



# Longfield Solar Farm

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## Table of Contents

<b>1.</b>	<b>Introduction</b> .....	<b>1</b>
1.2	Proposed Development.....	1
1.3	Site Descriptions .....	2
1.4	Planning context.....	3
<b>2.</b>	<b>Methodology</b> .....	<b>3</b>
2.1	Biodiversity Metric 3.0 .....	3
2.2	Baseline Data .....	4
2.3	Post-Development Data .....	4
2.4	River Habitats.....	4
2.5	Strategic Significance.....	5
2.6	Assumptions.....	5
2.7	Constraints .....	6
<b>3.</b>	<b>Results</b> .....	<b>6</b>
3.1	Biodiversity Metric 3.0 Calculation Tool Output.....	6
3.2	On-site Baseline Habitat Units .....	9
3.3	Post-Development Habitats .....	12
3.4	Summary of Results .....	16
<b>4.</b>	<b>Conclusion</b> .....	<b>19</b>
<b>5.</b>	<b>References</b> .....	<b>22</b>
<b>6.</b>	<b>Appendices</b> .....	<b>23</b>
6.1	Appendix A – Baseline Habitat Plan.....	23
6.2	Appendix B - Habitat classification conversion .....	24
6.3	Appendix C – Condition Assessment Rationale .....	23
6.4	Appendix D – Post-Development Habitat Plan .....	54
6.5	Appendix E – Strategic Significance .....	55
6.6	Appendix F – Biodiversity Metric 3.0 Calculation.....	57
6.7	Appendix G – Habitat Management Required to Achieve Target Condition .....	58

## Tables

Table 3-1:	Baseline area-based habitats.....	9
Table 3-2:	Baseline hedgerow habitats .....	10
Table 3-3:	Baseline river habitats.....	11
Table 3-4:	Retained habitats on-site - area habitats .....	13
Table 3-5:	Retained habitats on-site - hedgerow habitats.....	14
Table 3-6:	Retained habitats on-site - river habitats .....	15
Table 3-7:	Created Post-Development habitat data .....	15
Table 3-8:	Created Post-Development hedgerow data .....	16
Table 3-9:	Summary of Results .....	16
Table 3-10:	On-site change by broad habitat-type (area-based).....	17
Table 3-11:	On-site change by broad habitat-type (linear-based, .....	18
Table 3-12:	On-site change by broad habitat-type (River habitats) .....	18
Table 4-1:	Net gain trading rules summary .....	19

# 1. Introduction

- 1.1.1 AECOM was commissioned by Longfield Solar Farm Ltd to undertake a Biodiversity Net Gain ('BNG') assessment for the proposed Longfield Solar Farm located approximately 5.7km south-west of Chelmsford, Essex (referred to as the 'Scheme'). The Scheme will comprise the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating facility with a total capacity exceeding 50 megawatts (MW), an energy storage facility and an export/import connection to the National Grid, via an extension of the existing Bulls Lodge Substation. The Scheme will be located within the 'Order limits' and is the subject of the DCO Application.
- 1.1.2 For the planting proposals see the ***Outline Landscape and Ecological Management Plan (OLEMP) [EN010118/APP/7.13]***.
- 1.1.3 The BNG assessment has been undertaken to quantify the overall effect on biodiversity and to inform the habitat mitigation requirement for the Proposed Development using Biodiversity Metric 3.0 in accordance with the accompanying guidance and best practice principles (Ref 1, Ref 2, Ref 3). The report sets out the results of the BNG assessment. The methodology for the assessment is outlined in Section 2, the results in Section 3 and the conclusions are provided in Section 4.

## 1.2 Proposed Development

- 1.2.1 Longfield Solar Farm is a new solar farm scheme which will use ground mounted solar photovoltaic (PV) panel arrays to generate electricity energy from the sun and combine these with a Battery Energy Storage System (BESS). The Scheme will be connected to the national electricity transmission network by an underground cable and includes an extension to the existing Bulls Lodge Substation.
- 1.2.2 The principal infrastructure will be located within the Order limits and will include:
- a. Solar Photovoltaic Generating Station up to 275.26ha, known as 'The Solar Farm Site' for ease of reference;
  - b. Battery Energy Storage System (BESS) up to 5.2ha
  - c. Longfield Substation: up to 1.66ha;
  - d. Grid Connection Route including access tracks and temporary construction laydown areas: up to 22.90ha;
  - e. Bulls Lodge Substation Extension including electricity switching station (up to 4.62ha) and temporary overhead line alterations (up to 3.72);
  - f. Works (up to 370.09ha) including
    - electrical cables (underground);
    - fencing, gates, boundary treatment and other means of enclosure;



- works for the provision of security and monitoring measures such as CCTV columns, lighting columns and lighting, cameras, weather stations, communication infrastructure, and perimeter fencing;
  - landscaping and biodiversity mitigation and enhancement measures including planting;
  - improvement, maintenance and use of existing private tracks; and
  - laying down of internal access tracks, ramps, means of access, footpaths, permissive paths, cycle routes and roads, including the laying and construction of drainage infrastructure, signage and information boards;
  - temporary footpath diversions;
  - earthworks;
  - SuDs Ponds, runoff outfalls, general drainage and irrigation infrastructure and improvements or extensions to existing drainage and irrigation systems;
  - up to 10 secondary temporary construction compounds, both within the permanent work area and outside the permanent work area;
  - works to divert and underground existing electrical overhead lines.
- g. Temporary construction and decommissioning compounds (up to 6.9ha), secondary temporary construction compounds within the Solar Farm Site, and temporary construction laydown for the Bulls Lodge Substation Extension (up to 7.21ha);
- h. Ancillary Buildings, being office, warehouse and plant storage building: up to 0.61ha;
- i. Works to facilitate site access to the Solar Farm Site and the Bulls Lodge Substation Extension up to 5.11ha; and
- j. Habitat Management Areas: a minimum of 55.8ha.

### 1.3 Site Descriptions

- 1.3.1 The Order limits is 453 ha in size and is located approximately 5.7km south-west of Chelmsford, Essex. The central Ordnance Survey grid reference for the Order limits is TL 763 134.
- 1.3.2 The Order limits is dominated by arable fields with improved pasture fields to the north-west. There are mature trees and hedges, small, wooded copse and ponds within the Order limits. The River Ter, within adjacent woodland and grassland bisects the Order limits to the north, west of the village of Terling, Essex. The Order limits is surrounded mainly by arable land and mature broadleaved woodland (plantation, semi-natural and ancient). There are individual and clusters of residential properties located within and adjacent to the Order limits. The Order limits is located within areas administered by Braintree District Council and Chelmsford City Council. The Order limits is

within the South Suffolk and North Essex Clayland National Character Area (wholly within Essex) (Ref 4).

## 1.4 Planning context

- 1.4.1 It is government policy that planning decisions should minimise impacts on and provide net gain for biodiversity (National Planning Policy Framework 2019) (Ref 5). The Essex Green Infrastructure Strategy (2020) (Ref 6) for Essex County Council proposes to ‘*Use planning policy to secure multi-functional green spaces within and beyond development site boundaries through the application of biodiversity net gain, biodiversity off-setting and the creation of compensation habitat and other green infrastructure promotion schemes*’.
- 1.4.2 In addition, the Environment Act (Ref 7) which has recently received royal assent (9<sup>th</sup> November 2021) includes provisions which, when in force, will make biodiversity net gain (BNG) a mandatory requirement within the planning system in England (including for Nationally Significant Infrastructure Projects) requiring all relevant developments to achieve a minimum 10% net gain in biodiversity units relative to the Order limit’s baseline biodiversity value.

# 2. Methodology

## 2.1 Biodiversity Metric 3.0

- 2.1.1 A BNG assessment involves making a comparison between the biodiversity value of habitats present within the Order limits prior to 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 Biodiversity Metric 3.0 (Ref 1) 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 Order limits pre- and post-development including any temporary or permanent loss of habitat. To achieve biodiversity net gain, the biodiversity unit score must have a post-development score higher than the baseline score. When calculating the post-development biodiversity units, the metric 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 have the effect of reducing the value of the proposed habitats, which means larger areas, habitats of higher distinctiveness, and/or condition are required to achieve net gain.
- 2.1.3 The metric assesses and generates separate outputs for area-based habitats<sup>1</sup> (measured in habitat units) and linear based habitats, including hedgerows (measured in hedgerow units) and rivers (measured in river units). The

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<sup>1</sup> This includes all area-based terrestrial and intertidal habitats. All habitats from the low water mark to the high-water mark can and should be assessed using Metric 3.0 where they are impacted by development. Any marine habitats beyond the low water mark cannot be assessed using Metric 3.0.

different biodiversity units are not comparable and cannot be combined to give an overall score. To achieve a net gain in biodiversity, there must be an increase across all habitat, hedgerow and river units, i.e., an increase in habitat and hedgerow units cannot be used to offset a loss in river units.

2.1.4 The information required to undertake the calculation is described below.

## 2.2 Baseline Data

2.2.1 The Phase 1 habitat data collected by AECOM in April 2021 (see **Appendix 8B: Preliminary Ecological Appraisal** of the ES [EN010118/APP/6.2] (hereafter referred to as ‘the baseline’) have been utilised to determine the baseline area-based and linear -based habitats (hedgerows). All the habitats recorded within the Order limits were converted from standard Phase 1 habitat types to UK Habitat Classification categories (Ref 8, Ref 9) (see **Appendix A**), before being digitised in Geographic Information System (GIS) to provide area and length measurements of each habitat type (the Baseline Habitat Plan is provided in **Appendix B**).

2.2.2 All baseline habitats defined within the Order limits were assigned a condition retrospectively post-survey, based on assumptions informed by baseline information available for the Order limits, professional judgement and application of the condition assessment criteria outlined in the Biodiversity Metric 3.0 – Technical Supplement (Ref 2) (**Appendix C**). The data was aggregated and entered into the metric to calculate the baseline biodiversity units.

## 2.3 Post-Development Data

2.3.1 The Landscape Masterplan (Appended to the OLEMP) has been used to determine the extent and type of habitats to be lost, retained and created post-development. Habitats in the Landscape Plan were converted to UK Habitat Classification categories before being digitised into GIS to produce the ‘Post-Development’ Plan (see **Appendix D**). Target condition scores for the proposed habitats were selected in accordance with Biodiversity Metric 3.0 User Guide and Technical Supplement (Ref 2) using professional judgement to ensure the condition scores selected were realistic. The data was utilised to predict the post development biodiversity units.

## 2.4 River Habitats

2.4.1 Habitat categories, associated distinctiveness and condition scores are approached differently for rivers. In line with current guidance (Ref 10), a desk study was undertaken to identify all river habitats present within the Order limits using the ‘Discovering Priority Habitat in England’ river data map (Ref 11). Following this, where data was available, river habitats were assigned a habitat category and distinctiveness using Section 41 of the NERC Act’s Priority Habitat descriptions (Ref 12).

2.4.2 As data was not available for all river habitats present within the Order limits, a River Condition Assessment was undertaken on 20 July 2021. This survey aimed to capture data to determine the habitat condition of all stretches of river on site and within 10 m of the Order limits. To assess condition of rivers, Modular River Physical (MoRPh) Survey methodologies were utilised in line with Natural England Guidance. These surveys assess river condition based

on morphological features. Rivers within 10m of the Post-Development boundary have been included within this assessment due to the implementation of the 10m riparian zone buffer which is applied to all river habitats.

- 2.4.3 The river condition assessment survey utilises the MoRPh5 survey methodology which assesses watercourse condition based on its morphological features and not the biological elements of river condition; these are assessed in other reports associated with the Scheme.

## 2.5 Strategic Significance

- 2.5.1 Metric 3.0 requires that the strategic significance of all baseline and post-development habitats be defined. Strategic significance refers to strategic locations for local biodiversity and nature improvements, identified within local planning policies (**Appendix E**). As part of this assessment, the following local planning policy documents were reviewed to determine the strategic significance of the habitats within the Order limits:

- a. Chelmsford Biodiversity Action Plan (Ref 13);
- b. Chelmsford Local Plan 2013-2026 (adopted May 2020) (Ref 14);
- c. Braintree District Local Plan 2013-2033 (Ref 15); and
- d. The South Suffolk and North Essex Clayland National Character Area profile (Ref 4).

## 2.6 Assumptions

- 2.6.1 In undertaking the calculation, the following assumptions have been made:
- a. The assessment is based on the **Illustrative Concept Design (Figure 2-5** of the ES [EN010118/APP/6.3] which is also presented in the Landscape Masterplan (Appended to the OLEMP) and includes any permanent and temporary loss of habitats;
  - b. Strategic significance has been assessed using the documents identified in Section 2.1.3. Habitats within the within Boreham Road Gravel Pits County Wildlife Site (CWS) and habitats with specific plans within the Chelmsford Local Biodiversity Action Plan (Ref 13) (lowland mixed deciduous woodland, ponds and hedgerows) have been assigned 'high' strategic significance;
  - c. The dry ditch within the Order limits has included within the adjacent habitat for this assessment, and excluded from the river metric assessment as it fails to meet the definition for a ditch with the metric (Ref 2);
  - d. Habitats created as part of the Scheme will be subject to appropriate ongoing management and monitored to ensure correct establishment and growth, and that remedial action will be taken if this does not proceed as expected, otherwise the target conditions used in the calculations may not be met and the biodiversity units may not be achieved. This will be secured by the **Outline Construction Environmental Management Plan** (OCEMP) [EN010118/APP/7.10], the **Outline Operational**

**Environmental Management Plan** (OOEMP) [EN010118/APP/7.11], and the **Decommissioning Strategy** [EN010118/APP/7.12];

- e. Grassland located under photovoltaic (PV) solar panels is assumed to have a target condition of 'poor';
- f. Grassland located between fence and panels that will be regularly mown is assumed to have a target condition of 'poor'; and,
- g. There are no permanent impacts to watercourses as the temporary impacts to habitats in Boreham tributary will be reinstated within two years therefore it assumed these habitats are retained, refer to 3.1.3.

## 2.7 Constraints

- 2.7.1 All habitat areas and lengths included within the assessment have been measured manually using ArcGIS based on the Phase 1 Habitat Plan and the General Arrangement drawing, as such habitat areas are approximations only. However, the approximations are not viewed to impact the results of the assessment.

# 3. Results

## 3.1 Biodiversity Metric 3.0 Calculation Tool Output

- 3.1.1 The results of the assessment for the Order limits are summarised below. Full details of all habitats including baseline, retained, lost and created are presented within the accompanying biodiversity metric calculations for the Scheme, refer to **Appendix F**.

### On-site Baseline Habitats

- 3.1.2 Within the Order limits for Longfield Solar Farm there is a total habitat area of 450.64 ha as some of the Order limits is excluded as being formed by existing concrete and hardstanding areas. The habitats identified within the Order limits prior to development vary in ecological value, ranging from very low to high distinctiveness. The most dominant habitat on site is arable habitat which covers 386.93ha, 21.36km of hedgerow habitat is also present in the baseline and 1.56km of river habitats (0.121km of the River Ter and 1.292km of Boreham Tributary, along with 0.15km of ditches).

### Cropland – Cereal crops (Cultivated/disturbed land – Arable)

- 3.1.3 Arable fields form the majority of habitat on the Order limits. These consist of a number of different crops including oilseed rape (*Brassica napus*), wheat (*Triticum aestivum*), potato (*Solanum tuberosum*) and sugar beet (*Beta vulgaris spp. vulgaris*). This habitat was categorised as the UK Hab category 'Cropland – Cereal crops' and has a default condition of 'N/A – Agriculture' within the metric.

### Grassland – Modified Grassland (Poor semi-improved grassland)

- 3.1.4 The poor semi-improved grassland mainly comprises of conservation margins and edge habitats alongside hedges and roads. Dominant species comprise false oat grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus lanatus*), rough



meadow grass (*Poa trivialis*), perennial rye-grass (*Lolium perenne*) and common couch (*Elymus repens*). This habitat was categorised as the UK hab category 'Grassland – Modified Grassland' and has been assigned a condition of 'moderate' within the metric.

#### Grassland – Modified Grassland (Improved grassland)

- 3.1.5 This improved grassland mainly occurs in the cattle grazed fields to the north of the Order limits. The fields are dominated by perennial rye-grass with occasional other species including Yorkshire fog, cocksfoot (*Dactylis glomerata*), common couch, creeping thistle (*Cirsium arvense*), cow parsley, dandelion and meadow buttercup (*Ranunculus acris*). This habitat was categorised as the UK hab category 'Grassland – Modified Grassland' and has been assigned a condition of 'moderate' within the metric.

#### Woodland and Forest – Lowland mixed deciduous woodland (Broad-leaved semi-natural woodland)

- 3.1.6 There are a few small areas of broadleaved semi-natural woodland within the Order limits, within approximately 13 larger woodlands within 50m of the Order limits, most of which are Local Wildlife Sites. These woodlands are often dominated by pedunculate oak, hornbeam, field maple, ash, with abundant elder (*Sambucus nigra*) and hawthorn (*Crataegus monogyna*) and classified as ancient woodland. The ground flora has patches where bluebell is abundant. Other ancient woodland indicators recorded include three-nerved sandwort (*Moehringia trinervia*), wood millet (*Milium effusum*), wood speedwell (*Veronica montana*) and climbing corydalis (*Ceratocarpus claviculata*). This habitat was categorised as the UK hab category 'Woodland and Forest – Lowland mixed deciduous woodland' and has been assigned a condition of 'moderate' within the metric. This habitat has been assigned as 'high' strategic significance as Lowland mixed deciduous woodlands are mentioned with the local biodiversity plan for Chelmsford (Ref 13).

#### Woodland and Forest – Other woodland; broadleaved (Broad-leaved plantation woodland)

- 3.1.7 A few small areas of plantation woodland are present on site. Species include pedunculate oak (*Quercus robur*) and hornbeam (*Carpinus betulus*), with some wild cherry (*Prunus avium*), field maple (*Acer campestre*) and ash planted in rows. This habitat was categorised as the UK hab category 'Woodland and Forest – Other woodland; broadleaved' and has been assigned a condition of 'moderate' within the metric.

#### Heathland and Shrub – mixed scrub (Scrub)

- 3.1.8 There are numerous small patches of dense and scattered scrub especially surrounding ponds as well as along boundaries including adjacent to trainline to the south of the Order limits. These scrub habitats are dominated by woody species such as bramble, silver birch (*Betula pendula*), butterfly-bush (*Buddleja davidii*), hornbeam, hawthorn, elder and blackthorn. This habitat was categorised as the UK hab category 'Heathland and Shrub – mixed scrub' and has been assigned a condition of 'moderate' within the metric.

### Lakes – Pond (priority habitat) (Standing water)

- 3.1.9 There are 27 ponds located across the Order limits with most being heavily shaded from trees and scrub. No submerged macrophytes were observed in the ponds. A few ponds have emergent vegetation and marginal species including water cress (*Nasturtium officinale*), reedmace (*Typha latifolia*) and soft rush (*Juncus effusus*). There are a couple of wet ditches with reedmace, fine-leaved water dropwort (*Oenanthe aquatica*) and water-starwort (species of *Callitriche*). This habitat was categorised as the UK hab category 'Lakes – Pond (priority habitat)' and has been assigned both 'moderate' and 'poor' condition within the metric. This habitat has been assigned as 'high' strategic significance as ponds are mentioned with the local biodiversity plan for Chelmsford (Ref 13).

### Sparsely vegetated land - Ruderal/Ephemeral (Tall ruderal)

- 3.1.10 Areas of tall ruderal herbs were observed between cultivated arable fields on banks of ditches or between arable fields and other habitats such as woodland and hedge boundaries. These habitats are dominated with willowherb species (species of *Epilobium*), common nettle, cow parsley, white dead nettle, broad-leaved dock, common thistle, wild teasel and hogweed. Other species include soft brome, dandelion, common field speedwell (*Veronica persica*), meadow buttercup, red campion and ground ivy (*Glechoma hederacea*). This habitat was categorised as the UK hab category 'Sparsely vegetated land - Ruderal/Ephemeral' and has been assigned a condition of 'moderate' within the metric.

