It considers all habitats within the indicative options (option A or option B), as illustrated in Appendix 02 (Commercial in Confidence).

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<sup>1</sup> BBWF is subject to a separate consenting process. An application for consent under Section 36 of the Electricity Act 1989 (as amended) was submitted to MD-LOT and accepted in December 2022. The Branxton onshore infrastructure is subject to a separate planning application submitted to East Lothian Council and accepted in March 2023.



## 1.1 Design and Planning Status of the Onshore Scheme

This BNG assessment has been prepared to be submitted alongside an application for outline planning consent. There are some design details related to the Onshore Scheme that are still to be finalised due to the further ground investigations required, ongoing engineering design work and the procurement of cable and converter station suppliers. These details will inform the final specification. The Site boundary has been chosen to allow flexibility to accommodate these design details which will be subject to future application(s) for the Approval of Reserved Matters.

In accordance with the assessment approach to the ‘Rochdale Envelope’ set out in in Volume 2, Chapter 5: Project Description of this ES, the assessment is based on a reasonable worst-case scenario, split into two potential design options (Option A and Option B). This approach allows an understanding of the maximum area of land required to deliver BNG and if this can be met within the Site. As such, the outcomes of a BNG assessment undertaken at this stage is indicative. The BNG assessment will be updated based on the detailed Onshore Scheme design for the application of Reserved Matters.

Northumberland County Council (NCC) has agreed that this approach is acceptable as detailed in its response dated 9<sup>th</sup> June 2023.

## 1.2 Site Description

The Site is located approximately 1 km north of Blyth and 0.7 km south of Ashington, in south-east Northumberland. It is approximately 188 ha in area, centred on grid reference NZ 29311 84281 and is adjacent to the A189, including land to the east and west of the A189. The land to the west of the A189 consists of a small parcels of woodland, grassland and scrub habitats. The land to the east of the A189 is dominated by developed land of industrial nature with two active construction sites at the time of survey. A section of the River Blyth and Sleek Burn can be found at the southern area of the Site boundary. To the east is the North Sea coast.

## 1.3 Project Description for the Onshore Scheme

The Applicant is proposing the construction and installation of a cable landfall, onshore High Voltage Direct Current (HVDC) export cables, a new Onshore Converter Station and associated High Voltage equipment, High Voltage Alternating Current (HVAC) grid cables (from the new Onshore Converter Station to the existing Blyth National Grid substation near Cambois), including ancillary infrastructure.

The indicative outline construction programme includes the following:

- Commencement of construction expected in Q4 2025 and completion of construction expected in Q4 2029;
- Site preparation / enabling works for an estimated duration of up to 15 months;
- Landfall construction for an estimated duration of up to 24 months;
- Onshore Cable (HVAC and HVDC) installation for an estimated duration of up to 15 months;
- Onshore Converter Station construction for an estimated duration of up to 18 months; and
- Outfall installation for an estimated duration of up to 9 months.

## 1.4 Purpose of this Report

This report is intended to be submitted as part of the outline planning application package in respect of the Onshore Scheme. It seeks to provide NCC, as the planning authority, with sufficient information on the biodiversity performance of the proposed development to inform consideration of the planning application against relevant local and national planning policies.

More specifically, the aims of this report are to:

- Clearly set out the proposed approach to provide BNG;
- Identify and justify any proposed deviations from the standard method of applying Metric 4.0 (Natural England-Defra Joint Publication JP039, 2023) “the Metric”; and



- To provide a justified indication of the likely Biodiversity Unit (BU) loss or gain as a result of the Project, based on key assumptions and the design available at outline application stage.

## 1.5 Evidence of Technical Competence and Experience

This report has been authored by Callum Taylor, a Senior Ecologist at SLR Consulting with over five years' experience as a professional ecologist and a Qualifying member of CIEEM. Callum has been involved in the collection of habitat data and is experienced in habitat surveying and condition assessment.

Additional technical support and Quality Assurance review has been provided by Jess Colebrook and Sara Toule. Jess is a Principal Ecologist at SLR Consulting, Chartered Environmentalist (CEnv) and full member of CIEEM (MCIEEM) with over 22 years' professional ecological experience. Sara is an Principal Ecologist and Associate member of CIEEM (ACIEEM) with over 10 years' professional ecological experience.

## 1.6 Deliverables

All documents relating to the BNG assessment have been/ will be prepared in accordance with good practice guidance<sup>13</sup>. Further description of each stage of the process is described in the subsections below.

### 1.6.1 Outline Application Stage

Key deliverables submitted within this Biodiversity Net Gain Indicative Design Stage Report as part of the outline planning application process include:

- Baseline Plans (i.e., pre-development): A Metric Habitat Plan Appendix 03 (Commercial in Confidence); and
- Indicative Post-Project (i.e., after development, including proposed mitigation, compensation and enhancement): A Metric Proposed Habitat Plan Appendix 03 (Commercial in Confidence).

The requirements for auditing against the BNG objectives will be set out within a Habitat Management Plan, similar or document, to be provided as part of the application for approval of Reserved Matters.

### 1.6.2 Approval of Reserved Matters Stage

Once the detailed design is known the metric will be re-run, and the Biodiversity Net Gain Final Design Report shall be prepared. It is envisaged that this and the requirement for 10% BNG would be the subject of a condition. Deliverables would be the same as above, i.e.:

- Baseline Plans (i.e., pre-development): A Metric 4.0 Habitat Plan, a Condition Assessment plan and a Strategic Significance Plan;
- Post-Project (i.e., after development, including all proposed mitigation, compensation and enhancement): A Metric Habitat Plan, a Condition Assessment Plan and a Strategic Significance Plan.
- Completed Metric 4.0 spreadsheet.

