Heckington Fen Solar Park

ENO10123

Appendix 8.13– Biodiversity Net Gain Assessment – Report

Applicant: Ecotricity (Heck Fen Solar) Limited

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BIODIVERSITY NET GAIN ASSESSMENT – REPORT

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1. INTRODUCTION

1.1 Introduction

1.1.1 This Biodiversity Net Gain (BNG) assessment has been prepared by Ecotricity (hereafter referred to as the 'Applicant'). The assessment has been undertaken upon land to the north of East Heckington where the Energy Park will be developed, inclusive of the ground mounted solar photovoltaic (PV) electricity generation and energy storage facility, (hereafter referred to as the 'Site'). The assessment has been conducted to inform the development of Heckington Fen Energy Park at the Site (hereafter 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. BNG is measured using a Biodiversity Metric published by DEFRA[1]. 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 prioritizes preventative actions, including the avoidance and minimization of developmental impacts, over remediative 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[2].

1.2 Site Description

1.2.1 The Energy Park Site is bounded by a drainage ditch which lies directly to the south of the Head Dike, which runs along the northern boundary, Holland Dike to the east, the A17 Sleaford to Holbeach road to the south and B1395 Sidebar Lane and agricultural land to the west, extending to approximately 524ha. The Energy Park Site lies wholly within North Kesteven District, abutting Boston Borough boundary along the eastern edge.

1.2.2 Land within the Energy Park Site is in arable use and is subdivided into rectilinear parcels by long linear drainage ditches that lie principally north-south, connected east-west by shorter ditches including Labour in Vain Drain. The ditches have an engineered profile, colonised in part by emerging aquatic plant species.

1.2.3 The Energy Park Site is very flat and low-lying at between 2m and 3m above Ordnance Datum (AOD) and is predominantly within Flood Zones 2 and 3, with a narrow ribbon of Flood Zone 1 occurring along the southern edge and south-western corner of the Energy Park Site.

1.2.4 Six Hundreds Farm lies in the eastern third of the Energy Park Site, with access gained from Six Hundreds Drove via the A17. Two further access tracks lie off the A17 adjacent Rectory Farm in the centre of the Energy Park Site and at Elm Grange in the southwest corner, these in turn connect to Crab Lane toward the northeast corner of the Energy Park Site, and then to Sidebar Lane. The access tracks follow ditch alignments.

[1] Natural England (2023) The Statutory Biodiversity Metric
[2] CIEEM, CIRIA, IEMA . (2016). Biodiversity net gain. Good practice principles for development

1.2.5 Land within Six Hundreds farms on the eastern side of the Energy Park Area has been brought into Mid-Tier Countryside Stewardship Scheme with the provision of 4-6m grass margins around the majority of field boundaries. There are also grass tracks around a number of the fields on Elm Grange on the western section of the Energy Park Area (see Appendix 8.4: Further Phase 1 Habitat Report (document ref: 6.3.8.4, APP-193)). Intermittent shrubs and gappy defunct hedgerows occur along six field margins of the Energy Park Site. There are four small plantation woodland blocks and a number of isolated trees in the field boundaries within the Energy Park.

1.2.6 The Cable Route Corridor for the proposed Off-Site Grid Connection will run south from the Energy Park Site, from the east of the Energy Park. This then crosses the A17, the South Forty Foot Drain and the railway. The underground cable will connect into the existing Bicker Fen Substation.

1.3 The Proposed Development

1.3.1 Heckington Fen Solar Park Development Consent Order (DCO) allows for the construction, operation (including maintenance), and decommissioning of a ground mounted solar photovoltaic (PV) electricity generation and energy storage facility (hereafter referred to as "the Energy Park"), cable route to, and above and below ground works at, the National Grid Bicker Fen Substation (inclusive of Energy Park)) on land at Six Hundreds Farm, Six Hundreds Drove, East Heckington, Sleaford, Lincolnshire.

1.3.2 The Proposed Development will be located within the Order limits (the land shown on the Works Plans (document reference2.2, PINS APP-074)).

1.4 Legislation, Policy and Guidance

Our Green Future: A 25-year plan to improve the environment

1.4.1 In England DEFRA's 25-year environment plan[3] forms the key policy driver for both terrestrial and marine net gain. The plan includes a commitment to embed environmental net gain into policy and legislation.

The Environment Act (2021)

1.4.2 The Environment Act[4] (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. It is intended that developments within the scope of the Town and Country Planning Act, with some exemptions, will need to demonstrate a minimum 10% net gain by early 2024, whilst developments that qualify as Nationally Significant Infrastructure Projects (NSIPs) under the Planning Act 2008 will need to demonstrate a minimum 10% net gain from 2025.

1.4.3 Under the Act, demonstrating a developments delivery of BNG is calculated by comparing the sites baseline biodiversity unit value with that following development using the Acts adopted DEFRA Metric.

National Planning Policy Framework (NPPF)

[3] DEFRA (2018) A Green Future: Our 25 Year Plan to Improve the Environment
[4] UK Parliament. (2021). Environment Act 2021. Retrieved from https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

1.4.4 The National Planning Policy Framework[5] (NPPF), makes general provisions for the delivery of BNG. The NPPF states that "planning policies and decisions should…identify and pursue opportunities for securing measurable net gains for biodiversity".

Local Planning Policy

1.4.5 Table 8.5 of Chapter 8: Ecology and Ornithology sets out the relevant planning policy associated with the ecological aspects of the DCO, of particular relevance to the BNG assessment are the following local planning policies:

- Policy LP20: 'Green Infrastructure Network' of the 2017 Central Lincolnshire Local Plan;
- Policy LP21: 'Biodiversity and Geodiversity' of the 2017 Central Lincolnshire Local Plan;
- Policy S60 'Protecting Biodiversity and Geodiversity' of the Central Lincolnshire Local Plan Review Proposed Submission;
- Policy S61: 'Biodiversity Opportunity and Delivering Measurable Net Gains' of the Central Lincolnshire Local Plan Review Proposed Submission, and
- Policy 28: 'The Natural Environment' of the South East Lincolnshire Local Plan 2011-36

BNG Guidance

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

- Guidance: Statutory biodiversity metric tools and guides[6]
- The Good Practice Principles for Development, A Practical Guide for the assessment and delivery of BNG;
- BS 8683:2021, the British Standard for Biodiversity Net Gain[7], and
- CIEEM Biodiversity Net Gain Report & Audit Templates document[8].