### Hedgerow habitats

- 3.1.11 Hedgerows border many of the fields within the Order limits. These ranged from defunct to intact hedges, species poor or species rich and with or without standard trees. Some have associated features such as ponds, ditches and connection to woodland habitats. Many hedges have been less intensively managed and had been allowed to grow tall. There is also a range of species diversity with woody species recorded within the hedges including pedunculate oak, hawthorn, elder, dog rose, spindle (*Euonymus europaeus*), blackthorn (*Prunus spinosa*), field maple, English elm (*Ulmus procera*) and small leaved lime (*Tilia cordata*) as well as wild service tree (*Sorbus torminalis*) within two hedgerows. The ground flora of these hedgerows consists of cow parsley, hogweed, common nettle, perennial rye-grass, dock, cleavers (*Galium aparine*), rosebay willowherb, barren brome (*Anisantha sterilis*) and garlic mustard.
- 3.1.12 Hedgerows have been categorised as the UK hab category 'Native Species Rich Hedgerow', 'Native Species Rich Hedgerow - Associated with bank or ditch', 'Native Hedgerow', 'Native Hedgerow - Associated with bank or ditch', 'Native Species Rich Hedgerow with trees', 'Native Species Rich Hedgerow with trees - Associated with bank or ditch', 'Native Hedgerow with trees' and have been assigned 'moderate' and 'poor' conditions. All hedgerow habitat has been assigned as 'high' strategic significance as hedgerows are mentioned with the local biodiversity plan for Chelmsford (Ref 13).

## Running water

- 3.1.13 The River Ter flows west to east through the northern section of Order limits, approximately 100m is within the Order limits. The stretch surveyed is naturally meandering and slow flowing. The steep banks were densely vegetated by a mixture of trees, short-creeping herbaceous plants and short and tall grasses. No invasive non-native plant species were recorded along the stretch surveyed. The River Ter was assigned 'fairly good' condition.
- 3.1.14 Boreham Tributary flows north to south through the southern section of the Order limits, and a total of 200 m is within the Order limits. The stretch surveyed was quite straight, possibly having been historically realigned for development. The most upstream survey stretch was choked with emergent macrophytes however, the downstream stretch was heavily shaded by broadleaved trees and shrubs and therefore macrophyte abundance was limited to traces along the bank face channel margins. Banks were gently sloping and vegetated by a mixture of trees, shrubs, tall herbaceous plants and grasses. No invasive non-native plant species were recorded along the stretch surveyed. Boreham Tributary was assigned 'fairly good condition'. River habitat has been assigned as 'high' strategic significance as rivers are mentioned with the local biodiversity plan for Chelmsford (Ref 13).
- 3.1.15 Based on available evidence, all habitats were considered to be in 'poor' to 'moderate' condition with developed and agricultural habitats not being allocated a condition score, refer to see **Table 3-1**.
- 3.1.16 Strategic significance of habitats was mostly classed as being from 'low' to 'high', with habitats present within the Order limits being identified as priority habitat in local plans such as lowland mixed deciduous woodland, ponds and hedgerows, see **Appendix E**.

## 3.2 On-site Baseline Habitat Units

- 3.2.1 The baseline biodiversity value for area-based and linear habitats are provided in **Table 3-1****Table 3-2**Table 3-3. In total, the baseline biodiversity value of the habitats present was calculated as 1056.40 habitat units, 281.34 hedgerow units and 24.97 river units.

**Table 3-1: Baseline area-based habitats**

Habitat type (UK Habitats)	Distinctiveness	Condition	Area (ha)	Habitat Units
Cereal crops	Low	N/A -Agricultural	386.89	773.78
Modified grassland	Low	Moderate	15.03	60.12
Modified grassland	Low	Moderate	32.11	128.44
Mixed scrub	Medium	Moderate	0.75	6.00
Ponds (Priority Habitat)	High	Moderate	0.22	3.04



Ponds (Priority Habitat)	High	Poor	0.45	3.11
Ruderal/Ephemeral	Low	Moderate	1.55	6.20
Ruderal/Ephemeral	Low	Poor	1.9	3.80
Modified grassland	Low	Poor	0.11	0.22
Developed land; sealed surface	V.Low	N/A - Other	3.77	0.00
Vacant/derelict land/ bareground	Low	Poor	1.33	2.66
Lowland mixed deciduous woodland	High	Moderate	1.77	24.43
Other woodland; broadleaved	Medium	Moderate	3.08	24.64
Other woodland; mixed	Medium	Moderate	0.11	0.88
Other neutral grassland	Medium	Moderate	0.27	2.48
Mixed scrub	Medium	Moderate	0.29	2.67
Lowland mixed deciduous woodland	High	Moderate	1.01	13.94
<b>Total</b>	-	-	<b>450.64</b>	<b>1056.40</b>

**Table 3-2: Baseline hedgerow habitats**

Hedgerow type (UK Habitats)	Distinctiveness	Condition	Length (km)	Hedgerow Units
Line of Trees (Ecologically Valuable) - with Bank or Ditch	Medium	Moderate	2.43	22.36
Line of Trees	Low	Poor	0.14	0.32
Native Species Rich Hedgerow	Medium	Good	0.96	13.25
Native Species Rich Hedgerow - Associated with bank or ditch	High	Good	1.09	22.56
Native Hedgerow	Low	Moderate	0.37	1.70

Native Hedgerow - Associated with bank or ditch	Medium	Moderate	0.49	4.51
Native Hedgerow	Low	Poor	0.13	0.30
Native Hedgerow	Low	Good	2.41	16.63
Native Hedgerow - Associated with bank or ditch	Medium	Good	0.95	13.11
Native Species Rich Hedgerow with trees	High	Moderate	0.17	2.35
Native Species Rich Hedgerow with trees	High	Good	3.92	81.14
Native Species Rich Hedgerow - Associated with bank or ditch	High	Good	2.74	56.72
Native Hedgerow with trees	Medium	Moderate	0.03	0.28
Native Hedgerow with trees - Associated with bank or ditch	High	Moderate	0.17	2.35
Native Hedgerow with trees	Medium	Good	1.5	20.70
Native Hedgerow with trees - Associated with bank or ditch	High	Good	0.33	6.83
Line of Trees	Low	Moderate	3.53	16.24
<b>Total</b>	-	-	<b>21.36</b>	<b>281.34</b>

**Table 3-3: Baseline river habitats**

River habitat	Length within Order limits (km)	Distinctiveness	Condition	Strategic Significance	Watercourse encroachment	Riparian encroachment	River Units
River Ter	0.121	High	Fairly Good	High	No encroachment	No encroachment	2.09
Boreham Tributary	1.292	High	Fairly Good	High	No encroachment	No encroachment	22.29

Ditches	0.15	Medium	Poor	Low	No encroachment	No encroachment	0.6
<b>Total length (km)</b>	<b>1.56</b>					<b>Total river habitat units</b>	<b>24.97</b>

### 3.3 Post-Development Habitats

- 3.3.1 The proposed Landscape Masterplan includes provision of several habitats including mixed scrub, neutral grassland, mixed woodland plantation, broadleaved woodland plantation, hard standing and hedgerows. These habitats vary in ecological value, ranging from very low to high distinctiveness.
- 3.3.2 Habitats to be retained onsite, either entirely or partially include arable land, improved grassland, poor semi-improved grassland, scrub, ponds, ruderal and ephemeral, hardstanding, semi-natural broadleaved woodland, broadleaved woodland plantation, marshy grassland, hedgerows and all river habitats.
- 3.3.3 The entire length of the River Ter (121m) is assumed to be retained at current condition within the Order limits. No enhancements or habitat creation is proposed for this stretch within the current design proposal.
- 3.3.4 The entire length of Boreham Tributary (1.292) km is assumed to be retained at current condition within the Order limits. No enhancements are proposed for this stretch within the current design proposal. It is assumed that there is one temporary impact proposed for Boreham Tributary in the form of construction of a cable route across the watercourse. This will involve digging a trench (which will be a maximum of 5m wide) through both the banks and the watercourse and temporarily diverting the water via a pipe. The watercourse will be reinstated after the cable is laid which will only be likely to take up to a week. No permanent impacts are proposed for Boreham Tributary. Due to the temporary nature of the proposed works and the fact that the watercourse will be restored to at least baseline condition within two years, it is considered as no loss of river habitat units within the metric.
- 3.3.5 The created habitats include neutral grassland split across three areas of the Proposed Development, the ecologically enhanced area, which is set aside, the proposed species rich grass mix located under the photovoltaic (PV) solar panels and the regularly mown grassland between fence and panels. There is proposed scrub planting in the corner of the fields, a proposed native tree belt and a natural regeneration buffer to the mixed woodland and pond edges - 15-25m wide. There is also 7.64 km of native species rich hedgerow with trees to be planted.
- 3.3.6 The management regime required for the created habitats to reach their target condition in the specified timeframe is provided in **Appendix G**.

### Post-Development habitat units

3.3.7 The Post-Development biodiversity value of the habitats (retained value + created value) was calculated as 1894.75 habitat units, 287.04 hedgerow units and 24.97 river units. **Table 3-4**, **Table 3-5**, and **Table 3-6** show retained habitats and **Table 3-7** and **Table 3-8** show habitats that are created.

**Table 3-4: Retained habitats on-site - area habitats**

Habitat type (UK Habitats)	Distinctiveness	Condition	Area retained (ha)	Habitat Units
Cereal crops	Low	N/A -Agricultural	8.46	16.92
Modified grassland	Low	Moderate	1.61	6.44
Modified grassland	Low	Moderate	9.68	38.72
Mixed scrub	Medium	Moderate	0.05	0.40
Ponds (Priority Habitat)	High	Moderate	0.22	3.04
Ponds (Priority Habitat)	High	Poor	0.45	3.11
Ruderal/Ephemeral	Low	Moderate	0.54	2.16
Modified grassland	Low	Poor	0.03	0.06
Developed land; sealed surface	V.Low	N/A - Other	3.04	0.00
Lowland mixed deciduous woodland	High	Moderate	1.31	17.94
Other woodland; broadleaved	Medium	Moderate	3.07	24.56
Other neutral grassland	Medium	Moderate	0.27	2.48
Mixed scrub	Medium	Moderate	0.29	2.67
Lowland mixed deciduous woodland	High	Moderate	1.01	13.94
		<b>Total</b>	<b>30.03</b>	<b>132.57</b>

**Table 3-5: Retained habitats on-site - hedgerow habitats**

Hedgerow type (UK Habitats)	Distinctiveness	Condition	Length retained (km)	Hedgerow Units
Line of Trees (Ecologically Valuable) - with Bank or Ditch	Medium	Moderate	2.39	21.99
Native Species Rich Hedgerow	Medium	Good	0.88	12.14
Native Species Rich Hedgerow - Associated with bank or ditch	High	Good	0.89	18.42
Native Hedgerow	Low	Moderate	0.23	1.06
Native Hedgerow - Associated with bank or ditch	Medium	Moderate	0.49	4.51
Native Hedgerow	Low	Poor	0.13	0.30
Native Hedgerow	Low	Good	2.37	16.35
Native Hedgerow - Associated with bank or ditch	Medium	Good	0.72	9.94
Native Species Rich Hedgerow with trees	High	Moderate	0.17	2.35
Native Species Rich Hedgerow with trees	High	Good	3.92	81.14
Native Species Rich Hedgerow - Associated with bank or ditch	High	Good	2.62	54.23
Native Hedgerow with trees	Medium	Moderate	0.03	0.28
Native Hedgerow with trees - Associated with bank or ditch	High	Moderate	0.17	2.35
Native Hedgerow with trees	Medium	Good	1.25	17.25

Native Hedgerow with trees - Associated with bank or ditch	High	Good	0.33	6.83
Line of Trees	Low	Moderate	3.18	14.63
		<b>Total</b>	<b>19.77</b>	<b>263.76</b>

**Table 3-6: Retained habitats on-site - river habitats**

River type (UK Habitats)	Distinctiveness	Condition	Length retained (ha)	River Units
Other Rivers and Streams	High	Fairly good	0.121	2.09
Other Rivers and Streams	High	Fairly good	1.292	22.29
Ditches	Medium	poor	0.15	0.60
		<b>Total</b>	<b>1.56</b>	<b>24.97</b>

**Table 3-7: Created Post-Development habitat data**

Habitat type (UK Habitats)	Distinctiveness	Target Condition	Time to target condition (yrs)	Area created (ha)	Habitat Units
Mixed scrub	Medium	Moderate	5	0.83	5.56
Other neutral grassland	Medium	Moderate	5	84.24	563.96
Other neutral grassland	Medium	Poor	2	275.24	1025.24
Other neutral grassland	Medium	Poor	2	23.16	86.27
Developed land; sealed surface	V.Low	N/A - Other	0	11.36	0.00
Other woodland; broadleaved	Medium	Moderate	15	3.97	21.40

Other woodland; mixed	Medium	Moderate	30	21.75	59.75
<b>Total</b>				<b>420.55</b>	<b>1762.18</b>

**Table 3-8: Created Post-Development hedgerow data**

Hedgerow type (UK Habitats)	Distinctiveness	Target Condition	Time to target condition (yrs)	Length created (km)	Hedgerow Units
Native Species Rich Hedgerow with trees	High	Moderate	10	7.64	73.83
<b>Total</b>				<b>7.64</b>	<b>73.83</b>

### 3.4 Summary of Results

3.4.1 A summary of the results is shown in **Table 3-9**. Based on the current Post-Development Plan, the Scheme is predicted to result in a net gain of 838.35 habitat units (+79.36%), +56.26 hedgerow units (+20%) and no impact on river units.

3.4.2 **Table 3-10, Table 3-11, and Table 3-12**, show the overall change in broad habitat types. There is an overall loss of arable land (-756.86 units), scrub (-0.04 units), ruderal habitat (-7.84 units) and urban habitat types (-5.32 units). For hedgerow habitats, there is a total gain of +6.05km.

**Table 3-9: Summary of Results**

Area/Linear Units	On-site baseline	On-site post-development	Total net unit change	Total net % change	Units required to achieve 10%
Habitat units	1056.40	1894.75	+838.35	+79.36%	N/A
Hedgerow units	281.34	337.60	+56.26	+20%	N/A
River units	24.97	24.97	0	0	2.50



**Table 3-10: On-site change by broad habitat-type (area-based)**

On site change by broad habitat type						
	Baseline		Post development on site		Onsite Change	
Habitat group	Existing area	Existing value	Proposed area	Proposed value	Area change	Onsite Unit change
Cropland	386.93	773.86	8.46	16.92	-378.47	-756.86
Grassland	47.48	191.10	394.23	1723.17	346.75	1531.91
Heathland and shrub	1.04	8.67	1.17	8.62	0.13	-0.04
Lakes	0.67	6.14	0.67	6.14	0.00	0.00
Sparsely vegetated land	3.45	10.00	0.54	2.16	-2.91	-7.84
Urban	5.10	2.66	14.40	-2.66	9.30	-5.32
Woodland and forest	5.97	63.88	31.11	137.73	25.14	73.85

**Table 3-11: On-site change by broad habitat-type (linear-based, hedgerows)**

On site change by hedgerow type						
Hedgerow type	Baseline		Post development on site		Onsite Change	
	Existing length on-site	Existing value	Proposed length on-site	Proposed value on-site	On-site length change	On-site Unit change
Native Species Rich Hedgerow with trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Species Rich Hedgerow with trees	4.09	83.49	11.73	157.32	7.64	73.83
Native Species Rich Hedgerow - Associated with bank or ditch	3.83	79.28	3.51	72.66	-0.32	-6.62
Native Hedgerow with trees - Associated with bank or ditch	0.50	9.18	0.50	9.18	0.00	0.00
Native Species Rich Hedgerow	0.96	13.25	0.88	12.14	-0.08	-1.10
Native Hedgerow - Associated with bank or ditch	1.44	17.62	1.21	14.44	-0.23	-3.17
Native Hedgerow with trees	1.53	20.98	1.28	17.53	-0.25	-3.45
Line of Trees (Ecologically Valuable)	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees (Ecologically Valuable) - with Bank or Ditch	2.43	22.36	2.39	21.99	-0.04	-0.37
Native Hedgerow	2.91	18.63	2.73	17.71	-0.18	-0.92
Line of Trees	3.67	16.56	3.18	14.63	-0.49	-1.93

**Table 3-12: On-site change by broad habitat-type (River habitats)**

On site change by hedgerow type						
River type	Baseline		Post development on site		Onsite Change	
	Existing length on-site	Existing value	Proposed length on-site	Proposed value on-site	On-site length change	On-site Unit change
Priority Habitat	1.4	21.2	1.4	21.2	0.0	0.0
Other Rivers and Streams	0.2	0.6	0.2	0.6	0.0	0.0

## 4. Conclusion

4.1.1 Based on the current proposals and outlined assumptions, the Scheme is predicted to result in an **overall gain of approximately 79% of habitat units and 20% of hedgerow habitats**. Therefore, no further habitat mitigation is required in order to achieve a minimum of a 10% net gain in biodiversity for both habitat units and hedgerow units. However, the trading rules are not satisfied for ‘medium’ or ‘high’ distinctiveness habitats due to the loss of lowland mixed deciduous woodland (high distinctiveness), and scrub (medium distinctiveness) (**Table 4-1**).

**Table 4-1: Net gain trading rules summary**

Habitat type	Distinctiveness	Unit loss	Trading rules	Trading rules satisfied (Yes/No)
Lowland mixed deciduous grassland	High	-6.35	Like for like replacement	No
Mixed scrub	Medium,	-0.04	Same broad habitat type or higher distinctiveness habitat	No

4.1.2 The development proposals result in an overall net gain of approximately 79% of which approximately 25% is delivered through additional woodland planting. However, the proposed development results in a loss of 6.35 units of high distinctiveness ‘lowland mixed deciduous woodland’. The provision of lower distinctiveness woodland to compensate for the loss of this habitat is contrary to published net gain trading rules. Options available to meet the trading rules would require the like for like replacement of this woodland type. Onsite solutions to achieving this would involve the reconfiguration of the proportions of grassland and woodland provision within the masterplan. However, in this instance, given the overall net gains in woodland habitat type, a deviation from the trading rules is considered acceptable, especially when considered in the wider context of the significant overall net gains in biodiversity delivered by the proposed scheme.

4.1.3 Similarly, trading rules are not met for mixed scrub and pond habitats. The proposed development results in a loss of approximately 0.04 units of mixed scrub. The post development master plan does make provision for the creation of 0.83 ha of mixed scrub at field margins. Given the overall size of the Order limits, it is considered that the trading rules will eventually be met through the natural succession and colonisation of scrub within the Order limits.

4.1.4 There is 0% net change for river units. For river units, a further 2.50 river units are required to achieve 10% net gain, which would require bespoke

enhancements. If 1.16 km of the watercourses were enhanced from 'fairly good' to 'good/condition' this would achieve the 10% net gain.

#### 4.1.5 Potential measures regarding river habitats for the River Ter could include:

- a. Increasing the bank face and bank top tree feature richness by planting with riparian trees of local provenance, potentially including alder *Alnus glutinosa*, willow *Salix sp.* and hazel *Corylus avellana*. Tree and scrub species in the wider riparian corridor could include hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and dog rose *Rosa canina*, for example.
- b. Creating bank top water related features such as inset berms planted with marginal species including bulrush *Typha latifolia*, reed sweet grass *Glyceria maxima* and yellow flag *Iris pseudacorus*, ponds and species-rich wet grassland.
- c. Widening the natural riparian zone by planting riparian vegetation within the managed ground cover;
- d. Increasing the diversity of the vegetation structure on the bank face;
- e. Increasing the bank face natural bank profile and material richness;
- f. Increasing the macrophyte abundance and diversity within the channel;
- g. Improving channel bed siltation;
- h. Enhancements to flow types by altering the flow structure using deflectors;
- i. Improving the channel bed material richness; and
- j. Enhancement of sections of the watercourse in line with the recommendations of the Water Framework Directive Assessment report to ensure 'no deterioration'.

#### 4.1.6 Potential measures regarding river habitats for the Boreham Tributary could include:

- a. Re-naturalising the riparian zone and restoring the vegetation structure diversity along the bank top and bank face after the temporary impacts to Boreham Tributary;
- b. Restoring the natural channel bed after the temporary impacts to Boreham Tributary;
- c. Increasing the bank top and bank face tree feature richness;
- d. Increasing the macrophyte abundance and diversity within the channel;
- e. Improving channel bed siltation;
- f. Enhancement to flow types by altering the flow structure using deflectors; and
- g. Enhancement of sections of the watercourse in line with the recommendations of the Water Framework Directive Assessment report to ensure 'no deterioration'.

