

# RWE Renewables UK Dogger Bank South (West) Limited RWE Renewables UK Dogger Bank South (East) Limited

# Dogger Bank South Offshore Wind Farms

**Environmental Statement** 

Volume 7

Appendix 18-10 - Biodiversity Net Gain Strategy (Revision 2) (Tracked)

May 2024

**Application Reference: 7.18.18.10** 

APFP Regulation: 5(2)(a)

**Revision: 02** 



Company:	RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited	Asset:	Development
Project:	Dogger Bank South Offshore Wind Farms	Sub Project/Package:	Consents
Document Title or Description:	Appendix 18-1 Biodiversity Net Gain Strategy (Revision 2) (Tracked)		
Document Number:	004300159-02	Contractor Reference Number:	PC2340-RHD-ON-ZZ- AX-Z-0078

COPYRIGHT © RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited, 2024. All rights reserved.

This document is supplied on and subject to the terms and conditions of the Contractual Agreement relating to this work, under which this document has been supplied, in particular:

#### LIABILITY

In preparation of this document RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited has made reasonable efforts to ensure that the content is accurate, up to date and complete for the purpose for which it was contracted. RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited makes no warranty as to the accuracy or completeness of material supplied by the client or their agent.

Other than any liability on RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited detailed in the contracts between the parties for this work RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited shall have no liability for any loss, damage, injury, claim, expense, cost or other consequence arising as a result of use or reliance upon any information contained in or omitted from this document.

Any persons intending to use this document should satisfy themselves as to its applicability for their intended purpose.

The user of this document has the obligation to employ safe working practices for any activities referred to and to adopt specific practices appropriate to local conditions.

Rev No	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	June 2024	Final for DCO Application	RHDHV	RWE	RWE
02	May 2025	Submission for Deadline 5	RHDHV	RWE	RWE



	Revision Change Log				
Rev No.	Page	Section	Description		
01	N/A	N/A	Submitted for DCO Application		
02	Various	Various	Appendix 18-10 Biodiversity Net Gain Strategy [APP-157] has been updated at the request of the Examining Authority within the Rule 17 [PD-018] to accurately reflect the proposed development and contains all the updated information within the chapter as a result of <b>Project Change Request 2</b> [AS-152].		
02	Various	Various	Appendix 18-10 Biodiversity Net Gain Strategy [APP-157] has been updated following the River Condition Assessment Surveys undertaken at the request of the Environment Agency within their Relevant Representation [RR-015].		

#### Dogger Bank South Offshore Wind Farms

#### Contents

18.10 Biodive	ersity Net Gain Strategy	10
18.10.1 Intro	oduction	10
18.10.1.1	Summary of Key Updates in Revision 2 of the Strategy	11
18.10.1.2	Biodiversity Net Gain Overview	14
18.10.1.3	Purpose of this Report	15
18.10.1.4	Assessor Technical Competence	15
18.10.1.5	Policy and Legislation	16
18.10.2 Met	hods - Delivery of Biodiversity Net Gain	18
18.10.2.1	Overview	18
18.10.2.2	Rules and Principles of the Defra Biodiversity Metric	22
18.10.2.2.	1 Defra Biodiversity Metric rules	22
18.10.2.2.	2 Defra Metric principles	25
18.10.2.3	Proposed Approach	26
18.10.2.3.	1 Defining Terms	26
18.10.2.4	'On-site' and 'Off-site'	28
18.10.2.5	Baseline Data Collection	30
18.10.2.5.	1 Assumptions and Limitations	31
18.10.2.6	Stakeholder Consultation	31
18.10.3 Base	eline Conditions	32
18.10.3.1	Summary of Habitats Present	32
18.10.3.2	Baseline Metric Calculations	32
18.10.4 Prop	oosed Design, Strategy and Assumptions	38
18.10.4.1	Broad Strategy and Assumptions	39
18.10.4.2	BNG Assumptions - Area Module (Habitat Units)	42
18.10.4.2.	1 Retained Area Habitats	42
18.10.4.2.	2 Temporary Losses (restored within two years)	44
18.10.4.2.	3 Temporary Habitat Loss (Reinstated within 6 Years of Impact)	47
18.10.4.2.	4 Permanent Habitat Loss or Creation	48
18.10.4.3	BNG Assumptions - Hedgerow Module (Hedgerow Units)	50
18.10.4.3.	1 Retained Habitats	50
18.10.4.3.	2 Temporary Losses (reinstated within 6 years of impact)	50

Unrestricted

004300159

		Dogger Bank South Offshore Wi	na Farms
18.10	0.4.3.3	S Permanent Habitat Loss or Creation	51
18.10.4	4.4	BNG Assumptions - Watercourse Module (Watercourse Units)	51
18.10	0.4.4.1	Retained Habitats	51
18.10	0.4.4.2	? Temporary Losses	51
18.10	0.4.4.3	S Permanent Habitat Loss, Creation or Enhancement	52
18.10.5	Feasi	bility of Biodiversity Net Gain	52
18.10.5	5.1	Commitment to Mitigation Hierarchy	52
18.10.5	5.2	Stakeholder Engagement	53
18.10	0.5.2.1	East Riding of Yorkshire Council	53
18.10	0.5.2.2	2 Natural England	54
18.10	0.5.2.3	S Environment Agency	54
18.10	0.5.2.4	Yorkshire Wildlife Trust	54
18.10	0.5.2.5	Private Stakeholders and Habitat Banks	54
18.10.5	5.3	On-site Compensation Proposals	55
18.10.5	5.4	Recommendations for Management to Maximise Biodiversity Be	
18.10.5	5.5	Off-site Compensation Proposals	55
18.10.6	BNG	Metric	56
18.10.7	Discu	ıssion	57
18.10.8	Next	Steps	59
Tables			
		ummary of key changes between Revision 1 and Revision 2 of the	
		ummary of changes to baseline and post intervention Biodiversity of this Strategy	
		NG good practice principles for development, taken from CIEEM, (Biodiversity net gain good practice principles for development	
		efra Metric rules (taken from The Statutory Biodiversity Metric Use	
		mmary of the trading rules to compensate for habitat losses (tak diversity Metric User Guide [Defra, 2023d])	
		atutory Biodiversity Metric principles which must be followed to in The Statutory Biodiversity Metric User Guide [Defra, 2023d])	
Table 18-1	0-7 Le	vels of strategic significance	28

Unrestricted

004300159



Table 18-10-8 Summary of spatial risk multipliers, demonstrating the number of compensator Biodiversity Units required when delivered on-site versus off-site. Multiplie values taken from the Metric (Defra, 2023a)	er 29
Table 18-10-9 Summary of baseline Habitat Units and area per habitat type within the Projects BNG Study Area	
Table 18-10-10 Summary of Hedgerow Units recorded at baseline within the Projects Estudy Area.	BNG 37
Table 18-10-11 Summary of Watercourse Units recorded at baseline within the Project Study Area BNG Study Area	
Table 18-10-12 Time in years for newly created habitats to achieve target condition. Habitat list limited to those recorded within the Dogger Bank South Windfarm Onshore Development Area (data adapted from the Metric [Defra, 2023d]). *Reserved for habitat which cannot achieve poor, moderate or good condition due to habitat type. **habitats considered to be restored once soils have been appropriately reinstated (full details provided within section 18.10.4.2.2)	
Table 18-10-13 Summary of BNG Metric results, for the BNG Study Area of the Project Onshore Development Area.	:s 56

#### **Annexes**

Annex A - Biodiversity Metric, on-site habitat baseline and creation

Annex B - Biodiversity Metric, on site hedgerow and watercourse baseline and creation Baseline River Condition Assessment (RCA) and Ditch Condition Assessment (DCA) Report of this Strategy



# Glossary

Term	Definition	
Biodiversity Net Gain Strategy	A Biodiversity Net Gain Strategy is a document that shows how a project will achieve BNG. The final strategy should be based upon detailed design and include detail of the legal and financial mechanisms to secure BNG measures, including long term management and monitoring.	
Biodiversity Net Gain (BNG)	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 to ensure that the current loss of biodiversity through development will be halted and ecological networks can be restored.	
Biodiversity Unit (BDU)	A proxy value for biodiversity, calculated by the Statutory Metric. There are three subcategories of BDU, Habitat Unit, Hedgerow Unit and Watercourse Unit. These are defined by the module type used to calculate their value. The values of different BDU types are not transferable and cannot be summed, i.e., one Habitat Unit does not equal one Hedgerow Unit, and cannot be used to mitigate for its loss.	
BNG Study Area	Terrestrial and intertidal habitats above the MLWS mark which are contained within the Onshore Development Area. The BNG Study Area forms the extent of this assessment. Habitats below the MLWS mark are considered marine and outside of this assessment.	
Temporary Construction Compound	An area set aside to facilitate the construction of the Projects. These will be located adjacent to the Onshore Export Cable Corridor and within the Onshore Substation Zone, with access to the highway.	



Term	Definition	
Habitat composite	X% of baseline habitats, where impacts are taking place in an unknown location which account for X% of an area. For example, if a Haul Road location is unknown but is expected to cover 10% of an application boundary area, then it is assumed that 10% of each habitat type within the application boundary will be affected. If a proportion of the application boundary area has known activities within a known location, then these areas may be excluded from the habitat composite calculation.	
Habitat reinstatement	Replacement of soils and replanting of the habitat. Habitat restoration starts at the point of reinstatement.	
Habitat restoration	Starts at the point of habitat reinstatement when soil, hydrological and vegetative conditions are returned to baseline. Full habitat restoration is achieved when the baseline habitat type and condition is achieved. This may take a number of years, depending on the habitat type and condition required.	
Horizontal Directional Drill (HDD)	HDD is a trenchless technique to bring the offshore cables ashore at the landfall and can be used for crossing other obstacles such as roads, railways and watercourses onshore.	
Module	Calculator within the biodiversity statutory metric used to assess different habitat types. There are three module types: habitat, hedgerow and watercourse. These are used to calculate the values of different habitat types. Each module generates its own type of Biodiversity Unit.	
Temporary habitat loss	Habitats which are fully restored to their original habitat type and condition within two years of impact.	
Trenchless Crossing Areas	Areas where trenching is not used to cross obstacles such as hedgerows, habitats or other receptors. Includes HDD or other techniques for installation of ducts or cables where trenching may not be suitable such as micro tunnelling or auger boring.	



## **Acronyms**

Term	Definition	
BDU	Biodiversity Unit	
BNG	Biodiversity Net Gain	
CIEEM	Chartered Institute of Ecology and Environmental Management	
DBS	Dogger Bank South	
DCO	Development Consent Order	
Defra	Department for Environment Food and Rural Affairs	
HDD	Horizontal Directional Drill	
MLWS	Mean low water spring tide mark	
NCA	National Character Area	



### 18.10 Biodiversity Net Gain Strategy

#### 18.10.1 Introduction

- Royal HaskoningDHV was commissioned by the Applicants to prepare a Biodiversity Net Gain (BNG) Strategy for the Dogger Bank South (DBS) Offshore Wind Farms (herein 'DBS' or 'the Projects'), to accompany the Projects' Development Consent Order (DCO) application under the Planning Act 2008.
- 2. This report sets out the second version (Revision 2) of the strategy of to assessing and securing BNG for the onshore elements of the Projects, and includes the following key elements:
  - A summary of the key updates between this version (Revision 2) of the Strategy and first Revision (dated June 2024);
  - A summary of the relevant legal and policy background;
  - The proposed <u>outline approach</u> <u>methods</u> to delivering BNG for the Projects;
  - The <u>proposed</u> approach <u>taken</u> to calculating <u>the</u> Biodiversity Units required to secure <u>the</u> BNG <u>objective of for</u> the Projects; and
  - The <u>feasibility and options fordeliverables achieving associated with</u> the Projects' BNG <u>assessmentobjectives</u>.
- 3. Reporting and assessment herein is based on the reasonable worst case BNG impacts, resulting from the sequential construction scenario. With regard to BNG, this is considered the reasonable worst case scenario as it would require the greatest quantum of habitat disturbance, and therefore BNG requirement. Further details on these assumptions are provided within section 18.10.4 below.
- 4. As detailed in Volume 7, Chapter 1 Introduction (application ref: 7.1),

  t\( \text{This Strategy has been updated to incorporate the changes to the Projects} \)

  Design parameters resulting from Project Change Request 2 Onshore

  Substation Zone (document reference 10.53), and the incorporation of any associated responses and corrections provided on the Strategy throughout the Examination process, which includes the addition of the River Condition Assessment survey results.
- 4.5. This Strategy will be <u>further</u> updated post-consent once the full design detail of the Projects is known. The updated Strategy will be submitted for approval prior to implementation.

Unrestricted 004300159



### 18.10.1.1 Summary of Key Updates in Revision 2 of the Strategy

6. The original version of this Strategy (Volume 7, Appendix 18-10 - Biodiversity Net Gain Strategy (application ref: 7.18.18.10)) was finalised in June 2024 and based on the Projects design information and best informed assumptions available at the time of submission. Key updates of particular relevance within this Revision of the Strategy are summarised in Table 18-10-1, below.

Table 18-10-1. Summary of key changes between Revision 1 and Revision 2 of the BNG Strategy-

Change	Basis for Revision 1	Basis for Revision 2	Effect of Change
Onshore Development Area	Onshore Development Area in June 2024 (456.53ha).	Onshore Development Area in May 2025 (451.22ha).	The new Onshore Development Area is slightly smaller than the one used for Revision 1 following the acceptance of Project Change Request 2 (document reference 10.53) into examination.
Indicative Landscape Masterplan	Indicative Landscape Plan Figure 23-6 of 7.23.1 Chapter 23 Landscape and Visual Impact Assessment Figure 23-1 to Figure 23-17.	Indicative Landscape Plan, Figure 23-6 of 7.23.1 Chapter 23 Landscape and Visual Impact Assessment Figure 23-1 to Figure 23-17 (Revision 4) which was submitted to the Examining Authority during the examination process.).	Updated areas of proposed landscaping and habitat creation at the Substation Zone following the acceptance of Project Change Request 2 (document reference 10.53) into examination.
Addition of off-route access routes	Not included within previous version.	Off-route Access Routes have now been included form completeness.	Increase in the areas of habitats effected by the Projects.

Dogger Bank South Offshore Wind Farms

<u>Change</u>	Basis for Revision 1	Basis for Revision 2	Effect of Change
Road Junctions	Not included within previous version.	Based on updated areas and more detailed design.	More detailed consideration and accurate assessment of the c. 9ha of habitat which are covered by these areas.
Watercourses	Watercourse module of Metric was based on high level assumptions and UK Hab data.	Full River Condition Assessments and Ditch Condition Assessments were completed in 2025 to inform the updated Strategy (see Annex B of this Strategy).	More accurate assessment of the effects the Projects' are anticipated to have on watercourses.
<u>Hedgerows</u>	High level assumptions on losses based on averages and prevailing visibility and access splay information.	Updates to assumptions about potential hedgerow removals at roads, following comments raised in the examination and more accurate visibility and access splays.	More accurate assessment of the effects the Projects' are anticipated to have on hedgerows. Each hedgerow has been individually assessed to provide as accurate as possible assessment of the potential quantum of losses and retention.
Trees	UK Hab survey data was used to access individual trees.	Arboricultural surveys were completed in 2024 to inform the updated Strategy. This information was provided to the Examining Authority within 10.13 Arboricultural Survey Report, Preliminary Arboricultural Impact Assessment and Outline Arboricultural Method Statement (Revision 3).	Individual field trees have been accurately accounted for within the baseline Metric calculations (classified as 'rural trees').

Dogger Bank South Offshore Wind Farms

Change	Basis for Revision 1	Basis for Revision 2	Effect of Change
Condition of recreated habitats	Assumed that the condition of recreated habitats would be the same as those lost at baseline. This included 'good' condition habitats being recreated to a 'good' condition.	Precautionary approach taken and assumed that no recreated habitats will achieve above 'moderate' condition.	More precautionary and deliverable assessment of habitat creation within the Metric.
Link Boxes and Jointing Bays	Assumed that an average of 124 of each would be installed, effecting up to 0.11ha and 3.1ha of habitat, respectively.	Assumed that a total of 205 of each will be installed, effecting up to 0.205ha and 5.125ha of habitat, respectively.	More precautionary assessment of lost and disturbed habitats.
Intertidal habitat	Accounted 0.12ha of intertidal habitat being effected by up to 6 trenchless crossing exit pits.	Intertidal trenchless crossing exit pits have been removed from the Projects' design.	Intertidal habitat no longer effected by intertidal trenchless crossing exit pits.

7. Following these updates the baseline and post intervention scenario

Biodiversity Units have changed. These changes are summarised in **Table**18\_10-2.

<u>Table 18-10-2. Summary of changes to baseline and post intervention Biodiversity Units between Revisions of this Strategy.</u>

Module Type	Revision 1	Revision 2		
Baseline Biodiversity Units / Areas (ha) / Lengths (km)				
<u>Habitats</u>	1085.1 Habitat Units 456.53ha	1132.58 Habitat Units 451.98ha		
<u>Hedgerows</u>	104.4 Hedgerow Units 16.67km	121.75 Hedgerow Units 17.56km		



Module Type	Revision 1	Revision 2
<u>Watercourses</u>	28.04 Watercourse Units 4.88km	15.61 Watercourse Units 3.89km
Post intervention Biodiversity U	nits (BDU) / Areas (ha) / Len	gths (km)
<u>Habitats</u>	1083.29 Habitat Units 456.53ha	1102.02 Habitat Units 451.98ha
<u>Hedgerows</u>	109.44 Hedgerow Units 18.8km	134.06 Hedgerow Units 22.64km
<u>Watercourses</u>	26.35 Watercourse Units 4.64km	16.09 Watercourse Units 3.89 km
Net Change in Biodiversity Units	(BDU and %) / Areas (ha) /	Lengths (km)
<u>Habitats</u>	-1.81 Habitat Units -0.17% Oha	-30.56 Habitat Units -2.70% Oha
<u>Hedgerows</u>	+5.04 Hedgerow Units +4.83% +2.13km	+12.31 Hedgerow Units +10.11% +5.08km
<u>Watercourses</u>	-1.69 Watercourse Units -6.04% -0.24km	+0.48 Watercourse Units 3.09% Okm

### 18.10.1.1 Biodiversity Net Gain Overview

5.8. The Environment Act 2021 sets out provisions for delivering "Biodiversity gain in planning" for developments in England. The delivery of 10% BNG for nationally significant infrastructure projects (NSIPs) is anticipated to be mandated for applications from November 2025 onwards via secondary legislation. At the time of writing, the Applicants' delivery of BNG in relation to the Projects is therefore voluntary.

Unrestricted 004300159



- 6.9. Defra (2023a) defines BNG as "a way to contribute to the recovery of nature while developing land. It is making sure the habitat for wildlife is in a better state than it was before development". This is achieved through the retention, enhancement, and creation of habitats of biodiversity value, on or off-site.
- 7.10. Biodiversity calculators, such as the 'Statutory Metric' <u>used in this Strategy</u>, hereafter referred to as the "Metric", published by Defra (2023a), allow developers to quantify the biodiversity value of their site pre- and post-development. In doing so, the amount of biodiversity compensation that is required to achieve a measurable BNG can be calculated.
- 8.11. At the time of writing, planning policy encourages developers of NSIPs to seek opportunities to provide BNG. As such, the Overarching National Policy Statement for Energy (EN-1) states appropriate weight should be given to environmental and Biodiversity Net Gain in the determination of NSIP applications (Department for Energy Security and Net Zero [DESNZ], 2024). Further information on the legislation and policy relevant to BNG is provided within section 18.10.1.5 below.

#### 18.10.1.2 Purpose of this Report

#### 9.12. This report seeks to:

- Set out the Projects' approach to, delivering no net loss of biodiversity and net gain where possible;
- Set out key assumptions that have been used when determining biodiversity values; and
- Identify and justify any anticipated or unavoidable deviations from the Statutory biodiversity metric standard guidelines; and
- Provide a log of any changes in approach to calculating and assessing the baseline and post development scenario biodiversity value of the Projects'.-

### 18.10.1.3 18.10.1.4 Assessor Technical Competence

10.13. The Defra BNG technical guidance (Defra, 2023d) states a BNG assessment should be carried out by a competent person. This states, "A competent person has the knowledge and skills to perform specified tasks to complete and review biodiversity metric calculations. You obtain this through training, qualifications, experience, or a combination of them".

Unrestricted 004300159



- 11.14. This report was written by a Royal HaskoningDHV Principal Ecologist with over 9 years' experience as a professional ecological consultant. They are an Associate member of CIEEM and therefore follows CIEEM's code of professional conduct (CIEEM, 2022). In addition, they are a qualified botanist with a Level 4 Field Identification Skills Certificate (FISC) from Botanical Society of Britain and Ireland (BSBI) and have extensive experience conducting BNG assessments for a range of project types and sizes.
- 12.15. Additional technical review, support and quality assurance was provided by the Royal HaskoningDHV Terrestrial Ecology Practice Lead. They are a full member of CIEEM and a Chartered Environmentalist, with over 20 years' experience as a professional ecologist.
- 13.16. Both the author and technical reviewer of this report surpass the criteria for 'competent person' (Defra, 2023d).

#### 18.10.1.4 18.10.1.5 Policy and Legislation

- 14.17. This BNG strategy has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework, from which the protection of sites, habitats and species is derived in England:
  - The Environment Act 2021 (2021 Act);
  - Planning Act 2008 (2008 Act);
  - National Policy Statements for energy infrastructure EN-1, EN-3 and EN-5 (DESNZ, 2024):
  - The Natural Environment and Rural Communities Act 2006 (NERC); and
  - ERYC Local Plan Strategy Document (2016).
- 15.18. Section 99 and Schedule 15 of the 2021 Act will mandate the provision of BNG for NSIPs by inserting secondary amendments into the 2008 Act. It is anticipated that Section 99 and Schedule 15 will be brought into force in November 2025.
- 16.19. The 2021 Act outlines Local Nature Recovery Strategies (LNRS) as a mandatory requirement for local policy to contribute to the wider Nature Recovery Network (NRN) across England. County-wide LNRS will reflect local biodiversity priorities and be used to inform targeted off-site compensation for BNG. NPS EN-1 Section 4.6.12 states "If published, the relevant strategy is the Local Nature Recovery Strategy (LNRS). If an LNRS has not been published, the relevant consenting body or planning authority may specify alternative plans, policies or strategies to use". A LNRS does not currently exist for East Riding of Yorkshire Council, however a strategy is set to be complete by early 2025.

Unrestricted 004300159



- 17.20. The 2008 Act as amended by the 2021 Act sets out provisions regarding the preparation of biodiversity gain statements, being a statement of government policy in relation to the biodiversity gain to be achieved in connection with NSIP developments. A biodiversity gain statement must set out a biodiversity gain objective of at least 10%. for developments to which the statement relates.
- 18.21. The 2008 Act as amended by the 2021 Act would provide that, where the relevant national policy statement contains a biodiversity gain statement, or a separate biodiversity gain statement has been issued, the Secretary of State may not grant an application for an NSIP unless satisfied that the biodiversity gain objective contained in the biodiversity gain statement is met in relation to the development to which the application relates.
- 19.22. The Defra (2023b) policy paper sets out that, once brought into effect, at least 10% measurable net gain will be required and must be maintained for at least 30 years. Legal and financial provision would therefore be required over this period for the maintenance of habitat areas that are essential to the delivery of the project's BNG.
- 20.23. The Overarching National Policy Statement for Energy (EN-1,), which came into force 17th January 2024, states that "Energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, and the wider environment where possible" (DESNZ, 2024).
- 21.24. EN-1 goes on to state within Section 4.6.3 that "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." This indicates that voluntary BNG delivery, before the November 2025 mandatory date, should be positively weighted in the planning decision.
- 22.25. The National Policy Statement for Electricity Networks (EN-5) Section 2.5 deals with BNG, and notes "When planning and evaluating the proposed development's contribution to environmental and biodiversity net gain, it will be important for both the applicant and the Secretary of State to supplement the generic guidance set out in EN-1 (Section 4.6) with recognition that the linear nature of electricity networks infrastructure can allow for excellent opportunities to: i. reconnect important habitats via green corridors, biodiversity stepping zones, and reestablishment of appropriate hedgerows; and/or ii. connect people to the environment, for instance via footpaths and cycleways constructed in tandem with environmental enhancements."

**Unrestricted 004300159** 



- 23.26. Section 40 of The NERC Act outlines the duty in of a public authority to consider what action the authority can properly take to further the general biodiversity objective, which is the conservation and enhancement of biodiversity in England through the exercise of functions in relation to England.
- 24.27. Policy ENV4 of the East Riding of Yorkshire Council Local Plan Strategy Document states "proposals should seek to achieve a net gain in biodiversity where possible" (East Riding of Yorkshire Council, 2016).

# 18.10.2 Methods – Delivery of Biodiversity Net Gain 18.10.2.1 Overview

- 25.28. BNG is an approach to development activities that leave the natural environment in a measurably better state than it was before.
- 26.29. BNG works with and does not replace the mitigation hierarchy. Primarily avoiding impacts on ecological receptors, as per the mitigation hierarchy, minimises the need for providing compensation for losses. If losses are encountered and impacts cannot be avoided, other tiers of the mitigation hierarchy, and therefore BNG compensation and enhancement, should be sought. Additionally, the mitigation hierarchy applies to all ecological receptors, whilst BNG calculations are based purely on habitat data and delivery of BNG may not sufficiently compensate for all potential ecological receptors, for example European Protected Species (EPS).
- 27.30. BNG does not replace existing legal requirements, and it should not be applied to compensate for effects on irreplaceable habitats. Bespoke compensation to address losses and deterioration of irreplaceable habitats needs to be agreed on a case-by-case basis with the determining body or planning authority (in this case East Riding of Yorkshire Council). The post-development sheets of the Metric cannot include any bespoke compensation to address specific losses and deterioration of irreplaceable habitats.
- 28.31. The Projects will follow industry best practice for BNG, and namely-adhere to the ten principles developed by CIEEM, IEMA and CIRIA (CIEEM, et al., 2016), summarised in **Table 18-10-3** Even though **Table 18-10-1** is based on guidance produced in 2016, these principles remain relevant.





Table  $18-10-3\pm$  BNG good practice principles for development, taken from CIEEM, CIRA and IEMA (2016) Biodiversity net gain good practice principles for development.

Principle	Description
<b>Principle 1</b> – apply the mitigation hierarchy	Primarily avoid and then minimise impacts on biodiversity. Compensation for losses that cannot be avoided should only be used as a last resort, and in agreement with external decision-makers. If compensation for losses is not possible within the development footprint or does not generate the most beneficial outcome for nature conservation, then biodiversity losses should be offset by gains elsewhere.
Principle 2 – avoid losing biodiversity that cannot be offset by gains elsewhere	Impacts should be avoided in areas considered to have 'irreplaceable biodiversity'. Such impacts cannot be offset to achieve no net loss or net gain.
Principle 3 – be inclusive and equitable	Stakeholders should be engaged early in the project and involved in design, implementing, monitoring and evaluating the approach to net gain. Net gain should be achieved in partnership with stakeholders where possible and the benefits shared fairly among stakeholders.
<b>Principle 4</b> – address risks	Any difficulties, uncertainties, and other risks to achieving net gain will require mitigation. Best practice and industry accepted methods should be used to add contingency when calculating biodiversity losses and gains, to account for risks and compensate for the period between losses and gains to establish.
Principle 5 – make a measurable net gain contribution	Achieve a measurable, overall net gain of biodiversity and ecosystem services provided while also directly contributing towards nature conservation priorities.



Principle	Description	
<b>Principle 6</b> – achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly justified choices when:	
	Delivering ecologically proportional compensation which accounts for type, timing, amount, condition and location of losses;	
	Compensating for losses of on type of biodiversity using a more beneficial type for nature conservation;	
	Achieving net gain at local, regional and national levels;	
	Enhancing existing or creating new habitat; and	
	Enhancing ecological connectivity.	
Principle 7 – be additional	Achieve nature conservation outcomes that exceed existing obligations and enhance biodiversity.	
Principle 8 – create a	Ensure net gain has long-term benefits by:	
net gain legacy	Engaging stakeholders when agreeing practical solutions that ensure net gain is achieved;	
	Plan for the adaptive management and funding for long- term management of net gain sites;	
	Net gain design should be resilient to external factors, especially climate change;	
	Avoid displacing negative and harmful activities from one location to another; and	
	Support local-level management of net gain activities.	
<b>Principle 9</b> – optimise sustainability	BNG should be a priority, as well as optimising wider environmental benefits for a sustainable society and economy.	
Principle 10 – be transparent	All net gain activities should be communicated in a transparent and timely manner, sharing findings with stakeholders.	

29.32. To adhere to principle 5 and ensure net gain is 'measurable', the Projects will be using the Metric. The Metric uses habitat types as an indicator of biodiversity in an area, based on the assumption that if a suitable habitat is present species will colonise it. As a result, use of the Metric does not account for species-specific compensation, mitigation, and enhancement.

Unrestricted 004300159



- 30.33. Along with technical competence highlighted in section 18.10.1.4, the competent person will ensure any Metric outputs are interpreted using ecological expertise to inform Projects plans and decisions.
- 31.34. The Metric can be used to inform and optimise project planning, design, land management and decision-making (Defra, 2023d). The Metric uses habitats and the 'Biodiversity Units' they generate as a proxy to indicate the biodiversity value of an area. These Biodiversity Units are the 'currency' of the Metric that quantify biodiversity value.
- 32.35. There are three types of Biodiversity Unit (BDU) in the Metric, which are calculated in three separate habitat 'modules' of the Metric:
  - Habitat Units these are calculated within the Area Module and apply to habitats measured in hectares (ha), such as grassland and woodland;
  - Hedgerow Units calculated within the Hedgerow Module, these apply to linear hedgerows and lines of trees measured in km; and
  - Watercourse Units calculated within the Watercourse Module, these apply to linear freshwater habitats such as rivers, streams and ditches which are measured in km.
- 33.36. The Defra Metric calculation of the change in biodiversity resulting from a project or development is made by deducting the baseline unit value of a development area from the number of post-development Biodiversity Units. Post-development units incorporate temporary and permanent losses resulting from the Projects, along with the value of any mitigation, compensation, and enhancement measures also part of the Projects.
- 34.37. As well as habitat type and quantity for area, hedgerow and watercourse habitats, various factors and multipliers are considered to produce the Biodiversity Unit values for each module, namely:
  - **Habitat distinctiveness**: "a measure based on the type of habitat and its distinguishing features. This includes consideration of species richness, rarity, the extent to which the habitat is protected by designations and the degree to which a habitat supports species rarely found in other habitats" (Defra, 2023d);
  - **Habitat condition**: "a measure of the habitat against its ecological optimum state. Condition is a way of measuring variation in the quality of patches of the same habitat type." (Defra, 2023d);
  - **Strategic significance**: a factor that "describes the local significance of the habitat based on its location and the habitat type." (Defra, 2023d); and

Unrestricted 004300159



- Other risks and multipliers: the Metric also accounts for potential risks in the forms of multipliers, including the difficulty, temporal and spatial risks associated with post-development habitat management. This incorporates the feasibility for projects realistically achieving their BNG targets.
- 35.38. The Statutory Metric can be used throughout all stages of a project, however the earlier it is applied, the greater the opportunity and benefit to design for biodiversity and wider ecological benefits.

#### 18.10.2.2 Rules and Principles of the Defra Biodiversity Metric

#### 18.10.2.2.1 Defra Biodiversity Metric rules

36.39. The Metric has four rules which must be followed, otherwise a project cannot claim to have achieved BNG. These rules will be followed by the Projects and are outlined below in-**Table 18-10-4**.

Table 18-10-42 Defra Metric rules (taken from The Statutory Biodiversity Metric User Guide [Defra, 2023d]).

Rule Number	Rule Description
Rule 1	The trading rules of this metric must be followed.
Rule 2	Biodiversity unit outputs are unique to this metric. The results of other metrics, including previous versions of this metric, are not comparable to those of this metric.
	The three types of Biodiversity Units generated by this metric (area, hedgerow, and watercourse) cannot be summed, traded, or converted between modules. The requirement to deliver at least a 10% net gain applies to each type of unit.
Rule 3	To accurately apply the biodiversity metric formula, you must use the biodiversity metric calculation tool
Rule 4	In exceptional ecological circumstances, deviation from this metric methodology may be permitted by the relevant consenting body or planning authority.
	Any deviation must be fully justified and evidenced.





37.40. Rule 1, also referred to as the BNG 'trading rules', set out the minimum level of habitat creation or enhancement in order to compensate for losses of specific habitats based on their distinctiveness. The Metric trading rules are set out below in **Table 18-10-5** Table 18-10-3.

Table 18-10-53 Summary of the trading rules to compensate for habitat losses (taken from The Statutory Biodiversity Metric User Guide [Defra, 2023d]).