The detailed Habitat Management Plan (or similar document), would be produced to accompany the Final Design Report, and will include the final requirements for auditing on-site areas against the BNG objectives set out in the Metric assessment, and any associated management actions. It is envisaged that audit and management requirements for off-site areas (if needed) would be dealt with separately. This has been discussed and agreed with NCC as set out in Section 2.

## 1.7 Relevant Policy and Legislation

A summary of policy and legislation relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original documents should be consulted for definitive information.





## 1.7.1 Environment Act 2021

The Environment Act 2021 (the Act) gained Royal Assent on 9 November 2021 and is now enshrined within UK law. The Act provides a mechanism for implementing Government’s ambitions for ‘improving the natural environment’, which were previously set out in publications including the 25 Year Environment Plan. The Act provides recognition of the 25 Year Environment Plan as the first “environmental improvement plan” which will, once the relevant regulations come into force, be used as the basis for understanding the steps Government intends to take to improve the natural environment.

The Act implements the ambitions for an improved natural environment, by setting out statutory requirements which mandate action, under the oversight of the newly formed Office for Environmental Protection (OEP). The focus of the Act is the “...*provision [of] targets, plans and policies for improving the natural environment...*” and its requirements are structured around a number of broad themes.

Of relevance to this report, section 98 and Schedule 14 of the Act set out provisions for ‘Biodiversity gain as condition of planning permission’. Once enacted, amendments to the Town and Country Planning Act 1990 made by these provisions will require planning applications to be supported with additional information on the change in the biodiversity value attributed to a project, with biodiversity metric calculations, and with biodiversity gain plans. Planning authorities will be required to consider these submissions in the exercise of their planning functions, to ensure that they are secured, approved and where relevant registered.

While the Act is now part of UK law, its required actions do not commence either directly or immediately, for all parties. There remain a range of preparatory actions that need to be undertaken before further implementation of the wider legal framework (secondary legislation or regulations) will take place.

It should be noted that while the Act sets out the relevant percentage for BNG, the relevant parts of the Act (Section 98 and Schedule 14) are still subject to implementation through secondary legislation before they formally apply to applications. Defra has confirmed that the requirement for mandatory BNG will apply to applications made from January 2024<sup>2</sup>.

In the interim, clarification of requirements for BNG have been set out through recent appeal decisions<sup>3</sup> which have clarified that

- *“the 10% biodiversity net gain requirement set out in the Act is not yet law and is not applicable to these appeals”;*
- *“Paragraph 174 of the Framework [the NPPF encourages applicants to], ... seek a net gain in biodiversity without identifying a specific percentage...”*
- The relevant Core Strategy may *“...seek a net gain in biodiversity without identifying a specific percentage...”*; and
- *“A net gain of just 1% would be policy compliant in these circumstances.”*

Therefore since the provision of 10% BNG does not apply to applications submitted prior to Jan 2024 (which includes this application for the Onshore Scheme), and as there are not yet any transitional provisions that explain how 10% BNG will apply to Reserved Matters applications, a precautionary approach has been taken and this Indicative Design Stage Report provided.

## 1.7.2 National Planning Policy Framework

### 1.7.2.1 National - The National Planning Policy Framework (NPPF), 2022

The National Planning Policy Framework (NPPF)<sup>4</sup> sets out guidance for local planning authorities and decision makers on how to apply planning policies when drawing up plans and making decisions about planning

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<sup>2</sup> [BNG: what’s happened and what’s coming next - Land use: policies and framework \(blog.gov.uk\)](https://www.blog.gov.uk/2022/09/21/bng-what-s-happened-and-what-s-coming-next-land-use-policies-and-framework/)

<sup>3</sup> Planning Inspectorate (2022). Appeal Decisions APP/Y3940/W/21/3278256, APP/Y3940/Q/21/3278923, APP/Y3940/W/21/3282365

<sup>4</sup> Department for Levelling Up, Housing and Communities (2023). National Planning Policy Framework.



applications. Along with Government Circular 06/05<sup>5</sup>, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 174 and 179-182 of the NPPF.

Paragraph 174 states that:

*“Planning policies and decisions should contribute to and enhance the natural and local environment by:*

*a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); ...*

*d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; ...”*

Paragraph 180 of the NPPF states that:

*“When determining planning applications, local planning authorities should apply the following principles:*

*a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; ...*

*c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*

*d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”*

### 1.7.3 Local Planning Policy

#### 1.7.3.1 Northumberland Local Plan<sup>6</sup>

##### Environment commitments

States that, *“In the context of the ecosystem approach, and recognising the health, social and economic benefits derived from the enjoyment of Northumberland's rich natural, historic and built environment, the Council will work with relevant lead authorities, land and property owners, local communities and groups, developers, adjoining local planning authorities and Local Nature Partnerships to:*

- *Identify opportunities for appropriate environmental enhancements, including:*
  - *i. Habitat improvement, restoration and creation;*
  - *ii. Enhancement of landscape quality in accordance with valued characteristics; and*
  - *iii. Restoring, enhancing and, where appropriate, bringing into viable use heritage assets.*
- *Gather, record and update evidence to advance understanding of the significance of Northumberland's natural and historic environment and heritage assets; and*
- *Identify opportunities to make information on assets widely accessible and promote the enjoyment of the physical and cultural components of these assets.”*

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<sup>5</sup> Office of the Deputy Prime Minister (2005). ODPM Circular 06/2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

<sup>6</sup> <https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/planning%20policy/Local%20Plan/Northumberland-Local-Plan-Adopted-March-2022.pdf> [Accessed October 2023].



