The Sizewell C Project

6.3 Appendix 14E Biodiversity Net Gain Report

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BIODIVERSITY METRIC 2.0 CALCULATIONS – MAIN DEVELOPMENT SITE – 2021 DESIGN UPDATES

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EXECUTIVE SUMMARY

Arcadis Consulting (UK) Limited has been commissioned on behalf of SZC Co., to undertake Biodiversity Metric 2.0 (BM 2.0) calculations of the Sizewell C proposals. This report supersedes one provided in the application (**Volume 2, Chapter 14 Appendix 14E** [APP-266] of the **Environmental Statement (ES)**) and is provided to account for updated red line boundaries, provide greater clarity around assumptions and justifications and to reflect comments made by Natural England and others on the earlier report. It had originally been intended to update the assessments to use an updated Biodiversity Metric but a delay in the release of that metric means that has not yet been possible.

This assessment includes areas within the main development site (i.e. within the proposed site boundary (i.e. 'on-site') and other areas within the wider EDF Energy estate (i.e. 'off-site' in the context of Biodiversity Net Gain).

A small portion of Sizewell Marshes SSSI overlaps with the western extent of the main Nuclear platform site. Within this portion of the site, 0.46ha of fen meadow and 3.12ha of wet woodland will be permanently lost. The metric cannot assess such an impact on statutory designated sites, so specific compensatory habitats are required. As such three off-site areas will be used to provide compensatory fen meadow and wet woodland habitats, along with the wetlands area of Aldhurst Farm and an area of wet woodland in the north of the site. The portion of the site overlapping with Sizewell Marshes SSSI is excluded from the baseline and post-development calculations, along with areas of SSSI compensatory habitats.

The areas within the main development site can be seen in **Figure 1** of this document. The off-site offsetting areas within the EDF Energy estate are as follows:

- Studio Fields Complex – delivering biodiversity enhancement and reptile mitigation.
- St James Covert – delivering biodiversity enhancement and reptile mitigation.
- Marsh Harrier Habitat Improvement Area (including Great Mount Walk) – delivering biodiversity enhancement and marsh harrier mitigation in the construction phase and reptile mitigation.
- Kenton Hills – delivering biodiversity enhancement and reptile mitigation.
- Aldhurst Farm (delivering biodiversity enhancement in the form of wetland areas which are not included in calculations as it comprises SSSI wetland mitigation) and additional acid grassland habitat (terrestrial habitats are included in the calculations).

The baseline is comprised of the site composition and condition prior to any works relating to Sizewell C taking place, for example prior to any mitigation or enhancement works which were progressed in advance to achieve maturity. This is in line with Natural England European Protected Species (EPS) policies[1]:

[1] https://www.gov.uk/government/consultations/wildlife-licensing-comment-on-new-policies-for-european-protected-species-licences#:~:text=European%20protected%20species%20are%20protected,The%204%20new%20policies%20could%3A&text=improving%20populations%20overall%20and%20not%20just%20protecting%20individual%20species%20within%20development%20sites

1. To allow greater flexibility on decisions to exclude or relocate EPS from development sites.
2. To allow greater flexibility on the location of newly created habitats that compensate for habitats that will be lost.
3. To allow EPS to have access to temporary habitats that will be developed at a later date.
4. To allow appropriate and relevant surveys to be carried out where the impacts of development can be confidently predicted.

Under current proposals it is estimated that there is a potential increase in biodiversity unit values for habitats of 18.03%, and an increase in biodiversity unit values for hedgerows of 0.16% across the main development site. The increase in hedgerow units is predicted due to a small increase in hedgerows across the on and off-site areas. The increase in habitat units is due to the suite of habitat enhancement and creation measures presented within this report. The items which have created the greatest uplift in units are as follows:

- On-site (within the site boundary)
  - Creation of a large area of 'Dry Sandlings Grassland', a collection of acid grassland, heathland scrub and scattered trees, created on mostly arable land.
  - Creation of woodland in the centre of the site, increasing the area of woodland relative to the baseline.
  - Creation of semi-improved grassland on arable and improved pasture land, in the west of the site.
- Off-site (outside the site boundary but within the EDF Energy estate)
  - Creation of a high-quality reptile habitat within Studio Fields Complex, Kenton Hills and St James Covert, largely composed of acid grassland, on the site of former arable land and plantation woodland.
  - Creation of areas of acid grassland and heathland within the Aldhurst Farm area, largely on the site of former arable land.
  - Creation of further acid grassland on predominantly arable land, within the Marsh Harrier Habitat Improvement Area.

There are a series of off-site associated developments (AD sites), three of which were also assessed via the BM 2.0 (Sizewell Link Road, Two Village Bypass, Yoxford Roundabout) and these are presented in separate reports. These sites were chosen for assessment via the metric as they are proposed as permanent developments and are considered to have the potential for permanent habitat loss. When considered as a whole, there is predicted to be an approximate 19% increase in biodiversity units across the main development site and three AD sites.

The achievement of the predicted units scores is reliant upon achieving the target condition for created habitats.