1.5 Biodiversity Net Gain Target

1.5.1 The Proposed Development will aim to deliver a BNG uplift of 65% in habitat units. It is understood that appropriate mechanisms to ensure delivery will be secured through the DCO during the inspection process.

1.6 Development Consent Order Consultation Process

1.6.1 This report forms part of the Deadline 4 submission for the Heckington Fen Solar Farm DCO and updates the original BNG Metric to Revision 3 from the submitted version presented during pre-examination at Appendix 8.12 (document reference 6.3.8.12/APP-202).

1.6.2 Changes in the previously reported BNG totals have arisen from:

1) Updating the metric from Metric 4.0 to the Statutory Metric published 29th November 2023[9];

[5] Ministry Housing, Community & Local Government. (2021, March 27). National Planning Policy Framework. Retrieved from Gov.UK: https://www.gov.uk/government/publications/national-planning-policy-framework--2

[6] DEFRA (2023) Statutory biodiversity metric tools and guides. Retrieved from: Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)

[7] British Standards Institute. (2021). BS8683 - Process for designing and implementing biodiversity net gain.

[8] British Standards Institute. (2021). BS8683 - Process for designing and implementing biodiversity net gain.

[9] Some changes to the metrics multiplier values have altered between version 4.0 and the Statutory Metric, including 'difficulty of creation' and 'enhancement' multipliers in relation to culverts and ditches.

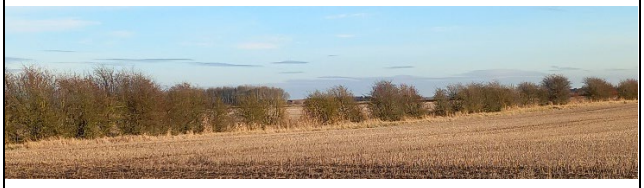
2) Aligning the baseline lengths of on-site hedgerows to those within the current order limits;

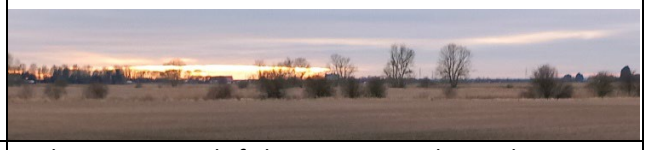
3) Incorporating the bespoke offsetting agreement in relation to woodland loss within the grid connection corridor, and

4) Incorporating comments received from AECOM (on behalf of North Kesteven District Council (NKDC))

1.6.3 Comments received from NKDC's ecological advisors in advance of deadline 4 are summarised in Table 1:

Table 1: Comments submitted by NKDC's ecological advisors

Comment	Response
Woodlands: Additional information regarding condition assessments.	Updated table C1 to include detail of habitat condition assessment and photographic evidence
Hedgerows: Additional information regarding condition assessments.	Updated table C1 to include detail of habitat condition assessment
Hedgerows: Additional information regarding hedgerow enhancement and creation: Version 2 of the metric calculation proposed to enhance hedgerows to not only improve condition, but to also change the hedgerow type to a higher distinctiveness ('Native hedgerow' to 'Species-rich native hedgerow'). NKDC has highlighted that aerial imagery available to third parties does not indicate that the hedgerows are sufficiently 'gappy' to allow the necessary infill planting to achieve this change in distinctiveness.	It is acknowledged that the aerial imagery available to third parties for verification shows existing hedgerows in full leaf. Site inspections undertaken in January 2024, when hedgerow stools were dormant, has illustrated that the 'gappiness' of hedgerows does allow for the necessary infilling with whips to achieve 5 or more woody species per 30m survey section. Furthermore, due to the age and condition of some hedgerow sections it is also considered possible to remove some unhealthy hedgerow stools and replant/ translocate other existing stools along the hedgerow's length alongside any infill planting – restructuring the hedgerow to further increase species diversity and frequency. However, at this stage of the development process, and taking on board NKDCs comments, it is proposed to take a more precautionary approach during inspection. Therefore, the metric has been re-run to only enhance or create 'native hedgerows' in a 'moderate' condition. This approach will be reviewed at the detailed design phase and as part of the on-going adaptive management and monitoring during the sites 40-year operational phase. 

Comment	Response
	
Ditches: Additional information regarding the proposed method of invasive species control proposed to achieve 'good' condition over the 40-year management period.	Ditches are currently failing criterion H due to the presence of the invasive Nuttall's waterweed (*Elodea nuttallii*). To achieve the target condition of 'good' this invasive species must be removed from site. Further ditch surveys will be undertaken in 2024 (secured through the OLEMP) following which a detailed management strategy will be designed. It is anticipated that management prescriptions will include two-year cycles of cutting/harvesting. Di Nino *et al.* (2005) has reported that harvesting can cause a drastic reduction of biomass and that two harvests can result in an almost total disappearance of the species. Therefore, it is considered reasonable to anticipate that sequential 2-year cycles of cutting, spread across the 40-year operational phase of the development, will reduce the presence of Nuttals waterweed to such an extent that a 'good' condition can be achieved during the lifetime of the development. It is felt that the ability to control this invasive species will also be made more feasible because of the large-scale reduction of macronutrients and phosphorus entering the ditches due to the land use change brought about by the development, .
Arable field margins: Additional information on the treatment of arable field margins in the metric.	Following updates to the statutory metric, and feedback from NKDC's ecological advisors, the approach to retaining arable margins has been reassessed. As such, arable margins are no longer 'retained' within the metric. Instead, -other neutral grassland in 'moderate' condition has been created to reflect the enhancement of the habitat present on site. However, the move from the broad habitat of 'cropland' to 'grassland' causes an error in the metrics trading rules. In this instance it is considered that whilst the metric reports a failure of the trading rules, the proposed habitat creation on-site will result in the real-world provision of a better outcome for biodiversity, with a baseline habitat of medium distinctiveness and no condition value being replaced by a medium distinctiveness habitat with a higher 'moderate' condition score. This error is regularly encountered when modelling the BNG delivery of arable reversion, with both Gate Burton and West Burton solar DCOs reporting this error.
Indicative seed mixes: Additional information on the proposed indicative seed mixes.	Boston seeds CSS2 and Emorsgate EG27/EM34 are presented in this report as indicative seed mixes. It is acknowledged that Boston seeds CSS2 seed mix contains some non-native plant species and therefore would fail Criteria A of the Medium to High grassland condition tables.# Following soil sampling, proposed to be undertaken in March 2024, all seed mixes will be tailored to soil chemistry on a field-by-field basis. At this stage any non-native

Comment	Response
	species within the indicative lists would be substituted for native species.