## Policy ENV 1

### Approaches to assessing the impact of development on the natural, historic and built environment (Strategic Policy)

1. The character and/or significance of Northumberland's distinctive and valued natural, historic and built environments, will be conserved, protected and enhanced by:
  - a. Giving appropriate weight to the statutory purposes and special qualities of the hierarchy of international, national and local designated and non-designated nature and historic conservation assets or sites and their settings, and, in particular, giving great weight to:
    - i. Conserving and enhancing the Areas of Outstanding Natural Beauty, in accordance with Policies ENV 5 and ENV 6, and Northumberland National Park;
    - ii. The conservation of designated heritage assets, with the impact of proposed development on their significance being assessed in accordance with Policy ENV 7.
  - b. Protecting Northumberland's most important landscapes and applying a character-based approach to, as appropriate, manage, protect or plan landscape across the whole County.
2. In applying part (a) above, recognising that:
  - a. Assets or sites with a lower designation or non-designated, can still be irreplaceable, may be nationally important and/or have qualitative attributes that warrant giving these the appropriate protection in-situ;
  - b. Development and associated activity out with designations can have indirect impacts on the designated assets or sites;
3. An ecosystem approach will be taken that demonstrates an understanding of the significance and sensitivity of the natural resource. This should result in a neutral impact on, or net benefit for those ecosystems and the ecosystem services that they provide.

## Policy ENV 2

### Biodiversity and geodiversity

1. Development proposals affecting biodiversity and geodiversity, including designated sites, protected species, and habitats and species of principal importance in England (also called priority habitats and species), will:
  - a. Minimise their impact, avoiding significant harm through location and/or design. Where significant harm cannot be avoided, applicants will be required to demonstrate that adverse impacts will be adequately mitigated or, as a last resort compensated for;
  - b. Secure a net gain for biodiversity as calculated, to reflect latest Government policy and advice, through planning conditions or planning obligations.
2. Where sites are designated for their biodiversity or geodiversity, planning decisions will reflect the hierarchical approach set out in Policy ENV 1.
3. In the case of Local Wildlife and Geological Sites and Local Nature Reserves:
  - a. If significant harm to biodiversity value cannot be avoided (through locating on an alternative site with less harmful impacts) adequately mitigated, or, as a last resort, compensated for, then planning permission will be refused.
  - b. Geological value and soils within these sites will be protected and enhanced in a manner commensurate with the identified quality.
  - c. Where permission can be granted in accordance with (3) (a) or (b) above, planning conditions or obligations will be used to protect the site's remaining nature conservation or geological interest and to provide appropriate compensatory measures for the harm caused.
4. The Council expects the ecosystem approach to be applied in development through the following measures, individually or in combination:



- a. The conservation, restoration, enhancement, creation and/or (where appropriate) the re-creation of priority habitats and the habitats of priority species;
- b. The protection and enhancement of the ecological resilience and proper functioning of all ecological networks and links to promote migration, dispersal and genetic exchange, including the South East Northumberland Wildlife Network, as shown on the Policies Map, including its linkages with Newcastle and North Tyneside; where disruption to these networks cannot be avoided, adequate mitigation or, as a last resort, compensatory measures that relate to the integrity of the network will be sought;
- c. Measures that will buffer or extend existing sites of ecological value, support the development of the Border Uplands Nature Improvement Area and Northumberland Coalfield Nature Improvement Area or contribute to national or local biodiversity objectives;
- d. Minimising any adverse effects on habitats and species caused by the wider impacts of development and its associated activities including: i. Disturbance; or ii. The inadvertent introduction of non-native species; or iii. Reductions in water quality; or iv. Other forms of pollution that would adversely affect wildlife; The above to be achieved through precautionary measures including appropriate buffer zones and developer contributions to the Coastal Mitigation Service within zones shown on the Policies Map;
- e. Maximising opportunities to incorporate biodiversity, and ecological enhancement for species of conservation concern, through additional built-in or planted features; and f. Securing the continued management of those ecological features created, restored or enhanced as a result of development.

5. Harm to geological conservation interests will be prevented and, where appropriate, opportunities for public access to those features will be provided.

### 1.7.3.2 Northumberland Biodiversity Action Plan<sup>7</sup>

The following habitats are included in the Northumberland Biodiversity Action Plan and relevant to the Site:

- Brownfield land
- Built Environment
- Coastal Heathland
- Fen, Marsh & Swamp
- Gardens & Allotments
- Native Woodland
- Ponds, Lakes & Reservoirs
- Recreational & Amenity Spaces
- Rivers & Streams
- Saltmarsh & Mudflat
- Sand Dunes
- Transport Corridors
- Trees and Hedges

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<sup>7</sup> Northumberland Wildlife Trust (2008) Northumberland Biodiversity Action Plan



## 2.0 Methods

### 2.1 Field Survey

Baseline habitat survey and habitat condition data were collected during spring-summer 2023 (the optimal season for habitat surveys runs from May to September inclusive). Data comprise:

- Classification of habitats using UKHabitat Classification (UKHab) v1.1<sup>8</sup>; and
- Habitat Condition Assessment, undertaken in accordance with the Defra Metric 4.0 (Metric 4.0), at each polygon or line of mapped habitat. The Metric requires values for a specific set of criteria to be recorded (this varies depending on habitat type) in order to determine the habitat condition score for each polygon/line.

