## Tillbridge <br> Solar

## Tillbridge Solar Project

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## 1. Introduction

1.1.1 AECOM were commissioned by Tillbridge Solar Limited (hereafter referred to as the 'Applicant') to undertake a Biodiversity Net Gain (BNG) assessment to inform the development consent order (DCO) application for the Tillbridge Solar Project (hereafter referred to as 'the Scheme'). The land within which the Scheme will be delivered and is therefore being assessed as part of this BNG assessment, is referred to as the 'BNG Parameters Plan' (hereafter referred to as 'the Site'). This area falls within the wider Order limits - an explanation for this approach is providing in Section 2.
1.1.2 The BNG assessment has been undertaken to quantify the overall effect of the Scheme upon the Site's biodiversity value. This is achieved by comparing the Site's baseline habitat value with that following implementation of the Scheme. Calculations consider the level of proposed habitat loss, retention, enhancement and/or creation delivered by the Scheme and are measured using DEFRA's Statutory Biodiversity Metric (Ref 1) in accordance with the User Guide (Ref 2) and best practice principles (Ref 3). The report sets out the results of the BNG assessment, including the methodology in Section 2, the results in Section 3, and the conclusions in Section 4.

### 1.2 Site Description

1.2.1 The BNG assessment assesses areas within the Order limits, as shown by the BNG Parameters Plan (hereafter referred to as the 'Site') boundary on the 'Baseline Plan' (Appendix A), including the Principal Site (in which the solar arrays are located) and the Cable Route Corridor. The Principal Site is located approximately 5 kilometres (km) to the east of Gainsborough, Lincolnshire (within the administrative district of West Lindsey). The Cable Route Corridor tracks south of the Principal Site, east of Willingham by Stow, before heading west towards the River Trent and south of Gate Burton. The Cable Route Corridor crosses into Nottinghamshire (within the administrative district of Bassetlaw) before connecting to National Grid Cottam Substation.
1.2.2 The Scheme covers an area of 1,670 hectares (ha) and is dominated by arable fields, with the Principal Site covering 1,350 ha and the Cable Route Corridor Site covering 320 ha. The area that has been assessed for BNG is based on the Indicative Principal Site Layout Plan (Figure 3-1 of Chapter 3: Scheme Description of the ES [EN010142/APP/6.3]) and covers a slightly smaller area, as explained in Section 2 of this report due to focussing the assessment on the illustrative construction right of way for the 400 kV high voltage export cable (to avoid overestimating the likely effects), and covers an area of $1,424.52$ ha. Numerous mature trees (including veterans) and hedges, woodlands, small wooded copses, and ditches are present within the Scheme. Areas surrounding the Scheme comprise mainly arable and improved grassland livestock fields.

### 1.3 The Scheme

1.3.1 The Scheme (presented in the 'Post-Development Plan' shown in Appendix B) will comprise the construction, operation (including maintenance), and decommissioning of ground-mounted solar photovoltaic (PV) arrays. The Scheme will also include associated development to support the solar PV arrays.
1.3.2 The Scheme is made up of the Principal Site, the Cable Route Corridor and works to the existing National Grid Cottam Substation. The Principal Site comprises the solar PV arrays, electrical substations, grid balancing infrastructure, cabling, and areas for landscaping and ecological enhancement.
1.3.3 The associated development element of the Scheme includes but is not limited to access provision; a Battery Energy Storage System (BESS) to support the operation of the ground mounted solar PV arrays; the development of on-site substations; underground cabling between the different areas of solar PV arrays; and areas of landscaping and biodiversity enhancement.
1.3.4 The Scheme also includes a 400 kV underground Cable Route Corridor of approximately 18.5 km in length connecting the Principal Site to the National Electricity Transmission System (NETS) at the existing National Grid Cottam Substation. The Scheme will export and import electricity to the NETS.
1.3.5 A full description of the Scheme is included in Chapter 3: Scheme Description of the Environmental Statement (ES) [EN010142/APP/6.1]. An overview of the Scheme and its environmental impacts is provided in the Non-Technical Summary [EN010142/APP/6.4].
1.3.6 The Scheme will be operational for 60 years, after which it will be decommissioned. All infrastructure and components will be removed from the Site, except for areas of woodland, tree, and hedge planting (bar perhaps discrete areas needed for access widening, for example), along with the two Onsite Substations. The Application also allows the option for abandoning the buried cables in situ at the end of the Scheme, depending on the approach to be agreed with the host councils and statutory stakeholders in the Decommissioning Environmental Management Plan (a Framework Decommissioning Environmental Management Plan (DEMP) [EN010142/APP/7.10] has been submitted with the DCO Application).

### 1.4 Policy context

## National Legislation

1.4.1 Government policy states that "planning decisions should minimise impacts on and provide net gain for biodiversity" (Ref 4).
$\begin{array}{ll}\text { 1.4.2 } & \text { As a Nationally Significant Infrastructure Project (NSIP), the Scheme will } \\ \text { require consent via a Development Consent Order (DCO), which is not } \\ \text { currently subject to mandatory BNG requirements. DCO applications will be } \\ \text { required to achieve } 10 \% \text { net gain in biodiversity units relative to the Site's }\end{array}$
baseline biodiversity value by November 2025 under Section 98 and 99 of the Environment Act, 2021 (Ref 5).
1.4.3 Overarching National Policy Statement EN-1 (Ref. 6) 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, or the wider environment where possible".

## Local Planning Policy

1.4.4 The Central Lincolnshire Local Plan (Ref. 7) includes Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains which states:
"Following application of the mitigation hierarchy, all development proposals should ensure opportunities are taken to retain, protect and enhance biodiversity and geodiversity features proportionate to their scale, through site layout, design of new buildings and proposals for existing buildings with consideration to the construction phase and ongoing site management.

Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains then goes onto discuss the local requirement of " $10 \%$ measurable biodiversity net gain" for "all qualifying developments". With the Scheme being a DCO, and therefore not a qualifying development (As defined in The Environment Act 2021, Schedule 14, Part 2, Paragraph 17, Ref 5), there is no obligation to meet these local requirements.

## Minimum BNG Requirement

1.4.5 There is currently no target BNG based on national or local policy, which equates to a $0 \%$ change.
1.4.6 Although not mandated for this NSIP, at a minimum, the Applicant is committed to providing a $10 \%$ net gain on a voluntary basis for the Scheme, in line with the approach to trading rules outlined in this report.

## 2. Methodology

### 2.1 Statutory Biodiversity Metric

2.1.1 The BNG assessment involves comparing the biodiversity value of habitats present within the Site before development (i.e., the 'baseline') and the predicted biodiversity value of habitats following the completion of the development (i.e., 'post-development'). The comparison is made in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.
2.1.2 The Statutory Biodiversity Metric (Ref. 1) (hereafter referred to as the 'Metric') calculates the overall loss or gain of biodiversity of development projects by assessing the distinctiveness (i.e., type of habitat and its value), condition, extent, and strategic significance of habitats on site pre- and postdevelopment, including both permanent and temporary land-take areas. To achieve BNG, the biodiversity unit score must have a post-development score higher than the baseline score.
2.1.3 When calculating the post-development biodiversity units, the Metric (Ref. 1) includes a series of standard 'risk multipliers' to account for the inherent risk of creating and restoring habitats, the time taken to establish habitats and the location of the mitigation in relation to the habitats lost on site. The risk multipliers reduce the value of the proposed habitats, which means larger areas, habitats of higher distinctiveness, and/or conditions are required to mitigate losses and achieve BNG.

### 2.1.4 The Metric is guided by the rules set out in Table 1.

Table 1. Metric Rules
Rule Explanation

Rule 1 - Trading rules

The trading rules try to prevent the 'trading down' of habitat distinctiveness. Under the trading rules, habitat losses are to be compensated for on a "like for like" or "like for better" basis.

Rule 2 - The requirement to deliver at least a 10\% net gain applies to each type of unit present on the Site

The Metric assesses and generates separate outputs for area-based habitats (measured in habitat units) and linear-based habitats, including hedgerows (measured in hedgerow units) and watercourses (measured in watercourse units). To claim a net gain in biodiversity, there must be an increase across all habitats, hedgerows, and river units. The units cannot be summed to give an overall biodiversity unit value; i.e., an increase in habitat and hedgerow units cannot offset a loss in watercourse units.

Rule 3 - Use of the Assessment must use the latest version of the Metric Metric released by DEFRA.

Rule 4 - Exceptional In exceptional ecological circumstances, the relevant circumstances planning authority may permit deviation from the required LPA Metric methodology. engagement
2.1.5 The information required to undertake the calculation is described below.

### 2.2 Assessment Boundary

2.2.1 The BNG assessment assesses the areas that fall within the BNG Parameters Plan (see Appendix A), otherwise referred to as the Site, instead of all areas within the Order limits. This approach is designed to focus on areas and habitats that are to be directly impacted by the Scheme and ensure that the proposed mitigation is proportionate to that impact. Therefore, areas that are not to be impacted to be excluded from the assessment (i.e. those areas where trenchless crossing methodology has been used to avoid impacts). This prevents the baseline habitat unit score from being inflated by areas of habitat that are not to be impacted and, therefore, does not disproportionately increase the required mitigation.
2.2.2 All areas within the Principal Site are assessed as part of the BNG assessment. The above approach primarily applies to the Cable Route

Corridor, the boundary for which is larger than the proposed impacts (allows for flexibility in design and route optioneering). The BNG assessment has based the assessment boundary for the BNG calculations within the Cable Route Corridor on the preferred cable alignment within that corridor and has assessed all areas within the proposed temporary fencing. This temporary fencing boundary has then been combined with the vegetation removal layer to gap fill in locations where temporary fencing is not proposed.
2.2.3 Should the preferred cable alignment change within the Cable Route Corridor as the design progresses, it is not anticipated that it would substantially change the overall conclusions of this assessment, as it is likely that neighbouring habitats will be of similar habitat types. The Applicant is committed to calculating the BNG in liaison with the host councils postconsent based on the detailed design once the alignment has been selected.

### 2.3 Terrestrial Baseline Data

2.3.1 Phase 1 Habitat data collected by AECOM between June and September 2022, with follow up surveys in June through until November 2023 (habitat condition data was collected during these follow up surveys), as detailed within Chapter 9: Ecology and Nature Conservation of the ES
[EN010142/APP/6.1] have been utilised to determine the Site's baseline area-based, hedgerow and watercourse habitats. Arboricultural data collected by AECOM between August 2022 and January 2024 as detailed within Appendix 12-7: Arboriculture Impact Assessment of the ES [EN010142/APP/6.2] have been utilised to determine the Site's baseline tree data. This arboricultural data combined with the Phase 1 Habitat data is hereafter referred to as the 'baseline'. The baseline habitats were converted from standard Phase 1 Habitat types (Ref 8) to UKHab Classification categories (Ref 9) (Appendix C.1) before being digitised in the Geographic Information System (GIS) to provide area and length measurements of each habitat type.
2.3.2 A suitably qualified ecologist assigned a condition to all baseline habitats defined within the Site using the condition assessment criteria outlined in the Metric Technical Annex 1: Condition Assessment Sheets and Methodology (Ref. 10). The data was aggregated and entered into the Metric (Ref. 1) to calculate the baseline biodiversity units.

