MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Outline Biodiversity Benefit Management Plan

Deadline: Deadline 7

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Glossary

Term	Meaning
400 kV grid connection cables	Cables that will connect the proposed onshore substations to the existing National Grid Penwortham substation.
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Ltd (Morecambe OWL).
Baseline	The status of the environment without the Transmission Assets in place.
Biodiversity benefit	An approach to development that leaves biodiversity in a better state than before. Where a development has an impact on biodiversity, developers are encouraged to provide an increase in appropriate natural habitat and ecological features over and above that being affected. For the Transmission Assets, biodiversity benefit will be delivered within identified biodiversity benefit areas within the Onshore Order Limits.
Code of Construction Practice	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes.
Commitment	This term is used interchangeably with mitigation and enhancement measures. The purpose of commitments is to avoid, prevent, reduce or, if possible, offset significant adverse environmental effects. Primary and tertiary commitments are taken into account and embedded within the assessment set out in the ES.
Development Consent Order	An order made under the Planning Act 2008, granting development consent.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Generation Assets	The generation assets associated with the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm include the offshore wind turbines, inter-array cables, offshore substation platforms and platform link (interconnector) cables to connect offshore substations.
Intertidal Infrastructure Area	The temporary and permanent areas between Mean Low Water Springs and Mean High Water Springs.
Landfall	The area in which the offshore export cables make landfall (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Lytham St. Annes between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, intertidal working area and landfall compound(s).
Mitigation measures	This term is used interchangeably with Commitments. The purpose of such measures is to avoid, prevent, reduce or, if possible, offset significant adverse environmental effects.

Term	Meaning
Morecambe OWL	Morecambe Offshore Windfarm Limited is owned by Copenhagen Infrastructure Partners' (CIP) fifth flagship fund, Copenhagen Infrastructure V (CI V).
Morecambe Offshore Windfarm: Generation Assets	The offshore generation assets and associated activities for the Morecambe Offshore Windfarm.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The offshore and onshore infrastructure connecting the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm to the national grid. This includes the offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV grid connection cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Morgan OWL	Morgan Offshore Wind Limited is a joint venture between JERA Nex bp (JNbp) and Energie Baden-Württemberg AG (EnBW).
Morgan Offshore Wind Project: Generation Assets	The offshore generation assets and associated activities for the Morgan Offshore Wind Project.
Onshore export cables	The cables which would bring electricity from landfall to the onshore substations.
Onshore Order Limits	See Transmission Assets Order Limits: Onshore (below).
Onshore substations	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Order Limits	See Transmission Assets Order Limits (below).
Transmission Assets	See Morgan and Morecambe Offshore Wind Farms: Transmission Assets (above).
Transmission Assets Order Limits	The area within which all components of the Transmission Assets will be located, including areas required on a temporary basis during construction and/or decommissioning.
Transmission Assets Order Limits: Onshore	The area within which all components of the Transmission Assets landward of Mean High Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds).

Acronyms

Acronym	Meaning
BNG	Biodiversity Net Gain
CoCP	Code of Construction Practice
DCO	Development Consent Order
Defra	Department for Environment, Food & Rural Affairs
ES	Environmental Statement
ExA	Examining Authority
JNCC	Joint Nature Conservation Committee
NSIPs	Nationally Significant Infrastructure Projects
SoS	Secretary of State

Units

Unit	Description
ha	Hectare
km	Kilometres
kV	Kilovolts
%	Percentage

1 Outline Biodiversity Benefit Management Plan

1.1 Background

1.1.1 Introduction

1.1.1.1 This document forms the Outline Biodiversity Benefit Management Plan (previously referred to as the Onshore Biodiversity Benefit Statement) which has been prepared for the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (referred to hereafter as 'the Transmission Assets').

1.1.1.2 The document was updated for Deadline 4 to include the following:

- Clarification of the biodiversity benefit calculations to include:
  - a re-run of the Biodiversity Net Gain (BNG) metric calculator using the current Statutory Defra metric (version 1.0.4 published July 2025)
  - minor corrections to the baseline habitat mapping for the onshore substations and addition of habitat parcel references
  - inclusion of the habitat condition assessment sheets for habitat parcels subject to UK Habs survey for the BNG assessment.
  - Clarification of habitat parcels where UK Habs and habitat condition assessments were derived from Phase 1 Habitat survey data due to access restrictions.

1.1.1.3 At Deadline 5, **Appendix K** was updated to include the requirement for long-term monitoring at Lea Marsh Fields for a period of 30-years after completion of the development.

1.1.1.4 At Deadline 7 further clarification was added in response to the ExA's Rule 17 letter of 24 October regarding the Applicants' approach to delivering biodiversity benefit through local nature recovery projects or the purchase of biodiversity credits.

1.1.1.5 In addition, a Biodiversity Benefit Supporting Statement (S_D5_11) has been prepared to provide an overarching response to the questions on BNG raised by the Examining Authority's (ExA) Second Questions. The Biodiversity Benefit Supporting Statement covers the following:

- A review of legislation and local/ national planning policies relevant to the provision of BNG, in the absence of specific guidance on the use and application of the statutory Defra metric for Nationally Significant Infrastructure Projects (NSIPs).
- Rationale for the Applicants' approach to the provision of BNG for the Transmission Assets (referred to by the ExA as a 'bespoke BNG metric').
- Consideration of potential alternative approaches that could satisfy local and national planning policies in the event that the Secretary of State

(SoS) concluded the use of land to deliver biodiversity benefit was not appropriate or justified.

- Additional BNG metric calculation (using the Defra Statutory Biodiversity Metric calculator tool) for the whole Order Limits. Separate calculations have been undertaken for each Project separately (Morgan Transmission Assets and Morecambe Transmission Assets), as well as a combined assessment for the combined Transmission Assets.

1.1.1.6 At Deadline 6, the document became an outline management plan ('Outline Biodiversity Benefit Management Plan') and the following updates were made:

- Amendments to the structure of the document to align with the other outline management plans.
- Inclusion for updating this plan, and other linked documents to ensure that an update to one follows through to the others, where relevant.
- Amendments to the drafting of Requirement 26 of Schedules 2A and 2B of the draft Development Consent Order (REP6-013) Amendments to the drafting of Requirement 26 of Schedules 2A and 2B of the draft Development Consent Order (REP6-013).
- Inclusion of habitat condition targets for the management of the biodiversity benefit areas and outline management to be implemented for each habitat type (see **Appendix M**).

1.1.1.7 The Outline Biodiversity Benefit Management Plan should be read in conjunction with Biodiversity Benefit Supporting Statement (REP5-145) which was prepared to provide an overarching response to the questions on BNG raised by the Examining Authority's (ExA) Second Questions.

1.1.2 Project Overview

1.1.2.1 Morgan Offshore Wind Limited (Morgan OWL), a joint venture between JERA Nex bp (JNbp) and Energie Baden-Württemberg AG (EnBW), is developing the Morgan Offshore Wind Project. The Morgan Offshore Wind Project is a proposed offshore wind farm in the east Irish Sea.

1.1.2.2 Morecambe Offshore Windfarm Ltd (Morecambe OWL), owned by Copenhagen Infrastructure Partners' (CIP) fifth flagship fund, Copenhagen Infrastructure V (CI V), is developing the Morecambe Offshore Windfarm, also located in the east Irish Sea.

1.1.2.3 Morgan OWL and Morecambe OWL (the Applicants) are jointly seeking a single consent for their electrically separate transmission assets comprising aligned offshore export cable corridors to landfall and aligned onshore export cable corridors to separate onshore substations, and onward connection to the National Grid at Penwortham, Lancashire.

1.1.2.4 The purpose of the Transmission Assets is to connect the Morgan Offshore Wind Project: Generation Assets and Morecambe Offshore Windfarm: Generation Assets (collectively known as the 'Generation Assets') to the National Grid. The key components of the Transmission Assets include offshore landfall and onshore elements. Details of the activities and infrastructure associated with the Transmission Assets are set out in Volume 1, Chapter 3: Project Description of the Environmental Statement (ES) (document reference F1.3).

1.1.3 Aim and Purpose of the Outline Biodiversity Benefit Management Plan

1.1.3.1 The purpose of this Outline Biodiversity Benefit Management Plan is to set out the Applicants' proposed approach to identifying and delivering biodiversity benefit for the Transmission Assets. The document provides the following information.

- An assessment of the baseline value of habitats related to the permanent above ground infrastructure area for the Transmission Assets.
- An assessment of the potential worst-case impact of construction of the permanent above-ground infrastructure proposed for the Transmission on the value of habitats within the Onshore Infrastructure Area.
- Identify suitable opportunities for habitat creation and/or management principles for enhanced, restored or newly created habitats necessary to deliver biodiversity benefit (above baseline value) in relation to the permanent above ground infrastructure only.

1.1.3.2 As set out in **paragraph 1.3.1.7**, the biodiversity benefit for each project will be delivered within areas at the Morgan and Morecambe onshore substations in addition to the biodiversity benefit area at Lea Marsh Fields. The location and geographic extent of areas proposed for biodiversity benefit are presented in **Figure 1.4**, **Figure 1.5** and **Figure 1.6** of this Management Plan below. **Figure 1.7** within **Appendix J** provides indicative locations of enhancement measures at Lea Marsh Fields. **Appendix J** also outlines the principles of management measures and monitoring at Lea Marsh Fields.

1.1.3.3 Although there is no statutory requirement for the Applicants to provide biodiversity net gain, and no guidance on how applicants should approach this for linear nationally significant infrastructure projects (or projects directed into the regime under s35 Planning Act 2008 as is the case for the Transmission Assets), the Applicants have adopted a transparent approach to the identification of the areas proposed for biodiversity benefit and the metrics applied. As described in **section 1.4** below, the assessment has utilised the Department for Environment, Food & Rural Affairs (Defra) Statutory Biodiversity Net Gain (BNG) methodology and metric (version 1.0.4, published 3 July 2025), and is discussed separately for area-based habitats, hedgerows, and watercourses.

1.1.3.4 Any biodiversity benefit measures for the Transmission Assets would be implemented separately for the above ground permanent infrastructure associated with Morgan OWL, and the above ground permanent infrastructure associated with Morecambe OWL.

1.1.3.5 This Outline Biodiversity Benefit Management Plan should be read in conjunction with the Outline Ecological Management Plan (document reference J6) and the Outline Code of Construction Practice (document reference J1) and its supporting appendices and the Outline Wildlife Hazard Management Plan (S_D3_8/F04).

1.1.4 Structure of this document

1.1.4.1 The structure of this Outline Biodiversity Benefit Management Plan is as follows.

- **Section 1.1** provides an introduction to the Outline Biodiversity Benefit Management Plan.
- **Section 1.2** provides information on the implementation of the Outline Biodiversity Benefit Management Plan
- **Section 1.3** provides clarification on the calculation of biodiversity benefit and the justification for the area identified at Lea Marsh
- **Section 1.3** provides the relevant policy and legislation in relation to biodiversity benefit.
- **Section 1.4** provides the approach to the delivery overall biodiversity benefit.
- **Section 1.5** provides the assessment of biodiversity benefit for area-based habitats, hedgerows, and watercourses.
- **Section 1.6** provides a summary of the proposals for habitat creation and habitat enhancement.
- **Section 1.8** provides a summary of this Outline Biodiversity Benefit Management Plan Project overview

1.2 Implementation

1.2.1 DCO Requirement

1.2.1.1 Following the granting of consent for the Transmission Assets, detailed Biodiversity Benefit Management Plans will be prepared on behalf of Morgan OWL and/or Morecambe OWL, prior to commencement of the relevant stage of works and will follow the principles established in this Outline Biodiversity Benefit Management Plan. The detailed Biodiversity Benefit Management will require approval by the relevant planning authority following consultation with relevant stakeholders. The Applicants and all appointed contractors will be responsible for the implementation of the respective detailed Biodiversity Benefit Management Plans.

1.2.1.2 The Applicants have committed to implementation of detailed Biodiversity Management Plans, which are secured by inclusion of Requirement 26 of the draft Development Consent Order (DCO) (document reference C1/F09) Schedules 2A & 2B.

1.2.1.3 Below sets out the requirement wording for Project A (Project B's requirement mirrors that of Project A for this requirement and is, therefore not repeated):

26.—(1) The Project A biodiversity benefit works must not be carried out until a biodiversity benefit scheme (in accordance with the onshore biodiversity benefit management plan) has been approved in writing by the relevant planning authority in consultation with the statutory nature conservation body.

(2) The biodiversity benefit scheme will demonstrate how at least ten per cent in biodiversity net gain in respect of Work Nos 21A and 23A is to be delivered as part of Project A.

(3) The delivery of biodiversity benefit (outside of the Project A onshore substation permanent works) will follow a prioritisation exercise as described in the outline biodiversity management plan with priority to be given to the delivery of biodiversity benefit (outside of the Project A onshore substation permanent works) as follows:

(a) as part of Work No. 44A;

(b) as part of biodiversity projects delivered within close proximity to the Order limits as set out within the outline biodiversity benefit ; and

(c) through the purchase of biodiversity credits as set out in the outline biodiversity benefit management plan.

(4) The biodiversity benefit scheme approved under paragraph (1) must be implemented as approved and maintained as set out in the approved scheme.

1.2.1.4 The Transmission Assets may adopt a staged approach to the approval of DCO requirements. This will enable requirements to be approved in part or in whole, prior to the commencement of the relevant stage of works in accordance with whether staged approach is to be taken to the delivery of the each of the offshore wind farms.

1.2.1.5 For onshore and intertidal works (landward of Mean Low Water Springs), this approach will be governed by the inclusion of Requirement 3 within the draft DCO, which requires notification to be submitted to the relevant planning authority/authorities detailing whether Project A or Project B relevant works will be constructed in a single stage; or in two or more stages to be approved prior to the commencement of the authorised development

1.2.2 Scope of the Outline Biodiversity Benefit Management Plan

1.2.2.1 Onshore site preparation activities are defined in Article 2 of the draft DCO (document reference C1/F09). This Outline Biodiversity Benefit Management Plan applies to the onshore site preparation works and the construction and operation and maintenance phases of the Transmission Assets. Onshore site preparation works will be undertaken prior to the commencement of construction.

1.2.2.2 The measures within this outline management plan are in accordance with best practice and are appropriate to manage the impacts associated with onshore site preparation works. Ecological surveys will be undertaken during the onshore site preparation works and the results will be used to inform the preparation of the detailed Biodiversity Benefit Management Plans for Morgan OWL and Morecambe OWL respectively.

1.2.3 Overview of the Biodiversity Benefit Assessment

1.2.3.1 As mentioned above, the scope of the biodiversity benefit assessment is limited to areas of permanent habitat loss associated with permanent above ground infrastructure area for the Transmission Assets which includes the following Work Numbers: 21A and 23A. As such, the following onshore elements of the Transmission Assets are considered.

- Onshore substations, including associated landscaping areas where permanent habitat loss would occur.
- Permanent access tracks to the onshore substations.

1.2.3.2 This approach was agreed by relevant stakeholders at the pre-application Expert Working Group (EWG) meetings (Technical Engagement Plan Appendices Part 2 of 3 (APP-191)).

1.2.3.3 In addition, given that biodiversity benefit measures will be implemented separately by the Morgan OWL and Morecambe OWL, biodiversity benefit calculations for area-based habitats, hedgerows, and watercourses have been presented separately for the Morgan onshore substation and Morecambe onshore substation.