The following baseline data are held within GIS data for each mapped line or polygon of habitat within the red line boundary:

- UKHab type; and
- Condition Assessment details including score per criterion, and overall.

Full description of the baseline habitats and survey methodology within the Site are provided within the Habitat Report<sup>9</sup>.

### 2.2 Approach to delivering BNG

BNG is an approach to development activities that leaves the natural environment in a measurably better state than it was before. BNG works with and does not replace the mitigation hierarchy. It does not replace existing legal requirements (e.g., in relation to protected species) and it should not be applied to compensate for impacts on irreplaceable habitats. The Onshore Scheme is cognisant of the good practice in respect of BNG<sup>10,11,12,13</sup>, and will align with the ten principles developed by CIEEM, IEMA and CIRIA summarised below.

- **Principle 1. Apply the Mitigation Hierarchy:** Avoid and then minimise impacts on biodiversity. As a last resort, and in agreement with stakeholders and decision-makers, compensate for losses that cannot be avoided;
- **Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere:** Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset;
- **Principle 3. Be inclusive and equitable:** Engage stakeholders in designing, implementing, monitoring and evaluating the approach to Net Gain. Share the benefits fairly among stakeholders;
- **Principle 4. Address risks:** Mitigate difficulty and/or uncertainty using well-accepted ways to add contingency when calculating biodiversity losses and gains;
- **Principle 5. Make a measurable Net Gain contribution:** Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities;
- **Principle 6. Achieve the best outcomes for biodiversity:** Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge;
- **Principle 7. Be additional:** Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e., do not deliver something that would occur anyway);

<sup>8</sup> UKHab Ltd (2020). UK Habitat Classification Version 1.1, available at: <https://www.ukhab.org> [Accessed October 2023].

<sup>9</sup> Cambois Connection Onshore Scheme, Volume 3. Technical Appendix 9.1 Habitat Report, 2023.

<sup>10</sup> Biodiversity Net Gain: Good practice principles for development CIEEM, CIRIA, IEMA, 2016.

<sup>11</sup> Baker, J., Hoskin, R., Butterworth, T. Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide (2019) CIRIA C776a.

<sup>12</sup> BS 8683:2021: Process for designing and implementing Biodiversity Net Gain. Specification (2021)

<sup>13</sup> CIEEM (2021). Biodiversity Net Gain Report and Audit Templates Chartered Institute of Ecology and Environmental Management, Winchester, UK.



- **Principle 8. Create a Net Gain legacy:** Ensure Net Gain generates long-term benefits;
- **Principle 9. Optimise sustainability:** Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy;
- **Principle 10. Be transparent:** Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

In respect of Principle 5, the Onshore Scheme uses the Metric 4.0 to demonstrate measurable Net Gain contribution. It is however worth highlighting here that since the metric is a proxy, it does not account for species-specific mitigation, compensation or enhancement. Loss/gains in this respect will be measured against monitoring targets set out within the relevant European Protected Species Licence(s) (if applicable) and Landscape and Ecological Management Plan (LEMP), or similar document, that will be submitted at the detailed design stage. The Metric User Guide<sup>14</sup> states in Section 1.5.5:

*“The outputs of this metric are not absolute values but provide a proxy for the relative biodiversity worth of a site pre- and post-intervention. The quality and reliability of outputs will depend on the quality of the inputs. The metric and its outputs should be used alongside ecological expertise as part of the evidence that informs plans and decisions”.*

### 2.2.1 Assessment using the Metric 4.0

The Metric which is currently accepted for use in England is the Natural England-Defra Joint Publication Biodiversity Metric 4.0 (henceforth ‘the Metric’). The Metric uses a comparison of habitats as a proxy for biodiversity and describes these habitats using standard units referred to as biodiversity units (BUs). There are three distinct types of BUs and these are not of equivalence or interchangeable (i.e. the different types of BU cannot be traded/converted, must be reported separately and not combined), which are:

- Habitat BUs – which describe areas of habitat based on measurement in hectares (ha);
- Linear BUs – which describe hedgerows and lines of trees measured in kilometres (km); and
- Riparian BUs – which described rivers and streams measured again in kilometres (km).

The overall calculation of the change in biodiversity resulting from a project or development is derived by subtracting pre-project or ‘baseline’ biodiversity units valuation (for each type of unit) of an area of land from the number of post-project units.

The results are influenced by:

- Habitat area/length;
- Distinctiveness -an indication of value;
- Condition – an indication of quality; and
- Multipliers or risk factors – that take account of the contribution to local priorities, the difficulty of habitat creation /management, the time it takes to deliver and variation in the location of habitat delivery.

### 2.2.2 Applying Metric 4.0 in this instance

For the purposes of this BNG assessment, to be submitted alongside the outline planning application, two indicative design options have been assessed (Option A and Option B). Of these the option with the greatest biodiversity value has been used to inform potential BNG requirements (the worst-case scenario). This approach allows an understanding of the maximum area of land required in order to deliver BNG and how much of this can be met within the Site. As highlighted in Section 1, the BNG assessment will be updated at the detailed design stage, based on the detailed design of the Onshore Scheme. It is noted that biodiversity values at the detailed design stage are likely to vary from the calculations the indicative values presented here, either higher or lower. However, by assessing multiple indicative design options and excluding any specific design mitigation that may be able to be adopted at the detailed design stage, it is considered unlikely that

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<sup>14</sup> Natural England (2023) The Biodiversity Metric 4.0 User Guide. Natural England Joint publication JP039.



