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1. INTRODUCTION

1.1 Introduction

- 1.1.1 This Biodiversity Net Gain Assessment has been prepared by Wardell Armstrong (WA) on behalf of Beacon Fen Energy Park (hereafter referred to as the 'Applicant'). The assessment has been undertaken on land east of Ewerby Thorpe and west of Car Dyke, comprising most of Ewerby Fen down to the road adjacent to Howell Fen, hereafter referred to as the 'Solar Array Area', in addition to land west of this (hereafter referred to as the 'Bespoke Access Corridor', as well as land to the south and east (hereafter referred to as the 'Cable Route Corridor). The assessment has been conducted to inform the development of Beacon Fen Energy Park at the Site (hereinafter referred to as the 'Proposed Development').
- 1.1.2 BNG is an approach that seeks to deliver measurable net gains in biodiversity through the planning process. It is not yet mandatory for NSIPs determined under the Planning Act 2008, such as Beacon Fen Energy Park. BNG is measured using a biodiversity metric published by DEFRA (the Statutory Metric, July 2024). The metric calculations compare the sites baseline biodiversity unit value with that following the construction of the Proposed Development. These calculations consider the level of proposed habitat loss, retention, enhancement and/or creation occurring across three distinct habitat groups: area-based habitats, hedgerows and watercourses.
- 1.1.3 The successful delivery of BNG relies upon the correct application of the 'mitigation hierarchy'. This approach prioritises preventative actions, including the avoidance and minimisation of developmental impacts, over restorative actions, such as the compensation or offsetting of habitat loss. BNG strategies for proposed developments also need to satisfy the BNG Hierarchy, the metrics habitat trading rules and be seen to meet peer accepted best practice principles.

1.2 Proposed Development

- 1.2.1 The proposals comprise of above ground solar photovoltaic (PV), and Battery Energy Storage System (BESS) infrastructure connected by a cable route of around 13 km length to the National Grid Bicker Fen 400 kV substation ('Bicker Fen substation') (the 'Proposed Development').
- 1.2.2 The Proposed Development will be located within the DCO Order Limits ('Order Limits') as shown on Figure 1.2 Site Boundary Plan (Document Ref: 6.4 ES Vol.3, 6.4.2) and comprises the Solar Array Area, the Bespoke Access Corridor and the Cable Route Corridor which are defined as follows:
 - Solar Array Area The land within the Order Limits within which the Solar PV and BESS (and their ancillary infrastructure) will be located.
 - Cable Route Corridor The land within the Order Limits within which the Cable Route will be located.
 - Cable Route The physical development, i.e. the cable itself, to be located within the Cable Route Corridor.



- Bespoke Access Corridor The land within the Order Limits within which the Bespoke Access Road will be located.
- Bespoke Access Road The physical development i.e. the road itself, to be located within the Bespoke Access Corridor.

1.3 Legislation, Policy, and Guidance

DEFRA 25-year environment plan

1.3.1 In England, DEFRA's 25-year environment plan (DEFRA 2018) (reviewed in the Environmental Improvement Plan (DEFRA 2023)) forms the key policy driver for both terrestrial and marine biodiversity net gain. The plan includes a commitment to embed environmental net gain into policy and legislation.

The Environment Act (2021)

- 1.3.2 The Environment Act (2021) includes provisions for the protection and improvement of the natural environment. The Act seeks to deliver this through development by making BNG a mandatory requirement within the planning system. Developments within the scope of the Town and Country Planning Act 1990, with some exemptions, have needed to demonstrate a minimum 10% net gain since early 2024, whilst it is anticipated that developments that qualify as Nationally Significant Infrastructure Projects (NSIPs) under the Planning Act 2008 will need to demonstrate a minimum 10% net gain if the DCO application is lodged after November 2025.
- 1.3.3 No BNG Statement has yet been published in draft or final form to guide how BNG is to be accommodated within individual DCOs or the application and examination process.
- 1.3.4 Under the Act, demonstrating how a development will deliver BNG is calculated by comparing the baseline biodiversity unit value of a site with the value of that site following development, using the Act's adopted Statutory Metric.
- 1.3.5 Statutory BNG is not being delivered by the Proposed Development, since it is not formally or statutorily part of NSIP consenting. The Applicant is voluntarily incorporating the substantive elements of the current BNG regime that is statutory in relation to Town and Country Planning Act 1990 projects into its application, in order to meet or exceed policy and consultee expectations. The Applicant is not proposing to adopt every prerequisite or procedural element of BNG. For example, the Statutory Metric (version issued July 2024) will be used by the Applicant at all stages of delivery. References in this document to 'statutory' BNG and metric and so forth should be read in this context.