### 2.4 Watercourse Baseline Data

2.4.1 For rivers, habitat categories, associated distinctiveness, and condition scores have been defined as the Metric Technical Annex 1: Condition Assessment Sheets and Methodology (Ref 10). A desk study was undertaken to identify all watercourse habitats present within the Site using the 'Discovering Priority Habitat in England' river data map (Ref 11). Following this, water body habitats were assigned a habitat category (according to the criteria: Priority Habitat, Other Rivers and Streams, Ditches, Canals, Culvert) and distinctiveness using Section 41 of the NERC Act's Priority Habitat descriptions (Ref 12).

[^0]for access road crossings, open-cut crossings, and changes to the riparian zone. Only water bodies that have been assessed as being impacted by the Scheme have been included in this BNG assessment.
2.4.3 Watercourse crossings were given a "sensitivity classification" based on assessment of aquatic ecology receptors and the severity of potential impact from the Scheme. Only higher sensitivity water bodies with potential impacts from crossing points were surveyed. Water bodies with lower sensitivity were given a precautionary condition by way of a desk-based assessment of readily available information from previous surveys, as well as arial imagery.
2.4.4 Habitat classification, length measurement values, strategic significance, condition data and watercourse and riparian encroachment information were then inputted to the Metric to determine the baseline biodiversity units for watercourse habitats within the Site.

### 2.5 Post-Development Data

2.5.1 The Landscape Masterplan presented in the Framework Landscape and Ecology Management Plan (LEMP) [EN010142/APP/7.17] has been used to determine the extent and type of habitats to be lost, retained and/or created post-development. Habitats in the Framework LEMP
[EN010142/APP/7.17] were converted to UKHab Classification categories (Appendix C.2) before being digitised into GIS to produce the 'PostDevelopment' Plan (Appendix B). Target condition scores for the proposed habitats were selected in accordance with the Metric User Guide (Ref. 2) using professional judgement to ensure the condition scores selected were realistic. The data was utilised to predict the post-development biodiversity units.
2.5.2 The majority of works within the Cable Route Corridor are temporary or involve avoiding impacts to habitats via trenchless crossing methods. It is intended that the majority of habitats will be either retained or reinstated post-construction. The Metric User Guide (Ref. 2) states "Where a habitat is disturbed for a short period of time, it may be considered temporary loss if specific criteria are met. If these criteria are met, then the habitat may be recorded as 'retained' within the metric tool. The temporary loss option is only available for disturbed habitats that can be restored (in full) to their baseline condition (or better) within 2 years from the date of impact". This is likely to apply to the Cable Route Corridor, but given the uncertainty at this stage and to take a worst case approach as the predicted construction period for the Scheme is anticipated to be $24-36$ months, it is assumed temporary works within the Cable Route Corridor will not qualify for the 'retained' status within the Metric, and they will not be reinstated within a two-year time period. In this instance, temporarily lost habitats were inputted as 'lost' and subsequently 'created' within the Metric to accurately capture the timing of reinstatement.

### 2.6 Strategic Significance

2.6.1 The Metric (Ref. 1) requires that the strategic significance (hereafter referred to as 'SS') of all baseline and post-development habitats be defined. SS refers to strategic locations for local biodiversity and nature improvements,
identified within local planning policies. The process of how the SS of a habitat is assessed is shown in Table 2.

Table 2. Strategic Significance Guidance
SS Category Description
High Where there is a published Local Nature Recovery Strategy (Ref 13) (LNRS) assign 'High' SS if:

- The location of the habitat parcel has been mapped in the Local Habitat Map as an area where a potential measure has been proposed to help deliver the priorities of that LNRS; and,
- The Scheme is consistent with the potential measure proposed for that location.
OR
- Where there is no published LNRS, but the habitat type is mapped and described as locally ecologically important within a specific location within documents specified by the relevant planning authority.
- If the Scheme is proposed to contribute towards priorities or measures set out in the LNRS (or alternative strategy), assign 'Low' SS to the baseline habitat and 'High' SS to the proposed habitat.

| Medium | This category cannot be applied where the LNRS is <br> published, or where the habitat and location is included <br> within other strategic documents specified by the relevant <br> planning authority. |
| :--- | :--- |
| Using professional judgement, assign 'Medium' SS if: |  |
| - It can be explained how the habitat type is |  |
| ecologically important within a specific location; |  |
| and/or, |  |
| - It can be demonstrated the importance of that habitat |  |
| in providing ecological linkage to other strategically |  |
| significant locations. |  |

If the Scheme falls within a plan area, but either of the baseline or post-development habitats do not contribute to specific actions and priorities outlined in these plans, 'Low' SS should be assigned.
2.6.2 As part of this assessment, the following relevant documents were reviewed to determine the SS of the habitats on the Site:
a. Central Lincolnshire Local Plan - StatMap Aurora Online Mapping (Ref 14).
b. No biodiversity opportunity areas or similar are present within Nottinghamshire.

## c. Chapter 9: Ecology and Nature Conservation of the ES

 [EN010142/APP/6.1]:i. Willingham to Fillingham Road Verges Local Wildlife Site (LWS);
ii. Cow Pasture Lane Drains LWS; and
iii. Upton Grange Road Verges LWS.
d. MAGIC (Ref 15).
2.6.3 Detailed information is presented in Appendix $\mathbf{D}$ on how $S S$ has been assigned.

### 2.7 BNG Good Practice Principles for Development

2.7.1 Justification for how the BNG Good Practice Principles (Ref. 3) have been applied during this BNG assessment is provided in Appendix E.

### 2.8 Assumptions

2.8.1 In undertaking the calculation, the following assumptions have been made:

## Area Based Habitats and Hedgerows

a. Habitats created as part of the Scheme will be subject to appropriate ongoing management as set out in the Framework LEMP
[EN010142/APP/7.17] and will be monitored to ensure correct establishment and growth. Remedial action will be taken if this does not proceed as expected to achieve the target conditions in the specified timeframes according to the Metric.
b. Guidance published by Building Research Establishment 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" (Ref 16). Therefore, $95 \%$ of the solar array footprint within the Site have been categorised as the 'Grassland - Modified grassland', with the remaining $5 \%$ categorised as 'Urban - Developed land; sealed surface' to take into account array infrastructure. This approach is understood to be supported by the Royal Society for the Protection of Birds (Ref 17).
c. Areas of modified grassland under panels have been assigned a postdevelopment target condition of 'Poor' to acknowledge both the prolonged levels of shading these areas will receive over the Scheme's lifetime and the seed mixes and management prescriptions as specified in the Framework LEMP [EN010142/APP/7.17].
d. Any loss of biodiversity units arising from temporary impacts within the Cable Route Corridor will be 'offset' within the Principal Site.
e. No time delay in habitat creation has been applied as works are expected to be completed between 24-36 months. However, this does rule out the potential for 'temporary impacts' to habitats being considered as retained as habitats will be temporarily impacted for a period of longer than two years.
f. All baseline habitats of the same type and condition have been aggregated within the Metric due to the findings from the ecology survey concluding relative uniformity within habitat types across the Site.
g. Where temporary access points or visibility splays are proposed, hedgerows have been assumed to be lost and reinstated.
h. Where permanent access points or visibility splays are proposed, permanent hedgerow loss has been assumed.
i. The design of the Biodiversity Enhancement areas has not yet been defined; the details of these areas are to be finalised at a later design stage. For the purposes of this BNG assessment, these areas have been assigned habitats by percentage cover. This includes:
i. $70.00 \%$ - Grassland - Other neutral grassland;
ii. $12.50 \%$ - Woodland and forest - Other woodland; broadleaved;
iii. 12.50\% - Heathland and shrub - Mixed scrub;
iv. $4.00 \%$ - Grassland - Lowland calcareous grassland; and,
v. $1.00 \%$ - Lakes - Ponds (non-priority habitat).
j. Precautionary conditions of 'Moderate' have been assigned to all habitats proposed within the Biodiversity Enhancement areas.

## Watercourse Habitats

2.8.2 The watercourse metric assessment was completed based on a worst-case scenario of impacts, which consisted of the following assumptions:
a. Culverts have been assessed as being permanent due to being in place for 24-36 months. If culverts are removed post-construction, it is proposed that a further BNG assessment of watercourses is undertaken, or this is updated during detailed design to ensure the baseline condition is representative of that at the time.
b. Trenchless crossing will be used for cable laying under the higher sensitivity waterbodies;
c. For the open cut crossings, a single trench will be installed. It is assumed that this trench would have a maximum width of 3.5 m .
d. Open cut crossings have been assessed as being permanent due to the works taking place for 24-36 months. Watercourses crossed by open cut methods will be fully reinstated following construction, so a further BNG assessment of these watercourses post-construction is proposed.
e. Watercourses that are crossed by trenchless crossing or other nonintrusive crossings have been scoped out of this assessment. It is assumed that any launch and receive pits for trenchless crossing and non-intrusive crossings will lie outside of the 10 m riparian zone for rivers and 5 m riparian zone for ditches.
f. If there are no changes between the baseline and post-development riparian zone habitat for a watercourse, and there are no other impacts (culverts or open cut crossings), that watercourse has been scoped out of this assessment.
g. It is assumed that where post-development biodiversity enhancement areas are present within the riparian zones of watercourses, the riparian zone will be unmanaged post-development.
h. Where habitat condition has been assigned from desk-based assessment alone, i.e., for watercourses of low sensitivity, a reasonable precautionary approach has been adopted to prevent underestimating the value of the baseline habitat.
i. There are some watercourses within the Site which are not included within this BNG assessment as it is understood under the current design there will be no impacts to these ditches, watercourses, or their riparian zones ( 10 m from the bank-top on either side for rivers, or 5 m from the bank-top either side for ditches).
j. Some ditches were scoped out of the Metric assessment based on the assessment that they likely do not hold water for more than four months of the year (Ref. 2), and therefore, they are assessed as part of the adjacent area-based habitats or associated features.
k. If proposed lengths of enhancements are not adhered to, there is potential for a loss of watercourse habitat units.

### 2.9 Constraints or limitations

## Area Based Habitats, Hedgerows and Watercourse Habitats

2.9.1 The following limitations also apply:
a. The total areas of the Principal Site and the Cable Route Corridor may vary slightly between the baseline and post-development data within the Metric. This difference is caused by the rounding of areas and lengths of individual habitats within the dataset to three decimal places. This has a negligible impact on the assessment as a whole due to the minor variation in area and lengths.
b. The BNG assessment has assessed the Framework LEMP
[EN010142/APP/7.17], which represents the minimum planting and a likely concept layout based on maximum parameters. The calculation will therefore be updated as part of the detailed design stage of the Scheme to reflect the final design, to demonstrate a minimum $10 \%$ BNG is achieved (based on the approach to trading rules outlined in this report) and with aspirations to improve the BNG outcome presented in this report. Any updates to habitat surveys required as part of this update will also be actioned at this point.
c. All habitat areas and lengths have been measured using ArcGIS based on the Phase 1 Habitat data (see Chapter 9: Ecology and Nature Conservation of the ES [EN010142/APP/6.1] for details) and the Framework Landscape and Ecological Management Plan [EN010142/APP/7.17], as such habitat areas and lengths are approximations only.
d. Any habitats that were not assigned a condition during the field survey have been assigned condition based on their distinctiveness score. For example, 'High' distinctiveness habitats have been assigned 'Good' condition, 'Medium' distinctiveness habitats have been assigned
'Moderate' condition, and 'Low' distinctiveness habitats have been assigned 'Poor' condition.
e. The Arboricultural data (see Appendix 12-7: Arboriculture Impact Assessment of the ES [EN010142/APP/6.2]) collected tree data in groups with no reference to the number of individual trees present within the group in some areas of the Site. In these situations, the root protection area of the group has been used as the area measurement for 'Individual trees - Rural tree' with an assumed condition of 'Moderate' assigned based on the distinctiveness of the habitat.