Baseline Habitat Distinctiveness	Area Module (Habitat Units)	Hedgerow Module (Hedgerow Units)	Watercourse Module (Watercourse Units)
Very high	Priority should be given to replacing losses with area Habitat Units of the same habitat type.	Losses must be replaced with hedgerow units of the same habitat type.	Priority should be given to replacing losses with watercourse units of the same habitat type
High	Losses must be replaced with Habitat Units of the same habitat type.	Losses must be replaced with hedgerow units of the same habitat type or higher distinctiveness band.	Losses must be replaced with watercourse units of the same habitat type.
Medium	Losses must be replaced by Habitat Units either:  Medium distinctiveness habitats within the same broad habitat type.	Losses must be replaced with hedgerow units of the same or higher distinctiveness band.	Losses must be replaced with watercourse units of the same habitat type.
	Any habitat from a higher distinctiveness band (from any broad habitat type).		



Baseline Habitat Distinctiveness	Area Module (Habitat Units)	Hedgerow Module (Hedgerow Units)	Watercourse Module (Watercourse Units)
Low	Losses must be replaced with Habitat Units of the same or higher distinctiveness band.	Losses must be replaced with hedgerow units of the same or higher distinctiveness band.	Losses must be replaced with watercourse units of the same or higher distinctiveness band.
Very low	N/A	Losses must be replaced with hedgerow units of the same or higher distinctiveness band.	N/A

- 38.41. Rule 4 states "In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority". Therefore, if irreplaceable habitats are present within the development boundary and specific losses or deterioration cannot be avoided, bespoke compensation will be required to address this which also considers all relevant up-to-date policy, legislation, and regulations. Such compensation will include stakeholder consultation and will be agreed upon on a case-by-case basis with the determining body or planning authority. All irreplaceable habitats must be recorded in the irreplaceable habitat sheet within the Metric.
- 39.42. Some very high distinctiveness habitats are considered to be irreplaceable habitats, but not all. Regardless, very high distinctiveness habitats also require bespoke compensation if their losses or deterioration cannot be avoided by a development. However, bespoke compensation is not required for very high distinctiveness hedgerows.
- 40.43. Ancient woodland irreplaceable habitat is not a specific habitat type and is therefore not an option in the habitat categories presented in the Metric. For example, it can include ancient semi-natural woodlands, plantations on ancient woodland sites and also ancient woodland pasture / parkland.
- 41.44. Individual ancient and veteran trees can be found within a variety of habitats, such as hedgerows, lines of trees, woodland, open habitats and urban settings. Where ancient or veteran trees occur, they should have be considered and recorded as irreplaceable habitat.

Unrestricted 004300159



#### 18.10.2.2.2 Defra Metric principles

42.45. In addition to the Metric rules and BNG good practice principles set out within-**Table 18-10-3**Table **18-10-1**, there are nine principles set out by Defra (Defra, 2023d) which should be used to inform best use of the Metric. These principles will be followed by the Projects and are summarised in **Table 18-10-6**Table **18-10-4**.

Table 18-10-64 Statutory Biodiversity Metric principles which must be followed to inform the use of the Metric (The Statutory Biodiversity Metric User Guide [Defra, 2023d]).

Principle Number	Principle Description
Principle 1	The metric assessment should be completed by a competent person.
Principle 2	The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licensing processes, for example woodlands.
Principle 3	This Metric should be used in accordance with established good practice guidance and professional codes.
Principle 4	This Metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.
Principle 5	Biodiversity units are a proxy for biodiversity and should be treated as relative values.
Principle 6	This Metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.
Principle 7	Habitat interventions need to be realistic and deliverable within a relevant project timeframe.
Principle 8	Created and enhanced habitats should seek, where practical and reasonable, to be local to any impact and deliver strategically important outcomes for nature conservation.
Principle 9	The Metric does not enforce a minimum habitat size ratio for compensation of losses. However, proposals should aim to:
	Maintain habitat extent - supporting more, bigger, better and more joined up ecological networks; and
	Ensure that proposed or retained habitat parcels are of sufficient size for ecological function.



#### 18.10.2.3 Proposed Approach

- 43.46. For the Projects to deliver BNG where possible, the approach proposed below will be followed. This approach covers project-specific requirements such as defining key terms, baseline data needs, pre-consent calculations and post-development approach.
- 44.47. The Projects' BNG Assessment and Metric Assessment only apply to terrestrial and intertidal habitats within the BNG Study Area. The BNG Study Area is defined as all terrestrial habitats within the Projects Onshore Development Area, as defined within the Environmental Statement (Volume 7, Appendix 18-2 Habitat Survey Report, Appendix C (application ref: 7.18.18.2)). This includes all habitats within the mean low water spring tide mark (MLWS). Habitats beyond the MLWS mark are considered marine and outside the scope of this assessment.
- 45.48. With regard to Marine Net Gain (MNG), which is currently in its very early stages, Defra published a summary of responses on 21st March 2023 following a 12-week consultation period in 2022. It is unknown when MNG will become statutory, however this is expected to be after the Projects construction and therefore is not currently considered as part of the Projects.

#### 18.10.2.3.1 Defining Terms

46.49. In order to discuss BNG and the use of the Metric to calculate gains and losses, there are a number of specific terms which must be used. These are defined below.

#### 18.10.2.3.1.1 Strategic Significance

- 47.50. As part of using the Metric, all habitats within each module require input of a strategic significance value. Where Local Nature Recovery Strategies (LNRS) are yet to be published, as is the case within ERYC, Table 8 of the Statutory Biodiversity Metric User Guide (Defra, 2023d) is applied.
- 48.51. In order to determine strategic significance of each habitat, consideration of a range of local policies, strategies and action plans were used. Defra (2023d) identifies the following plans, policies and strategies that may influence strategic significance:
  - Draft Local Nature Recovery Strategies;
  - Local Plans and Neighbourhood Plans;
  - Local Planning Authority Local Ecological Networks;
  - Tree strategies;

Unrestricted

Page 26

004300159



- Areas of Outstanding Natural Beauty (AONB) management plans;
- Biodiversity Action Plans;
- Species and protected sites conservation strategies;
- Woodland strategies;
- Green Infrastructure (GI) strategies;
- River basin management plans;
- Catchment plans and catchment planning systems;
- Shoreline management plans; and
- Estuary strategies.
- 49.52. Plans, policies, and strategies relevant to the Projects' and BNG strategic significance assessment include:
  - UK Biodiversity Action Plan (BRIG, 2011);
  - Local Biodiversity Action Plan for the East Riding of Yorkshire (ERYC, 2010); and
  - East Riding Local Plan (ERYC, 2016).
- 50.53. Following the consideration of local plans, policies and strategies, the definitions in **Table 18-10-7**Table 18-10-5 of each level of strategic significance were prepared for the Projects. These definitions were used to determine the strategic significance score of each habitat present within the Projects' BNG Study Area.



Table 18-10-75 Levels of strategic significance

Strategic Significance	Habitat Criteria
High	Sites of Specific Scientific Interest (SSSI);
	Special Areas of Conservation (SAC) and Special Protected Areas (SPA);
	Local Wildlife Sites (LWS);
	Locally important sites such as ancient woodland, veteran trees, and other irreplaceable habitats (Defra, 2023c); and
	NERC Act 2006 Section 41 priority habitats.
Medium	Areas and habitats immediately adjacent to the above sites for nature conservation, with potential to support the features of interest of the site or buffer impacts to them;
	Areas which meet local LWS selection criteria but are not designated as such; and,
	Areas of land and habitats identified in Natural England's habitat network mapping data including information on habitat restoration-creation, restorable habitat, plus fragmentation action, and network enhancement and expansion zones.
Low	All remaining habitats which do not meet the above criteria.

#### 18.10.2.4 'On-site' and 'Off-site'

- 51.54. Habitats within the Metric are considered as either on or off-site.

  Distinguishing between these two categories allows for consideration of Principle 8, detailed within\_-**Table 18-10-6**Table 18-10-4, which aims to incentivise BNG delivery local to the point of impact.
- 52.55. Broadly speaking, on-site compensation is given a higher weighting and therefore benefit versus off-site compensation. The weighting of off-site compensation further decreases as the distance from the point of impact increases. This is quantified through 'Spatial Risk' multipliers within the Metric, as summarised in **Table 18-10-6** below.



- 53.56. The Defra (2023d) Statutory Biodiversity Metric Draft User Guide defines the terms 'on-site' and 'off-site' as:
  - On-site: "All land within a red line boundary of a development".
  - **Off-site**: "Off-site for the purposes of the metric calculation tool means land outside of the onsite boundary, which is dedicated to habitat interventions (habitat enhancement or creation), regardless of proximity or ownership".
- 54.57. For the purposes of this strategy, the Defra (2023d) definitions of on-site and off-site have been interpreted as follows:
  - On-site: BNG Study Area which aligns with the onshore and intertidal habitats within the Onshore Development Area, submitted with the Projects ES.
  - Off-site: This refers to all other areas outside of the BNG Study Area.

Table 18-10-86 Summary of spatial risk multipliers, demonstrating the number of compensator Biodiversity Units required when delivered on-site versus off-site. Multiplier values taken from the Metric (Defra, 2023a).

Category / Distance of BNG compensation from point of impact	Multiplier	Ratio of Biodiversity Units required vs on-site compensation
For Area and Hedgerow habitats: Compensation inside Local Planning Authority (LPA) boundary or National Character Area (NCA) of impact site.	1	1:1
For intertidal habitats: compensation inside Marine Plan Area of impact site.		
For Watercourse habitats: compensation is within waterbody catchment.		





Category / Distance of BNG compensation from point of impact	Multiplier	Ratio of Biodiversity Units required vs on-site compensation
For Area and Hedgerow habitats:  ©compensation outside LPA or NCA of impact site, but in neighbouring LPA or NCA.	0.75	1:1.33
For intertidal habitats: compensation outside same Marine Plan Area but in neighbouring Marine Plan Area		
For Watercourse habitats: compensation is outside waterbody catchment, but within operational catchment.		
For Area and Hedgerow habitats:  ©compensation outside LPA or NCA of impact site and neighbouring LPA or NCA.	0.5	1:2
For intertidal habitats: compensation outside Marine Plan Area of impact site and beyond neighbouring Marine Plan Area.		
For Watercourse habitats: compensation is outside operational catchment.		

#### 18.10.2.5 Baseline Data Collection

- 55. Habitat surveys of the BNG Study Area were carried out between 2022 and 2023, full details and methods are provided within Volume 7, Chapter 18

  Terrestrial Ecology Appendix 18-2 Habitat Survey Report (application ref: 7.18).
- 58. The baseline assessment of the habitat present within the Onshore Development Area has been informed by:
  - UKHab habitat surveys carried out between 2022 and 2023;
  - Arboricultural survey information collected in 2024; and

Unrestricted 004300159



- River Condition Assessment (RCA) and Ditch Condition Assessment (DCA) surveys in 2025.
- 59. Full details and methods of these surveys are provided within:
  - Volume 7, Chapter 18 Terrestrial Ecology Appendix 18-2 Habitat Survey Report (application ref: 7.18):
  - Arboricultural Survey Report, Preliminary Arboricultural Impact
     Assessment and Outline Arboricultural Method Statement (Revision
     3) (document reference 10.13); and
  - Annex B Baseline River Condition Assessment (RCA) and Ditch Condition Assessment (DCA) Report of this Strategy.
- 56.60. Where necessary, habitats were converted from UKHab to align with the habitats included within the Metric. Conversions were carried out in accordance with the habitat translations included tab "G-1 All Habitats" of the Metric (Defra, 2023a), unless otherwise specified.

#### 18.10.2.5.1 Assumptions and Limitations

- The majority of habitats within the BNG Study Area were subject to field surveys, with the exception of a small number of inaccessible road verges. These areas have been assessed using aerial mapping, and mapped accordingly using best-professional judgement and a proportionatea precautionary approach. These areas have been included within this assessment as areas of 'other neutral grassland' in 'moderate' condition. Within the local context of the Onshore Development Area, these is considered a reasonable, well informed estimate and is not considered to pose a significant limitation on this Strategy.
- 58.61. River condition assessments (RCA) were not carried out as part of the baseline habitat surveys. Once design details have been finalised post-consent, RCA may be required of any watercourses which would be affected.

#### 18.10.2.6 Stakeholder Consultation

59.62. Stakeholder consultation was carried out to assess on-site and off-site BNG delivery opportunities. This included East Riding of Yorkshire Council, Natural England, Yorkshire Wildlife Trust, the Environment Agency, the Environment Bank, and a number of private stakeholders.



#### 18.10.3 Baseline Conditions

60.63. No degradation of habitats was carried out prior to the baseline habitat surveys being completed. The habitat surveys completed in between 2022 and 2023 (as detailed within section 18.10.2.5), which have informed this assessment, are therefore taken to represent the baseline biodiversity value of the BNG Study Area.

#### 18.10.3.1 Summary of Habitats Present

- 61.64. The BNG Study Area is predominantly of agricultural use and dominated by Cropland, which accounts for over 80% of the total land cover. The remaining areas comprise a combination of woodland, grassland, wetland, scrub, urban, freshwater and hedgerow habitats.
- 62.65. Irreplaceable habitats (as defined under The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024) recorded within the BNG Study Area include small (below 3ha per habitat block) areas of lowland fen and ancient woodland.

#### 18.10.3.2 Baseline Metric Calculations

- 63.66. Full metric assessments of baseline habitats present within the BNG Study Area are provided within Annex A Biodiversity Metric, on-site habitat baseline and creation. and Annex B Biodiversity Metric, on-site hedgerow and watercourse baseline and creation.
- 64.67. The baseline biodiversity value of the BNG Study Area, by module, is:
  - 1085.11132.58 Habitat Units (values exclude irreplaceable fen, and ancient woodland and veteran tree habitats, as per best practice [Defra (2023d]);
  - 121.75<del>04.4</del> Hedgerow units; and
  - 15.6128.04 Watercourse units.
- **65.68. Table 18-10-9Table 18-10-7**, **Table 18-10-10Table 18-10-8**\_and **Table 18-10-11Table 18-10-9**\_below provide summaries of the habitats present and their biodiversity value, per module type (area, hedgerow, and watercourse, respectively).



Table 18-10-97 Summary of baseline Habitat Units and area per habitat type within the Projects BNG Study Area.

Habitat TypeHabitat Type	Sum of Area (ha)Area (ha)	Distinctiven ssDistinctiveneness	Sum of Biodiversity UnitsSugge sted action to address habitat losses	Habitat Units
Arable field margins cultivated annuallyHorticulture	<u>2.07</u> 4 <del>.29</del>	<u>Medium</u> Low	9.52Same distinctivenes s or better habitat required =	8.58
Arable field margins game bird mixArable field margins cultivated annually	<u>0.28<del>2.07</del></u>	MediumMedi um	1.28Same broad habitat or a higher distinctivenes s habitat required (>)	<del>8.28</del>
Arable field margins pollen and nectarArable field margins tussocky	<u>1.83</u> 1.82	MediumMedi um	8.43Same broad habitat or a higher distinctivenes s habitat required (>)	<del>7.28</del>
Arable field margins tussockyArable field margins pollen and nectar	<u>1.83</u> <del>1.83</del>	MediumMedi um	8.4Same broad habitat or a higher distinctivenes s habitat required (>)	<del>7.32</del>
Artificial unvegetated, unsealed surfaceArable field margins game bird mix	0.60.28	Very lowMedium	OSame broad habitat or a higher distinctivenes s habitat required (≥)	1.12

### Dogger Bank South Offshore Wind Farms

Habitat TypeHabitat Type	Sum of Area (ha)Area (ha)	Distinctiven ssDistinctivenenss	Sum of Biodiversity UnitsSugge sted action to address habitat losses	Habitat Units
Bramble scrubTemporary grass and clover leys	<u>0.42</u> <del>15.36</del>	<u>Medium</u> Low	1.68Same distinctivenes s or better habitat required =	<del>30.72</del>
Cereal crops Cereal crops	<u>281.7</u> <del>269.91</del>	<u>Low</u> Low	563.4Same distinctivenes s or better habitat required ≥	<del>539.82</del>
Developed land; sealed surfaceNon-cereal crops	<u>5.85</u> <del>81.79</del>	Very low-Low	OSame distinctivenes s or better habitat required =	163.58
Fens (upland and lowland) (irreplaceable habitat) Fens (upland and lowland)	<u>1.71</u> <del>1.73</del>	Very highV.High	OBespoke compensatio n likely to be required	2.56
Fens (upland and lowland)Other neutral grassland	0.1611.89	<u>Very</u> <u>high</u> Medium	2.94Same broad habitat or a higher distinctivenes s habitat required (=)	103.28
Hawthorn scrubModified grassland	0.0422.04	<u>Medium</u> Low	0.31Same distinctivenes s or better habitat required >	<del>50.96</del>

Unrestricted 004300159

Dogger Bank South Offshore Wind Farms

Habitat TypeHabitat Type	Sum of Area (ha)Area (ha)	Distinctiven ssDistinctiv eness	Sum of Biodiversity UnitsSugge sted action to address habitat losses	Habitat Units
HorticultureBramble scrub	<u>4.29</u> <del>0.42</del>	<u>Low</u> Medium	8.57Same broad habitat or a higher distinctivenes s habitat required (≥)	<del>1.68</del>
<u>Littoral sand</u> Hawthorn scrub	14.370.04	MediumMedi um	132.2Same broad habitat or a higher distinctivenes s habitat required (≥)	0.32
Lowland meadowsMixed scrub	<u>0.91</u> <del>0.07</del>	<u>V.High</u> Mediu m	14.41 Same broad habitat or a higher distinctivenes s habitat required (≥)	0.52
Maritime cliff and slopesPonds (non-priority habitat)	0.170.14	<u>High</u> Medium	2.33Same broad habitat or a higher distinctivenes s habitat required (≥)	1.12
Mixed scrubWatercourse footprint	0.120.24	MediumV.Lo	0.91Compen sation Not Required	θ
Modified grasslandMaritime cliff and slopes	<u>19.82</u> <del>0.17</del>	<u>Low</u> High	46.52Same habitat required =	2.04

Unrestricted 004300159

Dogger Bank South Offshore Wind Farms

Habitat TypeHabitat Type	Sum of Area (ha)Area (ha)	Distinctiven ssDistinctiv eness	Sum of Biodiversity UnitsSugge sted action to address habitat losses	Habitat Units
Non-cereal cropsLittoral sand	<u>81.79</u> <del>14.37</del>	<u>Low</u> Medium	163.59Same broad habitat or a higher distinctivenes s habitat required (≥)	<del>114.96</del>
Other neutral grassland Vegetated garden	<u>10.83</u> <del>0.14</del>	<u>Medium</u> Low	107.38Same distinctivenes s or better habitat required =	0.28
Other woodland; broadleaved (irreplaceable habitat)Developed land; sealed surface	<u>2.02</u> 24.18	MediumV.Lo ₩	OCompensati on Not Required	θ
Other woodland; broadleavedOther woodland; broadleaved	<u>1.772.85</u>	MediumMedi um	19.28 Same broad habitat or a higher distinctivenes s habitat required (≥)	<del>33.48</del>
Ponds (non-priority habitat)Other woodland; mixed	<u>0.13</u> <del>0.9</del>	MediumMedi um	1.18Same broad habitat or a higher distinctivenes s habitat required (≥)	<del>7.2</del>
Rural tree (irreplaceable habitat)	0.34	<u>Medium</u>	<u>O</u>	
Rural tree	0.42	<u>Medium</u>	3.68	

Unrestricted 004300159





Habitat TypeHabitat Type	Sum of Area (ha)Area (ha)	Distinctiven ssDistinctiv eness	Sum of Biodiversity UnitsSugge sted action to address habitat losses	Habitat Units
Temporary grass and clover leys	18.14	Low	36.29	
<u>Vegetated garden</u>	0.14	Low	0.27	
Watercourse footprint	0.24	<u>Very low</u>	<u>0</u>	
Total area excluding trees	451.23			
<u>Grand</u> <u>Tt</u> otal	456.53451.9 9		1132.58	1085.1

Table 18-10-108 Summary of Hedgerow Units recorded at baseline within the Projects BNG Study Area.

Habitat Type	Length (km)	Distinctivenes s	Suggested action to address habitat losses	Hedgerow Units
Ecologically valuable line of treesNative hedgerow	0.0311.9	<u>Medium</u> Low	Same distinctivenes s-band or better	0.1355.32
<u>Line of trees</u> Species rich native hedgerow	<u>0.62</u> 4 <del>.21</del>	Medium	Same distinctivenes s band or better	2.45 <mark>45.12</mark>
Native hedgerow	12.78	Low		68.58

Unrestricted 004300159



Species-rich native hedgerowEcologicall y valuable line of trees	4.130.56	Medium	Suggested action to address habitat losses	<u>50.59</u> 3.96
Total	17.56 <del>16.6</del> 7			104.4121.7 5

Table 18-10-119 Summary of Watercourse Units recorded at baseline within the Projects Study Area BNG Study Area.

Habitat Type	Length (km)	Distinctiveness	Suggested action to address habitat losses	Watercourse Units
CulvertOther rivers and streams	0.0040.18	HighLow	Same habitat required	<u>0.01</u> 2.16
<u>Ditches</u>	3.44	<u>Medium</u>		12.02
Other rivers and streamsDitches	<u>0.45</u> 4.7	<u>High</u> Medium	Same habitat required	<u>3.58</u> 25.88
Total	3.89 <mark>4.48</mark>			<del>28.04</del> 15.61

### 18.10.4 Proposed Design, Strategy and Assumptions

66.69. Full details of the Projects proposals, including worst case scenarios are set out within Volume 7, Chapter 5 Project Description (application ref: 7.5) and Volume 7, Chapter 18 Terrestrial Ecology and Ornithology (application ref: 7.18). For the purposes of this assessment, a number of additional assumptions have been made and detailed below. This includes assumptions for impacts, construction methods, habitat reinstatement, habitat creation and/or enhancement and development. All assumptions apply to habitats within the BNG Study Area.

**Unrestricted 004300159** 



#### 18.10.4.1 Broad Strategy and Assumptions

- 67.70. The development proposals will require **temporary** and **permanent** habitat losses throughout the BNG Study Area.
- 68.71. For BNG purposes, temporary losses are defined as habitats which are fully restored to their <u>original habitat type and condition</u> within two years of impact. Temporary losses can be discounted from habitat loss calculations (Defra, 2023d) <u>and included within the areas of 'retained' habitat</u>, substantially reducing BNG impacts. Construction methods will therefore be adapted where possible to minimise habitat loss durations and reduce BNG impacts. Further details of which are provided in section 18.10.4.2.2 below.
- 69.72. It should be noted that full habitat restoration takes multiple years for most habitat types (as shown within-<u>Table</u> 18-10-12Table 18-10-10). However, it is considered that subject to soils being reinstated in accordance with the Soil Management Plan, cropland habitats are fully restored once their soils have been replaced. Therefore, losses of this habitat type can be classified as <u>temporary and therefore 'retained', in accordance with Defra guidance</u> (2023d), subject to soil reinstatement being completed within two years of impact.
- 73. Where reinstatement of baseline habitats is proposed, it is assumed that the original habitat type and condition will be achieved. With the exception of baseline habitats in 'good' condition. On a precautionary basis, it is assumed that these habitats will be reinstated to a 'moderate' condition. This is to ensure the Strategy remains realistic and achievable. This is a modification of the original strategy at the point at submission.

Table 18-10-12 Time in years for newly created habitats to achieve target condition. Habitat list limited to those recorded within the Dogger Bank South Windfarm Onshore Development Area (data adapted from the Metric [Defra, 2023d]). \*Reserved for habitats which cannot achieve poor, moderate or good condition due to habitat type. \*\*habitats considered to be restored once soils have been appropriately reinstated (full details provided within section 18.10.4.2.2).

Habitat Type Undergoing Restoration	Years to 'Good' condition	Years to 'Moderate' condition	Years to 'Poor' condition	Years to 'Condition Assessment N/A'*	
Area Habitats					
<u>Cropland - Horticulture</u>	N/A	N/A	N/A	1**	
Cropland - Arable field margins cultivated annually	N/A	N/A	N/A	1**	

Unrestricted 004300159

## **RWE**

Dogger Bank South Offshore Wind Farms

Habitat Type Undergoing Restoration	Years to 'Good' condition	Years to 'Moderate' condition	Years to 'Poor' condition	Years to 'Condition Assessment N/A'*
Cropland - Arable field margins tussocky	N/A	N/A	N/A	1**
Cropland - Arable field margins pollen and nectar	N/A	N/A	N/A	<u>1**</u>
Cropland - Arable field margins game bird mix	N/A	N/A	N/A	1**
Cropland - Temporary grass and clover leys	N/A	N/A	N/A	1**
Cropland - Cereal crops	N/A	N/A	N/A	1**
Cropland - Non-cereal crops	N/A	N/A	N/A	1**
Wetland - Fens (upland and lowland)	30	20	10	N/A
Grassland - Other neutral grassland	10	<u>5</u>	2	N/A
Grassland - Modified grassland	7	4	1	N/A
Grassland - Lowland meadows	<u>15</u>	10	<u>5</u>	N/A
Heathland and shrub - Bramble scrub	N/A	N/A	N/A	1
Heathland and shrub - Hawthorn scrub	10	<u>5</u>	1	<u>N/A</u>
Heathland and shrub - Mixed scrub	10	<u>5</u>	<u>1</u>	N/A
Woodland and forest - Other woodland; broadleaved	<u>30+</u>	<u>15</u>	<u>5</u>	N/A
Woodland and forest - Other woodland; mixed	<u>30+</u>	<u>30</u>	<u>5</u>	N/A

Unrestricted 004300159

# **RWE**

#### Dogger Bank South Offshore Wind Farms

Habitat Type Undergoing Restoration	Years to 'Good' condition	Years to 'Moderate' condition	Years to 'Poor' condition	Years to 'Condition Assessment N/A'*	
Woodland and forest - Wet woodland	<u>30+</u>	<u>15</u>	<u>5</u>	N/A	
<u>Lakes - Ponds (non-priority habitat)</u>	<u>5</u>	<u>3</u>	<u>1</u>	N/A	
Sparsely vegetated land - Maritime cliff and slopes	20	10	<u>5</u>	N/A	
Intertidal sediment - Littoral sand	4	1	1	N/A	
<u>Urban - Developed land; sealed</u> <u>surface</u>	N/A	N/A	N/A	<u>O</u>	
<u>Urban - Unvegetated garden</u>	N/A	N/A	N/A	<u>O</u>	
<u>Urban - Artificial unvegetated,</u> <u>unsealed surface</u>	N/A	N/A	<u>N/A</u>	<u>O</u>	
<u>Urban - Vegetated garden</u>	N/A	<u>N/A</u>	<u>N/A</u>	1	
	Hedgerow H	<u>abitats</u>			
Species-rich native hedgerow	<u>12</u>	<u>5</u>	1	N/A	
Native hedgerow	12	<u>5</u>	<u>1</u>	N/A	
Line of trees	<u>30+</u>	20	<u>5</u>	N/A	
Ecologically valuable line of trees	<u>30+</u>	20	<u>5</u>	N/A	
Watercourse Habitats					
<u>Ditches</u>	10	<u>5</u>	1	N/A	
Other rivers and streams	10	<u>5</u>	<u>1</u>	N/A	

Unrestricted 004300159



#### 18.10.4.2 BNG Assumptions - Area Module (Habitat Units)

- 70.74. At the time of writing, the location of construction activities within the Onshore Development Area are mostly unknown, except for the locations of:
  - The trenchless crossings zones, which use Horizontal Directional Drilling (HDD) or other trenchless techniques such as micro tunnelling or auger boring;
  - Temporary Construction Compound <u>areas</u>, <u>as per Revision 4 of the</u>
     Onshore Works Plans (Volume 2, Works Plans (Onshore) (application ref: 2.16));
  - Works within intertidal habitats:
  - The permanent Substation Access Road and associated construction area;
  - <u>The Onshore</u> Substation <u>Zone Temporary</u> Construction <del>Zones</del> Compounds; <del>and</del>
  - The Onshore Substation Zone.
    - The Onshore Converter Station(s);
    - The permanent Substation Access Road and associated construction area;
    - Landscaping design (Figure 23-6 of 7.23.1 Chapter 23 Landscape and Visual Impact Assessment Figure 23-1 to Figure 23-17 (application ref: 7.23.1)); and
    - o The Sustainable Drainage System pond.
- 71.75. Where specific construction locations are unknown the effect upon habitats cannot be assessed. Therefore, to provide an indicative assessment, average habitat values from within the BNG Study Area can have been used as a proxy. Those habitats which are known to be retained or impacted by other activities are excluded from the average value. This value is defined as a 'habitat composite'. For the purpose of this assessment, the area used to calculate habitat composites comprises the Onshore Development Area, minus the areas of works listed in paragraph 74.

#### 18.10.4.2.1 Retained Area Habitats

72.76. All habitats within the c. 41.9ha Landfall Zone (29ha terrestrial, 12.9ha intertidal) (Volume 7, Figure 5.3a Onshore Development Area Indicative Design (application ref: 7.5.1)) will be retained throughout the construction and post-development phase with the exception of:

Unrestricted 004300159



- Up to 1.425ha of terrestrial habitats used for Temporary Construction Compounds, including the Transition Joint Bay (TJB) Compound, Temporary Construction Compound and a TJB Temporary Construction Compound (approximately 11% of Landfall Zone terrestrial habitats, i.e., habitat composite value). This area will be subject to temporary disturbance (Reinstated within 6 Years of Impact) as detailed in section 18.10.4.2.318.10.4.2.3, below.
- Up to 0.12ha within the intertidal area which will be area required for up to 6 trenchless crossing exit pits (20x10m each); and
- Up to 6.3ha area of The section of Onshore Export Cable Corridor within this area. This area will be subject to temporary disturbance (restored within two years) as detailed in section 18.10.4.2.2 below.

73.77. Other habitats which will be retained include:

- All habitats beneath-above Trenchless Crossing Zones (AreasTCZ);
- All intertidal habitats <u>and maritime cliff and slopes habitat</u> within the emergency beach access route (though it should be noted that protective matting may be installed <u>within this areato cross the eroding</u> <u>cliff line</u>. This area will be monitored should emergency access be required); <del>and</del>
- All areas of irreplaceable habitat, specifically areas of ancient woodland and lowland fen, categorised as 'Woodland and forest - Other woodland; broadleaved' and 'Wetland - Fens (upland and lowland)' within the Metric; and:
- A 20.49ha area of cropland within the Onshore Substation Zone (as per the Indicative Landscape Plan Rev P08 (October 2024), Figure 23-6 of 7.23.1 Chapter 23 Landscape and Visual Impact Assessment Figure 23-1 to Figure 23-17 (application ref: 7.23.1) and detailed within Volume 8, Outline Landscape Management Plan (application ref: 8.11).
- 74.78. On a precautionary basis, aAll other area habitats within the Onshore Development Area are anticipated to be subject to disturbance (such as temporary or permanent losses) as a result of the Projects.

**Unrestricted 004300159** 



- 18.10.4.2.2 Temporary Losses (restored within two years)
- 75.79. Temporary losses can be discounted from habitat loss calculations if baseline habitats can be restored (defined as a reinstated habitat reaching its baseline habitat type and condition) within two years (Defra, 2023d). Any habitats which meet this criteria are included within the areas of 'retained' habitat within the Metric.
- 76.80. Habitats which can be restored within two years are generally limited to cropland habitats, though some grassland and heathland and scrub and non-priority pond habitats are also capable of this (as shown within <u>Table</u> 18-10-12Table 18-10-10).
- 77.81. Conversely, if the habitat type <u>creation</u>, and <u>re-establishment to its original</u> <u>condition</u> takes longer than two years <del>to establish and/or the baseline</del> <del>condition cannot be achieved within two years (</del>(e.g., most woodland habitats require 30+ years to establish and achieve moderate condition) then no losses can be considered temporary, <u>even if the habitat is resown or planted immediately after impact</u>.
- 78.82. The construction phase of the Projects is anticipated to take up to six years. However, some areas within the Onshore Development Area will have habitat reinstatement (defined as replacement of soils and replanting of the habitat, restoration starts at the point of reinstatement) started within one to two years. Once soils have been appropriately reinstated (in accordance with the Appendix A, Soil Management Plan of the OCoCP (Volume 8, application ref: 8.9), cropland habitats are considered to have been fully restored to their original habitat type and condition. Subject to this being complete within a two year period, effects on these habitats are considered temporary and therefore, are included as areas of 'retained' habitat within the Metric. can be discounted from the BNG habitat loss calculations (see
- 79.83. It is assumed that the habitats within the ducted sections of the cable route (between the Jointing Bays), and associated soil storage area will have their soils reinstated within two years. The exact area and location of the ducted cable route sections are unknown at the time of writing as Jointing Bays could be located between 750 and 1500m apart, which will not be determined until the detailed design stage. However, as a worst-case, they are assumed to comprise all habitats within the Onshore Development Area, excluding areas which have been identified within the following sections of this report:
  - 18.10.4.2.1 Retained Area Habitats; and
  - 18.10.4.2.4 Permanent Habitat Loss or Creation.; and

Unrestricted 004300159



- 18.10.4.2.4 Habitat Reinstatement Starting Upon Completion of Construction.
- 80.84. The <u>total</u> area of the ducted sections of the cable route and associated soil storage are estimated to equal approximately 13252.7628ha.