The proportions of the broad habitat types present on the site will change under the Sizewell C proposals. The largest decrease in area will be in arable, a 250ha decrease, while the

largest increase will come in grassland, an 193ha increase. An overall increase in woodland is predicted within the site, with lower quality, mainly plantation woodland being replaced with higher quality woodland. Off-site a decrease in woodland is predicted due to the removal of plantation woodland to extend areas of acid grassland in Kenton Hills and St James Covert. Moderate increases will occur in the remaining other broad habitat types.

Separate BNG calculations were carried out as part of the Sizewell B relocated facilities development. The Sizewell B calculations were carried out under two scenarios, which assumed the Sizewell C development either did, or did not take place (as these works will proceed regardless of Sizewell C). To avoid double counting any areas, the area within the red line boundary for these Sizewell B works have been excluded from this assessment. Details of the Sizewell B BNG assessment can be found in the dedicated report, included in **Appendix C** of this document. That assessment predicts a 22.1% increase in biodiversity units and 16.7% increase in hedgerow units under the future scenario in which Sizewell C proceeds.

1 INTRODUCTION

1.1 Overview

1.1.1 Arcadis Consulting (UK) Limited has been commissioned on behalf of SZC Co., to undertake Biodiversity Metric 2.0 (BM 2.0) calculations of the Sizewell C proposals for the main development site. This report supersedes one provided in the application (**Volume 2, Chapter 14 Appendix 14E** [APP-266] of the **Environmental Statement (ES)**) and is provided to account for updated red line boundaries, provide greater clarity around assumptions and justifications and to reflect comments made by Natural England and others on the earlier report. It had originally been intended to update the assessments to use an updated Biodiversity Metric but a delay in the release of that metric means that has not yet been possible.

1.1.2 This assessment includes areas within the main development site (i.e. within the proposed site boundary (i.e. 'on-site') and other areas within the wider EDF Energy estate (i.e. 'off-site' in the context of Biodiversity Net Gain).

1.1.3 This site will house the Sizewell C nuclear power station, located to the north of the existing Sizewell A and B power station complex. The 'Proposed Development' will comprise on-site areas, including the main platform, Sizewell B relocated facilities (excluded, see Section 2.10.3c)) and offshore works area and off-site areas. Within the wider EDF Energy estate, 'off-site areas' include the Marsh Harrier Habitat Improvement Area (MHHIA), Studio Fields complex, St James covert, Kenton Hills and Aldhurst Farm. The offshore area is not assessed within this report as it is not covered by the BM 2.0. The red line boundary is shown in **Plate 1** of this document.

1.1.4 There is also a series of off-site associated developments (AD sites), three of which are assessed via the BM 2.0 in separate reports. These sites were chosen for assessment via the metric as they were considered to have potential for permanent habitat change. These are:

- A permanent road to bypass Stratford St Andrew and Farnham (referred to as the 'Two Village Bypass' (TVB)) to alleviate traffic on the A12 through the villages;
- A permanent road linking the A12 to the Sizewell C main development site (referred to as 'Sizewell Link Road' (SLR)) to alleviate traffic from the B1122 through Theberton and Middleton Moor; and
- Permanent highway improvements at the junction of the A12 and B1122 east of Yoxford (referred to as the 'Yoxford Roundabout' (Yoxford) and other road junctions to accommodate Sizewell C construction traffic.

1.1.5 Updated calculations are provided for each of these three sites with the 'Biodiversity Metric 2.0 Calculations – Two Village Bypass – 2021 design updates' (Doc Ref. 9.8), 'Biodiversity Metric 2.0 Calculations – Sizewell link road – 2021 design updates' (Doc Ref. 9.7) and 'Biodiversity Metric 2.0 Calculations – Yoxford Roundabout – 2021 design updates' (Doc Ref. 9.9) which supersede those presented as **Volume 5. Chapter 7** [APP-266], **Annex 7-4, Volume 6, Chapter 7 Annex 7-4** [APP-462] and **Volume 7, Chapter 7, Annex 7-4** [APP-495] of the Sizewell C Project respectively.

Plate 1: Aerial imagery of the site and redline boundary (not including sports pitches at Leiston)

1.2 Site overview

1.2.1 The Proposed Development sits on the east coast of Suffolk and extends inland to the west. The site comprises the current Sizewell B power station (largely hardstanding), an area of plantation woodland to the north and large areas of arable and pasture land (a combination of semi-improved and improved grassland), among other habitats (see **Plate 1** and **Figure 1** of this document). Approximately 270ha of the site falls within designated sites (predominantly within the AONB):

- Sizewell Marshes Site of Special Scientific Interest (SSSI) – a small wetland area, including fen meadow habitat;

- Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) – most of the east of the site;
- Sizewell Levels and Associated Areas County Wildlife Site (CWS) – largely plantation woodland and acid grassland
- Southern Minsmere Levels CWS – acid grassland and heathland; and
- Suffolk Shingle Beaches CWS – dune grassland and vegetated shingle.