National Energy Policy

1.3.6 The Overarching National Energy Policy Statement for Energy (EN-1) (DENZ 2023a) states that: Paragraph 4.6.2 "Biodiversity net gain is an essential component of environmental net gain. Projects in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain."



- 1.3.7 It provides further details in Paragraph 4.6.7 "In England applicants for onshore elements of any development are encouraged to use the latest version of the biodiversity metric to calculate their biodiversity baseline and present planned biodiversity net gain outcomes. This calculation data should be presented in full as part of their application."
- 1.3.8 This is re-iterated in the National Policy Statement for Renewable Energy Infrastructure (EN-3) (DENZ 2023b) Paragraph 2.10.128 "In England, proposed enhancements should take account of the above factors and as set out in Sections 4.6 and 5.5 of EN-1 aim to achieve environmental and biodiversity net gain in line with the ambition set out in the Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere."

National Planning Policy Framework

1.3.9 The National Planning Policy Framework (NPPF, MHCLG 2024), makes general provisions for the delivery of BNG. The NPPF states in paragraph 192 that "planning policies and decisions should...identify and pursue opportunities for securing measurable net gains for biodiversity".

Local Planning Policy

- 1.3.10 The Site falls under planning policy produced by Central Lincolnshire in their Local Plan (2023), and South East Lincolnshire Local Plan (2011).
- 1.3.11 For Central Lincolnshire, Policy 61 of the Local Plan states "Biodiversity net gain should be provided on-site wherever possible. Off-site measures will only be considered where it can be demonstrated that, after following the mitigation hierarchy, all reasonable opportunities to achieve measurable net gains onsite have been exhausted or where greater gains can be delivered off-site where the improvements can be demonstrated to be deliverable and are consistent with the Local Nature Recovery Strategy"
- 1.3.12 The South East Lincolnshire Policy 28 of the Local Plan states "A high quality, comprehensive ecological network of interconnected designated sites, sites of nature conservation importance and wildlife-friendly greenspace will be achieved by protecting, enhancing and managing natural assets:
- 1.3.13 Addressing gaps in the ecological network:
 - a. by ensuring that all development proposals shall provide an overall net gain in biodiversity, by:
 - i. protecting the biodiversity value of land, buildings and trees (including veteran trees) minimising the fragmentation of habitats;
 - ii. maximising the opportunities for restoration, enhancement and connection of natural habitats and species of principal importance;
 - iii. incorporating beneficial biodiversity conservation features on buildings, where appropriate; and maximising opportunities to enhance green infrastructure and ecological corridors, including water space:"

BNG Guidance

1.3.14 The following publications have also been used to inform the BNG assessment:



Guidance: Statutory Biodiversity Metric Tools and Guides (DEFRA 2024a)

1.4 Biodiversity Net Gain Target

1.4.1 The Proposed Development will aim to deliver a BNG uplift of at least 30 % in habitat area, and 10 % in hedgerow and watercourse units. Delivery of 30 % of BNG for habitat areas and 10% of BNG for hedgerow and watercourse, as a minimum, is secured through a requirement in Schedule 2 to the **Draft DCO** (Document Ref: 3.1). The relevant requirement specifies that "No part of the authorised development may commence until a biodiversity net gain strategy has been submitted to and approved by the relevant planning authority, in consultation with the relevant statutory nature conservation body. The biodiversity net gain strategy must be substantially in accordance with the outline landscape and ecological management plan and must be implemented as approved and maintained throughout the operation of the relevant part of the authorised development to which the plan relates." This report has been prepared so that the level of BNG that the Proposed Development can be expected to deliver can be understood at this stage of the consenting process and to inform the preparation of the Outline Landscape and Ecological Management Plan (OLEMP) (Document Ref: 6.3 ES Vol 2, 6.3.19).