  Approximately 123.9153.34ha of this comprise cropland habitats which can be restored within two years (i.e. temporary losses <u>which are included</u> within 'retained' areas of habitat within the Metric).
- 81.85. It is assumed that 50% of the Temporary Construction Compounds and associated soil storage (approximately 14.33ha) will be reinstated within two years. It is assumed that low value cropland habitats will be reinstated first (to allow for a worst-case loss assessment). Impacts within these areas are therefore classified as temporary losses and are discounted from the loss metric calculations by including them as 'retained' within the Metric.
- 82.86. The design and location of the Haul Road\_is yet to be determined and therefore, the following assumptions have been made (it should be noted that after the initial installation of the cable ducts within the first two years, the construction areas required for the pulling of cables and installation of the additional Jointing Bays to support the second Project would be reduced. Therefore, an assumption has been made that less working area would be required. However, at this stage in the design it is not known exactly where the following works would be located and a high level assumptions have been made for the purposes of this Strategy):
  - The Haul Road will <u>run the length of the be</u> c.34.5km <u>cable corridor long</u> (<u>including the Onward Cable Connection between the Onshore</u> <u>Converter Station(s) and from the Landfall to the</u> proposed Birkhill Wood National Grid Substation):
  - The Haul Road!t will be be an average of 10m wide (this includes 5m wide road surface, passing places and, with a 5m wide soil storage area running parallel to the route. The route will be narrowed for hedgerow and watercourse intersections);
  - The total footprint will be 10m wide, will covering an area of 34.135ha;
  - 50% of the Haul Road\_and soil storage areas will be reinstated within two years; and and
  - Low value cropland habitats will be reinstated first (to allow for a worstcase loss assessment). Reinstatement of the remaining 50% is described in 18:10:4:2.4.

Unrestricted 004300159



Table 18-10-10 Time in years for newly created habitats to achieve target condition. Habitat list limited to those recorded within the Dogger Bank South Windfarm Onshore Development Area (data adapted from the Metric [Defra, 2023d]). \*Reserved for habitats which cannot achieve poor, moderate or good condition due to habitat type. \*\*habitats considered to be restored once soils have been appropriately reinstated (full details provided within section 18.10.4.2.2).

Habitat Type Undergoing Restoration	Years to 'Good' condition	Years to 'Moderate' condition	Years to 'Poor' condition	Years to 'Condition Assessment N/A'*
Cropland - Horticulture	N/A	N/A	<del>N/A</del>	1**
Cropland - Arable field margins cultivated annually	N/A	N/A	N/A	1**
Cropland Arable field margins tussocky	N/A	N/A	N/A	1**
Cropland - Arable field margins pollen and nectar	N/A	N/A	N/A	1**
Cropland Arable field margins game bird mix	N/A	N/A	N/A	1**
Cropland Temporary grass and clover leys	N/A	N/A	N/A	1**
Cropland - Cereal crops	N/A	N/A	N/A	1**
Cropland - Non-cereal crops	N/A	N/A	N/A	1**
Wetland Fens (upland and lowland)	<del>30</del>	<del>20</del>	<del>10</del>	N/A
Grassland Other neutral grassland	<del>10</del>	5	2	N/A
Grassland Modified grassland	7	4	1	N/A
Grassland - Lowland meadows	<del>15</del>	<del>10</del>	5	N/A
Heathland and shrub - Bramble scrub	N/A	N/A	N/A	1

Unrestricted 004300159

### **RWE**

Dogger Bank South Offshore Wind Farms

Habitat Type Undergoing Restoration	Years to 'Good' condition	Years to 'Moderate' condition	Years to 'Poor' condition	Years to 'Condition Assessment N/A'*
Heathland and shrub - Hawthorn scrub	10	5	<del>1</del>	N/A
Heathland and shrub Mixed scrub	10	5	1	<del>N/A</del>
Woodland and forest Other woodland; broadleaved	<del>30+</del>	<del>15</del>	5	N/A
Woodland and forest Other woodland; mixed	<del>30+</del>	<del>30</del>	5	N/A
Woodland and forest Wet woodland	<del>30+</del>	<del>15</del>	5	N/A
<del>Lakes - Ponds (non-priority habitat)</del>	5	3	1	N/A
Sparsely vegetated land Maritime cliff and slopes	<del>20</del>	10	5	N/A
Intertidal sediment - Littoral sand	4	1	1	N/A
Urban Developed land; sealed surface	N/A	N/A	N/A	θ
Urban Unvegetated garden	N/A	N/A	<del>N/A</del>	θ
Urban Artificial unvegetated, unsealed surface	N/A	N/A	N/A	θ
<del>Urban - Vegetated garden</del>	N/A	N/A	N/A	1

18.10.4.2.3 Temporary Habitat Loss (Reinstated within 6 Years of Impact)

87. For Habitats not included within the sections 18.10.4.2.1, 18.10.4.2.2, or 18.10.4.2.4 it is assumed reinstatement will commence upon completion of construction.

Unrestricted 004300159



- 88. The following areas are anticipated to be reinstated within six years after initial loss:
  - Up to 1.425ha of cropland habitat which may be required for use as <u>Temporary Construction Compounds and Transition Joint Bay</u> <u>Compound with the Landfall Zone;</u>
  - 50% of 10m wide Haul Road (high value habitats)
  - The full length of the Off-route Access Routes (assumed to be of the same specification as the Haul Road (10m average width) and over an 8.8km length, totalling 8.8ha. The habitat composite for this area is assumed to comprise high value habitats on a precautionary basis);
  - 50% of the non-landfall related Temporary Construction Compounds (high value habitats);
  - The two Substation Temporary Construction Compounds which are located outside of the permanent substation footprint (total area of 5.94ha, with baseline habitats of 3.22ha non-cereal crop and 2.72ha cereal crop); and
  - 5.125ha working areas for Jointing Bays. Area assumed to cover 10 x
     25m per Jointing Bay with a total of 205 required.
- 89. Where reinstatement in proposed, it is assumed that it will be returned to the same habitat type, condition and land use as established by the baseline studies. With the exception of habitats which are in 'good' condition at baseline, it is assumed that these will be reinstated in a 'moderate' condition, as per the broad assumptions set out within 18.10.4.1. Management of the land will revert to the landowners. Full details of this will be provided within the final BNG Strategy.

18.10.4.2.3 18.10.4.2.4 Permanent Habitat Loss or Creation

- 83.90. It is assumed that the only areas of permanent habitat loss or creation will be:
  - The Onshore Substation Zone a proportion of baseline habitats within this area will be permanently changed to a combination of vegetated and unvegetated habitat types. Though details of the habitat creation within this area may be subject to refinement, an outline Indicative Landscape Plan (Figure 23-6) plan can be seen within Volume 7, Chapter 23 Landscape and Visual Impact Assessment (application ref: 7.23.1); the Outline Landscape Management Plan (OLMP)
     (Volume 8, application ref: 8.11); and

Unrestricted 004300159



- Approximately 0.20511ha, associated with above ground 'manhole covers' for Link Boxes (assuming a total of 205n average interval of 1250m and total of 124, at 10m² Link Boxes are installed). The location and therefore habitats within these areas are not currently known, therefore a habitat composite has been used as a proxy. The habitat composite is a proportion of all habitats present at baseline, excluding areas which are known to be retained and intertidal areas. The 0.11ha associated with the Link Boxes will become classified as "Developed land; sealed surface" and have a biodiversity value of zero.
- 84.91. It is anticipated that the only parcels of land which will remain under the long term (+30 years) control, management and maintenance of the Applicants (or their successors as undertaker under the draft DCO) will be within the Onshore Substation Zone, TJBs and Link Boxes.
- 18.10.4.2.4-Habitat Reinstatement Starting Upon Completion of Construction
- 85. Habitats not included within the sections 18.10.4.2.1, 18.10.4.2.2, or 18.10.4.2.3 assumptions will have reinstatement commence upon completion of construction.
- 86. The following areas are anticipated to be reinstated six years after initial loss:
  - Up to 1.96ha of cropland habitat which may be required for use as Temporary Construction Compounds with the Landfall Zone;
  - 50% of 10m wide Haul Road (high value habitats);
  - 50% of the non-landfall related Temporary Construction Compounds (high value habitats);
  - The two Substation Temporary Construction Compounds which are located outside of the permanent substation footprint (total area of 5.93ha, with baseline habitats of 3.21ha non-cereal crop and 2.71ha cereal crop);
  - 3.1ha working areas for Jointing Bays. Area assumed to cover 10 x 25m per Jointing Bay and for there to be one Jointing Bay per Link Box (Link Boxes assumed to be spaced an average of 1750m apart along the route, with an estimated total of 124); and
- 87. The following areas is anticipated to be reinstated 1.5 years after initial loss:
  - 0.12ha within the intertidal area which will be required for up to 6 trenchless crossing exit pits (20x10m each).

Unrestricted 004300159



88. Where reinstatement in proposed, it is assumed that it will be returned to the same habitat type, condition and land use as established by the baseline studies. Management of the land will revert to the landowners. Full details of this will be provided within the final BNG Strategy.

#### **18.10.4.3** BNG Assumptions - Hedgerow Module (Hedgerow Units)

#### 18.10.4.3.1 Retained Habitats

- 92. There is c. 16.9km of hedgerow and c. 0.68km 'lines of trees' located within the Onshore Development Area. These lengths are totaled and presented within sheet 'B-1 On-site Hedge Baseline' of the Biodiversity Metric, presented within **Annex A**. Of these lengths, it is assumed that c. 10.91km of hedgerow and c. 0.47km 'lines of trees' (total c. 11.38km) will be retained throughout the Projects'.
- 18.10.4.3.1 18.10.4.3.2 Temporary Losses (reinstated within 6 years of impact)
- 93. Where possible trenchless crossings such as HDD will be used to prevent loss and impacts on the hedgerows. However, temporary removal of hedgerow habitat will be required in some areas, in the majority of cases, gaps will not exceed 24m of removal along the Onshore Export Cable Corridor and up to 34m for the Onward Cable Connection to the Proposed Birkhill Wood National Grid Substation. Additionally, lengths of hedgerow removal will be required for visibility splays and other access requirements, as shown in Revision 6 of the Volume 2, Tree Preservation Order and Hedgerow Plan (document reference 2.18). These are assumed to be maximum lengths of potential removal. Where possible hedgerows within visibility splays would be limited to pruning rather than hedgerow removal. This will result in a temporary loss of the habitat itself but will also temporarily reduce the ecological function of hedgerows, which may provide ecologically important habitats and linear connections within the wider landscape.
- 89.94. Under these worst-case conditions, it has been assumed within this Strategy that up tolt is assumed that:
  - c. For every hedgerow which requires crossing by a section of ducted cable or Haul Road a 24m 5.99km of hedgerow section will be removed; and
  - c. 0.21km 'lines of trees' will be removed.
  - Where hedgerows interest with construction access points off of existing roads, an average of 25m (12.5m from the centre point) of hedgerow will be removed for access and visibility splays;
  - Hedgerows that intersect with Temporary Construction Compounds will be removed; and

Unrestricted 004300159



- •95. Upon the completion of construction (within 6 years of commencement), these sections of hedgerow will be replanted with native, species rich hedgerow planting or lines of trees.
- 18.10.4.3.2 Permanent Habitat Loss or Creation
- 90.96. Lengths of hedgerow that intersect with the Onshore Converter Station and Substation Access Road are assumed to be permanently lost. These lengths total 0.21km of hedgerow and 0.0075km of 'line of trees' (0.22km combined total).
- 91.97. Within the Onshore Substation Zone, lengths of new species rich hedgerow planting are proposed. Details of this can be seen within the **Outline**Landscape Management Plan (Volume 8, application ref: 8.11).

#### 18.10.4.4 BNG Assumptions – Watercourse Module (Watercourse Units)

92.98. Approximately 4.883.54km of watercourses have been identified within the ProjectsOnshore Development Area. Approximately 4.32km (88.5%) of which will be retained. With regard to BNG, it is anticipated that impacts from the Projects will be limited to 0.54km of ditches in moderate or poor condition and 0.02km of 'other rivers and streams' (as defined within the Statutory Biodiversity Metric User Guide (Defra, 2023d)).

#### 18.10.4.4.1 Retained Habitats

99. It is assumed that watercourses which are located within Trenchless Crossing Areas and within the Substation Zone will be retained.

#### 18.10.4.4.2 Temporary Losses

- 93. It is assumed that for every watercourse which requires crossing by a section of trenched cable or Haul Road, a 24m section will be lost for up to 6 years, after which, habitat reinstatement will be completed. Reinstated habitats are assumed to target like for like habitat types in moderate condition.
- 100. that watercourses which are overlapped by the following construction related activities will be eaffected on a temporary basis:
  - The Landfall Temporary Construction Zone;
  - Off-route Access Roads;
  - Access Works Areas; and
  - The Onshore Export Cable Corridor.

Unrestricted 004300159



- It is anticipated that the majority of these losses will be reinstated within a two year period. Ditches in 'poor' condition will be reinstated to their original habitat type and condition within this period and are therefore considered retained within the Metric calculations. This relates to an approximately 1.1km length of 'poor' condition ditch.
- 102. One section of watercourse (Watercourse off of Milldam Beck) is anticipated to have c. 0.024km effected for up to 6 years (as shown within Figure 1 of Annex B - Baseline River Condition Assessment (RCA) and Ditch Condition Assessment (DCA) Report of this Strategy). Upon the completion of construction, this section of watercourse will be reinstated to its original type and condition. This has been accounted for within sheet 'C-2 On-Site Water C' Creation' of the Metric, Annex B of this Strategy.
- 18.10.4.4.3 Permanent Habitat Loss, Creation or Enhancement
- 103. No permanent loss of watercourses is anticipated.
- A c. 0.24 length of ditch within the Substation Zone is anticipated to be enhanced as part of the landscape proposals (Indicative Landscape Plan, Figure 23-6, Chapter 23 - Landscape and Visual Impact Assessment (Volume 7, application ref: 7.23.1).
- 94.105. It is assumed that approximately 0.24km of ditch habitat will be permanently lost as a result of construction of the Onshore Converter Station.

### 18.10.5 Feasibility of Biodiversity Net Gain

### **18.10.5.1** Commitment to Mitigation Hierarchy

- 95.106. Principle 1 of the Biodiversity Net Gain Good Practice Principles for Development (CIEEM, et al., 2016) is to follow the mitigation hierarchy. This sets out the need to prioritise avoiding impacts to biodiversity wherever possible. Where this is not possible, impacts should be reduced and finally, as a last resort, impacts should be compensated for.
- 96.107. In order to uphold this principle, impacts have been avoided where possible with c. 191.87ha (42.45% of total Onshore Development Area) of baseline habitats retained alongside development. This includes to all irreplaceable habitats. have been avoided and those to Losses of 'very high' and 'high' distinctiveness habitats have been minimised by redefining the Onshore Development Area, the use of <del>TCZ</del>Trenchless Crossing Areas and a future commitment to micro-siting of construction activities during the construction phase.
- 97.108. -Where impacts to habitats cannot be avoided alongside development, the following measures have been taken to reduce impacts on biodiversity:

**Unrestricted** 

Page 52

004300159



- For the majority of the Onshore Development Area, the width of the construction zone has been reduced from 100m wide to 75m wide; and
- Substantial areas of cropland habitats will be reinstated within two
  years. These areas have been therefore classified as 'retained' within the
  Metric and account for an additional c. 159.97 (35.39% of total
  Onshore Development Area).
- Where possible habitats within the approximately 50% of the Haul Road and dducted sections of the cable route will be restored within two years, this represents a significant proportion on the total BNG Study Area (approximately 1564.123.34ha, or 36.3134.9% of the Onshore Development Area).
- 98.109. Finally, as a last resort, to compensate for unavoidable impacts on biodiversity and to deliver no-net loss:
  - The remaining areasThe majority of baseline habitats (approximately c. 233h66.92ha or 5114.83% of the total Onshore Development Area) will be reinstated after completion of the construction phase (up to 6 years from commencement); and
  - New Aareas of on-site soft landscaping will be delivered and off-site compensation will be delivered.

#### 18.10.5.2 Stakeholder Engagement

- 99.110. The development of this Biodiversity Net Gain Strategy has been informed through consultation with a range of stakeholders.
- 18.10.5.2.1 East Riding of Yorkshire Council
- 100.111. On 11th December 2023 and 12th January 2024, RHDHV consulted with ERYC via pre-arranged video conference calls regarding the BNG objectives of the Projects and opportunities for delivery within the local area (Volume 7, Appendix 18-1 Terrestrial Ecology and Ornithology Consultation Responses (application ref: 7.18.18.1)).
- 101.112. ERYC supported the objectives of the Projects to deliver a minimum of no net loss for biodiversity and a net gain, where possible. At the time of the meetings, ERYC confirmed that they were unable to directly provide options to purchase off-site BDUs for off-site BNG delivery.
- 102.113. On 19th March 2024 ERYC agreed with the strategy that cropland with soils reinstated within two years could be considered a temporary loss, subject to the related soil storage areas being sown with a native mix of annual wildflowers (Volume 7, Appendix 18-1 Terrestrial Ecology and Ornithology Consultation Responses (application ref: 7.18.18.1)).

Unrestricted 004300159



#### 18.10.5.2.2 Natural England

- 103.114. On 14th December 2023 RHDHV consulted with Natural England via pre-arranged video conference to discuss the BNG objectives of the Projects and opportunities for delivery within the local area.
- 104.115. Natural England were supportive of the Projects objectives to deliver a minimum of no net loss for biodiversity and a net gain, where possible. No additional comment was provided.

#### 18.10.5.2.3 Environment Agency

- 116. On 7<sup>th</sup> November 2024 RHDHV consulted with the Environment Agency via pre-arranged video conference to discuss the BNG Strategy which had been presented to date.
- 117. The Environment Agency raised that RCA data and sufficient information regarding the determination of watercourse strategic significance had not been included at that time (Environment Agency (2024), Relevant Representations, RR-015). This information has now been incorporated within this revision of the Strategy and is detailed in full within:
  - Strategic significance section 18.10.2.3.1.1 of this Strategy; and
  - RCA data and specific watercourse strategic significance Annex B –
     Baseline River Condition Assessment (RCA) and Ditch Condition
     Assessment (DCA) Report of this Strategy.
- 18.10.5.2.3 18.10.5.2.4 Yorkshire Wildlife Trust
- 105.118. On 11<sup>th</sup> December 2023 RHDHV consulted with Yorkshire Wildlife Trust via pre-arranged video conference to discuss the BNG objectives of the Projects and opportunities for delivery within the local area.
- 106.119. They were supportive of the Projects objectives to deliver a minimum of no net loss for biodiversity and a net gain, where possible.
- 107.120. Yorkshire Wildlife Trust confirmed that they had no commercial availability of habitat units for off-site BNG compensation available in the short term. However, it was noted that a scheme may become available in the future.
- 18.10.5.2.4 18.10.5.2.5 Private Stakeholders and Habitat Banks
- 108.121. RHDHV and the Applicants have been in ongoing discussions since November 2023 with local private landowners and habitat banks to explore opportunities to deliver BNG compensation off-site.

Unrestricted 004300159



#### **18.10.5.3** On-site Compensation Proposals

- 109.122. Within the Onshore Substation Zone a combination of vegetated and unvegetated habitat types will be created. The unvegetated habitats will comprise the Onshore Converter Station, access roads and associated infrastructure and are anticipated to provide zero biodiversity value. Areas of vegetated habitat will seek to maximise on-site BNG opportunities. Habitats which are proposed within the **Outline Landscape Management Plan (Volume 8, application ref: 8.11)** include woodland, grassland, hedgerow and ephemeral waterbodies.
- 110.123. In addition, soil stockpiles related to areas of cropland habitat which will be reinstated within a two year period will be sown with native annual wildflowers. This is to provide temporary pollen and nectar rich resources and to provide flexibility with the reinstatement of the cropland habitats within a one to two year period. As such, the reinstatement of these habitats' soils, within a maximum of two years, is considered temporary and can be carried out during suitable seasonal and weather conditions This measure is not reflected within the Metric calculations but is considered to provide a qualitative biodiversity benefit.
- 111.124. The detail behind these on-site provisions will be finalised and confirmed, pre-commencement, as part of a final Biodiversity Net Gain Strategy.

## 18.10.5.4 Recommendations for Management to Maximise Biodiversity Benefits

- 112.125. Additional opportunities to deliver BNG on-site have been identified. These opportunities have not been detailed or secured at this stage. However, they will be considered when designing the final Biodiversity Net Gain Strategy. These opportunities are as follows:
  - Retained hedgerow enrichment planting;
  - Planting of trees in hedgerows;
  - Tree and, or shrub planting in filed corners;
  - Retained lowland fen enhancement and, or expansion;
  - Ancient woodland enhancement; and
  - Creation and or widening of reinstated field margins.

#### **18.10.5.5** Off-site Compensation Proposals

113.126. It is anticipated that a proportion of the BDUs required to deliver no net loss or a BNG will require delivery off-site (including Area, Hedgerow and Watercourse habitats).

Unrestricted

Page 55

004300159



- 114.127. Where this is the case, habitat trading rules will be followed to ensure habitats of equal or greater distinctiveness are created to mitigate for any anticipated losses.
- 115.128. The majority of the BNG Study Area comprises 'low' distinctiveness cropland habitats (approximately 852.738% by area), which provides a high degree of flexibility to provide strategically significant off-site habitat compensation while meeting trading rules. This may include the delivery of moderate or high distinctiveness habitats, including grassland, woodland, or wetland.
- 116.129. Consultation with external stakeholders completed (as detailed within section 18.10.5.2.5) to date has revealed a number of viable options for Area, Hedgerow and Watercourse BDU delivery within the same or neighbouring LPA or NCA to the Projects.
- 117.130. As a last resort, where sufficient on-site and off-site compensation cannot be delivered, Statutory Biodiversity Credits can be purchased via the credit sales service (Defra, 2023b). However, this option is not anticipated to be required for the Projects.

#### **18.10.6** BNG Metric

118.131. **Table 18-10-13** provides a summary of the estimated on-site baseline, on-site post intervention and on-site net change biodiversity values.

Table 18-10-13<del>11</del> Summary of BNG Metric results, for the BNG Study Area of the Projects Onshore Development Area.

	Habitats	Hedgerows	Watercourses
Total baseline area (ha) / length (km)	451.99456.53ha	<u>17.56</u> <del>16.67km</del>	<u>3.89</u> 4.88km
Total baseline units	<u>1132.58</u> <del>1085.1</del>	<u>121.75</u> <del>104.4</del>	<u>15.61</u> 28.04
Total baseline area (ha) / length (km) retained	351.84342.51ha	11.38 <sub>13.47km</sub>	3.634.32km
Total baseline units retained	<u>860.96</u> <del>801.46</del>	<u>75.55</u> <del>85.54</del>	<u>14.50</u> <del>25.48</del>
	•	,	

**Unrestricted 004300159** 



	Habitats	Hedgerows	Watercourses
Total baseline area (ha) / length (km) lost	100.15 <del>114.02ha</del>	<u>6.18</u> 3.20km	<u>0.02</u> 0.56km
Total baseline units lost	271.64 <del>283.64</del>	<u>46.20</u> 18.86	<u>0.28</u> 2.56
Total area (ha) / length (km) created	1 <u>00.08</u> 14.02ha	<u>11.26</u> 5.33km	0. <u>0</u> ₹2 <u>4</u> km
Total units created	2 <u>4</u> 81. <u>0</u> 8 <del>3</del>	<u>58.51</u> 23.9	0. <u>06</u> 87
Net change in area (ha) / length (km)	Oha	+ <u>5.08</u> 2 <del>.13</del> km	- <del>0.24km</del> <u>0</u>
Net change in units	<u>-30.56</u> <del>-1.81</del>	+12.31+5.04	+0.48-1.69
Net change in percent	-2.70% 	+10.11%4.83%	<u>+3.09%</u> -6.04%
Units required to achieve 10% BNG	110.32	5.40	4.5

- 119.132. Full details of the Mmetric calculations, including habitat types, the areas of each present on-site and their assigned biodiversity values can be reviewed within the Metric calculator, Annex A Biodiversity Metric, on-site habitat baseline and creation and Annex B Biodiversity Metric, on-site hedgerow and watercourse baseline and creation.
- 120.133. A copy of the full, interactive Metric calculator (in Excel format) will be made available upon request. This is to accord with principle 10 of the BNG good practice principles for development and be transparent.

#### 18.10.7 Discussion

121.134. In accordance with the mitigation hierarchy, the Projects route alignment has been designed to avoid impacts on designated sites and high distinctiveness habitats.

Unrestricted 004300159



- 122.135. The construction strategy has been adapted to minimise habitat impact durations, with a commitment to reinstate and restore a significant proportion of habitats within the Onshore Development Area in two years. This commitment reduces impacts on an area of approximately 1864.124.73ha and accounts for approximately 334 Habitat Units.
- 123.136. The majority of baseline habitats within the BNG Study Area comprises habitats of low distinctiveness and, correspondingly, low Habitat Unit value per hectare (approximately 2 Habitat Units/ha). Impacts to irreplaceable habitat and habitats of higher distinctiveness which have a greater biodiversity value, approximately 16 to 12 Habitat Units/ha, are either entirely or mostly avoided, as outlined above. This substantially reduced the potential impacts of the Projects on terrestrial habitats and reduces the requirement for biodiversity mitigation.
- 124.137. On-site avoidance measures, construction methods and habitat creation opportunities, in combination with off-site opportunities ensure a high degree of feasibility for delivering a no net loss outcome and a net gain, where possible, for the Projects.
- 125.138. Habitat creation within the Onshore Substation Zone will be subject to future refinement. However, this area provides the potential to provide a substantial number of BDUs and contribute significantly towards the Projects potential to deliver no net loss or a net gain.
- <u>126.139.</u> Based upon the assumptions outlined within section 18.10.4 of this Strategy, the on-site net change in biodiversity is -20.17% Habitat Units, +10.114.83% Hedgerow Units and +6.043.09% Watercourse Units (**Table 18-10-11**).
- 127.140. BNG could be delivered on-site through additional enhancements, including, though not limited to those outlined within section 18.10.5.3 above. Where on-site options are not feasible, off-site options should be secured. These are likely to come in the form of purchasing Biodiversity Units from a private habitat bank or through agreement with local landowners. It is not anticipated that the use of Statutory Credits will be required.
- 128.141. It should be noted that a combination of on and off-site BDU provision can be delivered. BDU delivery, local to the point of impact, should be prioritised in order to reduce the effects of 'spatial risk' which reduced biodiversity mitigation effectiveness as distance increases (as outlined within-Table 18-10-8Table 18-10-6).

Unrestricted 004300159



#### **18.10.8** Next Steps

- 129.142. In order to secure BNG for the Projects a Biodiversity Net Gain Strategy will be provided prior to the commencement of construction.
- 130.143. The final Biodiversity Net Gain Strategy will be informed by the detailed design of the Projects, including landscape proposals, construction methods and Projects timescale. Based upon these parameters, the final Biodiversity Net Gain Strategy will:
  - Provide a finalised metric calculation to assess the on-site net change in biodiversity and the requirements to deliver a net gain;
  - Detail the on-site and off-site measures to deliver a no net loss, or where possible a net gain; and
  - Detail how compensation will be legally secured, managed and monitored for a minimum 30 year period.



#### References

BRIG. 2011. UK Biodiversity Action Plan: Priority Habitat Descriptions. JNCC, Peterborough. CIEEM (2022) Code of Professional Conduct. Available at:

. Last accessed: December 2023.

CIEEM, CIRIA, and IEMA (2016). Biodiversity Net Gain Good Practice Principles for Development. Available at:

Last accessed December 2023.

Defra (2022). Consultation on Biodiversity Net Gain Regulations and Implementation. Available at: https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/. Last accessed: December 2023.

Defra (2023a) Understanding biodiversity net gain. Available at: https://www.gov.uk/guidance/understanding-biodiversity-net-gain. Last accessed: December 2023.

Defra (2023b) Guidance on Statutory Biodiversity Credit Prices. Available at: https://www.gov.uk/guidance/statutory-biodiversity-credit-prices. Last accessed: December 2023.

Defra (2023c) Irreplaceable habitats and BNG: what you need to know. Available at:

Last accessed; January 2024.

Defra (2023d) The Statutory Biodiversity Metric User Guide. Available at: https://assets.publishing.service.gov.uk/media/65673fee750074000d1dee31/The\_Statutory\_Biodiversity\_Metric\_-\_Draft\_User\_Guide.pdf. Last accessed January 2024.

Defra (2024) The Biodiversity Net Gain Statutory Instruments - explained. Available at:

. Last accessed: January 2024.

Department of Energy and Climate Change (2023a) Overarching National Policy Statement for Energy (EN-1). Presented to Parliament pursuant to Section 5(9) of the Planning Act 2008. The Stationary Office, London.

Department of Energy and Climate Change (2023b) National Policy Statement for Renewable Energy Infrastructure (EN-3). Presented to Parliament pursuant to Section 5(9) of the Planning Act 2008. The Stationary Office, London.

Department of Energy and Climate Change (2023c) National Policy Statement for Electricity Networks Infrastructure (EN-5). Presented to Parliament pursuant to Section 5(9) of the Planning Act 2008. The Stationary Office, London.

DESNZ (2024) National Policy Statements for energy infrastructure. Available at: https://www.gov.uk/government/collections/national-policy-statements-for-energy-infrastructure. Last accessed: January 2024.

Unrestricted 004300159



Environment Agency (2024) Relevant Representations. RR-015. Dated 6 September 2024. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010125/EN010125-000619-Dogger%20Bank%20South%20-%20Examination%20Library.pdf. Last accessed: May 2025.

ERYC (2010) East Riding of Yorkshire Biodiversity Action Plan Strategy. Available at: https://fostonparishcouncil.eastriding.gov.uk/Data/Sites/8/media/fostondocuments/ERY BAP%20Strategy%20PDF\_3.0\_DR.pdf. Last accessed: May 2025.

ERYC (2016) East Riding Local Plan (adopted April 2016). Available at: https://www.eastriding.gov.uk/planning-permission-and-building-control/planning-policy-and-the-local-plan/east-riding-local-plan/. Last accessed: January 2024.

Natural England (2018) Ancient Woodland Inventory handbook (NECR248). Available at:

accessed: December 2023.

Natural England (2019) Ancient Woodland (England). Available at:

Last

accessed: December 2023.

Planning Inspectorate (2018) Advice Note Nine: Rochdale Envelope.

The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. Available at: <a href="https://www.legislation.gov.uk/uksi/2024/48/contents/made">https://www.legislation.gov.uk/uksi/2024/48/contents/made</a>. Last accessed: January 2024.

UKHab Ltd. (2023) UK Habitat Classification Version 2.0. Available at: Last accessed: December 2023.