## 3. Results

### 3.1 Baseline Habitats

3.1.1 The Site for which this BNG assessment is based covers a total area of $1,424.52$ ha. The habitats identified on-site vary in ecological value, ranging from 'High' to 'V. Low' distinctiveness. The most dominant habitat on site is 'Cropland - Cereal crops'. A total of 68.05 km of hedgerow habitat are present on-site and 10.32 km of watercourse habitats on-site have been scoped into the assessment, all of which are classified as 'Ditches'. All other watercourses present on-site have been scoped out of the assessment as they will not be impacted. The 'Baseline Habitat Plan' is provided in Appendix A. Detailed descriptions of baseline habitats can be found within the Chapter 9: Ecology and Nature Conservation of the ES [EN010142/APP/6.1]. Details of habitat condition scores and associated data can be provided upon request.

## Irreplaceable Habitat

3.1.2 Veteran trees are present on-site, these trees being of 'Very Large', 'Large' and 'Medium' size. These trees are not to be impacted by the Scheme. Details of these trees are provided in Table 3.

Table 3. Veteran Trees

| Tree Size | Tree References |
| :--- | :--- |
| Very Large | T205, T280, T9, T73, T127, T367, T452, T494, T537, T554 |
| Large | T288, T290, T297, T300, T347, T56, T57, T114, T882 |
| Medium | T541 |

## Baseline Habitats - SS

3.1.3 As outlined in Section 2.6, SS has been assigned to all baseline habitats present within the Site, as follows:
a. 'High' SS has been assigned to habitats if they fall within one of the following areas: the Lincolnshire Area of Great Landscape Value, or any of the local wildlife sites (Upton Grange Road Verges, Cow Pasture Lane

Drains, Willingham to Fillingham Road Verges). These areas are considered strategically significant and thus meet the requirement for habitats achieving 'High' SS. The only exceptions to this are areas of 'Urban - Developed land; sealed surface’ which have been assigned 'Low' SS;
b. 'Medium' SS has been assigned to habitats based on the potential value these habitats provide to protected species (in situations where these habitats fall with 'High' SS areas, 'High' SS has been assigned):
i. Ground-nesting birds:

1. Cropland - Arable field margin cultivated annually.
2. Cropland - Cereal crops.
ii. Great Crested Newts:
3. Lakes - Ponds (non-priority habitat).
iii. Bats:
4. Woodland and forest - Lowland mixed deciduous woodland.
5. Woodland and forest - Other woodland; broadleaved.
6. Individual trees - Rural tree.
iv. All hedgerow habitat types present on-site have been identified as providing important habitat connectivity throughout the Site.
c. 'Low' SS has been assigned to all habitats that are neither located within a strategically significant location nor provide value to protected species.

## Baseline Habitat Units

3.1.4 The baseline biodiversity value was calculated as $3,312.17$ units for areabased habitats, 582.29 units for hedgerow habitats and 59.05 for watercourse habitats. See Appendix F for further detail.

### 3.2 Post-Development Habitats

3.2.1 The Framework LEMP [EN010142/APP/7.17] includes the retention of 51.84 ha of baseline area-based habitat, the creation of $1,382.30$ ha of areabased habitat and the enhancement of 0.33 ha of baseline area-based habitat. The habitats identified on the Site post-development vary in ecological value, ranging from 'High' to 'V. Low' distinctiveness.
3.2.2 A total of 5.52 km of hedgerow habitats will be lost due to the development of the Scheme, while 52.10 km will be retained in current condition. A total of 10.43 km of hedgerow habitats will be enhanced and 15.30 km of hedgerow habitats will be created.
3.2.3 A total of 0.10 km of watercourse habitats will be lost due to the construction of culverts and through open-cut crossings, while 1.55 km of watercourse habitats will be retained in current condition. A total of 8.67 km of watercourse habitats will be enhanced, predominantly as a result of the
reduction in riparian zone management along many of the watercourses scoped into the assessment. A further 0.05 km of culverts will be created.

### 3.2.4 The post-development habitats are shown on the 'Post-Development Habitat Plan' in Appendix B.

## Post-Development Habitats - SS

3.2.5 SS has been assigned to post-development habitats following the same methodology as baseline habitats.

## Retained Habitats

3.2.6 The habitats that are due to be retained within the Scheme are detailed in Appendix F. In total, 226.20 area-based habitat units, 466.45 hedgerow units, and 7.78 watercourse units are proposed to be retained.
3.2.7 Watercourses that are to be retained are those that were scoped into the assessment due to a change in riparian zone habitat from the baseline to the post-development scenario, but where this change does not result in a change to the riparian zone encroachment. Where the riparian zone encroachment does change, as a result of a change to the riparian habitat, this was recorded as enhanced due to the positive impact from removal of riparian encroachment.

## Enhanced Habitats

3.2.8 The habitats due to be enhanced within the Scheme are detailed in Appendix F. In total, the proposed enhancements will result in the delivery of 2.88 area-based habitat units (uplift of 1.49 area-based habitat units), 109.76 hedgerow units (uplift of 41.44 hedgerow units) and 64.78 watercourse units (uplift of 13.92 watercourse units).
3.2.9 All watercourse enhancements are based on reduced management of the riparian zone, and therefore reduced riparian zone encroachment. There are no in-channel enhancements proposed.

## Created Habitats

3.2.10 The habitats due to be retained within the Scheme are detailed in Appendix F. In total, 5,221.14 area-based habitat units, 106.98 hedgerow units and 0.04 watercourse units are proposed to be created.
3.2.11 Created watercourse habitats are a result of new culverts being created on several watercourses.

### 3.3 Summary of Results

3.3.1 All baseline habitats and habitats created and retained are present within the accompanying Metric (Ref. 1) assessment for the Scheme (Appendix G). A summary of the results is shown in Table 4.

Table 4. Summary of Results

| Habitat Type | Baseline | Post- <br> Development | Total Net Unit <br> Change | Total Net \% <br> Change |
| :--- | :---: | :---: | :---: | :---: |
| Area-Based <br> Units | $3,312.17$ | $5,450.22$ | $+2,138.05$ | $64.55 \%$ |
| Hedgerow <br> Units | 582.29 | 683.19 | +100.90 | $17.33 \%$ |
| Watercourse <br> Units | 59.05 | 72.60 | +13.55 | $22.94 \%$ |

## Trading Rules

## Area-Based Habitats

3.3.2 For area-based habitats, the trading rules within the Metric (Ref. 1) are satisfied for 'High' and 'Low' distinctiveness habitats (see Table 5). However, 'Medium' distinctiveness habitats are currently not satisfied. This failure is caused by losses to 'Cropland - Arable field margins cultivated annually’ and 'Individual trees - Rural tree'. Despite the trading rules not being passed, qualitatively, it is deemed that the increased provision of proposed 'Grassland - Other neutral grassland' and 'Woodland and forest - Other woodland; broadleaved' provide similar functional benefits to 'Cropland Arable field margins cultivated annually' and 'Individual trees - Rural tree'. Therefore, the failure in 'Medium' distinctiveness habitats is recommended to be considered acceptable in this case. It is not deemed suitable to retain/create the 'Cropland - Arable field margins cultivated annually' when the Site will to be converted to a grassland / solar array mix and a margin habitat of 'Grassland - Other neutral grassland' is more suitable to this habitat composition. This would also not meet the objectives of the Scheme to deliver a solar energy project, if having to retain arable land to achieve the trading rules, which would miss an opportuntiy to provide renewable energy and offset greenhouse gas emissions from alternative energy sources.
3.3.3 Despite overall losses for 'Low' distinctiveness habitats, these losses are offset by gains in 'Medium' distinctiveness habitats.

Table 5. Trading Rules - Area-Based Habitats

| Broad Habitat | Habitat Type | Distinctiveness Group | Trading Rule | Unit Change per habitat | Trading Satisfied? |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grassland | Lowland calcareous grassland | High | Same habitat required | +23.91 | Yes |
| Woodland and forest | Lowland mixed deciduous woodland |  |  | 0.00 |  |
| Cropland | Arable field margins cultivated annually | Medium | Same broad habitat or a higher distinctiveness habitat required | -42.31 | No |
| Grassland | Other neutral grassland |  |  | +3034.27 |  |
| Heathland and shrub | Mixed scrub |  |  | +192.80 |  |
| Lakes | Ponds (non-priority) |  |  | +17.51 |  |
| Individual trees | Rural tree |  |  | -3.58 |  |
| Woodland and forest | Other woodland; broadleaved |  |  | +334.62 |  |
| Cropland | Cereal crops | Low | Same distinctiveness or better habitat required | -2681.42 | Yes |
| Grassland | Modified grassland |  |  | +1269.89 |  |
| Sparsely vegetated land | Ruderal / ephemeral |  |  | -6.30 |  |
| Urban | Bare ground |  |  | -1.33 |  |
| Total | - | - | - | +2138.05 | - |

## Hedgerow Habitats

3.3.4 For hedgerow habitats, the trading rules within the Metric (Ref. 1) are currently satisfied for each distinctiveness level (see Table 6).

Table 6. Trading Rules - Hedgerow Habitats

| Habitat Group | Distinctiveness Group | Trading Rule | Unit Change | Trading Satisfied? |
| :---: | :---: | :---: | :---: | :---: |
| Species-rich native hedgerow with trees associated with bank or ditch | V. High | Same habitat required | +19.34 | Yes |
| Species-rich native hedgerow with trees | High | Like for like or better | -4.05 | Yes |
| Species-rich native hedgerow associated with bank or ditch |  |  | +3.47 |  |
| Native hedgerow with trees associated with bank or ditch |  |  | +0.79 |  |
| Species-rich native hedgerow | Medium | Same distinctiveness or better habitat required | +73.41 | Yes |
| Native hedgerow associated with bank or ditch |  |  | -0.74 |  |
| Native hedgerow with trees |  |  | +5.60 |  |
| Native hedgerow | Low | Same distinctiveness or better habitat required | +4.73 | Yes |
| Line of trees |  |  | +0.85 |  |
| Line of trees associated with bank or ditch |  |  | -2.49 |  |
| Total | - | - | +100.90 | - |

## Watercourse Habitats

3.3.5 For watercourse habitats, the trading rules within the Metric (Ref. 1) are currently satisfied for each distinctiveness level (see Table 7).