#### 4.1.7 Due to the limited opportunity to provide additional on-site mitigation as both watercourses are already of fairly good condition, opportunities to undertake

off-site mitigation may be considered a potential option to achieve 10% biodiversity net gain. This would need to be agreed with local landowners and stakeholders and assured through an appropriate legal agreement. It is also recommended that consultation with the Environment Agency and other stakeholders is undertaken to maximise opportunities for on-site and off-site mitigation in line with current proposals, as described above.

- 4.1.8 The outputs of the metric are dependent on all created and retained habitats meeting the target conditions, subject to the criteria outlined within Natural England's Biodiversity Metric 3.0 Technical Note (Ref 2)<sup>2</sup>. Management methodology to meet the target condition for each habitat would therefore need to be outlined within an overarching Landscape and Ecology Management Plan for the Proposed Development.
- 4.1.9 Ecological monitoring reports should be prepared to establish the success of the management measures specified and to determine if any further adaptive management is required to ensure the change in condition is achieved. Management & Monitoring Plans would need to be prepared for any on-site and off-site enhancement measures, as set out within the OCEMP and OOEMP.

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<sup>2</sup> Natural England (2021). The Biodiversity Metric 3.0 – User Guide & Technical Supplement

## 5. References

- Ref 1 Natural England's Biodiversity Metric 3.0 (online source).
- Ref 2 Natural England (2021). The Biodiversity Metric 3.0 – User Guide & Technical Supplement.
- Ref 3 Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide (2019).
- Ref 4 NCA Profile: 86 South Suffolk and North Essex Clayland (NE515) (2014). Natural England.
- Ref 5 National Planning Policy Framework (2021)
- Ref 6 Essex Green Infrastructure Strategy (2020). Essex County Council
- Ref 7 Environment Bill (2019). The House of Commons, 15 October 2019.
- Ref 8 Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit. Joint Nature Conservation Committee, Peterborough.
- Ref 9 The UK Habitat Classification System.
- Ref 10 Natural England and other parties (2021). Biodiversity Metric 3.0 – Auditing and accounting for biodiversity - User Guide.
- Ref 11 Discovering Priority Habitats in England. River Data
- Ref 12 Natural Environment and Rural Communities Act (2006). Section 41
- Ref 13 Chelmsford Biodiversity Action Plan
- Ref 14 Chelmsford Local Plan 2013-2026 (Adopted May 2020)
- Ref 15 Braintree District Local Plan 2013-2033 (Adopted February 2021).

## 6. Appendices

### 6.1 Appendix A – Baseline Habitat Plan





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### LEGEND

- Redline boundary
- County Wildlife Site (CWS)
- Riparian Zone
- UK Habitat Classification**
- Woodland and forest - Lowland mixed deciduous
- Woodland and forest - other woodland; broadleaved
- Woodland and forest - other woodland; mixed
- Heathland and shrub - Mixed shrub
- Grassland - Modified grassland
- Ponds (Priority Habitat)
- Sparsely vegetated land - Ruderal/Ephemeral
- Cropland - Cereal crops
- Urban - Developed land; sealed surface
- Urban - Vacant/derelict land/bareground
- Other Rivers and Streams
- Ditches
- Line of Trees
- Line of trees (Ecologically Valuable) - with Bank or Ditch
- Native Species Rich Hedgerow
- Native Species Rich Hedgerow - Associated with bank or ditch
- Native Hedgerow
- Native Hedgerow - Associated with bank or ditch
- Native Species Rich Hedgerow with trees
- Native Species Rich Hedgerow with trees - Associated with bank or ditch
- Native Hedgerow with trees
- Native Hedgerow with trees - Associated with bank or ditch

### NOTES

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### ISSUE PURPOSE

FOR INFORMATION  
PROJECT NUMBER

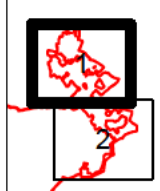
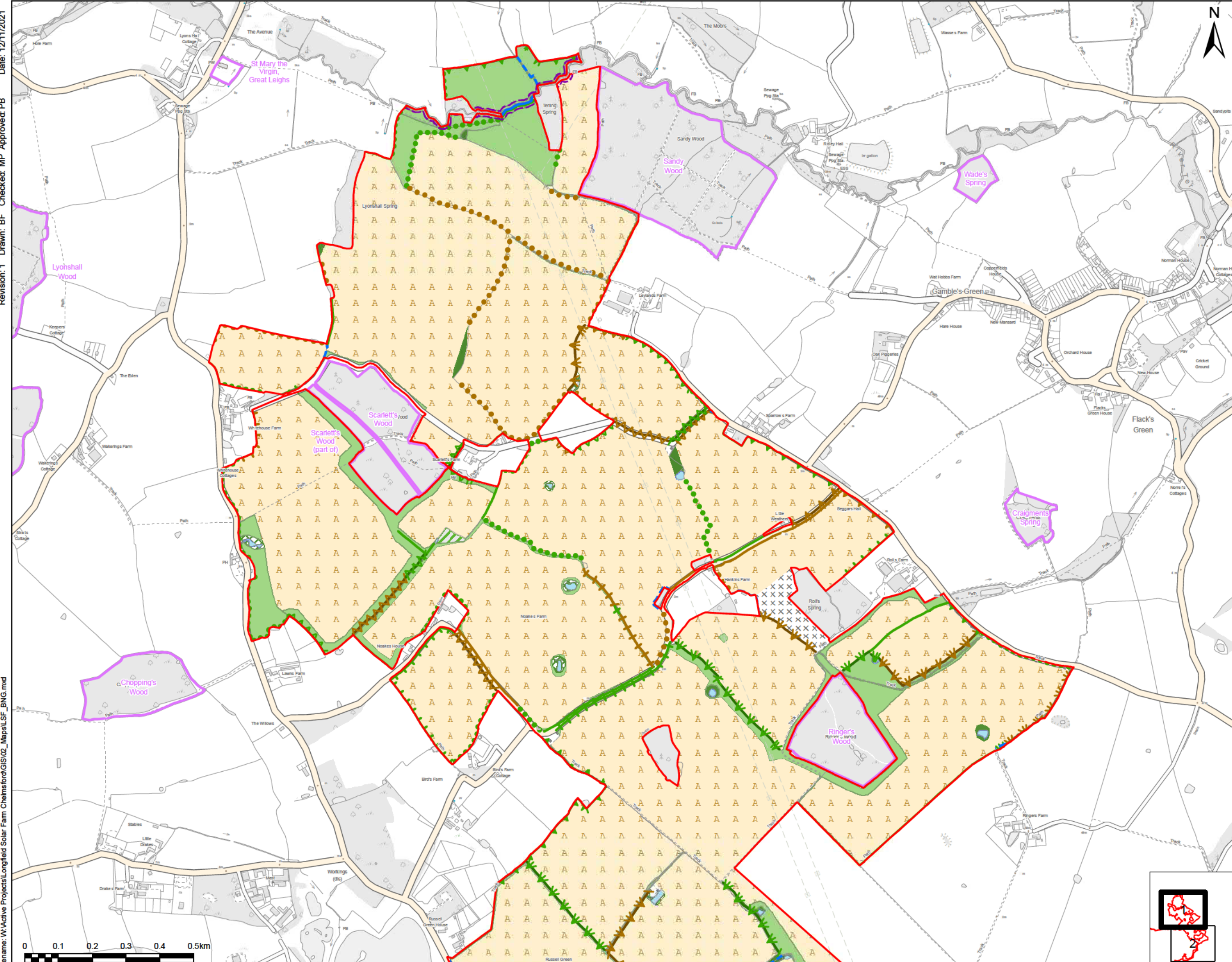
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### SHEET TITLE

Baseline Habitat

### SHEET NUMBER

Figure 4.1



Revision: 1 Drawn: BF Checked: MP Approved: PB Date: 12/11/2021  
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## 6.2 Appendix B - Habitat classification conversion

Phase 1 habitat classification	UK Habitat Classification
Bare ground	Vacant/derelict land/ bare ground
Broadleaved parkland/scattered trees	Woodland and forest – Wood-pasture and parkland
Broadleaved woodland – plantation	Woodland and forest – Other woodland mixed
Broadleaved woodland – semi-natural	Woodland and forest – Lowland mixed deciduous woodland
Buildings	Urban – Developed land; sealed surface
Cultivated/disturbed land – arable	Cropland – Cereal crops
Cultivated/disturbed land – ephemeral/short perennial	Sparsely vegetated land = Ruderal/Ephemeral
Defunct hedge – native species-rich	Native species rich hedgerow
Defunct hedge – species-poor	Native hedgerow
Dry ditch	N/A (only classified if wet ditch for 4+ months)
Hedge with trees – native species-rich	Native species rich hedgerow with trees
Hedge with trees – species-poor	Native hedgerow with trees
Improved grassland	Grassland – Modified grassland
Intact hedge – native species-rich	Native species rich hedgerow
Intact hedge – species-poor	Native hedgerow
Mixed woodland – semi-natural	Woodland – Lowland mixed deciduous woodland
Other tall herb and fern – ruderal	Sparsely vegetated land -Ruderal/Ephemeral
Poor semi-improved grassland	Grassland – Modified grassland
Running water	Rivers and Streams – Rivers and Streams (Other)
Scrub – dense/continuous	Heathland and scrub – Mixed scrub
Scrub - scattered	Heathland and scrub – Mixed scrub
Standing water	Lakes – Ponds (priority habitat)



## 6.3 Appendix C – Condition Assessment Rationale

### *Baseline habitat condition assessment rationale*

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
Cropland – cereal crops	No assessment required; condition is pre-set.	Phase 1 habitat survey undertaken by AECOM in August 2020	N/A	Pre-set	N/A – Agriculture
Urban - Developed land; sealed surface	No assessment required; condition is pre-set.	Phase 1 habitat survey undertaken by AECOM in August 2020	N/A	Pre-set	N/A - Other
Woodland and forest – Other woodland; broadleaved	One age class present (1), evidence of browsing pressure in less than 40% of woodland (2), no invasive species present (3), 5 or more native tree species (3), >80% of canopy trees and >80% of understorey shrubs are native (3), 10-20% of woodland areas of temporary open space (3), one or two classes only present in woodland (2), tree mortality less than 10%, no pests or diseases and no crown dieback (3), no recognisable NVC community (1), two storeys across all survey plots (2), no veteran trees present in woodland (1), less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps (1), less than 1 hectare in total of nutrient enrichment across woodland areas and/or less	Phase 1 habitat survey undertaken by AECOM in April 2021	Woodland Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
Woodland and forest – Other woodland; broadleaved	than 20% of woodland area has damaged ground (2). Total = 27 points.	Phase 1 habitat survey undertaken by AECOM in April 2021	Woodland Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Woodland and forest – Lowland mixed deciduous woodland	Two age classes present (2), evidence of significant browsing pressure is present in <40% of woodland (2), no invasive species present in woodland (3), 5 or more native tree or shrub species found across woodland parcel (3), >80% of canopy trees and >80% of understory shrubs are native (3), 10-20% of woodland has areas of temporary open space (3), 1 or 2 classes only present in woodland (2), greater than 25% tree mortality and or any high risk pest or disease present (1), no recognisable NVC community (1), two storeys	Phase 1 habitat survey undertaken by AECOM in April 2021	Woodland Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>across all survey plots (2), two or more veteran trees per hectare (3), less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/stems and stumps (1), less than 1 hectare in total of nutrient enrichment across woodland area and/or less than 20% of woodland area has damaged ground (2). Total = 28 points.</p>				
Woodland and forest – Wet woodland	<p>Two age classes present (2), no significant browsing damage evident in woodland (3), no invasive species present in woodland (3), 5 or more native tree or shrub species found across woodland parcel (3), &gt;80% of canopy trees and &gt;80% of understory shrubs are native (3), 10-20% of woodland has areas of temporary open space (3), all 3 classes present in woodland; trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth (3), no recognisable NVC community (1), one or less storey across all survey plots (1), no veteran trees present in woodland (1), between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/stems and stumps (2). No nutrient enrichment or damaged ground evident (3). Total = 31</p>	Phase 1 habitat survey undertaken by AECOM in April 2021	Woodland Habitat Type		Moderate
Grassland - Modified grassland	<p>Appearance and composition of the vegetation does not closely matches characteristics of the specific grassland type (fail), sward height is not varied (fail), cover of bare ground between 1% and 5% including localised areas e.g.</p>	Phase 1 habitat survey undertaken by AECOM in April 2021	Grassland Habitat Type (low distinctiveness)	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	Rabbit warrens (pass), cover of bracken less than 20% and cover of scrub (including bramble) less than 5% (pass), absence of invasive non-native species and combined cover of undesirable species and physical damage accounts for less than 5% of total area (pass). 3/5 criteria passed.				
Grassland – Other neutral grassland	Appearance and composition of the vegetation closely matches characteristics of the specific grassland type (pass), sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) (pass), cover of bare ground between 1% and 5% including localised areas e.g. Rabbit warrens (pass), cover of bracken is more than 20% and/or scrub (including bramble) less than 5% (fail), absence of invasive non-native species, combined cover of undesirable species and physical damage accounts for less than 5% of total area (pass). 4/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Grassland Habitat Type (high distinctiveness)	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Heathland and shrub - Mixed scrub	Habitat is representative of UKHab description and there is at least 3 woody species with no one species comprising more than 75% of the cover (pass), good age range – all of the following are present: seedlings, young shrubs and mature shrubs (pass), absence of invasive non-native species and undesirable species make up less than 5% of ground cover (pass), scrub has well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s)	Phase 1 habitat survey undertaken by AECOM in April 2021	Scrub Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	(pass), there are no clearings, glades or rides present within the scrub (fail). 4/5 criteria passed.				
Rivers and Streams – Ditches (dry)	Dry ditches are absorbed into the area of the adjacent habitat and is not categorised as it is dry for more than 4 months of the year	Phase 1 habitat survey undertaken by AECOM in April 2021	N/A	N/A	N/A
Lakes – Ponds (Priority Habitat); Ponds 1 & 8	Pond is of good water quality indicating no obvious signs of pollution, turbidity is acceptable if the pond is grazed by livestock (pass), semi-natural habitat is not present for at least 10m from the pond edge (fail), <10% of pond is covered with duckweed or filamentous algae (pass), pond is not artificially connected to other waterbodies (pass), pond water levels fluctuate naturally throughout the year, no obvious dams, pumps or pipework (pass), absence of non-native plant and animal species, pond is not artificially stocked with fish, if naturally stocked it is native species at low densities (pass). 6/7 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Lake Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Lakes – Ponds (Priority Habitat); Ponds 2, 3 & 16	Pond is not of good water quality (fail), semi-natural habitat is not present for at least 10m from the pond edge (fail), <10% of the pond is covered with algae (pass), not artificially connected to other waterbodies (pass), water levels are able to fluctuate naturally throughout the year and no obvious dams, pumps or pipework (pass), absence of non-native plant and animal species (pass), pond is not	Phase 1 habitat survey undertaken by AECOM in April 2021	Lake Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	artificially stocked by fish, if naturally stocked it is native species at low densities (pass). 5/7 criteria passed.				
Lakes – Ponds (Priority Habitat); Ponds 4, 5, 6, 7, 17, 19, 21 non-woodland ponds	Pond is not of good water quality (fail), semi-natural habitat is not present for at least 10m from pond edge (fail), less than 10% of the pond is covered with algae (pass), pond is not artificially connected to other waterbodies (pass), water levels fluctuate naturally throughout the year and no obvious dams, pumps or pipework (pass), absence of non-native plant and animal species (pass), pond is not artificially stocked by fish, if naturally stocked it is native species at low densities (pass), plants do not cover at least 50% of the pond in areas less than 3m deep (fail), more than 50% of surface is shaded by woody bankside species (fail). 5/9 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Lake Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Poor
Lakes – Ponds (Priority Habitat); Ponds 9, 10, 23, 24, 25 non-woodland ponds	Pond is of good water quality indicating no obvious signs of pollution, turbidity is acceptable if the pond is grazed (pass), semi-natural habitat is not present for at least 10m from pond edge (fail), <10% of the pond is covered with algae (pass), pond is not artificially connected to other waterbodies (pass), pond water levels fluctuate naturally throughout the year and no obvious dams, pumps or pipework (pass), absence of non-native plant and animal species (pass), pond is not artificially stocked by fish, if naturally stocked it is native species at low densities (pass), plants do not cover at least 50% of the	Phase 1 habitat survey undertaken by AECOM in April 2021	Lake Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate



Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	pond in areas less than 3m deep (fail), more than 50% of surface is shaded by woody bankside species (fail). 6/9 criteria passed.				
Lakes – Ponds (Priority Habitat); Ponds 18, 61, 62, 63 non-woodland ponds	Pond is of good water quality indicating no obvious signs of pollution, turbidity is acceptable if the pond is grazed (pass), semi-natural habitat is not present for at least 10m from pond edge (fail), >10% of the pond is covered with algae (fail), pond is not artificially connected to other waterbodies (pass), pond water levels fluctuate naturally throughout the year and no obvious dams, pumps or pipework (pass), absence of non-native plant and animal species (pass), pond is not artificially stocked by fish, if naturally stocked it is native species at low densities (pass), plants do not cover at least 50% of the pond in areas less than 3m deep (fail), more than 50% of surface is shaded by woody bankside species (fail). 6/9 criteria passed. 5/9 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Lake Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Poor
Lakes – Ponds (Priority Habitat); Pond 20 non-woodland pond	Pond is not of good water quality (fail), semi-natural habitat is not present for at least 10m from pond edge (fail), >10% of the pond is covered with algae (fail), pond is not artificially connected to other waterbodies (pass), pond water levels fluctuate naturally throughout the year and no obvious dams, pumps or pipework (pass), absence of non-native plant and animal species (pass), pond is not artificially stocked by fish, if naturally stocked it is native species at low densities (pass), plants do not cover at least 50% of the pond in areas less than 3m	Phase 1 habitat survey undertaken by AECOM in April 2021	Lake Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Poor

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	deep (fail), more than 50% of surface is shaded by woody bankside species (fail). 4/9 criteria passed.				
Line of trees (ID 1, 3, 8)	More than 70% of trees are native species (pass), tree canopy is predominantly continuous with gaps making up <10% of total area and no individual gap is >5m wide (pass), does not include one or more mature or veteran tree (fail), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 3/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Line of trees (ID 7, 9, 12, 13, 15, 17, 18, 22, 26, 35, 38, 40, 46, 49, 54, 59, 73)	More than 70% of trees are native species (pass), tree canopy is predominantly continuous with gaps making up <10% of total area and no individual gap is >5m wide (pass), includes one or more mature or veteran tree (pass), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 4/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Line of trees (ID 24)	More than 70% of trees are native species (pass), tree canopy is not predominantly continuous with gaps making up >10% of total area and/or no individual gap is <5m wide (fail), includes one or more mature or veteran	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	tree (pass), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 3/5 criteria passed.				
Line of trees (ID 52)	More than 70% of trees are native species (pass), tree canopy is predominantly continuous with gaps making up <10% of total area and no individual gap is >5m wide (pass), includes one or more mature or veteran tree (pass), undisturbed naturally vegetated strip of at least 6m on both sides (pass), more than 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (fail). 4/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Line of trees (ID 94)	Less than 70% of trees are native species (fail), tree canopy is not continuous with gaps making up >10% of total area and/or no individual gap is <5m wide (fail), does not include one or more mature or veteran tree (fail), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 1/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Poor

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
Line of trees – Associated with bank or ditch (ID 62)	More than 70% of trees are native species (pass), tree canopy is predominantly continuous with gaps making up <10% of total area and no individual gap is >5m wide (pass), includes one or more mature or veteran tree (pass), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 4/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Line of trees (ecologically valuable) (ID 4, 5, 30, 43, 75)	More than 70% of trees are native species (pass), tree canopy is predominantly continuous with gaps making up <10% of total area and no individual gap is >5m wide (pass), includes one or more mature or veteran tree (pass), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 4/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Line of trees (ecologically valuable) – Associated with bank or ditch (ID 10, 14, 25, 110)	More than 70% of trees are native species (pass), tree canopy is predominantly continuous with gaps making up <10% of total area and no individual gap is >5m wide (pass), includes one or more mature or veteran tree (pass), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	livestock, wild animals, pests diseases or humans (pass). 4/5 criteria passed.				
Line of trees (ecologically valuable) – Associated with bank or ditch (ID 66a)	More than 70% of trees are native species (pass), tree canopy is not continuous with gaps making up >10% of total area and/or individual gaps are >5m wide (fail), includes one or more mature or veteran tree (pass), no undisturbed naturally vegetated strip of at least 6m on both sides (fail), at least 95% of trees are in healthy condition with little or no evidence of adverse impact on tree health by livestock, wild animals, pests diseases or humans (pass). 3/5 criteria passed.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Native hedgerow (ID 2, 6, 11, 21, 39, 44, 47, 61, 120)	Height is >1.5m average along length and width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length and gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side and plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Pass of all functional groups = Metric score 3.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow (ID 16)	Height and width are >1.5m average along length (fail), gap between ground and base of canopy <0.5m for >90% length (fail) and gaps	Phase 1 habitat survey undertaken by	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and	Moderate