1.2.2 Areas of the site within the Sizewell Marshes SSSI and those areas which compensate for the habitat losses to the SSSI were excluded from the calculations. Further detail is provided in **Section 2.10** of this document.

1.3 Proposed scheme

1.3.1 The proposed scheme will consist of the following components:

- The main development site would comprise five on-site components, which are described below:
  - Power station platform (main platform): the area that would become the Sizewell C nuclear power station itself.
  - Offshore works area: the area where offshore cooling water infrastructure and other marine works would be located.
  - Temporary construction area: the area located primarily to the north and west of the proposed Sizewell Marshes Site of Special Scientific Interest (SSSI) crossing, which would be used to support construction activity on the main platform, including an accommodation campus.
  - Land east of Eastlands Industrial Estate (LEEIE): the area including and directly north of Sizewell Halt, which would be used to support construction on the main platform and the temporary construction area.
  - Sports facilities in Leiston: these would include one full-size 3G pitch, 400mm pile, rubber crumb surface suitable for football, non-contact rugby and hockey; and two Multi-Use Games Areas (MUGAs) suitable for basketball, netball, tennis and football. While not within the Sizewell estate, this area is within the DCO boundary.
  - Sizewell B Relocated Facilities land and National Grid land: the area that certain Sizewell B facilities would be moved to in order to release other land for the Sizewell C Project and land required for the National Grid transmission network.

- The Sizewell B calculations were carried out under two scenarios, which assumed the Sizewell C development either did or did not take place. To avoid double counting any areas, the area within the red line boundary for these Sizewell B works have been excluded from this assessment (red line shown in Plate 2). Details of the Sizewell B BNG assessment can be found in the dedicated report, included in **Appendix C** of this document.

1.3.2 The net gain calculations included all the above areas, with the exception of the offshore works area (excluded as these are not covered by BM 2.0), the Sizewell B area (excluded to avoid double counting) and an area of wet woodland in the north of the site (excluded as it provides SSSI compensatory habitat).

- The off-site areas of the main development site are as follows:
  - Aldhurst Farm area: this area included farmland adjacent to the main development site, which has been converted to an area including lowland ditches, reedbed and open water habitats and a large area of acid grassland habitat. These are shown within the ELMP (EDF Energy, 2014).
  - MHHIA: this area will provide foraging habitat for marsh harriers during the construction phase. This is shown in **Volume 2, Chapter 14, Appendix 14C5** [APP-259] of the **ES**. In the long-term, post-construction, the dry areas here will be managed as an area of acid grassland with scrub mosaics of similar character to the on-site Dry Sandlings Grassland (DSG). This area includes the Great Mount Walk reptile receptor area. The area will also include a new wetland area.
  - Studio Fields area: this area will provide reptile habitats and provide a receptor area during the construction phase.
  - St James covert: this area will provide reptile habitats and provide a receptor area during the construction phase.
  - Kenton Hills: this area will provide reptile habitats and provide a receptor area during the construction phase.

1.3.3 The net gain calculations include all the above off-site areas, with the exception of the wetlands areas of Aldhurst farm (see **Section 2.10** of this document for further details on areas excluded from the assessment) and the wet woodlands on the marsh harrier habitat improvement area. These areas are considered separately as the metric cannot be used to assess impacts to SSSIs or compensatory habitats

1.4 Changes to the scheme

1.4.1 A small number of changes are proposed to the scheme, relative to the ES submission made in May 2020. The key change is the expansion of the new wetland area in the north of the site within the Marsh Harrier habitat Improvement Area. This includes an expanded area of reedbed and wetland habitat, shown in **Figure 2** of this document.

1.4.2 Changes are also proposed to the crossing over the Sizewell Marshes SSSI with a bridge replacing the previously proposed culvert. See **Section 2.10** of this document for details regarding areas excluded from the assessment.

1.5 Biodiversity Targets

1.5.1 This report has been prepared in response to SZC Co., government and stakeholder interest around quantifying biodiversity. Defra (Department for Environment Food and Rural Affairs) has presented their intentions for biodiversity, in their summary of responses to the biodiversity net gain consultations published in July 2019 (Defra, 2019).

1.5.2 A requirement to commit to a 10% increase in biodiversity units to achieve net gain for new developments is likely to be mandated through the upcoming Environment Bill (the bill is currently in the reporting stage in the House of Commons), with exemptions made for Nationally Significant Infrastructure Projects (NSIPs).

1.5.3 The scope of this report and analysis is to present the biodiversity unit change due to the proposed development. The ecological impacts and associated mitigation to ensure legislative and policy compliance are presented in the **ES** (**Volume 2, Chapter 14** [AS-033] and its associated documents and as updated by the **ES Addendum** [AS-181].

2 METHODOLOGY

2.1 Biodiversity metric 2.0

2.1.1 The purpose of this document is to evaluate the potential of the Proposed Development to achieve biodiversity net gain. This approach utilises information on the habitats and features of the site before and after the Development to calculate a biodiversity value, utilising this information to calculate a change in the biodiversity value of the Outline Planning Area (OPA).