BNG requirements at the Approval of Reserved Matters stage would significantly exceed the indicative requirements identified here.

### 2.2.3 Defining “On-Site” and “Off-Site”

Natural England provides definitions of the terms ‘on-site’ and ‘off-site’ for use in considering all scales of development project except for very small residential developments. The User Guide<sup>14</sup> defines these terms as follows:

- ‘On-site’ includes “all land within the boundary of a project. In a planning context, this usually means within the red line boundary of a planning application”; and
- ‘Off-site’ is all “land outside of the on-site boundary, regardless of proximity or ownership.”

It is noted that the Red Line Boundary (RLB) presented within the Outline Planning Application is considerably larger than the anticipated project footprint. The RLB is therefore not considered an appropriate baseline against which to measure BNG requirements (i.e., the Project should not be expected to provide 10% BNG for areas that are not impacted by the Project or required to deliver mitigation/ compensation for such areas).

The BNG boundary (i.e., “on-site”) for the purpose of applying the Metric is therefore applied to two indicative project footprints (Option A and Option B), including areas needed for mitigation, compensation or enhancement. The BNG assessment is limited to land above MHWS and does not include intertidal or marine habitats as agreed with NCC.

The RLB used at the detailed design is likely to be considerably smaller than the current and likely to be closer to the indicative Onshore Scheme footprints used here.

### 2.2.4 Defining Strategic Significance

All habitat polygons and lines (both baseline and post-intervention) must be assigned a strategic significance score as follows:

- High – formally identified in local strategy, plan or policy;
- Medium – location ecologically desirable but not identified in a local strategy, plan or policy; or
- Low – not identified in a local strategy, plan or policy OR no strategy or plan is in place in the area.

The definition of “Strategic Significance” represents an area open to interpretation and includes areas and/or habitat identified in (for example) Local Nature Recovery Strategies, Local Biodiversity Plans, National Character Area objectives, Local Planning Authority Local Ecological Networks, Shoreline Management Plans, estuary strategies and green infrastructure strategies. The following documents have been referenced in this regard:

- Northumberland Biodiversity Action Plan<sup>6</sup>;
- Natural England’s habitat network mapping data<sup>15</sup>.
- Northumberland Local Plan<sup>16</sup>

At the time of writing, there is no adopted Local Nature Recovery Strategy for the area and no Local Ecological Network.

Following review of the above documents, all habitats within the BNG boundary were identified to be of low strategic significance with no references to the Onshore Scheme location that are included in local plans, strategy or policy, and there is no evidence to suggest that the habitat is of medium strategic significance.

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<sup>15</sup> [Habitat Networks \(England\) - data.gov.uk](https://www.naturalengland.org.uk/About-us/Our-work/Habitat-networks/Habitat-networks-(England)-data.gov.uk) [Accessed October 2023].

<sup>16</sup> <https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/planning%20policy/Local%20Plan/Northumberland-Local-Plan-Adopted-March-2022.pdf> [Accessed October 2023].





## 2.3 Metric 4.0 Principles and Rules

Natural England advise that the Metric is a tool that helps inform plans and decisions, by using habitats as a proxy for measuring biodiversity value, but that any assessment must be undertaken with awareness of its limitations. The metric specifically requires interpretation and ecological expertise to provide evidence of the appropriateness of proposed approaches to BNG and sets out a series of key principles and rules that help to support an understanding of whether proposals support wider considerations that a calculation output.

The Metric User Guide indicates that assessments should be conducted with regard to:

- **Principle 1:** *This metric does not change existing biodiversity protections, statutory obligations, or policy requirements. The use of this metric does not override the ecological mitigation hierarchy and other requirements (such as consenting or licensing processes, for example woodlands).*
- **Principle 2:** *This metric should be used in accordance with established good practice guidance and professional codes.*
- **Principle 3:** *This metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.*
- **Principle 4:** *Biodiversity units are a proxy for biodiversity and should be treated as relative values.*
- **Principle 5:** *This metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.*
- **Principle 6:** *Habitat interventions need to be realistic and deliverable within a relevant project timeframe.*
- **Principle 7:** *Created and enhanced habitats should seek, where practical and reasonable, to be local to any impact and deliver strategically important outcomes for nature conservation.*
- **Principle 8:** *The metric does not enforce a minimum habitat size ratio for compensation of losses. However, proposals should aim to:*
  - *maintain habitat extent (supporting more, bigger, better and more joined up ecological networks); and*
  - *ensure that proposed or retained habitat parcels are of sufficient size for ecological function.*

In addition to these principles the Metric also sets out a series of rules that should be followed when undertaking a BNG calculation. These are:

- **Rule 1:** *Competency requirements must be complied with.*
- **Rule 2:** *Biodiversity unit outputs are unique to this metric. The results of other metrics, including previous versions of this metric, are not comparable to those of this metric. The three types of biodiversity units generated by this metric (area, hedgerow and watercourse) cannot be summed, traded, or converted between modules.*
- **Rule 3:** *The trading rules of this metric must be followed.*
- **Rule 4:** *Losses and deterioration of irreplaceable or very high distinctiveness habitat cannot be accounted for through this metric.*
- **Rule 5:** *In exceptional ecological circumstances, deviation from this metric methodology may be permitted by the relevant consenting body or planning authority. Any deviation must be fully justified and evidenced, and follow advice set out in the Metric Guide.*