2. METHODOLOGY AND STRATEGIC APPROACH

2.1 Statutory Biodiversity Metric

- 2.1.1 The BNG calculations presented in this report has been undertaken using DEFRA's current BNG metric, the Statutory Metric updated in July 2024.
- 2.1.2 A full description of the metric methodology is provided in the Statutory Biodiversity Metric: User Guide Last updated July 2024.
- 2.1.3 The Statutory Metric calculates separate outputs for the following unit types:
 - Habitat units, measured in hectares (ha)
 - Hedgerow units, measured in kilometres (km), and
 - Watercourse units, including ditches and canals, measured in kilometres (km).
- 2.1.4 Unit gains and losses are recorded and reported separately for each unit type.
- 2.1.5 The BNG Metric calculates baseline biodiversity unit value by assessing the extent, distinctiveness, condition and strategic significance of each habitat.
- 2.1.6 Post-development calculations are used to identify levels of habitat loss, retention, enhancement and/or creation. Post development scenarios can be calculated solely from within the site or through a combination of on-site and off -site locations.
- 2.1.7 When calculating post-development biodiversity unit values, a suite of further 'risk multipliers' are applied. These consider the difficulty and time required to enhance or create habitats and any spatial and temporal variation in where or when the provision of habitat enhancement or creation is intended to occur.
- 2.1.8 The loss, enhancement and creation of habitats are also governed by a set of 'trading rules'. These rules ensure developments do not result in the 'trading down' of habitat distinctiveness and that losses of habitats are instead compensated for on a 'like for like' or 'like for better' basis.
- 2.1.9 The data required to undertake the calculation is described further in Sections 2.2 and 2.3.

2.2 Baseline Data

- 2.2.1 Phase 1 habitat and botanical data was collected during surveys presented in the following documents:
 - Appendix 7.3 Preliminary Ecological Appraisal (Document ref: 6.3 ES Vol 2, 6.3.22);
 - Appendix 7.11 Botanical Survey Report (Solar Array Area) (Document ref: 6.3 ES Vol 2, 6.3.30)
- 2.2.2 For the purposes of the BNG calculation, Phase 1 habitat data was first translated into UKHab habitat types, and their corresponding BNG Metric habitat types. These translations are presented in Table 1.



2.2.3 Information used to inform the translations included:

- JNCC (2008) Spreadsheet of Habitat Correspondences;
- The Statutory Metric Technical Data tab UKHab/Phase 1 translation, and
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020).
 The UK Habitat Classification Version 1.1 Correspondences
 Spreadsheet

Table 1: Habitat translations to BNG Statutory Metric habitat types

Arable	Cropland – cereal crops Cropland – Arable field margins tussocky Grassland- Other neutral grassland (arable margins of higher biodiversity value)
Broadleaved Plantation Woodland	Woodland and forest – Other Woodland; broadleaved
	Woodland and forest – Other Woodland; mixed
Hard standing/track	Urban – Development land; sealed surface
Neutral Grassland – Semi-improved	Grassland – Other neutral grassland
Marsh Grassland	Cropland – Arable field margins tussocky
Water	Lakes – Ponds (non-priority habitat)
Scattered Scrub	Heathland and scrub – Mixed scrub
Tall Ruderal	Sparsely vegetated land – Ruderal/Ephemeral
Bare Ground	Urban – Bare ground
Ditch	Ditches
Line of trees -broadleaved/coniferous	Line of trees
Species poor hedge – Intact/Defunct	Native hedgerow – associated with bank or ditch

- 2.2.4 Baseline habitat extents were digitised using GIS software to illustrate and measure the area or length of each habitat type.
- 2.2.5 Baseline habitat conditions were determined either during field surveys or retrospectively reviewing data gathered in the field. In all instances



professional judgements have been made by suitably qualified ecologists with experience in detailed botanical surveys and familiar with the UK Habitat classification system and BNG metric calculations.