2.1.2 This report supersedes one provided in the application (**Volume 2, Chapter 14 Appendix 14E** [APP-266] of the **Environmental Statement (ES)**) and is provided to account for updated red line boundaries, provide greater clarity around assumptions and justifications and to reflect comments made by Natural England and others on the earlier report. It had originally been intended to update the assessments to use an updated Biodiversity Metric but a delay in the release of that metric means that has not yet been possible.

2.1.3 The calculations were therefore undertaken using the Biodiversity Metric 2.0 issued by Defra and Natural England (details can be found at Crosher et al., 2019 a and b) a spreadsheet-based tool into which data can be entered to carry out biodiversity net gain calculations. The version used for these calculations is that released in December 2019. The calculations were carried out using the same methodology as those within the ES, with the exception of where updated guidance has been provided (Natural England, 2020). Such instances are made clear in the relevant sections below.

2.1.4 When considering baseline conditions, the metric takes account of several factors, detailed below. The numbers in brackets show the multipliers used by the metric for each category.

- Habitat type;
- Size of habitat parcel;
- The distinctiveness of the habitat type:
  - Value predetermined for each habitat type on a scale of Very Low (0), Low (2), Medium (4), High (6) and Very High (8).
  - Distinctiveness considers the species richness, rarity and the degree to which a habitat supports species rarely found in other habitats.
- The condition of each habitat parcel;

  - Value assigned based on a scale of Poor (1) Fairly Poor (1.5) Moderate (2) Fairly Good (2.5) and Good (3). For some habitat types this is pre-determined.
  - Condition sheets (provided in Crosher et al., 2019b) were used where possible to assess the condition of each habitat on the site.
- How ecologically connected the parcels are; and
  - Value assigned based on a scale of Low (1) Medium (1.1) and High (1.15). At present, all habitats are set to low connectivity. See section 2.2d) for details.
- Whether the parcels are in locations identified as local nature priorities.
  - Value assigned based on a scale of Low (1) Medium (1.1) and High (1.15) strategic importance.

2.1.5 Data is entered into the metric under the UK habitat classification typologies. Baseline data was largely collected under Phase 1 Habitat survey Typologies. A conversion was carried out using a table within the tool and using the guidance document produced by UK Habitat Classification Working Group (2018).

2.2 Valuation of habitats

2.2.1 To calculate the biodiversity value of the site, a 'value' for each of the habitats is formulated and multiplied by the size of this habitat, as described within the Biodiversity Metric 2.0 (Crosher et al., 2019a). The 'value' is based upon the habitat's distinctiveness, condition, ecological connectivity and strategic significance. For non-linear habitats, such as woodland or grassland, the area of the habitat is used to assess its size, whereas length is used for non-linear habitats, such as hedgerows and rivers. The biodiversity values of area-based habitats, hedgerows and rivers are separate and cannot be summed. As such they should all be evaluated separately. Area based habitats and hedgerows are largely assessed in the same way and any differences are highlighted below. No rivers are present on the site, so a rivers assessment was not necessary.

2.2.2 Habitats located within the site and those located off-site within off-setting areas are assessed differently, with the latter including further multipliers to allow for the fact that the habitats are spatially separated from the site (although in this case, the off-site areas are immediately adjacent to the site, so no penalty is paid – see Section c)). The on-site and off-site habitats are entered into the metric in different sections, to allow for clear differentiation. In this report the biodiversity values of on-site and off-site areas are also presented separately.

2.2.3 This section describes how this value has been applied to the existing 'before' habitats and the proposed 'after' (post-development) habitats. Full details of the Biodiversity Metric 2.0 can be found in Crosher et al. (2019a and b).

a) Habitat size

2.2.4 The size of the different habitats was calculated in GIS. The area taken up by scattered trees throughout the site was calculated by inputting the number of scattered trees into the 'Street Tree Helper Tool', included in the Biodiversity Metric 2.0 calculation tool.

b) Habitat distinctiveness

2.2.5 The metric assigns a distinctiveness band to each of the habitats and linear features. These are based upon different criteria, so are considered separately below.

i. Area based habitats

2.2.6 As detailed in Crosher et al. (2019a), this is assessment is based upon "species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats". **Table 1** of this document, below, provides detail of the bandings to which each area-based habitat is assigned.

Table 1: Area based habitat distinctiveness valuation bandings

Distinctiveness band	Multiplier	Typical habitats
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens
Medium	4	Semi-natural habitats not classed as a Priority Habitat
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub
Very low	0	Little or no biodiversity value e.g. hard standing or sealed surface

ii. Hedgerows

2.2.7 The distinctiveness of hedgerows is based upon their physical structure, the woody species composition and any association with physical features, such as banks and ditches. An assessment of ground flora is not included within the metric. **Table 2** of this document, below, details the distinctiveness categories of each of the types of hedgerows and line of trees. Further detail is provided in Crosher et al. (2019a). Due to the large number of hedgerows present within the Sizewell Estate, like hedgerows were grouped together for the purposes of assessment.