2. METHODOLOGY AND STRATEGIC APPROACH

2.1 Statutory Biodiversity Metric

2.1.1 The BNG calculation presented in this report has been undertaken using DEFRAs statutory BNG Metric.

2.1.2 A full description of the metric methodology is provided in the BNG Metric User Guide..

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 each habitats extent, distinctiveness, condition and strategic significance.

2.1.6 Post-development calculations 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 data was collected during surveys presented in the following documents:

- Figure 8.4- Phase 1 Habitat (document reference 6.2.8 (Rev 2)/PS-155)
- Appendix 8.3- Phase 1 Habitat Survey Report - Energy Park (document reference 6.3.8.3/PS-APP-192)
- Appendix 8.4- Further Extended Phase 1 Habitat Survey Report - Energy Park (document reference 6.3.8.4/PS-APP-193)
- Appendix 8.5- Extended Phase 1 Survey Report – Cable Route Corridor (document reference 6.3.8.5/PS-APP-194)

- Appendix 8.6- Botany Report including Aquatic Plants and Rare Arable Plants – Energy Park and Cable Route Corridor (document reference 6.3.8.6/PS-APP-195)

2.2.2 For the purposes of the BNG calculation Phase 1 habitat data (document reference 6.2.8/PS-155) was first translated into UKHab habitat types, and their corresponding BNG Metric habitat types. These translations are presented in Table 2.

2.2.3 Information used to inform the translations included:

- JNCC (2008) Spreadsheet of Habitat Correspondences[10];
- The Statutory Metric Technical Data tab UKHab/Phase 1 translation[11], and
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification Version 1.1 – Correspondences Spreadsheet[12]

Table 2: Habitat translations to BNG metric habitat types

Phase 1	BNG Metric Habitats
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 – Developed land; sealed surface
Neutral Grassland – Semi-improved	Grassland - Other neutral grassland
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 In addition to surveys listed in para 2.2.1 habitat translations were ground-truthed during site visits on 19/09/2023, 26/10/2023 and 13/01/2024.

2.2.5 Baseline habitat extents were digitised using GIS software to illustrate and measure the area or length of each habitat type.

2.2.6 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.

[10] JNCC (2008) Spreadsheet of Habitat Correspondences 2008. Retrieved from: https://hub.jncc.gov.uk/assets/9e70531b-5467-4136-88f6-3b3dd905b56d
[11] Accessed as part of the Statutory Metric
[12] UKhab (2020) UK Habitat Classification Documents. Retrieved from: https://ukhab.org/ukhab-documentation/

2.3 Post-development Data

2.3.1 The Proposed Developments landscape strategy plan (document reference 6.2.6) has been compared to the baseline phase 1 habitat plan (document reference 6.2.8) 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 3.

Table 3: Landscape typology translation to BNG habitat types

Landscape Typology	BNG Metric Habitats
Existing and proposed access tracks	Developed land sealed surface
Ditches and culverts	Ditch Where ditches remain within the applicants control a 'moderate' condition has been applied. Where ditches lie outside of the applicant's management control a precautionary 'poor' condition has been applied. Ditches are currently failing criterion H due to the presence of the invasive Nuttall's waterweed (Elodea nuttallii). To achieve the target condition of 'good' this invasive species must be removed from site. Further ditch surveys will be undertaken in 2024 (secured through the OLEMP) following which a detailed management strategy will be designed. It is anticipated that management prescriptions will include two-year cycles of cutting/harvesting. Di Nino et al. (2005) has reported that harvesting can cause a drastic reduction of biomass and that two harvests can result in an almost total disappearance of the species. Therefore, it is considered reasonable to anticipate that sequential 2-year cycles of cutting, spread across the 40-year operational phase of the development, will reduce the presence of Nuttals waterweed to such an extent that a 'good' condition can be achieved during the lifetime of the development. It is felt that the ability to control this invasive species will also be made more feasible because of the large-scale reduction of macronutrients and phosphorus entering the ditches due to the land use change brought about by the development,
Grazing species-rich grass to panel compounds (max 3m height)	95% Modified grassland 5% Developed land; sealed surface

Landscape Typology	BNG Metric Habitats
	It is considered possible for the modified grassland under panels to achieve a 'moderate' condition using a species rich grazing mix such as Emorsgate EG27 'old fashioned grazing mix', or similar.
Grazing species-rich grass to panel compounds max 3.5m height)	95% Other neutral grassland 5% Developed land; sealed surface It is considered possible for the other neutral grassland under panels to achieve a 'moderate' condition using a herbal ley seed mix such as Boston Seeds CSS2 'Legume & Herb Rich Mixture GS4', or similar[13].
Grazing species-rich grass to panel compounds (grassland areas associated with margins and easements within compounds. Not over-shaded by panel arrays)	Other neutral grassland in 'moderate' condition. It is considered possible for other neutral grassland in 'moderate' condition to develop between panels and at panel margins using a species rich grazing mix such as Emorsgate EG27 'old fashioned grazing mix, or similar.
Loose gravel/hard surfacing (BESS footprint)	Artificial unvegetated, unsealed surface.
Species rich grassland to field margins	Other neutral grassland[14] Mixed scrub[15] It is considered possible to achieve a 'moderate' condition 'Other neutral grassland' using a Emorsgate EM34 Diverse Meadow Mixture, or similar.
Meadow grassland to orchard	The habitat Traditional orchard has been selected over lower distinctiveness orchard categories because it is understood that the orchard will be secured as a habitat feature beyond the 40-year operational life of the solar farm. As such, it is considered feasible to create a Traditional Orchard in 'moderate' condition.
Proposed hedgerows (3m, 3.5m and 5m in height)	Native Hedgerow – associated with bank or ditch (moderate condition)
Proposed woodland tree planting	Other woodland; broadleaved (moderate condition)

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

[13] Boston seeds CSS2 seed mix contains some non-native plant species and therefore would fail Criteria A of the Medium to High grassland condition tables. This seed list is indicative only, following soil sampling proposed to be undertaken in March 2024 the herbal ley mix would be tailored to the sites soil chemistry with native species substituted for those species currently listed.