The Metric guidance also confirms:

- **Irreplaceable habitats** – *“Rule 4 (Table 3-1) states losses and deterioration of irreplaceable habitat cannot be accounted for through this metric. Irreplaceable habitats require separate consideration which must comply with up-to-date policy, legislation and regulations... Bespoke compensation to address specific losses and deterioration of irreplaceable habitats needs to be agreed on a case-by-case basis with the determining body or planning authority”.*





- **Ancient woodland** – *“Ancient woodland (an irreplaceable habitat) is not a discrete habitat type and, as such, is not listed in the metric”.*
- **Ancient and veteran trees** – *“Ancient and veteran trees may be found within a range of situations, including within hedgerows, lines of trees, woodland, open habitats and urban settings. Wherever ancient and veteran trees occur they should be considered and recorded as irreplaceable habitat”.*
- **Compensating for loss of high distinctiveness woodland** – *“If woodland creation is required to compensate for the loss of high distinctiveness woodland, then:*
  - o *a ‘like for like’ replacement must be provided and input into the metric:*
  - o *target habitat must replicate the woodland type that is being lost*
  - o *lower distinctiveness woodland habitat types must not be used*
  - o *a realistic target condition should be set (likely poor condition)*
- **Woodland creation** – If a woodland is being created, and is not replacing the loss of a high distinctiveness woodland, the newly created woodland should be input into the metric as either:
  - o *Woodland and forest – ‘other woodland; broadleaved’ or*
  - o *Woodland and forest – ‘other woodland; mixed’ or*
  - o *Woodland and forest – ‘other coniferous woodland’”*

## 2.4 Limitations

No significant limitations have been encountered when collecting baseline data or performing the Metric calculations. The conclusions of this report are considered to be a fair representation of the likely effect of the scheme on the Metric 4.0 BU score resulting from the proposed development, considering a reasonable worst-case scenario.



## 3.0 Baseline Conditions

### 3.1 Important Ecological Features

Important ecological features that may be affected by the Onshore Scheme are identified within the EIA<sup>17</sup>, and their influence on the deliverability of BNG has been taken into account in this assessment, e.g., designated sites, protected and priority habitats and species.

### 3.2 Habitats

As set out in the introduction and in section 2.2.3, for the purposes of this assessment, the calculation of baseline biodiversity values before development is necessarily indicative as detailed design is not yet available. The BNG boundary (i.e., “on-site”) for the purpose of applying the Metric is therefore applied to two indicative project footprints (Option A and Option B), including areas needed for mitigation, compensation or enhancement). A summary of the habitats is given in Table 3-1 and Table 3-2.

**Table 3-1 Baseline Habitats within the Option A Development footprint (“on-site”)**

Broad Habitat	Habitat Type	Size (ha) <sup>18</sup>	Condition
Grassland	g3c Other neutral grassland	1.91	Good
		2.03	Moderate
		18.29	Poor
Grassland	g4 Modified grassland	0.16	Good
		0.22	Moderate
		0.27	Poor
Heathland and shrub	h3a Blackthorn scrub	0.01	Poor
Heathland and shrub	h3h Mixed scrub	1.22	Moderate
		1.04	Poor
Urban	u1a Open mosaic habitats on previously developed land	3.78	Good
		0.49	Moderate
Urban	u1b Developed land, sealed surface unvegetated, unsealed surface	0.84	N/A
Urban	u1e Built linear features	0.59	N/A
Woodland and forest	w1f7 Other lowland mixed broadleaved woodland	1.05	Good
		2.08	Moderate
		4.49	Poor
Woodland and forest	w1h6 Other woodland; mixed; mainly conifer	0.00 <sup>1</sup>	Poor
Woodland and forest	w2b Other Scot’s pine woodland	6.49	Poor

<sup>17</sup> Cambois Connection Onshore Scheme, Environmental Statement Volume 2, Chapter 9: Terrestrial Ecology and Ornithology (2023).

<sup>18</sup> Rounded to two decimal places.



**Table 3-2 Baseline Habitats within the Option B Development Footprint (“on-site”)**

Broad Habitat	Habitat Type	Size (ha) <sup>19</sup>	Condition
Grassland	g3c Other neutral grassland	1.91	Good
		2.03	Moderate
		17.36	Poor
Grassland	g4 Modified grassland	0.27	Poor
Heathland and shrub	h3a Blackthorn scrub	0.01	Poor
Heathland and shrub	h3h Mixed scrub	1.89	Moderate
		1.04	Poor
Urban	u1a Open Mosaic Habitat	3.78	Good
		0.76	Moderate
Urban	u1b Developed land, sealed surface unvegetated, unsealed surface	1.73	N/A
Urban	u1e Built Linear Features	0.47	N/A
Woodland and forest	w1f7 Other Lowland Mixed Broadleaved Woodland	1.05	Good
		2.08	Moderate
		4.49	Poor
Woodland and forest	w1h6 Other Woodland; Mixed; Mainly Conifer	0.00 <sup>1</sup>	Poor
Woodland and forest	w2b Other Scot’s Pine Woodland	6.49	Poor

### 3.2.1 Consideration of Metric 4.0 principles and rules

Protected and locally important species needs are not considered through the Metric. Such areas need specific separate consideration of existing policy and legislation. Protected species are considered in the ES Chapter, Volume 3, Chapter 9: Terrestrial Ecology and Ornithology for the Site.