Table 2: Hedgerow distinctiveness categories and multipliers

	Woody plant structural composition				
Associated features	Species rich hedgerow (inc. hedgerow with trees)	Native species hedgerow	Other hedgerow (ornamental / non-native species)	Line of trees (ecologically valuable)	Line of trees
Associated earth bank or ditch	High 6	Medium 4	Low 2	Medium 4	Low 2
None	Medium 4	Low 2	Very Low 1	Medium 4	Low 2

c) Habitat condition assessment

2.2.8 The condition of the habitat is defined as: “the biological ‘working-order’ of a habitat type judged against the perceived ecological optimum state for that particular habitat.” (Crosher et al., 2019b). This provides a measure of variation in the quality of areas of the same habitat type.

i. Area based habitats

2.2.9 A habitat condition assessment sheet is provided for each habitat type within Crosher et al. (2019b), which should be used to assign each habitat parcel to each of the categories detailed in **Table 3** of this document, below. Each condition sheet is composed of a list of pass/fail criteria. The ratio of ‘passes’ to ‘fails’ is used to determine the habitat condition.

Table 3: Condition bandings for the habitats on the site

Category	Multiplier
Good	3
Fairly good	2.5
Moderate	2
Fairly poor	1.5
Poor	1
N/A – Agriculture	1
N/A – other	0

ii. Hedgerows

2.2.10 A single condition sheet is provided for hedgerows, although lines of trees have a separate sheet. Both of these can be found in Crosher et al. (2019a), along with the pass/fail ratios for both types of linear feature. The condition categories and multipliers are the same as shown in **Table 3** of this document, above, but 'fairly good' and 'fairly poor' are not options. Due to the large number of hedgerows present within the EDF Energy estate, like hedgerows were grouped together for the purposes of assessment.

d) Ecological connectivity assessment

2.2.11 Version 2.0 of the biodiversity metric includes a valuation of 'ecological connectivity'. The connectivity factor relates to the relationship of a "particular habitat patch to other surrounding similar or related semi-natural habitats facilitating flows of species and ecosystem services" (Crosher et al., 2019b). Increased connectivity with the surrounding area corresponded to a higher value for the ecological connectivity factor. Higher habitat connectivity increases the value of a habitat, all else being equal. For example, a well-connected area of woodland will likely have a higher biodiversity than an equivalent, unconnected woodland. However, in the Biodiversity Metric 2.0 - Beta Test: Summary Consultation Response (Natural England, 2020) the decision was taken to fix connectivity at Low (x1 multiplier) for all habitats until the metric is next reviewed. Therefore, the connectivity applied to all habitats identified on site was set at Low (1x multiplier).

e) Strategic significance assessment

2.2.12 Strategic significance assesses the value of habitats from the point of view of environmental objectives and preferred locations for biodiversity. Local and national policy was reviewed to quantify the strategic significance of each habitat area. **Table 4** of this document, below, based upon Table 5-5 in Crosher et al. (2019a), was used to assist with this assessment. This assessment utilised the following resources:

- MAGIC (2019) Multi-Agency Geographical Information for the Countryside (MAGIC);
- Suffolk Nature Strategy (Suffolk County Council, 2015); and
- Leiston Neighbourhood Plan 2015-2029 (East Suffolk Council, 2015).

Table 4: Strategic significance categories and multipliers

Category	Description	Multiplier
High	Within area formally identified in local strategy	1.15
Medium	Location ecologically desirable but not in local strategy	1.1
Low	Area/compensation not in local strategy/ no local strategy	1

2.3 Pre-development calculations

2.3.1 The number of biodiversity units provided by each habitat currently within the Proposed Development site is calculated by multiplying the values for Distinctiveness, Condition, Connectivity, Strategic location and the size of each habitat in hectares (ha). Hedgerows are evaluated in the same way, but base upon their length (in km), rather than area. This value represents the baseline condition of the site, in terms of biodiversity units. Further detail can be found in Crosher et al. (2019a and b). The Phase 1 habitat map presented in **Figure 1** and **Figure 14A3.1** in **Appendix 14A3** of the **ES** [APP-230] were used to inform these baseline calculations.

2.3.2 Habitat improvement works have already begun in several of the off-site areas (shown in blue in **Figures 1** and **2** of this document) in advance of the proposed Sizewell C development. As such, the baseline was taken as the point in time prior to the commencement of these works. These timepoints are stated in the sections below. The baseline for the areas within the red line boundary is taken to be the state at time of submission, with the exception of on-site portions of the MHHIA,

Studio Field Complex and Aldhurst Farm. The baseline timepoint for these areas is the same as the off-site portions (which is stated below).

a) Off-site areas

2.3.3 The development also includes mitigation areas beyond the red line boundary, for example the MHHIA and Studio Field Complex. The biodiversity units provided by each habitat in these areas is calculated in the same way. These areas are included within the overall net gain calculations as they are offsetting sites relating to the main development site. This section outlines when the temporal baseline was taken to be, due to works improvement works commencing ahead of time.

i. Marsh Harrier Habitat Improvement Area (MHHIA)

2.3.4 The MHHIA spans the site boundary in the north of the site. This area will provide additional foraging habitat for marsh harrier to compensate for impacts during the construction phase. Discussions are ongoing around the long-term management of this area to provide the greatest benefits. It is likely that this area will be managed to be of similar character to the DSG areas across the site. The DSG area is described as "a complex mosaic of dry summer parched grassland, scrub and scattered trees/woodland (particularly around the edges)" in the OLEMP.