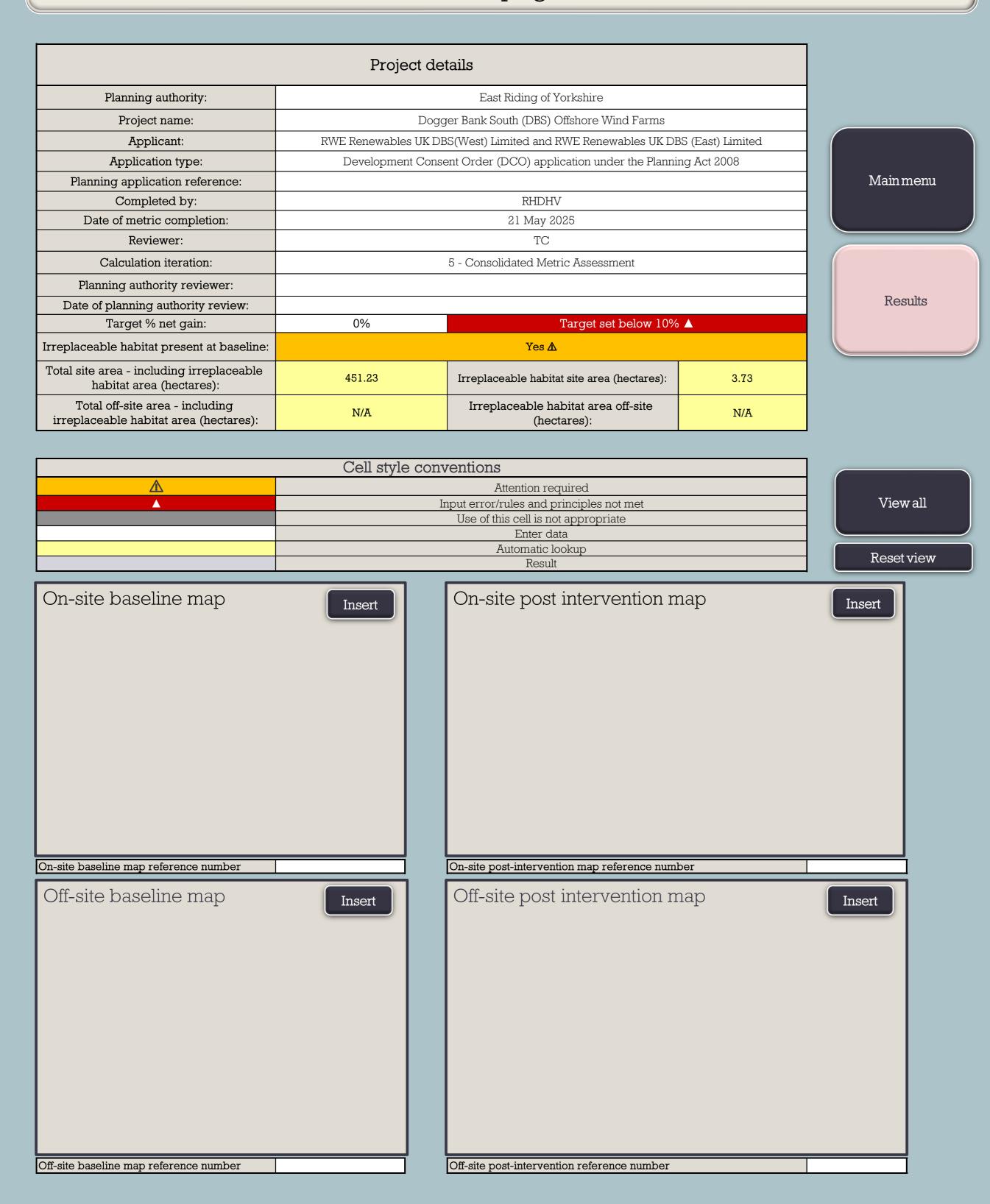
Unrestricted 004300159



Annex A - Biodiversity Metric, on-site habitat baseline and creation

Unrestricted 004300159

# The Statutory Biodiversity Metric Start page



Dogger Bank South (DBS) Offshore Wind Farms  Headline Results  Scroll down for final results ▲				
On-site baseline	Habitat units Hedgerow units Watercourse units	1132.58 121.75 15.61		
On-site post-intervention  (Including habitat retention, creation & enhancement)	Habitat units Hedgerow units Watercourse units	1102.02 134.06 16.09		
On-site net change  (units & percentage)	Habitat units Hedgerow units Watercourse units	-30.56 12.31 0.48	-2.70% 10.11% 3.09%	On-site net gain is less than target set 🛆
Off-site baseline	Habitat units Hedgerow units Watercourse units	0.00 0.00 0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units Hedgerow units Watercourse units	0.00 0.00 0.00		
Off-site net change  (units & percentage)	Habitat units Hedgerow units Watercourse units	0.00 0.00 0.00	0.00% 0.00% 0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units Hedgerow units Watercourse units	-30.56 12.31 0.48		
Spatial risk multiplier (SRM) deductions	Habitat units Hedgerow units Watercourse units	0.00 0.00 0.00		
FINAL RESULTS				
Total net unit change  (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units Hedgerow units Watercourse units	-30.56 12.31 0.48		

	Habitat units	-2.70%
Total net % change  (Including all on-site & off-site habitat retention, creation & enhancement)	Hedgerow units	10.11%
(including an on-site & on-site habital relention, creation & emiancement)	Watercourse units	3.09%

## Trading rules satisfied?

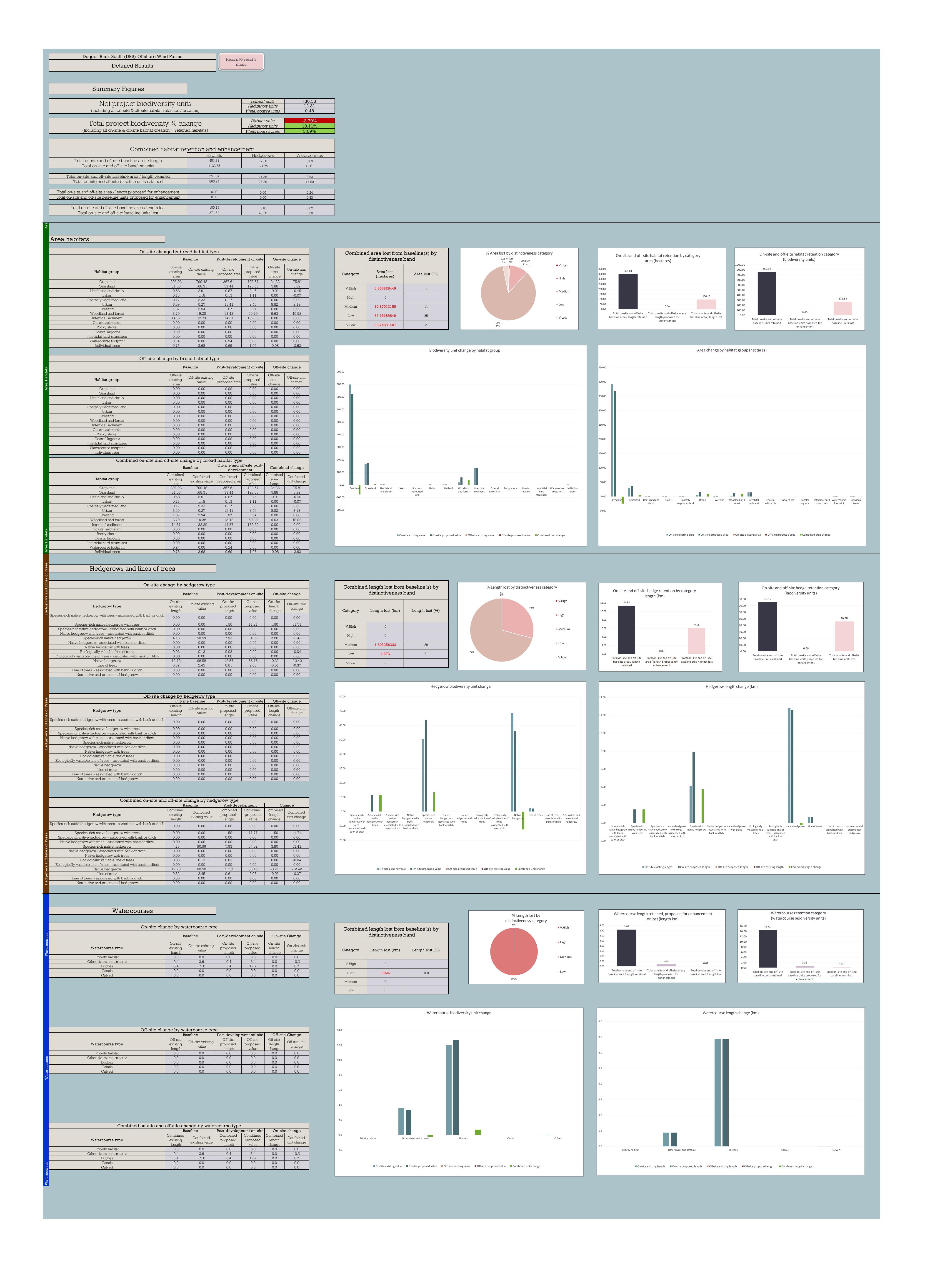
No - Check Trading Summaries 🔺

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	0.00%	1132.58	1132.58	30.56
Hedgerow units	0.00%	121.75	121.75	0.00
Watercourse units	0.00%	15.61	15.61	0.00

No additional hedgerow units required to meet target  $\checkmark$  No additional watercourse units required to meet target  $\checkmark$ 

Total net gain achieved is less than target set  $\blacktriangle$ 

Input errors/rule breaks present in metric 🔺





Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied?	
Very High	Same habitat required =	Yes✓	
High	Like for like or better	Yes✓	
Medium	Same distinctiveness or better habitat required	Yes✓	
Low	Same distinctiveness or better habitat required	Yes✓	
Very Low	Same distinctiveness or better habitat required	Yes√	



Very High Distinctiveness				
Habitat group  On-site unit change Off-site unit change Change				
Species-rich native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00	
	0.00	0.00	0.00	

High Distinctiveness			
Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Species-rich native hedgerow with trees	11.71	0.00	11.71 ✓
Species-rich native hedgerow - associated with bank or ditch	0.00	0.00	0.00
Native hedgerow with trees - associated with bank or ditch	0.00	0.00	0.00
	11.71	0.00	11.71

Medium Distinctiveness			
Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Species-rich native hedgerow	13.43	0.00	13.43 ✓
Native hedgerow - associated with bank or ditch	0.00	0.00	0.00
Native hedgerow with trees	0.00	0.00	0.00
Ecologically valuable line of trees	-0.04	0.00	-0.04 ▲
Ecologically valuable line of trees - associated with bank or ditch	0.00	0.00	0.00
	13.39	0.00	13.39

Low Distinctiveness			
Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Native hedgerow	-12.42	0.00	-12.42 ▲
Line of trees	-0.37	0.00	-0.37 ▲
Line of trees - associated with bank or ditch	0.00	0.00	0.00
	-12.79	0.00	-12.79

Very Low Distinctiveness			
Habitat group	On-site unit change	Off-site unit change	Project wide unit change
Non-native and ornamental hedgerow	0.00	0.00	0.00
	0.00	0.00	0.00

Very High Distinctiveness Summary			
Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00		
Remaining losses; Like for like not satisfied	0.00		

High Distin	nctiveness Summary	
High Distinctiveness Units available to offset lower distinctiveness deficit	11.71	<b>√</b>
High Distinctiveness losses to be offset by trading up	0.00	
Higher Distinctiveness surplus units minus any high distinctiveness deficit	0.00	

Medium Distinctiveness Summary		
Units available from higher distinctiveness habitats	11.71	<b>√</b>
Medium Distinctiveness net change in units	13.39	<b>√</b>
Cumulative availability of units	25.10	<b>√</b>

Low Distin	ctiveness Summary	
Low Distinctiveness net change in units	-12.79	$\triangle$
Cumulative availability of units	12.31	<b>√</b>

Vora I ou Die	tin atirron o a a Crimono	0.00
very how Dis	stinctiveness Summ	ary
Very Low Distinctiveness net change in units	0.00	
Cumulative availability of units	12.31	✓

Condense / Show Col	On-Site Habitat Baseline  Condense	/ Show Rows			% Change les Satisfied	-30.56 -2.70%  No - check trading summaries ▲									
Main Menu						details for any watercourse footprints d in the watercourse tabs $oldsymbol{\Delta}$									
	Existing area habitats			Distinctiveness	Condition	Strategic significance		Ecological						Comments	
Broad Habitat	Habitat Type	Irreplaceable habitat	t Area (hectares)	Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Total habitat units	Area Area retained enhanced	Baseline units	Baseline units	Area habitat	Units lost	Bespoke compensation agreed for losses of VHDH or irreplaceable habitat  User comments  Planning authority comments	Habi
Cropland	Horticulture	No	4.285541289	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	8.57	3.299499	retained 6.60	enhanced 0.00	0.99	1.97		
Cropland	Arable field margins cultivated annually	No	2.068639233	Medium	Condition Assessment N/A	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	9.52	1.317104	6.06	0.00	0.75	3.46		
Cropland	Arable field margins tussocky	No	1.82641602	Medium	Condition Assessment N/A	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	8.40	0.93677	4.31	0.00	0.89	4.09		
Cropland	Arable field margins pollen and nectar	No	1.833333528	Medium	Condition Assessment N/A	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	8.43	0.593688	2.73	0.00	1.24	5.70		
Cropland	Arable field margins game bird mix	No	0.277844733	Medium	Condition Assessment N/A	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	1.28	0	0.00	0.00	0.28	1.28		
Cropland	Temporary grass and clover leys	No No	18.1445307 281.702	Low	Condition Assessment N/A Condition	Area/compensation not in local strategy/ no local strategy Area/compensation not in local strategy/ no	habitat required ≥	36.29 563.40	14.42345 242.0424	28.85	0.00	3.72	7.44		
Cropland  Cropland	Cereal crops  Non-cereal crops	No	81.794	Low	Assessment N/A Condition Assessment N/A	local strategy  Area/compensation not in local strategy/ no local strategy	habitat required ≥	163.59	47.58439	95.17	0.00	39.66	68.42		+
Wetland	Fens (upland and lowland)	Yes	1.71	V.High	Poor	Formally identified in local strategy	Bespoke compensation likely to be required	0.00	1.71	Irreplaceable habitat - no units	0.00	0.00	0.00	Habitat retained in full	
Wetland	Fens (upland and lowland)	No	0.160019729	V.High	Moderate	Formally identified in local strategy	Same habitat required – bespoke	2.94	0.16002	generated ▲ 2.94	0.00	0.00	0.00		+
Grassland	Lowland meadows	No	0.169356358	V.High	Good	Formally identified in local strategy	Same habitat required – bespoke	4.67	0	0.00	0.00	0.17	4.67	Mapped in UK Hab as neutral grassland - conservative	
Grassland	Lowland meadows	No	0.313495584	V.High	Moderate	Formally identified in local strategy	compensation option ▲  Same habitat required – bespoke compensation option ▲	5.77	0.06	1.10	0.00	0.25	4.66	mapped in UK Hab as neutral grassland - conservative proxy habitat type used	
Grassland	Lowland meadows	No	0.430976507	V.High	Poor	Formally identified in local strategy	Same habitat required – bespoke compensation option △	3.96	0	0.00	0.00	0.43	3.96	Mapped in UK Hab as neutral grassland - conservative proxy habitat type used	
Grassland	Other neutral grassland	No	5.163744823	Medium	Good	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	68.16	2.572014	33.95	0.00	2.59	34.21		
Grassland	Other neutral grassland	No	1.573768023	Medium	Moderate	Location ecologically desirable but not in local strategy	distinctiveness nabital required	13.85	0.493294	4.34	0.00	1.08	9.51		+
Grassland	Other neutral grassland	No	2.463400313	Medium	Poor	Location ecologically desirable but not in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required	10.84	0.702852	3.09	0.00	1.76	7.75		+
Grassland	Other neutral grassland	No	0.038296087	Medium	Good	Location ecologically desirable but not in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required	0.51	0	0.00	0.00	0.04	0.51	Mapped in UK Hab as g3c5 - Arrhenatherum neutral grassland. Closest proxy habitat used.	+
Grassland	Modified grassland	No	0.266734506	Low	Good	Area/compensation not in local strategy/ no local strategy  Area/compensation not in local strategy/ no	habitat required ≥	1.60	0.114669	0.69	0.00	0.15	0.91		
Grassland Grassland	Modified grassland  Modified grassland	No No	2.911181516 16.63780431	Low	Moderate Poor	local strategy  Area/compensation not in local strategy/ no local strategy/ no	habitat required ≥	33.28	1.663632	6.65	0.00	1.25 5.18	4.99		+
hland and shrub	Mixed scrub	No	0.047203495	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Samo broad habitat or a higher	0.38	0	0.00	0.00	0.05	0.38		
thland and shrub	Bramble scrub	No	0.42081596	Medium	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Came broad habitat or a higher	1.68	0.176219	0.70	0.00	0.24	0.98		
thland and shrub	Hawthom scrub	No	0.039	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	0.31	0.039	0.31	0.00	0.00	0.00		
thland and shrub	Mixed scrub	No	0.060401033	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	0.48	0	0.00	0.00	0.06	0.48		
thland and shrub	Mixed scrub	No	0.012601078	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	0.05	0.000292	0.00	0.00	0.01	0.05		
Grassland	Other neutral grassland	No	1.593935479	Medium	Moderate	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	14.03	0.434315	3.82	0.00	1.16	10.20	Mapped as "No access - verge" assumed habitat proxy based on aerial imagery.	
Lakes	Ponds (non-priority habitat)	No	0.128370849	Medium	Moderate	Location ecologically desirable but not in local strategy	(≥)	1.13	0.085669	0.75	0.00	0.04	0.38		
Lakes	Ponds (non-priority habitat)	No	0.006190555	Medium	Moderate	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	0.05	0	0.00	0.00	0.01	0.05		
ercourse footprint	Watercourse footprint	No	0.2355	V.low	N/A - Other	Formally identified in local strategy	Compensation Not Required	0.00	0.2355	0.00	0.00	0.00	0.00	River Hull. Accounted for within Watercourse Module.	
ely vegetated land	Maritime cliff and slopes	No	0.168632868	High	Moderate	Formally identified in local strategy	Same habitat required =	2.33	0.168633	2.33	0.00	0.00	0.00		
ertidal sediment	Littoral sand	No	14.36917605	Medium	Moderate	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	132.20	14.36916	132.20	0.00	0.00	0.00		
Urban Urban	Vegetated garden  Developed land; sealed surface	No No	0.137 4.42655668	Low V.Low	Condition Assessment N/A N/A - Other	Area/compensation not in local strategy/ no local strategy  Area/compensation not in local strategy/ no	habitat required ≥	0.27	0.137 2.020461	0.27	0.00	0.00	0.00	Proxy for: u1 - Built-up areas and gardens  Proxy for: u1b - Developed land; sealed surface	
Urban	Developed land; sealed surface	No	0.005828935	V.Low	N/A - Other	local strategy  Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00	0.004341	0.00	0.00	0.00	0.00	Proxy for: u1b5 - Buildings	
Urban Urban	Developed land; sealed surface  Artificial unvegetated, unsealed surface	No No	0.218949643	V.Low V.Low	N/A - Other N/A - Other	Area/compensation not in local strategy/ no local strategy  Area/compensation not in local strategy/ no	Compensation Not Required	0.00	0.630477	0.00	0.00	0.78	0.00	Proxy for: u1b6 - Other developed land  Proxy for: u1c - Artificial unvegetated, unsealed surface	
Urban	Artificial unvegetated, unsealed surface	No	0.383732962	V.Low	N/A - Other	local strategy Area/compensation not in local strategy/ no local strategy		0.00	0.379443	0.00	0.00	0.00	0.00	Proxy for: uld - Suburban/ mosaic of developed/ natural surface	
odland and forest	Other woodland; broadleaved	Yes	2.02	Medium	Good	Formally identified in local strategy	Bespoke compensation likely to be required	0.00	2.02	Irreplaceable habitat - no units	0.00	0.00	0.00	Proxy for: wlg - Other woodland; broadleaved. This area covers Bentley Moor Ancient Woodland. Area fully retained.	
dland and forest	Other woodland; broadleaved	No	0.53	Medium	Good	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	7.31	0.53	generated ▲ 7.31	0.00	0.00	0.00	Proxy for: wlg - Other woodland; broadleaved. This area is retained through use of trenchless crossing	+
dland and forest	Other woodland; broadleaved	No	0.036	Medium	Good	Formally identified in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required	0.50	0.036	0.50	0.00	0.00	0.00	techniques.  Proxy for: w1g6 - Line of trees	
odland and forest	Other woodland; broadleaved	No	0.036	Medium	Poor	Formally identified in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required	0.17	0.036	0.17	0.00	0.00	0.00	Proxy for: wlg6 - Line of trees	+
odland and forest	Other woodland; broadleaved	No	0.129	Medium	Good	Formally identified in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required (>)	1.78	0.129	1.78	0.00	0.00	0.00	Proxy for: wlg7 - Other broadleaved woodland types	
odland and forest	Other woodland; broadleaved	No	0.1048	Medium	Moderate	Formally identified in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required (>)	0.96	0.1048	0.96	0.00	0.00	0.00	Proxy for: wlg7 - Other broadleaved woodland types	
odland and forest	Other woodland; broadleaved	No	0.928445363	Medium	Moderate	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	8.54	0.688692	6.34	0.00	0.24	2.21	Proxy for: wlh5 - Other woodland; mixed; mainly broadleaved	
odland and forest	Other woodland; broadleaved	No	0.00282	Medium	Poor	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	0.01	0	0.00	0.00	0.00	0.01	Proxy for: wlh5 - Other woodland; mixed; mainly broadleaved	
ndividual trees	Rural tree	Yes	0.339292007	Medium	Good	Formally identified in local strategy	Bespoke compensation likely to be required	0.00	0.339292	Irreplaceable habitat - no units	0.00	0.00	0.00	Veteran trees - based on Arboricultural Impact Assessment field survey results. All retained.	
ndividual trees	Rural tree	No	0.076453799	Medium	Good	Location ecologically desirable but not in local strategy	distinctiveness habitat required	1.01	0	generated A  0.00	0.00	0.08	1.01	Individual trees not associated with a hedgerow or woodland. Based on Arboricultural Impact Assessment	
ndividual trees	Rural tree	No	0.258766704	Medium	Moderate	Location ecologically desirable but not in local strategy	distinctiveness nabitat required	2.28	0	0.00	0.00	0.26	2.28	field survey results. Category A trees.  Individual trees not associated with a hedgerow or woodland. Based on Arboricultural Impact Assessment	+
Individual trees	Rural tree	No	0.08957309	Medium	Poor	Location ecologically desirable but not in local strategy	(≥) Same broad habitat or a higher distinctiveness habitat required (≥)	0.39	0	0.00	0.00	0.09	0.39	field survey results. Category B trees.  Individual trees not associated with a hedgerow or woodland. Based on Arboricultural Impact Assessment field survey results. Category C trees.	
			ea 451.99					1132.58	351.84 0.00	000.04		100.15	071.04		土

Select a unit Hectares M<sup>2</sup>

M<sup>2</sup> to hectares conversion tool:

				Tota Tradi	l Net Unit Chang al Net % Change ing Rules Satisfic Area Check	ge e	-30.56  -2.70%  No - check trading summaries ▲  Area Acceptable ✓																
Ref	Broad Habitat	Proposed habitat	Area (hectares)	Distincti  Distinctiveness	iveness Score	Condi	tion Strategic significance	gnificance Strategic significance	Strategic significance	Standard time to target condition	Post intervention  Habitat created Delin advance hall		Temporal multiplier  Standard or adjusted time to target condition	Final time to target condition		Standard lifficulty of	Difficulty multiplier  Applied difficulty multiplier	ers Final difficulty of creation	Difficulty multiplier	Habitat units	User comments	Comments  Planning authority comments	Habitat reference
1	Grassland	Lowland meadows	0.330929979	V.High	8	Poor	l Formally identified in local strategy	High strategic significance	multiplier	(years)	(years)	(years)	Check details- Delay in starting habitat in required condition? ⚠	(years)		Creation High	Standard difficulty applied	of creation  High	applied  0.33	delivered  0.81	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as	Training dumonty comments	number
2	Grassland	Other neutral grassland	1.736407223	Medium	Δ	Moderate	Location ecologically desirable but not in loca	Medium strategic	1.1	5	0	1	Check details- Delay in starting habitat in required	6	0.808	Low	Standard difficulty applied	Low	1	12.34	'created' habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as		
2	Grassland		0.431747894		4	Moderate	Location ecologically desirable but not in loca	significance  Medium strategic	1.1	5	0	1	condition? ▲  Check details- Delay in starting habitat in required	6	0.808	Low	Standard difficulty applied	Low	1	3.07	'created' habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted within 1 year, but restoration to original type and condition not possible within		
3		Other neutral grassland			4		Location ecologically desirable but not in loca	significance  Medium strategic		5		1	condition? ▲  Check details- Delay in starting habitat in required						1		'created' habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted within 1 year, but restoration to original type and condition not possible within		
4	Grassland	Other neutral grassland	0.416333016	Medium	4	Poor	Location ecologically desirable but not in loca strategy	significance	1.1	2	0	1	condition? A	3	0.899	Low	Standard difficulty applied	Low	1	1.65	2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted within 1 year, but restoration to original type and condition not possible within		_
5	Grassland	Other neutral grassland	0.029433527	Medium	4	Moderate	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	5	0	1	Check details- Delay in starting habitat in required condition? ▲	6	0.808	Low	Standard difficulty applied	Low	1	0.21	2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted within 1 year, but restoration		
6	Grassland	Modified grassland	0.000335093	Low	2	Moderate	Area/compensation not in local strategy/ no loc strategy	l Low Strategic Significance	1	4	0	1	Check details- Delay in starting habitat in required condition? ▲	5	0.837	Low	Standard difficulty applied	Low	1	0.00	to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted within 1 year, but restoration		
7	Heathland and shrub	Mixed scrub	0.036279564	Medium	4	Moderate	Area/compensation not in local strategy/ no loc strategy	l Low Strategic Significance	1	5	0	1	Check details-Delay in starting habitat in required condition? ⚠	6	0.808	Low	Standard difficulty applied	Low	1	0.23	to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.		
8	Heathland and shrub	Mixed scrub	0.0464229	Medium	4	Moderate	Area/compensation not in local strategy/ no loc strategy	l Low Strategic Significance	1	5	0	1	Check details- Delay in starting habitat in required condition? ⚠	6	0.808	Low	Standard difficulty applied	Low	1	0.30	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.		
9	Grassland	Other neutral grassland	0.640957774	Medium	4	Moderate	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	5	0	1	Check details-Delay in starting habitat in required condition? ⚠	6	0.808	Low	Standard difficulty applied	Low	1	4.55	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.		
10	Lakes	Ponds (non-priority habitat)	0.032819466	Medium	4	Moderate	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	3	0	1	Check details-Delay in starting habitat in required condition? Δ	4	0.867	Low	Standard difficulty applied	Low	1	0.25	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.		
11	Lakes	Ponds (non-priority habitat)	0.004757924	Medium	4	Moderate	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	3	0	1	Check details- Delay in starting habitat in required condition? Δ	4	0.867	Low	Standard difficulty applied	Low	1	0.04	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum condition for created habitats will be moderate.		
12	Intertidal sediment	Littoral sand	1.61153E-05	Medium	4	Moderate	2 Formally identified in local strategy	High strategic significance	1.15	1	0	1	Check details- Delay in starting habitat in required condition? Δ	2	0.931	Medium	Standard difficulty applied	Medium	0.67	0.00	Habitats replanted within 1 year, but restoration to original type and condition not possible within		
13	Woodland and forest	Other woodland; broadleaved	0.184268974	Medium	4	Moderate	2 Formally identified in local strategy	High strategic significance	1.15	15	0	1	Check details-Delay in starting habitat in required condition? ▲	16	0.566	Low	Standard difficulty applied	Low	1	0.96	Habitats replanted within 1 year, but restoration to original type and condition not possible within		
14	Individual trees	Rural tree	0.196714985	Medium	4	Moderate	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	27	0	1	Check details- Delay in starting habitat in required condition? △	28	0.369	Low	Standard difficulty applied	Low	1	0.64	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum		
15	Individual trees	Rural tree	0.068843899	Medium	4	Poor	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	10	0	1	Check details- Delay in starting habitat in required condition? ▲	11	0.676	Low	Standard difficulty applied	Low	1	0.20	Habitats replanted within 1 year, but restoration to original type and condition not possible within 2 year period, therefore accounted for as 'created' habitat. Assumed that maximum		
16	Cropland	Horticulture	0.980966889	Low	2	Condition Assessment N/A	Area/compensation not in local strategy/ no loc strategy	l Low Strategic Significance	1	1	0	6	Check details- Delay in starting habitat in required condition? ⚠	7	0.779	Low	Standard difficulty applied	Low	1	1.53	Created habitat. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact.  Assumed that maximum condition for created habitats will be moderate.		
17	Cropland  Cropland	Arable field margins cultivated annually  Arable field margins tussocky	0.750723565	Medium Medium	4	Condition Assessment N/A Condition Assessment	1 Formally identified in local strategy  1 Formally identified in local strategy	High strategic significance  High strategic significance	1.15	1	0	6	Check details-Delay in starting habitat in required condition? ⚠  Check details-Delay in starting habitat in required condition? ⚠	7	0.779	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created		
19	Cropland	Arable field margins pollen and nectar	1.239163213	Medium	4	N/A Condition Assessment N/A Condition	l Formally identified in local strategy	High strategic significance	1.15	1	0	6	Check details-Delay in starting habitat in required condition? △	7	0.779	Low	Standard difficulty applied	Low	1	4.44	habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact.		
20	Cropland  Cropland	Arable field margins game bird mix  Temporary grass and clover leys	0.277845019 3.4432092	Medium Low	2	Assessment N/A  Condition Assessment N/A	Pormally identified in local strategy  Area/compensation not in local strategy/ no loc strategy	High strategic significance  Low Strategic Significance	1.15	1	0	6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	7	0.779	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.		
22	Cropland  Cropland	Cereal crops  Non-cereal crops	18.56785346 18.70002839	Low	2	Condition Assessment N/A Condition Assessment	Area/compensation not in local strategy/ no loc strategy  Area/compensation not in local strategy/ no loc	Significance  Low Strategic	1	1	0	6	Check details-Delay in starting habitat in required condition? △  Check details-Delay in starting habitat in required	7	0.779	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created		
24	Grassland	Lowland meadows	0.099131566		8	N/A Poor	l Formally identified in local strategy	Significance  High strategic  significance	1.15	5	0	6	condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	11		High	Standard difficulty applied	High	0.33		habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.		
25	Grassland Grassland	Other neutral grassland Other neutral grassland	0.852632302		4	Moderate  Moderate	Location ecologically desirable but not in loca strategy  Location ecologically desirable but not in loca strategy	significance	1.1	5 5	0	6	Check details-Delay in starting habitat in required condition? △  Check details-Delay in starting habitat in required condition? △	11	0.676	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.		
27	Grassland Grassland	Other neutral grassland Other neutral grassland	0.901827916		4	Poor Moderate	Location ecologically desirable but not in loca strategy  Location ecologically desirable but not in loca	significance  Medium strategic	1.1	2	0	6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required	8		Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created		
29	Grassland	Modified grassland	0.151730334	Low	2	Moderate	strategy  Area/compensation not in local strategy/ no loc strategy	significance  Low Strategic Significance	1.1	4	0	6	condition? ▲  Check details- Delay in starting habitat in required condition? ▲	10	0.700	Low	Standard difficulty applied  Standard difficulty applied	Low			habitats will be moderate.  Habitats replanted up to 6 years after impact.  Assumed that maximum condition for created habitats will be moderate.		
30	Grassland Grassland	Modified grassland  Modified grassland	0.636426199	Low	2	Moderate Poor	Area/compensation not in local strategy/ no loc strategy  Area/compensation not in local strategy/ no loc strategy	Significance	1	1	0	6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	10 7	0.700	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.		
32	Heathland and shrub	Mixed scrub	0.010867707	Medium	4	Moderate  Condition	Area/compensation not in local strategy/ no loc strategy  Area/compensation not in local strategy/ no loc	Significance	1	5	0	6	Check details- Delay in starting habitat in required condition? △  Check details- Delay in starting habitat in required	11	0.676	Low	Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact.		
33	Heathland and shrub  Heathland and shrub	Bramble scrub  Mixed scrub	0.235342709	Medium Medium	4	Assessment N/A Moderate	strategy  Area/compensation not in local strategy/ no loc strategy	Significance	1	1 5	0	6	condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	11	0.779	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.		
35	Heathland and shrub  Grassland	Mixed scrub  Other neutral grassland	0.012308715	Medium Medium	4	Poor Moderate	Area/compensation not in local strategy/ no loc strategy  Location ecologically desirable but not in loca strategy	Significance	1.1	1	0	6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	7	0.779	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created		
37	Lakes	Ponds (non-priority habitat)	0.009831219			Moderate	Location ecologically desirable but not in loca strategy	Medium strategic significance	1.1	3	0	6	Check details- Delay in starting habitat in required condition? ⚠	9		Low	Standard difficulty applied	Low			habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact.		
38	Lakes Intertidal sediment	Ponds (non-priority habitat)  Littoral sand	0.001425258 4.82743E-06		4	Moderate Moderate	Location ecologically desirable but not in loca strategy  2 Formally identified in local strategy	Medium strategic significance  High strategic significance	1.15	1	0	6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	7	0.726	Low	Standard difficulty applied  Standard difficulty applied	Low Medium	0.67		Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.		
40	Urban Urban	Developed land; sealed surface  Developed land; sealed surface	2.405250919 0.001481263	V.Low V.Low		N/A - Other  N/A - Other	O Area/compensation not in local strategy/ no loc strategy  O Area/compensation not in local strategy/ no loc strategy	Significance	1	0	0	6	Standard time to target condition applied  Standard time to target condition applied	6	0.808	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created		
42	Urban	Developed land; sealed surface	0.782252231	V.Low		N/A - Other	strategy	l Low Strategic Significance	1	0	0	6	Standard time to target condition applied	6		Low	Standard difficulty applied	Low	1		habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact.		
43	Urban Urban	Artificial unvegetated, unsealed surface  Artificial unvegetated, unsealed surface	0.080129657	V.Low V.Low		N/A - Other  N/A - Other	Area/compensation not in local strategy/ no loc strategy  Area/compensation not in local strategy/ no loc strategy	Significance	1	0	0	6	Standard time to target condition applied  Standard time to target condition applied	6		Low	Standard difficulty applied  Standard difficulty applied	Low	1		Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact.  Assumed that maximum condition for created habitats will be moderate.		+
45	Woodland and forest  Woodland and forest	Other woodland; broadleaved  Other woodland; broadleaved	0.055198601	Medium Medium	4	Moderate Poor	2 Formally identified in local strategy  Area/compensation not in local strategy/ no loc		1.15	15 5	0	6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required	21	0.473	Low	Standard difficulty applied  Standard difficulty applied	Low	1		Habitats replanted up to 6 years after impact. Assumed that maximum condition for created habitats will be moderate.  Habitats replanted up to 6 years after impact. Assumed that maximum condition for created		
47	Individual trees	Rural tree	0.00282	Medium Medium	4	Poor	strategy  Location ecologically desirable but not in loca strategy	Significance	1.1	10	0	6	condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	16		Low	Standard difficulty applied  Standard difficulty applied	Low	1	0.01	habitats will be moderate.  Habitats replanted up to 6 years after impact.  Assumed poor condition to reduce time to target condition below 30 years. May be replaced or offset as part of wider woodland		
48	Individual trees  Urban	Rural tree  Developed land; sealed surface	0.0206225 6.72	Medium V.Low	4	Poor N/A - Other	Location ecologically desirable but not in local strategy  Area/compensation not in local strategy/ no loc	significance  Low Strategic	1.1	10	0	6	Check details- Delay in starting habitat in required condition? ▲  Standard time to target condition applied	16	0.566	Low	Standard difficulty applied  Standard difficulty applied	Low	1	0.05	Habitats replanted up to 6 years after impact. Assumed poor condition to reduce time to target condition below 30 years. May be replaced or offset as part of wider woodland planting.  Substation footprint and Link Box manhole		
50 51 52	Urban Urban Urban Grassland	Built linear features  Developed land; sealed surface  Developed land; sealed surface  Other neutral grassland	0.84822918 0.13427286 7.73	V.Low V.Low V.Low Medium	0 0 4	N/A - Other  N/A - Other  N/A - Other  Moderate	strategy  Area/compensation not in local strategy/ no loc strategy  Area/compensation not in local strategy/ no loc strategy  Location ecologically desirable but not in loca strategy	Significance Low Strategic Significance Low Strategic Significance	1 1 1	0 0 5	0 0	6 6	Standard time to target condition applied  Standard time to target condition applied  Check details- Delay in starting habitat in required condition?	6 6 11	0.808 0.808 0.808 0.676	Low Low Low	Standard difficulty applied  Standard difficulty applied  Standard difficulty applied  Standard difficulty applied	Low  Low  Low	1 1 1	0.00 0.00 0.00 45.97	Substation access road  Substation Zone Landscaping - access tracks		
53 54 55	Grassland Woodland and forest Urban	Modified grassland  Other woodland; broadleaved  Sustainable drainage system	2.81 9.631629575 1.123062262	Low Medium Low	2 4	Moderate  Moderate  Moderate	2 Area/compensation not in local strategy/ no loc strategy 2 Formally identified in local strategy 2 Area/compensation not in local strategy/ no loc strategy/	Significance High strategic significance	1 1.15	4 15 3	0 0	6 6	Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠  Check details- Delay in starting habitat in required	10 21 9	0.700 0.473 0.726	Low  Low  Medium	Standard difficulty applied  Standard difficulty applied  Standard difficulty applied	Low  Low  Medium	1 1 0.67	7.87 41.93 2.18	Substation Zone Landscaping		
56 57 58 59 60 61	Cropland	Cereal crops	12.56263049	Low	2	Condition Assessment N/A	strategy  Area/compensation not in local strategy/ no loc  strategy	Significance	1	1	0	6	condition? ⚠  Check details- Delay in starting habitat in required condition? ⚠	7	0.779	Low	Standard difficulty applied  Standard difficulty applied	Low	1	19.58	Cubatation Zana Landaganing, returned to		
60 61		Total habitat are: Site Area (Excluding area of individual trees, green walls, intertidal hard structures																	Total Units	241.08			