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	make up <10% of length with no gaps >5m (pass), >1m width of undisturbed ground with perennial herbaceous vegetation for >90% on at least one side of hedge (pass), plant species indicative of nutrient enrichment dominate <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). 2 fails in 2 separate functional groups and 1 functional group failed = Metric score 2	AECOM in April 2021		assessor professional judgement	
Native hedgerow (ID 33 & 51)	Height is >1.5m average along length and width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length and gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail), plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and/or <90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = Metric score 3.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow (ID 45 & 64)	Height is >1.5m average along length (pass), width is not >1.5m average along length (fail), gap between ground and base of canopy <0.5m for >90% of length and gaps make up <10% of total length with no canopy gaps>5m	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>(pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail), plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = Metric score 3.</p>				
Native hedgerow (ID 48)	<p>Height is &gt;1.5m average along length and width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length and gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail), plant species indicative of nutrient enrichment dominant and &lt;20% of undisturbed ground (fail), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). Fail of 1 functional group = Metric score 2.</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Moderate</p>
Native hedgerow (ID 67)	<p>Height is &gt;1.5m average along length and width is &gt;1.5m average along length (fail), gap between ground and base of canopy &lt;0.5m for &gt;90% of length and gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Moderate</p>

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>and plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). Fail of 1 functional group = 2</p>				
Native hedgerow (ID 71)	<p>Height Is &gt;1.5m average along length and width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length and gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (fail), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = 3</p>	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow (ID 80)	<p>Height Is &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (fail), gap between ground and base of canopy &lt;0.5m for &gt;90% of length and gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and</p>	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good



Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = 3				
Native hedgerow (ID 81)	Height is >1.5m average along length (pass), width is >1.5m average along length (fail), gap between ground and base of canopy <0.5m for >90% of length and gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Total of 3 fails with 1 functional group failing = 2	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Native hedgerow (ID 83)	Height is >1.5m average along length (pass), width is >1.5m average along length (fail), gap between ground and base of canopy <0.5m for >90% of length and gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90%	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	hedgerow or undisturbed ground is free of human damage (pass). 2 fails = 3				
Native hedgerow (ID 85)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length and gaps make up <10% of total length with no canopy gaps >5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Pass all functional groups = 3	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow (ID 100)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps >5m (fail), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3</p>				
Native hedgerow (ID 108)	<p>Height is &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (fail), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (fail), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). 2 fails = 3</p>	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow (ID 57a)	<p>Height is &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (fail), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of</p>	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = 3				
Native hedgerow – Associated with bank or ditch (ID 77, 106)	Height Is >1.5m average along length (pass) ,width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = 3	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow – Associated with bank or ditch (ID 93)	Height Is >1.5m average along length (pass) ,width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	of human damage (pass). Pass all functional groups = 3				
Native hedgerow – associated with bank or ditch (ID 96)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). 2 fails in same functional group = 2	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Native hedgerow with trees (ID 23, 63, 74, 121)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Pass all functional groups = 3				
Native hedgerow with trees (ID 31)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Two fails within the same functional group = 2	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Moderate
Native hedgerow with trees (ID 50)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (fail), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.</p>				
<p>Native hedgerow with trees (ID 56)</p>	<p>Height Is &gt;1.5m average along length (pass), width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Good</p>
<p>Native hedgerow with trees (ID 69)</p>	<p>Height Is &gt;1.5m average along length (pass), width is &gt;1.5m average along length (pass),</p>	<p>Phase 1 habitat survey</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and</p>	<p>Good</p>



Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>gap between ground and base of canopy &lt;0.5m for &gt;90% of length (fail), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). 2 fails = 3.</p>	<p>undertaken by AECOM in April 2021</p>		<p>assessor professional judgement</p>	
<p>Native hedgerow with trees – associated with bank or ditch (ID 78)</p>	<p>Height ls &gt;1.5m average along length (pass), width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (fail), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Good</p>

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	livestock, animals, pests, disease or humans (pass). 2 fails = 3.				
Native hedgerow with trees – associated with bank or ditch (ID 82)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Pass all functional groups = 3.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native hedgerow with trees – associated with bank or ditch (ID 112, 117)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.</p>				
<p>Native hedgerow with trees – associated with bank or ditch (ID 115)</p>	<p>Height is &gt;1.5m average along length (pass), width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps &gt;5m (fail), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (fail), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). 3 fails with 2 in the same functional group = 2.</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Moderate</p>
<p>Native hedgerow with trees – associated with bank or ditch</p>	<p>Height is &gt;1.5m average along length (pass), width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make</p>	<p>Phase 1 habitat survey undertaken by</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Moderate</p>

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
(ID 116)	up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). 2 fails within the same functional group = 2.	AECOM in April 2021			
Native species rich hedgerow (ID 19, 27, 34, 36, 60, 65)	Height ls >1.5m average along length (pass) ,width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Pass all functional groups = 3	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
Native species rich hedgerow (ID 28, 29)	Height Is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = 3	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native species rich hedgerow (ID 55)	Height Is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (fail), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). Only 1 fail = 3	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native species rich hedgerow with trees (ID 101, 102, 103, 105)	Height Is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make	Phase 1 habitat survey undertaken by	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Pass all functional groups = 3.</p>	<p>AECOM in April 2021</p>		<p>assessor professional judgement</p>	
<p>Native species rich hedgerow with trees (ID 41)</p>	<p>Height ls &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (fail), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Good</p>



Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.				
Native species rich hedgerow with trees (ID 42)	Height ls >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (pass), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good
Native species rich hedgerow with trees (ID 76)	Height ls >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps>5m (fail), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). 2 fails = 3.</p>				
<p>Native species rich hedgerow with trees – Associated with bank or ditch (ID 20, 53, 58, 68, 70, 72, 79, 84, 86, 87, 88, 89, 90, 92, 97, 99, 114, 118, 57b)</p>	<p>Height Is &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Pass all functional groups = 3.</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Good</p>
<p>Native species rich hedgerow with trees – Associated with bank or ditch (ID 91, 66b)</p>	<p>Height Is &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Good</p>

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	<p>gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (pass), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.</p>				
<p>Native species rich hedgerow with trees – Associated with bank or ditch (ID 98)</p>	<p>Height ls &gt;1.5m average along length (pass) ,width is &gt;1.5m average along length (pass), gap between ground and base of canopy &lt;0.5m for &gt;90% of length (pass), gaps make up &lt;10% of total length with no canopy gaps&gt;5m (pass), &gt;1m with of undisturbed ground with perennial vegetation for &gt;90% length on at least on side (fail) plant species indicative of nutrient enrichment dominant &lt;20% of undisturbed ground (fail), &gt;90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and &gt;90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans</p>	<p>Phase 1 habitat survey undertaken by AECOM in April 2021</p>	<p>Hedgerows and Line of Trees Habitat Type</p>	<p>Biodiversity Metric 3.0 condition criteria and assessor professional judgement</p>	<p>Moderate</p>

Habitat type	Habitat condition assessment	Survey data reference	Habitat condition sheet	Assessment	Assigned condition
	(pass). 2 fails within the same functional group = 2.				
Native species rich hedgerow with trees – Associated with bank or ditch (ID 109)	Height is >1.5m average along length (pass), width is >1.5m average along length (pass), gap between ground and base of canopy <0.5m for >90% of length (pass), gaps make up <10% of total length with no canopy gaps >5m (pass), >1m with of undisturbed ground with perennial vegetation for >90% length on at least on side (pass) plant species indicative of nutrient enrichment dominant <20% of undisturbed ground (fail), >90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species and >90% hedgerow or undisturbed ground is free of human damage (pass). At least 1 mature tree per 30m stretch of hedgerow (pass), at least 95% of trees are in healthy condition with little to no evidence of adverse impacts by livestock, animals, pests, disease or humans (pass). Only 1 fail = 3.	Phase 1 habitat survey undertaken by AECOM in April 2021	Hedgerows and Line of Trees Habitat Type	Biodiversity Metric 3.0 condition criteria and assessor professional judgement	Good

## 6.4 Appendix D – Post-Development Habitat Plan





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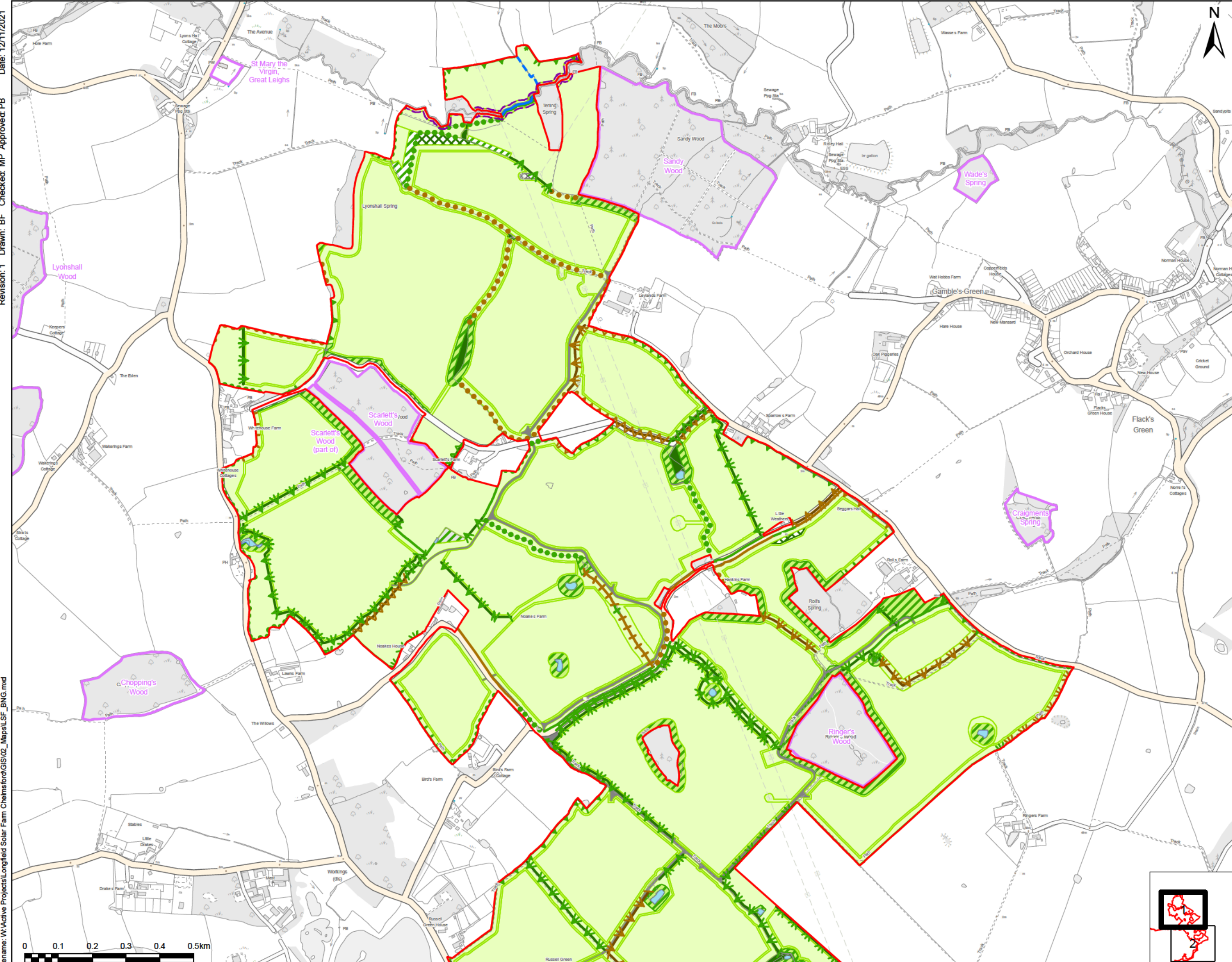
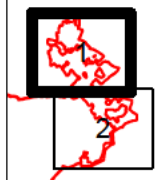
- Redline boundary
- County Wildlife Site (CWS)
- Riparian Zone
- UK Habitat Classification
  - Woodland and forest - Lowland mixed deciduous
  - Woodland and forest - other woodland; broadleaved
  - Woodland and forest - other woodland; mixed
  - Heathland and shrub - Mixed shrub
  - Grassland - Other neutral grassland
  - Ponds (Priority Habitat)
  - Urban - Developed land; sealed surface
  - Unclassified
  - Other Rivers and Streams
  - Ditches
  - Line of Trees
  - Line of trees (Ecologically Valuable) - with Bank or Ditch
  - Native Species Rich Hedgerow
  - Native Species Rich Hedgerow - Associated with bank or ditch
  - Native Hedgerow
  - Native Hedgerow - Associated with bank or ditch
  - Native Species Rich Hedgerow with trees
  - Native Species Rich Hedgerow with trees - Associated with bank or ditch
  - Native Hedgerow with trees
  - Native Hedgerow with trees - Associated with bank or ditch

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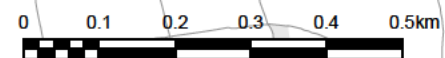
60624362

Post Development Habitat

Figure 4.1



Revision: 1 Drawn: BF Checked: MP Approved: PB Date: 12/11/2021  
Filename: W:\Active Projects\Longfield Solar Farm\Chelmsford\GIS\02\_Maps\LSF\_BNG.mxd







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**LEGEND**

- Redline boundary
- County Wildlife Site (CWS)
- Riparian Zone
- UK Habitat Classification**
- Woodland and forest - Lowland mixed deciduous
- Woodland and forest - other woodland; broadleaved
- Woodland and forest - other woodland; mixed
- Heathland and shrub - Mixed shrub
- Grassland - Other neutral grassland
- Grassland - Modified grassland
- Ponds (Priority Habitat)
- Sparsely vegetated land - Ruderal/Ephemeral
- Cropland - Cereal crops
- Urban - Amenity grassland
- Urban - Developed land; sealed surface
- Other Rivers and Streams
- Ditches
- Native Hedgerow
- Native Hedgerow - Associated with bank or ditch
- Native Species Rich Hedgerow with trees
- Native Species Rich Hedgerow with trees - Associated with bank or ditch
- Native Hedgerow with trees

**NOTES**

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**ISSUE PURPOSE**

FOR INFORMATION

**PROJECT NUMBER**

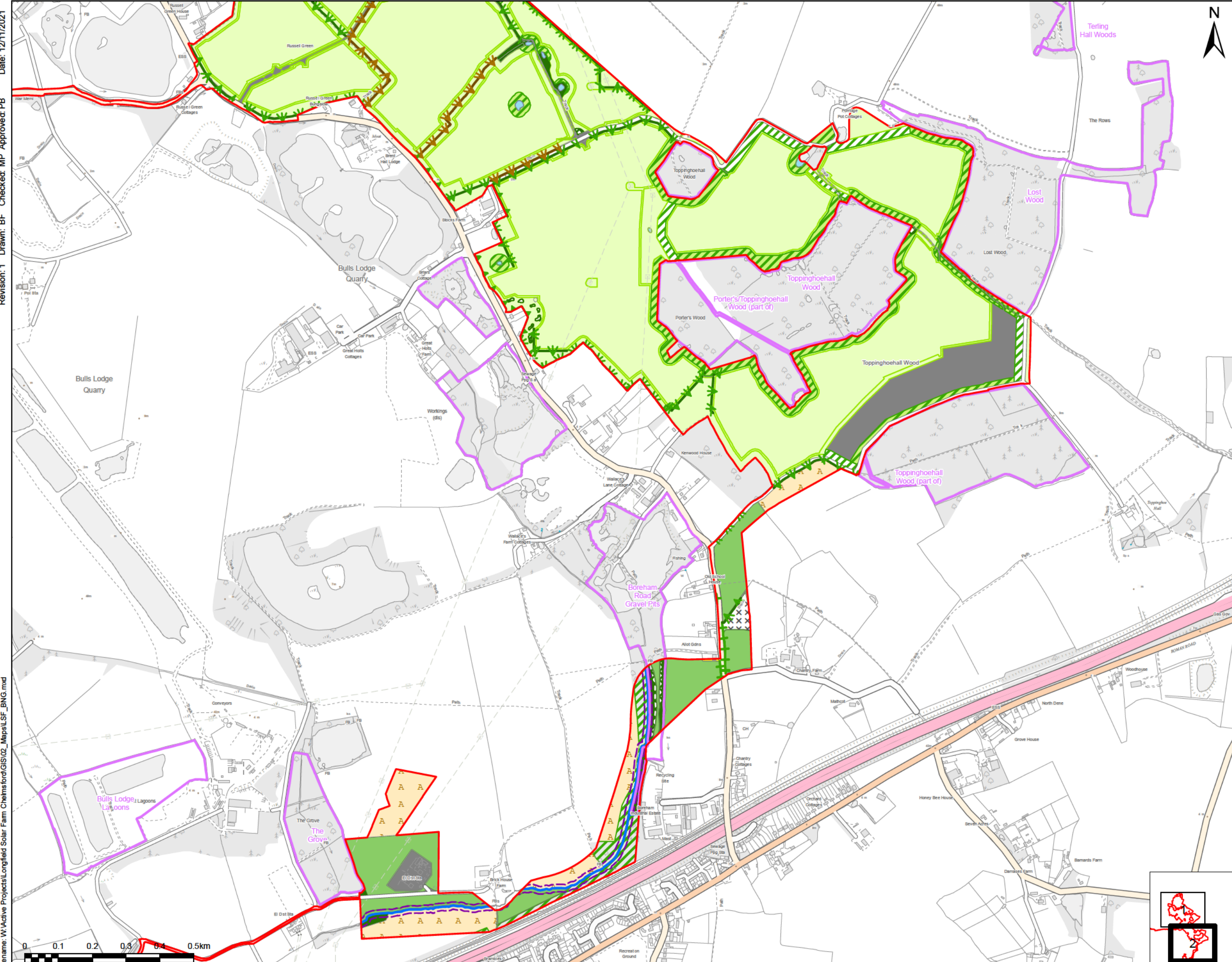
60624362

**SHEET TITLE**

Post Development Habitat

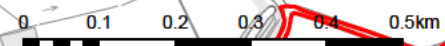
**SHEET NUMBER**

Figure 4.2



Revision: 1 Drawn: BF Checked: MP Approved: PB Date: 12/11/2021

Filename: W:\Active Projects\Longfield Solar Farm\Chelmsford\GIS\02\_Maps\LSF\_BNG.mxd



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## 6.5 Appendix E – Strategic Significance

### Summary of strategic significance review

Plan	Policy
Chelmsford Biodiversity Action Plan <sup>3</sup>	Habitat Action Plans <ul style="list-style-type: none"> <li>• Lowland mixed deciduous woodland</li> <li>• Ponds</li> <li>• Hedgerows</li> </ul>
Chelmsford Local Plan 2013-2026 (adopted May 2020) <sup>4</sup>	Policy DM19 – Renewable and low carbon energy: Planning permission will be granted for renewable or low carbon energy developments provided that they: <ul style="list-style-type: none"> <li>• do not cause demonstrable harm to residential living environment; and</li> <li>• avoid or minimise impacts on the historic environment; and</li> <li>• can demonstrate no adverse effect on the natural environment including designated sites; and</li> <li>• do not have an unacceptable visual impact which would be harmful to the character of the area; and</li> <li>• will not have a detrimental impact on highway safety.</li> </ul>
Braintree District Local Plan 2013-2033 <sup>5</sup>	Shaping principle (SP)7: <ul style="list-style-type: none"> <li>• Incorporate biodiversity creation and enhancement measures</li> </ul>
The South Suffolk and North	<ul style="list-style-type: none"> <li>• SEO 1: Maintain and enhance the character of this gently undulating, rural landscape by maintaining agricultural productivity and encouraging sustainable land management practices that protect and enhance the landscape, geodiversity and biodiversity assets and benefit carbon storage and water quality, as well as the over-riding sense of place.</li> </ul>