1.2.4 Interlinked Management Plans and the Update Process

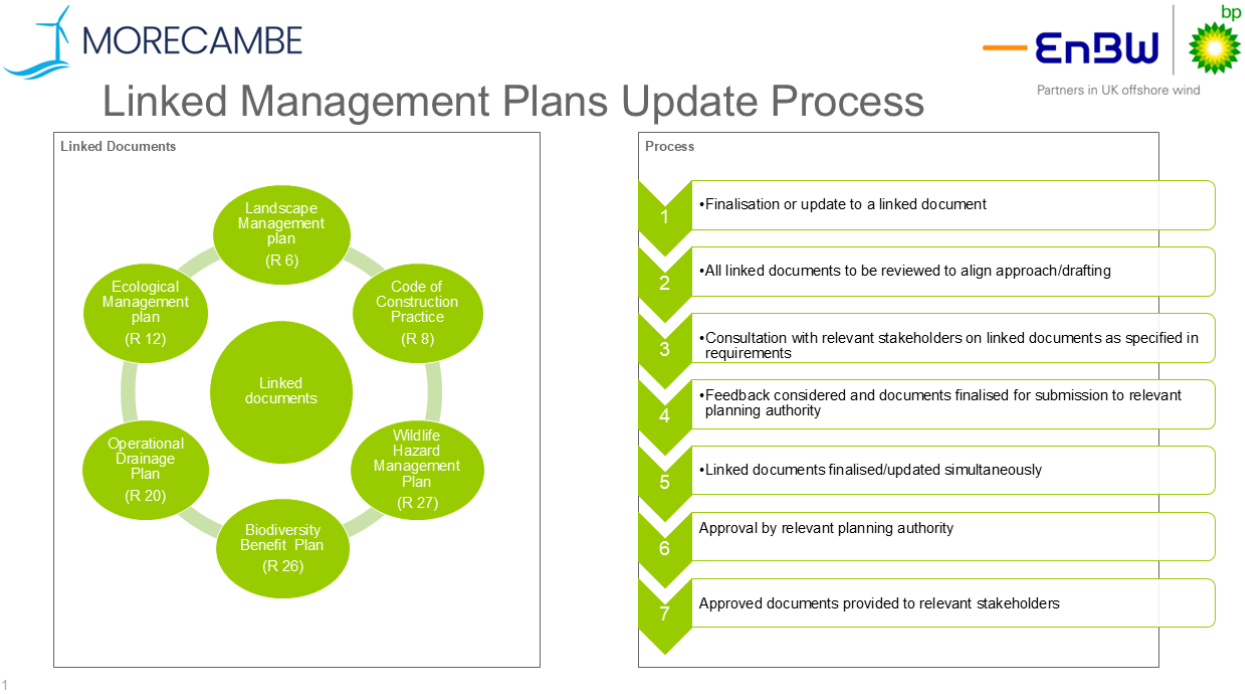
1.2.4.1 The Outline Biodiversity Benefit Management Plan forms part of a suite of interlinked outline management plans relating to the design, management and monitoring of environmental mitigation and biodiversity areas and management of construction impacts associated with the Transmission Assets Project. These interlinked plans are as follows:

- Code of Construction Practice.
- Wildlife Hazard Management Plan.
- Landscape Management Plan.

- Ecological Management Plan.
- Biodiversity Benefit Plan.
- Operational Drainage Management Plan.

1.2.4.2 The outline management plans form part of the Transmission Asset DCO application. Each outline management plan is secured by a requirement of the draft DCO; detailed management plans will be prepared in accordance with the outline plan and approved by the relevant planning authority. The approved plans must be implemented as approved.

1.2.4.3 Each management plan has its own purpose and objectives specific to the subject of the plan, but there is cross-over in the objectives of the different plans. The outline plans have been prepared to ensure that the objectives of each management plan can be delivered the management measures are aligned between the interlinked plans. The Applicants will adopt a structured approach in the preparation of the detailed management plans to ensure continued alignment of management measures across the interlinked management plans. The interlinked management plans will remain as 'live' documents during the construction and operation stages to reflect the adaptive management approach. Where a review/update of a management plan is required (e.g. in response to monitoring results), the review/updates will be undertaken in the context of the other interlinked plans and will follow the staged approach set out below.



1.2.5 Approach to biodiversity benefit

1.2.5.1 The principles for the delivery of biodiversity benefit for the Transmission Assets and the site selection rationale, are set out in Section 4.9.7 of Volume 1 Chapter 4: Site selection and consideration of alternatives (APP-030) and Site Selection of the Environmental Mitigation and Biodiversity Benefit Areas (REP2-046).

1.2.5.2 In accordance with policy within National Policy Statement (NPS) EN-1 (**Table 1-1**) and the guidance in the National Planning Policy Framework (NPPF) (**Table 1-2**), the Applicants have committed to delivering no net loss and measurable net gains for biodiversity as part of the delivery of the Transmission Assets.

1.2.5.3 The site selection for Lea Marsh Fields biodiversity benefit area also achieves the aims in paragraph 187(d) of the NPPF for net gains to establish '*...coherent ecological networks that are more resilient to current and future pressures*', and paragraph 192 (b) to '*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species*' for the following reasons:

- It is currently of low ecological value being dominated by a commercial crop monoculture and is therefore able to deliver substantial biodiversity enhancements through habitat creation and management.
- It is also located on land that lies between two existing Biological Heritage Sites (BHSs); Mason's Wood BHS and Lea Marsh BHS. The enhancement of the current low ecological value habitat of the land will result in substantial enhancements to habitat connectivity between the locally designated sites, and its proximity to habitats of higher ecological value will increase the likelihood of colonisation by species such as small mammals and invertebrates (which may include priority species).
- It is proximal to Mason's Wood BHS and Lea Marsh BHS and will create a substantial high ecological value habitat buffer to the existing BHS network to increase its resilience to current and future pressures.
- It is within an area identified in the Lancashire Local Nature Recovery Strategy (LNRS) as "*Areas that Could Become of Particular Importance*", which are locations within the county where there are opportunities to create, connect or improve habitats most likely to provide the greatest benefit for nature and the wider environment. The delivery of biodiversity benefits at this location would contribute to the aims and objectives of the LNRS for appropriate habitat creation, restoration and enhancement of land adjoining BHSs to support nature recovery in the region.

1.2.5.4 The habitat creation and management to be undertaken at the Lea Marsh fields biodiversity benefit area has been designed to occupy the whole field parcels. This is to ensure that the objectives for improving habitat connectivity between Mason's Wood BHS and Lea Marsh BHS are met. Furthermore, the delivery of biodiversity benefit measures within entire field parcels at one location is preferred (and supported by policy) rather than delivering smaller and more scattered/ piecemeal enhancements across the Order Limits, which would be contrary to the LNRS objectives and the Lawton Principles (Lawton, 2010) of bigger, better and more connected habitats.

1.2.5.5 As part of the biodiversity benefit strategy, a calculation of habitat losses and gains associated with the permanent infrastructure and the Lea Marsh biodiversity benefit area has been undertaken using the revised Statutory Biodiversity Metric to quantify the biodiversity benefits to demonstrate that the project is delivering measurable net gains for biodiversity.

1.2.5.6 The calculation has demonstrated that the predicted net gains using the metric would exceed 10%, which is the current minimum uplift required for projects subject to mandatory BNG under the Environment Act 2021. However, the statutory provisions relating to BNG for nationally significant infrastructure projects are not in force (and will not be before the determination of the Transmission Assets application) and in any event there is no upper limit to the net gain that can be delivered by a development.

1.2.6 Habitat condition assessments

1.2.6.1 Habitat condition assessment sheets for habitat parcels that were subject to specific UK Habs survey for the BNG assessment are included as **Appendix L** (these have been provided as three separate Excel documents).

1.2.6.2 Habitat condition assessments for habitat parcels that were converted to UK Habs from Phase 1 Habitat survey data for the purposes of the BNG assessment, due to access restrictions, were determined based on a combination of desk study, aerial photographs, information collected during the Phase 1 Habitat survey and professional judgement, and a precautionary approach applied as appropriate[1].

1.2.6.3 A habitat condition assessment was not undertaken for the arable cropland within the Lea Marsh Fields biodiversity benefit area, as this is not required (cropland is not assigned a habitat condition assessment in the Statutory Biodiversity Metric).

[1] Habitat parcel references: 2685, 2150, 233, 1062 (Morgan Substation) and 1050, 234, 239, 250, 1103, 2114 (Morecambe Substation).

1.3 Policy requirements and legislation

1.3.1 Environment Act 2021

1.3.1.1 Part 6 of the Environment Act 2021 includes provisions for BNG with respect to developers looking to submit DCO applications for NSIPs. Specifically, Part 6 of the Environment Act 2021 states that there is an obligation for developers to ensure that all new proposals achieve a minimum of 10% improvement to biodiversity.

1.3.1.2 However, as recently confirmed, there will be no BNG requirement placed on NSIPs (or schemes directed into the Planning Act 2008 regime) until May 2026 (which will then apply to applications submitted from this point onwards) but projects submitting an application before this comes into force could choose to do so voluntarily, with the level of requirement to be detailed within a BNG statement (subject to prior publication and presently expected to be set at a minimum of 10%).

1.3.1.3 As such, the requirements of Part 6 of the Environment Act 2021 are not mandatory for the Transmission Assets and instead have been voluntarily applied.

1.3.1.4 Defra have confirmed that projects which have been accepted for examination prior to the May 2026, would not be required to deliver the minimum BNG target.

1.3.1.5 Furthermore, following a request from the Applicants, on 4 October 2022 the Secretary of State issued a direction under section 35 of the Planning Act 2008 that the Transmission Assets should be treated as development for which a DCO is required. As such the Transmission Assets application is not subject to the mandatory BNG requirements for developments consented via the Town and Country Planning Act 1990.

1.3.1.6 Therefore, in accordance with existing legislation at the time application, there is no legal requirement for the Transmission Assets to deliver BNG.

1.3.1.7 The Applicants are proposing to make a voluntary commitment to achieve an overall biodiversity benefit for areas of permanent habitat loss associated with the permanent above-ground infrastructure of the Transmission Assets, as set out in **paragraph 1.2.2.1**.

1.3.1.8 In addition, as explained in the Outline Ecological Management Plan (document reference J6), the Applicants are pursuing additional opportunities for enhancement via engagement with projects in the wider area. Any enhancement mentions will form part of the detailed Ecological Management Plan(s).

1.3.2 National Policy Statements

1.3.2.1 There are currently six energy National Policy Statements (NPSs), three of which contain policy relevant to offshore wind development and the Transmission Assets, specifically:

- Overarching NPS for Energy (NPS EN-1) which sets out the UK Government's policy for the delivery of major energy infrastructure (Department for Energy Security & Net Zero 2023a).

1.3.2.2 **Table 1-1** sets out a summary of the policies within these this NPS, relevant to biodiversity benefit.

1.3.2.3 The policies within the current NPSs relevant to all topics in the ES can be viewed in the National Policy Statement tracker (document reference J26) and Planning Statement (document reference J28), submitted with the Application.

Table 1-1: Summary of NPS requirements relevant to biodiversity benefit

Summary of NPS provision	How and where considered
NPS EN-1	
Although achieving biodiversity net gain is not currently an obligation on applicants, Schedule 15 of the Environment Act 2021 contains provisions which, when commenced, mean the Secretary of State may not grant an application for a Development Consent Order unless satisfied that a biodiversity gain objective is met in relation to the onshore development in England to which the application relates. [Paragraph 4.6.1 of NPS EN-1]	As set out in **section 1.3.1** above, the Transmission Assets are not subject to a mandatory net gain requirement under the Environment Act 2021. Nevertheless, the Applicants have worked with statutory consultees to discuss the approach, and to develop the design, to allow the maximum benefit to biodiversity within the parameters of the Transmission Assets. This document (**section 1.6**) provides potential habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the Transmission Assets. The results of the calculation of biodiversity benefit are shown in **section 1.4.3** of this document. As set out in **paragraph 1.2.2.1**, the biodiversity benefit approach taken for the Transmission Assets considers the permanent above-ground infrastructure of the Transmission Assets and ensures that biodiversity benefit will be delivered for these areas of permanent habitat loss. This approach seeks to provide biodiversity benefit whilst balancing other socio-economic and land use considerations.
The Secretary of State should give appropriate weight to environmental and biodiversity net gain, although any weight given to gains provided to meet a legal requirement (for example under the Environment Act 2021) is likely to be limited. [Paragraph 4.6.3 of NPS EN-1]	Information to inform this decision is provided within this document and Volume 3, Chapter 3: Ecology and nature conservation of the ES (document reference F3.3).
Energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and enhance the natural environment by	The Transmission Assets do not fall under the definition of an NSIP set out in the Planning Act 2008. However, as stated in **paragraph 1.3.1.4**, following a request from the Applicants, on 4 October 2022 the Secretary of State

Summary of NPS provision	How and where considered
providing net gains for biodiversity, and the wider environment where possible. [Paragraph 4.6.6 of NPS EN-1]	issued a direction under section 35 of the Planning Act 2008 that the Transmission Assets should be treated as a 'development for which development consent is required'. Commitments made as part of the Transmission Assets relevant to ecology are set out in section 3.8 of Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document reference F3.3). This includes measures to conserve biodiversity in terms of ecological interests. It also includes opportunities for biodiversity benefit. Habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the Transmission Assets are set out in **section 1.6** of this document. The results of the calculation of biodiversity benefit are shown in **section 1.4.3** of this document.
In England applicants for onshore elements of any development are encouraged to use the latest version of the biodiversity metric to calculate their biodiversity baseline and present planned biodiversity net gain outcomes. This calculation data should be presented in full as part of their application. [Paragraph 4.6.7 of NPS EN-1]	The calculation undertaken for biodiversity benefit (**section 1.4.3** of this document) utilises the latest Defra Biodiversity Metric (version 1.0.4).
Where possible, this data should be shared, alongside a completed biodiversity metric calculation, with the Local Authority and Natural England for discussion at the pre-application stage as it can help to highlight biodiversity and wider environmental issues which may later cause delays if not addressed. [Paragraph 4.6.8 pf NPS EN-1]	Details regarding stakeholder consultation in relation to biodiversity benefit are set out in Volume 3, Chapter 3: Ecology and nature conservation of the ES (document reference F3.3) and the consultation report (document reference E1).
Biodiversity net gain should be applied after compliance with the mitigation hierarchy and does not change or replace existing environmental obligations, although compliance with those obligations will be relevant to the question of the baseline for assessing net gain and if they deliver an additional enhancement beyond meeting the existing obligation, that enhancement will count towards net gain. [Paragraph 4.6.10 of NPS EN-1]	Commitments made as part of the Transmission Assets relevant to ecology are set out in section 3.8 of Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document reference F3.3). This includes measures to conserve biodiversity in terms of ecological interests and complies with the mitigation hierarchy, with measures to avoid and minimise impacts as far as is possible. Habitat creation and enhancement measures proposed to achieve biodiversity benefit for the Transmission Assets are set out in **section 1.6** below. Wider ecological enhancement measures are set out in the Outline Ecological Management Plan (document reference J6).
Biodiversity net gain can be delivered onsite or wholly or partially off-site. We encourage details of any off-site delivery of biodiversity net gain to be set out within the application for development consent. [Paragraph 4.6.11 of NPS EN-1]	Biodiversity benefit for the permanent above ground infrastructure of the Transmission Assets is proposed to be provided within the Onshore Order Limits, as shown in **Figure 1.4** and **Figure 1.5**.

1.3.3 The National Planning Policy Framework

1.3.3.1 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019, 2021,023 and 2024 (Ministry of Housing Communities & Local Government, 2024) (formerly Department for Levelling Up, Housing and Communities). The NPPF sets out the Government's planning policies for England. **Table 1-2** sets out a summary of the NPPF policies relevant to this Outline Biodiversity Benefit Management Plan.

Table 1-2: Summary of NPPF requirements relevant to biodiversity benefit

Policy	Key provisions	How and where considered
Conserving and enhancing the natural environment. (NPPF Section 15)	Planning policies and decisions should contribute to and enhance the natural and local environment by: … 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 187 (d)).	Impacts on habitats and species, alongside Commitments proposed to avoid and/or reduce potential impacts are discussed in Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document reference F3.3). This document (**section 1.6**) sets out habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the Transmission Assets. The results of the calculations of biodiversity benefit are shown in **section 1.4.3** of this document. Wider ecological enhancement measures are set out in the Outline Ecological Management Plan (document reference J6).
Habitats and biodiversity (NPPF section 15)	To protect and enhance biodiversity and geodiversity, plans should: … b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity. (Paragraph 192 (b))	

1.3.4 Local planning policy

1.3.4.1 The onshore elements of the Transmission Assets are located within the administrative areas of Fylde Council, Blackpool Council, South Ribble Borough Council and Preston City Council (and Lancashire County Council at the County level). The relevant local planning policies applicable to biodiversity benefit are summarised in **Table 1-3**.