M² to hectares conversion tool:

B-1 On-Site Hedge Baseline  Condense / Show Columns  Main Menu  Hedgerow summary  Total Net Unit Change 12.31  Total Net % Change 10.11%  Trading Rules Satisfied  Trading Rules Satisfied																				
		Existing hedgerow habitats	_	Distinctive	eness	Cond	lition	Strategic significar	nce		Required Action to	Ecological baseline					number  ity habitat)" under UK  ity habitat)" under UK			
Ref	Hedge number	Habitat type	Length (km)	Distinctivenes	s Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier	Required Action to Meet Trading Rules	Total hedgerow units	Length Length retained enhanced	Units retained e	Units Length Units hanced lost lost	User comments	Planning authority comments	reference		
1		Native hedgerow	5.79041241	Low	2	Good	3	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	39.95	3.202412407	22.10	0.00 2.59 17.86	Classified as "h2a hedgerow (priority habitat)" under UK Hab.				
2		Native hedgerow	5.39631388	Low	2	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	24.82	4.278313884	19.68	0.00 1.12 5.14	Classified as "h2a hedgerow (priority habitat)" under UK Hab.				
3		Native hedgerow	1.56130737	Low	2	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	3.59	1.045307369	2.40	0.00 0.52 1.19	Classified as "h2a hedgerow (priority habitat)" under UK Hab.				
4		Species-rich native hedgerow	2.73370357	Medium	4	Good	3	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	37.73	1.668703571	23.03	0.00 1.07 14.70	Classified as "h2a hedgerow (priority habitat)" under UK Hab and marked as "important".				
5		Species-rich native hedgerow	1.39785293	Medium	4	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	12.86	0.687852928	6.33	0.00 0.71 6.53	Classified as "h2a hedgerow (priority habitat)" under UK Hab and marked as "important".				
6		Native hedgerow	0.03113908	Low	2	Good	3	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.21	0.02613908	0.18	0.00 0.01 0.03	Classified as "h2b other hedgerows" under UK Hab.				
7		Line of trees	0.4455836	Low	2	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	2.05	0.323583603	1.49	0.00 0.12 0.56	Classified as "w1g6 line of trees" under UK Hab.				
8		Line of trees	0.1746115	Low	2	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.40	0.150611501	0.35	0.00 0.02 0.06	Classified as "w1g6 line of trees" under UK Hab.				
9		Ecologically valuable line of trees	0.02825622	Medium	4	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.13	0	0.00	0.00 0.03 0.13	Classified as "w1g6 line of trees" under UK Hab and marked as "important".				
10													$\vdash$					-		
12																				
14																				
16																				
17																				
18			17.56									121.75	11.38 0.00	75.55	0.00 6.18 46.20					

Property Label   Prop				Total Ne Total N Trading I	et % Char	ange nge	erow sur	nmary  12.31  10.11%  Yes √														
Part   March		Proposed habitats		Distinctive	ness	Cond	ition	Strategic signifi	cance			Tem	poral multiplier				Difficulty risk r	nultipliers	Hedge		Comments	
Second Content Seco		Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significanc e multiplier	Standard Time to target condition (years)	Habitat created in advance (years) Delay in starting habitat creation (years)	Standard or adjusted time to target condition	target condition	target	difficulty	Applied difficulty multiplier	Final Difficulty difficulty multiplier of creation applied	units delivered	User comments	Planning authority comments	Habitat reference number
Marches   Marc	1	Native hedgerow	2.466537	Low	2	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	5	0 6	Check details- Delay in starting habitat in required condition?	11	0.676	Low	Standard difficulty applied	Low 1	7.67	during construction. Assumed that reinstated hedgerows will be limited to		
1	2	Native hedgerow	1.02696	Low	2	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	5	0 6	Check details- Delay in starting habitat in required condition? △	11	0.676	Low	Standard difficulty applied	Low 1	3.19	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
Second control residence   1/9	3	Native hedgerow	0.516	Low	2	Poor	1	Formally identified in local strategy	High strategic significance	1.15	1	0 6	Check details- Delay in starting habitat in required condition? △	7	0.779	Low	Standard difficulty applied	Low l	0.92	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
Species-contractive beogram  Species-contract	4	Species-rich native hedgerow	1.065	Medium	4	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	5	0 6		11	0.676	Low		Low 1	6.62	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
Reliance extigation with the following statistics of the control o	5	Species-rich native hedgerow	0.71	Medium	4	Moderate	2	Formally identified in local strategy		1.15	5	0 6	Check details- Delay in starting habitat in required condition?	11	0.676	Low		Low 1	4.41	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
For the first service of the service	6	Native hedgerow	0.005	Low	2	Moderate	2	Formally identified in local strategy			5	0 6	Check details- Delay in starting habitat in required condition? △	11	0.676	Low		Low 1	0.02	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
Line of trees  Don't Low  Don't L	7	Line of trees	0.114463	Low	2	Moderate	2	Formally identified in local strategy		1.15	20	0 6	Check details- Delay in starting habitat in required condition? △	26	0.396	Low	Standard difficulty applied	Low 1	0.21	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
Formally identified in local strategy    Ecologically valuable line of trees   0.03   Medium   4   Poor   1   Formally identified in local strategy   High strategic significance   1.15   5   0   6   Check details Delay in starting habitat in required condition? A   1   0.676   Low   Standard difficulty applied   Low   1   0.09   Check details Delay in starting habitat in required condition.    Medium   4   Poor   1   Formally identified in local strategy   High strategic significance   1.15   5   0   6   Check details Delay in starting habitat in required condition? A   1   0.676   Low   Standard difficulty applied   Low   1   1.71   Hedgerows proposed within Substation Zone.    Medium   4   Poor   1   Formally identified in local strategy   High strategic significance   1.15   10   0   6   Check details Delay in starting habitat in required condition? A   1   0.676   Low   Standard difficulty applied   Low   1   1.71   Hedgerows proposed within Substation Zone.    Medium   4   Moderate   2   Formally identified in local strategy   High strategic significance   1.15   5   0   6   Check details Delay in starting habitat in required condition? A   1   0.676   Low   1   1.71   Hedgerows proposed within Substation Zone.    Medium   4   Moderate   2   Formally identified in local strategy   High strategic significance   1.15   5   0   6   Check details Delay in starting habitat in required condition? A   1   0.676   Low   1   23.63   Hedgerows proposed within Substation Zone.    Medium   4   Moderate   2   Formally identified in local strategy   1.15   5   0   6   Check details Delay in starting habitat in required condition? A   1   0.676   Low   1   1.71   Low   1   1.71   Hedgerows proposed within Substation Zone.    Medium   4   Moderate   2   Formally identified in local strategy   1.15   5   0   6   Check details Delay in starting habitation required condition? A   1   0.676   Low   1	8	Line of trees	0.024	Low	2	Poor	1	Formally identified in local strategy		1.15	5	0 6		11	0.676	Low		Low 1	0.04	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
Species-rich native hedgerow  3.8 Medium  4 Moderate  2 Formally identified in local strategy significance 1.15  5 O B Boundard of this in required condition? A Boundard of the significance of the significa	9	Ecologically valuable line of trees	0.03	Medium	4	Poor	1	Formally identified in local strategy	significance	1.15	5	0 6	habitat in required condition?	11	0.676	Low	difficulty applied	Low 1	0.09	during construction. Assumed that reinstated hedgerows will be limited to 'moderate' condition.		
habitat in required condition? ▲ Indicated a line of the latter of the	10	Species-rich native hedgerow with trees	1.5	High	6	Moderate	2	Formally identified in local strategy	significance	1.15	10	0 6	habitat in required condition? A	16	0.566	Low	difficulty applied	Low 1	11.71	Zone.		
13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Species-rich native hedgerow	3.8	Medium	4	Moderate	2	Formally identified in local strategy	significance	1.15	5	0 6		11	0.676	Low		Low 1	23.63			
15 16	13																					
	15 16																					+
11.26			11.26		1							,							58.51			

Condense/	: Dogger Bank South (DBS) Offshore Wind Far C-1 On-Site WaterC' Baseline  Show Columns Condense/Show Rows  n Menu		Total Net Un Total Net % Trading Rule	t Change Change	0.48 3.09% No - check trading summary											
Ref	Existing watercourse type  Watercourse type	Length (km)	Distinctiveness  Distinctiveness	Condition  Condition	Strategic significance Strategic significance	Watercourse encroachment  Extent of encroachment	Riparian encroachment  Extent of encroachment for both banks	Required Action to Meet Trading	Ecological baseline  Total watercourse	Length Length retained enhanced	Units retained	Units enhanced	Length Lost	Units Lost	Bespoke compensation agreed for losses of VHDH  User Comments  Planning authority comments	Habitat reference number
1	Ditches	0.00181398	Medium	Poor	Formally identified in local strategy		Major/Major	Same habitat required =	units 0.01	0.001813979	0.01	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to the road to the west of the ditch, affecting both banks	D1
2	Ditches	0.07574397	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.26	0.075743968	0.26	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural	D2
3	Ditches	0.10307758	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.36	0.103077579	0.36	0.00	0.00	0.00	management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural	D3
	Ditalog	0.00122100	To a skin noon	Door		No Co suo o classo cut	D. Carina (D. Carina)	Same habitat	0.00	0.001221004	0.20	0.00	0.00	0.00	management practices present either side of the ditch and a road running along the west bank.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	
4	Ditches	0.09133109	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	required =	0.32	0.091331094	0.32	0.00	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D4
5	Ditches	0.07499951	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.26	0.074999508	0.26	0.00	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke	D5
6	Ditches	0.09462185	Medium	Poor	Formally identified in local strategy	Minor	Major/Major	Same habitat required =	0.26	0.094621851	0.26	0.00	0.00	0.00	from East Ridings of Yorkshire Biodiversity Action Plan  Minor watercourse encroachment due to evidence of old timber revetments being used to stabalize sections of the banks.	D6
7	Ditches	0.10763948	Medium	Poor	Formally, identified in local strategy	No Engroschment	Major/Major	Same habitat	0.37	0.107639478	0.37	0.00	0.00	0.00	Major riparian encrouchment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D7
	Ditches	0.10763948	Medium	Poor	Formally identified in local strategy	No Encroachment	iviajor/iviajor	required =	0.31	0.107639478	0.31	0.00	0.00	0.00	Major riparian encroachement due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	
8	Ditches	0.09737786	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.34	0.097377862	0.34	0.00	0.00	0.00	Major riparian encroachment due to the road on the left hand side bank and agricultural management practices on the right hand side.  Habitat identified as priority habitat under drainage dyke	D9
9	Ditches	0.08861779	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.31	0.08861779	0.31	0.00	0.00	0.00	from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to the agricultural  practices present either side of the ditch	D10
10	Ditches	0.21462237	Medium	Poor	Formally identified in local strategy	No Encroachment   1	Moderate/ No Encroachmen	Same habitat required =	0.91	0.214622369	0.91	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Moderate riparian encroachment due to agricultural practices present on the northern side of the bank.	Dll
11	Ditches	0.16698321	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.58	0.16698321	0.58	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural management practices present along either side of the ditch.	D13
12	Ditches	0.0790825	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.27	0.079082496	0.27	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural management practices present along either side of the ditch.	D14
13	Ditches	0.0930592	Medium	Poor	Formally identified in local strategy	No Encroachment N	Moderate/ No Encroachmen	Same habitat required =	0.39	0.093059202	0.39	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Moderate riparian encroachment due to agricultural management practices present on the northern bank of the	D16
14	Ditches	0.01408351	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.05	0.014083507	0.05	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encrouchment due to agricultural	D17
15	Ditches	0.08681181	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat	0.30	0.086811814	0.30	0.00	0.00	0.00	management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D18
								required =  Same habitat	0.00						Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	
16	Ditches	0.08515268	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	required =	0.29	0.085152679	0.29	0.00	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D19
17	Ditches	0.06175248	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.21	0.061752482	0.21	0.00	0.00	0.00	Major riparian encroachment due to managed grassland present on norther bank and agricultural practices present on southern bank.  Ditch not fully accessible due to H&S issues and therefore	D20
															not included within Baseline River Condition Assessment (RCA) and Ditch Condition Assessment (DCA) Report. Assumptions made on condition based on other nearby ditches.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	
18	Ditches	0.11030583	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.38	0.110305831	0.38	0.00	0.00	0.00	Major riparian encroachment due to managed grassland present on norther bank and agricultural practices present on southern bank  Habitat identified as priority habitat under drainage dyke	D21
19	Ditches	0.01500008	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.05	0.015000079	0.05	0.00	0.00	0.00	from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural management practices present either side of the ditch.	D22
20	Ditches	0.03622815	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.12	0.036228155	0.12	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural management practices present either side of the ditch.	D23
21	Ditches	0.08821324	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Moderate	Same habitat required =	0.32	0.088213235	0.32	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to the road on the southern bank and moderate riparian encroachment due to	D24
22	Ditches	0.10683857	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.37	0.106838572	0.37	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural	D25
23	Ditches	0.00775095	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.03	0.007750951	0.03	0.00	0.00	0.00	management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D26
24	Ditches	0.09006998	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat	0.31	0.090069977	0.31	0.00	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D27
	Dictios	0.0000000	Weddin	1001		TVO Enerodemnent	iviajoi/iviajoi	required =	0.01	0.00000011	0.01	0.00		0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	
25	Ditches	0.09214854	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.32	0.092148536	0.32	0.00	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke	D28
26	Ditches	0.50322939	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	1.74	0.503229386	1.74	0.00	0.00	0.00	from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to the road located at the southern end of the ditch and agricultural management practices present either side of the ditch	D29
27	Ditches	0.09112683	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Moderate	Same habitat required =	0.34	0.091126826	0.34	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major and moderate riparian encroachment due to land management practices present either side of ditch	D30
28	Ditches	0.04708872	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.16	0.047088718	0.16	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural management practices present on the north side bank and a road and managed grass verge present alongside the	D31
29	Ditches	0.33611894	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	1.16	0.336118944	1.16	0.00	0.00	0.00	Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to the road located at the	D32
	Ditches	0.01500421	Medium	Poor	Formally identified in local strategy		Major/Major	Same habitat	0.05	0.015004208	0.05	0.00	0.00	0.00	Major riparian encroachment due to the road located at the southern end of the ditch and agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D33
30								required =  Same habitat							Major riparian encroachment due to managed grassland present either side of ditch  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	
31	Ditches	0.24100814	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	required =	0.83	0.241008142	0.00	0.83	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke from East Ridings of Yorkshire Biodiversity Action Plan	D34
32	Ditches	0.01605552	Medium	Poor	Formally identified in local strategy	No Encroachment	Major/Major	Same habitat required =	0.06	0.016055519	0.06	0.00	0.00	0.00	Major riparian encroachment due to agricultural management practices present either side of the ditch.  Habitat identified as priority habitat under drainage dyke	D35
33	Ditches	0.11130521	Medium	Poor	Formally identified in local strategy	Minor	Major/Major	Same habitat required =	0.31	0.111305211	0.31	0.00	0.00	0.00	from East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to agricultural management practices present either side of ditch  Minor watercourse encroachment due to evidence of old	D36
34	Culvert	0.003	Low	Poor	Area/compensation not in local strategy/ no local strategy	N/A - Culvert	N/A - Culvert	Better distinctiveness habitat required	0.00	0.003	0.00	0.00	0.00	0.00	timber revetments being used to stabalize sections of the banks.  Whole culvert within the site boundary Associated with Ditch 9	C1
35	Culvert	0.001	Low	Poor	Area/compensation not in local strategy/ no local strategy	N/A - Culvert	N/A - Culvert	Better distinctiveness habitat required	0.00	0.001	0.00	0.00	0.00	0.00	Only 1m of the culvert is within the site boundary Associated with Ditch 17	C2
36	Other rivers and streams	0.088	High	Fairly Poor	Formally identified in local strategy	Major	Major/Major	Same habitat required =	0.34	0.088	0.34	0.00	0.00	0.00	Rivers and streams identified as a priority habitat from the  East Ridings of Yorkshire Biodiversity Action Plan  Major watercourse encroachment due to more than 20% of the bank length being an engineered bank revetment	River Hull
															Major riparian encroachment due to intensively/regularly managed and mown grassland within 0-4m of both river banks and heavy poaching from livestock and regularly used and managed footpaths present either side of the river.	
37	Other rivers and streams	0.091	High	Fairly Poor	Formally identified in local strategy	Major	Major/Major	Same habitat required =	0.35	0.091	0.35	0.00	0.00	0.00	Rivers and streams habitat identified as a priority habitat from the East Ridings of Yorkshire Biodiversity Action Plan Major watercourse encroachment due to more than 20% of the bank length being an engineered bank revetment.  Major riparian encroachment due to arable agriculture use	Beverley and Barmston Drain
															Major riparian encroachment due to arable agriculture use 0-4m from bank top and covering >25 % of total riparian zone area and intensively/regularly managed and mown grassland within 0-4m of both river banks.	

								<u> </u>								
38	Other rivers and streams	0.091	High	Moderate	Formally identified in local strategy No Encroachment	Major/Major	Same habitat required =	0.94	0.091		0.94	0.00	0.00	0.00	Rivers and streams habitat identified as a priority habitat from the East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to arable agriculture use 0-4m from bank top and covering >25 % of total riparian zone area and intensively/regularly managed and mown grassland within 0-4m of both river banks.	Holderness Drain
39	Other rivers and streams	0.077	High	Moderate	Formally identified in local strategy No Encroachment	Major/Major	Same habitat required =	0.80	0.077		0.80	0.00	0.00	0.00	Rivers and streams habitat identified as a priority habitat from the East Ridings of Yorkshire Biodiversity Action Plan  Major riparian encroachment due to arable agriculture use 0-4m from bank top and covering >25 % of total riparian zone area and intensively/regularly managed and mown grassland within 0-4m of both river banks.	Stream Dike
40	Other rivers and streams	0.098	High	Moderate	Formally identified in local strategy No Encroachment	Moderate/ Moderate	Same habitat required =	1.15	0.074		0.87	0.00	0.02	0.28	Rivers and streams habitat identified as a priority habitat from the East Ridings of Yorkshire Biodiversity Action Plan  Moderate riparian encroachment due to the footprint of encroachment occupying between 10% to 25% of the riparian zone area 2m to 5m from both bank tops.  Up to 24m impacted during construction by trenching or culverting.	Watercourse off of Milldam Beck
41																
42 43																
44																
		3.89			<b>'</b>			15.61	3.63	0.24	14.50	0.83	0.02	0.28		

Pro	oject Name: Do	ogger Bank South Jarms Man Refe	(DBS) Offs	shore Wind			Ī								٦													
	C-2 O	n-Site Water C	" Creatic	on					Motel Niet IInit Chan		course summary		0.40		4													
					J				Total Net Unit Chang				0.48 3.09%															
	Condense / Show C	Columns	Condense/Sh	low Rows								NT.																
	Main Menu						l		Trading Rules Satisfi	1ea		No -	check trading	summary A	ı													
	Main Menu																											
		Proposed habitats		Distinctiv	reness	Cond	dition	Strategic	significance				Tempo	cal multiplier				Difficulty mult	tipliers		Watercourse e	ncroachment	Riparian encro	achment			Comments	
Re	f Wa	itercourse type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significanc e multiplier	Standard Time to target condition (years)	Habitat created in advance (years)	Delay in starting habitat creation	Standard or adjusted time to target condition	Final time to target condition (years)	Final Time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied	Extent of encroachmen	Multiplier	Extent of encroachment for both banks	Multiplier	Watercourse units delivered	User comments	Planning authority comments	Habitat reference number
1	Othe	er rivers and streams	0.024	High	6	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	5	0	6	Check details- Delay in starting habitat in required condition?	11	0.676	High	Standard difficulty applied	High	0.33	No Encroachme	nt 1	Moderate/ Moderate	0.85	0.06	Reinstatement of watercourse off of Milldam Beck upon completion of construction. Delay up to 6 years.		Watercourse off of Milldam Beck
2																												
3																											+	
5																												
6			0.00																						0.00			
			0.02	J																					0.06	_		

			lows						Watercourse summary  Total Net Unit Change 0.48  Total Net % Change 3.09%  Trading Rules Satisfied No - check trading summary ▲			Dogt intervention hebitet									
				Baselir	ne habitats				Change in distinctiveness and condition	Habitat distinctiveness	Habitat condition	Post intervention habitats Strategic significance		al multiplier	Difficulty multipl	liers	Watercourse encroa	achment Riparian encroad	achment	Comments	
Baseline re	ef Baseline habitat	Length (km)	Baseline Baseline Baseline istinctiveness distinctiveness condition band score category	Baseline condition score	Baseline strategic significance category	Strategic significance  Baseline strategic Required Action to Meet significance Score Trading Rules	Baseline habitat units	Proposed habitat	Distinctiveness movement Condition movement (km)	Distinctiveness Score	Condition Score	Strategic significance Strategic significance significance multiplier  Strategic significance multiplier  Strategic significance multiplier  Strategic significance (years)	Habitat enhanced in advance (years)  Delay in starting habitat enhancement (years)	Standard or adjusted time to target condition (years)	Final Time to Standard target difficulty of multiplier enhancement Applied difficulty multiplier	Final difficulty  of  enhancement  of  applied	Extent of encroachment Mu	Extent of ultiplier encroachment for both banks	Watercourse units Multiplier delivered	User comments Planning authority com	Habitat reference number
31	Ditches	0.241008	Medium 4 Poor	1	Formally identified in local strategy	High strategic significance 1.15 Same habitat required =	0.83147809	Ditches	Medium - Medium Poor - Moderate 0.2410081	l Medium 4	Moderate 2	Location ecologically desirable but not in local strategy  Medium strategic significance  1.1  4	0 6	Check details- Delay in starting habitat in required condition? ▲	0.700 Low Standard difficulty applied	Low 1	No Encroachment	l Moderate/ Moderate	0.85 1.53	Watercourse planting specified within Illustrative Landscape Plan.	D34
																				4	
									0.24										1.53		

				Irr	eplaceable a	rea habita	ts on-site			
	<ul> <li>For further information</li> </ul>	please refer to the irrep	laceable habitats	s section of the met	ric user guide. This s	heet is autopopu	ulated from the A1 on-	site habitat baseline tab, with the exception of	rreplaceable habitat name	).
Habitat reference	Metric habitat type	Irreplaceable habitat name	Total area at baseline	Area retained	Area enhanced	Area lost	Bespoke compensation agreed for losses?	User comments	Planning authority comments	Habitat reference number
9	Wetland - Fens (upland and lowland)		1.71	1.71	0.00	0.00		Habitat retained in full		
38	Woodland and forest - Other woodland; broadleaved		2.02	2.02	0.00	0.00		Proxy for: wlg - Other woodland; broadleaved. This area covers Bentley Moor Ancient Woodland. Area fully retained.		
46	Individual trees - Rural tree		0.34	0.34	0.00	0.00		Veteran trees - based on Arboricultural Impact Assessment field survey results. All retained.		
	Irreplaceable habitat are trees, green walls and in	tertidal hard structures:	4.07							
	Total irreplaceable ha individual trees, green w struct	valls and intertidal hard	3.73							

	structi	ures:	3.13							
						7 7 1	4 00 14			
					eplaceable a					
	For further information	please refer to the irrep	laceable nabitats	section of the meti	ric user guide. This s	neet is autopopt		site habitat baseline tab, with the exception of	irrepiaceable nabitat name	Э.
Habitat reference	Metric Habitat type	Irreplaceable habitat name	Total area at baseline	Area retained	Area enhanced	Area lost	Bespoke compensation agreed for losses?	User comments	Planning authority comments	Habitat reference number
	Irreplaceable habitat are trees, green walls and in	ea including individual tertidal hard structures:	0.00							
	Total irreplaceable ha individual trees, Green w structi	valls and intertidal hard	0.00							

Return to	Trading Su	ımmary	
results menu	Distinctiveness Group	Trading Rule	Trading Satisfied?
	Very High	Same habitat required – bespoke compensation option $\Delta$	No ▲
Trading	High	Same habitat required =	Yes✓
summary	Medium	Same broad habitat or a higher distinctiveness habitat required (≥)	No ▲
hedgerows	Low	Same distinctiveness or better habitat required ≥	No ▲

Trading summary watercourses

Very High Dist	inctiveness				
Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Unit losses
Grassland - Lowland dry acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Lowland meadows	Grassland	-12.29	0.00	-12.29	-12.29
Grassland - Upland hay meadows	Grassland	0.00	0.00	0.00	
Heathland and shrub - Mountain heaths and willow scrub	Heathland and shrub	0.00	0.00	0.00	
Lakes - Aquifer fed naturally fluctuating water bodies	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Calaminarian grasslands	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Limestone pavement	Sparsely vegetated land	0.00	0.00	0.00	
Wetland - Blanket bog	Wetland	0.00	0.00	0.00	
Wetland - Depressions on peat substrates (H7150)	Wetland	0.00	0.00	0.00	
Wetland - Fens (upland and lowland)	Wetland	0.00	0.00	0.00	
Wetland - Lowland raised bog	Wetland	0.00	0.00	0.00	
Wetland - Oceanic valley mire[1] (D2.1)	Wetland	0.00	0.00	0.00	
Wetland - Purple moor grass and rush pastures	Wetland	0.00	0.00	0.00	
Wetland - Transition mires and quaking bogs (H7140)	Wetland	0.00	0.00	0.00	
Woodland and forest - Wood-pasture and parkland	Woodland and forest	0.00	0.00	0.00	
Rocky shore - High energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral seagrass on peat, clay or chalk	Intertidal sediment	0.00	0.00	0.00	
		-12.29	0.00	-12.29	-12.29

Very High Distinctivenes	ss Summary
Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Remaining losses; Like for like not satisfied	-12.29

High Distin	ctiveness				
Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Losses not yet accounted for
Grassland - Traditional orchards	Grassland	0.00	0.00	0.00	
Grassland - Floodplain wetland mosaic and CFGM	Grassland	0.00	0.00	0.00	
Grassland - Lowland calcareous grassland	Grassland	0.00	0.00	0.00	
Grassland - Tall herb communities (H6430)	Grassland	0.00	0.00	0.00	
Grassland - Upland calcareous grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Lowland Heathland	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Dunes with sea buckthorn (H2160)	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Upland heathland	Heathland and shrub	0.00	0.00	0.00	
Lakes - High alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Low alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Marl lakes	Lakes	0.00	0.00	0.00	
Lakes - Moderate alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Peat lakes	Lakes	0.00	0.00	0.00	
Lakes - Ponds (priority habitat)	Lakes	0.00	0.00	0.00	
Lakes - Temporary lakes ponds and pools (H3170)	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Coastal sand dunes	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Coastal sand dulies  Sparsely vegetated land - Coastal vegetated shingle	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Coastal vegetated similare  Sparsely vegetated land - Inland rock outcrop and scree habitats	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Maritime cliff and slopes	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Open mosaic habitats on previously developed land	Urban	0.00	0.00	0.00	
Wetland - Reedbeds	Wetland	0.00	0.00	0.00	
Woodland and forest - Felled/Replacement for felled woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland beech and yew woodland  Woodland and forest - Lowland beech and yew woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Native pine woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland birchwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland mixed ashwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland oakwood	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Wet woodland	Woodland and forest	0.00	0.00	0.00	
Coastal lagoons - Coastal lagoons	Coastal lagoons	0.00	0.00	0.00	
Rocky shore - High energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral mud	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00	
Coastal saltmarsh - Saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Mussels	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Sabellaria	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Features of littoral sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral muddy sand	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral seagrass	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

High Distinctiveness S	Summary
High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Remaining losses; Like for like not satisfied	0.00