<sup>3</sup> Chelmsford Biodiversity Action Plan

<sup>4</sup> Chelmsford Local Plan 2013-2026 (adopted May 2020)

<sup>5</sup> Braintree District Local Plan 2013-2033 (adopted February 2021)

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Essex  
Clayland  
National  
Character  
Area  
profile<sup>6</sup>

- SEO 2: Protect and enhance the area's ancient woodland cover, parkland trees, river valley plantations and ancient hedgerows, through the management of existing woods and the planting of new woods, hedgerows and hedgerow trees to benefit landscape character, habitat connectivity and a range of ecosystem services, including timber provision, the regulation of soil erosion and the strengthening of the sense of place and history.
  - SEO 3: Enhance the slow-flowing, winding rivers and their pastoral valley flood plains that provide linkages through the landscape, including redundant sand and gravel extraction sites, for their ecological, historical and recreational importance. This will support the operation of natural processes and their contribution to biodiversity, geodiversity, soil quality, water availability, regulating water flow and the character of the area.
  - SEO 4: Conserve and enhance the distinctive character of the Dedham Vale Area of Outstanding Natural Beauty with its much-visited 'Constable Country' and improve opportunities for people to enjoy and understand the distinctive assemblage of historic landscapes outside the AONB. Ensure that access and recreational resources are managed to be compatible with the tranquillity of the area and the special qualities of protected landscapes, while providing a valuable health, education and access resource.
- 

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<sup>6</sup> [REDACTED]

## 6.6 Appendix F – Biodiversity Metric 3.0 Calculation



## The Biodiversity Metric 3.0 - Calculation Tool Start page

Project details	
Planning authority:	Essex
Project name:	Longfield Solar Farm
Applicant:	
Application type:	
Planning application reference:	
Assessor:	Emily Major, Senior Biodiversity Consultant
Reviewer:	Mark Latham, Principal Biodiversity Consultant
Metric version:	1
Assessment date:	08/11/2021
Planning authority reviewer:	

Instructions

Main menu

Results

View all

Reset view

### Cell style conventions

	Enter data
	Automatic lookup
	Result

On-site baseline map

Insert

On-site post intervention map

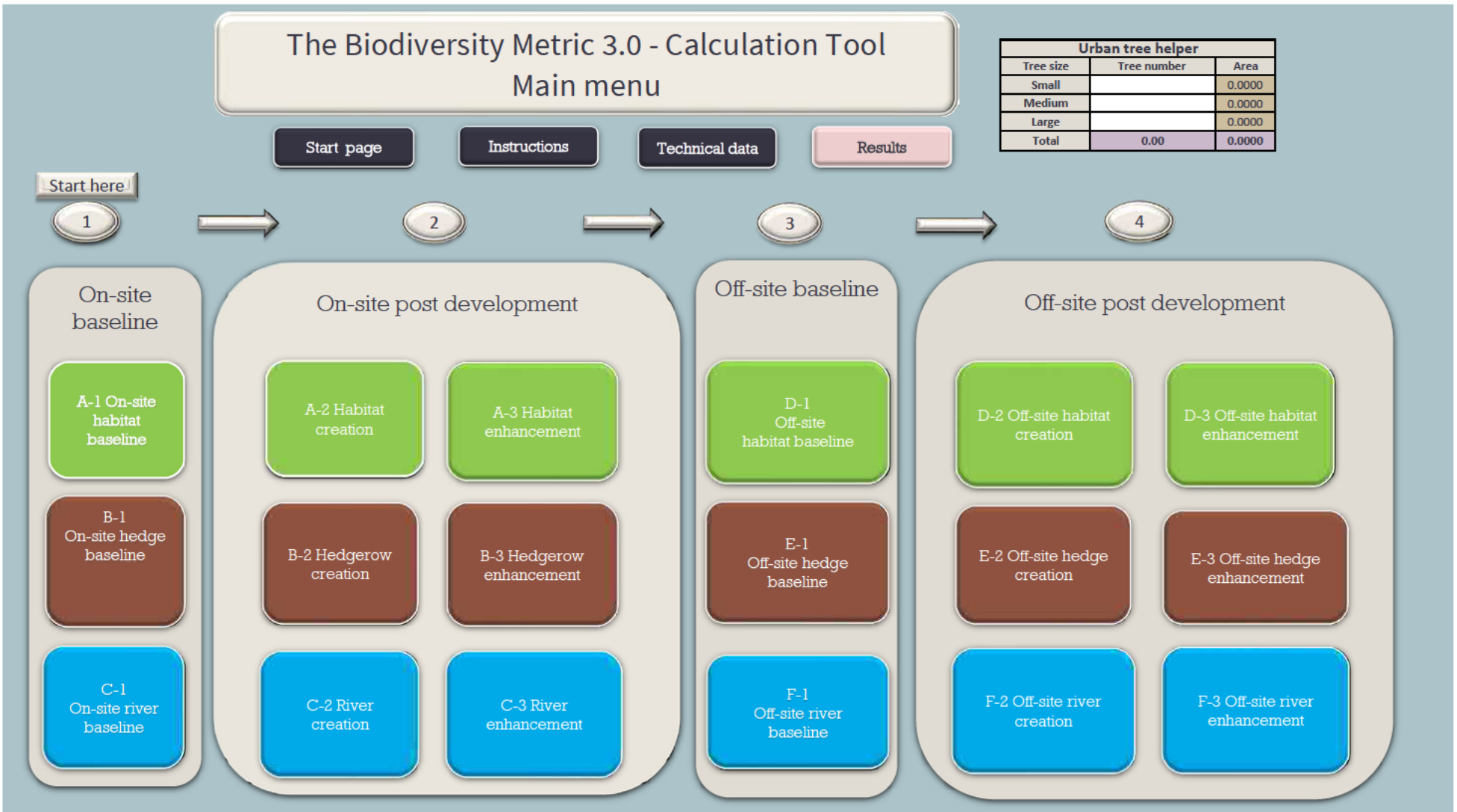
Insert

Off-site baseline map

Insert

Off-site post intervention map

Insert





## The Biodiversity Metric 3.0 - Calculation Tool Start page

Return to start  
page

Headline results

Detailed results

Habitat trading  
summary

Longfield Solar Farm  
 Headline Results

Return to results menu

On-site baseline	<i>Habitat units</i>	1056.40
	<i>Hedgerow units</i>	281.34
	<i>River units</i>	24.97
On-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	1894.75
	<i>Hedgerow units</i>	337.60
	<i>River units</i>	24.97
On-site net % change <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	79.36%
	<i>Hedgerow units</i>	20.00%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	838.35
	<i>Hedgerow units</i>	56.26
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	79.36%
	<i>Hedgerow units</i>	20.00%
	<i>River units</i>	0.00%
Trading rules Satisfied?	No - Check Trading Summary	

Longfield Solar Farm

[Return to results menu](#)

Detailed Results

Summary Figures

Net project biodiversity units (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	838.35
	<i>Hedgerow units</i>	56.26
	<i>River units</i>	0.00

Total project biodiversity % change (including all On-site & Off-site Habitat Creation + Retained Habitats)	<i>Habitat units</i>	79.36%
	<i>Hedgerow units</i>	20.00%
	<i>River units</i>	0.00%

Combined habitat retention and enhancement			
	Habitats	Hedgerows	Rivers
Total area / length	450.64	21.36	1.56
Total units	1056.40	281.34	24.97
Area / length retained	30.03	19.77	1.56
Units Retained	132.57	263.76	24.97
Area / length proposed for enhancement	0.00	0.00	0.00
Baseline units proposed for enhancement	0.00	0.00	0.00
Area / length lost	420.61	1.59	0.00
Units lost	923.83	17.57	0.00

## Area habitats

Area Habitats

### On site change by broad habitat type

Habitat group	Baseline		Post development on site		Onsite Change	
	Existing area	Existing value	Proposed area	Proposed value	Area change	Onsite Unit change
Cropland	386.89	773.78	8.46	16.92	-378.43	-756.86
Grassland	47.52	191.26	394.23	1723.17	346.71	1531.91
Heathland and shrub	1.04	8.67	1.17	8.62	0.13	-0.04
Lakes	0.67	6.14	0.67	6.14	0.00	0.00
Sparsely vegetated land	3.45	10.00	0.54	2.16	-2.91	-7.84
Urban	5.10	2.66	14.40	-2.66	9.30	-5.32
Wetland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland and forest	5.97	63.88	31.11	137.73	25.14	73.85
Intertidal sediment	0.00	0.00	0.00	0.00	0.00	0.00
Coastal saltmarsh	0.00	0.00	0.00	0.00	0.00	0.00
Rocky shore	0.00	0.00	0.00	0.00	0.00	0.00
Coastal lagoons	0.00	0.00	0.00	0.00	0.00	0.00
Intertidal Hard Structures	0.00	0.00	0.00	0.00	0.00	0.00

### Off site change by broad habitat type

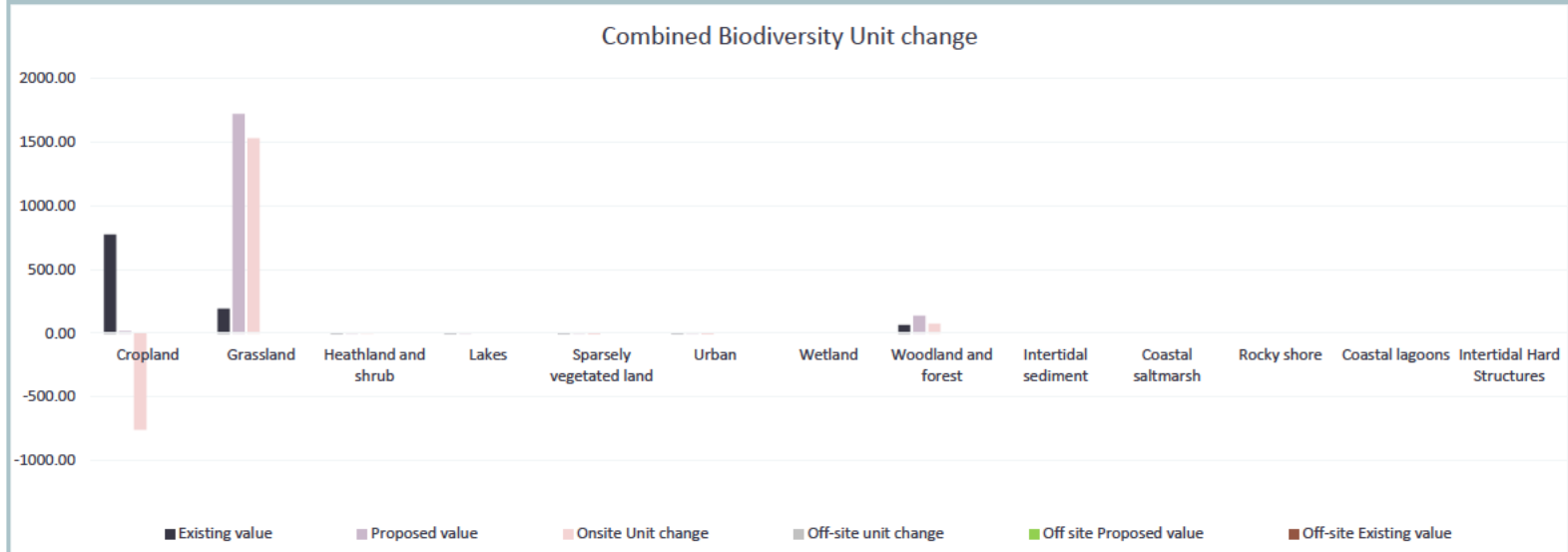
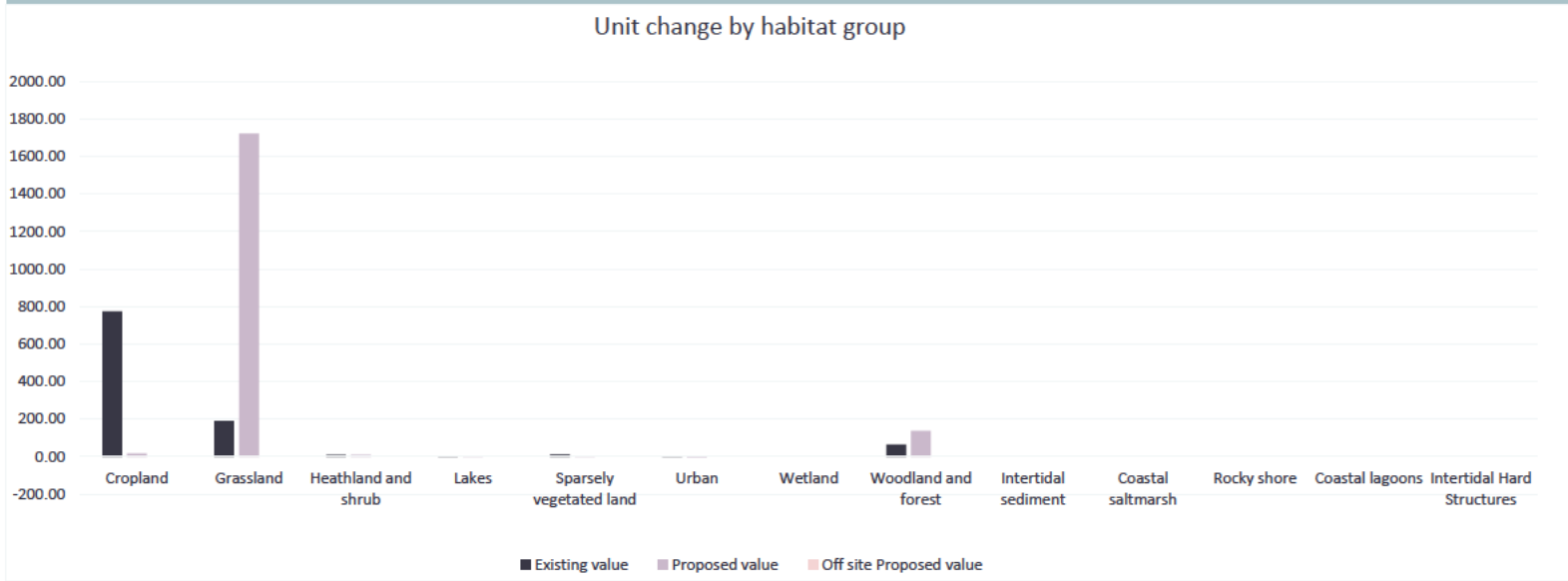
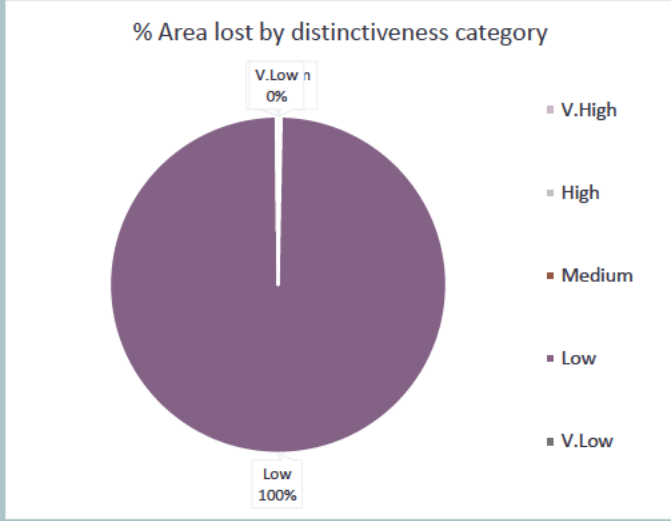
Habitat group	Baseline		Post development Off-site		Off-site Change	
	Existing area	Off-site Existing value	Off-site proposed area	Off site Proposed value	Off-site area change	Off-site unit change
Cropland	0.00	0.00	0.00	0.00	0.00	0.00
Grassland	0.00	0.00	0.00	0.00	0.00	0.00
Heathland and shrub	0.00	0.00	0.00	0.00	0.00	0.00
Lakes	0.00	0.00	0.00	0.00	0.00	0.00
Sparsely vegetated land	0.00	0.00	0.00	0.00	0.00	0.00
Urban	0.00	0.00	0.00	0.00	0.00	0.00
Wetland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland and forest	0.00	0.00	0.00	0.00	0.00	0.00
Intertidal sediment	0.00	0.00	0.00	0.00	0.00	0.00
Coastal saltmarsh	0.00	0.00	0.00	0.00	0.00	0.00
Rocky shore	0.00	0.00	0.00	0.00	0.00	0.00
Coastal lagoons	0.00	0.00	0.00	0.00	0.00	0.00
Intertidal Hard Structures	0.00	0.00	0.00	0.00	0.00	0.00