Table 7. Trading Rules - Watercourse Habitats

| Habitat <br> Group | Distinctiveness <br> Group | Trading Rule | Unit <br> Change per <br> habitat | Trading <br> Satisfied? $?$ |
| :--- | :---: | :---: | :---: | :---: |
| Ditches | Medium | Same habitat <br> required $=$ | +13.50 | Yes |
| Culvert | Low | Better <br> distinctiveness <br> habitat required | +0.04 | Yes |
| Total | - | - | $\mathbf{+ 1 3 . 5 5}$ | - |

## 4. Conclusion

4.1.1 Based on the current plans for the Site, the Scheme is predicted to result in a net gain of $64.55 \%$ for area-based habitat units, $17.33 \%$ for hedgerow units, and $22.94 \%$ for watercourse units. The Scheme, therefore, is considered to exceed the BNG target of $>0 \%$ BNG and the Applicant's commitment for 10\% BNG for each habitat type despite the trading rules not being passed.
4.1.2 The outputs of the Metric (Ref. 1) depend on all created and enhanced habitats meeting the target conditions, subject to the criteria outlined within Metric User Guide (Ref. 2). Habitats would need to be monitored to ensure correct establishment and growth, and remedial action would need to be taken if this does not proceed as expected. Otherwise, the target conditions used in the calculations may not be met, and the predicted biodiversity units might not be achieved.

## Appendix A Baseline Habitat Plan










## Appendix B Post-Development Habitat Plan










## Appendix C Habitat Classification Conversions

## C. 1 Phase 1 Habitat to UKHab Conversion

| Phase 1 Habitat Classification | UKHab Classification |
| :--- | :--- |
| J5 - Other habitat | Cropland - Arable field margins game bird mix |
| J1.1 - Cultivated/disturbed land - arable | Cropland - Cereal crops |
| B3.2 - Calcareous grassland - semi-improved | Grassland - Lowland calcareous grassland |
| B1.2 - Acid grassland - semi-improved | Grassland - Modified grassland |
| B4 - Improved grassland | Grassland - Modified grassland |
| B6 - Poor semi-improved grassland | Grassland - Modified grassland |
| J1.2 - Cultivated/disturbed land - amenity grassland | Grassland - Modified grassland |
| B2.2 - Neutral grassland - semi-improved | Grassland - Other neutral grassland |
| A2.1 - Scrub - dense/continuous | Heathland and shrub - Mixed scrub |
| A2.2 - Scrub - scattered | Heathland and shrub - Mixed scrub |
| G1 - Standing water | Lakes - Ponds (non-priority habitat) |
| C3.1 - Other tall herb and fern - ruderal | Sparsely vegetated land - Ruderal/ephemeral |
| J1.3 - Cultivated/disturbed land - ephemeral/short perennial | Sparsely vegetated land - Ruderal/ephemeral |
| I2.2 - Spoil | Urban - Bare ground |
| J4 - Bare ground | Urban - Bare ground |
| Hardstanding | Urban - Developed land; sealed surface |
| J3.6 - Buildings | Urban - Developed land; sealed surface |


| Watercourse | Watercourse footprint - Watercourse footprint |
| :--- | :--- |
| A1.1.1 - Broadleaved woodland - semi-natural | Woodland and forest - Lowland mixed deciduous woodland |
| A1.3.1 - Mixed woodland - semi-natural | Woodland and forest - Lowland mixed deciduous woodland |
| A1.1.2 - Broadleaved woodland - plantation | Woodland and forest - Other woodland; broadleaved |
| A1.3.2 - Mixed woodland - plantation | Woodland and forest - Other woodland; mixed |

## C. 2 Framework Landscape Masterplan to UKHab Conversion

## Tillbridge Masterplan Classification

## UKHab Classification

Proposed areas of solar panels with sbz i-improved grassland 95\%-Grassland - Modified grassland
beneath $5 \%$ - Urban - Developed land; sealed surface
Proposed 'Solar Stations' And Battery Energy Urban - Developed land; sealed surface
Storage Stations (Bess)

| Proposed Gravel Maintenance Access Tracks | Urban - Artificial unvegetated; unsealed surface |
| :--- | :--- |
| Proposed Infrastructure: Substations, Office, Storage | Urban - Developed land; sealed surface |

Proposed Timber/Wire Mesh Deer Fence With Cctv Cameras On Fences not included in the assessment Poles

| Proposed New Native Woodland Planting | Woodland and forest - Other woodland; broadleaved |
| :--- | :--- |
| Proposed Biodiv (E.G. Hedgerows, Grassland For Ground Nesting | $70.00 \%$ - Grassland - Other neutral grassland |
| Birds, Wood Pasture, Wetlands, Species-Rich Meadows) | $12.50 \%$ - Woodland and forest - Other woodland; broadleaved |
|  | $12.50 \%$ - Heathland and shrub - Mixed scrub |
|  | $4.00 \%$ - Grassland - Lowland calcareous grassland |
|  | $1.00 \%$ - Lakes - Ponds (non-priority habitat) |

Other Proposed Areas Of Grassland (Including Species-Rich) Outside Grassland - Other neutral grassland Of Panel And Access Track Areas

## Appendix D Strategic Significance Rationale

| Source | Strategic Significance Information |
| :---: | :---: |
| Central Lincolnshire Local Plan (Ref. 7) | Policy S60: Protecting Biodiversity and Geodiversity |
|  | "All development should: |
|  | - protect, manage, enhance and extend the ecological network of habitats, species and sites of international, national and local importance (statutory and non-statutory), including sites that meet the criteria for selection as a Local Site" |
|  | - Irreplaceable Habitats Planning permission will be refused for development resulting in the loss, deterioration or fragmentation of irreplaceable habitats, including ancient woodland and aged or veteran trees, unless there are wholly exceptional reasons and a suitable compensation strategy will be delivered. |
|  | - Local Sites (LNR, LWS and LGS) Development likely to have an adverse effect on locally designated sites, their features or their function as part of the ecological network, will only be supported where the benefits of the development clearly outweigh the loss, and the coherence of the local ecological network is maintained. Where significant harm cannot be avoided, the mitigation hierarchy should be followed |
|  | Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains |
|  | "Development proposals should create new habitats, and links between habitats, in line with Central Lincolnshire Biodiversity Opportunity and Green Infrastructure Mapping evidence." |
|  | Application to assessment |
|  | - All habitats located within LWS's assigned 'High' SS. <br> - All habitats considered irreplaceable assigned 'High' SS |


| Central Lincolnshire | An area running north to south through the site has been considered strategically significant because it falls within <br> Council - StatMap <br> the boundary for the 'Area of Great Landscape Value' (Policy LP17). These areas are of significance because "the |
| :--- | :--- |
| Aurora Online | wider Central Lincolnshire landscape is a green, species rich area". This policy is in place "to ensure that |
| Mapping (Ref 14). | development will not have an adverse impact upon the rural character of the landscape, biodiversity and upon <br> heritage assets". |
|  | Application to assessment |

Chapter 9: Ecology The following habitats have been considered to be of value to the following protected species. and Nature

Ground-nesting birds:

## Conservation of the

 ES
## [EN010142/APP/6.1]

- Cropland - Arable field margin cultivated annually.
- Cropland - Cereal crops.


## Great Crested Newts:

- Lakes - Ponds (non-priority habitat) - one pond confirmed as having GCN presence.

Bats:

- Woodland and forest - Lowland mixed deciduous woodland.
- Woodland and forest - Other woodland; broadleaved.
- Individual trees - Rural tree

All hedgerow habitat types present on-site have been identified as providing important habitat connectivity throughout the Site.

## Application to assessment

'Medium' SS at least assigned to all of the above habitats (in the case of 'Lakes - Ponds (non-priority habitat) this only applies to the pond which had confirmed GCN presence), with 'High' SS assigned if present within a strategically significant area.

MAGIC (Ref 15) Priority habitats including Deciduous Woodland, Good quality semi-improved grassland, Coastal and Floodplain Grazing Marsh may fall within the Site.

## Application to assessment

No direct impact on SS.

Planning Inspectorate Scheme Ref. EN010142
Application Document Ref. EN010142/APP/7.14

## Appendix E BNG Good Practice Principles for Development

| Principle | How has this been applied in the assessment |
| :--- | :--- |
| Principle 1: Apply the Mitigation Hierarchy | As much habitat is proposed to be retained as possible within the remits of the <br> assumptions made. Where possible, hedgerow habitats were enhanced, and <br> habitats have been proposed to be created on-site. |
| Principle 2: Avoid losing biodiversity that <br> cannot be offset by gains elsewhere | There is no loss of irreplaceable biodiversity due to take place on-site. All veteran <br> trees present are to be retained. |
| Principle 3: Be inclusive and equitable | No Stakeholder engagement was required for this BNG assessment. |
| Principle 4: Address risks | All risks regarding difficulties achieving net gains for the project have been mitigated <br> appropriately by means of sufficient provision of compensatory habitats, which has <br> enabled the project to achieve net gains. There was a particular focus on limiting <br> impacts to 'High' distinctiveness habitat, and thus all 'Woodland and forest - <br> Lowland mixed deciduous woodland' is proposed to be retained. Though 'Grassland |
| - Lowland calcareous grassland' is proposed to be impacted, it is proposed that the |  |
| biodiversity enhancement area will incorporate creation of this habitat, and thus, the |  |
| risks have been mitigated. |  |

The Site is proposed to transform from a relatively sparse arable landscape to a diverse range of interconnected grasslands. Focused areas for biodiversity enhancement have been allocated.

## Principle 7: Be additional

The area habitat BNG exceeds the minimum BNG commitment of $10 \%$ committed to by the Applicant.

A net gain legacy is to be achieved on this Site by achieving net gains in all habitat types.

## Principle 9: Optimise sustainability

This project will create a Solar Farm that will provide communities with renewable energy which will reduce the reliance on fossil fuels.

Principle 10: Be transparent
All BNG activities have been communicated transparently in this BNG report and associated Metric (Ref. 1).