Table 1-3: Summary of local policy relevant to biodiversity benefit

Policy	Key provisions	How and where considered
Fylde Local Plan to 2032 (incorporating Partial Review) (Adopted December 2021)		
Strategic Policy ENV2	**Section 1. Nature Conservation Sites and Ecological networks** The Council is committed to ensuring the protection and enhancement of Fylde's biodiversity and geological assets and interests.	All relevant designated sites and areas for wildlife conservation and species afforded extra protections under The Conservation of Habitats and Species Regulations 2017 and Schedule 5 of the Wildlife and Countryside Act 1981 and ecological networks are identified in Volume 3, Annex 3.1: Onshore ecology desk study technical

Policy	Key provisions	How and where considered
	Proposals which primarily seek to enhance or conserve biodiversity will be supported in principle, subject to the consideration of other Local Plan policies Where development is considered necessary, adequate mitigation measures and compensatory habitat creation will be required through planning conditions and / or obligations, in order to secure measurable net gains for biodiversity. Measures should be put in place for the ongoing management of such features. **Section 2 Priority Species Protection** Planning permission will not be granted for development which would have an adverse effect on a priority species or its habitat, unless the benefits of the development outweigh the need to maintain the population of the species in situ. Should development be permitted that might have an adverse effect on a priority species or its habitat, planning conditions or agreements will be used to: • … • Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.	report (document reference F3.3.1) and Volume 3, Annex 3.3: Phase 1 habitat survey, national vegetation classification and hedgerow survey technical report of the ES (document reference F3.3.3). Assessment of the potential impacts and subsequent effects of the Transmission Assets, alongside Commitments, are discussed in Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document reference F3.3). This document (**section 1.6**) sets out habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the above ground permanent infrastructure proposed for the Transmission Assets. The results of the calculations of biodiversity benefit are shown in **section 1.4.3** of this document. Wider ecological enhancement measures are set out in the Outline Ecological Management Plan (document reference J6).
South Ribble Local Plan 2012-2026 (Adopted July 2021)		
Policy G16 – Biodiversity and nature conservation	The borough's Biodiversity and Ecological Network resources will be protected, conserved and enhanced. The level of protection will be commensurate with the site's status and proposals will be assessed having regard to the site's importance and the contribution it makes to wider ecological networks. … In addition development should have regard to the provisions set out below: a. The need to minimise impacts on biodiversity and providing net gains in biodiversity where possible by designing in wildlife and by ensuring that significant harm is avoided or, if unavoidable, is reduced or	Assessment of the potential impacts and subsequent effects of the Transmission Assets, alongside Commitments, are discussed in Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document reference F3.3). This document (**section 1.6**) sets out habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the Transmission Assets. The results of the calculation of biodiversity benefit are shown in **section 1.4.3** of this document. Wider ecological enhancement measures are set out in the Outline Ecological Management Plan (document reference J6).

Policy	Key provisions	How and where considered
	appropriately mitigated and/or, as a last resort, compensated;	
Blackpool Local Plan Part 2: Site Allocations and Development Management Policies (Adopted 2023)		
Policy DM35 – Biodiversity	1. Development proposals will be required to: a. result in no loss or harm to biodiversity through avoidance, adequate mitigation either on site or off site or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement; b. minimise the impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist in line with relevant legislation and guidance.	Assessment of the potential impacts and subsequent effects of the Transmission Assets, alongside Commitments, are discussed in Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document reference F3.3). This document (**section 1.6**) sets out habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the Transmission Assets. The results of the calculations of biodiversity benefit are shown in **section 1.4.3** of this document. Wider ecological enhancement measures are set out in the Outline Ecological Management Plan (document reference J6).
Preston Local Plan 2012-2026 Site Allocations and Development Management Policies (Adopted July 2015)		
Policy EN10 – Biodiversity and nature conservation	In Preston, Biodiversity and Ecological Network resources will be protected, conserved, restored and enhanced. … In addition development must adhere to the provisions set out below: a. The production of a net gain in biodiversity where possible by designing in wildlife and by ensuring that any adverse impacts are avoided or if unavoidable are reduced or appropriately mitigated and/or compensated …	Assessment of the potential impacts and subsequent effects of the Transmission Assets, alongside Commitments, are discussed in Volume 3, Chapter 3: Onshore ecology and nature conservation of the ES (document referenceF3.3). This document (**section 1.6**) sets out habitat creation and enhancement measures proposed to achieve measurable biodiversity benefit for the Transmission Assets. The results of the calculations of biodiversity benefit are shown in **section 1.4.3** of this document. Wider ecological enhancement measures are set out in the Outline Ecological Management Plan (document reference J6).

1.4 Delivering biodiversity benefit

1.4.1 Overview

1.4.1.1 As explained above, the Applicants intend to deliver biodiversity benefit for areas of permanent habitat loss associated with the permanent above-ground infrastructure of the Transmission Assets, as set out in **paragraph 1.2.2.1**. The Applicants consider that this is a proportionate and pragmatic approach to BNG and is in line with NPS EN-1 and the guidance in the NPPF for the delivery of no net loss and measurable net gains.

1.4.2 Approach

Pre-Consent

1.4.2.1 In order to demonstrate and quantify the biodiversity benefit of the development associated with the Transmission Assets the following steps were undertaken.

- Step 1: baseline habitat types, extent and condition were determined via Phase 1 habitat and National Vegetation Classification surveys undertaken in 2023 and 2024. Results of these surveys can be found in Volume 3, Annex 3.3: Phase 1 habitat, national vegetation classification and hedgerow survey technical report of the ES (document reference F3.3.3).
- Step 2: Identified habitats were then converted to the UK Habitat Classification system using the translation guidance in the Defra Statutory Biodiversity Metric 1.0.4. To facilitate assessment of habitats against the UK Habitat Classification habitat types used in the Statutory Biodiversity Metric with reference to botanical species composition and indicator species as presented in the manual (UKHab Ltd, 2023).
- Step 3: The condition of each habitat parcel was defined using the relevant condition criteria for the habitat types as presented in The Statutory Biodiversity Metric Technical Annex 1: Condition Assessment Sheets and Methodology (Defra, 2023).
- Step 4: The geographic extent (or lengths) of identified habitats was then quantified using ArcGIS software, with the habitat type, extent and condition entered into the Statutory Defra Biodiversity Metric 1.0.4 to obtain baseline biodiversity unit values (referred to hereafter as ‘baseline habitat value’).
- Step 5: The post construction geographic extent (or lengths) of identified habitats, taking into account the onshore substations, including landscaping, permanent access and biodiversity benefit area at Lea Marsh Fields was then calculated and entered into the Defra Statutory Biodiversity Metric 1.0.4 to obtain biodiversity unit values post construction (referred to hereafter as ‘post-construction habitat value’).

1.4.2.2 It should be noted that the habitat proposals to be created at Lea Marsh Fields have been designed to achieve biodiversity benefit units in conjunction with landscaping associated with the Morgan and Morecambe onshore substations. This calculation would be updated post-consent once the detailed designs of the substations is confirmed (see below).

Post Consent

1.4.2.3 The Applicants would undertake an updated BNG assessment using the latest statutory biodiversity metric calculator post-consent and following the completion of detailed design for each substation and its associated landscaping/ drainage. This would be informed by an updated UKHabs survey where necessary (e.g. where baseline survey data were > 2 years old).

1.4.2.4 A detailed Habitat Management and Monitoring Plan (HMMP) would also be prepared for the biodiversity benefit units. The HMMP would set out the long-term management regime (for the 30-year management period) and the condition targets for each habitat parcel against which the long-term monitoring would be undertaken.

1.4.3 Survey methods

Pre Consent

1.4.3.1 In order to inform the biodiversity benefit calculations for the baseline assessment, the following provides a summary of the survey methods used. Refer to Volume 3, Annex 3.3: Phase 1 habitat, hedgerow and national vegetation classification survey technical report of the ES (document reference F3.3.3) and, Volume 3, Annex 3.2: Onshore ecology and nature conservation survey methodologies of the ES (document reference F3.3.2) for further details.

1.4.3.2 Phase 1 habitat surveys were undertaken in accordance with the standard methodology set out in the Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat Survey - a technique for environmental audit (JNCC, 2010).

1.4.3.3 Habitats that could support notable plant communities, or diverse assemblages of plant species, including rare or scarce species associated with Sites of Special Scientific Interest (SSSI) were scoped in for NVC surveys.

1.4.3.4 Where access could not be obtained, information on protected and notable habitats within the survey area was collected from existing studies and datasets and aerial photographs (viewed via Google maps and Google Earth Pro). These are summarised in **Table 1-4** below.

Table 1-4: Summary of key desktop sources for Transmission Assets relevant to phase 1 habitat, hedgerow and NVC surveys

Title	Source	Year	Author
Multi-Agency Geographic Information for the Countryside (MAGIC)	Department for the Environment, Food & Rural Affairs (Defra)	2023	Defra

Title	Source	Year	Author
UK Protected Area Joint Nature Conservation Committee (JNCC)	JNCC website	2023	JNCC
A vegetation survey of the Fylde Sand Dunes and Saltmarshes	Fylde Sand Dune Project	2016	Graeme Skelcher

1.4.3.5 Hedgerow surveys, including condition assessment, were undertaken using the methodology detailed in the most up to date Natural England Biodiversity Metric (4.1 at the time of assessment).

1.4.3.6 Surveys of river habitats followed the guidelines set out in The Modular River Physical (MoRPh) Survey (Modular River Survey, 2022) and the Guide to Assessing River Condition (Gurnell *et al.*, 2022), which include many components of the Environment Agency's River Habitat Survey (2003).

Post Consent

1.4.3.7 An updated UKHabs survey would be undertaken where necessary (e.g. where baseline survey data were > 2 years old) in accordance with standard survey methodology. The UKHabs survey would include all area-based habitats and linear hedgerow and watercourse (ditch) habitats within the substation footprints.

1.4.3.8 As part of the updated UKHabs survey, the habitat condition assessments for each habitat parcel would also be updated using the Defra habitat condition assessment criteria.

1.5 Onshore biodiversity benefit principles

1.5.1 Overview

1.5.1.1 In accordance with the Defra BNG methodology and statutory metric (which was first published in February 2024, last updated 3 July 2025 when BNG became mandatory for some developments), the following sections of this Outline Biodiversity Benefit Management Plan provide an assessment of the onshore biodiversity benefit for area-based habitats and linear hedgerows and watercourses.

1.5.1.2 The location and geographic extent of baseline habitat types identified at the Morgan and Morecambe onshore substation areas, including the permanent access tracks are presented in **Figure 1.1**. Baseline habitat types identified at the biodiversity benefit area at Lea Marsh Fields are presented in **Figure 1.3**.

1.5.1.3 **Sections 1.5.2, 1.5.3** and **1.5.4** below summarise the results of steps 1 to 4 of **paragraph 1.4.2.1**, for area-based habitats and linear hedgerows and watercourses respectively. **Appendix A** to **Appendix I** of this Statement provide the full results of steps 1 to 4.

1.5.2 Area-based habitats

1.5.2.1 A summary of the habitat value (units) used to calculate the net change and biodiversity benefit for area-based habitat types is provided in **Table 1-5** below. This includes the baseline, retained, enhanced, created and overall habitat value of area-based habitat types.

1.5.2.2 The calculations provided in **Table 1-5** are based on the apportionment of land within the biodiversity benefit area at Lea Marsh Fields between Morgan and Morecambe. Specifically:

- 67% (or approximately 8.0 ha) of the biodiversity benefit area at Lea Marsh Fields would be required for the Morgan Offshore Wind Farm: Transmission Assets; and
- 33% (or approximately 4.0 ha) of the biodiversity benefit area at Lea Marsh Fields would be required for the Morecambe Offshore Wind Farm: Transmission Assets.

1.5.2.3 The apportionment of land within the biodiversity benefit area at Lea Marsh Fields is based on the areas needed for the permanent above-ground infrastructure for Morgan and Morecambe respectively.

1.5.2.4 Further detailed information, including the baseline assessment of habitat value, assessment of biodiversity value of post-construction habitat creation and assessment of biodiversity value of post-construction habitat enhancement are presented in **Appendix A**, **Appendix B** and **Appendix C** of this Outline Biodiversity Benefit Management Plans respectively.

Table 1-5: Summary of area-based habitat biodiversity values[2]

Location	Baseline habitat value	Retained habitat value	Enhanced habitat value	Created habitat value	Overall habitat value	Net change in habitat value	Change Biodiversity benefit
Morgan*							
Morgan onshore substation	80.60 units	1.38 units	9.81 units	84.22 units	95.41 units	+ 14.81 units	+ 18.37 %
Biodiversity benefit area at Lea Marsh Fields	16.00 units	0.00 units	0.00 units	65.41 units	65.41 units	+ 49.41units	N/A

[2] Minor errors in additive numbers may have occured due to rounding from the BNG metric spreadsheet

Location	Baseline habitat value	Retained habitat value	Enhanced habitat value	Created habitat value	Overall habitat value	Net change in habitat value	Change Biodiversity benefit
Total	**96.6 units**	**1.38 units**	**9.81 units**	**149.63 units**	**160.82 units**	**+ 64.22 units**	**+ 66.48 %[3]**
Morecambe							
Morecambe onshore substation	53.97 units	0.24 units	0.00 units	44.66 units	44.9 units	- 9.07 units	- 16.80 %
Biodiversity benefit area at Lea Marsh Fields	8.00 units	0.00 units	0.00 units	32.7 units	32.7 units	+ 24.7 units	N/A
Total	**61.97 units**	**0.24 units**	**0 units**	**77.36 units**	**77.60 units**	**+ 15.63 units**	**+ 25.22 %**
Transmission Assets							
Total	**158.57 units**	**1.62 units**	**9.81 units**	**227.00 units**	**238.42 units**	**+ 79.85 units**	**+ 50.36%**

*total % change is calculated as a percentage of the total Morgan / Morecambe onshore substation units

1.5.2.5 As shown in **Table 1-5** above, the baseline value of habitat types within the area of permanent above-ground infrastructure for the Transmission Assets and biodiversity benefit area at Lea Marsh Fields is 158.57 units. Within the area of permanent above-ground infrastructure for the Transmission Assets, a total of 152.63 units would be permanently lost during construction (see **Appendix A**). The habitat loss within the biodiversity benefit area at Lea Marsh Fields relates to the arable cropland (24.00 units) that will be removed to facilitate the proposed habitat creation measures.

1.5.2.6 **Table 1-5** indicates that a total of 1.62 units (see **Appendix A**) would be retained and proposed habitat enhancements associated with the onshore substations would provide 9.81 units **Appendix C**.

1.5.2.7 **Table 1-5** demonstrates that proposed habitat creation associated with the onshore substations would provide a total of 227.00 units (see **Appendix B**).

[3] The biodiversity benefit percentage for the project as a whole is not a straightforward sum of the onsite measures plus Lea Marsh fields due to the way the metric spreadsheet calculator tool takes into account the multiple parameters when calculating the overall net gain for a project (including the trading rules and the time taken to reach the target condition etc.). This is the same for all summed % changes for each unit type.

1.5.2.8 Based on these figures, the onshore biodiversity benefit for area-based habitats would be 238.42 units (227.00 + 1.62 + 9.81 = 238.42, accounting for rounding to two decimal places of the original numbers provided in the BNG metric). This represents a net increase of +79.85 units (227.00 – 158.57 = 79.85) and an overall net biodiversity benefit of **+50.36**%.

1.5.2.9 Further details on the habitat enhancement and creation measures proposed to achieve this net biodiversity benefit are set out in **sections 1.6.2** and **0** below.

1.5.3 Hedgerows

1.5.3.1 A summary of the habitat value (units) used to calculate the net change and biodiversity benefit for hedgerows is provided in **Table 1-6** below. This includes the baseline, retained, enhanced, created and overall habitat value of hedgerows.

1.5.3.2 Further detailed information, including the baseline assessment of habitat value, assessment of biodiversity value of hedgerow creation and assessment of biodiversity value of hedgerow enhancement assessment are presented in **Appendix D**, **Appendix E** and **Appendix F** respectively at the end of this Outline Biodiversity Benefit Management Plan.

Table 1-6: Summary of hedgerow biodiversity values[4]

Location	Baseline habitat value	Retained habitat value	Enhanced habitat value	Created habitat value	Overall habitat value	Net change in habitat value	Change Biodiversity benefit
Morgan							
Morgan onshore substation	17.01 units	7.56 units	2.21 units	16.52 units	26.29 units	+ 9.28 units	+ 54.56%
Morecambe							
Morecambe onshore substation	9.53 units	4.60 units	0.00 units	7.98 units	12.57 units	+ 3.04 units	+ 31.93%
Transmission Assets							
Total	**26.54 units**	**12.16 units**	**2.21 units**	**24.50 units**	**38.86 units**	**12.32units**	**+ 44.43%**

1.5.3.3 As shown in **Table 1-6** above, the baseline value of hedgerows within the onshore substations, including landscaping, permanent access and biodiversity benefit area at Lea Marsh Fields is 26.54 units (see **Appendix D**).

[4] No hedgerows will be created at Lea Marsh fields.

1.5.3.4 **Table 1-6** indicates that a total of 12.16 units would be retained (see **Appendix D**) and proposed habitat enhancements associated with the onshore substation would provide 2.21 units (see **Appendix F**).

1.5.3.5 **Table 1-6** demonstrates that that proposed hedgerow creation associated with the onshore substations would provide a total of 24.50 units (see **Appendix E**).

1.5.3.6 Based on these figures, the onshore biodiversity benefit for hedgerows would be 38.86 units (12.16 + 2.21 + 24.50 = 38.86). This represents a net increase of + 12.32 units (38.86 - 26.54 = 12.32) and an overall net biodiversity benefit of **+ 44.43%**.

1.5.3.7 Further details on the hedgerow enhancement and creation measures proposed to achieve this net biodiversity benefit are set out in **sections 1.6.2** and **1.6.3** below.