This assessment adheres to all eight principles of Metric 4.0 and all five rules. For clarity, the Site supports no irreplaceable or very high distinctiveness habitat. All trading rules will be met, via off-site offsetting if necessary.

<sup>19</sup> Rounded to two decimal places.



## 4.0 Proposed Design and Key Assumptions

### 4.1 Proposed Design

The proposed plans for Option A and alternative Option B are illustrated in Appendix 03 (Commercial In Confidence) and corresponding landscape plans in Appendix 02 (Commercial in Confidence).

For the purpose of this assessment the following key assumptions have been used:

- As set out in DEFRA Guidance from 2023<sup>20</sup> and the BNG User Guide, habitat that is created as mitigation or compensation for impacts as a result of the development to protected species or protected sites may count toward no net loss but cannot count as gain. In this iteration of the assessment no mitigation or compensation for protected species or protected sites has been included.
- All habitat reinstatement to original type and condition is considered to take more than 2 years and will therefore be considered loss and creation under the 'worst case' scenario assumption.
- All habitat reinstatement or creation will start once construction is complete, and therefore a delay of approximately 2 years from the start of construction to commencement of habitat creation has been applied.
- Habitat along cable corridors will be reinstated with the same habitat and enhanced wherever possible. However, mature trees are unable to be planted directly over cable corridors due to the need for access. Therefore, it is assumed that woodland and scrub habitats will be replaced with other neutral grassland of good condition. Remaining, habitat creation consists of the following:
  - Other neutral grasslands reinstated as other neutral grasslands of good condition;
  - Open mosaic habitat reinstated with moderate condition;
  - Modified grassland to be reinstated with moderate condition;
  - SUD's ponds with permanently wet areas and marginal vegetation to be ponds (non priority habitat) of moderate condition;
  - Scrub of good condition.
  - Hedges of good condition; and
  - Watercourse of moderate condition.
- Woodland surrounding grasslands to the west of Site will be retained as far as practicable as indicated by the landscape plan.
- There will be no advance mitigation / compensation ahead of construction.
- A minimum 30 year monitoring and management plan will be implemented to ensure the post-development habitats reach the required condition within specified time period.

These key assumptions are subject to change at the Approval of Reserved matters stage.

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<sup>20</sup> <https://www.gov.uk/guidance/what-you-can-count-towards-a-developments-biodiversity-net-gain-bng> [Accessed October 2023].



## 5.0 BNG Metric

A completed Metric 4.0 can be provided upon request. In summary, the indicative proposed scheme worst case scenario is anticipated to result in c. 10% biodiversity loss in respect of area habitat and c. 15% loss in respect of hedgerow and 30% in respect of watercourses, as set out in the summary tables below.

**Table 5-1 Summary of biodiversity unit change Option A**

BIODIVERSITY UNIT TYPE	BASELINE UNITS	POST INTERVENTION UNITS	TOTAL NET UNIT CHANGE	% NET CHANGE
Area habitat	286.32	256.32	-29.96	-10.46
Linear habitat – Hedgerows	6.67	5.79	-0.88	-13.16
Linear habitat – Watercourses	7.61	5.11	--2.50	-32.87

**Table 5-2 Summary of biodiversity unit change Option B**

BIODIVERSITY UNIT TYPE	BASELINE UNITS	POST INTERVENTION UNITS	TOTAL NET UNIT CHANGE	% NET CHANGE
Area habitat	280.90.	247.50	-33.40	-11.89
Linear habitat – Hedgerows	6.67	5.79	-0.88	-13.16
Linear habitat – Watercourses	7.61	5.11	--2.50	-32.87



## 6.0 Recommendations for Achieving Biodiversity Net Gain

In order to provide the 10% gain proposed, the project needs to deliver significantly more biodiversity gain, either within the Site or off-site. Based upon the metric calculations for indicative Options A and B the following uplift of units is needed, as set out in Table 6-1 with regard to habitat type and distinctiveness. As noted previously, the values presented here are indicative only and are likely to change at the Approval of Reserved matters stage.

**Table 6-1 BUs required to meet 10% BNG**

BIODIVERSITY UNIT TYPE	BASELINE BU	10% NET GAIN ON BASELINE	POST DEVELOPMENT BU	ADDITIONAL BU NEEDED TO MEET 10% BNG
Option A Area habitat	286.32	314.952	-29.96	28.632
Option A Linear habitat – Hedgerows	6.67	7.337	-0.88	0.667
Option A Linear habitat – Watercourses	7.61	8.371	-2.50	0.761
Option B Area habitat	280.90	308.99	-33.40	28.09
Option B Linear habitat – Hedgerows	6.67	7.337	-0.88	0.667
Option B Linear habitat – Watercourses	7.61	8.371	-2.50	0.761

### 6.1 Off-Site Offsets (if relevant)

#### 6.1.1 Off-site Habitat Creation / Enhancement

In accordance with the mitigation hierarchy, BNG should ideally be delivered on-site, near to where negative impacts occur, wherever practicable. Providing BNG on-site may also enable BNG to be constructively added to other mitigation proposals, such as habitat-based mitigation for protected species. However, land ownership constraints may limit the scope to provide sufficient enhancement to meet a 10% net gain target within the red line boundary.

If 10% gain cannot be achieved within the RLB at the detailed design stage, locations / mechanisms will be identified off-site. Possible locations will be identified if required, to enable further work to establish their potential feasibility to be completed. In many cases this is likely to involve the completion of habitat surveys and condition assessment to establish the baseline value of any areas to be enhanced. Offset areas located off-site would also be subject to a minimum 30 year monitoring and management plan.