2.3 Post-development Data

- 2.3.1 The Proposed Development's Figure 6.31 Landscape Strategy Plan (Document Ref: 6.3 ES Vol 2, 6.2.6) has been compared to the baseline phase 1 habitat plan in Appendix 7.3 Preliminary Ecological Appraisal (Document ref: 6.3 ES Vol 2, 6.3.22) to determine the degree of habitat retention, loss, enhancement and creation occurring because of the Proposed Development.
- 2.3.2 Each of the elements of the Proposed Developments landscape strategy plan were converted to BNG habitat types. These translations are presented in Table 2.

Table 2: Landscape typology translation to BNG habitat types

Wildflower meadow	Lowland meadows
Floodplain grazing marsh	Lowland meadows
Native shrub mix	Mixed scrub
Neutral grassland	Modified Grassland/Other neutral grassland mix
Fence	Built linear features
Substation, roadways	Developed land sealed surface

2.4 Strategic Significance

2.4.1 Each habitat type has been assigned a Strategic Significance value. Assigning Strategic Significance utilises published Local Plan Policies and local strategies that identify priorities for targeting biodiversity and nature improvement, such as nature recovery strategies, local biodiversity plans, national character area objectives and green infrastructure strategies.

Solar Array Area BNG Strategy

- 2.4.2 Within the Solar Array Area the habitats with the highest distinctiveness will be retained or enhanced. Impacts upon arable margins, woodland compartments, ponds, lines of trees and hedgerows will be avoided, with ongoing management enhancing these features where possible.
- 2.4.3 Enhancements to approximately 12.58km of ditch will occur as part of the Proposed Development's management in line with the **OLEMP** (**Document ref: 6.3 ES Vol 2, 6.3.19**).



- 2.4.4 The remaining area, approximately 486ha of arable land currently under cultivation, will undergo arable reversion to grassland. The grassland created will support the solar arrays and be managed through a cutting regime designed to maximise biodiversity in line with the **OLEMP** (**Document ref: 6.3 ES Vol 2, 6.3.19**). Where solar arrays have been mounted higher due to flood risk, and where there will be no arrays to leave a buffer around farms the grassland will be sown with a higher diversity seed mix appropriate to the soil water levels. The cutting schedule within these areas will allow for the Site to offer approximately 17 ha of enhanced pollinator resource at key periods within the summer months.
- 2.4.5 It is also intended for both the ditch network present within the Solar Array Area to be buffered by approximately 28 ha of species rich grassland, incorporating existing arable margins and additional arable land. This area will be cut in line with the **OLEMP** (**Document ref 6.3 ES Vol 2, 6.3.19**).
- 2.4.6 Approximately 3ha of the Solar Array Area will be planted with mixed scrub, to provide a visual screening and wildlife corridors at points around the Proposed Development.
- 2.4.7 Finally, the retained woodland and hedgerow network will be complimented through the creation of approximately 2.78km of species rich native hedgerow to strengthen existing connections and create new links.

Bespoke Access Corridor and Cable Route Corridor

2.4.8 There will be loss of a 20 m strip for the Bespoke Access Road which results in approximately 6.6 ha of losses in habitats, and 0.33 km of hedgerow within the Bespoke Access Corridor. In the Cable Route Corridor there will be loss of approximately 0.7 ha woodland to facilitate access to Bicker Fen Substation. All other habitats in the Bespoke Access Corridor and Cable Route Corridor will be only temporary lost (i.e. reinstated within two years) and therefore for the purpose of BNG assumed to remain at the baseline value in line with the BNG User Guide (DEFRA 2024a). The construction programme is set out in Chapter 2 the Proposed Development (Document Ref: 6.2 ES Vol 1, 6.2.2).