1.5.4 Watercourses

1.5.4.1 A summary of the habitat value (units) used to calculate the net change and biodiversity benefit for watercourses is provided in **Table 1-7** below. This includes the baseline, retained, enhanced, created and overall habitat value of watercourses.

1.5.4.2 Further detailed information, including the baseline assessment of watercourse value, assessment of biodiversity value of watercourse creation and assessment of biodiversity value of watercourse enhancement assessment are presented in **Appendix G**, **Appendix H** and **Appendix I** at the end of this Outline Biodiversity Benefit Management Plan respectively.

Table 1-7: Summary of watercourse biodiversity values[5]

Location	Baseline habitat value	Retained habitat value	Enhanced habitat value	Created habitat value	Overall habitat value	Net change in habitat value	Change Biodiversity benefit
Morgan							
Morgan onshore substation	4.31 units	1.88 units	1.33 units	0 units	3.21 units	-1.0 units	+91.77%
Biodiversity benefit area at Lea Marsh Fields	0 units	0 units	0 units	5.07 units	5.07 units	+ 5.07 units	
Morecambe							
Morecambe onshore substation	0 units	0 units	0 units	0 units	0 units	0 units	0%
Transmission Assets							
Total	**4.31 units**	**1.88 units**	**1.33 units**	**5.07 units**	**8.27 units**	**+ 4.07 units**	**+ 91.77%**

1.5.4.3 As shown in **Table 1-7** above, the baseline value of watercourses within the onshore substations, including landscaping, permanent access and biodiversity benefit area at Lea Marsh Fields is 4.31 units (see **Appendix G**).

1.5.4.4 **Table 1-7** indicates that a total of 1.88 units would be retained (see **Appendix G**) and proposed habitat enhancements associated with the onshore substation would provide 1.33 units (see **Appendix I).**

1.5.4.5 **Table 1-7** demonstrates that that proposed watercourse creation associated with the onshore substations (at Lea Marsh Biodiversity benefit area) would provide a total of 5.07 units (see **Appendix H**).

1.5.4.6 Based on these figures, the onshore biodiversity benefit for watercourses would be 8.27 units (1.88 + 1.33 + 5.07 = 8.27). This represents a net increase of + 3.96 units (78.27 - 4.31 = 3963) and an overall net biodiversity benefit of **+ 91.77%.**

1.5.4.7 Further details on the watercourse enhancement and creation measures proposed to achieve this net biodiversity benefit are set out in **sections 1.6.2** and **1.6.3** below.

[5] Morecambe onshore substation does not impact any watercourse units therefore there is no requirement for that project to deliver a 10% net gain for watercourse units.

1.6 Pre Consent approach to habitat creation and enhancement

1.6.1 Overview

1.6.1.1 This section of the Outline Biodiversity Benefit Management Plan provides a summary of the indicative habitat creation and enhancement measures proposed to achieve biodiversity benefit for the permanent habitat loss associated with the permanent above ground infrastructure area for the Transmission Assets.

1.6.1.2 The measures for habitat creation and enhancement have been informed using the outcome of the biodiversity benefit assessments for area-based habitats and linear hedgerows, and watercourses presented in **section 1.4.2** of this Outline Biodiversity Benefit Management Plan above.

1.6.1.3 However, the habitat creation and enhancement proposals remain outline at this stage in the DCO application process. The final habitat creation and enhancement proposals will be based on detailed landscaping designs for the onshore substations and biodiversity benefit area at Lea Marsh Fields.

1.6.1.4 The location and geographic extent of the habitat creation and enhancement proposals at the onshore substations and biodiversity benefit area at Lea Marsh Fields is presented in **Figure 1.4** and **Figure 1.5** of this Outline Biodiversity Benefit Management Plan respectively. Where habitat creation and enhancement has been proposed on temporary working areas (e.g. the onshore substation temporary areas), final proposals will be subject to landowner agreement.

1.6.2 Habitat enhancements

1.6.2.1 No habitat enhancements are proposed at the Morecambe onshore substation. All existing habitats at the Morecambe onshore substation are proposed to be replaced by newly created high-value habitats (i.e. habitat creation). Therefore, this section only describes enhancements of existing habitats at the Morgan onshore substation.

Area-based habitats

1.6.2.2 Grassland habitat enhancement is proposed for areas of grassland retained at the Morgan substation site (see **Figure 1.4** and **Figure 1.5**).

1.6.2.3 The existing grassland habitat at this location comprises modified grassland in poor condition and “other neutral grassland” in poor condition. It is proposed to enhance these areas and establish an area of “other neutral grassland” in good condition.

Hedgerows

1.6.2.4 Hedgerow enhancement is proposed for a length of retained native species-rich hedgerow at the Morgan substation site (see **Figure 1.4** and **Figure 1.5**). Where hedgerows have been proposed on temporary working areas (e.g. the onshore substation temporary area), final proposals will be subject to landowner agreement.

1.6.2.5 The existing hedgerow at this location comprises species-rich hedgerow in poor condition. It is proposed to enhance this length of hedgerow and establish a species rich hedgerow in good condition.

1.6.2.6 To establish a length of species rich hedgerow in good condition at the Morgan substation site, the following indicative habitat management measures are proposed.

- Planting up any gaps in the existing species rich hedgerow with native species appropriate to the local area and soil conditions.
- Introduction of a management regime to improve shape of hedgerow in line with criteria for good condition as set out in Defra BNG condition assessment sheets.

Watercourses

1.6.2.7 Habitat enhancements along a section of Dow Brook at the Morgan substation site could be undertaken to provide biodiversity benefit.

1.6.2.8 Given the status of Dow Brook as a main watercourse, any measures proposed to improve the condition of the watercourse from poor to good condition would be agreed with the Environment Agency prior to the commencement of works, and would be contingent on obtaining any relevant permissions, consents and/or licenses.

1.6.3 Habitat creation

Area-based habitats

Grassland

1.6.3.1 Areas of grassland creation are proposed at the Morgan and Morecambe onshore substations and biodiversity benefit area at Lea Marsh Fields. These areas will comprise the creation of other neutral grassland and lowland meadow grassland using seed mixes appropriate to the area and local soil conditions (see **Figure 1.4** and **Figure 1.5**). Where grassland has been proposed on temporary working areas (e.g. the onshore substation temporary area), final proposals will be subject to landowner agreement.

1.6.3.2 The specific areas of grassland creation within the biodiversity benefit area at Lea Marsh Fields (see **Figure 1.6**) will be provided as part of the detailed design stage. **Figure 1.7** within **Appendix J** provides indicative locations of proposed enhancement measures at Lea Marsh Fields.

Woodland and scrub

1.6.3.3 Both woodland and potentially scrub planting is proposed at the Morgan and Morecambe onshore substations (see **Figure 1.4** and **Figure 1.5**). In addition, scrub planting will also be undertaken within the biodiversity benefit area at Lea Marsh Fields.

1.6.3.4 The specific areas of woodland and scrub creation within the biodiversity benefit area at Lea Marsh Fields (see **Figure 1.6**) will be provided as part of the detailed design stage. **Figure 1.7** within **Appendix J** provides indicative locations of proposed enhancement measures at Lea Marsh Fields.

1.6.3.5 To achieve good condition for the newly created areas of scrub and moderate condition for area of woodland, the following indicative management measures are proposed.

- Planting of species mixes characteristic of communities appropriate to the local area and soil conditions.
- Management to encourage a varied age structure of woody species and a diverse ground flora.
- For larger areas of trees and scrub, rides/glades would be created within planting areas to provide diversity of habitat structure.
- Management to provide transition zones between scrub and adjacent grassland (rather than an abrupt transition between habitat types).

Ponds

1.6.3.6 No additional ponds are proposed at the Morgan or Morecambe onshore substations (beyond those provided to compensate for the permanent loss of ponds during the construction of the Morgan onshore substation and the onshore export cable corridor for Morecambe OWL – refer to the Outline Ecological Management Plan (document reference J6)). Attenuation ponds are proposed at the onshore substations, however their primary function is to manage surface water runoff and control discharge from the site. The design of the attenuation ponds and the potential to provide ecological benefits is set out in the Outline Operational Drainage Management Plan (document reference J10).

1.6.3.7 In addition, further ponds could be created within the biodiversity benefit area at Lea Marsh Fields (see **Figure 1.6**).

1.6.3.8 The specific areas for pond creation within the biodiversity benefit area at Lea Marsh Fields (see **Figure 1.6**) will be provided as part of the detailed design stage. **Figure 1.7** within **Appendix J** provides indicative locations of proposed enhancement measures at Lea Marsh Fields.

1.6.3.9 To achieve good condition for the newly created ponds, the following indicative management measures are proposed.

- Digging of ponds at the appropriate depth to ensure ponds do not dry out.
- Planting of aquatic, emergent and marginal native species of plants at the newly created ponds.

Hedgerows

1.6.3.10 Additional hedgerows could be created at the Morgan and Morecambe onshore substations and adjacent sections of permanent access tracks (see **Figure 1.4** and **Figure 1.5**). No additional hedgerows are proposed within the biodiversity benefit area at Lea Marsh Fields.

1.6.3.11 To achieve moderate condition for the newly created hedgerows planting up any gaps in the newly created hedgerow with native species appropriate to the local area and soil conditions could be undertaken.

Watercourses

1.6.3.12 No additional watercourses are proposed at the Morgan or Morecambe onshore substations. However, additional ditches could be created within the biodiversity benefit area at Lea Marsh Fields (see **Figure 1.6**).

1.6.3.13 The specific areas for watercourse creation within the biodiversity benefit area at Lea Marsh Fields (see **Figure 1.6**) will be provided as part of the detailed design stage. **Figure 1.7** within **Appendix J** provides indicative locations of proposed enhancement measures at Lea Marsh Fields

1.6.3.14 To achieve good condition for the newly created ditches, the following indicative management measures are proposed.

- Creation of ditches with appropriate profile to encourage growth of aquatic, emergent and marginal species.
- Regular management to prevent ditches from becoming choked and to maintain water flows, and removal of arisings.

1.7 Habitat Condition Targets for Management

1.7.1.1 The habitat condition criteria against which the habitat creation and enhancement proposals set out in **sections 1.5** and **1.6** are measured are set out in **Appendix M**. For each of the broad habitat types proposed, the BNG calculation undertaken has assumed a target habitat conditions of either 'moderate' or 'good' depending on the habitat type (as set out above). A summary of the management measures that would be implemented to achieve these target conditions within the 30-year timeframe of the long-term management plan are also set out in the tables.

1.7.1.2 Detailed timetables for habitat creation and enhancement of the biodiversity benefit areas, and long-term management and monitoring, would be provided in the detailed Biodiversity Management Plan(s).

1.7.1.3 The lifetime of the long-term management plan would be 30 years from completion of the habitat enhancement/ creation measures, in accordance with the Defra guidance for Habitat Monitoring and Maintenance Plans (HMMP) for statutory BNG