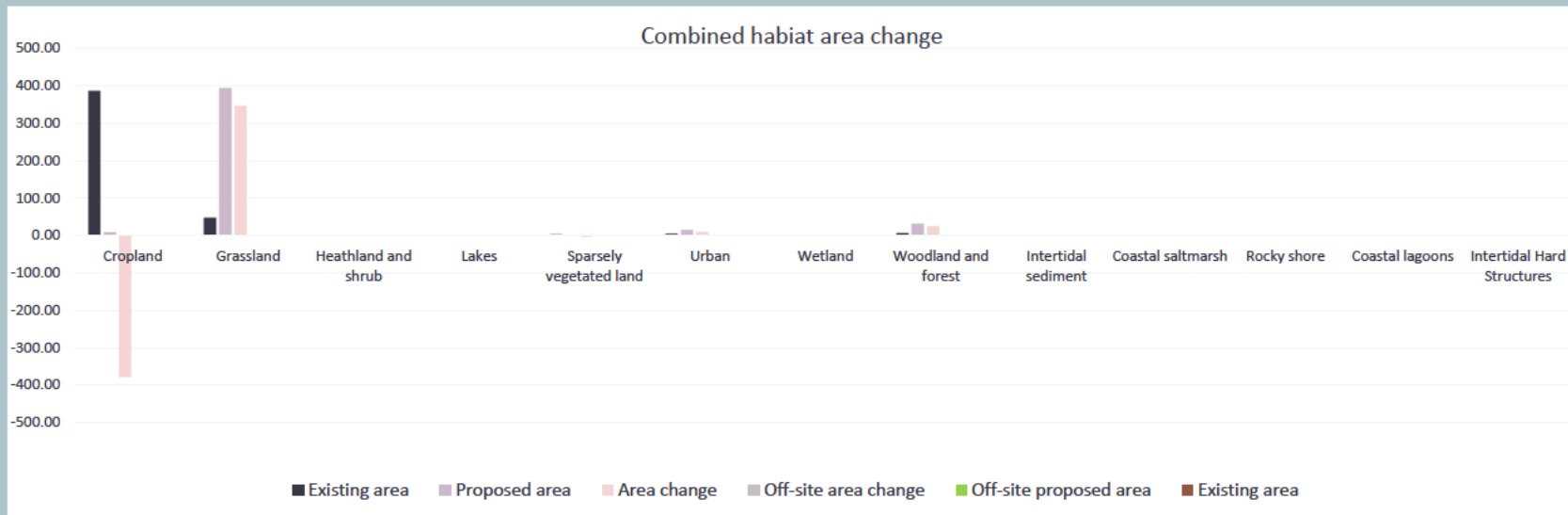
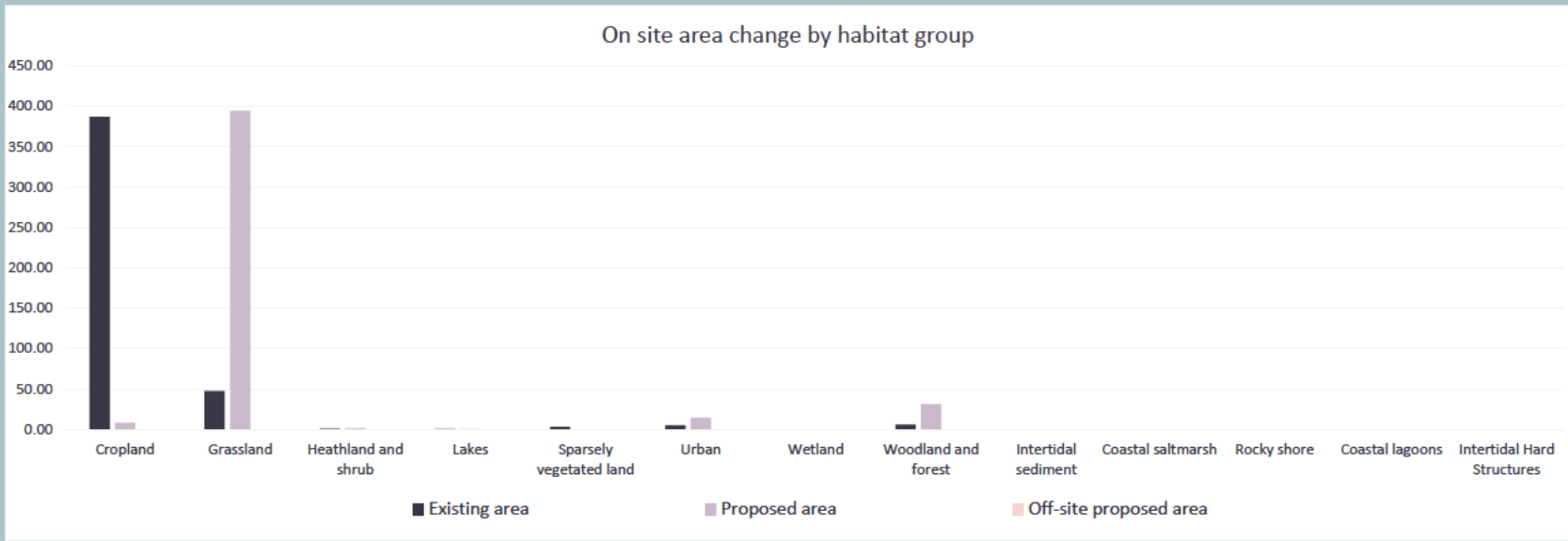
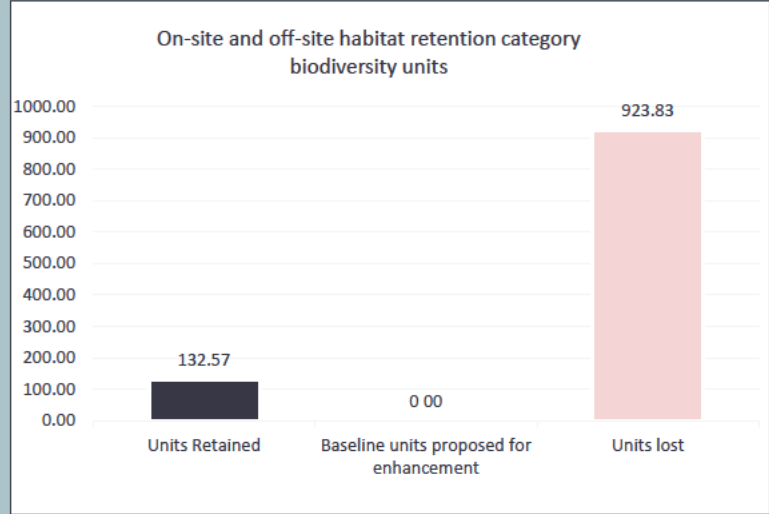
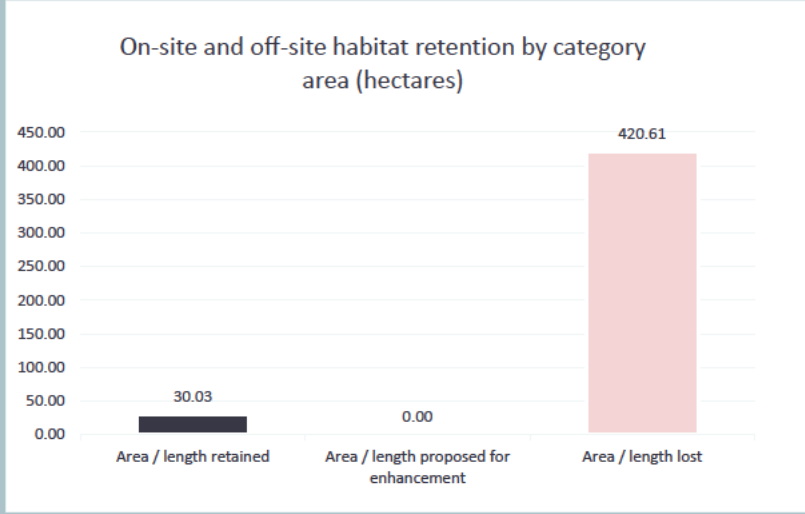
Area Habitats

### Combined on site and off site change by broad habitat type

Habitat group	Baseline		On-site and Off-site post development		Combined change	
	Existing area	Existing value	Combined proposed area	Combined proposed value	Proposed area	Proposed value
Cropland	386.89	773.78	8.46	16.92	-378.43	-756.86
Grassland	47.52	191.26	394.23	1723.17	346.71	1531.91
Heathland and shrub	1.04	8.67	1.17	8.62	0.13	-0.04
Lakes	0.67	6.14	0.67	6.14	0.00	0.00
Sparsely vegetated land	3.45	10.00	0.54	2.16	-2.91	-7.84
Urban	5.10	2.66	14.40	-2.66	9.30	-5.32
Wetland	0.00	0.00	0.00	0.00	0.00	0.00
Woodland and forest	5.97	63.88	31.11	137.73	25.14	73.85
Intertidal sediment	0.00	0.00	0.00	0.00	0.00	0.00
Coastal saltmarsh	0.00	0.00	0.00	0.00	0.00	0.00
Rocky shore	0.00	0.00	0.00	0.00	0.00	0.00
Coastal lagoons	0.00	0.00	0.00	0.00	0.00	0.00
Intertidal Hard Structures	0.00	0.00	0.00	0.00	0.00	0.00

Combined area lost by distinctiveness band		
Category	Area lost (hectares)	Area lost (%)
V.High	0	
High	0.46	0
Medium	0.82	0
Low	418.6	100
V.Low	0.73	0







## Hedgerows and lines of trees

Hedgerows and Lines of Trees

### On site change by hedgerow type

Hedgerow type	Baseline		Post development on site		Onsite Change	
	Existing length on-site	Existing value	Proposed length on-site	Proposed value on-site	On-site length change	On-site Unit change
Native Species Rich Hedgerow with trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Species Rich Hedgerow with trees	4.09	83.49	11.73	157.32	7.64	73.83
Native Species Rich Hedgerow - Associated with bank or ditch	3.83	79.28	3.51	72.66	-0.32	-6.62
Native Hedgerow with trees - Associated with bank or ditch	0.50	9.18	0.50	9.18	0.00	0.00
Native Species Rich Hedgerow	0.96	13.25	0.88	12.14	-0.08	-1.10
Native Hedgerow - Associated with bank or ditch	1.44	17.62	1.21	14.44	-0.23	-3.17
Native Hedgerow with trees	1.53	20.98	1.28	17.53	-0.25	-3.45
Line of Trees (Ecologically Valuable)	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees (Ecologically Valuable) - with Bank or Ditch	2.43	22.36	2.39	21.99	-0.04	-0.37
Native Hedgerow	2.91	18.63	2.73	17.71	-0.18	-0.92
Line of Trees	3.67	16.56	3.18	14.63	-0.49	-1.93
Line of Trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Hedge Ornamental Non Native	0.00	0.00	0.00	0.00	0.00	0.00

### Off site change by hedgerow type

Hedgerows and Lines of Trees

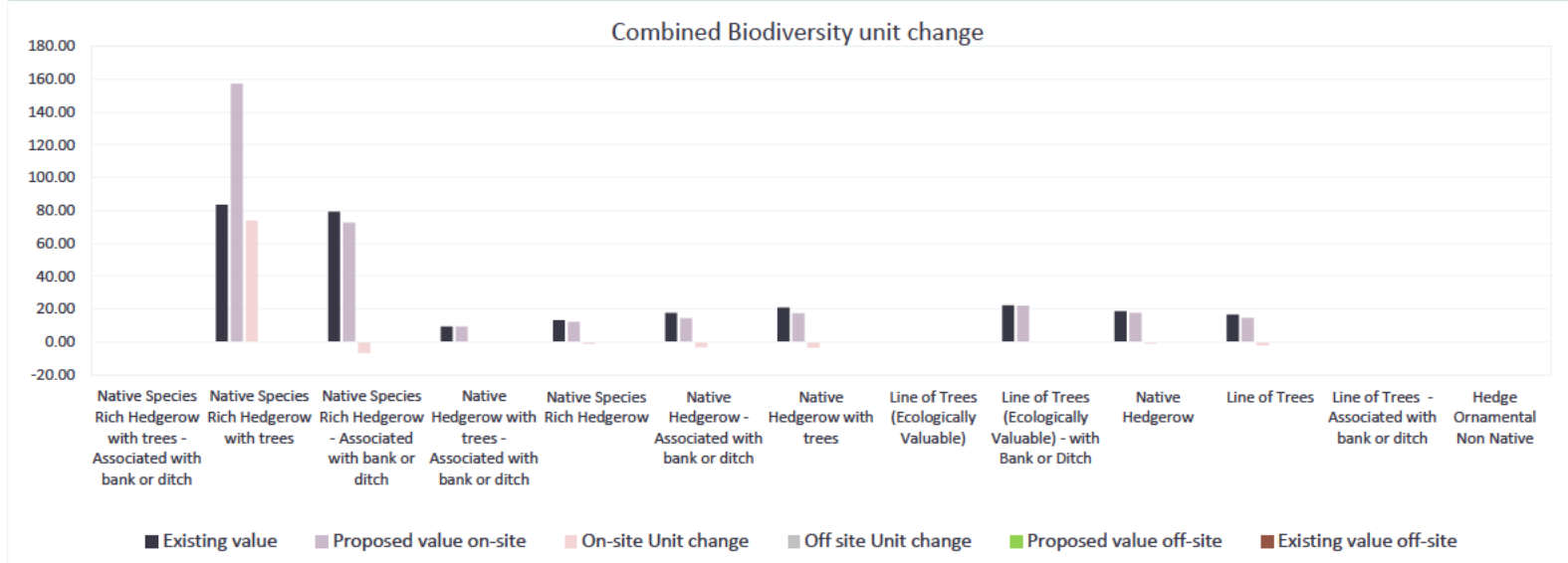
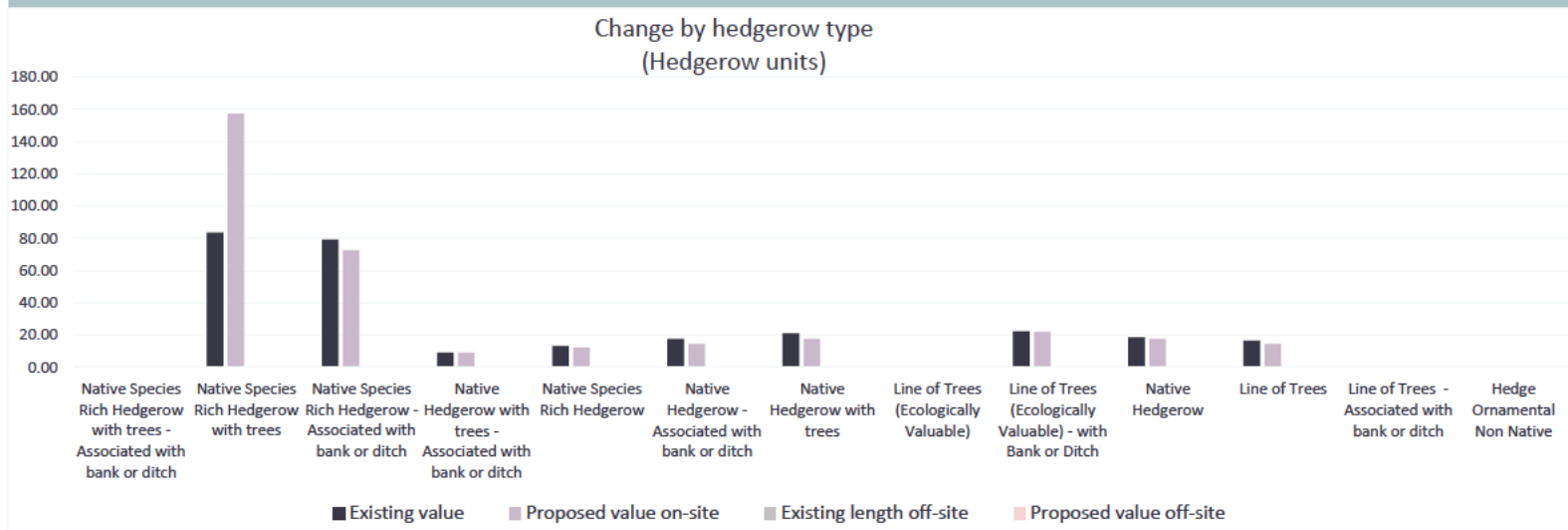
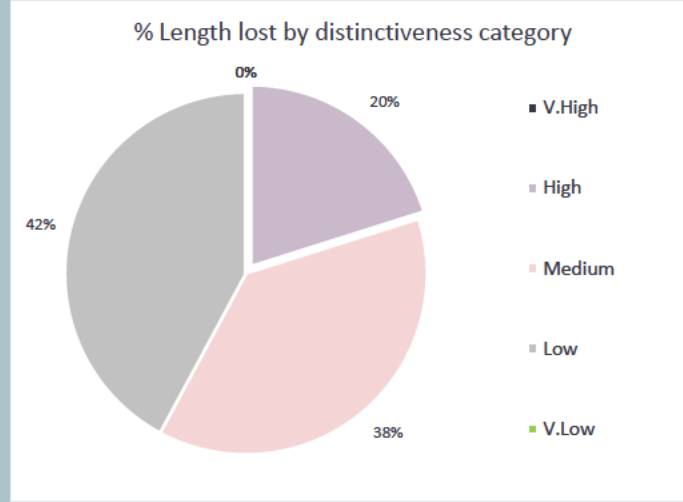
Hedgerow type	Off site baseline		Post development off site		Off site Change	
	Existing length off-site	Existing value off-site	Proposed length off-site	Proposed value off-site	Off-site length change	Off site Unit change
Native Species Rich Hedgerow with trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Species Rich Hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00
Native Species Rich Hedgerow - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Hedgerow with trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Species Rich Hedgerow	0.00	0.00	0.00	0.00	0.00	0.00
Native Hedgerow - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Hedgerow with trees	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees (Ecologically Valuable)	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees (Ecologically Valuable) - with Bank or Ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Hedgerow	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Hedge Ornamental Non Native	0.00	0.00	0.00	0.00	0.00	0.00

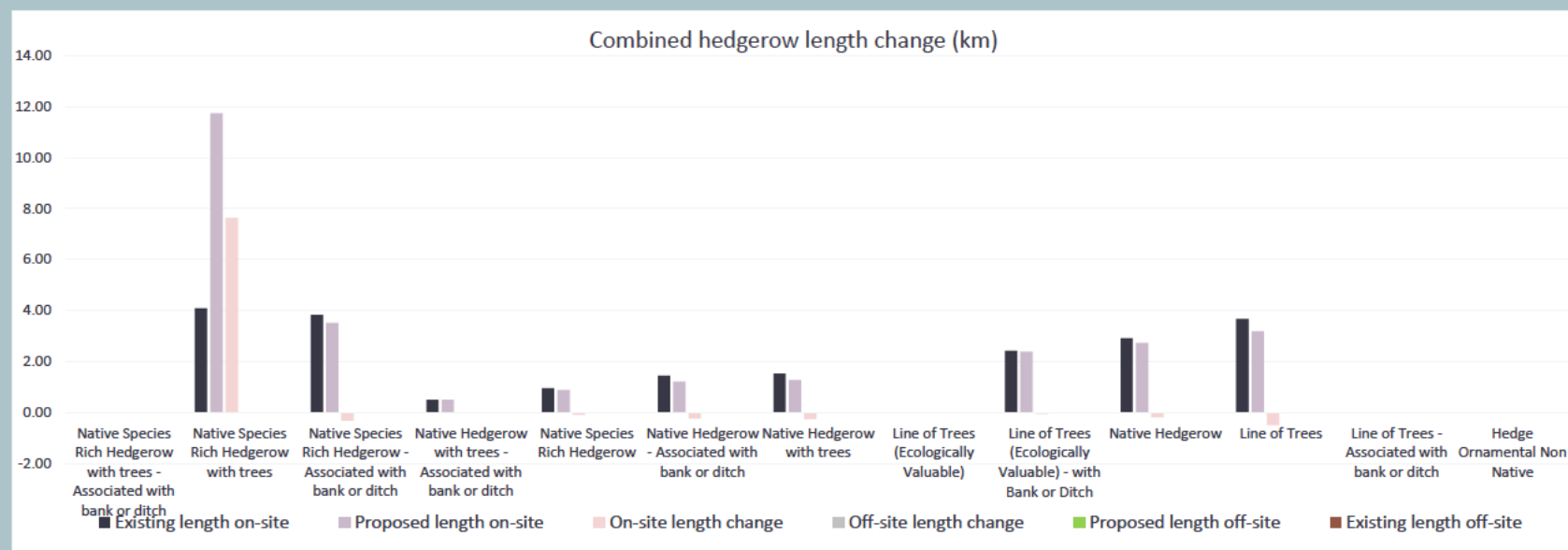
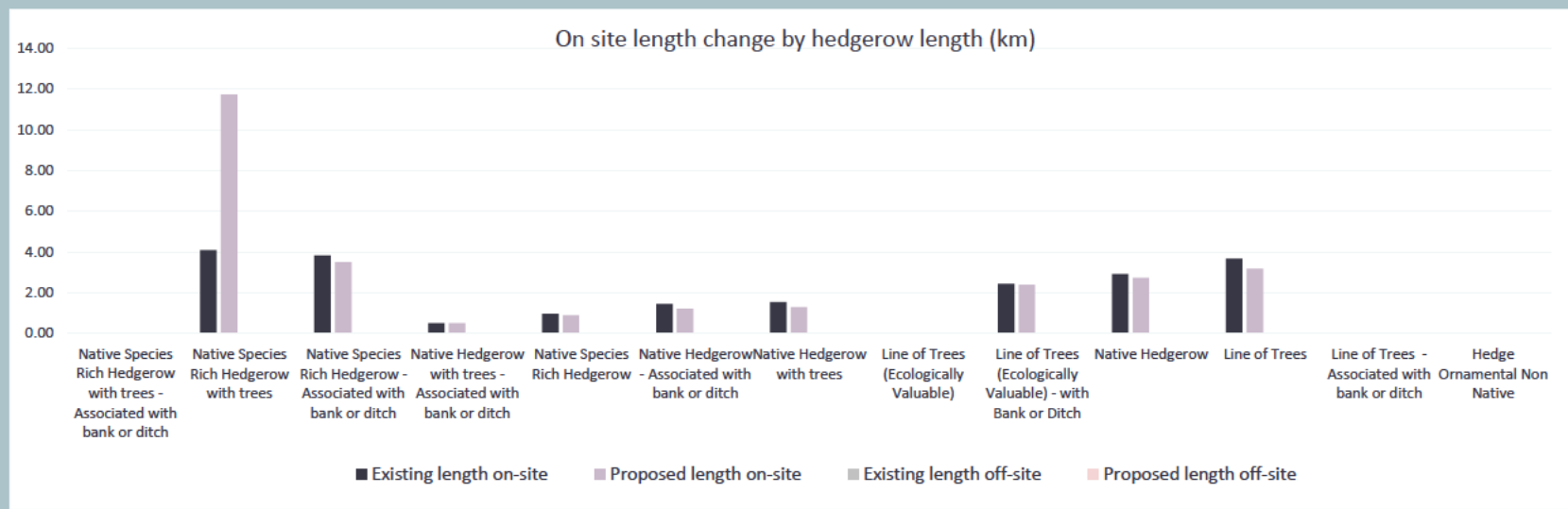
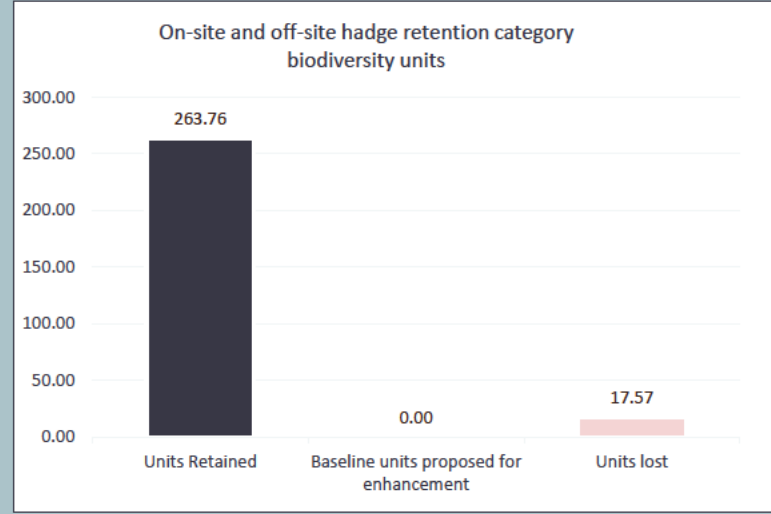
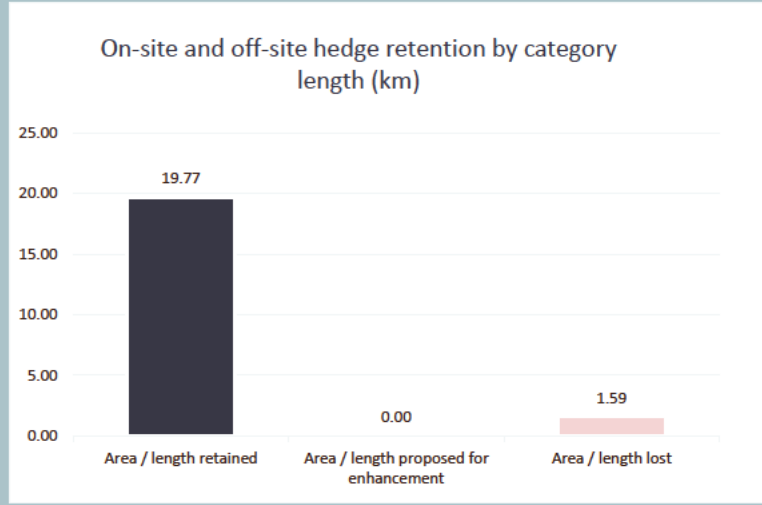
### Combined on and off site change by hedgerow type