## Appendix F Data Tables

## Baseline Data

Baseline Area-Based Habitats

| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | Ss | Habitat <br> Units |
| :--- | :--- | :---: | :--- | :--- | :--- | :--- | :--- |
| Cropland | Arable field margins cultivated <br> annually | 9.617 | Medium | Condition Assessment <br> N/A | Medium | 42.31 |
| Cropland | Cereal crops | 130.013 | Low | Condition Assessment <br> N/A | High | 299.03 |
| Cropland | Cereal crops | 18.038 | Low | Condition Assessment |  |  |
| N/A | Medium | 39.68 |  |  |  |  |
| Cropland | Cereal crops | 1123.879 | Low | Condition Assessment | Medium | 2472.53 |
| Grassland | Lowland calcareous grassland | 0.07 | High | Good | Low | 1.26 |
| Grassland | Lowland calcareous grassland | 0.035 | High | Good | High | 0.72 |
| Grassland | Lowland calcareous grassland | 0.083 | High | Good | High | 1.72 |
| Grassland | Modified grassland | 4.068 | Low | Poor | Low | 8.14 |
| Grassland | Modified grassland | 2.51 | Low | Poor | Low | 5.02 |
| Grassland | Modified grassland | 0.029 | Low | Poor | Low | 0.06 |
| Grassland | Modified grassland | 88.001 | Low | Poor | Low | 176.00 |
| Grassland | Modified grassland | 0.028 | Low | Poor | High | 0.06 |
| Grassland | Modified grassland | 2.116 | Low | Poor | High | 4.87 |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | SS | Habitat <br> Units |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Grassland | Modified grassland | 0.042 | Low | Poor | High | 0.10 |
| Grassland | Modified grassland | 5.015 | Low | Poor | High | 11.53 |
| Grassland | Modified grassland | 0.038 | Low | Poor | High | 0.09 |
| Grassland | Modified grassland | 0.04 | Low | Poor | High | 0.09 |
| Grassland | Other neutral grassland | 0.79 | Medium | Moderate | Low | 6.32 |
| Heathland and shrub | Mixed scrub | 2.125 | Medium | Moderate | Low | 17.00 |
| Heathland and shrub | Mixed scrub | 0.289 | Medium | Moderate | Low | 2.31 |
| Heathland and shrub | Mixed scrub | 0.208 | Medium | Moderate | Low | 1.66 |
| Heathland and shrub | Mixed scrub | 0.188 | Medium | Poor | Low | 0.75 |
| Heathland and shrub | Mixed scrub | 0.215 | Medium | Poor | High | 0.99 |
| Lakes | Ponds (non-priority habitat) | 1.505 | Medium | Moderate | Low | 12.04 |
| Lakes | Ponds (non-priority habitat) | 0.138 | Medium | Moderate | Medium | 1.21 |
| Sparsely vegetated | Ruderal/ephemeral | 3.152 | Low | Poor | Low | 6.30 |
| land |  | 0.061 | Low | Poor | Low | 0.12 |
| Urban | Bare ground | 4.05 | Low | Poor | Low | 8.10 |
| Urban | Bare ground | 0.587 | Low | Poor | High | 1.35 |
| Urban | 0 | Low | Poor | High | 0.00 |  |
| Urban | Bare ground | 11.742 | V.Low | N/A - Other | Low | 0.00 |
| Urban | 2.357 | V.low | N/A - Other | Low | 0.00 |  |
| Watercourse footprint | Watercourse footprint |  |  |  |  |  |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | SS | Habitat <br> Units |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Woodland and forest | Lowland mixed deciduous woodland | 0.028 | High | Good | High | 0.58 |
| Woodland and forest | Lowland mixed deciduous woodland | 0.722 | High | Good | Medium | 14.30 |
| Woodland and forest | Lowland mixed deciduous woodland | 0.519 | High | Moderate | Medium | 6.85 |
| Woodland and forest | Other woodland; broadleaved | 0.08 | Medium | Moderate | High | 0.74 |
| Woodland and forest | Other woodland; broadleaved | 5.259 | Medium | Moderate | Medium | 46.28 |
| Woodland and forest | Other woodland; broadleaved | 2.28 | Medium | Moderate | Medium | 20.06 |
| Woodland and forest | Other woodland; broadleaved | 0.383 | Medium | Poor | Medium | 1.69 |
| Woodland and forest | Other woodland; broadleaved | 4.215 | Medium | Poor | Medium | 18.55 |
| Individual trees | Rural tree | 0.22 | Medium | Moderate | High | 2.02 |
| Individual trees | Rural tree | 0.183 | Medium | Moderate | High | 0.00 |
| Individual trees | Rural tree | 1.686 | Medium | Moderate | Medium | 14.84 |
| Individual trees | Rural tree | 0.147 | Medium | Moderate | Medium | 0.00 |
| Individual trees | Rural tree | 0.522 | Medium | Moderate | High | 4.80 |
| Individual trees | Rural tree | 0.179 | Medium | Moderate | Medium | 1.58 |
| Individual trees | Rural tree | 2.443 | Medium | Moderate | Medium | 21.50 |
| Individual trees | Rural tree | 0.016 | Medium | Moderate | Medium | 0.00 |
| Individual trees | Rural tree | 0.053 | Medium | Moderate | High | 0.49 |
| Individual trees | Rural tree | 0.147 | Medium | Moderate | Medium | 1.29 |
| Individual trees | Rural tree | 0.229 | Medium | Moderate | High | 2.11 |

Tillbridge Solar Project

| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | SS | Habitat <br> Units |
| :--- | :--- | :---: | :--- | :--- | :--- | :--- |
| Individual trees | Rural tree | 0.153 | Medium | Moderate | High | 0.00 |
| Individual trees | Rural tree | 0.382 | Medium | Moderate | Medium | 3.36 |
| Individual trees | Rural tree | 0.612 | Medium | Moderate | Medium | 0.00 |
| Individual trees | Rural tree | 0.07 | Medium | Moderate | High | 0.64 |
| Individual trees | Rural tree | 0.318 | Medium | Moderate | High | 2.93 |
| Individual trees | Rural tree | 1.109 | Medium | Moderate | Medium | 9.76 |
| Individual trees | Rural tree | 1.822 | Medium | Moderate | Medium | 16.03 |
| Individual trees | Rural tree | 0.045 | Medium | Moderate | Medium | 0.40 |
| Total | - | $\mathbf{1 4 2 4 . 5 2}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{3 3 1 2 . 1 7}$ |

*'Individual trees - Rural tree' areas are excluded from the total area to prevent double counting of the area; however, the unit contributions are included within the habitat unit total. Data in red represent veteran trees, which are considered irreplaceable habitats.

## Baseline Hedgerow Habitats

| Habitat type | Length <br> $\mathbf{( k m )}$ | Distinctiveness Condition | SS | Hedgerow <br> Units |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Line of trees | 1.443 | Low | Moderate | Medium | 6.35 |
| Line of trees | 0.055 | Low | Poor | High | 0.13 |
| Line of trees | 0.953 | Low | Poor | Medium | 2.10 |
| Line of trees - associated with bank or ditch | 1.133 | Low | Poor | Medium | 2.49 |
| Native hedgerow | 0.516 | Low | Good | High | 3.56 |


| Habitat type | Length (km) | Distinctiveness | Condition | SS | Hedgerow Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Native hedgerow | 10.609 | Low | Good | Medium | 70.02 |
| Native hedgerow | 0.066 | Low | Moderate | High | 0.30 |
| Native hedgerow | 13.485 | Low | Moderate | Medium | 59.33 |
| Native hedgerow | 0.546 | Low | Poor | High | 1.26 |
| Native hedgerow | 2.244 | Low | Poor | Medium | 4.94 |
| Native hedgerow - associated with bank or ditch | 2.065 | Medium | Good | Medium | 27.26 |
| Native hedgerow - associated with bank or ditch | 1.724 | Medium | Moderate | Medium | 15.17 |
| Native hedgerow with trees | 2.328 | Medium | Good | High | 32.13 |
| Native hedgerow with trees | 4.659 | Medium | Good | Medium | 61.50 |
| Native hedgerow with trees | 1.43 | Medium | Moderate | High | 13.16 |
| Native hedgerow with trees | 12.035 | Medium | Moderate | Medium | 105.91 |
| Native hedgerow with trees | 0.018 | Medium | Poor | High | 0.08 |
| Native hedgerow with trees | 1.096 | Medium | Poor | Medium | 4.82 |
| Native hedgerow with trees - associated with bank or ditch | 0.473 | High | Good | High | 9.79 |
| Native hedgerow with trees - associated with bank or ditch | 1.312 | High | Good | Medium | 25.98 |
| Native hedgerow with trees - associated with bank or ditch | 0.025 | High | Moderate | High | 0.35 |
| Native hedgerow with trees - associated with bank or ditch | 1.12 | High | Moderate | Medium | 14.78 |
| Native hedgerow with trees - associated with bank or ditch | 0.758 | High | Poor | Medium | 5.00 |
| Species-rich native hedgerow | 0.475 | Medium | Good | Medium | 6.27 |


| Habitat type | Length (km) | Distinctiveness | Condition | SS | Hedgerow Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Species-rich native hedgerow | 0.279 | Medium | Moderate | High | 2.57 |
| Species-rich native hedgerow | 1.356 | Medium | Moderate | Medium | 11.93 |
| Species-rich native hedgerow - associated with bank or ditch | 0.027 | High | Good | High | 0.56 |
| Species-rich native hedgerow - associated with bank or ditch | 0.235 | High | Good | Medium | 4.65 |
| Species-rich native hedgerow - associated with bank or ditch | 0.32 | High | Moderate | Medium | 4.22 |
| Species-rich native hedgerow with trees | 0.051 | High | Good | High | 1.06 |
| Species-rich native hedgerow with trees | 1.567 | High | Good | Medium | 31.03 |
| Species-rich native hedgerow with trees | 0.25 | High | Moderate | High | 3.45 |
| Species-rich native hedgerow with trees | 0.65 | High | Moderate | Medium | 8.58 |
| Species-rich native hedgerow with trees | 0.468 | High | Poor | Medium | 3.09 |
| Species-rich native hedgerow with trees - associated with bank or ditch | 0.441 | V.High | Good | Medium | 11.64 |
| Species-rich native hedgerow with trees - associated with bank or ditch | 1.2 | V.High | Moderate | Medium | 21.12 |
| Species-rich native hedgerow with trees - associated with bank or ditch | 0.279 | V.High | Poor | High | 2.57 |
| Species-rich native hedgerow with trees - associated with bank or ditch | 0.358 | V.High | Poor | Medium | 3.15 |
| Total | 68.05 | - | - | - | 582.29 |