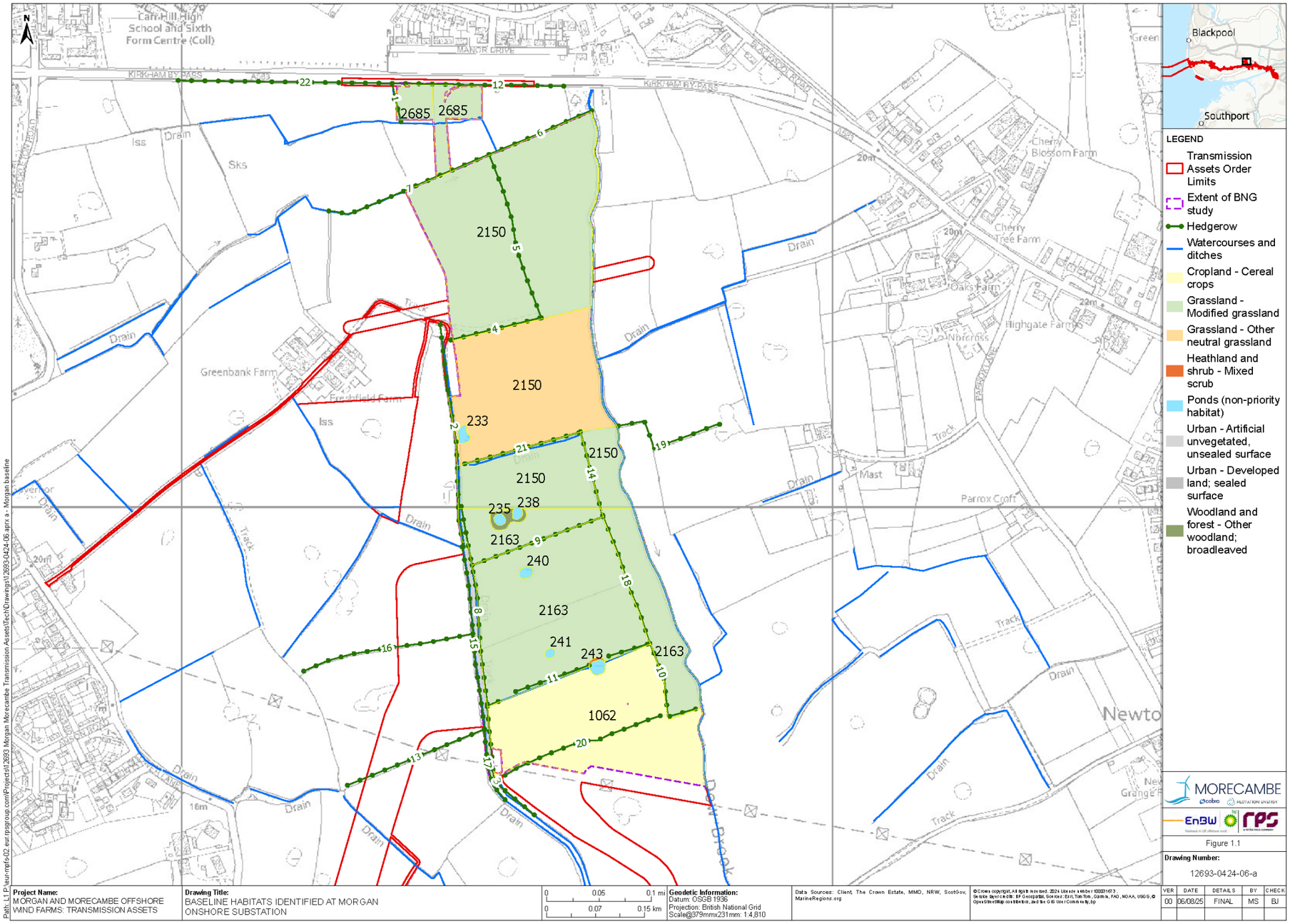


Figure 1.1: Baseline habitats identified at Morgan onshore substation

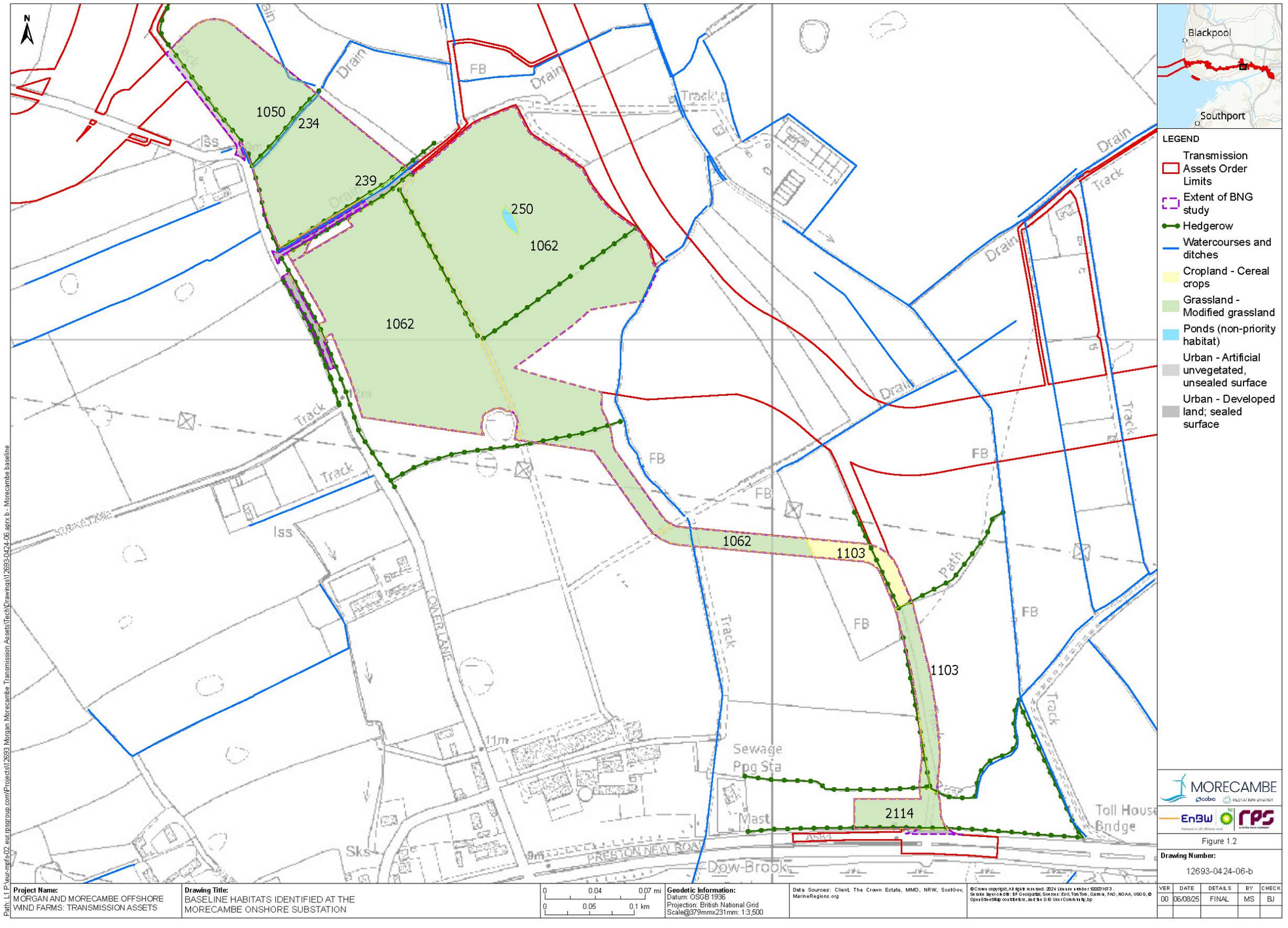


Figure 1.2: Baseline habitats identified at Morecambe onshore substation

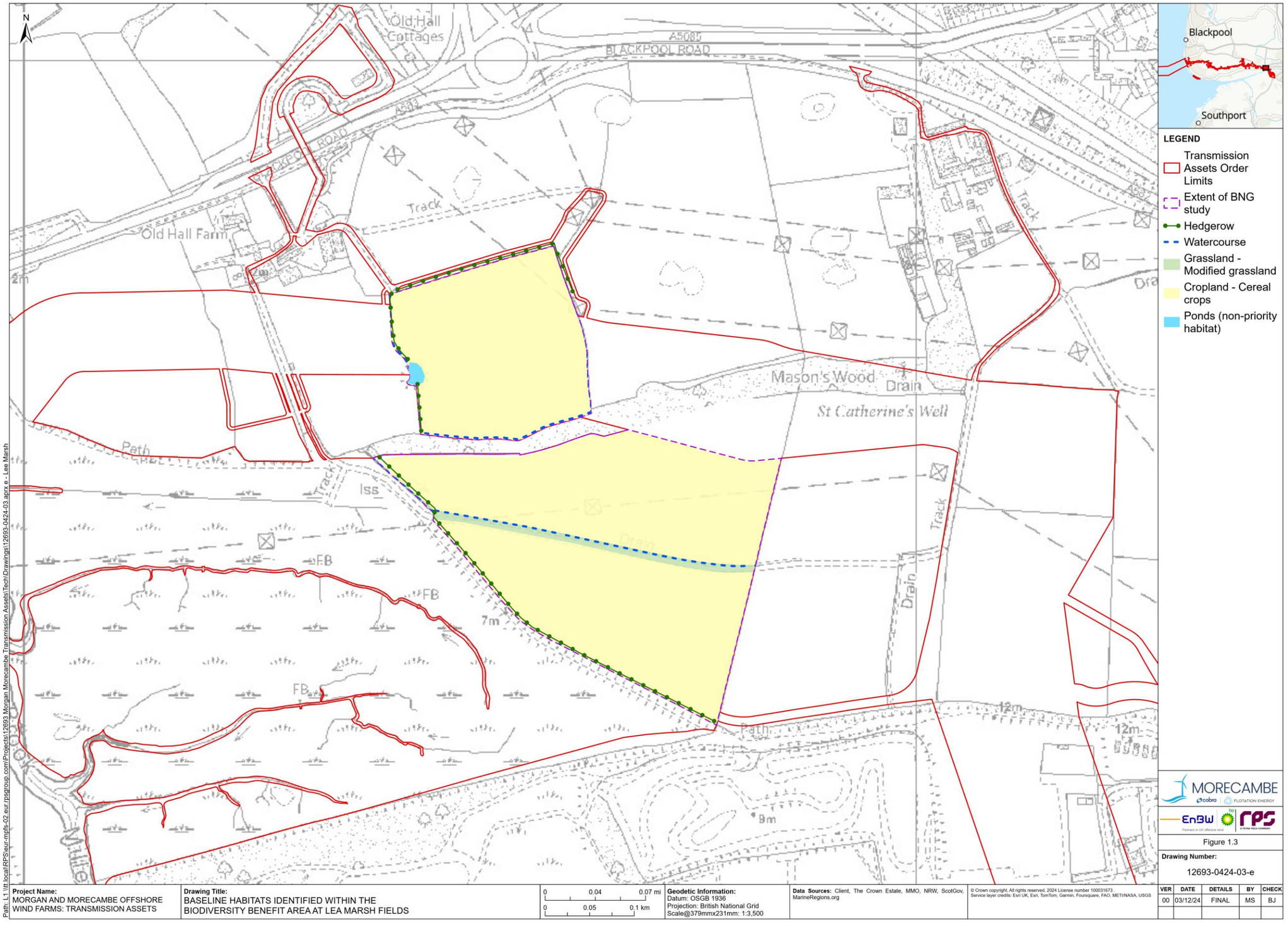


Figure 1.3: Baseline habitats identified within the biodiversity benefit area at Lea Marsh Fields

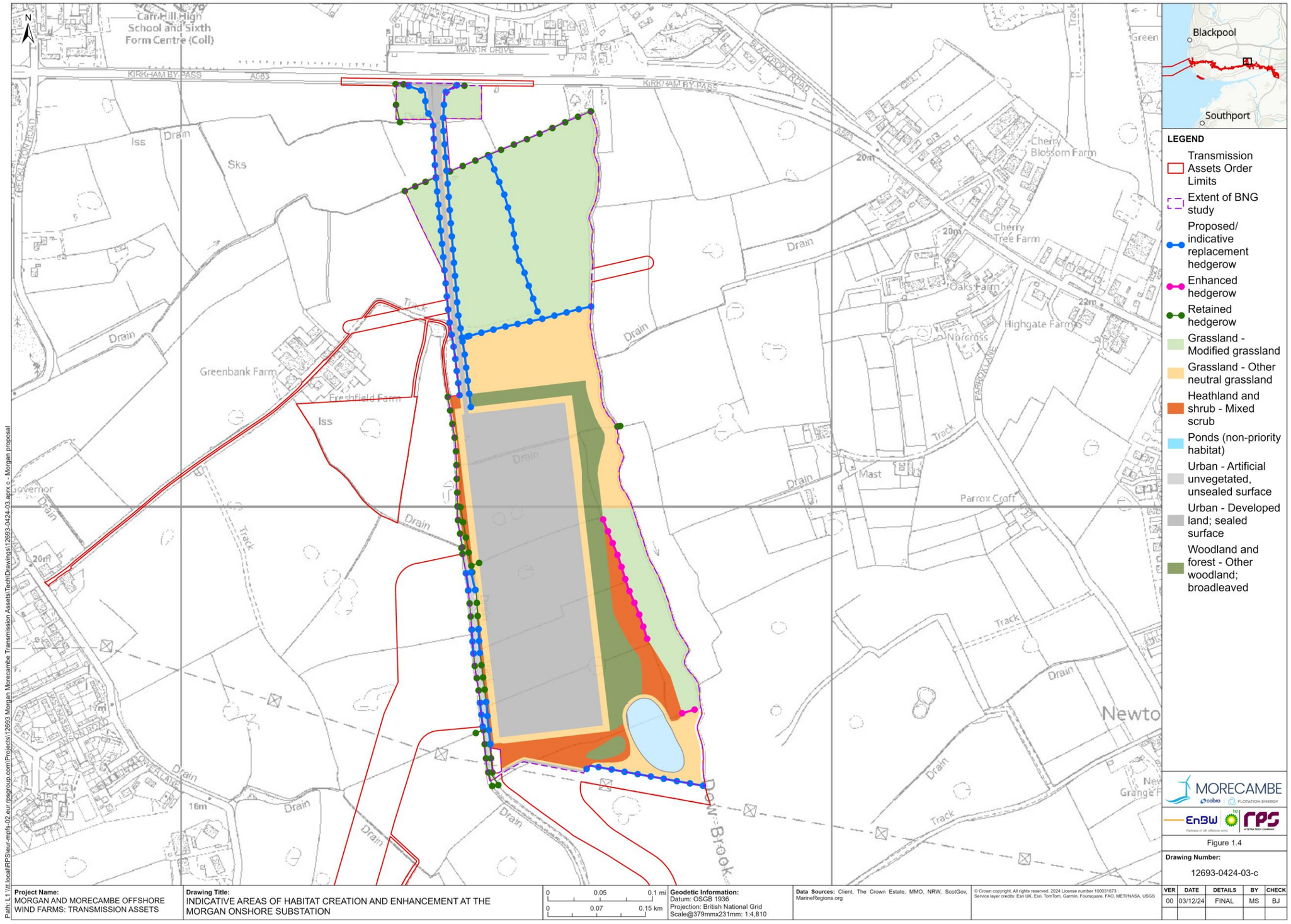


Figure 1.4: Indicative areas of habitat creation and enhancement at the Morgan onshore substation

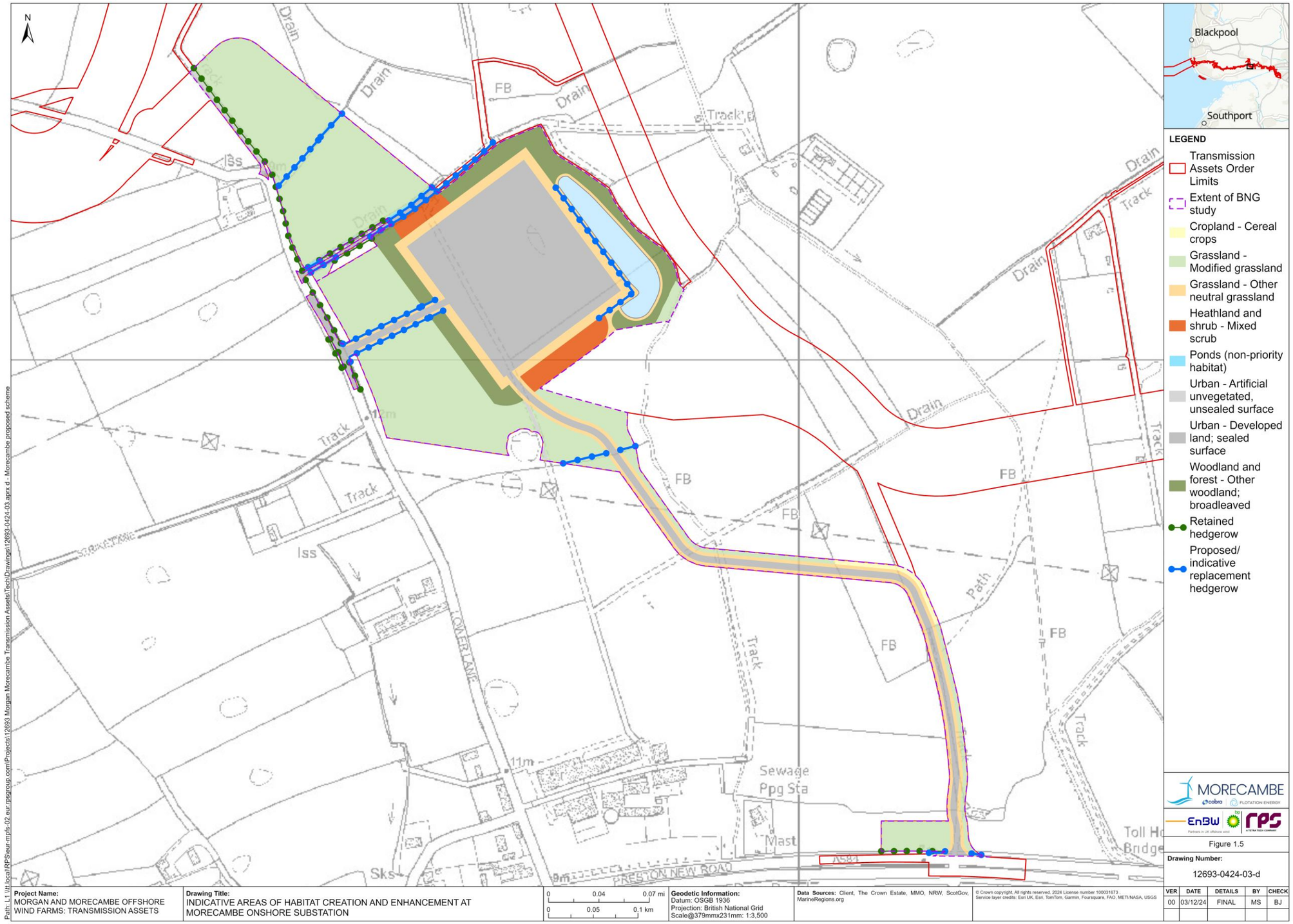


Figure 1.5: Indicative areas of habitat creation and enhancement at Morecambe onshore substation

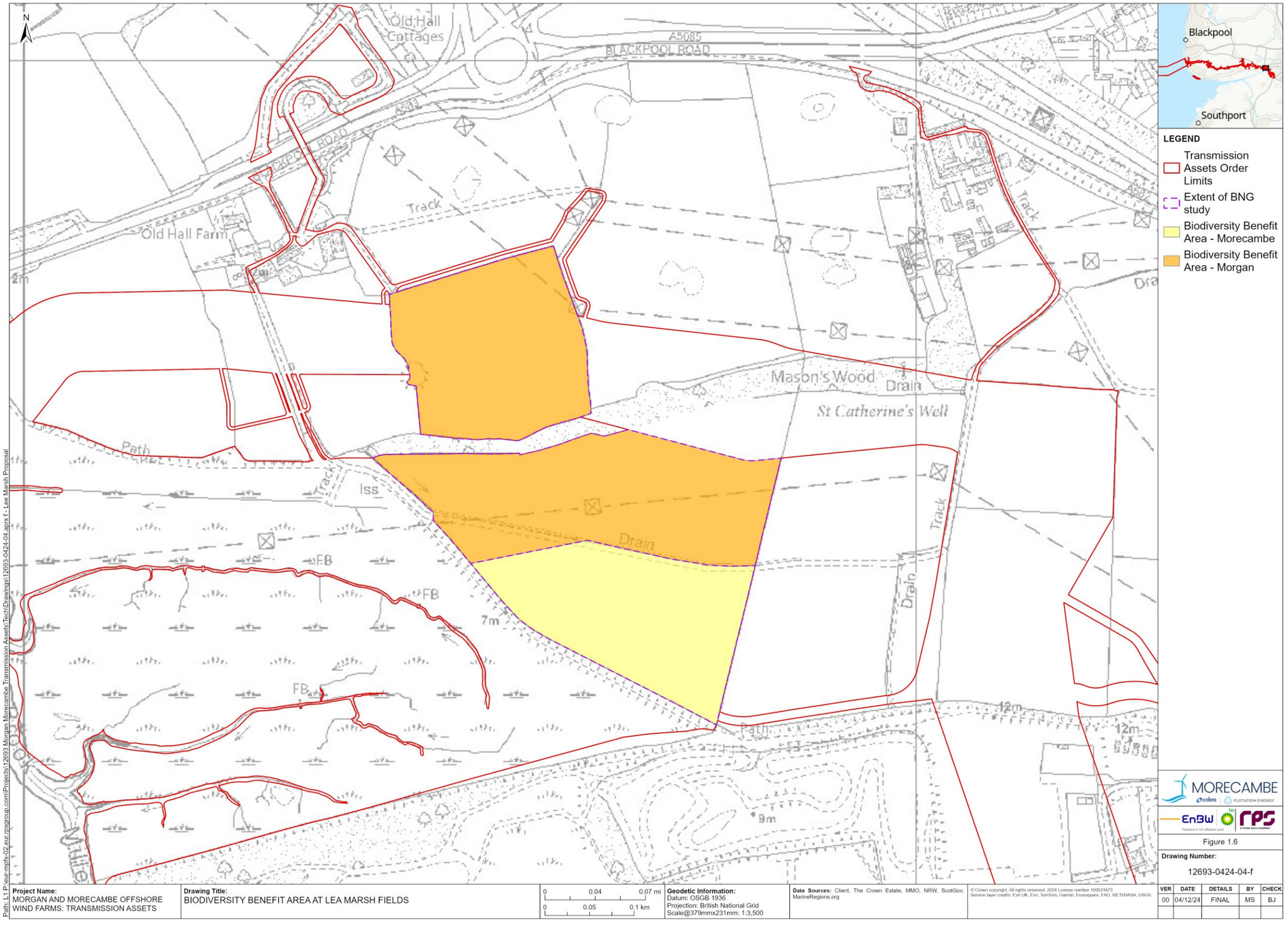


Figure 1.6: Biodiversity benefit area at Lea Marsh Fields

1.8 Hierarchy

1.8.1.1 This Outline Biodiversity Benefit Management Plan presents the Applicants' preferred position to deliver biodiversity benefit at Lea Marsh Fields. However, in the case that biodiversity benefit cannot be delivered through these preferred means, the Applicants proposed a hierarchy (as presented in the Biodiversity Benefit Supporting Statement submitted at Deadline 5 (REP5-145)) to ensure the delivery of a positive biodiversity outcome. This hierarchy is presented below in order of preference:

- Option 1: deliver biodiversity benefit (as per this Outline Biodiversity Benefit Management Plan) with the proposed measures at Lea Marsh Fields to deliver in excess of 10% biodiversity benefit;
- Option 2: to only deliver 10% biodiversity benefit with the majority delivered at the onshore substations and reducing the total area of land taken at Lea Marsh Fields to cover the shortfall of delivering 10% biodiversity benefit (i.e. watercourse units for Morgan OWL and habitat units for Morecambe OWL);
- Option 3: the shortfall of delivering 10% biodiversity benefit to be delivered by the funding of local biodiversity projects to maximise the benefit to local biodiversity. Projects would be considered on the basis of their potential to create ecological connectivity and their ability to support locally protected habitats and species. Projects that were aimed at supporting larger strategic scale delivery within the local area would also be considered
- Option 4: the shortfall of delivering 10% biodiversity benefit to be delivered through the purchase of Biodiversity Credits (this refers to either statutory BNG credits purchased from the UK Government or BNG offsetting units purchased from a private provider).