2.3.5 Work has already begun to convert this former arable land to grassland to provide foraging habitat for marsh harriers in anticipation of impacts from the Sizewell C development. As this work commenced ahead of time, the temporal baseline was taken to be the point prior to the commencement of improvement works (in line with current guidance (Crosher et al. 2019a) that the baseline relates to the state prior to intervention). As such, the baseline for this area is defined as arable dominated, rather than being composed of the grassland sward currently present. Natural England (2020) indicates that future iterations of the biodiversity metric may include a function to allow data to be entered on habitat creation work carried out in advance.

ii. Studio Fields Complex

2.3.6 The Studio Fields Complex will act as a reptile receptor area, providing extensive habitat for reptiles, among other species. As with the MHHIA, arable reversion to grassland has already begun. As this work commenced ahead of time, the temporal baseline was taken to be the point prior to the commencement of improvement works (i.e. in 2011 when the area was arable dominated). As such, the baseline for this area is defined as arable dominated, rather than being composed of the grassland sward currently present.

iii. Kenton Hills and St James Covert

2.3.7 These two areas are also reptile receptor areas, providing extensive habitat for reptiles, among other species. As with the areas above, reversion of plantation woodland to acid grassland has already begun. As this work commenced ahead of time, the temporal baseline was taken to be the point prior to the commencement of improvement works (i.e. in 2007 when these areas were still areas of plantation woodland). As such, the baseline for this area is plantation woodland, rather than being composed of the grassland sward currently present.

iv. Aldhurst Farm

2.3.8 The Aldhurst Farm complex will include areas of acid grassland along with wetland habitats that provide compensation for lost wetland habitats within the Sizewell Marshes SSSI. The wetland areas are therefore excluded from the calculations (see **Section 2.10** of this document). As with the areas above, on the non-wetland parts of the site, arable reversion to grassland has already begun. As this work commenced ahead of time (beginning in 2015), the temporal baseline was taken to be the point prior to the commencement of improvement works. As such, the baseline for this area is defined as being arable dominated, rather than being composed of the grassland sward currently present.

2.3.9 The following sources were used to assess the baseline conditions of the on and off-site mitigation areas:

- **Volume 2, Chapter 7 Appendix 14A3** of the **ES** [APP-229];
- MAGIC (2019);
- Reptile receptor site plans; and
  - **Volume 2. Chapter 14, Figure 14E.3, Figure 14E.4, Figure 14E.5, Figure 14E.6 and Figure 14E.7** [APP-267].
- **Sizewell C: Marsh Harrier Mitigation Area Feasibility Report (Volume 2, Chapter 14, Appendix 14C5** [APP-259]).

2.4 Post-development calculations

a) On-site

2.4.1 The site has then been reassessed for the post-development conditions that will be present after the landscape treatments are implemented. The number of biodiversity units provided by each habitat within the Proposed Development site is calculated in the same way as the baseline habitats, but with the additional multipliers detailed

in **Table 5** of this document, below. Further detail regarding these multipliers is presented in **Section 2.5** of this document.

Table 5: Risk components included in post-developments calculations

Risk factor	Description
Difficulty of creating or restoring a habitat	A standard score based on how difficult the habitat type is to create.
Temporal risk	A standard score based on how long the habitat type takes to establish.

2.4.2 The following sources were used to assess the on-site conditions after the landscape treatments are implemented:

- **Volume 2, Chapter 14, Appendix 14A3** of the **ES** [APP-229];
- **Main Development Site Outline Landscape and Ecology Management Plan (OLEMP)** (Doc Ref. 8.2(A));
- Reptile receptor site plans.
  - **Figure 14E.3, Figure 14E.4, Figure 14E.5, Figure 14E.6 and Figure 14E.7** (Doc Ref. 6.3 [APP-267]).
- MAGIC (2019)
- Stakeholder Presentation (EDF Energy, 2019); and
- **Sizewell C: Marsh Harrier Mitigation Area Feasibility Report** (**Volume 2, Chapter 14 Appendix 14C5** [APP-259] of the **ES**).

2.4.3 The OLEMP details a mosaic landscape typology referred to as Dry Sandlings Grassland. For the purposes of this assessment, these areas were broken down into the constituent components detailed within the OLEMP; dry acid grassland, heathland scrub and scattered broadleaved trees.

2.4.4 The assessments were informed by the vegetation retention and clearance plans contained in the **Main Development Site Landscape Plans** [AS-120].

b) Off-site

2.4.5 The biodiversity units provided by each habitat in the mitigation areas beyond the red line boundary also include a spatial risk multiplier, which takes the distance of the mitigation area from the Proposed Development Site into account. Further detail

regarding these multipliers is presented in **Section 2.5** of this document. Due to their proximity to the site, no spatial risk multiplier is applied to the off-site areas, which are all located immediately adjacent to the site.