[14] A precautionary approach has been taken when setting the target habitat condition of the species rich grassland margins. It is considered likely that over 40 years of management a higher distinctiveness habitat could be achieved.

[15] A proportion of this area will be allowed to naturally regenerate into mixed scrub, creating a matrix of species rich grassland and scrub over the life-time of the proposed development.

recovery strategies, local biodiversity plans, national character area objectives and green infrastructure strategies.

2.4.2 Local planning policy identifies the following habitats of importance: all priority habitats (Policy S60 Part Two), woodlands, trees and hedgerows (S66). Furthermore, the Local Plan interactive policies map identifies several ditches and field boundaries on-site as 'green infrastructure'.

2.4.3 The original metric identified the pond on site as a priority habitat pond. A reassessment against UKHab criteria has reassessed this pond as a non-priority habitat. However, due to the rarity of agricultural ponds within the landscape it has been assigned a 'medium' strategic significance value.

2.4.4 Therefore, the following habitats have been assigned a High Strategic Significance:

- Other woodland; broadleaved
- Rural trees
- Hedgerows (all types)
- Line of Trees
- Ditches
- Arable Field Margins (inc. 'Arable field margins; tussocky' and 'Other neutral grassland'

2.5 BNG Strategy

2.5.1 For the purposes of the BNG Strategy the baseline has been separated into three areas:

- The energy park
- The grid connection corridor, and
- An area outside of the Order Limits, but within the Applicant's and Landowner's control, which could be used for skylark enhancement to the south of the Energy Park

2.5.2 All three areas are currently composed of 'v.low' to 'high' distinctiveness habitats. No 'very high' distinctiveness habitats are present within the Order Limits and no irreplaceable habitats will be impacted. In terms of the overall baseline approximately 583.04ha is occupied by low distinctiveness arable land set within a matrix of grassland margins and a network of ditches where woodland, scrub, ruderal habitats and hedgerows are sparsely distributed. As such the majority of habitat enhancement and creation on-site can be considered to fall within the criteria of 'significant on-site gains' specifically - "*habitats of low distinctiveness which create a large number of biodiversity units relative to the biodiversity value of the site before development*"[16]

Impacts Within the Grid Connection Corridor

[16] Significant on-site enhancements. Accessed via https://www.gov.uk/guidance/make-on-site-biodiversity-gains-as-a-developer

2.5.3 With the exception of 0.4ha of unavoidable loss of woodland within the grid connection corridor, all other impacts are considered temporary[17].

Impacts Within the Skylark Enhancement Area

2.5.4 Within the skylark enhancement area 0.2ha of arable land will be converted into approximately 125 skylark plots measuring c.16 sqm each. All other habitats within this area will be retained and will remain within arable use.

Solar Park BNG strategy

2.5.5 Within the solar park site the highest distinctiveness habitats will be retained or enhanced. All impacts upon arable margins, woodland compartments, ponds, lines of trees and hedgerows will be avoided with ongoing management enhancing these features where possible.

2.5.6 Approximately 60m of the c.38km of internal ditches within the solar park will be lost via culverting required to facilitate internal access. Impacts to the remaining c.37km of ditches will be avoided. Enhancements to approximately 29km of ditch will occur as part of the proposed sites management. Approximately 8.4km of ditch will remain under the management control of the Internal Drainage Board.

2.5.7 The remaining area, approximately 483ha of arable land currently under cultivation, will undergo arable reversion to grassland. The grassland created will support the solar arrays and be managed through rotational grazing by sheep maintained at 'conservation grazing' stocking levels. Where solar arrays have been mounted higher due to flood risk the grassland will be sown with herbal leys. In addition to the benefits that herbal leys bring to soil structure, carbon storage and soil health the grazing schedule within these areas will allow for the site to offer approximately 192ha of enhanced pollinator resource at key periods within the summer months.

2.5.8 It is also intended for both the ditch network and the gas pipeline present within the solar park site to be buffered by approximately 66ha of species rich grassland, incorporating existing arable margins and additional arable land. This area will be mown twice a year, once in early March and again in August. With grazing (at conservation stocking levels) occurring between January and February and September and December, depending upon appropriate ground conditions. Approximately 3ha of this area will be allowed to naturally regenerate and succeed to 'mixed scrub'.

2.5.9 Finally the retained woodland and hedgerow network will be complimented through the planting of an additional 0.42ha of broadleaved woodland, a 2.15ha community orchard and approximately 8.66km of native species rich hedgerow.

2.6 Assumptions

2.6.1 The following assumptions have been made during the BNG Metric calculation:

Habitat Management and Monitoring

[17] Since the submission of the last metric calculation a bespoke compensation contribution has also been agreed with Boston Borough Council. This results in the woodland loss being offset for through two pathways 1) additional woodland planting within the Energy Park site and 2) a financial contribution to ensure that further compensatory planting also occurs within the Boston Borough geographical area to such an extent to offset the woodland loss.

2.6.2 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.

2.6.3 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

2.6.4 Guidance published by BRE[18] 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 footprint within the proposed solar compartments 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.

2.6.5 Areas of modified grassland under panels with a maximum height of 3m have been assigned a post development target condition of 'moderate'. Areas of other neutral grassland under panels with a maximum height of 3.5m 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 and also the different seed mixes and management prescriptions specified in the OLEMP (document reference 7.8) for these areas.

Individual Trees

2.6.6 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'.

2.6.7 Similarly, for the purposes of the post development calculation where additional tree planting is specified as part of the landscape strategy plan these have been considered part of hedgerow enhancement/creation rather than the planting of individual 'Rural trees'.

2.6.8 There is a potential veteran tree located within the grid connection corridor. should it be determined to be of veteran status, the BNG calculation will be updated to reflect this.