1.8.1.2 The approach to biodiversity benefit delivery would be confirmed and agreed as part of the discharge of DCO Requirement 26.

1.9 Summary

1.9.1.1 The Outline Biodiversity Benefit Management Plan provides an assessment of the overall benefit to onshore biodiversity associated with the Transmission Assets, specifically, the onshore substations, associated access tracks and biodiversity benefit area at Lea Marsh Fields.

1.9.1.2 The Applicants have taken a responsible and pragmatic approach to meeting the relevant policies in EN-1 and EN-5. While BNG is not a legal requirement for NSIPs, the project voluntarily delivers measurable biodiversity benefits aligned with national policy objectives, balancing environmental outcomes with land use and stakeholder considerations.

1.9.1.3 The Applicants proposed a hierarchy for the delivery of biodiversity benefit. The preferred approach is the delivery of biodiversity gain with measures at Lea Marsh Fields. The total predicted biodiversity net gains for Option 1 are **50.36%** for area-based habitat units, **44.43%** for hedgerow units and **91.77%** for linear watercourse units. A summary of the biodiversity gains for Option 1 and the alternative options is presented in **Table 1-8** to **Table 1-11**.

Table 1-8: Morgan Onshore Substation – Option 1

BNG Habitat Units	Baseline		BNG at Substation Retained/ Enhanced/ Created Habitats		BNG without Lea Marsh Fields		BNG Units delivered at Lea Marsh Fields Created Habitats		OPTION 1: BNG with Lea Marsh Fields	
	BNG Units	Area/ length	BNG Units	Area	Change in BNG Units	% BNG	BNG Units	Area/ length	Change in BNG Units	% BNG
Area Habitat Units	80.60	27.19 ha	95.41	27.19 ha	+14.81	**+18.37%**	65.41	8 ha	+64.22	**+66.48%**
Linear Hedgerow Units	17.01	3.17 km	26.29	3.46 km	+9.28	**+54.56%**	0	0	+9.28	**+54.56%**
Linear Watercourse Units	4.31	1.14 km	3.21	0.48 km	-1.0	**-23.20%**	5.07	0.90 km	+4.07	**+91.77%**

Table 1-9: Morgan Onshore Substation - Alternative Options

BNG Habitat Units	Baseline		BNG at Substation Retained/ Enhanced/ Created Habitats		BNG without Lea Marsh Fields		BNG Units at Lea Marsh Fields (reduced to 10%) Created Habitats		OPTION 2: 10% BNG with Lea Marsh Fields		OPTION 3 and 4: 10% BNG without Lea Marsh Fields, BNG units delivered using funding of alternative projects or offsetting credits (purchased at a ratio of 2:1)
	BNG Units	Area/ length	BNG Units	Area	Change in BNG Units	% BNG	BNG Units	Area/ length	Change in BNG Units	% BNG	BNG Units Required for Offsetting
Area Habitat Units	Not required – 10% minimum BNG met at Morgan onshore substation										
Linear Hedgerow Units	Not required – 10% minimum BNG met at Morgan onshore substation										
Linear Watercourse Units	4.31	1.14 km	3.21	0.48 km	-1.0	**-23.20%**	1.53	0.35 km	+0.43	**+10%**	1.53 x 2 = 3.06

Table 1-10: Morecambe Onshore Substation – Option 1

MBNG Habitat Units	Baseline		BNG at Substation Retained/ Enhanced/ Created Habitats		BNG without Lea Marsh Fields		BNG Units delivered at Lea Marsh Fields Created Habitats		OPTION 1: BNG Units delivered with Lea Marsh Fields	
	BNG Units	Area/ length	BNG Units	Area	Change in BNG Units	% BNG	BNG Units	Area/ length	Change in BNG Units	% BNG
Area Habitat Units	53.97	14.04 ha	44.9	14.04 ha	-9.07	**-16.80%**	32.7	4 ha	+15.63	**+25.22%**
Linear Hedgerow Units	9.53	1.75 km	12.57	1.54 km	+3.04	**+ 31.93%**	0	0	+3.04	**+ 31.93%**
Linear Watercourse Units	None									

Table 1-11: Morecambe Onshore Substation – Alternative Options

BNG Habitat Units	Baseline		BNG at Substation Retained/ Enhanced/ Created Habitats		BNG without Lea Marsh Fields		BNG Units delivered at Lea Marsh Fields (reduced to 10%) Created Habitats		OPTION 2: 10% BNG with Lea Marsh Fields		OPTIONS 3 and 4: 10% BNG without Lea Marsh Fields, BNG units delivered using funding of alternative projects or offsetting credits (purchased at a ratio of 2:1)
	BNG Units	**Area/ length**	**BNG Units**	**Area**	**Change in BNG Units**	**% BNG**	**BNG Units**	**Area/ length**	**Change in BNG Units**	**% BNG**	**BNG Units Required for Offsetting**
Area Habitat Units	53.97	14.04 ha	44.9	14.04 ha	-9.07	**-16.80%**	14.47	2.5 ha	+5.4	**+ 10%**	14.47 x 2 = 28.94
Linear Hedgerow Units	Not required – 10% minimum BNG met at Morecambe onshore substation										
Linear Watercourse Units	None										

1.10 References

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A.1.1 Baseline assessment of biodiversity value of area-based habitats

Habitat type	Area (ha)	Distinctiveness score		Condition score		Strategic significance score		Value (biodiversity units)[1]	Area of habitat retained	Area of habitat enhanced	Baseline value of retained habitats	Baseline value of enhanced habitats	Area of habitat lost (ha)	Value of habitats lost	Location
Cereal crops	4.54	Low	2	Condition Assessment N/A	1	Low Strategic Significance	1	9.07	0.06	0.00	0.11	0.00	4.48	8.96	Morgan Substation
Other neutral grassland	0.12	Medium	4	Moderate	2	Low Strategic Significance	1	0.98		0.12	0.00	0.98	0.00	0.00	Morgan Substation
Modified grassland	1.31	Low	2	Poor	1	Low Strategic Significance	1	2.63		1.31	0.00	2.63	0.00	0.00	Morgan Substation
Modified grassland	0.35	Low	2	Poor	1	Low Strategic Significance	1	0.71		0.35	0.00	0.71	0.00	0.00	Morgan Substation
Modified grassland	6.80	Low	2	Poor	1	Low Strategic Significance	1	13.61	0.00		0.00	0.00	6.80	13.61	Morgan Substation
Modified grassland	8.46	Low	2	Poor	1	Low Strategic Significance	1	16.91	0.23		0.47	0.00	8.22	16.45	Morgan Substation
Modified grassland	0.85	Low	2	Poor	1	Low Strategic Significance	1	1.71	0.00		0.00	0.00	0.85	1.71	Morgan Substation
Other neutral grassland	0.00	Medium	4	Moderate	2	Low Strategic Significance	1	0.00	0.00		0.00	0.00	0.00	0.00	Morgan Substation
Other neutral grassland	4.10	Medium	4	Moderate	2	Low Strategic Significance	1	32.80	0.10		0.80	0.00	4.00	32.00	Morgan Substation
Mixed scrub	0.01	Medium	4	Moderate	2	Low Strategic Significance	1	0.07	0.00		0.00	0.00	0.01	0.07	Morgan Substation
Ponds (non-priority habitat)	0.03	Medium	4	Moderate	2	Low Strategic Significance	1	0.20	0.00		0.00	0.00	0.03	0.20	Morgan Substation

Habitat type	Area (ha)	Distinctiveness score		Condition score		Strategic significance score		Value (biodiversity units)[1]	Area of habitat retained	Area of habitat enhanced	Baseline value of retained habitats	Baseline value of enhanced habitats	Area of habitat lost (ha)	Value of habitats lost	Location
Ponds (non-priority habitat)	0.02	Medium	4	Moderate	2	Low Strategic Significance	1	0.20	0.00		0.00	0.00	0.02	0.20	Morgan Substation
Ponds (non-priority habitat)	0.02	Medium	4	Moderate	2	Low Strategic Significance	1	0.16	0.00		0.00	0.00	0.02	0.16	Morgan Substation
Ponds (non-priority habitat)	0.05	Medium	4	Moderate	2	Low Strategic Significance	1	0.36	0.00		0.00	0.00	0.05	0.36	Morgan Substation
Ponds (non-priority habitat)	0.04	Medium	4	Moderate	2	Low Strategic Significance	1	0.31	0.00		0.00	0.00	0.04	0.31	Morgan Substation
Ponds (non-priority habitat)	0.03	Medium	4	Moderate	2	Low Strategic Significance	1	0.25	0.00		0.00	0.00	0.03	0.25	Morgan Substation
Artificial unvegetated, unsealed surface	0.35	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.34		0.00	0.00	0.01	0.00	Morgan Substation
Developed land; sealed surface	0.02	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.00		0.00	0.00	0.02	0.00	Morgan Substation
Other woodland; broadleaved	0.08	Medium	4	Moderate	2	Low Strategic Significance	1	0.62	0.00		0.00	0.00	0.08	0.62	Morgan Substation
Cereal crops	0.28	Low	2	Condition Assessment N/A	1	Low Strategic Significance	1	0.56	0.00		0.00	0.00	0.28	0.56	Morecambe substation
Modified grassland	0.00	Low	2	Moderate	2	Low Strategic Significance	1	0.00	0.00		0.00	0.00	0.00	0.00	Morecambe substation
Modified grassland	2.81	Low	2	Moderate	2	Low Strategic Significance	1	11.26	0.00		0.00	0.00	2.81	11.25	Morecambe substation
Modified grassland	9.64	Low	2	Moderate	2	Low Strategic Significance	1	38.56	0.05		0.19	0.00	9.59	38.37	Morecambe substation

Habitat type	Area (ha)	Distinctiveness score		Condition score		Strategic significance score		Value (biodiversity units)[1]	Area of habitat retained	Area of habitat enhanced	Baseline value of retained habitats	Baseline value of enhanced habitats	Area of habitat lost (ha)	Value of habitats lost	Location
Modified grassland	0.38	Low	2	Moderate	2	Low Strategic Significance	1	1.54	0.00		0.00	0.00	0.38	1.54	Morecambe substation
Modified grassland	0.01	Low	2	Moderate	2	Low Strategic Significance	1	0.05	0.01		0.05	0.00	0.00	0.00	Morecambe substation
Modified grassland	0.35	Low	2	Moderate	2	Low Strategic Significance	1	1.41	0.00		0.00	0.00	0.35	1.41	Morecambe substation
Ponds (non-priority habitat)	0.03	Medium	4	Moderate	2	Low Strategic Significance	1	0.24	0.00		0.00	0.00	0.03	0.24	Morecambe substation
Ponds (non-priority habitat)	0.02	Medium	4	Moderate	2	Low Strategic Significance	1	0.16	0.00		0.00	0.00	0.02	0.16	Morecambe substation
Ponds (non-priority habitat)	0.03	Medium	4	Moderate	2	Low Strategic Significance	1	0.20	0.00		0.00	0.00	0.03	0.20	Morecambe substation
Artificial unvegetated, unsealed surface	0.09	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.06		0.00	0.00	0.03	0.00	Morecambe substation
Artificial unvegetated, unsealed surface	0.16	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.00		0.00	0.00	0.16	0.00	Morecambe substation
Developed land; sealed surface	0.10	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.01		0.00	0.00	0.09	0.00	Morecambe substation
Developed land; sealed surface	0.02	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.00		0.00	0.00	0.02	0.00	Morecambe substation
Developed land; sealed surface	0.11	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0.00	0.04		0.00	0.00	0.08	0.00	Morecambe substation
Cereal crops	12.00	Low	2	Condition Assessment N/A	1	Low Strategic Significance	1	24.00			0.00	0.00	12.00	24.00	Lee Marsh Fields

Habitat type	Area (ha)	Distinctiveness score		Condition score		Strategic significance score		Value (biodiversity units)[1]	Area of habitat retained	Area of habitat enhanced	Baseline value of retained habitats	Baseline value of enhanced habitats	Area of habitat lost (ha)	Value of habitats lost	Location
Total	**52.23**							**158.57**	**0.90**	**1.79**	**1.62**	**4.32**	**50.54**	**152.63**	

1: Calculated as: area x distinctiveness x condition x strategic significance score

B.1.1 Assessment of biodiversity value of area-based habitat creation

Proposed habitat	Area	Distinctiveness Score		Condition score		Strategic significance score		Final time to target condition (years)	Final time to target multiplier	Final difficulty of creation	Difficulty multiplier applied	Habitat units delivered	Location
Modified grassland	6.945064527	Low	2	Moderate	2	Low Strategic Significance	1	4	0.867180001	Low	Low	1	Morgan Substation
Other neutral grassland	1.158135156	Medium	4	Good	3	Low Strategic Significance	1	10	0.700282274	Low	Low	1	Morgan Substation
Other neutral grassland	3.3596424	Medium	4	Moderate	2	Low Strategic Significance	1	5	0.836828701	Low	Low	1	Morgan Substation
Mixed scrub	1.829022963	Medium	4	Good	3	Low Strategic Significance	1	10	0.700282274	Low	Low	1	Morgan Substation
Developed land; sealed surface	8.522545132	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0	1	Low	Low	1	Morgan Substation
Sustainable drainage system	0.633799508	Low	2	Good	3	Low Strategic Significance	1	5	0.836828701	Medium	Medium	0.67	Morgan Substation
Other woodland; broadleaved	2.219643406	Medium	4	Moderate	2	Low Strategic Significance	1	15	0.586016306	Low	Low	1	Morgan Substation
Cereal crops	0.075963476	Low	2	Condition Assessment N/A	1	Low Strategic Significance	1	1	0.965	Low	Low	1	Morecambe Substation
Modified grassland	6.253931249	Low	2	Moderate	2	Low Strategic Significance	1	4	0.867180001	Low	Low	1	Morecambe Substation
Other neutral grassland	0.923704792	Medium	4	Good	3	Low Strategic Significance	1	10	0.700282274	Low	Low	1	Morecambe Substation
Other neutral grassland	0.70006143	Medium	4	Moderate	2	Low Strategic Significance	1	5	0.836828701	Low	Low	1	Morecambe Substation
Mixed scrub	0.391125406	Medium	4	Good	3	Low Strategic Significance	1	10	0.700282274	Low	Low	1	Morecambe Substation
Ponds (non-priority habitat)	0.044830601	Medium	4	Moderate	2	Low Strategic Significance	1	3	0.898632125	Low	Low	1	Morecambe Substation
Artificial unvegetated, unsealed surface	0.049418708	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0	1	Low	Low	1	Morecambe Substation
Developed land; sealed surface	3.84901735	V.Low	0	N/A - Other	0	Low Strategic Significance	1	0	1	Low	Low	1	Morecambe Substation