## Baseline Watercourse Habitats

| Habitat type | Watercourse <br> Name | Length (km) | Distinctiveness | Condition | SS | Watercourse <br> Units |
| :--- | :---: | :---: | :--- | :---: | :---: | :---: |
| Ditches | NS13 | 0.326 | Medium | Moderate | Low | 1.96 |
| Ditches | NS15 | 0.175 | Medium | Moderate | Low | 1.22 |
| Ditches | WC13 | 0.033 | Medium | Poor | Low | 0.10 |
| Ditches | WC20 and WC21 | 0.244 | Medium | Poor | Low | 0.85 |
| Ditches | WC31 | 0.239 | Medium | Poor | Low | 0.83 |
| Ditches | NS11 | 0.764 | Medium | Moderate | Low | 4.58 |
| Ditches | WC15 | 0.069 | Medium | Poor | Low | 0.21 |
| Ditches | WC38 | 0.389 | Medium | Moderate | Low | 2.33 |
| Ditches | NS3 | 1.455 | Medium | Moderate | Low | 8.73 |
| Ditches | WC30 | 0.247 | Medium | Moderate | Low | 1.72 |
| Ditches | NS12 | 0.351 | Medium | Moderate | Low | 2.11 |
| Ditches | NS14 | 0.433 | Medium | Moderate | Low | 3.01 |
| Ditches | NS6 | 0.488 | Medium | Moderate | Low | 2.93 |
| Ditches | WC14 | 0.044 | Medium | Poor | Low | 0.13 |
| Ditches | NS10 | 0.368 | Medium | Moderate | Low | 2.36 |
| Ditches | WC32 and WC33 | 0.281 | Medium | Poor | Low | 0.84 |
| Ditches | WC25 | 0.09 | Medium | Poor | Low | 0.27 |
| Ditches | WC30 | 0.563 | Medium | Moderate | Low | 3.38 |


| Habitat type | Watercourse <br> Name | Length (km) | Distinctiveness | Condition | SS | Watercourse <br> Units |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Ditches | NS7 | 0.159 | Medium | Moderate | Low | 1.17 |
| Ditches | WC27 | 0.029 | Medium | Poor | Low | 0.09 |
| Ditches | WC37 | 0.340 | Medium | Moderate | Low | 2.04 |
| Ditches | WC36 | 0.915 | Medium | Moderate | Low | 5.49 |
| Ditches | WC31 | 0.389 | Medium | Poor | Low | 1.17 |
| Ditches | WC29 | 0.155 | Medium | Poor | Low | 0.47 |
| Ditches | NS4 | 0.562 | Medium | Moderate | Low | 3.37 |
| Ditches | NS5 | 0.306 | Medium | Moderate | Low | 1.84 |
| Ditches | NS8 | 0.104 | Medium | Moderate | Low | 0.83 |
| Ditches | NS33 | 0.285 | Medium | Moderate | Low | 1.92 |
| Ditches | NS9 | 0.520 | Medium | Moderate | Low | 3.12 |
| Total | $\mathbf{1 0 . 3 2}$ | - | - | $\mathbf{N a n}$ |  |  |

## Post-Development Data

## Retained Habitats

## Retained Area-Based Habitats

| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | SS <br> Units |  |
| :--- | :--- | :---: | :--- | :---: | :---: | :---: |
| Cropland | Cereal crops | 0.327 | Low | Condition Assessment <br> N/A | Medium | 0.72 |
| Grassland | Modified grassland | 10.708 | Low | Poor | Low | 21.42 |
| Grassland | Modified grassland | 0.351 | Low | Poor | High | 0.81 |
| Heathland and shrub | Mixed scrub | 2.125 | Medium | Moderate | Low | 17.00 |
| Heathland and shrub | Mixed scrub | 0.208 | Medium | Moderate | Low | 1.66 |
| Heathland and shrub | Mixed scrub | 0.215 | Medium | Poor | High | 0.99 |
| Lakes | Ponds (non-priority habitat) | 1.505 | Medium | Moderate | Low | 12.04 |
| Lakes | Ponds (non-priority habitat) | 0.138 | Medium | Moderate | Medium | 1.21 |
| Urban | Bare ground | 3.176 | Low | Poor | Low | 6.35 |
| Urban | Bare ground | 0.377 | Low | Poor | High | 0.87 |
| Urban | Developed land; sealed surface | 9.97 | V.Low | N/A - Other | Low | 0.00 |
| Watercourse | Watercourse footprint | 2.349 | V.low | N/A - Other | Low | 0.00 |
| footprint |  |  |  |  | Good | High |
| Woodland and forest | Lowland mixed deciduous | 0.028 | High | 0.58 |  |  |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | SS |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Woodland and forest | Lowland mixed deciduous <br> woodland | 0.722 | High | Good | Medium | 14.30 |
| Woodland and forest | Lowland mixed deciduous <br> woodland | 0.519 | High | Moderate | Medium | 6.85 |
| Woodland and forest | Other woodland; broadleaved | 5.186 | Medium | Moderate | Medium | 45.64 |
| Woodland and forest | Other woodland; broadleaved | 4.002 | Medium | Poor | Medium | 17.61 |
| Individual trees | Rural tree | 0.22 | Medium | Moderate | High | 2.02 |
| Individual trees | Rural tree | 0.183 | Medium | Moderate | High | 0.00 |
| Individual trees | Rural tree | 1.612 | Medium | Moderate | Medium | 14.19 |
| Individual trees | Rural tree | 0.147 | Medium | Moderate | Medium | 0.00 |
| Individual trees | Rural tree | 0.424 | Medium | Moderate | High | 3.90 |
| Individual trees | Rural tree | 0.066 | Medium | Moderate | Medium | 0.58 |
| Individual trees | Rural tree | 2.329 | Medium | Moderate | Medium | 20.50 |
| Individual trees | Rural tree | 0.016 | Medium | Moderate | Medium | 0.00 |
| Individual trees | Rural tree | 0.053 | Medium | Moderate | High | 0.49 |
| Individual trees | Rural tree | 0.147 | Medium | Moderate | Medium | 1.29 |
| Individual trees | Rural tree | 0.229 | Medium | Moderate | High | 2.11 |
| Individual trees | Rural tree | 0.153 | Medium | Moderate | High | 0.00 |
| Individual trees | Rural tree | 0.382 | Medium | Moderate | Medium | 3.36 |
| Individual trees | Rural tree | 0.612 | Medium | Moderate | Medium | 0.00 |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Condition | Ss <br> Units |  |
| :--- | :--- | :---: | :--- | :--- | :--- | :---: |
| Individual trees | Rural tree | 0.07 | Medium | Moderate | High | 0.64 |
| Individual trees | Rural tree | 0.318 | Medium | Moderate | High | 2.93 |
| Individual trees | Rural tree | 1.108 | Medium | Moderate | Medium | 9.75 |
| Individual trees | Rural tree | 1.819 | Medium | Moderate | Medium | 16.01 |
| Individual trees | Rural tree | 0.045 | Medium | Moderate | Medium | 0.40 |
| Total | - | $\mathbf{5 1 . 8 4}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{2 2 6 . 2 0}$ |

*'Individual trees - Rural tree' areas are excluded from the total area to prevent double counting of the area; however, the unit contributions are included within the habitat unit total. Data in red represent veteran trees, which are considered irreplaceable.

## Baseline Hedgerow Habitats

| Habitat type | Length <br> $(\mathbf{k m})$ | Distinctiveness Condition | SS | Hedgerow <br> Units |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Line of trees | 1.443 | Low | Moderate | Medium | 3.58 |
| Line of trees | 0.055 | Low | Poor | High | 0.00 |
| Line of trees | 0.953 | Low | Poor | Medium | 1.54 |
| Line of trees - associated with bank or ditch | 1.133 | Low | Poor | Medium | 0.00 |
| Native hedgerow | 0.516 | Low | Good | High | 2.87 |
| Native hedgerow | 0.813 | Low | Good | Medium | 66.63 |
| Native hedgerow | 0.702 | Low | Moderate | Medium | 37.90 |
| Native hedgerow | 0.416 | Low | Poor | Medium | 4.64 |


| Habitat type | Length (km) | Distinctiveness | Condition | SS | Hedgerow Units |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Native hedgerow - associated with bank or ditch | 10.096 | Medium | Good | Medium | 27.18 |
| Native hedgerow - associated with bank or ditch | 0.001 | Medium | Moderate | Medium | 13.40 |
| Native hedgerow with trees | 8.613 | Medium | Good | High | 28.14 |
| Native hedgerow with trees | 0.461 | Medium | Good | Medium | 57.43 |
| Native hedgerow with trees | 2.108 | Medium | Moderate | High | 7.10 |
| Native hedgerow with trees | 2.059 | Medium | Moderate | Medium | 78.71 |
| Native hedgerow with trees | 1.523 | Medium | Poor | High | 0.00 |
| Native hedgerow with trees | 2.039 | Medium | Poor | Medium | 1.28 |
| Native hedgerow with trees - associated with bank or ditch | 4.351 | High | Good | High | 9.79 |
| Native hedgerow with trees - associated with bank or ditch | 0.772 | High | Good | Medium | 25.26 |
| Native hedgerow with trees - associated with bank or ditch | 8.944 | High | Moderate | High | 0.00 |
| Native hedgerow with trees - associated with bank or ditch | 0.292 | High | Poor | Medium | 4.74 |
| Species-rich native hedgerow | 0.473 | Medium | Good | Medium | 6.02 |
| Species-rich native hedgerow | 1.276 | Medium | Moderate | High | 0.72 |
| Species-rich native hedgerow - associated with bank or ditch | 0.884 | High | Good | High | 0.00 |
| Species-rich native hedgerow - associated with bank or ditch | 0.718 | High | Good | Medium | 4.65 |
| Species-rich native hedgerow - associated with bank or ditch | 0.456 | High | Moderate | Medium | 3.87 |
| Species-rich native hedgerow with trees | 0.078 | High | Good | High | 0.00 |
| Species-rich native hedgerow with trees | 0.64 | High | Good | Medium | 25.88 |


| Habitat type |  |  |  | Length (km) | Distinctiveness | Condition | SS | Hedgerow Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Species-rich native hedgerow with trees |  |  |  | 0.235 | High | Moderate | Medium | 7.91 |
| Species-rich native hedgerow with trees |  |  |  | 0.293 | High | Poor | Medium | 2.24 |
| Species-rich native hedgerow with trees - associated with bank or ditch |  |  |  | 1.307 | V.High | Moderate | Medium | 9.42 |
| Species-rich native hedgerow with trees - associated with bank or ditch |  |  |  | 0.599 | V.High | Poor | Medium | 3.15 |
| Total <br> Retained Watercourse Habitats |  |  |  | 52.10 | - | - | - | 466.45 |
|  |  |  |  |  |  |  |  |  |
| Habitat type $\quad$Watercourse <br> Name |  | Length (km) | Distinctiveness |  | Condition | SS |  | Watercourse Units |
| Ditches | NS15 | 0.175 | Medium |  | Moderate | Low |  | 1.22 |
| Ditches | WC13 | 0.030 | Medium |  | Poor | Low |  | 0.09 |
| Ditches | WC20 and WC21 | 0.241 | Medium |  | Poor | Low |  | 0.84 |
| Ditches | WC31 | 0.236 | Medium |  | Poor | Low |  | 0.82 |
| Ditches | WC15 | 0.066 | Medium |  | Poor | Low |  | 0.20 |
| Ditches | WC30 | 0.247 | Medium |  | Moderate | Low |  | 1.72 |
| Ditches | WC14 | 0.041 | Medium |  | Poor | Low |  | 0.12 |
| Ditches | WC25 | 0.087 | Medium |  | Poor | Low |  | 0.26 |
| Ditches | NS7 | 0.159 | Medium |  | Moderate | Low |  | 1.17 |
| Ditches | WC27 | 0.026 | Medium |  | Poor | Low |  | 0.08 |


| Habitat type | Watercourse <br> Name | Length (km) | Distinctiveness | Condition | SS | Watercourse <br> Units |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Ditches | WC29 | 0.146 | Medium | Poor | Low | 0.44 |
| Ditches | NS8 | 0.104 | Medium | Moderate | Low | 0.83 |
| Total | - | $\mathbf{1 . 5 5}$ | - | - | - | $\mathbf{7 . 7 8}$ |