Hedgerows and Lines of Trees

Hedgerow type	Baseline		Post development on site		Onsite Change	
	Existing length	Existing value	Proposed length	Proposed value	length change	Onsite Unit change
Native Species Rich Hedgerow with trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Native Species Rich Hedgerow with trees	4.09	83.49	11.73	157.32	7.64	73.83
Native Species Rich Hedgerow - Associated with bank or ditch	3.83	79.28	3.51	72.66	-0.32	-6.62
Native Hedgerow with trees - Associated with bank or ditch	0.50	9.18	0.50	9.18	0.00	0.00
Native Species Rich Hedgerow	0.96	13.25	0.88	12.14	-0.08	-1.10
Native Hedgerow - Associated with bank or ditch	1.44	17.62	1.21	14.44	-0.23	-3.17
Native Hedgerow with trees	1.53	20.98	1.28	17.53	-0.25	-3.45
Line of Trees (Ecologically Valuable)	0.00	0.00	0.00	0.00	0.00	0.00
Line of Trees (Ecologically Valuable) - with Bank or Ditch	2.43	22.36	2.39	21.99	-0.04	-0.37
Native Hedgerow	2.91	18.63	2.73	17.71	-0.18	-0.92
Line of Trees	3.67	16.56	3.18	14.63	-0.49	-1.93
Line of Trees - Associated with bank or ditch	0.00	0.00	0.00	0.00	0.00	0.00
Hedge Ornamental Non Native	0.00	0.00	0.00	0.00	0.00	0.00

Combined length lost by distinctiveness band		
Category	Length lost (KM)	Length lost (%)
V.High	0	
High	0.32	20
Medium	0.6	38
Low	0.67	42
V.Low	0	





## Rivers and Streams

### On site change by river type

River type	Baseline		Post development on site		Onsite Change	
	Existing length	Existing value	Proposed length	Proposed value	length change	Onsite Unit change
Priority Habitat	0.0	0.0	0.0	0.0	0.0	0.0
Other Rivers and Streams	1.4	24.4	1.4	24.4	0.0	0.0
Ditches	0.2	0.6	0.2	0.6	0.0	0.0
Canals	0.0	0.0	0.0	0.0	0.0	0.0
Culvert	0.0	0.0	0.0	0.0	0.0	0.0

### Off site change by river type

River type	Baseline		Post development off-site		Off-site Change	
	Existing length off-site	Existing value off-site	Proposed length off-site	Proposed value off-site	Off-site length change	Off-site unit change
Priority Habitat	0.0	0.0	0.0	0.0	0.0	0.0
Other Rivers and Streams	0.0	0.0	0.0	0.0	0.0	0.0
Ditches	0.0	0.0	0.0	0.0	0.0	0.0
Canals	0.0	0.0	0.0	0.0	0.0	0.0
Culvert	0.0	0.0	0.0	0.0	0.0	0.0

### Combined on and off site change by river type

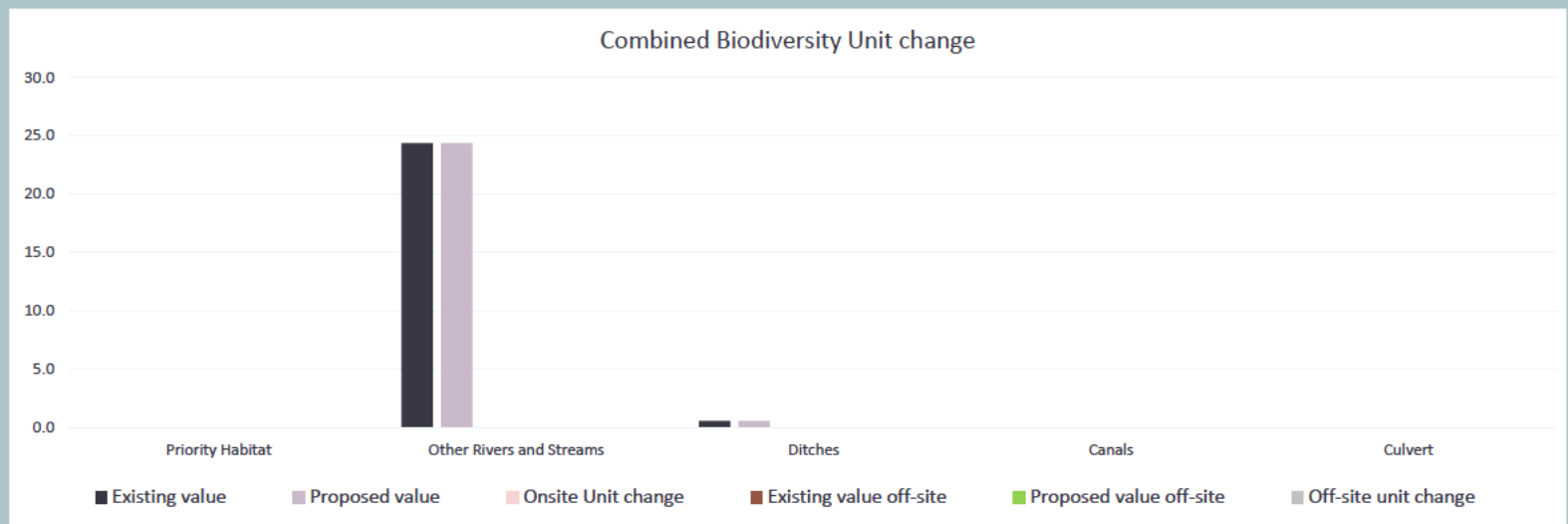
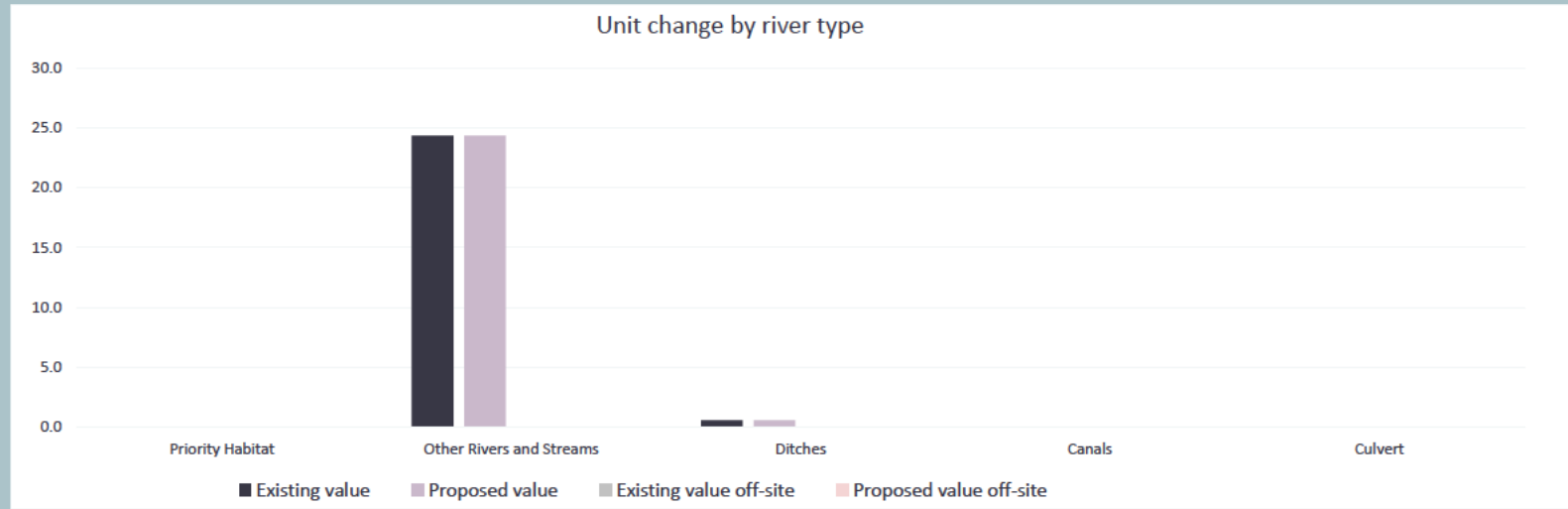
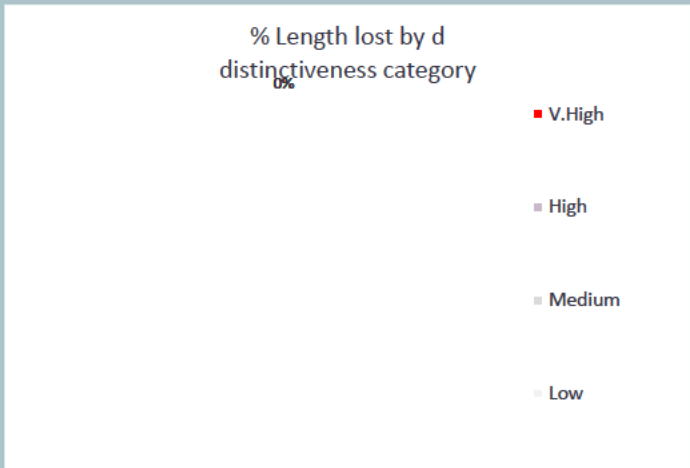
River type	Baseline		Post development on site		Onsite Change	
	Existing length	Existing value	Proposed length	Proposed value	length change	Onsite Unit change
Priority Habitat	0.0	0.0	0.0	0.0	0.0	0.0
Other Rivers and Streams	1.4	24.4	1.4	24.4	0.0	0.0
Ditches	0.2	0.6	0.2	0.6	0.0	0.0
Canals	0.0	0.0	0.0	0.0	0.0	0.0
Culvert	0.0	0.0	0.0	0.0	0.0	0.0

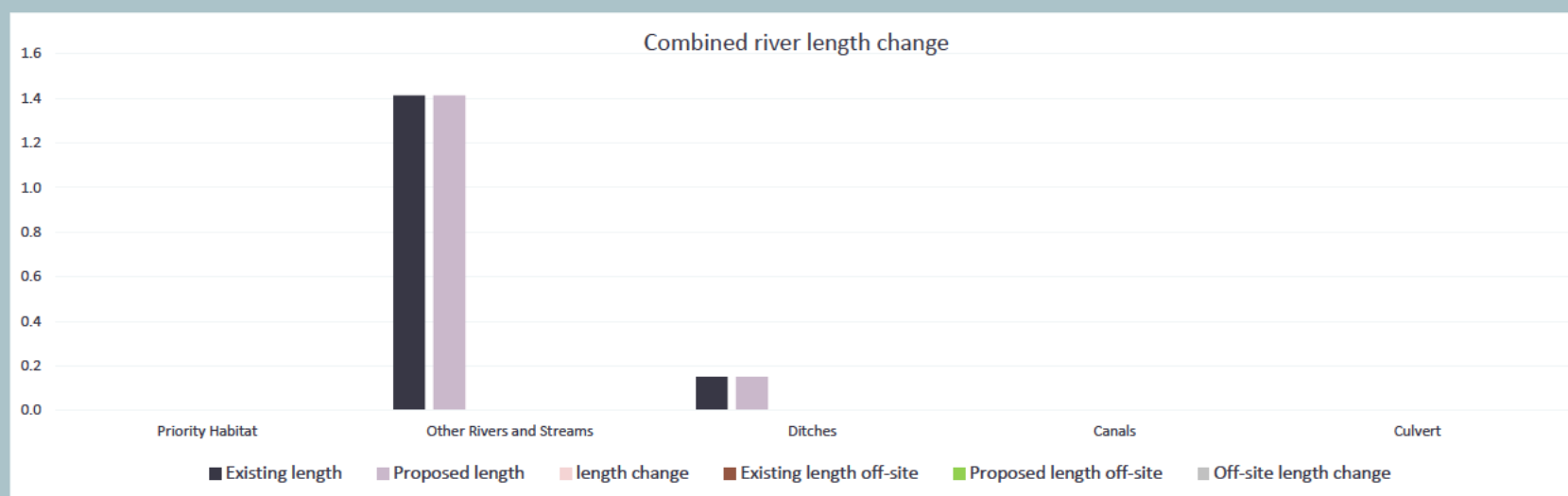
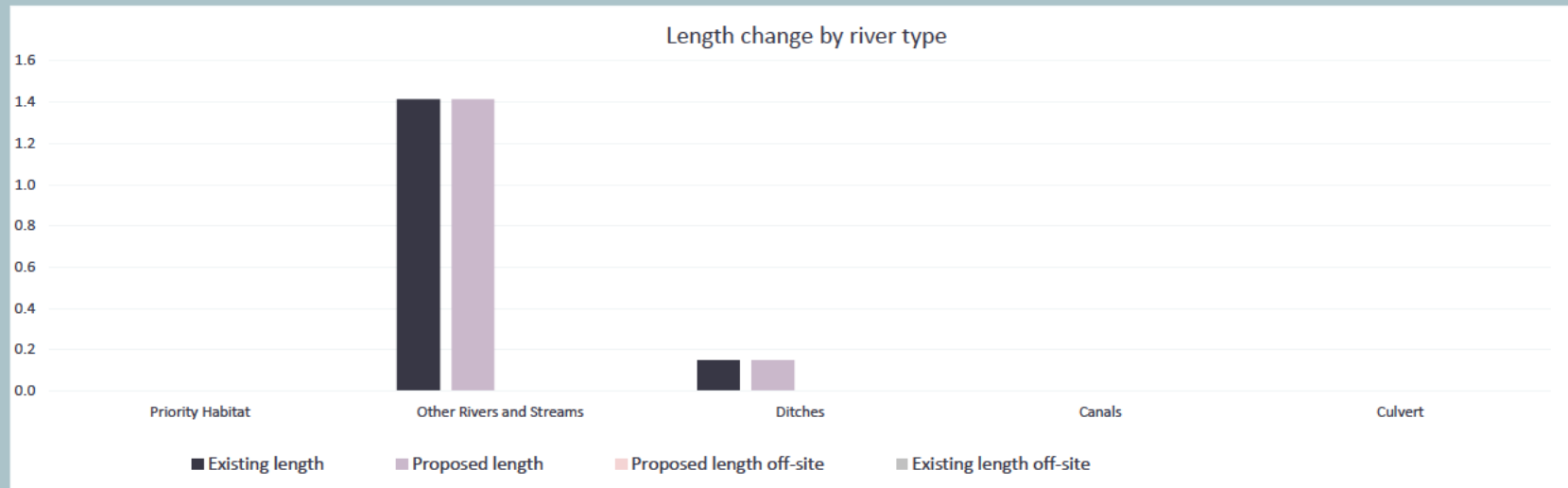
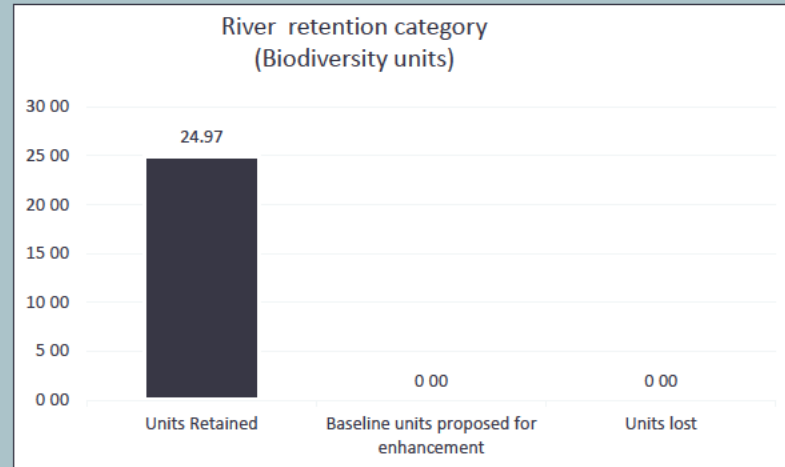
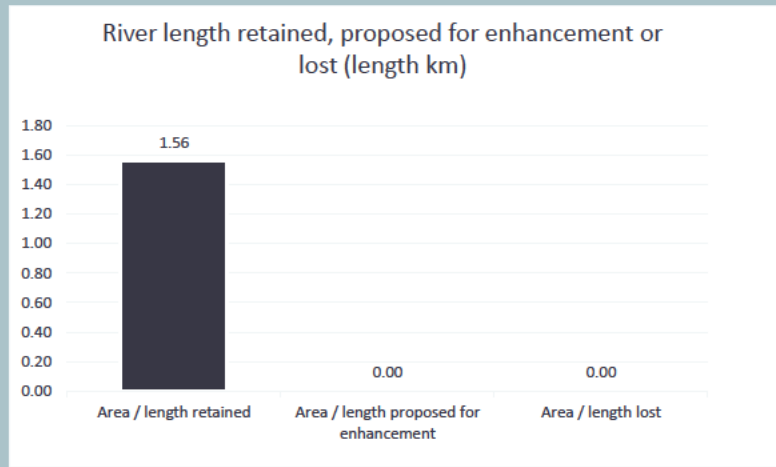
Rivers and Streams

Rivers and Streams

Rivers and Streams

Combined length lost by distinctiveness band		
Category	Length lost (KM)	Length lost (%)
V.High	0	
High	0	
Medium	0	
Low	0	







Return to  
 results  
 menu

### Trading Summary

Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Bespoke compensation likely to be required	Yes
High	Same habitat required	No
Medium	Same broad habitat or a higher distinctiveness habitat required	No
Low	Same distinctiveness or better habitat required	Yes

### Very High Distinctiveness

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

### Very High Distinctiveness Summary

Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
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### High Distinctiveness

Habitat group	Group	On Site Unit Change	Off Site Unit Change	Project wide Unit Change	Losses not yet accounted for
Grassland - Traditional orchards	Grassland	0.00	0.00	0.00	
Grassland - Floodplain Wetland Mosaic (CFGM)	Grassland	0.00	0.00	0.00	
Grassland - Lowland calcareous grassland	Grassland	0.00	0.00	0.00	
Grassland - Tall herb communities	Grassland	0.00	0.00	0.00	
Grassland - Upland calcareous grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Lowland Heathland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Sea buckthorn scrub (Annex 1)	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Upland Heathland	Heathland and shrub	0.00	0.00	0.00	
Lakes - High alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Low alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Marl Lakes	Lakes	0.00	0.00	0.00	
Lakes - Moderate alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Peat Lakes	Lakes	0.00	0.00	0.00	
Lakes - Ponds (Priority Habitat)	Lakes	0.00	0.00	0.00	
Lakes - Temporary lakes, ponds and pools	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Coastal sand dunes	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Coastal vegetated shingle	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Inland rock outcrop and scree habitats	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Maritime cliff and slopes	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Open Mosaic Habitats on Previously Developed Land	Urban	0.00	0.00	0.00	
Wetland - Reedbeds	Wetland	0.00	0.00	0.00	
Woodland and forest - Felled	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland beech and yew woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	-6.35	0.00	-6.35	-6.35
Woodland and forest - Native pine woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland birchwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland mixed ashwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland oakwood	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Wet woodland	Woodland and forest	0.00	0.00	0.00	
Coastal lagoons - Coastal lagoons	Coastal lagoons	0.00	0.00	0.00	
Rocky shore - High energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral mud	Intertidal sediment	0.00	0.00	0.00	