Arable Margins

2.6.9 Arable margins have been assessed in Appendix 8.6 "Botany Report including Aquatic Plants and Rare Arable Plants – Energy Park and Cable Route Corridor". 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

[18] BRE (2014) Biodiversity Guidance for Solar Developments

Metric 4.0 User Guide. However, following updates to the statutory metric, and feedback from NKDC's ecological advisors, the approach to retaining arable margins has been reassessed. As such, arable margins are no longer 'retained' within the metric. Instead, Other neutral grassland in 'moderate' condition has been created to reflect the enhancement of the habitat present on site. However, the move from the broad habitat of 'cropland' to 'grassland' causes an error in the metrics trading rules. In this instance it is considered that whilst the metric reports a failure of the trading rules, the proposed habitat creation on-site will result in the real-world provision of a better outcome for biodiversity, with a baseline habitat of medium distinctiveness and no condition value being replaced onsite by a medium distinctiveness habitat with a higher 'moderate' condition score. This error is regularly encountered when modelling the BNG delivery of arable reversion, with both Gate Burton and West Burton solar DCOs reporting this error.

Habitat Condition and Advanced/Delayed Creation

2.6.10 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.

2.6.11 Advanced and delayed habitat multipliers have been applied to reflect pre-construction grassland creation, scheduled to occur in Sept 2024 and delayed habitat creation scheduled to occur after the installation of the solar arrays and associated infrastructure.

Watercourses

2.6.12 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 Morph survey has been undertaken. It is understood that direct impacts to the South Forty Foot Drain will be avoided as works will follow HDD methodologies with directional drilling.

Mitigation and Additionality

2.6.13 To ensure transparency regarding the additionality delivered by the BNG strategy the scheme has sought to ensure that at least 10% of the BNG is delivered through habitat retention, enhancement or creation activities that are not required to mitigate or compensate for any protected species impacts. DEFRA, when summarising their feedback to the recent BNG consultation, 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*". The approach adopted at Heckington Fen ensures this guidance has been followed.

On-site and Off-site Habitat Allocation

2.6.14 Both the Energy Park and Grid Connection Corridor are included within the DCO Order Limits. However, for the purposes of this metric assessment the Energy Park and Grid Connection Corridor have been split in the metric with the Grid Connection Corridor and Skylark Enhancement areas treated as off-site areas within the calculation. This approach has been taken to reflect the level of management control the Applicant will have over the land post construction. In the Statutory Metric this results in the following error code '*off-site gain sites must be positive'*. In this instance this error is considered an artifact of metric design. This is because

off-site areas are more typically included in metric calculations to offset on-site losses rather than differentiate areas within Order Limit boundaries where the applicant has no long-term management control.

2.6.15 It is intended that, for the purpose of the metric calculation, any loss of biodiversity units arising from impacts within the Grid Connection Corridor will be 'offset' within the Energy Park.

Temporary Impacts within the Grid Connection Corridor

2.6.16 A 0.4ha loss of Other woodland; broadleaved will occur within the Grid Connection Corridor, this loss has been offset with planting within the Energy Park site and further compensated for through a financial contribution. In terms of the BNG Assessment it is assumed that all works within the Grid Connection Corridor will be temporary in nature and outside of the applicant's long-term management control.

Culverts, Footpaths, Bridges, Soil Storage Bunds and Compounds

2.6.17 The following assumptions have been made:

- All calculations of loss and replacement of culverts have been based on a minimum 12m culvert section;
- It is assumed that no additional culverts or vegetation loss will be required to facilitate temporary access within the grid connection corridor;
- No hardcore or tarmac is proposed to be used to create the proposed permissive footpaths;
- The extent and degree of ditch encroachment resulting from the repair or replacement of existing bridges have been excluded from the calculation due to the small areas of impact involved;
- Alterations in the sites overall surface area arising from the creation of soil storage bunds or drainage swales have been excluded from the metric calculation. Both features are intended to be contiguous with the adjacent habitat, and
- A combination of temporary and operational compounds are intended to be located on-site. Impacts are considered as either temporary or as the creation of 'Artificial unvegetated, unsealed surface' where compounds will potentially be retained.

Habitat Retention, Enhancement and Loss

2.6.18 Table 4 sets out the assumed ratios of habitat retention, enhancement and loss arising from the proposed development.

Table 4 Areas of habitat retention, enhancement, and loss

Baseline Habitats	Area	Retained	Enhanced	Lost
On-site				
Cereal crops	483.38	0.00	0.00	483.38
Arable field margins tussocky	13.28	0.00	0.00	13.28
Other neutral grassland	0.23	0.00	0.23	0.00
Other neutral grassland	10.80	0.00	0.00	10.80
Other woodland; broadleaved	1.48	0.00	1.48	0.00
Other woodland; mixed	0.11	0.00	0.11	0.00
Ponds (non-priority habitat)	0.01	0.00	0.01	0.00
Mixed scrub	1.80	0.00	0.00	1.80
Ruderal/Ephemeral	0.65	0.00	0.00	0.65
Developed land; sealed surface	5.67	3.91	0.00	1.76
Watercourse footprint	7.39	7.39	0.00	0.00

Baseline Habitats	Area	Retained	Enhanced	Lost
Rural tree	1.17	1.17	0.00	0.00
Bare ground	0.10	0.00	0.00	0.10
Total* *Excluding Rural Trees	**524.90**	**10.76**	**1.83**	**511.77**
Off-site Grid Connection Corridor				
Cereal crops	99.66	99.66	0.00	0.00
Other neutral grassland	2.7	2.70	0.00	0.00
Ruderal/Ephemeral	2.88	2.65	0.00	0.23
Bare ground	0.60	0.60	0.00	0.00
Developed land; sealed surface	8.06	8.06	0.00	0.00
Watercourse footprint	5.92	5.92	0.00	0.00
Other woodland; broadleaved	0.47	0.07	0.00	0.40
Rural tree	0.33	0.33	0.00	0.00
Total* *Excluding Rural Trees	**120.29**	**119.66**	**0.00**	**0.63**
Off-Site Skylark Enhancement Area				
Cereal crops	62	61.80	0.00	0.20
Total	**62**	**61.8**	**0.00**	**0.20**

Linear Based Habitat Loss (hedgerows and ditches)

2.6.19 It is assumed that all hedgerows and lines of trees present off-site will be retained. All hedgerows on-site will be enhanced. All lines of trees on-site will be retained.