2.5 Assumptions

2.5.1 The following assumptions have been made during the BNG metric Calculation:

Habitat management and Monitoring

- 2.5.2 All habitats retained, enhanced or created as part of the Proposed Development will be subject to ongoing management and monitoring in order to ensure each habitat meets its target condition as set out in the metric. The monitoring plan has been set out in the **OLEMP** (**Document ref 6.3: ES Vol 2, 6.3.19**).
- 2.5.3 Should monitoring indicate that a habitat is failing, or is likely to fail, its target condition remedial action will be undertaken to ensure target conditions are met within the specified timeframes as set out in the metric.



Under Panel Grassland

- 2.5.4 Guidance published by BRE (2014) recognises that on average 95% of a site used for solar farm development is "still accessible for plant growth and potentially for wildlife enhancements and complementary agricultural activities such as conservation grazing". To reflect this 95% of the Solar Array Area within the fields proposed for solar PV panels have been categorised as the UKHab habitat 'modified grassland' or 'other neutral grassland' with the remaining 5% allocated within the metric as 'Developed land; sealed surface' to account for array infrastructure and drainage.
- 2.5.5 Areas of modified grassland under panels with a have been assigned a post development target condition of 'moderate'. This is to acknowledge the variation in the levels of shading these areas will receive over the lifetime of the Proposed Development.

Individual Trees

2.5.6 Where individual trees, mapped as part of the baseline Phase 1 survey, also correspond with mapped hedgerows, these have been amalgamated into the associated 'hedgerow with tree' category, rather than duplicated in the metric as an individual 'rural tree'.

Arable Margins

2.5.7 Arable margins have been assessed in **Appendix 7.11 Botanical Survey Report (Solar Array Area) (Document ref: 6.3 ES Vol 2 6.3.30).** These surveys have separated arable margins into two UKHab/BNG Categories: 'Cropland - Arable field margins tussocky', condition assessment N/A, and 'Other neutral grassland' in moderate condition. This approach was undertaken to reflect the variation in floristic diversity present within the arable field margins and was in keeping with guidance set out in the Statutory Metric User Guide.

Habitat Condition

2.5.8 Due to the findings from the ecology surveys identifying relative uniformity within habitat types across the Order Limits, baseline habitats of the same type and condition have been aggregated in the metric.

Watercourses

2.5.9 All watercourses, except for the South Forty Foot Drain, within or immediately adjacent to the Order Limits meet the metric definition of 'Ditches' and as such no River Morphology survey has been undertaken. It is understood that direct impacts to the South Forty Foot Drain will be avoided as the Cable Route will be installed under the watercourse using trenchless techniques such as horizontal directional drilling (HDD).

Mitigation and Additionality

2.5.10 To ensure transparency regarding the additionality delivered by the BNG strategy the Proposed Development has sought to ensure that at least 30% of the BNG for habitat areas and 10% of the BNG for hedgerows and watercourses is delivered through habitat retention, enhancement or creation activities in line with the **OLEMP** (**Document ref: 6.3 ES Vol 2, 6.3.19**), that are not required to mitigate or compensate for any protected species impacts. DEFRA, have provided the following example: "If a development has a



baseline score of 10 biodiversity units and needs to achieve a score of 11 units, at least 1 unit should come from separate, non-species mitigation, activities" (DEFRA 2024b). The approach adopted at Beacon Fen Energy Park ensures this guidance has been followed.

Temporary Impacts within the Bespoke Access Corridor and Cable Route Corridor

- 2.5.11 A loss of 7.3 ha and 0.33km of habitat will occur across the Bespoke Access Corridor and Cable Route Corridor, as shown in Table 3. With the exception of these, for the BNG assessment, it is assumed that all works within these areas will be temporary in nature (i.e. in any one area works will be completed and habitats re-instated less than 2 years).
- 2.5.12 In order to compensate for loss of native hedgerow, approximately 3.92km of native hedgerow within the Solar Array Area will be enhanced to species rich native hedgerow of the same conditions across the Site.