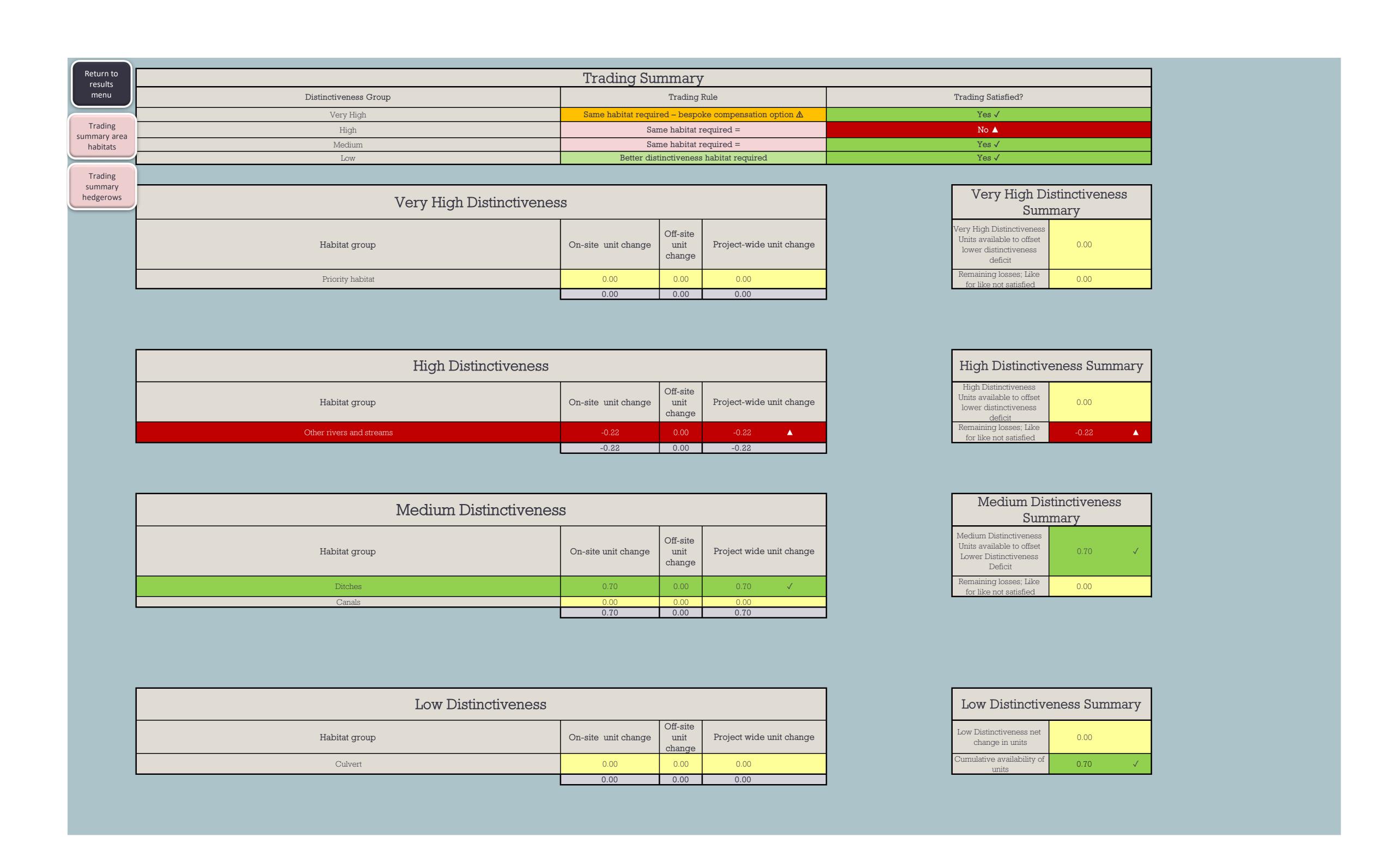
Medium Dis	tinctiveness				
Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change	Cumulative broad habitat change
Cropland - Arable field margins cultivated annually	Cropland	-0.77	0.00	-0.77	
Cropland - Arable field margins game bird mix	Cropland	-0.28	0.00	-0.28	-3.21 <b>△</b>
Cropland - Arable field margins pollen and nectar	Cropland	-1.26	0.00	-1.26	1
Cropland - Arable field margins tussocky	Cropland	-0.91	0.00	-0.91	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Other neutral grassland	Grassland	20.65	0.00	20.65	20.65 ✓
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Bramble scrub	Heathland and shrub	-0.24	0.00	-0.24	1
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	-0.45 ▲
Heathland and shrub - Willow scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	-0.20	0.00	-0.20	
Lakes - Ponds (non-priority habitat)	Lakes	-0.07	0.00	-0.07	-0.07
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	-0.01
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.00
Urban - Biodiverse green roof	Urban	0.00	0.00	0.00	0.00
Individual trees - Urban tree	Individual trees	0.00	0.00	0.00	-2.63 ⚠
Individual trees - Rural tree	Individual trees	-2.63	0.00	-2.63	-2.00
Woodland and forest - Other Scot's pine woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland; broadleaved	Woodland and forest	40.92	0.00	40.92	40.92 ✓
Woodland and forest - Other woodland; mixed	Woodland and forest	0.00	0.00	0.00	
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures with integrated greening of grey infrastructure (IGGI)	Intertidal hard structures	0.00	0.00	0.00	
		55.20	0.00	55.20	

Medium Distinctiveness Summary							
Medium Distinctiveness Units available to offset Lower Distinctiveness Deficit	61.57 ✓						
Medium Distinctiveness Broad Habitat losses to be offset by trading up	-6.37 ▲						
Higher Distinctiveness Surplus Units minus Medium Distinctiveness Broad Habitat Deficit	-6.37 ▲						
Cumulative surplus of units	55.20 ✓						

Low Distinctiveness				
Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change
Cropland - Cereal crops	Cropland	-30.80	0.00	-30.80 ▲
Cropland - Horticulture	Cropland	-0.44	0.00	-0.44 ▲
Cropland - Intensive orchards	Cropland	0.00	0.00	0.00
Cropland - Non-cereal crops	Cropland	-39.27	0.00	-39.27 ▲
Cropland - Temporary grass and clover leys	Cropland	-2.08	0.00	-2.08 ▲
Cropland - Winter stubble	Cropland	0.00	0.00	0.00
Grassland - Modified grassland	Grassland	-3.07	0.00	-3.07 ▲
Grassland - Bracken	Grassland	0.00	0.00	0.00
Heathland and shrub - Rhododendron scrub	Heathland and shrub	0.00	0.00	0.00
Lakes - Ornamental lake or pond	Lakes	0.00	0.00	0.00
Sparsely vegetated land - Ruderal/ephemeral	Sparsely vegetated land	0.00	0.00	0.00
Sparsely vegetated land - Tall forbs	Sparsely vegetated land	0.00	0.00	0.00
Urban - Bioswale	Urban	0.00	0.00	0.00
Urban - Bare ground	Urban	0.00	0.00	0.00
Urban - Allotments	Urban	0.00	0.00	0.00
Urban - Facade-bound green wall	Urban	0.00	0.00	0.00
Urban - Ground based green wall	Urban	0.00	0.00	0.00

Low Distinctiveness Summary		
Low Distinctiveness net change in units	-73.48 <b>△</b>	
Cumulative surplus of units	-18.27 <b>▲</b>	

Urban - Ground level planters	Urban	0.00	0.00	0.00
Urban - Other green roof	Urban	0.00	0.00	0.00
Urban - Intensive green roof	Urban	0.00	0.00	0.00
Urban - Introduced shrub	Urban	0.00	0.00	0.00
Urban - Rain garden	Urban	0.00	0.00	0.00
Urban - Actively worked sand pit quarry or open cast mine	Urban	0.00	0.00	0.00
Urban - Sustainable drainage system	Urban	2.18	0.00	2.18
Urban - Vacant or derelict land	Urban	0.00	0.00	0.00
Urban - Vegetated garden	Urban	0.00	0.00	0.00
Woodland and forest - Other coniferous woodland	Woodland and forest	0.00	0.00	0.00
Coastal saltmarsh - Artificial saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00
Intertidal sediment - Artificial littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mud	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral muddy sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral seagrass	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral biogenic reefs	Intertidal sediment	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures	Intertidal hard structures	0.00	0.00	0.00
Intertidal hard structures - Artificial features of hard structures	Intertidal hard structures	0.00	0.00	0.00
Heathland and shrub - Other sea buckthorn scrub	Heathland and shrub	0.00	0.00	0.00
		-73.48	0.00	-73.48





Dogger Bank South Offshore Wind Farms

Annex B - Biodiversity Metric, on-site hedgerow and watercourse baseline and creation Baseline River Condition Assessment (RCA) and Ditch Condition Assessment (DCA) Report of this Strategy

Unrestricted 004300159



Dogger Bank South –
Baseline River Condition
Assessment (RCA) and Ditch
Condition Assessment (DCA)
Report

HaskoningDHV UK Ltd

on behalf of

**RWE** Renewables

Date: 09/05/2025

Prepared by: Gareth Tomlinson

Ref: 24473





**Report to**: Haskoning DHV UK Ltd

Report Title: 24473 Dogger Bank South – River Condition Assessment (RCA) & Ditch

Condition Assessment (DCA) Report

**Version:** V1.0

Issue Date: May 2025 Report Ref: 24473

Originated By:

**Gareth Tomlinson** 

Consultant Ecologist Date: 22/04/2025

Reviewed By:

**Rebecca Jenkins** 

Principal Ecologist Date: 01/05/2025

Approved By: Filmsand.

**Felicity Husband** 

**Technical Director** Date: 07/05/2025

Prepared by:

Cura Terrae Land and Nature, 350 Bristol Business Park, Coldharbour Lane, Bristol, BS16 1EJ. 0117 403 9050

Version	Author	Description	Date
V0.1	GT	First draft	30/04/2025
V0.2	RJJ	Quality assurance review 1	01/05/2025
V0.3	GT	Amendments following QA1	06/05/2025
V0.4	FH	Quality assurance review 2	07/05/2025
V0.5	GT	Amendments following QA2	08/05/2025
V1.0	RJJ	Issue to client	09/05/2025

The report and the site assessments carried out by Cura Terrae on behalf of the client in accordance with the agreed terms of contract and/or written agreement form the agreed Services. The Services were performed by Cura Terrae with the skill and care ordinarily exercised by a reasonable Environmental Consultant at the time the Services were performed. Further, and in particular, the Services were performed by Cura Terrae taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between Cura Terrae and the client.

Other than that expressly contained in the paragraph above, Cura Terrae provides no other representation or warranty whether express or implied, in relation to the services.

This report is produced exclusively for the purposes of the client. Cura Terrae is not aware of any interest of or reliance by any party other than the client in or on the services. Unless expressly provided in writing, Cura Terrae does not authorise, consent or condone any party other than the client relying upon the services provided. Any reliance on the services or any part of the services by any party other than the client is made wholly at that party's own and sole risk and Cura Terrae disclaims any liability to such parties.

This report is based on site conditions, regulatory or other legal provisions, technology or economic conditions at the time of the Service provision. These conditions can change with time and reliance on the findings of the Services under changing conditions should be reviewed. Cura Terrae accepts no responsibility for the accuracy of third-party data used in this report.



## **Contents**

Executi	ive Summary	4
1. Int	troduction	5
1.1	Project background	5
1.2	Proposal	5
1.3	Purpose	5
2. Me	ethodology	6
2.1	Biodiversity Metric Inputs	6
2.2	Habitat Type and Length	6
2.3	Habitat Condition	7
2.4	Riparian and in-watercourse encroachment	10
2.5	Habitat Strategic Significance	11
2.6	Biodiversity Metric Calculations	11
2.7	Limitations	11
3. Re	esults	14
3.1	River Condition Assessment	14
3.2	Ditch Condition Assessment	17
3.3	Baseline Biodiversity Metric Calculations	18
4. Cc	onclusion	19
5. Re	eferences	20
Figure	1: Location Plan	21
Figure	2: MoRPH Survey Map	36
_	3: Thirteen near-natural river types that may be encountered in England (extracted from	
-	4: The decision tree used by the information system to discriminate river types using	
Appen	dix 1: Photographs	43
Appen	dix 2: River condition indicators	53
Appen	dix 3: Results of river riparian and in-watercourse encroachment assessment	55

Appendix 4: Ditch Condition Assessment Criteria sheet	58
Appendix 5: Results of ditch riparian and in-watercourse encroachment assessment	59
Appendix 6: Statutory Biodiversity Metric	65



# **Executive Summary**

Cura Terrae Land and Nature Limited ('Cura Terrae'), formerly Ecus Limited, was commissioned by HaskoningDHV UK Ltd in February 2025 to undertake River Condition Assessments (RCA) and Ditch Condition Assessments (DCA) of five watercourses and 32 ditches for the onshore works of the Dogger Bank South project, located in East Riding of Yorkshire (as shown in Figure 1) (hereafter referred to as the "Onshore Development Area" or "ODA".

The project involves the installation of a buried onshore export cable between the landfall locations and the onshore grid connection points at Creyke Beck, west of Beverley.

The results of the RCAs and DCAs will feed into the full Biodiversity Net Gain (BNG) Strategy for the Onshore Development Area of the Dogger Bank South project.

MoRPh5 surveys were carried out at the five watercourses, each consisting of three sub-reaches (upstream, within the ODA, and downstream where applicable) of five contiguous modules in April 2025.

The river types were categorised as **Type K** for Beverley and Barmston Drain, Holderness Drain, Watercourse off Milldam Beck and Stream Dike. The River Hull was categorised as a **Large River** as the river was greater than 20 m width.

The condition score for the River Hull, and Beverley and Barmston Drain was **Fairly Poor**. The condition score for Holderness Drain, Watercourse off Milldam Beck and Stream Dike was **Moderate**.

Riparian encroachment was assessed as **Major** on all watercourses apart from Watercourse off Milldam Beck which was classified as **Moderate**.

Watercourse encroachment was assessed as **Major** on the River Hull, and Beverley and Barmston Drain. There was **no watercourse encroachment** on Holderness Drain, Watercourse off Milldam Beck and Stream Dike.

Ditch Condition Assessments were carried out on 32 individual ditches in accordance with the Statutory Biodiversity Metric (SBM) in March 2025. Two culverts were present and were included in the SBM but are not subject to condition assessment as they are automatically determined to be of 'poor' condition.

All ditches were determined to be in **Poor** condition with **no encroachment** on the riparian zone for all ditches except ditch 6 and 36, which had **Minor** riparian encroachment. Watercourse encroachment was assessed as **Major** on all ditches except ditches 11, 16 and 24 which ranged between **no encroachment** and **Major** as detailed in this report.

Overall, the watercourse habitats (rivers, ditches and culverts combined) generated a baseline biodiversity value of 15.40 Watercourse Units.



## 1. Introduction

## 1.1 Project background

- 1.1.1 Cura Terrae Land and Nature Limited ('Cura Terrae'), formerly Ecus Limited, was commissioned by HaskoningDHV UK Ltd in February 2025 to undertake River Condition Assessments (RCA) of five watercourses and Ditch Condition Assessments (DCA) of 32 ditches for the onshore works of the Dogger Bank South project, located in East Riding of Yorkshire (hereafter referred to as the "Onshore Development Area" or "ODA".
- 1.1.2 The locations of the rivers, ditches and culverts, hereby referred to in combination as 'watercourses' are illustrated in Figure 1 and photographs are provided at Appendix 1.

## 1.2 Proposal

1.2.1 The proposed development includes the installation of a buried onshore export cable route from the Dogger Bank South offshore windfarm between the landfall zone and the onshore substation zone at Creyke Beck, west of Beverley. It is understood that the cable route will cross main rivers using trenchless techniques, such as Horizontal Direction Drilling (HDD), whilst ordinary watercourses, such as the ditches, will be subject to open cut trenching methods.

### 1.3 Purpose

- 1.3.1 This report details the methodology and findings of desk-based assessments and field surveys carried out as part of the RCA and DCA. These assessments were undertaken to evaluate the watercourses likely to be affected by the proposed development.
- 1.3.2 The RCA comprises of two components: a desk-based assessment and a field survey, whilst the DCA consists of a field survey only. These are used to determine river type (RCA only), establish the baseline condition of the rivers and ditches, and assess the extent of riparian and in-watercourse encroachment.
- 1.3.3 The purpose of this report is to provide the necessary inputs to the Statutory Biodiversity Metric for the identified watercourses to provide a baseline biodiversity value for the Watercourse Units, which will feed into the overall Biodiversity Net Gain Strategy.



# 2. Methodology

## 2.1 Biodiversity Metric Inputs

- 2.1.1 This report uses the industry recognised best practice methodology within 'The Statutory Biodiversity Metric, User Guide', distributed by the Department for Environment, Food & Rural Affairs (Defra, 2024a).
- 2.1.2 The Statutory Biodiversity Metric, hereafter referred to as 'SBM' uses habitat features as a proxy measure for the value and importance of nature. The following information on each watercourse type are the required metric inputs:
  - Type;
  - Length;
  - Condition;
  - Strategic significance; and,
  - Riparian and In-Watercourse Encroachment.
- 2.1.3 Biodiversity metric calculations provide a numerical score for the biodiversity value of the watercourses, which are measured in Watercourse Units (WU)). This report is for water-based habitats only, i.e. Watercourse Units.

## 2.2 Habitat Type and Length

- 2.2.1 The watercourses were classified according to the habitat classification system used by the SBM during the field surveys.
- 2.2.2 Habitat measurements for length have been taken using digital mapping software (QGIS Geographic Information System version 3.38.0).
- 2.2.3 The SBM uses a classification system based mainly on the UK Habitat Classification System (UKHab Ltd., 2023), with input from other systems including the Water Framework Directive (WFD) Lakes Typology (UKTAG, 2003), the European Nature Information System (EUNIS) habitat definitions (EEA, 2019), Habitats Directive Annex 1 definitions (JNCC, 2019) and habitats specific to the metric defined in the 'Statutory Biodiversity Metric, User Guide' (Defra, 2024a) and/or 'The Statutory Biodiversity Metric Technical Annex 1: Condition Assessment and Sheets Methodology' (Defra, 2024b).



- 2.2.4 River types subject to MoRPh5 surveys are classified according to 'the MoRPh Survey, Technical Reference Manual' (Gurnell et al., 2020a). Details of how river type is determined are included in Section 2.3 below.
- 2.2.5 The distinctiveness of each habitat type is automatically calculated within the SBM.

#### 2.3 Habitat Condition

#### **Ditch Condition Assessment**

- 2.3.1 The ditch condition assessment of 32 individual ditches and two culverts was carried out in accordance with the condition assessment sheets as set out in the Statutory Biodiversity Metric: User Guide (DEFRA, 2024a) and the Statutory Biodiversity Metric Condition Assessments, Ditch sheet (DEFRA, 2024b).
- 2.3.2 The DCA field surveys were carried between 24 March and 27 March 2025 out by Senior Ecologist Joseph Allsopp BSc (Hons) MCIEEM and Graduate Ecologist Abbey Beddoe BSc (Hons) MSc.
- 2.3.3 Weather conditions and visibility were suitable for the purpose of the surveys summarised in Table 1.

Table 1. DCA weather conditions and visibility

Date	Temperature °C	Wind	Cloud cover (%)	Precipitation
24 March 2025	10	Beaufort Force 3	30	None
25 March 2025	11	Beaufort Force 2	50	None
26 March 2025	11	Beaufort Force 1	20	None
27 March 2025	14	Beaufort Force 1	10	None

#### River Condition Assessment

#### MoRPh5 field survey

2.3.4 The MoRPh5 Modular River Physical Survey (MoRPh5) survey is used to collect field data within 'subreaches' of a river. At least 20% of the river length within the proposed development should be



surveyed (Gurnell et al., 2020a). MoRPh surveys are carried out on short 'modules' of the river, the size of which is determined by the river width (see Table 2).

Table 2. Determining module length from river width

River width (m)	Module length (m)
<5	10
5 to <10	20
10 to <20	30
20 to <30	40
Large and navigable rivers and canals	50

- 2.3.5 Five contiguous modules are surveyed within a single sub reach (Figure 1). The area surveyed within each module includes land within 10 m of the bank top either side of the river, both bank faces, and the channel bed. The features captured within the survey include the bank and bed sediments, morphological and hydraulic features, riparian and aquatic vegetation extent and structure, presence of non-native invasive plants, bank top land use pressures and human interventions within the river channel.
- 2.3.6 MoRPH5 surveys were completed on five individual watercourses for RCA, including land within 10 m either side of the top of the bank, as illustrated in Figure 2.
- 2.3.7 The MoRPh5 field surveys of the River Hull, and Beverley and Barmston Drain were carried out by Cura Terrae ecologists Associate Director Sarah Thresher BSc (Hons) and Consultant Ecologist Ellie MacQuarrie BSc (Hons) on 14 and 15 April 2025.
- 2.3.8 The MoRPh5 field surveys of the watercourses Holderness Drain, Stream Dike, and Watercourse off Milldam Beck were carried out by Principal Ecologist Claire Evans BSc (Hons) MSc ACIEEM and Graduate Ecologist Jessica Sams between 22 April and 24 April 2025.
- 2.3.9 Sarah Thresher and Claire Evans are accredited to conduct RCA surveys as per the requirements of the Statutory Biodiversity Metric (DEFRA, 2024a).

2.3.10 Weather conditions and visibility were suitable for the purpose of the surveys and are summarised in Table 3.

Table 3. RCA weather conditions and visibility

Date	Temperature °C	Wind	Cloud cover (%)	Precipitation
14 April 2025	14	Beaufort force 4	40	None
15 April 2025	12	Beaufort force 2	80	Rain
22 April 2025	14	Beaufort force 2	70	None
23 April 2025	13	Beaufort force 2	90	None
24 April 2025	10	Beaufort force 2	100	None

#### Indicative river type

2.3.11 A combination of a desk-based assessment and data from the MoRPh5 field surveys is used to determine river type from one of thirteen near-natural river types (Figure 3). Eight river type indicators are used to determine river type. Indicators A1 to A5 are derived from maps or aerial images. These indicators are A1 Braiding index, A2 Sinuosity index, A3 Anabranching index, A4 Level of confinement and A5 Valley gradient. Indicators A6 to A8 are derived from the MoRPh5 surveys. These indicators are A6 Bedrock reaches, A7 Coarsest bed material size class and A8 Average alluvial bed material size class.

### Condition analysis

- 2.3.12 Following the field survey, the data is inputted into the Cartographer web application (Cartographer Studios Ltd, 2025), which calculates a condition score for each subreach of Good, Fairly Good, Moderate, Fairly Poor or Poor. Subreaches are also assigned a numerical preliminary condition score ranging from -2.5 to ≥2.5, a higher number indicating a better condition score.
- 2.3.13 Cartographer additionally automatically calculates river type from one of the thirteen types shown in Figure 3, using the decision tree shown in Figure 4.

# 2.4 Riparian and in-watercourse encroachment

2.4.1 The riparian zone is a set area from the bank top of the watercourse, which is defined as 10 m for rivers, streams and canals, and 5 m for ditches (Figure 2). Any development within this zone is termed 'riparian encroachment'. Encroachment can be classed as minor, moderate, or major dependent on the proximity of the development to the bank top and the percentage area that it covers within the riparian zone. Riparian encroachment bands are described in Table 4.

Table 4. Description of riparian encroachment bands (Defra Group, 2023).

Riparian zone encroachment band for a bank	Rivers, streams and canals	Ditch	
No encroachment	No encroachment within 10 m of bank top	No encroachment within 5 m of bank top	
	Any encroachment 8 m to 10 m from bank top (up to 100% of area within the 8 - 10 m zone)	Any encroachment 4 m to 5 m from bank top (up to 100% of area within the 4 - 5 m zone)	
<b>Minor</b> or		or	
	where the footprint of encroachment occupies 0 - 10% of the riparian zone area 4 m to 10 m from bank top.	where the footprint of encroachment occupies 0 - 10% of the riparian zone area 2 m to 5 m from bank top.	
Moderate	Where the footprint of encroachment occupies between 10% to 25% of the riparian zone area 4 m to 10 m from bank top.	Where the footprint of encroachment occupies between 10% to 25% of the riparian zone area 2 m to 5 m from bank top.	
	Any encroachment 0 m to 4 m from bank top	Any encroachment 0 m to 2 m from bank top	
Major	or	or	
	where encroachment occupies greater than 25% of the total riparian zone area.	where encroachment occupies greater than 25% of the total riparian zone area.	

2.4.2 In-watercourse encroachment is defined as intervention that adversely affects hydrological and geo-morphological processes, creating localised changes in flow and/or sediment dynamics and riverine connectivity. In-watercourse encroachment is classed as minor or major dependent on the percentage of the bank length or channel width affected by the intervention; see Table 5 below.

Table 5. Description of in-watercourse encroachment bands (Defra Group, 2023).

Watercourse encroachment band	Multiplier	Description
No encroachment	1.0	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel
Minor	0.8	5% to 20% of the bank length comprises an engineered bank revetment or there is channel encroachment across up to 10% of the channel width
Major	0.5	Greater than 20% of the bank length comprises an engineered bank revetment or there is channel encroachment across greater than 10% of the channel width

## 2.5 Habitat Strategic Significance

- 2.5.1 Strategic significance is the local significance of the habitat based on its location and the habitat map.
- 2.5.2 Data on habitats locally identified as significant for nature were obtained from the Local Biodiversity Action Plan for the East Riding of Yorkshire (East Riding of Yorkshire Council, 2010).

## 2.6 Biodiversity Metric Calculations

2.6.1 Data from the RCA and DCA surveys is entered into the SBM to determine baseline biodiversity value of watercourses. This report is for 'watercourse' habitats only.

### 2.7 Limitations

#### River Condition Assessment

- 2.7.1 During the Beverley & Barmston Drain survey, the windy conditions, steep banks and turbid water made it difficult to assess water flow patterns, water depth and in channel characteristics. This was a limitation but did not affect the final river type assessment.
- 2.7.2 During the River Hull survey, access was limited due to the width of the river and the boggy / trampled banks, which made it difficult to estimate the water depth and in channel features such as bed type materials. This was a limitation but did not affect the final river type assessment.



- 2.7.3 The MoRPh survey guidance states that rivers more than 30 m wide are unsuitable for MoRPH, but a reduced survey can be done focussing on the bank top and any visible in-channel features in module lengths of 50 m. As the width of the River Hull is estimated to be c. 50 m, this would come under that category. Given that the module length is 50 m, this limited the number of sub-reaches to two, one within the ODA and one upstream of the ODA. This is not a significant limitation as enough information could be gathered to obtain a condition score.
- 2.7.4 During the Holderness Drain survey, the turbid water due to runoff from nearby arable land made it difficult to assess water depth and in channel characteristics. This was not a significant limitation as the bed material was visible at the edge of the channel in some of the modules, and water flow was visible. This was used to make a full assessment.
- 2.7.5 There were no significant limitations to the surveys of Stream Dike and Watercourse off Milldam Beck as all areas of the channel and banks were accessible and visible, and survey conditions were optimal.

#### Ditch Condition Assessment

- 2.7.6 The DCA surveys were completed in March, which is outside the optimal survey period for observing plants (May to September inclusive). Many plant species would not be fully developed at this time of year and therefore could have an impact on vegetation-specific questions of the condition assessment. This is not a significant limitation as the condition criteria could still be answered successfully.
- 2.7.7 A summary of the specific limitations from the DCA survey are provided in Table 6.

**Table 6. DCA Limitations** 

Ditch ID	Limitations
3	The ditch was dry at the time of the survey. This was not a significant limitation as the condition assessment was still completed.
8 / 29	These two ditches were the same linear feature, which is why a single condition assessment was undertaken, resulting in only ditch 29 being included in the metric. Therefore, there was no 'ditch 8'. This is not a significant limitation.
10	Thick scrub and steep bank made it difficult to see the watercourse. The surveyors could not access from the left-hand bank as access permission was not granted. This was not a significant limitation as the condition assessment was still completed successfully.

12	The ditch was dry and served as a grass verge between arable fields. Therefore, this ditch was excluded from the metric as it was determined during the survey that this feature did not qualify as a 'ditch'. This is not a significant limitation.
14	The ditch was completely dry at the time of the survey. This was not a significant limitation as the condition assessment was still completed.
15	The ditch was dry and served as a grass verge between arable fields. Therefore, this ditch was excluded from the metric as it was determined during the survey that this feature did not qualify as a 'ditch'. This is not a significant limitation.
20	Ditch 20 was de-scoped due to health and safety requirements identified by the client and is therefore not included in this metric. Whilst this is not a limitation to this report as it was descoped, this is a significant limitation to the BNG Strategy. It is recommended that an assumption on the biodiversity metric inputs is made using best practice guidance.
24	Thick scrub made it difficult to see the ditch along the full stretch. This was not a significant limitation as the condition assessment was still completed successfully.
26	The ditch was overgrown by vegetation making it difficult to observe the water in places. This was not a significant limitation as the condition assessment was still completed successfully.
31	The surveyors were unable to access the ditch due to a fence/hedge in the north and a road in the south. The ditch was completely dry at the time of the survey. This was not a significant limitation as the condition assessment was still completed successfully.

2.7.8 Overall, the only significant limitation to the DCA surveys was the ditch that was not surveyed due to health and safety reasons.



## 3. Results

### 3.1 River Condition Assessment

#### **Habitat Condition**

3.1.1 Preliminary condition scores and final condition scores are calculated using the Cartographer web application. The calculated condition scores for each sub-reach and an average for the whole reach of the five watercourses are provided in Tables 7 to 11.

Table 7. Preliminary and final condition scores River Hull

Sub-reach	Preliminary Condition Score	Final Condition Score
1 (ODA)	0.18	Fairly poor
2 (upstream)	0.49	Fairly poor
Average	0.34	Fairly poor

Table 8. Preliminary and final condition scores Beverley & Barmston Drain

Sub-reach	Preliminary Condition Score	Final Condition Score
1 (upstream)	0.07	Fairly poor
2 (ODA)	- 0.03	Fairly poor
3 (downstream)	-0.02	Fairly poor
Average	0.01	Fairly poor

**Table 9. Preliminary and final condition scores Holderness Drain** 

Sub-reach	Preliminary Condition Score	Final Condition Score
1 (upstream)	0.96	Moderate
2 (ODA)	0.51	Moderate
3 (downstream)	0.61	Moderate
Average	0.69	Moderate

**Table 10. Preliminary and final condition scores Watercourse off Milldam Beck** 

Sub-reach	Preliminary Condition Score	Final Condition Score	
1 (upstream)	0.72	Moderate	
2 (ODA)	0.67	Moderate	
3 (downstream)	0.62	Moderate	
Average	0.67	Moderate	

**Table 11. Preliminary and final condition scores Stream Dike** 

Sub-reach	Preliminary Condition Score	Final Condition Score
1 (upstream)	1.19	Moderate
2 (ODA)	0.82	Moderate
3 (downstream)	0.98	Moderate
Average	0.99	Moderate

### River Type

- 3.1.2 The River Hull type was determined to be a **Large River**. Large rivers are those that are too wide or deep for reliable bed material information to be collected during a MoRPh field survey. Although full MoRPh surveys may be feasible on quite wide rivers, accurate survey of bed material often becomes challenging on rivers wider than 20 m. Without a survey of bed material, these larger rivers cannot be allocated to one of river types A to M and therefore the category of 'Large River' is assigned.
- 3.1.3 The four other watercourses were determined to be **Type K**, which were checked against the guidance and verified, given that any boulders present were naturally occurring and not of anthropogenic origin (Gurnell et al., 2020b). Type K rivers typically support an average alluvial bed material of sand/gravel or silt/clay on straight sinuous rivers (Figure 3).
- 3.1.4 The results of the river type assessments are summarised in Table 12 below.



Table 12. Results of river type assessments

River Type Indicator	River Hull	Beverly and Barmston Drain	Holderness Drain	Watercourse off Milldam Beck	Stream Dike
A1 Braiding Index (number of wetted channels)	N/A Large River	1 (single channel)	1 (single channel)	1 (single channel)	1 (single channel)
A2 Sinuosity Index (reach river length/reach valley length)	N/A Large River	1.020	1.000	1.017	1.000
A3 Anabranching Index (number of unvegetated channels separated by vegetated bars or islands)	N/A Large River	1 (single channel)	1 (single channel)	1 (single channel)	1 (single channel)
<b>A4</b> Level of Confinement	N/A Large River	Unconfined	Unconfined	Unconfined	Unconfined
A5 Valley Gradient (difference between upstream and downstream elevation divided by the reach valley length)	N/A Large River	2.032520 (m/m)	0.000063492065 (m/m)	0.0016736402 (m/m)	0.0018518518 (m/m)
A6 Bedrock Reach	No	No	No	No	No
A7 Coarsest Bed Material	N/A Large River	Silt / Fine non- sticky sediments	Silt / Fine non- sticky sediments	Silt / Fine non- sticky sediments	Gravel-Pebble
<b>A8</b> Average Alluvial Bed Material	N/A Large River	Silt / Fine non- sticky sediments	Silt / Fine non- sticky sediments	Clay	Clay
River Type score	N/A Large River	Туре К	Туре К	Туре К	Туре К

3.1.5 All five watercourses were subsequently categorised as "other rivers and streams" as they do not qualify as "priority river" in the UKHab Methodology (UKHab Ltd, 2023) and in accordance with the Statutory Biodiversity Metric User Guide (DEFRA, 2024a).

### Strategic significance

3.1.6 All rivers had high strategic significance as they are listed as 'rivers and streams' under the Local Biodiversity Action Plan (LBAP) for the East Riding of Yorkshire (East Riding of Yorkshire Council, 2010).

### Riparian and in-watercourse encroachment

3.1.7 The riparian and in-watercourse encroachment of the watercourses within the ODA are provided in Appendix 3.

### 3.2 Ditch Condition Assessment

#### **Habitat Condition**

- 3.2.1 All 32 ditches were determined to be in Poor condition according to the SBM Condition Assessments, Ditch sheet (DEFRA 2024b) (Appendix 4).
- 3.2.2 Two culverts were recorded, associated with ditches D9 and D17. The two culverts are automatically assigned Poor condition as per the SBM Condition Assessments, Ditch sheet (DEFRA 2024b).

### Strategic Significance

- 3.2.3 All ditches were of high strategic significance as they are listed under drainage dyke under the Local Biodiversity Action Plan (LBAP) for the East Riding of Yorkshire (2010).
- 3.2.4 The two culverts were of low strategic significance as culverts are not listed within the East Riding of Yorkshire LBAP.

### Riparian and in-watercourse encroachment

- 3.2.5 The riparian and in-watercourse encroachment of the ditches within the ODA are provided in Appendix 5.
- 3.2.6 Encroachment does not apply to the assessment of culverts in the SBM.



# 3.3 Baseline Biodiversity Metric Calculations

- 3.3.1 The metric inputs and calculated biodiversity value of the baseline watercourse habitats are provided in the SBM (Appendix 6).
- 3.3.2 The 'watercourse' habitats generated a baseline value of 15.40 WU.



# 4. Conclusion

4.1.1 The condition score for the ditches and culverts was **Poor**. The condition score for the for the River Hull and Beverley and Barmston Drain was **Fairly Poor**. The condition score for Holderness Drain, Watercourse off Milldam Beck and Stream Dike was **Moderate**. The total baseline watercourse units were 15.40 WU for a total length of 3.83 km of watercourses.