2.6.20 All ditches present off-site, within the grid connection corridor, will be retained. Approximately 60m of ditch will be lost on-site as part of the repair and construction of new culverts. It is assumed that approximately 29.54km of the ditches on-site will be enhanced and approximately 8.4km of the ditches on-site will be retained.

2.7 Constraints or Limitations

2.7.1 All baseline and post-development features have been measured in GIS/CAD using the Phase 1 habitat plan and landscape strategy plan to determine habitat extents and lengths before and after development. Therefore, measurements should be regarded as approximations only.

3 RESULTS

3.1 Baseline Habitats

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:

Solar Park Site (on-site)

- 1107.23 Habitat units;
- 10.30 Hedgerow units, and
- 311.61 Watercourse units

Grid Connection Corridor and Skylark Enhancement Area (off-site)

- 359.24 Habitat units;
- 1.75 Hedgerow units, and
- 26.27 Watercourse units

3.1.2 Summary tables of the baseline habitat metric calculation are presented in Appendix A.

3.1.3 A map of the baseline habitats is provided in Appendix B.

3.1.4 Summary baseline BNG Habitat Condition Assessments are provided in Appendix C.

3.2 Post-development Habitats

3.2.1 The post-development habitats have been calculated as having a value of:

Solar Park Site (on-site)
- 2364.66 Habitat units;
- 50.89 Hedgerow units, and
- 424.82 Watercourse units

Grid Connection Corridor and Skylark Enhancement Area (off-site)
- 355.42 (a loss of -1.06%);
- 1.75 Hedgerow units, and
- 26.27 Watercourse units

3.2.2 Summary tables of the post development habitat metric calculations are presented in Appendix D.

3.2.3 A map of the post development habitats is provided in Appendix E.

3.2.4 The full biodiversity metric associated with this report is available in **Appendix 8.12 – Biodiversity Net Gain** (document reference 6.3.8.12).

3.3 Trading Rules

3.3.1 With the exception of the reported metric error discussed in para 2.6.9 all metric trading rules have been satisfied.

4. CONCLUSION

4.1.1 Based on the current plans for the site, the Proposed Development will result in an overall percentage change of:
- 113.22% net gain in Habitat units;
- 393.89% net gain in Hedgerow units, and
- 36.33% net gain in Watercourse units

5. BNG IMPLEMENTATION

5.1.1 Requirement 8 of Schedule 2 of the DCO sets out the applicants' obligations in relation to the delivery of BNG. Mechanisms ensuring delivery include:
- Landscape strategy plan[19];
- A Construction Environmental Management Plan[20], and
- An Outline Landscape and Ecological Management Plan[21]

[19] Document reference 6.2.6/PS-APP-135
[20] Document reference 7.7/PS-APP-238
[21] Document reference 7.8/PS-APP-239

6. HABITAT MANAGEMENT AND MONITORING

6.1.1 The OCEMP (document reference 7.7) and OLEMP (document reference 7.8) outline how the Biodiversity Net Gain set out in this Report and associated metric will be implemented, managed and monitored for the lifetime of the development.

6.1.2 The OLEMP (document reference 7.8) includes management and maintenance prescriptions and a commitment to undertake BNG habitat condition assessments and a review of management during years 1, 2 and 5 and then every 5 years for the remainder of the Proposed Developments operational life. Whilst BNG requires a commitment of 30 years management and monitoring this will occur across the lifetime of the solar park (40 years).

6.1.3 At each monitoring interval a monitoring report will be produced and shared with the relevant stakeholders including the LPA.

6.1.4 It is also proposed that an Ecology Advisory Group is established comprising local stakeholders and facilitated by the Applicant. The Group would form a long-term partnership that would steer the ongoing management at the Energy Park, ensuring the net gain strategy for the proposed development is delivered.

APPENDIX A: BASELINE HABITATS

Table A1: On-site area based habitats

Habitat	Area (Ha)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Cereal crops	483.38	Low	N/A	Low	966.76
Arable field margins tussocky	13.28	Medium	N/A	High	61.09
Other neutral grassland	0.23	Medium	Moderate	High	2.12
Other neutral grassland	10.8	Medium	Poor	Low	43.20
Other woodland; broadleaved	1.48	Medium	Poor	High	6.81
Other woodland; mixed	0.11	Medium	Poor	High	0.51
Ponds (non-priority habitat)	0.01	Medium	Moderate	Medium	0.09
Mixed scrub	1.8	Medium	Moderate	Low	14.40
Ruderal/Ephemeral	0.65	Low	Poor	Low	1.30
Developed land; sealed surface	5.67	V.Low	N/A	Low	0.00
Watercourse footprint	7.39	V.low	N/A	Low	0.00
Rural tree	1.17	Medium	Moderate	High	10.76
Bare ground	0.1	Low	Poor	Low	0.20
Sub Total	**524.90**	-	-	-	
Total (inc. Rural tree)	**526.07**	**-**	**-**	**-**	**1107.23**

Table A2: On-site hedgerow habitats

Habitats	Length (Km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Line of trees	0.26	Low	Poor	High	0.60
Native hedgerow – associated with bank or ditch	2.11	Medium	Poor	High	9.71
Total	**2.37**	**-**	**-**	**-**	**10.30**

Table A3: On-site watercourse habitats

Habitat	Length (Km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Culvert	0.48	Low	Poor	Low	0.96
Ditches	29.6	Medium	Moderate	High	272.32
Ditches	8.4	Medium	Poor	High	38.64
Total	**38.48**	-	-	-	**311.92**

Table A4: Off-site area based habitats (grid connection corridor)