## Enhanced Habitats

Enhanced Area-Based Habitats

| Broad <br> Habitat | Habitat type | Distinctivene <br> ss change | Condition <br> Change | SS | Time to <br> target <br> condition <br> (yrs) | Area (ha) | Enhanced <br> Units | Enhancemen <br> t Uplift |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Heathland <br> and shrub | Mixed scrub | No change | Poor $\rightarrow$ Good | Low | 10 | 0.188 | $0.75 \rightarrow 1.81$ | +1.06 |
| Woodland <br> and forest | Other <br> woodland; <br> broadleaved | No change | Poor $\rightarrow$ <br> Moderate | Medium | 10 | 0.144 | $0.63 \rightarrow 1.08$ | +0.45 |
| Total | - | - | - | - | - | $\mathbf{0 . 3 3}$ | $\mathbf{1 . 3 9 \rightarrow \mathbf { 2 . 8 8 }}$ | $\mathbf{+ 1 . 5 1 *}$ |

*Despite $2.88-1.39=1.49$, rounding in the Metric results in this enhancement totalling up to 1.51 .
Enhanced Hedgerow Habitats

| Habitat Type | Distinctivenes <br> s change | Condition <br> Change | SS | Time to target <br> condition (yrs) | Length (km) | Enhanced <br> Units | Enhancement <br> Uplift |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line of trees | Low - Low | Moderate - <br> Good | Medium | 10 | 0.539 | $2.37 \rightarrow 3.20$ | +0.83 |


| Habitat Type | Distinctivenes s change | Condition Change | SS | Time to target condition (yrs) | Length (km) | Enhanced Units | Enhancement Uplift |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line of trees | Low - Low | Poor Moderate | Medium | 20 | 0.251 | $0.55 \rightarrow 0.82$ | +0.27 |
| Line of trees associated with bank or ditch | Low - V.High | Lower Distinctiveness Habitat Moderate | Medium | 12 | 1.123 | $2.47 \rightarrow 13.75$ | +11.28 |
| Native hedgerow | Low - Low | Moderate Good | Medium | 2 | 3.683 | $16.21 \rightarrow 23.75$ | +7.54 |
| Native hedgerow with trees | Medium Medium | Moderate Good | Medium | 4 | 0.478 | $4.40 \rightarrow 6.30$ | +1.90 |
| Native hedgerow with trees | Medium Medium | Moderate Good | Medium | 4 | 2.491 | $21.92 \rightarrow 31.43$ | +9.51 |
| Native hedgerow with trees | Medium Medium | Poor Moderate | Medium | 6 | 0.632 | $2.78 \rightarrow 5.03$ | +2.25 |
| Native hedgerow with trees associated with bank or ditch | High - High | Moderate Good | Medium | 4 | 0.236 | $3.12 \rightarrow 4.47$ | +1.35 |
| Native hedgerow with trees - | High - High | Poor Moderate | Medium | 6 | 0.019 | $0.13 \rightarrow 0.23$ | +0.10 |


| Habitat Type | Distinctivenes s change | Condition Change | SS | Time to target condition (yrs) | Length (km) | Enhanced Units | Enhancement Uplift |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| associated with bank or ditch |  |  |  |  |  |  |  |
| Species-rich native hedgerow | Medium Medium | Moderate Good | Medium | 2 | 0.279 | $2.46 \rightarrow 3.60$ | +1.14 |
| Species-rich native hedgerow with trees | High - High | Poor Moderate | Medium | 6 | 0.034 | $0.22 \rightarrow 0.41$ | +0.19 |
| Species-rich native hedgerow with trees associated with bank or ditch | V.High - V.High | Moderate Good | Medium | 4 | 0.665 | $11.70 \rightarrow 16.78$ | +5.08 |
| Total | - | - | - | - | 10.43 | $68.32 \rightarrow 109.76$ | +41.44 |

## Enhanced Watercourse Habitats

| Habitat Type | Watercour se Name | Distinctive ness change | Condition Change | SS | Baseline Riparian Encroach ment | Postdevelopm ent Riparian Encroach ment | ```Time to target condition (yrs)``` | Length (km) | Enhanced Units | Enhancem ent Uplift |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ditches | NS13 | Medium Medium | Moderate Moderate | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.326 | $\begin{gathered} 1.96 \rightarrow \\ 2.61 \end{gathered}$ | +0.65 |
| Ditches | NS11 | Medium Medium | Moderate Moderate | Low | Major/ <br> Major | Major/No Encroachm ent | 1 | 0.764 | $\begin{gathered} 4.58 \rightarrow \\ 5.32 \end{gathered}$ | +0.74 |
| Ditches | WC38 | Medium Medium | Moderate Moderate | Low | Major/ <br> Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.3855 | $\begin{gathered} 2.31 \rightarrow \\ 3.08 \end{gathered}$ | +0.77 |
| Ditches | NS3 | Medium Medium | Moderate Moderate | Low | Major/ <br> Major | ```N\mp@code{No} ent/ No Encroachm ent``` | 1 | 1.451 | $\begin{gathered} 8.71 \rightarrow \\ 11.61 \end{gathered}$ | +2.90 |
| Ditches | NS12 | Medium Medium | Moderate Moderate | Low | Major/ <br> Major | No Encroachm ent/ No | 1 | 0.351 | $\begin{gathered} 2.11 \rightarrow \\ 2.81 \end{gathered}$ | +0.70 |


| Habitat Type | Watercour se Name | Distinctive ness change | Condition Change | SS | Baseline Riparian Encroach ment | Postdevelopm ent Riparian Encroach ment | Time to target condition (yrs) | Length (km) | Enhanced Units | Enhancem ent Uplift |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Encroachm ent |  |  |  |  |
| Ditches | NS14 | Medium Medium | Moderate Moderate | Low | Major/ No Encroachm ent | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.433 | $\begin{gathered} 3.01 \rightarrow \\ 3.46 \end{gathered}$ | +0.45 |
| Ditches | NS6 | Medium Medium | Moderate Moderate | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.484 | $\begin{gathered} 2.90 \rightarrow \\ 3.87 \end{gathered}$ | +0.97 |
| Ditches | NS10 | Medium Medium | Moderate Moderate | Low | Major/ Moderate | Moderate/ No Encroachm ent | 1 | 0.368 | $\begin{gathered} 2.36 \rightarrow \\ 2.71 \end{gathered}$ | +0.35 |
| Ditches | WC32 and WC33 | Medium Medium | Poor Poor | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.2685 | $\begin{gathered} 0.81 \rightarrow \\ 1.07 \end{gathered}$ | +0.26 |
| Ditches | WC30 | Medium Medium | Moderate Moderate | Low | Major/ Major | No Encroachm | 1 | 0.5555 | $\begin{gathered} 3.33 \rightarrow \\ 4.44 \end{gathered}$ | +1.11 |


| Habitat Type | Watercour se Name | Distinctive ness change | Condition Change | SS | Baseline Riparian Encroach ment | Postdevelopm ent Riparian Encroach ment | Time to target condition (yrs) | Length (km) | Enhanced Units | Enhancem ent Uplift |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | ent/ No Encroachm ent |  |  |  |  |
| Ditches | WC37 | Medium Medium | Moderate Moderate | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.3365 | $\begin{gathered} 2.02 \rightarrow \\ 2.69 \end{gathered}$ | +0.67 |
| Ditches | WC36 | Medium Medium | Moderate Moderate | Low | Major/ Major | Major/No Encroachm ent | 1 | 0.8995 | $\begin{gathered} 5.40 \rightarrow \\ 6.26 \end{gathered}$ | +0.86 |
| Ditches | WC31 | Medium Medium | Poor Poor | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.3755 | $\begin{gathered} 1.13 \rightarrow \\ 1.50 \end{gathered}$ | +0.37 |
| Ditches | NS4 | Medium Medium | Moderate Moderate | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.562 | $\begin{gathered} 3.37 \rightarrow \\ 4.50 \end{gathered}$ | +1.13 |


| Habitat Type | Watercour se Name | Distinctive ness change | Condition Change | SS | Baseline Riparian Encroach ment | Postdevelopm ent Riparian Encroach ment | Time to target condition (yrs) | Length (km) | Enhanced Units | Enhancem ent Uplift |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ditches | NS5 | Medium Medium | Moderate Moderate | Low | Major/ Major | Minor/ No Encroachm ent | 1 | 0.306 | $\begin{gathered} 1.84 \rightarrow \\ 2.40 \end{gathered}$ | +0.56 |
| Ditches | NS33 | Medium Medium | Moderate Moderate | Low | Major/ Minor | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.285 | $\begin{gathered} 1.92 \rightarrow \\ 2.28 \end{gathered}$ | +0.36 |
| Ditches | NS9 | Medium Medium | Moderate Moderate | Low | Major/ Major | No <br> Encroachm ent/ No Encroachm ent | 1 | 0.52 | $\begin{aligned} & 3.12 \rightarrow \\ & 416 \end{aligned}$ | +1.04 |
| Total |  | - | - | - | - | - | - | 8.67 | $\begin{gathered} 50.86 \rightarrow \\ 64.78 \end{gathered}$ | +13.89* |

*Despite $64.78-50.86=13.92$, rounding in the Metric results in this enhancement totalling up to 13.89 .