In the approach agreed with NCC, NCC states that *“It is likely that NCC would now be in a position to offer off-site biodiversity units in the locality of the application site which would be able meet any requirement for the development to deliver off-site units.”* NCC went on to state: *“As land will be available in the vicinity of the site to deliver any off-site units which may be required, subject to an appropriate commitment to providing this if it is deemed to be required once scheme design has been finalised, then we are satisfied that the specific detail of this provision could be left until the detailed planning stage.”*

This is considered the most likely outcome for delivering any additional BU’s required to meet 10% net gain but is subject to change at the Approval of Reserved matters stage.

#### 6.1.2 Purchase of Biodiversity Credits

If net gains cannot be delivered on or off-site, they may alternatively be able to be achieved through the purchase of market and/or statutory biodiversity credits. However, the option of buying statutory biodiversity credits is understood as a last resort measure, where developers are unable to achieve sufficient BNG through the available on-site and off-site options. Statutory biodiversity credits will become available for purchase,



where needed, at the introduction of mandatory BNG. Onshore Scheme. An indication of the likely cost per unit for projects has been produced by DEFRA and is available online<sup>21</sup>.

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<sup>21</sup> <https://www.gov.uk/guidance/statutory-biodiversity-credit-prices>



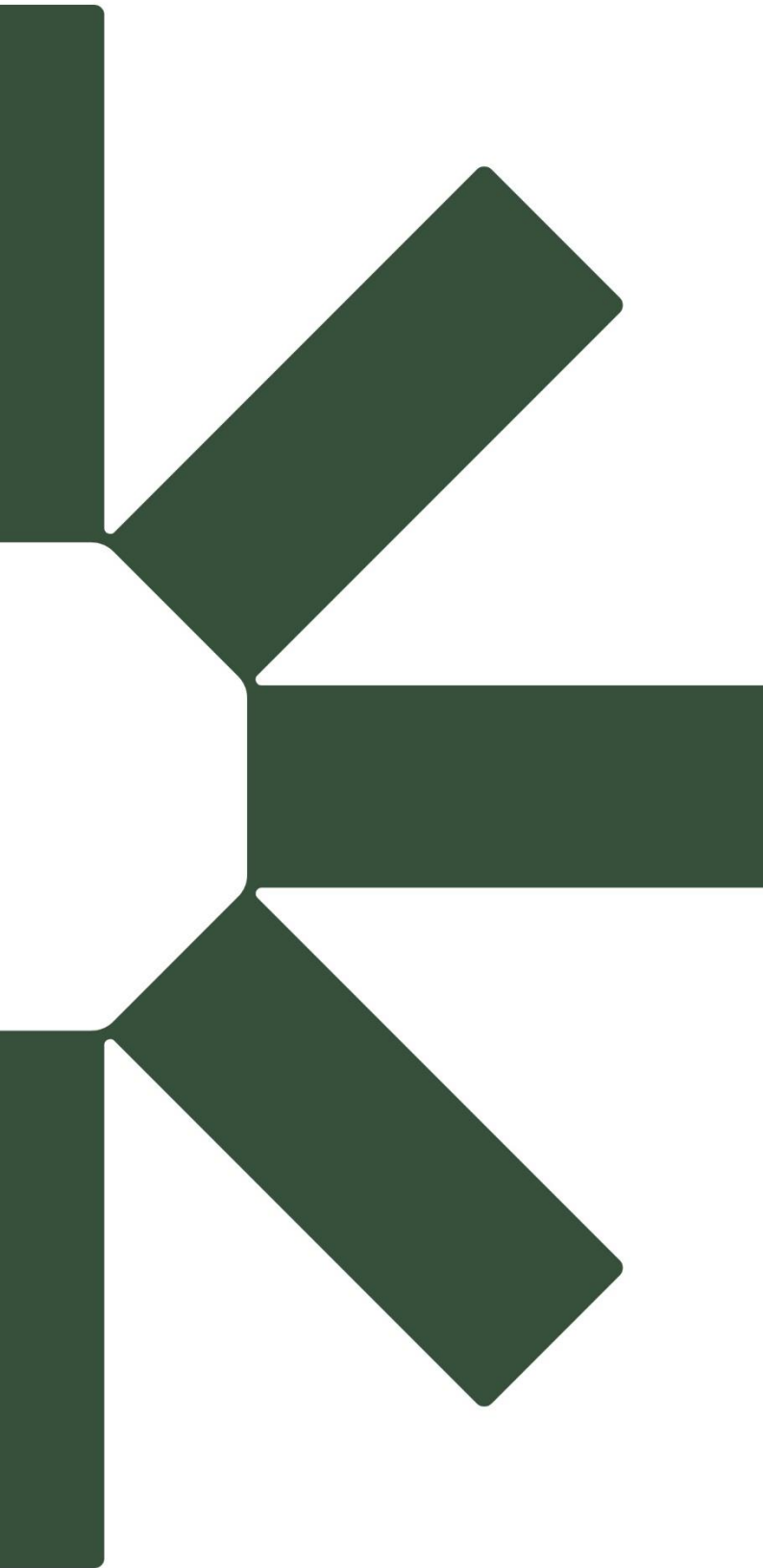
# Appendix 01 Illustrative Landscape Reinstatement Plan (Commercial in Confidence)





# Appendix 02 Baseline Habitats Plan & Post Construction Habitats Plan (Commercial in Confidence)





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