Habitats	Area (ha)	Distinctiveness	Condition	Strategic significance	Biodiversity Units
Cereal crops	99.66	Low	N/A	Low	199.32
Other neutral grassland	2.7	Medium	Moderate	Low	21.60
Ruderal/Ephemeral	2.88	Low	Poor	Low	5.76
Bare ground	0.6	Low	Poor	Low	1.20
Developed land; sealed surface	8.06	V.Low	N/A	Low	0
Watercourse] footprint	5.92	V.low	N/A	Low	0
Other woodland; broadleaved	0.47	Medium	Moderate	High	4.32
Rural tree	0.33	Medium	Moderate	High	3.04
Sub Total	**120.29**	-	-	-	
Total (inc. Rural Tree)	**120.62**	-	--	-	**235.24**

Table A5: Off-site hedgerow units (grid connection corridor)

Habitats	Length (Km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Line of trees	0.34	Low	Moderate	High	1.56
Native hedgerow	0.08	Low	Poor	High	0.18
Total	**0.42**	-	-	-	**1.75**

Table A6: Off-site watercourse units (grid connection corridor)

Habitat	Length (Km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Ditches	1.55	Medium	Poor	High	7.13
Ditches	2.08	Medium	Moderate	High	19.14
Total	**3.63**	-	-	-	**26.27**

Table A7: Off-site area-based habitats (skylark enhancement area)

Habitats	Area (ha)	Distinctiveness	Condition	Strategic significance	Biodiversity Units
Cereal crops	62	Low	N/A	Low	124
Total	**62**	-	-	-	**124**

APPENDIX B BASELINE HABITAT MAP

(document reference 6.2.8/PS-155)

APPENDIX C: BNG STATUTORY METRIC BASELINE CONDITION ASSESSMENTS

Condition assessments have been undertaken using The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.

Table C1: On-site habitat condition assessments

Habitat Type	Habitat condition sheet used	Survey Data Reference	Condition Assessment	Assigned Condition
Cereal crops	N/A	N/A	N/A	N/A
Arable field margins tussocky	N/A	N/A	N/A	N/A
Developed land; sealed surface	N/A	N/A	N/A	N/A
Watercourse footprint	N/A	N/A	N/A	N/A
Other neutral grassland	6A: Grassland Med, High, V. High	Para 2.1.8 lists baseline data sources	Passes A, C, D and E Fails B and F Passes 3 of 6 criteria = Moderate	Moderate
Ponds (non-priority habitat)	18A: Pond	Para 2.1.8 lists baseline data sources	Passes C, D, E, F, G and I Fails A, B and H Passes 6 of 9 criteria = Moderate	Moderate
Mixed scrub	20A: Scrub	Para 2.1.8 lists baseline data sources	Passes A, C and D Fails B and E Passes 4 of 5 = Moderate	Moderate
Rural tree	9A: Individual Tree	Para 2.1.8 lists baseline data sources	Passes A, B, C and F Fails D and E Passes 4 of 6 criteria = Moderate	Moderate
Other neutral grassland	6A: Grassland Med, High, V. High	Para 2.1.8 lists baseline	Passes C and D Fails A, B, E and F Passes 2 of 6 criteria = Poor	Poor

		data sources		
Ruderal/Ephemeral	22A: Urban	Para 2.1.8 lists baseline data sources	Fails A and B – poor structural and species diversity. Passes C no invasives Passes 1 of 3 core criteria = Poor	Poor
Bare ground	22A: Urban	Para 2.1.8 lists baseline data sources	Fails A and B – poor structural and species diversity. Passes C no invasives Passes 1 of 3 core criteria = Poor	Poor
Woodland	24A: Woodland	Para 2.1.8 lists baseline data sources	Poor	
A: Age distribution of trees = one age class present (1) B: Wild, domestic and feral herbivore damage = Evidence of significant browsing pressure is present in less than 40% of the whole woodland (2) C: Invasive plant species = No invasive species present in woodland (3) D: Number of native tree species = three to four on average native trees found across woodland parcels (combinations of oak, ash, field maple, lime, sycamore, holly and elm are present across all compartments with a maximum of four species recorded in any one plantation (2) E: Cover of native tree and shrub species = >80% of canopy trees are native (3). F: Open space within woodland = 0-20% temporary open space (3) G: Woodland regeneration = No classes or coppice regrowth present in woodland (1) H: Tree health = High risk pest or disease present (Ash dieback) (1) I: Vegetation ground flora = Recognisable woodland NVC plant community at ground layer present. Plantation planting with a developing ground flora comprising predominantly nettle, cleavers and some bramble (2). J: Woodland vertical structure = One or less story across all survey plots (1). K: Veteran trees = No veteran trees present (1) L: Amount of deadwood = Less than 25% of all survey plots within the woodland parcel have deadwood (1)				

M: Woodland disturbance = 20% or more of woodland area has damaged ground (2)
Scores 23 = Poor

Single age class, no invasive species, low number of native tree species per plantation, >80% canopy is native, 0-20% open space, no classes or coppice regrowth, developing NVC ground flora community, one story or less, no veteran trees, less than 25% deadwood.

			Mechanical and herbivore damage.  20% or more of woodland area has damaged ground, combination of deer, badger and rabbit.	
Line of trees	16A: Line of trees	Para 2.1.8 lists baseline data sources	Fails a total of 3 attributes No veteran trees, high disturbance/impacts	Poor
Native hedgerow – associated with bank or ditch	8A: Hedgerow	Para 2.1.8 lists baseline	Fails more than 4 attributes	Poor

		data sources		
A1: Greater than 1.5m height average along length – Pass A2: Greater than 1.5m width average along length – Fail B1: Less than 0.5m gaps at base for more than 90% of length – Fail B2: Less than 10% gaps in total length (and no canopy gaps greater than 5m) – Fail C1: Greater than 1m width of undisturbed ground with perennial vegetation for greater than 90% of length – Pass C2: Plant species indicative of nutrient enrichment of soils dominate less than 20% cover – Fail D1: Greater than 90% of the hedgerow and undisturbed ground is free of invasive non-native plant species – Pass D2: Greater than 90% of the hedgerow is free of damage caused by human activities – Fail Fails A2, B1, B2, C2 and D2 (five failures and fails both in functional group B)				
Ditches	4A: Ditch	Para 2.1.8 lists baseline data sources	Fails H Passes A to G Passes 7 of 8 criteria	Moderate
Ditches	4A: Ditch	Para 2.1.8 lists baseline data sources	Fails B, D and H Passes A, C, E, F and G Passes 5 of 8 criteria	Poor