Proposed habitat	Area	Distinctiveness Score		Condition score		Strategic significance score		Final time to target condition (years)	Final time to target multiplier	Final difficulty of creation	Difficulty multiplier applied	Habitat units delivered	Location
Sustainable drainage system	0.501326055	Low	2	Good	3	Low Strategic Significance	1	5	0.836828701	Medium	Medium	0.67	Morecambe Substation
Other woodland; broadleaved	1.082555554	Medium	4	Moderate	2	Low Strategic Significance	1	15	0.586016306	Low	Low	1	Morecambe Substation
Other neutral grassland	3.3	Medium	4	Good	3	High strategic significance	1.15	10	0.700282274	Low	Low	1	Biodiversity benefit at Lea Marsh Fields
Lowland meadows	3.3	V.High	8	Good	3	High strategic significance	1.15	15	0.586016306	High	High	0.33	Biodiversity benefit at Lea Marsh Fields
Ponds (priority habitat)	0.5	High	6	Good	3	Low Strategic Significance	1	5	0.836828701	Medium	Medium	0.67	Biodiversity benefit at Lea Marsh Fields
Mixed scrub	3	Medium	4	Good	3	Low Strategic Significance	1	10	0.700282274	Low	Low	1	Biodiversity benefit at Lea Marsh Fields
Other neutral grassland	1.9	Medium	4	Good	3	High strategic significance	1.15	10	0.700282274	Low	Low	1	Biodiversity benefit at Lea Marsh Fields
Total	**50.53**											**227.00**	

C.1.1 Assessment of biodiversity value of area-based habitat enhancement

Baseline habitat	Area (ha)	Baseline condition	Proposed habitat	Proposed distinctiveness	Dist. Score	Proposed condition	Cond. Score	Time to target condition (years)	Temporal multiplier	Difficulty of creation/enhancement	Difficulty multiplier	Habitat units delivered	Location
Grassland - Other neutral grassland	0.12306457	Moderate	Other neutral grassland	Medium	4	Good	3	15	0.700	Low	1	1.33	Morgan Substation
Grassland - Modified grassland	1.314506434	Poor	Modified grassland	Low	2	Good	3	10	0.586	Low	1	5.71	Morgan Substation
Grassland - Modified grassland	0.35287718	Poor	Other neutral grassland	Medium	4	Good	3	15	0.700	Low	1	2.77	Morgan Substation
Total	**1.79**											**9.81**	

D.1.1 Assessment of biodiversity value of hedgerows

Hedgerow type	Length (km)	Distinctiveness score		Condition score		Strategic significance score		Value (hedgerow units)	Length of hedgerow retained	Length of hedgerow enhanced	Baseline value of retained hedgerow	Baseline value of enhanced hedgerow	Length of hedgerow lost (km)	Value of hedgerows lost	Location
Native hedgerow	0.0273781	Low	2	Moderate	2	Low	1	0.11	0.02737808	0	0.0273781	0	0.00	0.00	Morgan Onshore Substation
Native hedgerow	0.2329925	Low	2	Good	3	Low	1	1.40	0.23299253	0	0.2329925	0	0.00	0.00	Morgan Onshore Substation
Species-rich native hedgerow with trees	0.1227358	High	6	Good	3	Low	1	2.21	0.06557123	0	0.0655712	0	0.06	1.03	Morgan Onshore Substation
Native hedgerow	0.1370048	Low	2	Poor	1	Low	1	0.27	0	0	0	0	0.14	0.27	Morgan Onshore Substation
Native hedgerow	0.2647247	Low	2	Poor	1	Low	1	0.53	2.9172E-06	0	0	0	0.26	0.53	Morgan Onshore Substation
Native hedgerow	0.1717378	Low	2	Poor	1	Low	1	0.34	0.1717378	0	0.1717378	0	0.00	0.00	Morgan Onshore Substation
Native hedgerow	0.1395282	Low	2	Poor	1	Low	1	0.28	0.11609615	0	0.1160962	0	0.02	0.05	Morgan Onshore Substation
Native hedgerow	0.3273212	Low	2	Poor	1	Low	1	0.65	0.23830658	0	0.2383066	0	0.09	0.18	Morgan Onshore Substation
Native hedgerow	0.2146743	Low	2	Moderate	2	Low	1	0.86	0.01279477	0	0.0127948	0	0.20	0.81	Morgan Onshore Substation
Native hedgerow	0.2279521	Low	2	Moderate	2	Low	1	0.91	0	0.01990028	0	0.019990028	0.21	0.83	Morgan Onshore Substation
Native hedgerow	0.1199145	Low	2	Poor	1	Low	1	0.24	0	0	0	0	0.12	0.24	Morgan Onshore Substation
Species-rich native hedgerow with trees	0.0125091	High	6	Moderate	2	Low	1	0.15	0.01250906	0	0.0125091	0	0.00	0.00	Morgan Onshore Substation
Native hedgerow	0.1331918	Low	2	Moderate	2	Low	1	0.53	0	0	0	0	0.13	0.53	Morgan Onshore Substation

Hedgerow type	Length (km)	Distinctiveness score		Condition score		Strategic significance score		Value (hedgerow units)	Length of hedgerow retained	Length of hedgerow enhanced	Baseline value of retained hedgerow	Baseline value of enhanced hedgerow	Length of hedgerow lost (km)	Value of hedgerows lost	Location
Species-rich native hedgerow with trees	0.28259	High	6	Good	3	Low	1	5.09	0.17661849	0	0.1766185	0	0.11	1.91	Morgan Onshore Substation
Native hedgerow	0.0072535	Low	2	Poor	1	Low	1	0.01	0	0	0	0	0.01	0.01	Morgan Onshore Substation
Native hedgerow	0.0875783	Low	2	Moderate	2	Low	1	0.35	0.08757828	0	0.0875783	0	0.00	0.00	Morgan Onshore Substation
Species-rich native hedgerow	0.2077186	Medium	4	Poor	1	Low	1	0.83	0	0.19560005	0	0.19560005	0.01	0.05	Morgan Onshore Substation
Native hedgerow	0.0044772	Low	2	Moderate	2	Low	1	0.02	0.0044772	0	0.0044772	0	0.00	0.00	Morgan Onshore Substation
Native hedgerow	0.2139834	Low	2	Poor	1	Low	1	0.43	0	0	0	0	0.21	0.43	Morgan Onshore Substation
Species-rich native hedgerow	0.1821077	Medium	4	Moderate	2	Low	1	1.46	0	0	0	0	0.18	1.46	Morgan Onshore Substation
Native hedgerow	0.0552277	Low	2	Good	3	Low	1	0.33	0.01225128	0	0.0122513	0	0.04	0.26	Morgan Onshore Substation
Species-rich native hedgerow with trees	0.1127305	High	6	Moderate	2	Low	1	1.35	0.11273054	0	0.1127305	0	0.00	0.00	Morecambe Onshore Substation
Native hedgerow with trees	0.1310297	Medium	4	Poor	1	Low	1	0.52	0.1310297	0	0.1310297	0	0.00	0.00	Morecambe Onshore Substation
Native hedgerow	0.0170202	Low	2	Good	3	Low	1	0.10	0	0	0	0	0.02	0.10	Morecambe Onshore Substation
Native hedgerow	0.0804673	Low	2	Moderate	2	Low	1	0.32	0	0	0	0	0.08	0.32	Morecambe Onshore Substation
Native hedgerow	0.1690775	Low	2	Moderate	2	Low	1	0.68	0	0	0	0	0.17	0.68	Morecambe Onshore Substation
Native hedgerow	0.1096337	Low	2	Moderate	2	Low	1	0.44	2.1801E-05	0	0	0	0.11	0.44	Morecambe Onshore Substation
Native hedgerow with trees	0.0348213	Medium	4	Moderate	2	Low	1	0.28	0.03482134	0	0.0348213	0	0.00	0.00	Morecambe Onshore Substation

Hedgerow type	Length (km)	Distinctiveness score		Condition score		Strategic significance score		Value (hedgerow units)	Length of hedgerow retained	Length of hedgerow enhanced	Baseline value of retained hedgerow	Baseline value of enhanced hedgerow	Length of hedgerow lost (km)	Value of hedgerows lost	Location
Native hedgerow with trees	0.0342746	Medium	4	Good	3	Low	1	0.41	0.03427462	0	0.0342746	0	0.00	0.00	Morecambe Onshore Substation
Native hedgerow with trees	0.0814087	Medium	4	Moderate	2	Low	1	0.65	0	0	0	0	0.08	0.65	Morecambe Onshore Substation
Native hedgerow with trees	0.1297891	Medium	4	Poor	1	Low	1	0.52	0.07120446	0	0.0712045	0	0.06	0.23	Morecambe Onshore Substation
Native hedgerow	0.1858342	Low	2	Poor	1	Low	1	0.37	0	0	0	0	0.19	0.37	Morecambe Onshore Substation
Native hedgerow	0.0750575	Low	2	Poor	1	Low	1	0.15	0	0	0	0	0.08	0.15	Morecambe Onshore Substation
Species-rich native hedgerow with trees	0.172119	High	6	Moderate	2	Low	1	2.07	0.09132366	0	0.0913237	0	0.08	0.97	Morecambe Onshore Substation
Native hedgerow	0.1367268	Low	2	Moderate	2	Low	1	0.55	0.11345555	0	0.1134556	0	0.02	0.09	Morecambe Onshore Substation
Native hedgerow	0.1604095	Low	2	Moderate	2	Low	1	0.64	0.0484645	0	0.0484645	0	0.11	0.45	Morecambe Onshore Substation
Species-rich native hedgerow	0.1199384	Medium	4	Poor	1	Low	1	0.48	0	0	0	0	0.12	0.48	Morecambe Onshore Substation
Total											**12.164**	**0.86**	**2.91**	**13.52**	

E.1.1 Assessment of biodiversity value of hedgerow creation

Proposed habitat	Length (km)	Distinctiveness score		Condition score		Indicative time to target condition (years)	Temporal multiplier	Difficulty of creation	Difficulty multiplier	Anticipated hedgerow units delivered[1]	Location
Native species-rich hedgerow with trees	1.871	High	6	Good	3	20	0.490	Low	1	16.52	Morgan Onshore Substation
Native species-rich hedgerow with trees	0.904	High	6	Good	3	20	0.490	Low	1	7.98	Morecambe Onshore Substation
Total	**2.775**									**24.5**	

1: Calculated as: area x distinctiveness x condition x strategic significance score x temporal multiplier x difficulty multiplier

F.1.1 Assessment of biodiversity value of hedgerow enhancement

Baseline habitat	Length to be enhanced (km)	Baseline condition	Proposed habitat	Distinctiveness Score		Condition Score		Indicative time to target condition (years)	Temporal multiplier	Difficulty of creation/enhancement	Difficulty multiplier	Anticipated habitat units delivered	Location
Native hedgerow	0.1999	Moderate	Native hedgerow	Low	2	Good	3	2	0.931	Low	1	0.12	Morgan Onshore Substation
Species-rich native hedgerow	0.1956	Poor	Species-rich native hedgerow	Medium	4	Good	3	5	0.837	Low	1	2.09	
	0.4356707											**2.21**	

G.1.1 Assessment of biodiversity value of watercourses

Hedgerow type	Length (km)	Distinctiveness score		Condition score		Strategic significance score		Value (watercourse units)	Anticipated length of watercourse retained	Anticipated length of watercourse enhanced	Baseline value of retained watercourse	Baseline value of enhanced watercourse	Indicative length of watercourse lost (km)	Anticipated value of watercourse lost	Location
Ditches	0.577	Medium	4	Moderate	2	Low	1	1.73			0.00	0.00	0.58	1.73	Morgan onshore substation site (wet ditches)
Other rivers and streams	0.539	High	6	Poor	1	Low	1	2.54	0.399	0.14	1.88	0.66	0.00	0.00	Morgan onshore substation site (Dow Brook east of substation)
Other rivers and streams	0.021	High	6	Poor	1	Low	1	0.55			0.00	0.00	0.02	0.05	Morgan onshore substation site (section of Dow Brook lost for construction of access track)
Total	**1.14**							**4.31**	**0.40**	**0.14**	**1.88**	**0.66**	**0.60**	**1.78**	

H.1.1 Assessment of biodiversity value of watercourse creation

Proposed habitat	Length (km)	Distinctiveness score		Condition score		Indicative time to target condition (years)	Temporal multiplier	Difficulty of creation	Difficulty multiplier	Anticipated watercourse units delivered[1]	Location
Ditches	0.9	Medium	4	Good	3	10	0.700	Medium	0.67	5.07	Biodiversity benefit area at Lea Marsh Fields
Total	**0.9**									**5.07**	

1: Calculated as: area x distinctiveness x condition x strategic significance score x temporal multiplier x difficulty multiplier

I.1.1 Assessment of biodiversity value of watercourse enhancement

Baseline habitat	Length (km)	Baseline condition	Proposed habitat	Proposed distinctiveness	Dist. Score	Proposed condition	Cond. Score	Indicative time to target condition (years)	Temporal multiplier	Difficulty of creation/enhancement	Difficulty multiplier	Anticipated watercourse units delivered	Location
Other rivers and streams	0.539	Poor	Other rivers and streams	High	6	Moderate	4	4	0.867	Medium	0.67	1.33	Morgan onshore substation - Dow Brook east of substation
Total	**0.539**											**1.33**	

Appendix J

J.1 Enhancement Measures for Biodiversity Benefit Area at Lea Marsh Fields

J.1.1 Objectives

The objectives of the Lea Marsh Fields biodiversity benefit area are as follows:

- to enhance existing habitats to achieve measurable biodiversity benefits; and
- to improve habitat connectivity between Mason's Wood BHS and Lea Marsh BHS to create a resilient habitat network that is bigger, better and more connected.

J.1.2 Principles of Management Measures

The management measures will seek to create the following existing features:

Ponds

The creation of several small ponds is proposed in the indicative locations shown in **Figure 1.7**. The design of the new ponds, including depth and coverage, will be agreed in consultation with Natural England. The ponds will be designed to discourage larger wader species and will be located outside the 400kV grid connection cable corridor.

Grassland management

The grassland areas will be enhanced to reduce nutrient levels in the soil to create areas of species-rich grassland

The grassland areas will be enhanced to create a mosaic of grassland habitats. A mowing regime could be implemented for the first two years to reduce nutrient levels in the soil.

Woodland planting

Indicative locations of woodland planting are shown on **Figure 1.7**. Shallow rooted species will be used where woodland areas are proposed close to the 400kV grid connection cable corridor. The species mix will complement the canopy diversity within the adjacent Mason's Wood BHS to provide a buffer to the edge of the BHS and improve the habitat network.

Ditches

Indicative sections of new ditch are shown on **Figure 1.7** that will be designed to be of high quality for wildlife and to encourage the colonisation of flora and fauna from the interconnected ditch network, including the adjacent Lea Marsh BHS.

J.1.3 Monitoring

These habitats would be monitored for a 30-year period after the completion of the development, in accordance with the standard guidance for habitats created for biodiversity benefit.