### High Distinctiveness Summary

High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Unit Deficit, Like for like not satisfied	-6.35

Intertidal sediment - Littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00	
Coastal saltmarsh - Saltmarshes and saline reedbeds	Coastal Saltmarsh	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Mussels	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Sabellaria	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Features of littoral sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral muddy sand	Intertidal sediment	0.00	0.00	0.00	
		-6.35	0.00	-6.35	-6.35

Medium Distinctiveness					
Habitat Group	Group	On site unit change	Off Site Unit Change	Project wide unit change	Cumulative Broad Habitat Change
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	0.00
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins pollen & nectar	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins tussocky	Cropland	0.00	0.00	0.00	
Cropland - Cereal crops winter stubble	Cropland	0.00	0.00	0.00	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Other neutral grassland	Grassland	1675.47	0.00	1675.47	1675.47
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	-0.04
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Bramble scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	-0.04	0.00	-0.04	
Lakes - Ponds (Non-Priority Habitat)	Lakes	0.00	0.00	0.00	0.00
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00
Urban - Brown roof	Urban	0.00	0.00	0.00	
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	
Urban - Intensive green roof	Urban	0.00	0.00	0.00	80.20
Woodland and forest - Other Scot's Pine woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland; broadleaved	Woodland and forest	21.32	0.00	21.32	
Woodland and forest - Other woodland; mixed	Woodland and forest	58.87	0.00	58.87	
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	0.00
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	
Intertidal Hard Structures - Artificial hard structures with Integrated Greening of Grey Infrastructure (IGGI)	Intertidal	0.00	0.00	0.00	
		1755.62	0.00	1755.62	

Medium Distinctiveness Summary	
Medium Distinctiveness Units available to offset lower distinctiveness deficit	1755.66
Medium Distinctiveness Broad Habitat Deficit to be offset by trading up	-0.04
Higher distinctiveness surplus units minus Medium Distinctiveness Broad Habitat Deficit	0.00
Cumulative surplus of units	1755.66

Low Distinctiveness					
Habitat group	Group	On site unit change	Off Site Unit Change	Project wide unit change	
Cropland - Cereal crops	Cropland	-756.86	0.00	-756.86	
Cropland - Cereal crops other	Cropland	0.00	0.00	0.00	
Cropland - Horticulture	Cropland	0.00	0.00	0.00	
Cropland - Intensive orchards	Cropland	0.00	0.00	0.00	
Cropland - Non-cereal crops	Cropland	0.00	0.00	0.00	
Cropland - Temporary grass and clover leys	Cropland	0.00	0.00	0.00	
Grassland - Modified grassland	Grassland	-143.56	0.00	-143.56	
Grassland - Bracken	Grassland	0.00	0.00	0.00	
Heathland and shrub - Rhododendron scrub	Heathland and shrub	0.00	0.00	0.00	
Lakes - Ornamental lake or pond	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Ruderal/Ephemeral	Sparsely vegetated land	-7.84	0.00	-7.84	
Urban - Bioswale	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Allotments	Urban	0.00	0.00	0.00	
Urban - Facade-bound green wall	Urban	0.00	0.00	0.00	
Urban - Ground based green wall	Urban	0.00	0.00	0.00	
Urban - Ground level planters	Urban	0.00	0.00	0.00	
Urban - Extensive green roof	Urban	0.00	0.00	0.00	
Urban - Introduced shrub	Urban	0.00	0.00	0.00	
Urban - Rain garden	Urban	0.00	0.00	0.00	
Urban - Sand pit quarry or open cast mine	Urban	0.00	0.00	0.00	
Urban - Urban Tree	Urban	0.00	0.00	0.00	
Urban - Sustainable urban drainage feature	Urban	0.00	0.00	0.00	
Urban - Vacant/derelict land/ bareground	Urban	-2.66	0.00	-2.66	
Urban - Vegetated garden	Urban	0.00	0.00	0.00	
Woodland and forest - Other coniferous woodland	Woodland and forest	0.00	0.00	0.00	
Coastal saltmarsh - Artificial saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00	
Intertidal sediment - Artificial littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	

Low Distinctiveness Summary	
Low Distinctiveness Net Change in Units	-910.92
Cumulative surplus of units	844.74

Intertidal sediment - Artificial littoral mud	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral muddy sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral seagrass	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral biogenic reefs	Intertidal sediment	0.00	0.00	0.00
Intertidal Hard Structures - Artificial hard structures	Intertidal	0.00	0.00	0.00
Intertidal Hard Structures - Artificial features of hard structures	Intertidal	0.00	0.00	0.00
Heathland and shrub - Sea buckthorn scrub (other)	Heathland and shrub	0.00	0.00	0.00
		-910.92		-910.92

**Longfield Solar Farm**  
**A-1 Site Habitat Baseline**

Condense / Show Columns      Condense / Show Rows  
Main Menu      Instructions

Ref	Habitats and areas			Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units
1	Cropland	Cereal crops	386.89	Low	N/A - Agricultural	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	773.78
2	Grassland	Modified grassland	15.03	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	60.12
3	Grassland	Modified grassland	32.11	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	128.44
4	Heathland and shrub	Mixed scrub	0.75	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	6.00
5	Lakes	Ponds (Priority Habitat)	0.22	High	Moderate	Within area formally identified in local strategy	Same habitat required	3.04
			<b>450.64</b>					<b>1056.40</b>

Retention category biodiversity value						Bespoke compensation agreed for unacceptable losses	Comments	
Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost		Assessor comments	Reviewer comments
8.46		16.92	0.00	378.43	756.86		J1.1 - Cultivated/disturbed land - arable	
1.61		6.44	0.00	13.42	53.68		B4 - Improved grassland	
9.68		38.72	0.00	22.43	89.72		B6 - Poor semi-improved grassland	ML is this B5 Marshy grassland + B6 Poor semi-improved grassland (31.76+0.36 = 32.12)?
0.05		0.40	0.00	0.70	5.60		A2.1 - Scrub - dense/continuous	
0.22		3.04	0.00	0.00	0.00		G1 - Standing water	
<b>30.03</b>	<b>0.00</b>	<b>132.57</b>	<b>0.00</b>	<b>420.61</b>	<b>923.83</b>			









## B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Baseline ref	UK Habitats - existing habitats			Habitat distinctiveness	Habitat condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
	Hedge number	Hedgerow type	Length KM	Distinctiveness	Condition	Strategic significance		Total hedgerow units
1		Line of Trees (Ecologically Valuable) - with Bank or Ditch	2.43	Medium	Moderate	Within area formally identified in local strategy	Like for like or better	22.36
2		Line of Trees	0.14	Low	Poor	Within area formally identified in local strategy	Same distinctiveness band or better	0.32
3		Native Species Rich Hedgerow	0.96	Medium	Good	Within area formally identified in local strategy	Like for like or better	13.25
4		Native Species Rich Hedgerow - Associated with bank or ditch	1.09	High	Good	Within area formally identified in local strategy	Like for like or better	22.56
5		Native Hedgerow	0.37	Low	Moderate	Within area formally identified in local strategy	Same distinctiveness band or better	1.70
6		Native Hedgerow - Associated with bank or ditch	0.49	Medium	Moderate	Within area formally identified in local strategy	Like for like or better	4.51
7		Native Hedgerow	0.13	Low	Poor	Within area formally identified in local strategy	Same distinctiveness band or better	0.30
8		Native Hedgerow	2.41	Low	Good	Within area formally identified in local strategy	Same distinctiveness band or better	16.63
9		Native Hedgerow - Associated with bank or ditch	0.95	Medium	Good	Within area formally identified in local strategy	Like for like or better	13.11
10		Native Species Rich Hedgerow with trees	0.17	High	Moderate	Within area formally identified in local strategy	Like for like or better	2.35
11		Native Species Rich Hedgerow with trees	3.92	High	Good	Within area formally identified in local strategy	Like for like or better	81.14
12		Native Species Rich Hedgerow - Associated with bank or ditch	2.74	High	Good	Within area formally identified in local strategy	Like for like or better	56.72
13		Native Hedgerow with trees	0.03	Medium	Moderate	Within area formally identified in local strategy	Like for like or better	0.28
14		Native Hedgerow with trees - Associated with bank or ditch	0.17	High	Moderate	Within area formally identified in local strategy	Like for like or better	2.35
15		Native Hedgerow with trees	1.5	Medium	Good	Within area formally identified in local strategy	Like for like or better	20.70
16		Native Hedgerow with trees - Associated with bank or ditch	0.33	High	Good	Within area formally identified in local strategy	Like for like or better	6.83
17		Line of Trees	3.53	Low	Moderate	Within area formally identified in local strategy	Same distinctiveness band or better	16.24
18								
19								
20								
			21.36					281.34

Retention category biodiversity value						Comments	
Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
2.39		21.99	0.00	0.04	0.37	A3.1 - Broadleaved Parkland/scattered trees	
		0.00	0.00	0.14	0.32	A3.1 - Broadleaved Parkland/scattered trees	
0.88		12.14	0.00	0.08	1.10	J2.1.1 - Intact hedge - native species-rich	
0.89		18.42	0.00	0.20	4.14	J2.1.1 - Intact hedge - native species-rich	
0.23		1.06	0.00	0.14	0.64	J2.1.2 - Intact hedge - species-poor	
0.49		4.51	0.00	0.00	0.00	J2.1.2 - Intact hedge - species-poor	
0.13		0.30	0.00	0.00	0.00	J2.1.2 - Intact hedge - species-poor	
2.37		16.35	0.00	0.04	0.28	J2.1.2 - Intact hedge - species-poor	
0.72		9.94	0.00	0.23	3.17	J2.1.2 - Intact hedge - species-poor	
0.17		2.35	0.00	0.00	0.00	J2.3.1 - Hedge with trees - native species-rich	
3.92		81.14	0.00	0.00	0.00	J2.3.1 - Hedge with trees - native species-rich	
2.62		54.23	0.00	0.12	2.48	J2.3.1 - Hedge with trees - native species-rich	
0.03		0.28	0.00	0.00	0.00	J2.3.2 - Hedge with trees - species-poor	
0.17		2.35	0.00	0.00	0.00	J2.3.2 - Hedge with trees - species-poor	
1.25		17.25	0.00	0.25	3.45	J2.3.2 - Hedge with trees - species-poor	
0.33		6.83	0.00	0.00	0.00	J2.3.2 - Hedge with trees - species-poor	
3.18		14.63	0.00	0.35	1.61	A3.1 - Broadleaved Parkland/scattered trees	
19.77	0.00	263.76	0.00	1.59	17.57		

## B-2 Site Hedge Creation

Condense / Show Columns      Condense / Show Rows

Main Menu      Instructions

Baseline ref	New hedge number	Proposed habitats		Habitat distinctiveness		Habitat condition		Strategic significance		
		Habitat type	Length km	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier
1		Native Species Rich Hedgerow with trees	7.64	High	6	Moderate	2	Within area formally identified in local strategy	High strategic significance	1.15
2										
3										
4										



Temporal multiplier						Difficulty risk multipliers				Hedge units delivered	Comments	
Standard Time to target condition/years	Habitat created in advance/years	Delay in starting habitat creation/years	Standard or adjusted time to target condition	Final time to target condition/years	Final Time to target multiplier	Standard difficulty of creation	Applied difficulty multiplier	Final difficulty of creation	Difficulty multiplier applied		Assessor comments	Reviewer comments
10	0	0	Standard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	1	73.83	12.3.1 - Hedge with trees - native species-rich	

## C-1 Site River Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Existing river type			Habitat distinctiveness		Habitat condition		Strategic significance			Watercourse encroachment		Riparian encroachment		Suggested action	Ecological baseline
Baseline ref	River type	Length KM	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier	Extent of encroachment	Multiplier	Extent of encroachment	Multiplier		
1	Other Rivers and Streams	0.121	High	6	Fairly good	2.5	Within Local Plans	High strategic significance	1.15	No Encroachment	1	No Encroachment	1	Restore	2.09
2	Other Rivers and Streams	1.292	High	6	Fairly good	2.5	Within Local Plans	High strategic significance	1.15	No Encroachment	1	No Encroachment	1	Restore	22.29
3	Ditches	0.15	Medium	4	poor	1	Low potential/action not identified in any plan	Low Strategic Significance	1	No Encroachment	1	No Encroachment	1	Restore	0.60
4															
5															
		1.56													24.97

Retention category biodiversity value						Comments	
Length retained	Length enhanced	Units retained	Units enhanced	Length Lost	Units Lost	Assessor Comments	Reviewer comments
0.121	0	2.09	0.00	0.00	0.00	River Ter	
1.292	0	22.29	0.00	0.00	0.00	Boreham Trib. - impacts will be temporary and will be restored to its baseline condition within two years	
0.15		0.60	0.00	0.00	0.00	ditches	
1.56	0.00	24.97	0.00	0.00	0.00		

## 6.7 Appendix G – Habitat Management Required to Achieve Target Condition

Habitat type	Habitat measure	Target condition	Time to target condition (years)	Habitat Condition Sheet	Condition Criteria	Associated habitat management requirements
Grassland – Other neutral grassland	Created	Poor	2	Grassland Habitat Types	Target condition is 'Poor' in two year. Cover of bracken less than 20% and cover of scrub and bramble less than 5% Variation of sward height with at least 20% being more than 7cm and 20% being less than 20%.	The grassland is the proposed species rich grass located under photovoltaic (PV) solar panels and the regularly mown grassland between fence and panels.
Grassland – Other neutral grassland	Created	Moderate	5	Grassland Habitat Types	Target condition is 'Moderate' in five years. Undesirable species and physical damage is below 5% cover. Cover of bracken less than 20% and cover of scrub and bramble less than 5% Variation of sward height with at least 20% being more than 7cm and 20% being less than 20%.	<p>Yr 1:</p> <p>June – Spray off or remove competitive/ruderal growth July – power/disc harrow August - Spray off or remove competitive/ruderal growth September to October – Seed with seed mix (Emorsgate EM5 or similar with additional yellow rattle @ 0.1g/m<sup>2</sup>)</p> <p>Year 2:</p> <p>April to June/July – control annual weeds by pulling or pot treatment July to September – Mow to 5-10cm</p> <p>Year 3 onwards</p>



Habitat type	Habitat measure	Target condition	Time to target condition (years)	Habitat Condition Sheet	Condition Criteria	Associated habitat management requirements
						Cut and collect arisings late July early August
Heathland and shrub – Mixed scrub	Created	Moderate	5	Grassland Habitat Types	<p>Target condition is 'Moderate' in five years.</p> <p>Undesirable species to make up less than 5% of ground cover.</p> <p>Absence of invasive non-native species.</p> <p>Representative of UKHab description and at least 3 woody species with not one comprising more than 75% of the cover.</p> <p>Good age range with seedlings, young shrubs and mature shrubs.</p>	<p>Ensure absence of invasive non-natives, undesirables to be &lt;5% ground cover.</p> <p>At least 3 woody species should be present with not one being more than 75% cover.</p> <p>Clearing glades or rides present within the scrub.</p> <p>Good age range- seedlings, young and mature shrubs present.</p>
Urban – Developed land; sealed surface	Created	N/A – Other	0	Urban Habitat Types	No assessment required; condition is pre-set.	N/A
Woodland and forest – Lowland mixed deciduous woodland	Created	Moderate	30+	Woodland Habitat Types	<p>Target condition of 'Moderate' in 30+ years.</p> <p>Three age classes present.</p> <p>Erect fencing to prevent significant browsing damage evident in woodland.</p> <p>No invasive species present in the woodland.</p> <p>&gt;80% of canopy trees and &gt;80% of understorey shrubs are native.</p> <p>Five or more native tree or shrub species found across the woodland parcel.</p> <p>Open space within the woodland is 20-40% of woodland has areas of temporary open space.</p> <p>Woodland managed to ensure there is low risk pest or disease present.</p>	<p>Seclude the area with fencing to prevent herbivore damage. This will also decrease woodland disturbance.</p> <p>Planting of saplings to give woodland regeneration. Fill in areas of open space.</p>

Habitat type	Habitat measure	Target condition	Time to target condition (years)	Habitat Condition Sheet	Condition Criteria	Associated habitat management requirements
					Less than 1 hectare in total nutrient enrichment across woodland area and/or less than 20% of woodland has damaged ground.	
Woodland and forest – Other woodland; mixed	Created	Moderate	30	Woodland Habitat Types	<p>Target condition of ‘Moderate’ in 30 years.</p> <p>Three age classes present.</p> <p>Erect fencing to prevent significant browsing damage evident in woodland.</p> <p>No invasive species present in the woodland.</p> <p>&gt;80% of canopy trees and &gt;80% of understorey shrubs are native.</p> <p>Five or more native tree or shrub species found across the woodland parcel.</p> <p>Open space within the woodland is 20-40% of woodland has areas of temporary open space.</p> <p>Woodland managed to ensure there is low risk pest or disease present.</p> <p>Less than 1 hectare in total nutrient enrichment across woodland area and/or less than 20% of woodland has damaged ground.</p>	<p>Exclude the area with fencing to prevent herbivore damage. This will also decrease woodland disturbance.</p> <p>Planting of saplings to give woodland regeneration. Fill in areas of open space.</p>
Native Species Rich Hedgerow with trees	Created	Moderate	10	Hedgerow types	<p>Target condition is moderate in 10 years. The condition criteria for hedgerows with trees are as follows, more than 5 failures in total or fails both attributes in more than one functional group, required for poor condition:</p> <ul style="list-style-type: none"> <li>A1. Height. &gt;1.5 m average along length;</li> <li>A2. Width. &gt;1.5 m average along length;</li> </ul>	<p>To meet target condition, it will be necessary to:</p> <ul style="list-style-type: none"> <li>Allow undisturbed ground to develop along the edge of the hedgerow;</li> <li>Carry out planting according to the supplier instructions (Hedgerow - 30% Hawthorn <i>Crataegus monogyna</i>, 30% Blackthorn <i>Prunus spinosa</i>, 10% Bird Cherry <i>Prunus padus</i>, 10% Field</li> </ul>

Habitat type	Habitat measure	Target condition	Time to target condition (years)	Habitat Condition Sheet	Condition Criteria	Associated habitat management requirements
					<ul style="list-style-type: none"> <li>B1. Gap - hedge base. Gap between ground and base of canopy &lt;0.5 m for &gt;90% of length (unless 'line of trees');</li> <li>B2. Gap - hedge canopy continuity. Gaps make up &lt;10% of total length and no canopy gaps &gt;5 m;</li> <li>C1. Undisturbed ground and perennial vegetation. &gt;1 m width of undisturbed ground with perennial herbaceous vegetation for &gt;90% of length: measured from outer edge of hedgerow, and is present on one side of the hedge (at least);</li> <li>C2. Undesirable perennial vegetation. Plant species indicative of nutrient enrichment of soils dominate &lt;20% cover of the area of undisturbed ground;</li> <li>D1. Invasive and neophyte species. &gt;90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species;</li> <li>D2. Current damage. &gt;90% of the hedgerow or undisturbed ground is free of damage caused by human activities;</li> <li>E1. Tree age. At least one mature tree per 30m stretch of hedgerow. A mature tree is one that is at least 2/3 expected fully mature height for the species; and,</li> <li>E2. Tree health. At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.</li> </ul>	<p>Maple <i>Acer campestre</i>, 10% Dog Rose <i>Rosa canina</i>, 10% Hazel <i>Corylus avellana</i>, Whips planted in a double row. Tree Species - Oak <i>Quercus R.</i> Beech <i>Fagus sylvatica</i> Planted as minimum 14-16cm diameter/4m high)</p> <ul style="list-style-type: none"> <li>Implement due diligence and do not introduce pernicious or invasive species;</li> <li>Monitor the planted hedgerow to ensure correct establishment, and take remedial action if growth fails; and,</li> </ul> <p>Ensure damaging activities do not take place near to the hedgerow.</p>