2.4.6 The following sources were used to assess the off-site conditions after the landscape treatments are implemented:

- **Sizewell C: Marsh Harrier Mitigation Area Feasibility Report** (**Appendix 14C5**) (**Volume 2, Chapter 14 Appendix 14C5** [APP-259] of the **ES**);
- Aldhurst Farm: Habitat Creation Scheme Planning Application (EDF Energy, 2014);
- Multi-Agency Geographical Information for the Countryside (MAGIC) (2019)
- Appendix 14A3 of the Main Development Site ES; and
- Reptile receptor site plans.
  - **Figure 14E.3, Figure 14E.4, Figure 14E.5, Figure 14E.6 and Figure 14E.7.**

i. MHHIA

2.4.7 As outlined in **Section 2.3.a)** of this document, proposals regarding the long-term management of the MHHIA have not been finalised. It is assumed that the area will likely be managed to target a community akin to the DSG proposed across the estate. DSG is described in the OLEMP as “a complex mosaic of dry summer parched grassland, scrub and scattered trees/woodland (particularly around the edges)”.

2.5 Post-Development delivery risks

a) Difficulty of creating or restoring a habitat

2.5.1 This ‘risk’ relates to the difficulty of the habitat restoration or recreation. There are four bands from Low difficulty, to Very high difficulty, with the value multiplier shown below in **Table 6** of this document, below.

Table 6: Difficulty categories and multiplier

Category	Multiplier
Very high	0.1
High	0.33

Category	Multiplier
Medium	0.67
Low	1

2.5.2 There is also different terminology and different treatment for the mechanism by which habitats are created. For example, different biodiversity change scenarios carry different levels of risk and the multipliers are applied differently to reflect this. Three distinct biodiversity habitat change scenarios are recognised in the biodiversity metric 2.0:

- **Habitat creation**. Where one habitat type is replaced by another or the habitat is destroyed (e.g. by development works) and the same habitat is recreated.
- **Habitat enhancement** of an existing habitat to improve its distinctiveness and / or condition. An example of restoration would be the transformation of a derelict chalk grassland dominated by scrub and coarse grasses to a continuous area of chalk grassland with isolated woody species and an abundance of fine-leaved grasses.
- **Accelerated habitat succession**. This recognises that certain interventions are comparable with ecological succession processes which result in a more distinctive habitat type (for example, grassland changing into scrub and ultimately woodland). The biodiversity value of the original habitat is not abruptly lost, but gradually changes as the new habitat type emerges. Accelerated succession interventions are subject to 'trading down' principles. Accelerated succession is a purposeful sustained intervention and it is envisaged that there are a limited number of situations where this would apply. For example, the planting of an existing grassland with thorny shrubs to facilitate natural tree regeneration to establish a woodland without removing the grassland.

2.5.3 Habitat creation and accelerated succession have the greatest risk, while enhancement carries less risk. It should be noted that accelerated succession is not recognised as an option for hedgerows.

b) Temporal risk

2.5.4 Many factors influence how long a habitat takes to go from the point of creation or restoration to the desired end point condition. Factors are often site dependent but can include soil nutrient status, soil types and pH, site preparation, climate and the neighbouring habitats and species matrix available to colonise the new or restored habitat. The timeframe is also resource dependent. With sufficient time and money

most habitats can be recreated more rapidly but allowing a more gradual process may be more beneficial to wildlife in the longer term.

2.5.5 For the purposes of the Biodiversity Metric 2.0 average time estimates need to be used, accepting that there will be variation from this central estimation. For example, some sites will take longer, where conditions are more nutrient enriched or higher altitude or north facing. Average estimates of the time to target condition were largely expert driven and build upon the considerations that shaped judgements of the difficulty to create or restore a habitat. They were additionally informed by field experience, industry case studies and a body of practical experience. The time to target condition varies between 0 and greater than 32 years, with 0 years having a multiplier of 1. The multiplier decreases by 3.5% per year.

c) Spatial risk

2.5.6 A separate risk multiplier is applied to post-development sites outside of the main development site. This incentivizes the utilisation of sites nearby to the development, for ecological and social reasons. Sites within the same local planning authority area (LPA) or National Character Area (NCA) are deemed sufficiently close to address ecological and social concerns. Higher multipliers are assigned to more distant sites, as shown in **Table 7** of this document, below.

Table 7: Off-site risk categories (LPA – local planning authority area, NCA – National Character Area)

Category	Multiplier
Compensation inside LPA or NCA of impact site.	1
Compensation outside LPA or NCA of impact site but in neighbouring LPA or NCA.	0.75
Compensation outside LPA or NCA of impact site and beyond neighbouring LPA or NCA.	0.5

2.6 'Pseudo' double counting areas

2.6.1 The total area input into the tool can be greater than the total area of the site. This is due to the three-dimensional nature of certain habitats. For example, the area covered by a tree is approximately the area covered by its canopy, but if an area of grassland is underneath, both should be included in the metric. As such the area under the tree is 'counted' twice and can result in the area in the metric being larger than the area of the site.