## Created Habitats

## Created Area-Based Habitats

| Broad Habitat | Area <br> (ha) | Distinctiveness | Target Condition | SSTime to target <br> condition (yrs) | Habitat <br> Units |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Grassland | Lowland calcareous <br> grassland | 0.07 | High | Good | Low | 20 | 0.20 |
| Grassland | Lowland calcareous <br> grassland | 0.035 | High | Good | High | 20 | 0.12 |
| Grassland | Lowland calcareous <br> grassland | 0.083 | High | Good | High | 20 | 0.28 |
| Grassland | Modified grassland | 727.291 | Low | Poor | Low | 1 | $1,403.67$ |
| Grassland | Modified grassland | 12.269 | Low | Poor | High | 1 | 27.23 |
| Grassland | Other neutral grassland | 0.157 | Medium | Good | Low | 10 | 1.32 |
| Grassland | Other neutral grassland | 181.713 | Medium | Good | Low | 10 | $1,527.00$ |
| Grassland | Other neutral grassland | 12.815 | Medium | Good | High | 10 | 123.84 |
| Heathland and <br> shrub | Mixed scrub | 0.289 | Medium | Moderate | Low | 5 | 1.93 |
| Urban | Artificial unvegetated, <br> unsealed surface | 12.093 | V.Low | N/A - Other | Low | 0 | 0.00 |
| Urban | Artificial unvegetated, <br> unsealed surface | 0.131 | V.Low | N/A - Other | Low | 0 | 0.00 |
| Urban | Developed land; sealed <br> surface | 28.274 | V.Low | N/A - Other | Low | 0 | 0.00 |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Target Condition | SS | Time to target condition (yrs) | Habitat Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Woodland and forest | Other woodland; broadleaved | 0.08 | Medium | Moderate | High | 15 | 0.43 |
| Woodland and forest | Other woodland; broadleaved | 6.345 | Medium | Moderate | High | 15 | 34.21 |
| Woodland and forest | Other woodland; broadleaved | 34.682 | Medium | Moderate | Medium | 15 | 178.85 |
| Woodland and forest | Other woodland; broadleaved | 0.383 | Medium | Poor | Medium | 5 | 1.41 |
| Cropland | Cereal crops | 23.254 | Low | Condition Assessment N/A | High | 1 | 51.61 |
| Cropland | Cereal crops | 18.038 | Low | Condition Assessment N/A | Medium | 1 | 38.29 |
| Cropland | Cereal crops | 18.466 | Low | Condition Assessment N/A | Medium | 1 | 39.20 |
| Grassland | Modified grassland | 4.068 | Low | Poor | Low | 1 | 7.85 |
| Grassland | Modified grassland | 2.51 | Low | Poor | Low | 1 | 4.84 |
| Grassland | Modified grassland | 0.014 | Low | Poor | Low | 1 | 0.03 |
| Grassland | Modified grassland | 0.015 | Low | Poor | Low | 1 | 0.03 |
| Grassland | Modified grassland | 1.474 | Low | Poor | Low | 1 | 2.84 |
| Grassland | Modified grassland | 0.028 | Low | Poor | High | 1 | 0.06 |
| Grassland | Modified grassland | 2.116 | Low | Poor | High | 1 | 4.70 |
| Grassland | Modified grassland | 0.042 | Low | Poor | High | 1 | 0.09 |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Target Condition | SS | Time to target condition (yrs) | Habitat Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grassland | Modified grassland | 0.946 | Low | Poor | High | 1 | 2.10 |
| Grassland | Modified grassland | 0.038 | Low | Poor | High | 1 | 0.08 |
| Grassland | Modified grassland | 0.04 | Low | Poor | High | 1 | 0.09 |
| Urban | Bare ground | 0.061 | Low | Poor | Low | 1 | 0.12 |
| Urban | Bare ground | 0.225 | Low | Poor | Low | 1 | 0.43 |
| Urban | Bare ground | 0.21 | Low | Poor | High | 1 | 0.47 |
| Grassland | Other neutral grassland | 66.291 | Medium | Poor | Medium | 2 | 271.62 |
| Grassland | Other neutral grassland | 0.95 | Medium | Poor | Medium | 2 | 3.89 |
| Grassland | Other neutral grassland | 6.333 | Medium | Poor | High | 2 | 27.13 |
| Grassland | Other neutral grassland | 2.652 | Medium | Poor | Low | 2 | 9.88 |
| Individual trees | Rural tree | 0.002 | Medium | Moderate | Medium | 27 | 0.01 |
| Grassland | Other neutral grassland | 97.542 | Medium | Moderate | Low | 5 | 653.01 |
| Woodland and forest | Other woodland; broadleaved | 17.418 | Medium | Moderate | Medium | 15 | 89.82 |
| Heathland and shrub | Mixed scrub | 17.418 | Medium | Moderate | Low | 5 | 116.61 |
| Grassland | Lowland calcareous grassland | 5.574 | High | Moderate | Medium | 10 | 17.00 |
| Lakes | Ponds (non-priority habitat) | 1.393 | Medium | Moderate | Medium | 3 | 11.02 |
| Grassland | Other neutral grassland | 54.93 | Medium | Moderate | High | 5 | 422.90 |


| Broad Habitat | Habitat type | Area <br> (ha) | Distinctiveness | Target Condition | SS | Time to target <br> condition (yrs) | Habitat <br> Units |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Woodland and <br> forest | Other woodland; <br> broadleaved | 9.809 | Medium | Moderate | High | 15 | 52.88 |
| Heathland and <br> shrub | Mixed scrub | 9.809 | Medium | Moderate | High | 5 | 75.52 |
| Grassland | Lowland calcareous <br> grassland | 3.139 | High | Moderate | High | 10 | 10.01 |
| Lakes | Ponds (non-priority habitat) | 0.785 | Medium | Moderate | High | 3 | 6.49 |
| Total | $\mathbf{-}$ | $\mathbf{1 3 8 2 . 3 0}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{-}$ | $\mathbf{5 2 2 1 . 1 4}$ |

## Created Hedgerow Habitats

| Habitat type | Length (km) | Distinctiveness | Target Condition | SS | Time to target <br> condition (yrs) | Hedgerow Units |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Line of trees | 0.082 | Low | Moderate | Medium | 20 | 0.18 |
| Line of trees | 0.055 | Low | Poor | Medium | 5 | 0.10 |
| Native hedgerow | 0.023 | Low | Good | High | 12 | 0.10 |
| Native hedgerow | 0.511 | Low | Good | Medium | 12 | 2.20 |
| Native hedgerow | 0.065 | Low | Moderate | High | 5 | 0.25 |
| Native hedgerow | 1.128 | Low | Moderate | Medium | 5 | 4.15 |
| Native hedgerow | 0.085 | Low | Poor | High | 1 | 0.19 |
| Native hedgerow | 0.182 | Low | Poor | Medium | 1 | 0.39 |


| Habitat type | Length (km) | Distinctiveness | Target Condition | SS | Time to target condition (yrs) | Hedgerow Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Native hedgerow associated with bank or ditch | 0.15 | Medium | Moderate | Medium | 5 | 1.10 |
| Native hedgerow with trees | 0.144 | Medium | Good | High | 20 | 0.97 |
| Native hedgerow with trees | 0.503 | Medium | Good | Medium | 20 | 3.26 |
| Native hedgerow with trees | 0.13 | Medium | Moderate | High | 10 | 0.84 |
| Native hedgerow with trees | 0.392 | Medium | Moderate | Medium | 10 | 2.42 |
| Native hedgerow with trees | 0.018 | Medium | Poor | High | 1 | 0.08 |
| Native hedgerow with trees | 0.05 | Medium | Poor | Medium | 1 | 0.21 |
| Native hedgerow with trees associated with bank or ditch | 0.03 | High | Good | Medium | 20 | 0.29 |
| Native hedgerow with trees associated with bank or ditch | 0.025 | High | Moderate | High | 10 | 0.24 |


| Habitat type | Length (km) | Distinctiveness | Target Condition | SS | Time to target condition (yrs) | Hedgerow Units |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Species-rich native hedgerow | 0.979 | Medium | Moderate | High | 5 | 7.54 |
| Species-rich native hedgerow | 9.597 | Medium | Moderate | Medium | 5 | 70.67 |
| Species-rich native hedgerow associated with bank or ditch | 0.027 | High | Good | High | 12 | 0.36 |
| Species-rich native hedgerow associated with bank or ditch | 0.364 | High | Moderate | Medium | 5 | 4.02 |
| Species-rich native hedgerow with trees | 0.311 | High | Good | Medium | 20 | 3.02 |
| Species-rich native hedgerow with trees | 0.25 | High | Moderate | High | 10 | 2.42 |
| Species-rich native hedgerow with trees | 0.121 | High | Moderate | Medium | 10 | 1.12 |
| Species-rich native hedgerow with trees | 0.025 | High | Poor | Medium | 1 | 0.16 |


| Habitat type | Length (km) | Distinctiveness | Target Condition | SS | Time to target <br> condition (yrs) | Hedgerow Units |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Species-rich <br> native hedgerow <br> with trees - <br> associated with <br> bank or ditch | 0.057 | V.High | Moderate | Medium | 10 | 0.70 |
| Total |  |  |  |  |  |  |

## Created Watercourse Habitats

| Habitat type | Length (km) | Distinctiveness | Target Condition | SS | Time to target <br> condition (yrs) | Watercourse <br> Units |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Culvert | 0.004 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.004 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.004 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.005 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.004 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.007 | Low | Poor | Low | 1 | 0.01 |
| Culvert | 0.005 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.006 | Low | Poor | Low | 1 | 0.01 |
| Culvert | 0.004 | Low | Poor | Low | 1 | 0.00 |
| Culvert | 0.006 | Low | Poor | Low | 1 | 0.01 |
| Total | $\mathbf{0 . 0 5}$ | - | - | - | - | $\mathbf{1}$ |

## Appendix G Statutory Biodiversity Metric Calculation

| FINAL RESULTS |  |  |
| :---: | :---: | :---: |
| Total net unit change <br> (Including all on-site \& off-site habitat retention, creation \& enhancement) | Habitat units | 2138.05 |
|  | Hedgerow units | 100.90 |
|  | Watercourse units | 13.55 |
| Total net \% change <br> (Including all on-site \& off-site habitat retention, creation \& enhancement) | Habitat units | 64.55\% |
|  | Hedgerow units | 17.33\% |
|  | Watercourse units | 22.94\% |
| Trading rules satisfied? | No - Check Trading Summaries |  |

## 5. References

Ref 1 DEFRA (2023). Statutory biodiversity metric calculation tool. Link: https://assets.publishing.service.gov.uk/media/65c60e5114b83c000ca715f4/The St atutory Biodiversity Metric Calculation Tool - Macro enabled 02.24.xlsm
Ref 2 DEFRA (2023). Statutory biodiversity metric: user guide. Link: https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The St atutory Biodiversity Metric - User Guide .pdf
Ref 3 CIEEM, IEMA \& ciria (2019). Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide. Link:

Ref 4 UK Government (2021). National Planning Policy Framework. Link:
https://www.gov.uk/government/publications/national-planning-policy-framework--2
Ref 5 UK Government (2021). The Environment Act. Link:
https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted
Ref 6 UK Government (2023). EN-1 Overarching National Policy Statement for Energy. Link: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1
Ref 7 Central Lincolnshire Council (2023). Central Lincolnshire Local Plan. Link: https://www.n-kesteven.gov.uk/central-lincolnshire/adopted-local-plan-2023
Ref 8 JNCC (2016). Handbook for Phase 1 habitat survey - a technique for environmental audit. Link:

Ref 9 UKHab Ltd (2018 - 2023). UK Habitat Classification. Link:
Ref 10 DEFRA (2023). The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology. Link:
https://assets.publishing.service.gov.uk/media/65c60f00cc433b000ca90b33/Statuto ry Biodiversity Metric Condition Assessments- Feb24.xIsx
Ref 11 Discovering Priority Habitats in England (2024). Discovering Priority Habitats in England. Link:
Ref 12 UK Government (2006). Natural Environment and Rural Communities Act. Link: https://www.legislation.gov.uk/ukpga/2006/16/section/41
Ref 13 UK Government (2023). Local Nature Recovery Strategies: Responsible Authorities. Link: https://www.gov.uk/government/publications/local-nature-recovery-strategies-areas-and-responsible-authorities/local-nature-recovery-strategies-responsibleauthorities
Ref 14 Central Lincolnshire Council (2023). StatMap Aurora Online Mapping. Link: https://wlnk.statmap.co.uk/map/Aurora.svc/run?script=\\Shared+Services\\JP U\%5cJPUJS.AuroraScript\%24\&nocache=1206308816\&resize=always
Ref 15 Natural England and Landmark Solutions (2024). Link: https://magic.defra.gov.uk/home.htm
Ref 16 BRE (2014). Biodiversity Guidance for Solar Developments. Link: National-Solar-Centre---Biodiversity-Guidance-for-Solar-Developments--2014-.pdf (bregroup.com)
Ref 17 RSPB (2017). RSPB Policy Briefing, May 2017.


[^0]:    2.4.2 Following the desk study, a scoping exercise was carried out to identify watercourses that are to be impacted by the Scheme, i.e., through culverting