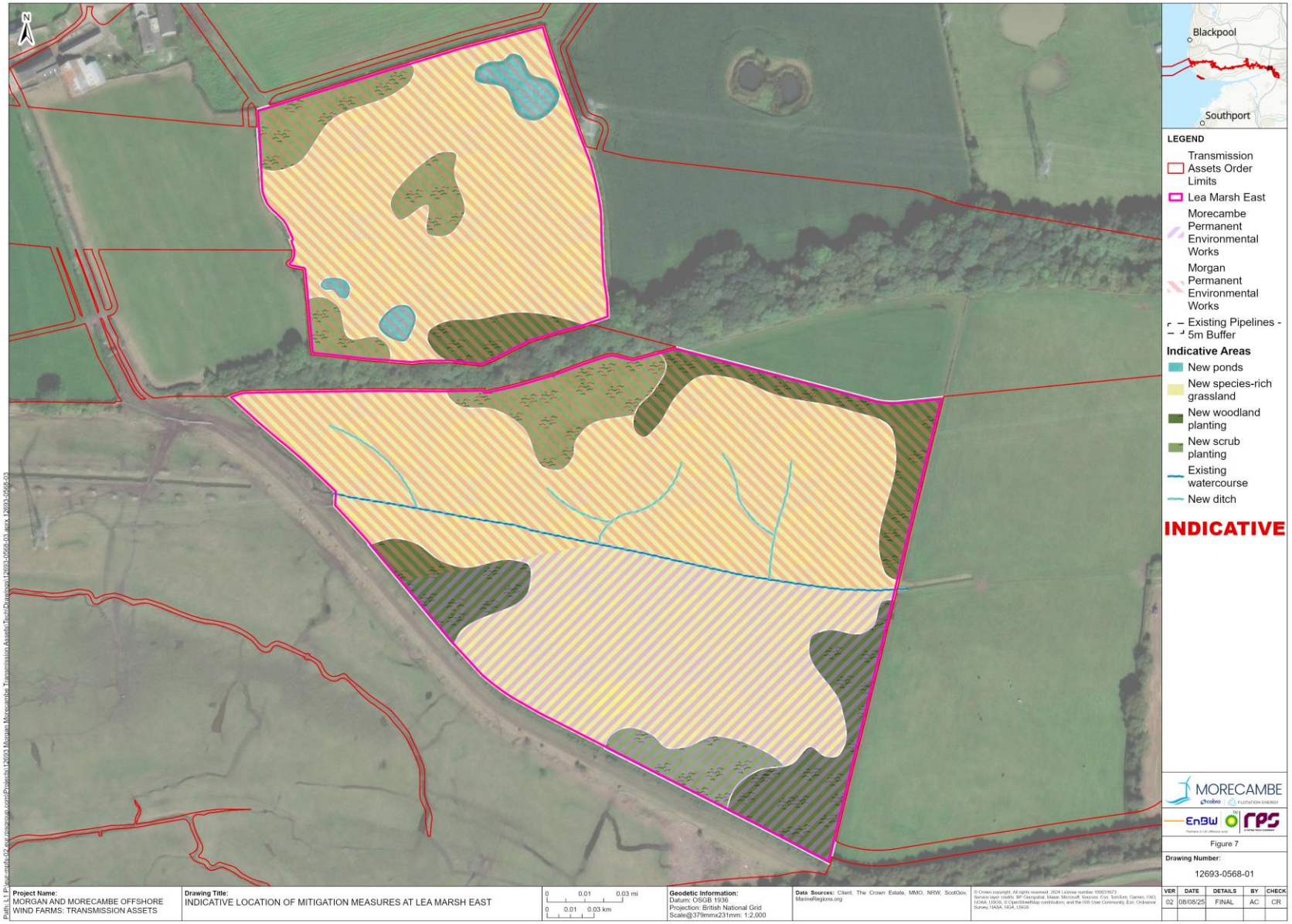

Figure 1.7: Indicative locations of enhancement measures at Lea Marsh Fields

Appendix K: Statutory Defra Metric

Appendix K has been submitted as a separate Excel document at Deadline 5. (REP5-146).

Appendix L: Habitat Condition Assessment

Appendix L has been provided as three separate Excel documents submitted at Deadline 5 (S_D5_20, S_D5_21, D_D5_22)

Appendix M: Habitat Condition Targets for Management

M.1.1 Grassland (lowland meadow/ other neutral grassland) Habitat Condition Targets

Habitat Condition Criteria	Habitat Creation/ Enhancement	Management	Target for Moderate Condition (passes 3 – 5 criteria including A)	Target for Good Condition (passes 5 or 6 criteria including A and F)
A: The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description)[6]. Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only	Suitable seed mix to be sown including characteristic indicator species. All areas of existing other neutral grassland meet this criterion.	Diversity to be maintained through appropriate mowing/ grazing management. All mown arisings will be removed from site after every cut to reduce nutrient input and maintain wildflower diversity.	✓	✓
B: Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N/A	Purpose of management is to reduce soil fertility and suppress grass growth, which outcompetes wildflowers. <u>If mowing</u>: Mow once or twice per year with the main cut occurring in late summer once most flowering species have set seed. Second cut in late autumn or early spring to manage vigorous grasses.	✓	✓

[6] Footnote 3- Species indicative of suboptimal condition for this habitat type include: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*. There may be additional relevant species local to the region and or site.

Habitat Condition Criteria	Habitat Creation/ Enhancement	Management	Target for Moderate Condition (passes 3 – 5 criteria including A)	Target for Good Condition (passes 5 or 6 criteria including A and F)
		Leave arisings in place for 2 – 3 days to drop seeds before removing from site (raking/ baling). Leave patches of grassland to grow longer to create varied sward height. <u>If grazing:</u> January-February - Remove all livestock, particularly if the area is wet and subject to poaching. March - Light grazing only on new growth (optional) April-mid July - Very light or no grazing. Effects of grazing will be monitored, and livestock numbers will be adjusted to maintain the variation in sward heights with a mosaic of short to slightly tussocky with the presence of flowers and seedheads of neutral grassland herb species. Rotational grazing will be adopted where practical to increase flowering and the production of seed. Mid July-end December – Grazing over a long-period with suitably low stocking density to help create varied sward height. Monitoring will determine the effects of grazing. Stocking levels to be adjusted as required based on monitoring results.		

Habitat Condition Criteria	Habitat Creation/ Enhancement	Management	Target for Moderate Condition (passes 3 – 5 criteria including A)	Target for Good Condition (passes 5 or 6 criteria including A and F)
		Fencing/ virtual fencing can be used to encourage different sward heights through selective grazing. The encroachment of scrub into grassland, creation of bare ground and spread of undesirable species will trigger revisions to management and/or remedial actions.		
C: Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens	N/A	Monitor damage and limit grazing to prevent excessive damage and bare ground/ erosion. Areas will not be accessible to public and therefore damage considered unlikely, although this will be monitored.	✓	✓
D: Cover of bracken Pteridium aquilinum is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.	N/A	Monitor area for bracken and scrub/ bramble encroachment. Remove bracken to ensure cover < 20% Remove scrub to ensure cover < 5%	✓	✓
E: Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	N/A	Monitor species assemblage through regular surveys. Address damage through remedial actions such as the reseeding native wildflower seed mix and protect during its establishment.		✓

Habitat Condition Criteria	Habitat Creation/ Enhancement	Management	Target for Moderate Condition (passes 3 – 5 criteria including A)	Target for Good Condition (passes 5 or 6 criteria including A and F)
If any invasive non-native plant species (as listed on Schedule 9 of WCA5) are present, this criterion is automatically failed.		Limit grazing where necessary to reduce areas of bare ground and poaching. Monitor for invasive species and remove 4where identified.		
F: There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species indicative of suboptimal condition cannot contribute towards this count). Note - this criterion is essential for achieving good condition for other neutral grassland.	Diverse seed mix to be chosen to encourage establishment of diverse sward with 10 or more vascular plant species per m2.	Monitor botanical species assemblages within each habitat parcel through regular surveys. Surveys will sample the vegetation across a habitat type using quadrats to record species lists and structure. The average species per m^2 across the habitat will be calculated. Additional seeding to be undertaken where necessary to increase species diversity.		✓
Total score targeted			4	6

M.1.2 Scrub Habitat Condition Targets

Condition Assessment Criteria	Habitat Creation/ Enhancement	Management	Target for Moderate Condition (passes 3 or 4 criteria)	Target for Good Condition (passes 5 criteria)
A: The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). - At least 80% of scrub is native, - There are at least three native woody species, - No single species comprises more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* (only in its restricted native range), or box *Buxus sempervirens*, which can be up to 100% cover).	Diverse mix of native scrub species to be planted	Removal of non-native scrub species where coverage >20%. Additional top-up planting where fewer than three native species present. Targeted thinning to ensure no single species comprises more than 75% cover.:	✓	✓
B: Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	N/A	Long-term target to achieve mature shrubs. Targeted thinning to encourage diversity of age classes. Grazing in areas of shrub will be managed (or excluded) to prevent all saplings being grazed out.	✓	✓
C: There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	N/A	The colonisation by invasives will be identified through regular monitoring of the species assemblage. Monitoring will identify and map the locations of any invasive non-native plant species, and a treatment/ eradication plan will be designed and implemented.	✓	✓

Condition Assessment Criteria	Habitat Creation/ Enhancement	Management	Target for Moderate Condition (passes 3 or 4 criteria)	Target for Good Condition (passes 5 criteria)
		Monitoring will record the presence of species indicative of suboptimal conditions and implement treatment to ensure percentage cover (all species combined) remains below 5%.		
D: The scrub has a well-developed edge with scattered scrub and tall grassland and /or forbs present between the scrub and adjacent habitat.	N/A	The areas of scrub adjacent to other neutral grassland habitat, will be managed to create and maintain edge habitat of young scrub, long grassland and tall herbs profile.	✓	✓
E: There are clearings, glades or rides present within the scrub, providing sheltered edges.	N/A	Large areas of scrub will be subject to the creation of small clearings and glades through selective cutting back of central areas, further increasing edge habitat.		✓
Total score targeted			4	5

M.1.3 Woodland Habitat Condition Targets

Habitat Condition Criteria	Description	Good (3 points)	Moderate (2 points)	Poor (1 point)	Habitat Creation	Management/ Monitoring	Target for Moderate Condition (total score 26 – 32 points)
A	Age distribution of trees	Three age-classes present.	Two age-classes present.	One age-class present	N/A	Long-term objective as trees need to mature. Selective thinning and coppicing of trees will be undertaken to create some open areas to promote natural regeneration.	3 points
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland.	Evidence of significant browsing pressure is present in less than 40% of whole woodland.	Evidence of significant browsing pressure is present in 40% or more of whole woodland.	N/A	Long-term objective as trees need to mature. Maintain fenced boundary to consented development to reduce grazing pressure by deer. Additional fencing to be implemented as needed	3 points
C	Invasive plant species	No invasive species present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species<10% cover.	Rhododendron or cherry laurel present, or other invasive species ≥10% cover.	N/A	Monitor for establishment / spread of invasive species and implement treatment/ eradication as necessary.	3 points
D	Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	Three to four native tree or shrub species found across woodland parcel.	Two or less native tree or shrub species across woodland parcel.	Woodland planting to include minimum of five native species.	Replacement of failed specimens within defined aftercare period.	3 points

Habitat Condition Criteria	Description	Good (3 points)	Moderate (2 points)	Poor (1 point)	Habitat Creation	Management/ Monitoring	Target for Moderate Condition (total score 26 – 32 points)
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.	<50% of canopy trees and <50% of understory shrubs are native.	N/A	Long-term objective. Removal of any grazing pressure and thinning of canopy will promote native shrub layer developing. Additional planting to be carried out after year 5 if needed. Replacement of failed specimens within defined aftercare period.	3 points
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted.	21 - 40% of woodland has areas of temporary open space.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category.	Planting layout to be planned to incorporate open space areas.	Long-term objective as woodland needs to mature. Selective thinning and coppicing of trees to create some open areas to promote natural regeneration.	3 points
G	Woodland regeneration	All three classes present in woodland; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland.	No classes or coppice regrowth present in woodland.	N/A	Long-term objective as woodland needs to mature. Selective thinning and coppicing of trees to create some open areas to promote natural regeneration. Fencing may be used to reduce deer grazing pressure to minimise over grazing of saplings.	2 points
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback.	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present.	Greater than 25% tree mortality and or any high-risk pest or disease present.	N/A	Monitor for tree mortality, evidence of pests and diseases. Replacement of failed specimens within defined aftercare period.	3 points

Habitat Condition Criteria	Description	Good (3 points)	Moderate (2 points)	Poor (1 point)	Habitat Creation	Management/ Monitoring	Target for Moderate Condition (total score 26 – 32 points)
						Remove any diseased species where necessary. Standing deadwood to be retained if possible.	
I	Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present.	No recognisable woodland NVC plant community at ground layer present.	N/A	Criteria for 3 points unlikely to be achieved for new woodland creation even within 30-year management timeframe.	2 points
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland.	Two storeys across all survey plots.	One or less storey across all survey plots.	N/A	Selective coppicing of trees/shrubs to create diversity in woodland structure. Target for 2 points reflects realistic outcome for newly planted woodland.	2 points
K	Veteran trees	Two or more veteran trees per hectare.	One veteran tree per hectare.	No veteran trees present in woodland.	N/A	Criteria for 3 or 2 points will not be achieved for new woodland creation within 30-year management timeframe.	1 point

Habitat Condition Criteria	Description	Good (3 points)	Moderate (2 points)	Poor (1 point)	Habitat Creation	Management/ Monitoring	Target for Moderate Condition (total score 26 – 32 points)
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities.	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Reuse of felled/ coppice material to create deadwood piles within newly planted woodland.	Long-term objective to create standing deadwood as trees age. Additional deadwood/ brash piles to be added throughout management period as necessary to meet criteria. Target for 1 point reflects realistic outcome for newly planted woodland.	1 point.
M	Woodland disturbance	No nutrient enrichment or damaged ground evident.	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground.	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground.	N/A	Long-term objective. Reduce or eliminate grazing through fencing/ virtual fencing of stock. Monitor for evidence of woodland disturbance. Selective clearance of nettles and brambles as needed.	3 points
Total score targeted							29 points

M.1.4 Pond Habitat Condition Targets

Habitat Condition Criteria	Habitat Creation	Management	Target for Moderate Condition (passes 5 or 6 criteria)	Target for Good Condition (passes 7 criteria)
A: The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Newly created ponds will be created with a clean water supply.	Stock poaching to ponds to be managed through the use of fencing/ virtual fencing where necessary.	✓	✓
B: There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	Newly created ponds will be surrounded by semi-natural habitat including scrub and grassland.	N/A		
C: Less than 10% of the water surface is covered with duckweed *Lemna* spp. or filamentous algae.	N/A	Long-term objective. Monitoring of pond surface for duckweed and algae. Add barley straw to control algae if needed.	✓	✓
D: The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	Ponds will be newly created and will not be artificially connected to other waterbodies.	N/A	✓	✓
E: Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams, pumps or pipework.	N/A	N/A		

Habitat Condition Criteria	Habitat Creation	Management	Target for Moderate Condition (passes 5 or 6 criteria)	Target for Good Condition (passes 7 criteria)
F: There is an absence of listed non-native plant and animal species.	No non-native plant species to be planted. Strict biosecurity procedure to be followed during pond creation to ensure invasive species are not introduced from other parts of the site.	Ponds to be monitored for invasive species and remedial action taken if recorded.	✓	✓
G: The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	No fish will be stocked in the ponds.	N/A	✓	✓
H: Emergent, submerged or floating plants (excluding duckweed) cover at least 50% of the pond area which is less than 3 m deep.	New ponds to be designed to retain water and have shallow margins suitable for supporting a range of aquatic plant species. Planting of emergent, submerged and floating plants to be undertaken where considered necessary to start colonisation process.	Selective management of emergent, submerged and floating plants where cover > 50%.		✓
I: The pond surface is no more than 50% shaded by adjacent trees and scrub.	Scrub to be planted around margins of ponds to discourage flocks of birds (for airfield safeguarding purposes).	Manage overhanging vegetation so ponds do not become overshaded.	✓	✓
Total score targeted			6	7

M.1.5 Watercourse Habitat Condition Targets

Habitat Condition Criteria	Habitat Creation	Management	Target for Good Condition (passes 8 criteria)
A: The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	N/A	Monitoring to be undertaken and any pollution remediated.	✓
B: A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length.	New watercourses to be designed to retain water and have shallow margins suitable for supporting a range of aquatic plant species. Natural colonisation favoured in the first instance, due to proximity to existing watercourses in Lea Marsh BHS.	Monitoring to be undertaken and additional planting of emergent, submerged and floating plants will be undertaken necessary where sufficient plant species diversity is not found to be developing.	✓
C: There is less than 10% cover of filamentous algae and or duckweed *Lemna* spp. (these are signs of eutrophication).	N/A	Long-term objective. Monitoring of watercourse surfaces for duckweed and algae. Add barley straw to control algae if needed.	✓
D: A fringe of aquatic and marginal vegetation is present along more than 75% of the ditch.	New watercourses to be designed to retain water and have shallow margins suitable for supporting a range of aquatic plant species. Natural colonisation favoured in the first instance, due to proximity to existing watercourses in Lea Marsh BHS.	Monitoring to be undertaken and additional planting of emergent, submerged and floating plants will be undertaken necessary where sufficient plant species diversity is not found to be developing.	✓

Habitat Condition Criteria	Habitat Creation	Management	Target for Good Condition (passes 8 criteria)
E: Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.	N/A	Long-term objective. Monitoring to be undertaken and remedial action taken where necessary to reduce damage e.g. fencing to reduce stock poaching.	✓
F: Sufficient water levels are maintained – as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.	New watercourses to be designed to retain a minimum depth of water of 50 cm year-round.	Long term objective. Monitoring to be undertaken and remedial action taken where necessary e.g. removal of accumulated silt to deepen ditches/ sections of ditch.	✓
G: Less than 10% of ditch is heavily shaded.	N/A	Long term objective. Targeted management to reduce overhanging shrubs and trees where necessary where monitoring indicates >10% of the ditch is becoming heavily shaded.	✓
H: There is an absence of listed non-native plant and animal species.	No non-native plant species to be planted. Strict biosecurity procedure to be followed during pond creation to ensure invasive species are not introduced from other parts of the site.	Watercourses to be monitored for invasive species and remedial action taken if recorded.	✓
Total score targeted			8