Table C2: Off-site habitat condition assessments

Habitat Type	Habitat condition sheet used	Survey Data Reference	Condition Assessment	Assigned Condition
Cereal crops	N/A	N/A	N/A	N/A
Developed land; sealed surface	N/A	N/A	N/A	N/A
Watercourse footprint	N/A	N/A	N/A	N/A
Other neutral grassland	6A: Grassland Med, High, V. High	Para 2.1.8 lists baseline data sources	Passes A, C, D and E Fails B and F Passes 3 of 6 criteria = Moderate	Moderate
Rural tree	9A: Rural Tree	Para 2.1.8 lists baseline data sources	Passes A, B, C and F Fails D and E Passes 4 of 6 criteria = Moderate	Moderate
Other woodland; broadleaved	24A: Woodland	Para 2.1.8 lists baseline data sources	Age class - Poor Herbivore damage - Moderate Invasive species - Good Native diversity - Good Canopy Nativity - Good Open space - Poor Woodland regeneration – Poor Tree health - Good Vegetation and ground flora - Moderate Vertical structure – Moderate Veteran tress - poor Deadwood - moderate Disturbance – moderate Scores 26 = Moderate	Moderate
Ruderal/Ephemeral	22A: Urban	Para 2.1.8 lists baseline data sources	Fails A and B – poor structural and species diversity. Passes C no invasives Passes 1 of 3 core criteria = Poor	Poor
Bare ground	22A: Urban	Para 2.1.8 lists baseline data sources	Fails A and B – poor structural and species diversity. Passes C no invasives Passes 1 of 3 core criteria = Poor	Poor
Line of trees	16A: Line of trees	Para 2.1.8 lists baseline data sources	Passes a total of 3 attributes No veteran trees, high disturbance/impacts	Moderate
Native hedgerow	8A: Hedgerow	Para 2.1.8 lists baseline data sources	Fails more than 4 attributes	Poor
Ditches	4A: Ditch	Para 2.1.8 lists baseline data sources	Fails H Passes A to G	Moderate

			Passes 7 of 8 criteria	
Ditches	4A: Ditch	Para 2.1.8 lists baseline data sources	Fails B, D and H Passes A, C, E, F and G Passes 5 of 8 criteria	Poor

APPENDIX D: POST DEVELOPMENT HABITATS

Table D1: On-site enhanced habitats

Habitat	Area	Distinctiveness	Condition Change	Strategic Significance	Delay in enhancement (yrs)	Habitat Units Delivered
Other neutral grassland	0.23	Medium	Moderate - Good	Low	1	2.46
Other woodland; broadleaved	1.48	Medium	Poor - Moderate	High	1	11.41
Other woodland; mixed	0.11	Medium	Poor - Moderate	High	1	0.85
Ponds (non-priority habitat)	0.01	Medium	Moderate - Good	Low	1	0.10
Total	**1.83**	-	-	-	-	**14.82**

Table D2: On-site created habitats

Habitat	Area	Distinctiveness	Condition	Strategic Significance	Advanced Creation (yrs)	Delayed creation (yrs)	Habitat Units
Developed land; sealed surface	9.47	V.Low	N/A - Other	Low	0	0	0.00
Artificial unvegetated, unsealed surface	8.45	V.Low	N/A - Other	Low	0	0	0.00
Modified grassland	186.34	Low	Poor	Low	1	0	372.68
Developed land; sealed surface	9.80	V.Low	N/A - Other	Low	0	0	0.00
Other neutral grassland	192.19	Medium	Moderate	Low	1	0	1333.31
Developed land; sealed surface	10.12	V.Low	N/A - Other	Low	0	0	0.00
Other neutral grassland	26.34	Medium	Moderate	Low	1	0	182.73
Other neutral grassland	50.45	Medium	Moderate	Low	0	1	325.92
Traditional orchards	2.15	High	Moderate	Low	0	0	12.21
Other woodland; broadleaved	0.42	Medium	Moderate	High	0	0	2.19
Mixed scrub	2.77	Medium	Moderate	Low	0	1	17.90
Other neutral grassland	13.28	Medium	Moderate	Low	0	1	92.13

Total	**498.50**	**-**	**-**	**-**	**-**	**-**	**2339.06**

Table D3: On-site enhanced hedgerow habitats

Habitat	Length (km)	Enhanced Habitat	Distinctiveness Change	Condition Change	Strategic Significance	Delay in enhancement	Hedgerow Units
Native hedgerow – associated with bank or ditch	2.11	Native hedgerow – associated with bank or ditich	Medium -Medium	Poor- Moderate	High	1	18.12
Total	**2.11**	-	-	-	-	-	**18.12**

Table D4: On-site created hedgerow habitats

Habitat	Length (km)	Distinctiveness	Condition	Strategic Significance	Delay in creation (yrs)	Hedgerow Units
native hedgerow	4.49	Low	Moderate	High	1	16.68
native hedgerow	0.43	Low	Moderate	High	1	1.60
native hedgerow	3.74	Low	Moderate	High	1	13.89
Total	**8.66**	-	-	-	-	**32.17**

Table D5: On-site enhanced watercourse habitats

Habitat	Length (km)	Distinctiveness	Condition Change	Strategic Significance	Delay in enhancement (yrs)	Watercourse Units
Ditches	29.54	Medium	Moderate - Good	High	1	347.95
Total	**29.54**	**-**	-	-	-	**347.95**

Table D6: On-site created watercourse habitats

Habitat	Length (km)	Distinctiveness	Condition	Strategic Significance	Delay in creation (yrs)	Watercourse Units
Culvert	0.08	Low	Poor	Low	0	0.15
Total	**0.08**	-	-	-	-	**0.15**

Table D7: Off-site created habitats (skylark enhancement area)

Habitat	Area	Distinctiveness	Condition	Strategic Significance	Advanced Creation (yrs)	Delayed creation (yrs)	Habitat Units
Ruderal/Ephemeral	0.2	Low	Moderate	Low	0	0	0.72
Total	**0.2**	**-**	**-**	**-**	**-**	**-**	**0.72**

APPENDIX E: LANDSCAPE STRATEGY PLAN

(document reference 6.2.6/PS-APP-135)