Culverts, Footpaths, Bridges, Soil Storage Bunds, and Compounds

2.5.13 The extent and degree of ditch encroachment resulting from the repair or replacement of existing bridges has been excluded from the calculation due to the small areas of impact involved.

Habitat Retention, Enhancement, and Loss

2.5.14 Table 3 sets out the assumed ratios of habitat retention, enhancement and loss arising from the Proposed Development. Table 4 identifies habitat creation.

Table 3: Areas of habitat retention, enhancement, and loss arising from the Proposed Development

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Baseline Habitat	Area (ha)	Retained (ha)	Enhanced (ha)	Lost (ha)				
Solar Array Area	Solar Array Area							
Ceral crops	486.23	0	0	486.23				
Arable field margins tussocky	0.43	0	0	0.43				
Arable field margins game bird mix	5.18	0	0	5.18				
Other neutral grassland	15.0	0	0	15.0				
Modified grassland	2.17	0.63	0	1.54				
Other woodland; broadleaved	6.17	6.17	0	0				
Ponds (non-priority habitat)	1.09	1.09	0	0				
Mixed scrub	0.60	0.40	0	0.20				
Developed land; sealed surface	1.34	0	0	1.34				
Artificial unvegetated, unsealed surface	1.78	0	0	1.78				



Total	520.02	8.30	0	511.71				
Bespoke Access Cor	Bespoke Access Corridor							
Cereal crops	41.78	35.72	0	6.06				
Other neutral grassland	1.155	0.99	0	0.17				
Modified grassland	1.88	1.61	0	0.27				
Developed land; sealed surface	0.42	0.35	0	0.06				
Other woodland; broadleaved	0.08	0.01	0	0.07				
Total	45.31	38.67		6.63				
Cable Route Corridor								
Other woodland; broadleaved	3.93	3.24	0	0.69				
Mixed scrub	0.24	0.24	0	0				
Other neutral grassland	9.63	9.63	0	0				
Modified grassland	16.18	16.18	0	0				
Developed land; sealed surface	16.73	16.73	0	0				
Ceral crops	135.88	135.88	0	0				
Total	182.59	181.90	0	0.69				

Table 4: Habitats to be created as part of the Proposed Development

Baseline Habitat	Area (ha)	Length (km)
Modified Grassland	461.07	-
Other Neutral Grassland	13.14	-
Lowland meadows	4.22	-
Mixed scrub	2.96	-
Lowland meadows	10.38	-
Built linear features	9.28	-
Developed land; sealed surface	17.99	-
Native hedgerow		2.78
Total	519.04	2.78



Table 5: Lengths of hedgerow retention, enhancement, and loss arising from the Proposed Development

Baseline Habitat	Length (Km)	Retained (Km)	Enhanced (Km)	Lost (Km)		
Solar Array Area						
Native hedgerow	3.92	2.54	1.38	0		
Native hedgerow with trees	3.02	3.02	0	0		
Species-rich native hedgerow	0.03	0.03	0	0		
Total	6.97	5.59	1.38	0		
Bespoke Access (Corridor					
Line of trees	0.11	0.08	0	0.02		
Species rich native hedgerow	1.57	1.42	0	0.16		
Native hedgerow	1.56	1.40	0	0.15		
Total	3.25	2.91	0	0.33		
Cable Route Corri	dor					
Line of trees	1.74	1.74	0	0		
Native hedgerow	2.35	2.35	0	0		
Species rich native hedgerow	1.93	1.09	0	0		
Total	6.02	6.02	0	0		

2.5.15 A total of 2.78km native hedgerow will be created on the Solar Array Area.

Table 6: Lengths of ditches retention, enhancement, and loss arising from the Proposed Development

Baseline Habitat	Length (Km)	Retained (Km)	Enhanced (Km)	Lost (Km)				
Solar Array Ar	Solar Array Area							
Ditches	28.27	15.69	12.58	0				
Bespoke Acce	Bespoke Access Corridor							
Ditches	3.57	3.57	0	0				
Cable Route Corridor								
Ditches	18.4	18.4	0	0				

Constraints or Limitations

2.5.16 All baseline and post-development features have been measured in GIS/CAD using the Phase 1 habitat plan (in Appendix 7.3 Preliminary Ecological Appraisal Document Ref: 6.3 ES Vol 2, 6.3.22 and Figure 6.31 Landscape Strategy Plan Document Ref: 6.4 ES Vol 3, 6.4.42) to determine habitat extents and lengths before and after development. Therefore, measurements should be regarded as approximations only.