#### References 5.

Cartographer Studios Ltd (2025) Cartographer 7.0.1. Available at: https://cartographer.io **DEFRA** The (2024a). Statutory Metric User Guide. Available at: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides (2024b). The Statutory Biodiversity Metric Calculation Tool. at: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-quides East Riding of Yorkshire Council (2010) East Riding of Yorkshire Biodiversity Action Plan Strategy Available https://fostonparishcouncil.eastriding.gov.uk/Data/Sites/8/media/fostondocuments/ERYBAP%20S trategy%20PDF\_3.0\_DR.pdf (Accessed: 25 April 2025). EEA (2019) Welcome to EUNIS, the European Nature Information System (no date) EUNIS. Available (Accessed: 06 May 2025). at: Gurnell, A., England, J., Scott, S. and Shuker, L. (2020b). A Guide to Assessing River Condition, Part of the Rivers and Streams Component of the Biodiversity Net Gain Metric. Available at: www.modularriversurvey.org/ Gurnell, A., England, J., Shuker, L. and Wharton, G. (2020a). The MoRPh Survey, Technical Reference Manual. Available at: JNCC (2019) Annex I: Natural habitat types of community interest whose conservation requires the designation of Special Areas of Conservation Document - Annex I: natural habitat types of community interest whose conservation requires the designation of special areas of conservation. Available at: (Accessed: 06 May 2025). QGIS.org (2025). QGIS Geographic Information System. QGIS Association. http://www.qgis.org UKHab Ltd (2023). UK Habitat Classification Version 2.0. Available at UKTAG (2003) Guidance on typology for lakes for the UK (draft)

Available

(Accessed: 06 May 2025).

**Figure 1: Location Plan** 





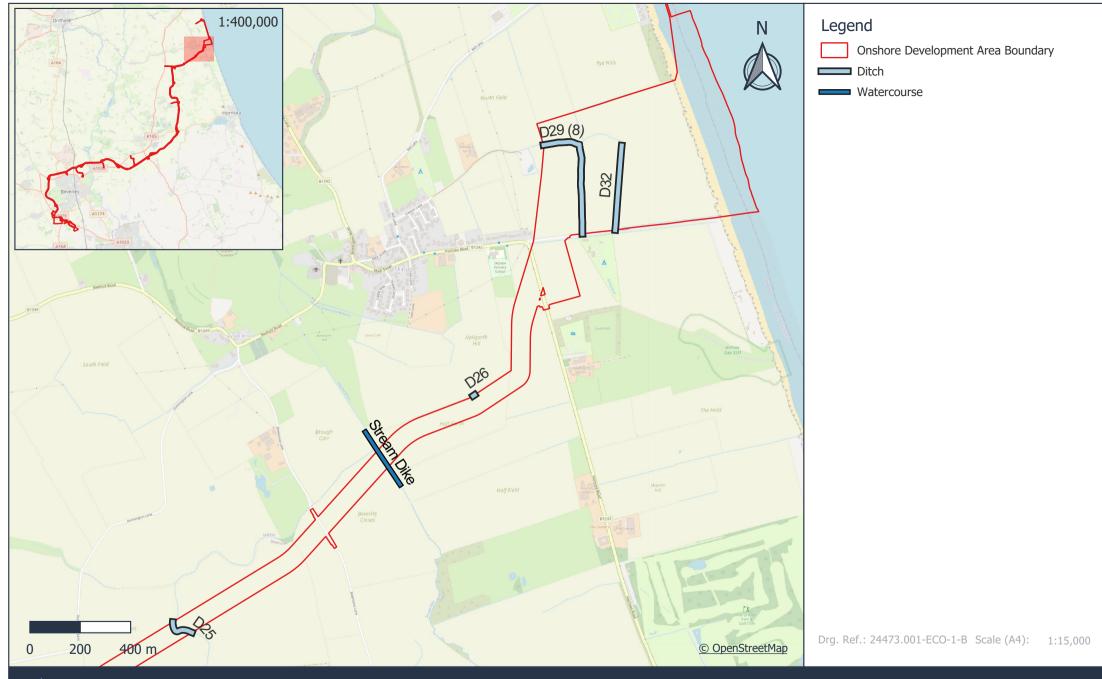
Legend

Onshore Development Area Boundary

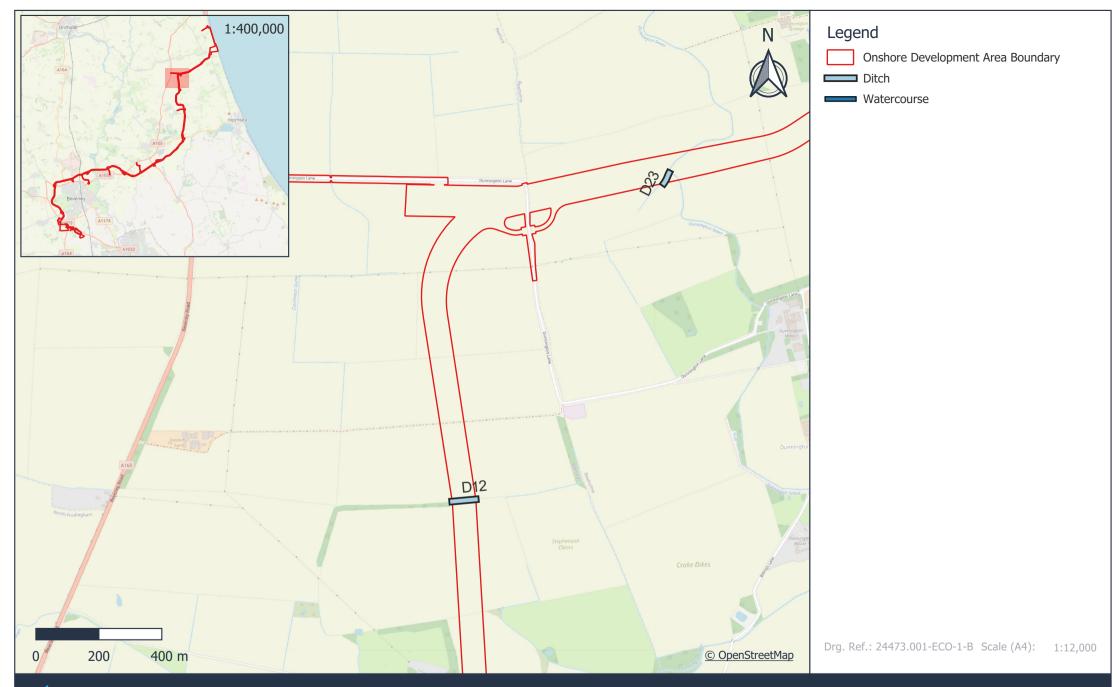
Revision	Date	Drawn by	Checked by
Α	30/04/2025	GT	RJ
В	07/05/2025	GT	EH

Drg. Ref.: 24473.001-ECO-1-B Scale (A4): 1:140,000

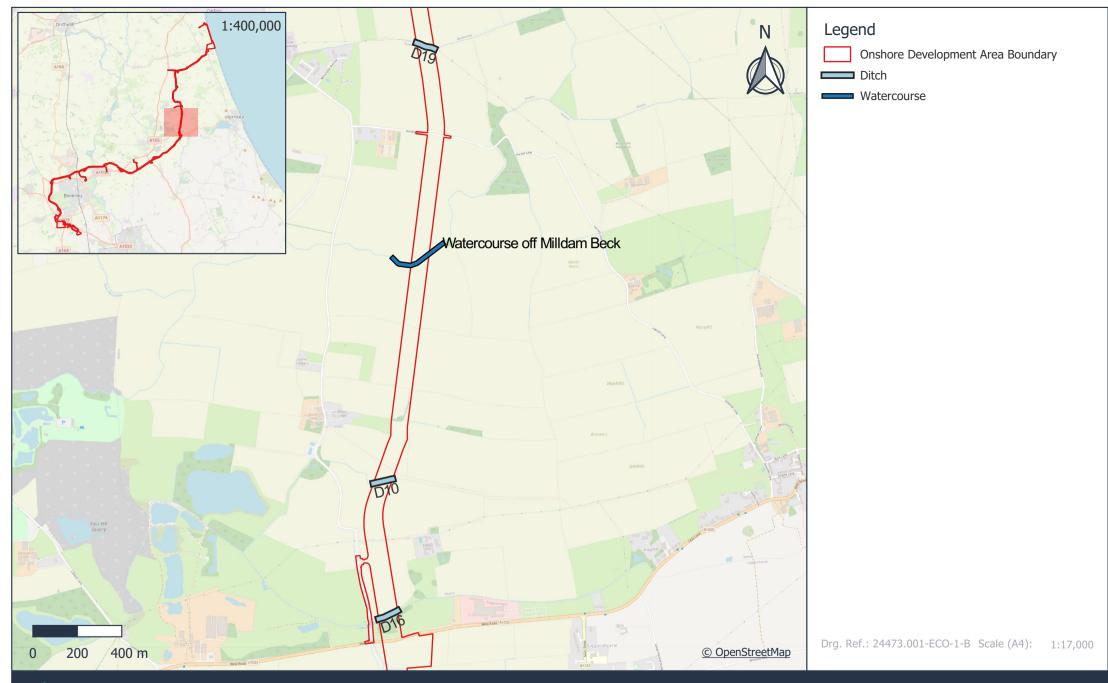




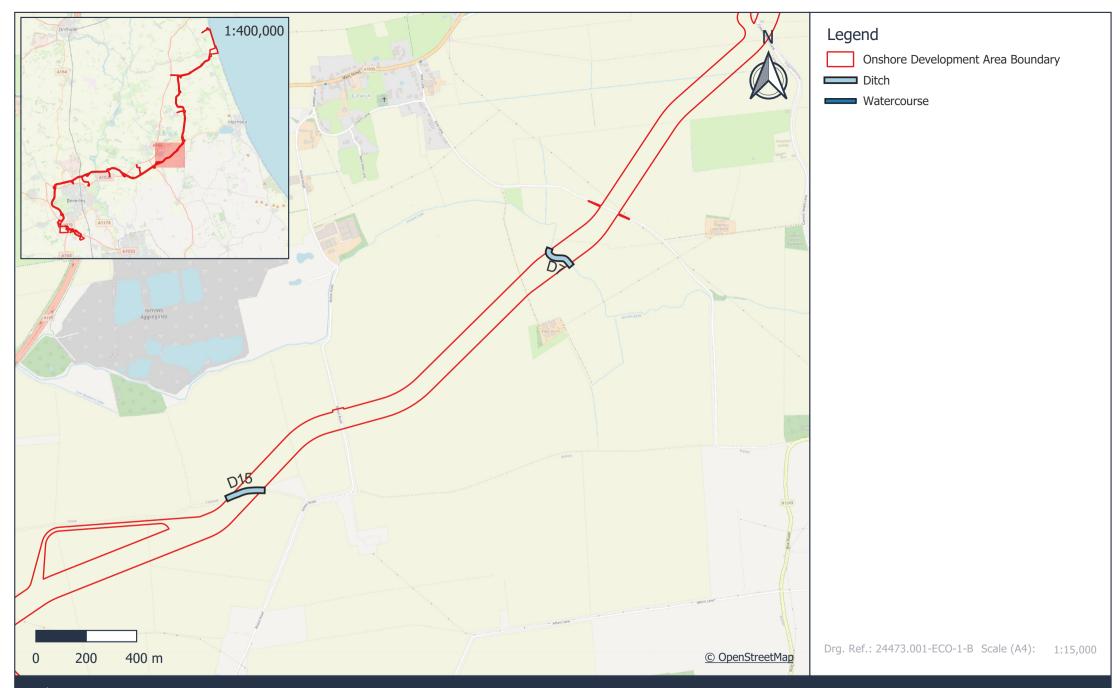




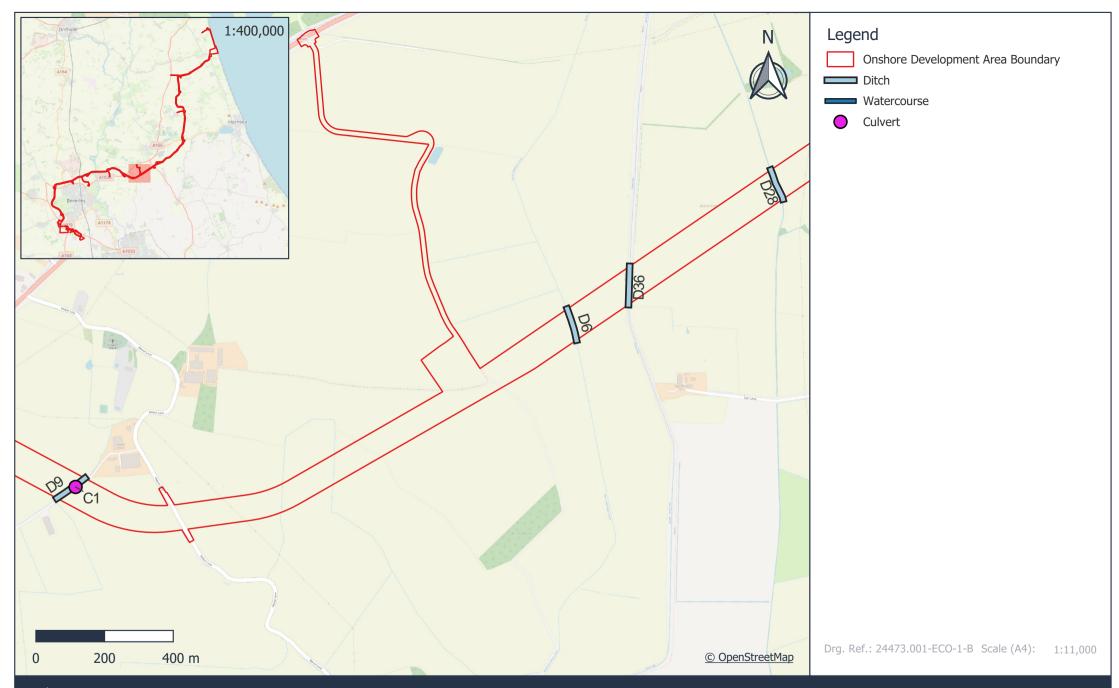




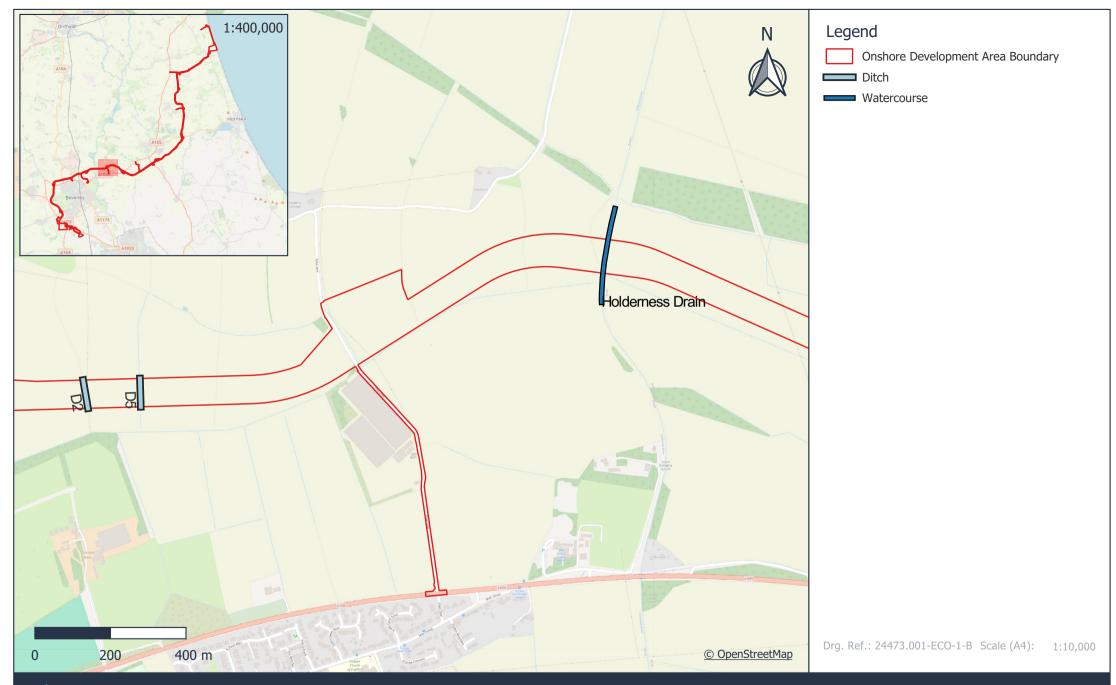




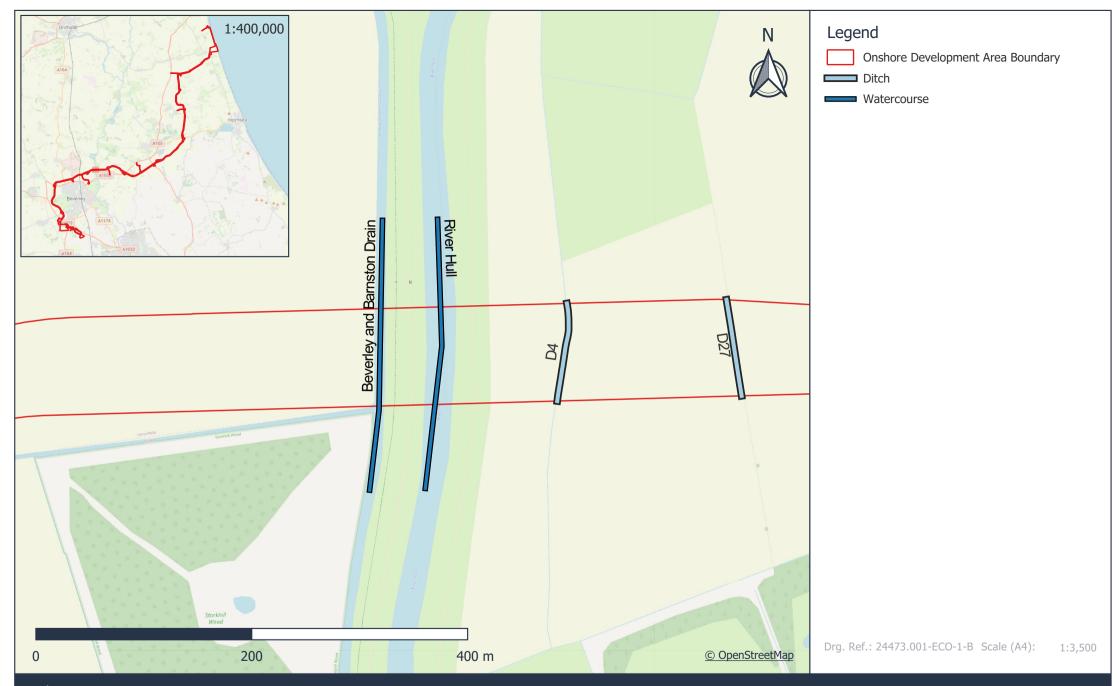




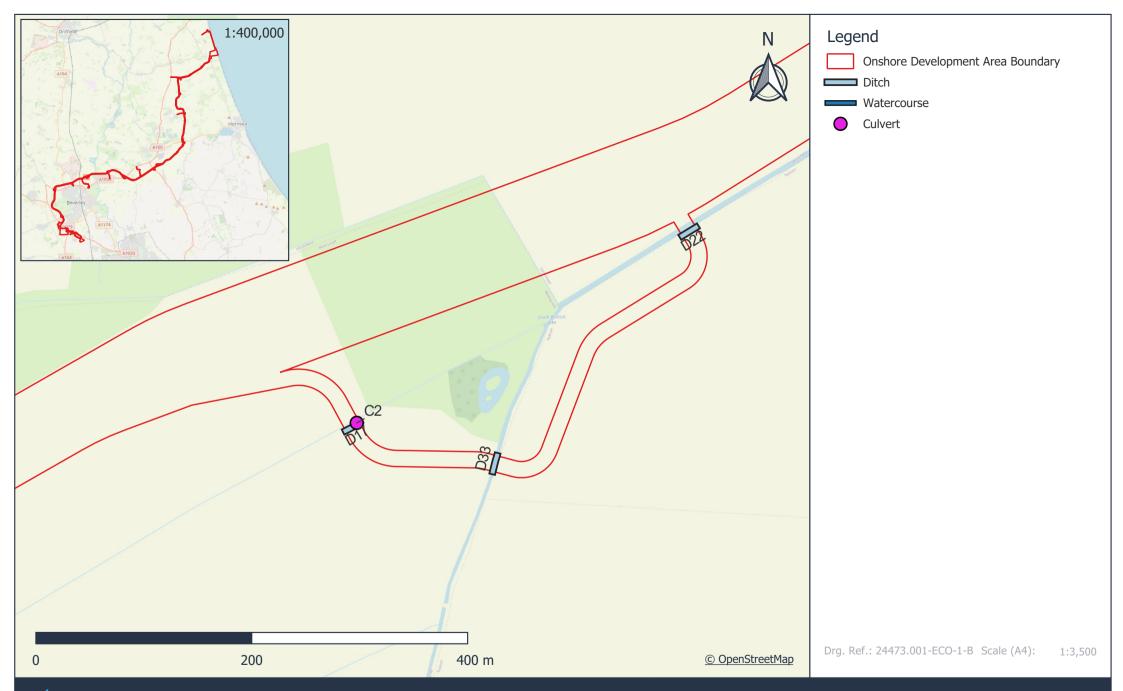




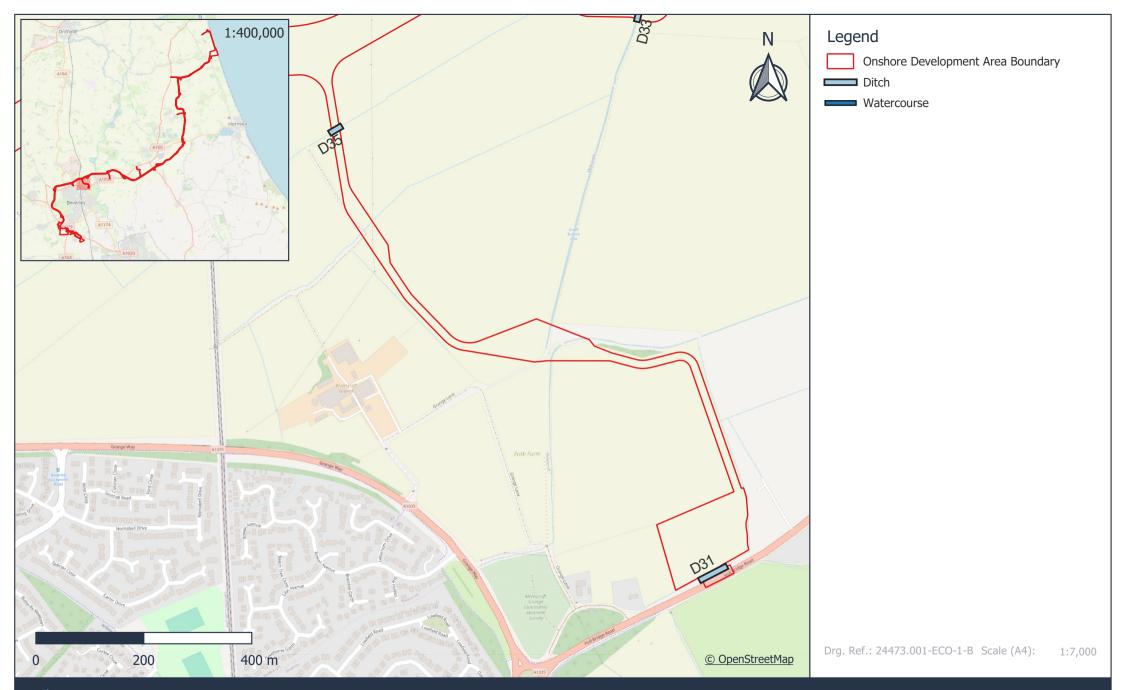




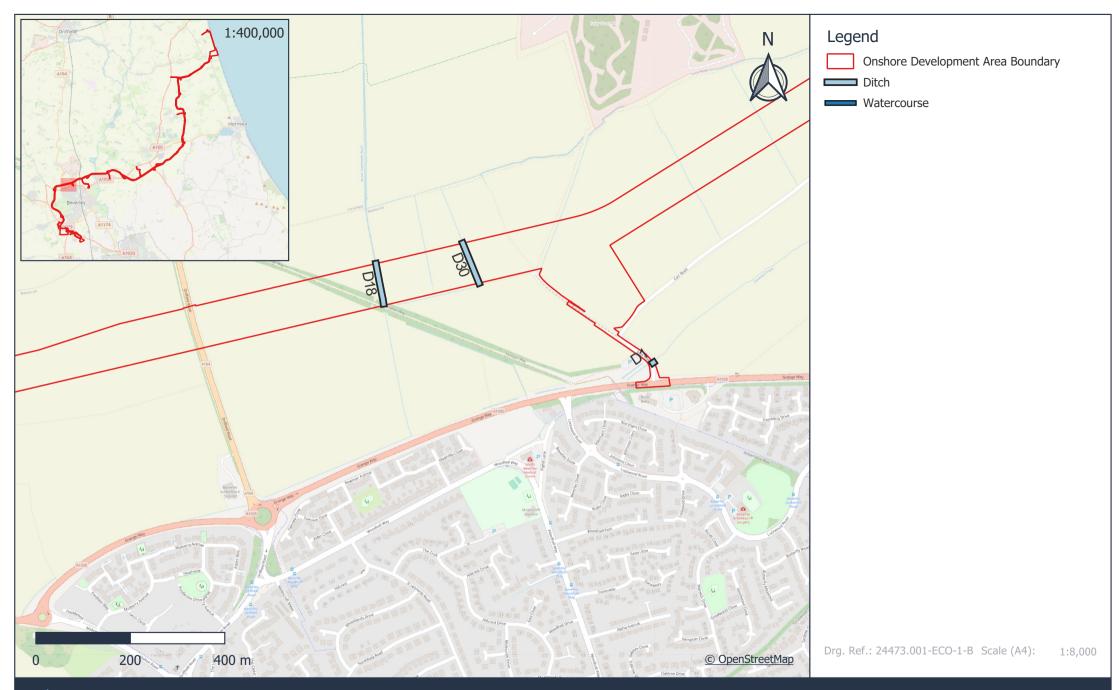




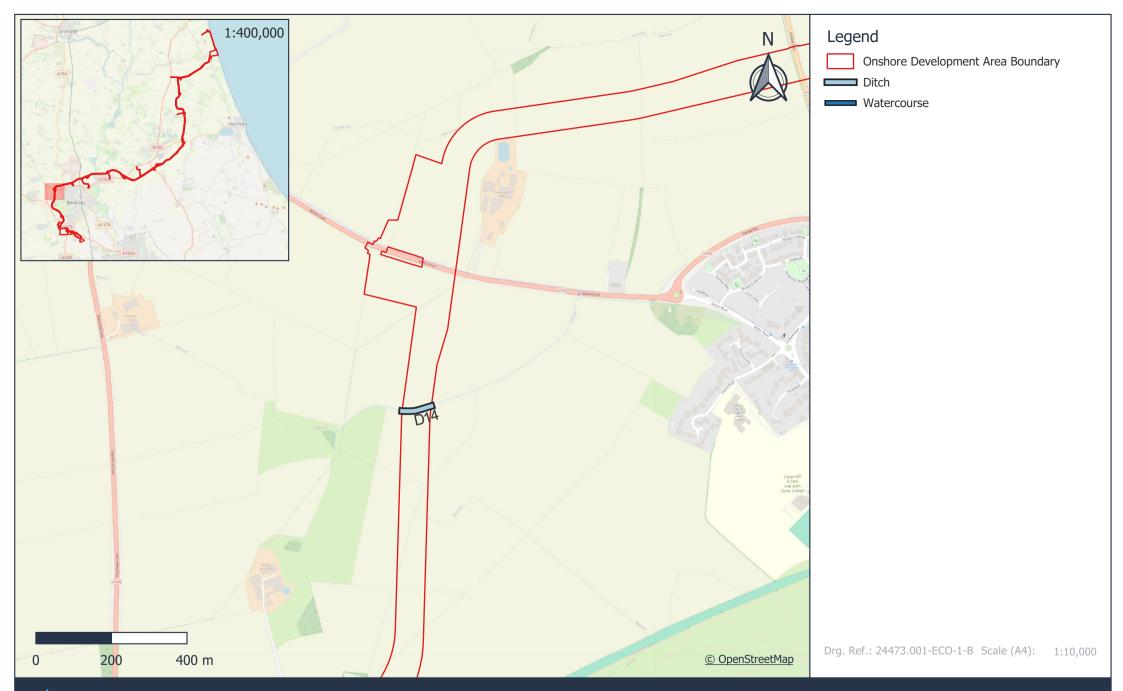




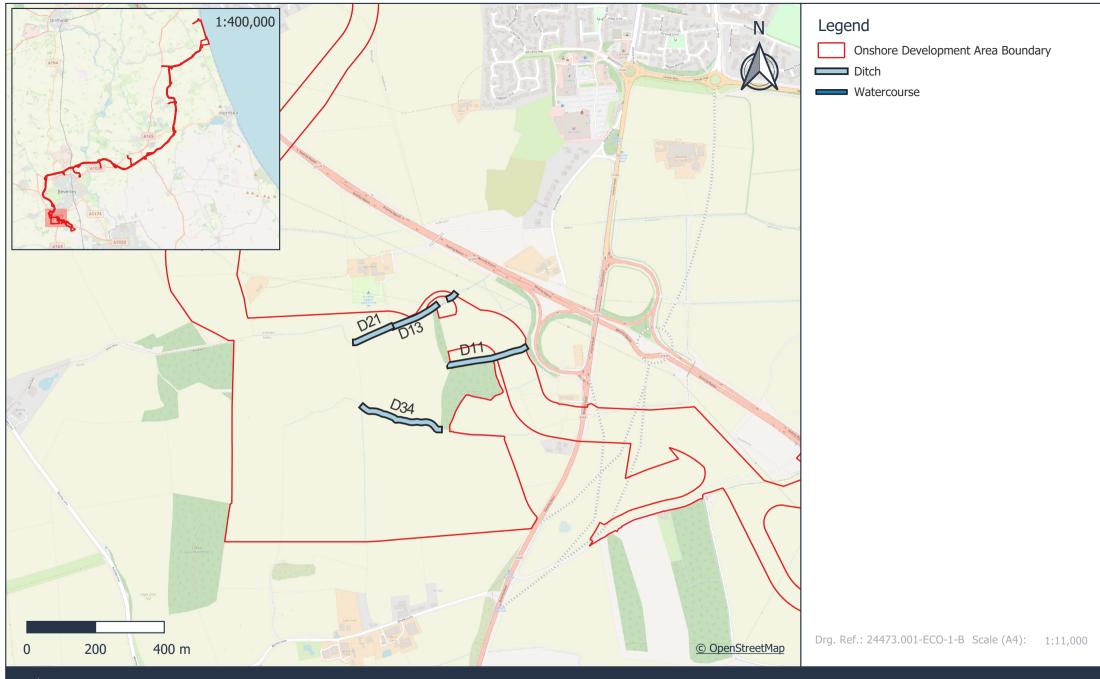














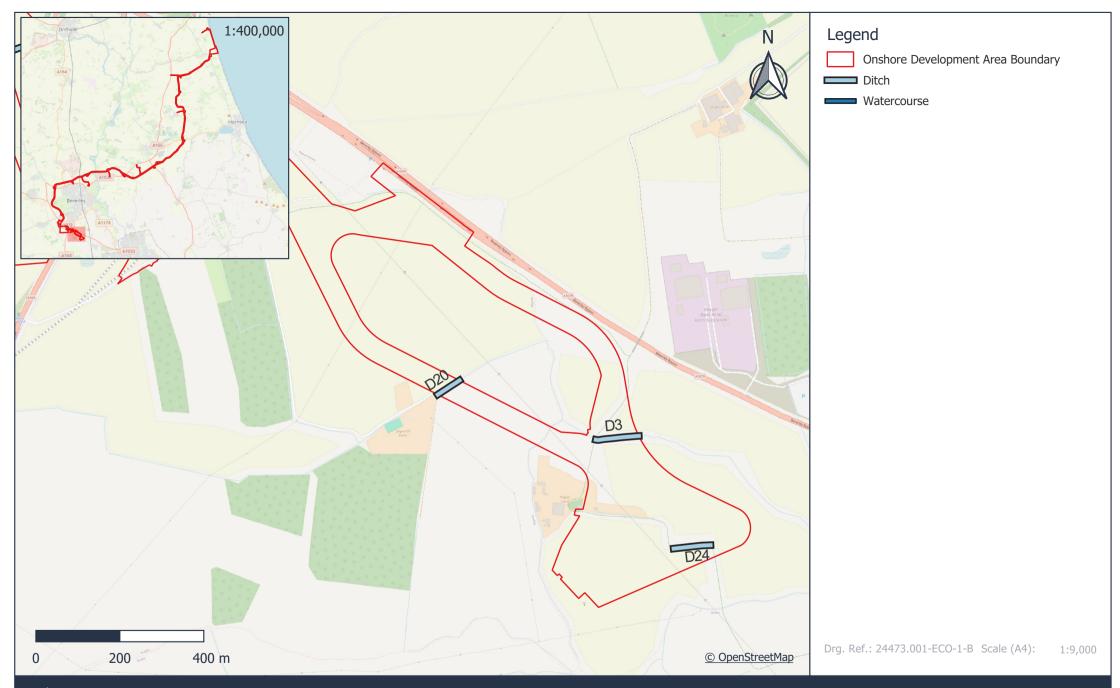
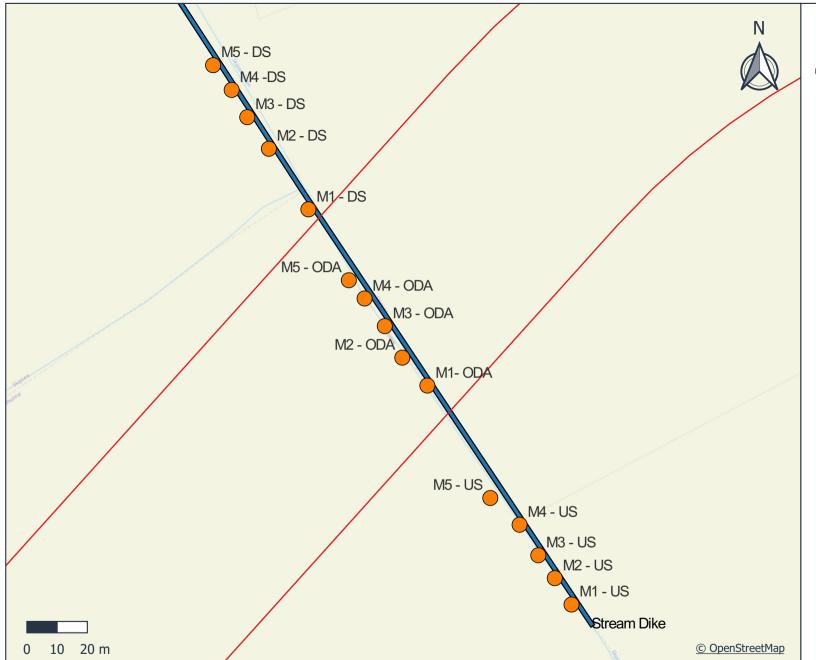