3. RESULTS

3.1 Baseline unit values

- 3.1.1 The baseline unit values of the habitats present within the Order Limits have been calculated with the statutory BNG metric as having a baseline value of:
 - 1740.38 Habitat units
 - 118.03 Hedgerow units
 - 243.79 Watercourse units

3.2 Post-development unit values

- 3.2.1 The post-development units have been calculated as having a value of:
 - 2374.33 Habitat units
 - 130.77 Hedgerow units
 - 282.67 Watercourse units
- 3.2.2 A summary of the post development BNG metric calculations is presented in Appendix 2.

3.3 Trading rules

3.3.1 All metric trading rules have been satisfied.



4. CONCLUSION

- 4.1.1 Based on the current plans for the Site, and using the current Statutory Metric in force (July 2024), the Proposed Development is anticipated to result in an overall percentage change of:
 - 36.43% net gain in Habitat units;
 - 10.79% net gain in Hedgerow units, and
 - 15.95% net gain in Watercourse units.



5. BNG IMPLEMENTATION

- 5.1.1 Delivery of the percentages of BNG specified in section 4 above, as a minimum, is secured through a requirement in Schedule 2 to the **Draft DCO** (**Document Ref: 3.1**). The relevant requirement specifies that "No part of the authorised development may commence until a biodiversity net gain strategy has been submitted to and approved by the relevant planning authority, in consultation with the relevant statutory nature conservation body. The biodiversity net gain strategy must be substantially in accordance with the outline landscape and ecological management plan and must be implemented as approved and maintained throughout the operation of the relevant part of the authorised development to which the plan relates." This report has been prepared so that the level of BNG that the Proposed Development can be expected to deliver can be understood at this stage of the consenting process and to inform the preparation of the **OLEMP** (**Document Ref: 6.3 ES Vol 2, 6.3.19**).
- 5.1.2 The obligation to prepare the detailed Landscape and Ecological Management Plan (LEMP) (or more than one LEMP if the Proposed Development is delivered in phases), and to have this/these approved by the relevant planning authority, is secured through a requirement in Schedule 2 to the **Draft DCO** (**Document Ref: 3.1**). The detailed LEMP(s) will be developed from the principles set out in the OLEMP as it/they must be substantially in accordance with this OLEMP. The LEMP(s) will include information on establishment and long-term operational management of the landscape and ecological resource. The LEMP(s) will also describe the long-term management of ecological habitats required to achieve biodiversity net gain units.



6. HABITAT MANAGEMENT AND MONITORING

- 6.1.1 The **OLEMP** (**Document ref: 6.3 ES Vol 2, 6.3.19**) includes management and maintenance prescriptions and a commitment to undertake BNG habitat condition assessments and a review of management during years 1, 3 and 5 and then every 5 years for the remainder of the Proposed Development's operational life. Whilst BNG requires a commitment of 30 years management and monitoring this will occur across the lifetime of the Proposed Development (which will be up to 40 years).
- 6.1.2 At each monitoring interval a monitoring report will be produced and shared with the relevant stakeholders including the relevant planning authority.



7. REFERENCES

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BFEP Appendices



Appendix 1 – Baseline Habitats

Table 7: Habitats on site

Habitat	Area (Ha)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Ceral crops	663.89	Low	N/A	Area/compensation not in local strategy /no local strategy	1327.78
Arable field margins tussocky	0.43	Medium	N/A	Area/compensation not in local strategy /no local strategy	1.73
Arable field margins game bird mix	5.18	Medium	N/A	Area/compensation not in local strategy /no local strategy	20.73
Other neutral grassland	1.74	Medium	Good	Area/compensation not in local strategy /no local strategy	11.55
Other neutral grassland	24.63	Medium	Moderate	Area/compensation not in local strategy /no local strategy	197.05
Modified grassland	20.24	Low	Moderate	Area/compensation not in local strategy /no local strategy	80.95
Other woodland; broadleaved	3.49	Medium	Good	Area/compensation not in local strategy /no local strategy	41.84
Other woodland; broadleaved	3.27	Medium	Moderate	Area/compensation not in local strategy /no local strategy	26.20
Other woodland; broadleaved	3.43	Medium	Poor	Area/compensation not in local strategy /no local strategy	13.72
Ponds (non- priority habitat)	1.09	Medium	Moderate	Area/compensation not in local strategy /no local strategy	12.09
Mixed scrub	12.33	Medium	Moderate	Area/compensation not in local strategy /no local strategy	6.75
Developed land; sealed surface	18.49	Very low	N/A	Area/compensation not in local strategy /no local strategy	0.00
Artificial unvegetated, unsealed surface	1.78	Very low	N/A	Area/compensation not in local strategy /no local strategy	0.00



Table 8: Hedgerow habitats

Habitat	Length (Km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Native hedgerow	3.03	Low	Good	Area/compensation not in local strategy /no local strategy	19.23
Native hedgerow	3.35	Low	Moderate	Area/compensation not in local strategy /no local strategy	13.41
Native hedgerow	1.44	Low	Poor	Area/compensation not in local strategy /no local strategy	2.89
Native hedgerow with trees	3.02	Medium	Good	Area/compensation not in local strategy /no local strategy	36.21
Species- rich native hedgerow	3.20	Medium	Good	Area/compensation not in local strategy /no local strategy	38.41
Species- rich native hedgerow	0.30	Medium	Moderate	Area/compensation not in local strategy /no local strategy	2.40
Line of trees	0.63	Poor	Low	Area/compensation not in local strategy /no local strategy	1.26
Line of trees	0.55	Moderate	Low	Area/compensation not in local strategy /no local strategy	2.21

Table 9: Watercourse habitats

Habitat	Length (Km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Ditch	0.19	Medium	Good	'Formally identified in local strategy	2.39
Ditch	1.11	Medium	Good	Area/compensation not in local strategy /no local strategy	12.51
Ditch	21.55	Medium	Poor	Area/compensation not in local strategy /no local strategy	78.41
Ditch	6.72	Medium	Moderate	Area/compensation not in local strategy /no local strategy	51.06



Appendix 2 – Post Development Habitats



Table 10 Created habitats

Habitat	Area (ha)	Length (km)	Distinctiveness	Condition	Strategic Significance	Habitat/watercourse/hedgerow units
Habitat areas						
Lowland meadows	17.36		Very high	Good	Area/compensation not in local strategy/ no local strategy	80.57
Mixed scrub	2.96		Medium	Moderate	Area/compensation not in local strategy/ no local strategy	19.82
Lowland meadows	10.38		Very high	Good	Area/compensation not in local strategy/ no local strategy	48.16
Built linear features	9.28		Very low	N/A	Area/compensation not in local strategy/ no local strategy	0.00
Developed land; sealed surface	17.99		Very low	N/A	Area/compensation not in local strategy/ no local strategy	0.00
Other neutral grassland	13.14		Medium	Moderate	Area/compensation not in local strategy/ no local strategy	87.97
Modified grassland	461.08		Low	Moderate	Area/compensation not in local strategy/ no local strategy	1599.35
Watercourses						
Enhanced ditches		12.58	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	38.88
Hedgerows						
Enhanced hedgerows (Species rich)		0.87	Medium	Good	Area/compensation not in local strategy/ no local strategy	9.58
Enhanced hedgerows (Species rich)		0.51	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	3.72
Created hedgerows (Native hedgerow		2.78	Low	Moderate	Area/compensation not in local strategy/ no local strategy	9.31



Drawings







