Figure 2: MoRPH Survey Map





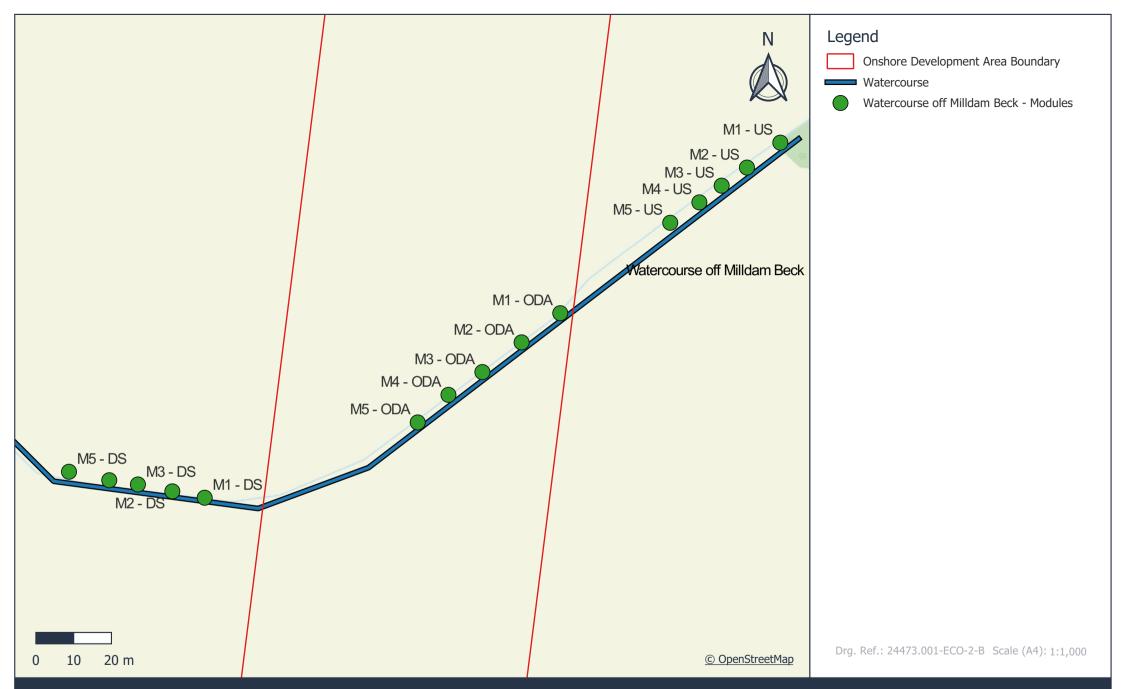
Legena	
Onshore Development Area Boundary	

Watercourse
Stream Dike - Modules

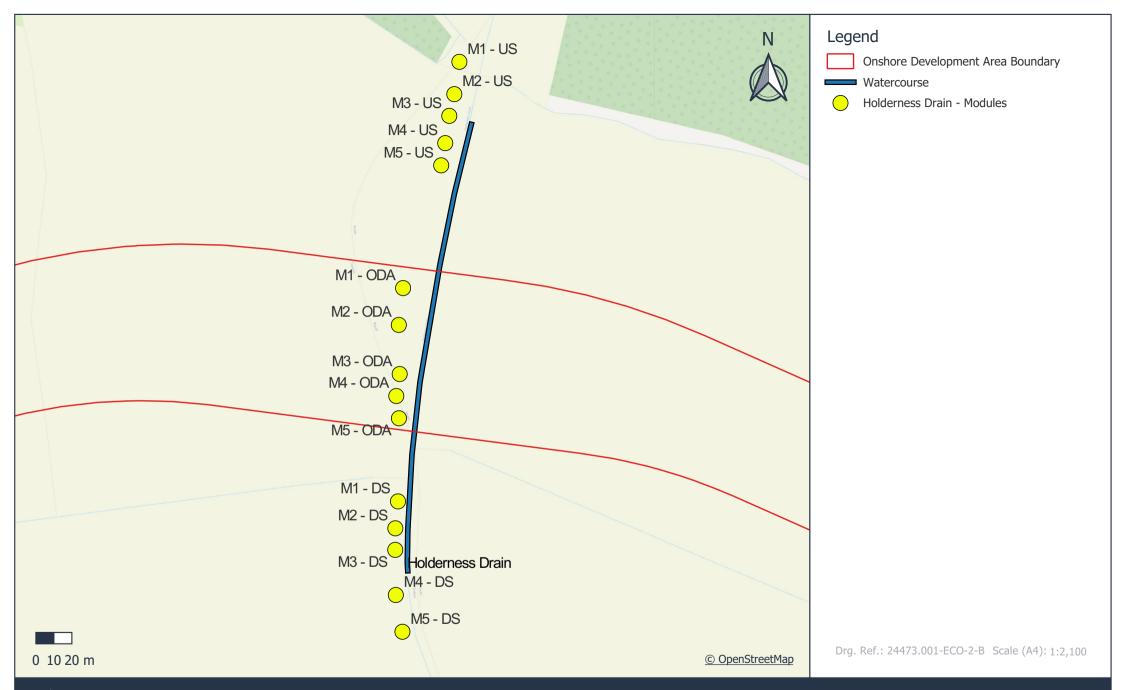
Revision	Date	Drawn by	Checked by
Α	30/04/2025	GT	RJ
В	07/05/2025	GT	EH

Drg. Ref.: 24473.001-ECO-2-B Scale (A4): 1:1,250











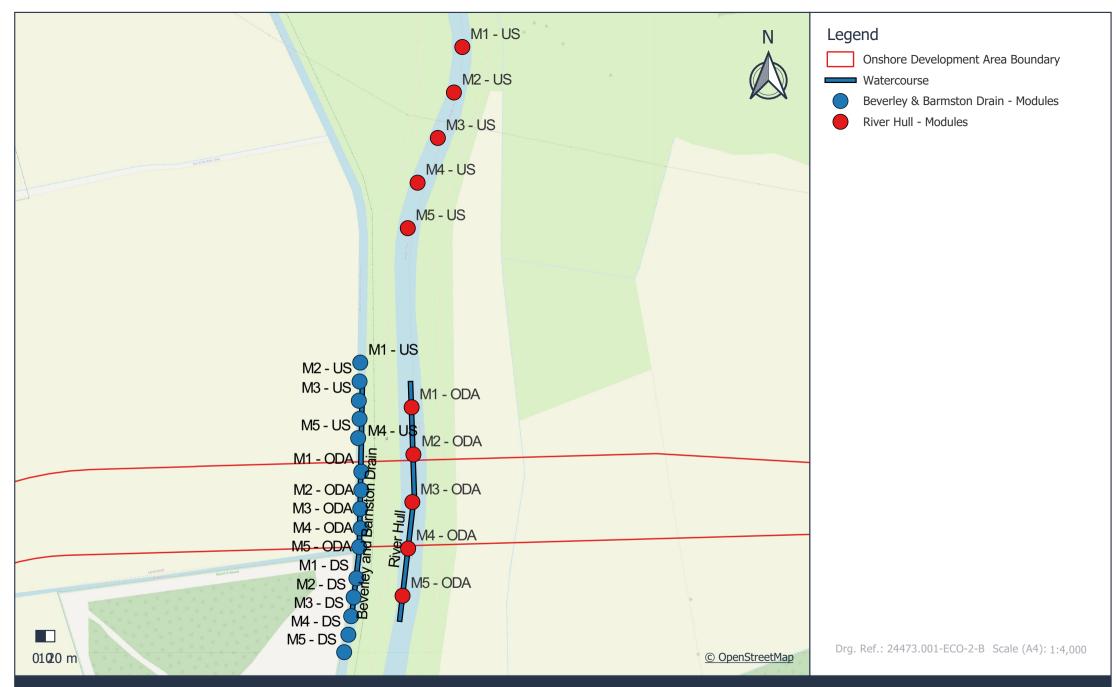
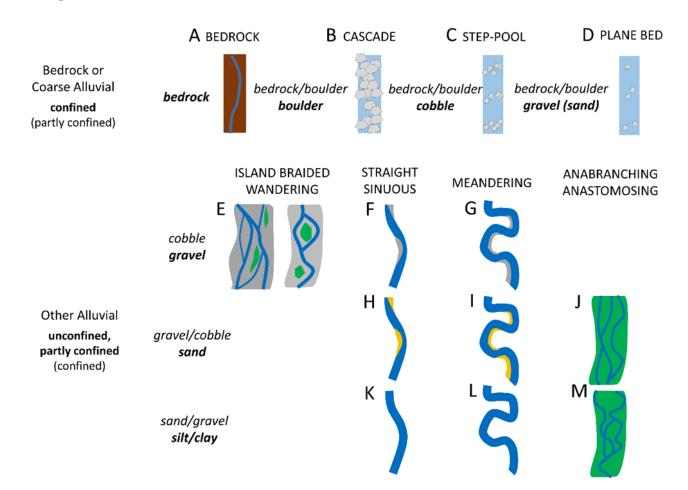




Figure 3: Thirteen near-natural river types that may be encountered in England (extracted from Gurnell et al., 2020b)



## Figure 4: The decision tree used by the information system to discriminate river types using indicators A1 to A8

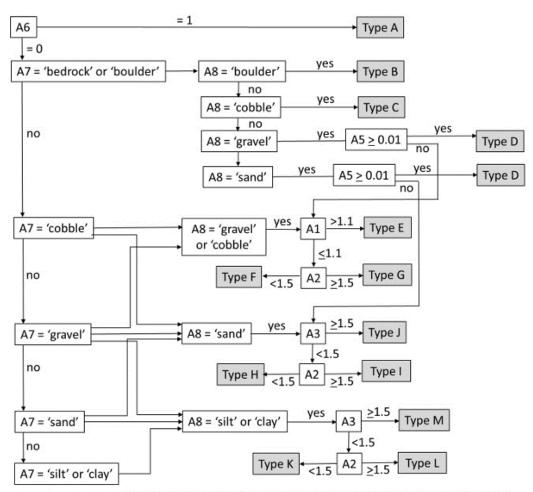
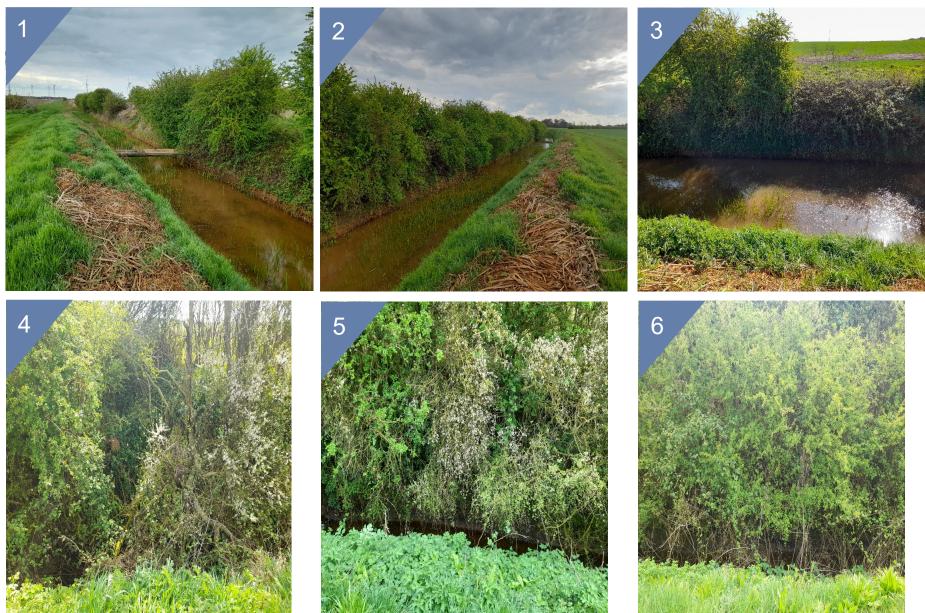


Figure 3: The decision tree used by the information system to discriminate river types using indicators A1 to A8.

## **Appendix 1: Photographs**

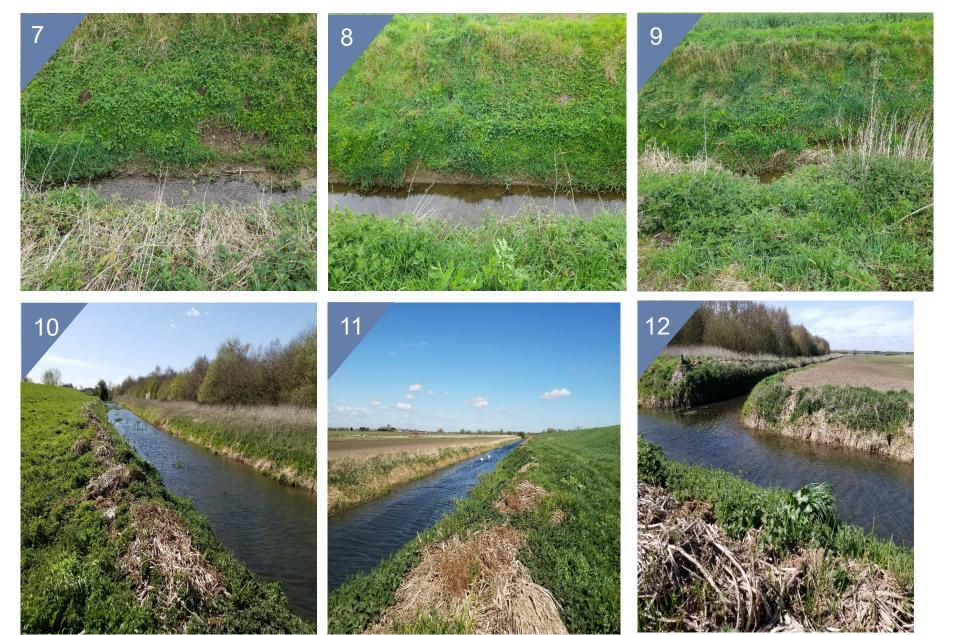








24473 Dogger Bank South – River Condition Assessment and Ditch Condition Assessment report

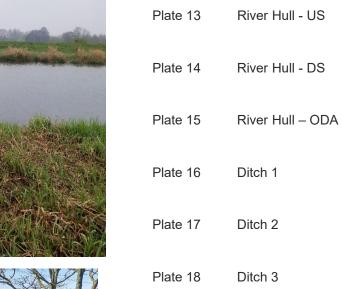






24473 Dogger Bank South – River Condition Assessment and Ditch Condition Assessment report





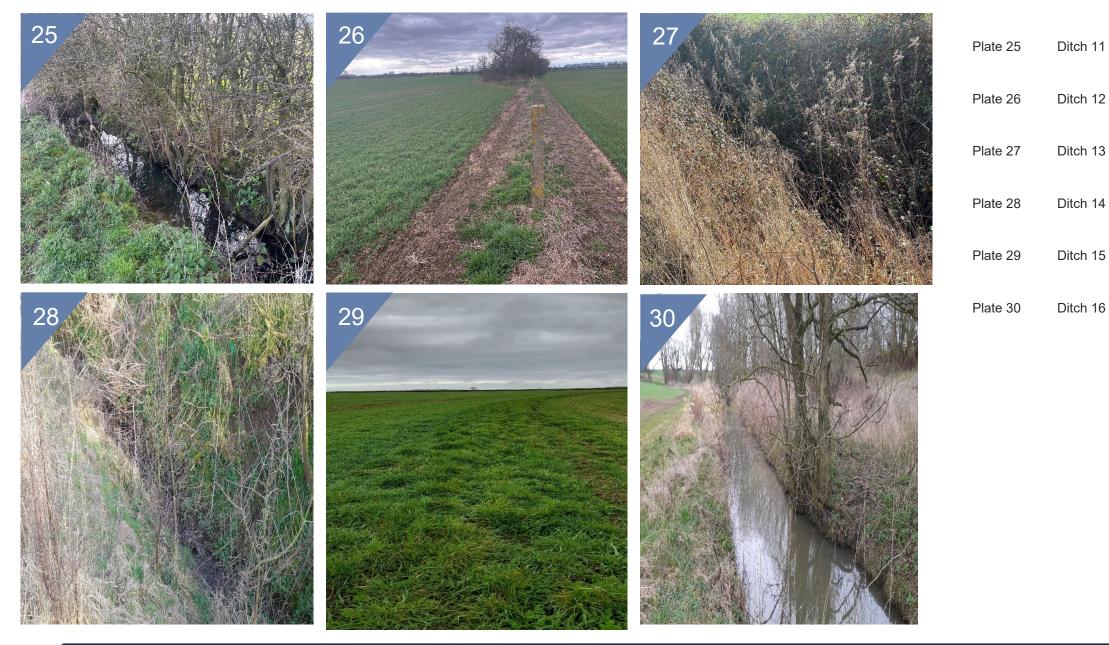


24473 Dogger Bank South – River Condition Assessment and Ditch Condition Assessment report





24473 Dogger Bank South – River Condition Assessment and Ditch Condition Assessment report





24473 Dogger Bank South – River Condition Assessment and Ditch Condition Assessment report

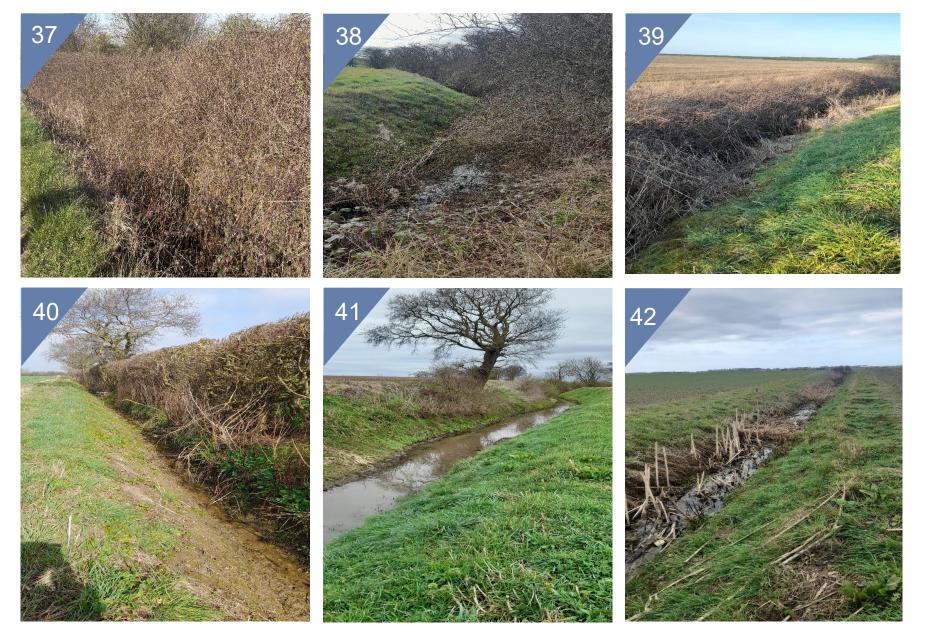
5





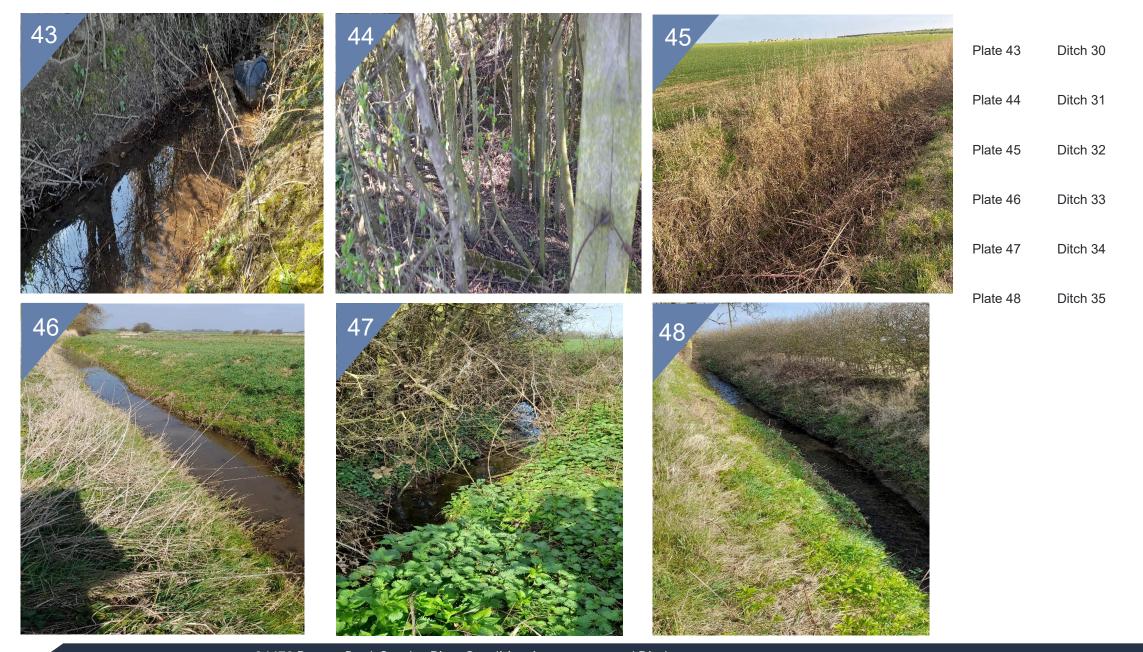


6











24473 Dogger Bank South – River Condition Assessment and Ditch Condition Assessment report



#### **Appendix 2: River condition indicators**

Table A2. River condition indicators from MoRPh5 field surveys (Gurnell et al., 2020b)

(NNIPS = Non-Native Invasive Plant Species, <u>Positive Indicators Underlined</u>, *Negative Indicators Italics*)

Location	Name	Example
Bank top	Vegetation structure	
	Tree feature richness	Leaning and J-shaped trees
	Water-related features	Ponds, side channels, wetland
	NNIPS cover	
	Managed ground cover	Footpaths, transport infrastructure, buildings, landfill, farmland, orchards, parks
Bank face	Riparian vegetation structure	
	Tree feature richness	Leaning and J-shaped trees
	Natural bank profile extent	
	Natural bank profile richness	
	Natural bank material richness	
	Bare sediment extent	
	Artificial bank profile extent	
	Reinforcement extent	
	Reinforcement material severity	
	NNIPS cover	
Channel – water margin	Aquatic vegetation extent	
	Aquatic morphotype richness	
	Physical feature extent	Side bars, berms, benches, cliffs
	Physical feature richness	
	Artificial features	Pipes/outfalls, jetties
Channel bed	Aquatic morphotype richness	
	Tree features richness	Trees growing in channel
	Hydraulic features richness	

Location	Name	Example
	Natural features extent	Mid channel bars, islands, cascades, pools, riffles
	Natural features richness	
	Bed material richness	
	Bed siltation	
	Reinforcement extent	
	Reinforcement severity	
	Artificial features severity	Large trash, weirs, bridge piers
	NNIPS extent	
	Filamentous algae extent	

# Appendix 3: Results of river riparian and in-watercourse encroachment assessment

River name	Sub reach	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment		
River Hull	Upstream	Major/Major	Heavy poaching from livestock and is regularly used and managed footpaths. The right bank is within 0 – 4 m of bank top over and the left bank has intensive grass management.	Major	More than 20% of the bank length was an engineered bank revetment.		
	ODA	Major/Major	Due to intensively/regularly managed and mown grassland within 0 – 4 m of riverbank on both banks.	Major	More than 20% of the bank length was an engineered bank revetment.		
	Upstream	Major/Major	Due to arable agriculture use 0 – 4 m from bank top and the use covers >25 % of total riparian zone area on both banks.	Major	More than 20% of the bank length was an engineered bank revetment.		
Beverley and Barmston Drain	ODA	Major/Major	Due to arable agriculture use 0 – 4 m from bank top and the use covers >25 % of total riparian zone area on both banks.	Major	More than 20% of the bank length was an engineered bank revetment.		
	Downstream	Major/Major	Due to intensively/regularly managed and mown grassland within 0 – 4 m of riverbank on both banks.	Major	More than 20% of the bank length was an engineered bank revetment.		
Holderness Drain	Upstream	Major/Major	Any encroachment 0 m to 4 m from bank top or	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is		

River name	Sub reach	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
			where encroachment occupies greater than 25% of the total riparian zone area.		no encroachment into the channel.
	ODA	Major/Major	Any encroachment 0 m to 4 m from bank top  or  where encroachment occupies greater than 25% of the total riparian zone area.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel
	Downstream	Major/Major	Any encroachment 0 m to 4 m from bank top  or  where encroachment occupies greater than 25% of the total riparian zone area.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel
Stream Dike	Upstream	Major/Major	Any encroachment 0 m to 4 m from bank top  or  where encroachment occupies greater than 25% of the total riparian zone area	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel
Stream Dike	ODA	Major/Major	Any encroachment 0 m to 4 m from bank top  or  where encroachment occupies greater than 25% of the total riparian zone area.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel



River name	Sub reach	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment	
	Downstream	Major/Major	Any encroachment 0 m to 4 m from bank top  or  where encroachment occupies greater than 25% of the total riparian zone area.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel	
	Upstream	Moderate /Moderate	Where the footprint of encroachment (e.g. arable land) occupies between 10% to 25% of the riparian zone area 2 m to 5 m from bank top.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel.	
Watercourse off Milldam Beck	ODA	Moderate /Moderate	Where the footprint of encroachment (e.g. arable land) occupies between 10% to 25% of the riparian zone area 2 m to 5 m from bank top.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel.	
	Downstream	Moderate /Moderate	Where the footprint of encroachment (e.g. arable land) occupies between 10% to 25% of the riparian zone area 2 m to 5 m from bank top.	No encroachment	Less than 5% of the bank length comprises an engineered bank revetment and there is no encroachment into the channel.	

### **Appendix 4: Ditch Condition Assessment Criteria sheet**

Condition		Ditch ID																														
Assessment Criteria	1	2	3	4	5	6	7	9	10	11	13	14	16	17	18	19	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
А	Υ	Υ	Ν	Ν	Υ	Ν	Υ	Ν	Υ	Ν	Υ	Ν	N	Υ	Υ	Υ	N	Υ	Υ	Υ	Υ	Υ	Υ	N	N	Υ	N	Ν	N	Υ	Υ	Ν
В	Ν	Ν	Ν	Ν	N	Ν	Ν	Ν	Ν	N	N	N	N	Ν	N	N	N	N	N	N	N	N	N	N	N	N	N	Ν	N	N	Ν	Ν
С	Υ	Ν	Υ	Ν	Υ	Υ	Υ	Υ	Ν	Υ	Υ	Υ	Υ	Υ	Υ	Ν	Υ	Υ	Υ	Υ	Υ	Ν	N	Υ	N	Υ	Υ	Υ	Υ	N	Υ	Υ
D	Ν	Ν	Ν	Ν	N	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν	N	Υ	Ν	Ν	Ν	N	N	Ν	N	N	N	Ν	Ν	Ν	Ν	Ν	Ν	Ν
Е	Υ	Ν	Ζ	Ν	N	Ν	Ν	Ν	Z	Υ	Υ	Z	Υ	Υ	Υ	Ν	Υ	Ν	Z	Υ	N	Z	N	Ν	Υ	N	Ν	Z	Ν	Υ	Z	Ν
F	Ζ	Ν	Ζ	Υ	N	Υ	Ν	Ν	Z	Ν	Ν	Z	Υ	Ν	N	Ν	N	Υ	Z	N	N	Z	N	Ν	Ν	N	Ν	Υ	Ν	Ν	Z	Υ
G	Ν	Υ	Ν	Υ	Ν	Υ	Υ	Υ	Ν	Ν	Υ	Ν	Υ	Ν	N	Υ	Ν	Ν	Υ	N	N	Ν	N	Υ	Υ	N	Ν	Υ	Υ	Ν	Ν	Υ
Н	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
No. of criteria passed	4	3	2	3	3	4	4	3	2	3	5	2	5	4	4	4	3	4	4	4	3	2	2	3	3	3	2	4	3	3	3	4
Condition Score	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р

# Appendix 5: Results of ditch riparian and in-watercourse encroachment assessment

ID	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
D1	Major/Major	Major riparian encroachment due to a road 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	No encroachment less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D2	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D3	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D4	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D5	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D6	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	Minor	5% to 20% of the bank length is an engineered bank revetment.

ID	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
D7	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D9	Major/Major	Major riparian encroachment due to a road 0 - 2 m from bank top and arable agriculture use covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D10	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D11	Moderate/ No Encroachment	Moderate riparian encroachment due to arable agriculture use 2 - 5 m from northern bank top and covering >10 % and <25% of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D13	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D14	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D16	Moderate/ No Encroachment	Moderate riparian encroachment due to arable agriculture use 2 -	No encroachment	Less than 5% of the bank length is an engineered bank revetment and



ID	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
		5 m from northern bank top and covering >10 % and <25% of total riparian zone.		there is no encroachment into the channel
D17	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D18	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D19	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D21	Major/Major	Major riparian encroachment due to managed grassland and arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D22	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D23	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel



ID	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
D24	Major/Moderate	Major riparian encroachment due to a road 0 - 2 m from southern bank top and moderate riparian encroachment due to arable agriculture use 2 - 5m from northern bank top and covering >10 % and <25% of total riparian zone	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D25	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D26	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D27	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D28	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D29	Major/Major	Major riparian encroachment due to a road 0 - 2 m from bank top and arable agriculture use covering > 25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel



ID	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
D30	Major/Moderate	Major riparian encroachment due to arable agriculture use 0 - 2 m from western bank top and covering >25 % of total riparian zone and moderate riparian encroachment due to arable agriculture use 2 - 5m from eastern bank top and covering >10 % and <25% of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D31	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from northern bank top and covering >25 % of total riparian zone and a road and managed grassland use 0 - 2m from southern bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D32	Major/Major	Major riparian encroachment due to a road 0 - 2 m from bank top and arable agriculture use covering > 25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D33	Major/Major	Major riparian encroachment due to managed grassland 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D34	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel



ID	Riparian encroachment	Reason for assessment	Watercourse encroachment	Reason for assessment
D35	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	No encroachment	Less than 5% of the bank length is an engineered bank revetment and there is no encroachment into the channel
D36	Major/Major	Major riparian encroachment due to arable agriculture use 0 - 2 m from bank top and covering >25 % of total riparian zone.	Minor	5% to 20% of the bank length is an engineered bank revetment;

### **Appendix 6: Statutory Biodiversity Metric**

The Statutory Biodiversity Metric is provided as a separate Excel document.



RWE Renewables UK Dogger Bank South (West) Limited

RWE Renewables UK Dogger Bank South (East) Limited

Windmill Hill Business Park Whitehill Way Swindon Wiltshire, SN5 6PB