2.7 Calculation of gains or losses

2.7.1 The net change in biodiversity or hedgerow units on and off-site is calculated within the tool by subtracting the baseline units from the post-development units. The overall net change is the sum of the change in units on-site and off-site. The percentage net gain is then calculated by dividing this overall net change by the number of baseline units on the site, as shown in the equation below:

$$overall\ percentage\ net\ gain = \frac{change\ in\ units\ on\ site + change\ in\ units\ off\ site}{baseline\ units\ on\ site} \times 100$$

2.7.2 A positive value indicates a net gain has been made and a negative value indicates a net loss has been made.

2.8 Changes in broad habitat type calculations

2.8.1 The UK habitat classification system is hierarchical in structure, so specific habitat types can be grouped into broad habitat types. The changes in area and biodiversity units associated with each of these broad habitat types was calculated using the baseline and post-development data.

2.9 Inclusion of mitigation areas

2.9.1 Landscape design has been carried out to maximise the benefits to a range of species, maximise biodiversity value and provide ecosystem service benefits. The design is layered in this way, for example, the reptile mitigation areas also provide benefits to a range of other species, for example bats and invertebrates. BNG as presented in the biodiversity metric guidance is a holistic landscape scale assessment of the overall long-term status of the site and the habitats within. As such, it is appropriate that where mitigation for species which results in a change of habitat (such as within the Studio Fields Complex) is assessed within the biodiversity metric.

2.10 Areas excluded from the assessment

a) Sizewell Marshes SSSI

2.10.1 Part of the site lies within Sizewell Marshes Site of Special Scientific Interest (SSSI). The metric is not designed to assess habitats within such statutory designated sites. As such habitats within this area were excluded from the baseline and post-development calculations. Bespoke compensatory habitats are required to offset these impacts to the SSSI. These compensatory habitats are also not included within the assessment. Further detail on these areas is provided in **Section 7** of this document.

2.10.2 "Irreplaceable" habitats, as defined in Baker et al. (2019) should also be excluded from assessments as the metric cannot adequately assess them. There are no irreplaceable habitats, such as ancient woodland, present on the Proposed Development or within the off-site areas.

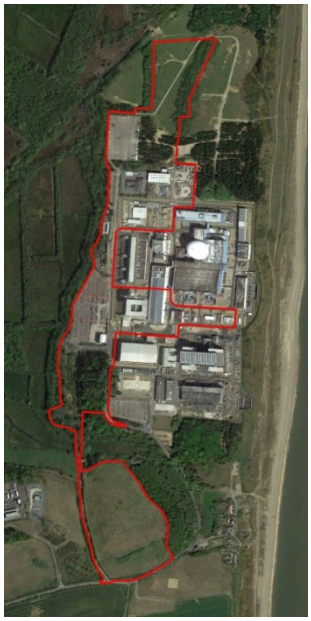
b) Marine Habitats

2.10.3 The BM 2.0 cannot be used to assess oceanic habitats, so the areas of the site within the sea are not included within this assessment.

c) Sizewell B relocated facilities

2.10.4 Separate BNG calculations were carried out as part of the Sizewell B relocated facilities development. These works are required to enable the Sizewell C development to take place, but will occur whether the Sizewell C proposals are taken forward or not. However, the exact layout of the Sizewell B area will vary dependent upon whether Sizewell C occurs. The Sizewell B calculations were carried out under two scenarios, which assumed the Sizewell C development either did or did not take place. To avoid double counting any areas, the area within the red line boundary for these Sizewell B works have been excluded from this assessment (red line shown in **Plate 2** of this document). Details of the Sizewell B BNG assessment can be found in the dedicated report, included in **Appendix C** of this document. This assessment predicted a 22.1% increase in biodiversity units and 16.7% increase in hedgerow units under the scenario in which Sizewell C proceeds.

Plate 2: SZB red line boundary



d) Sizewell Estate Woodland Management Plan

2.10.5 An existing Sizewell Estate Woodland Management Plan (Freedom Group, 2016) is in place, which defines the approach used to improve the quality of existing woodlands within the site and the wider EDF Energy estate. As this plan is already in place and would happen irrespective of the Sizewell C development, the actions proposed are excluded from the assessment. In the calculations, retained areas of woodland are treated as being retained in their baseline state, excluding any enhancement that would occur in accordance with the woodland management plan. This ensures that only genuine additionality is presented within the biodiversity net gain assessment.

e) Retsoms Field

2.10.6 At least some of the area of Retsoms Field within the red line boundary will be used as a water management zone during the construction phase although the precise profile is still to be finalised. It is likely that this will result in the loss of approximately half of the grassland habitat present within this area, with the remained retained and improved to DSG, in line with much of the estate. It is assumed that the Dry Heath/Acid Grassland mosaic present on the southern edge will be lost. Retsoms was formerly an arable field but the reversion to grassland occurred prior to the current Sizewell C proposals and so this reversion has been excluded from the assessment.

2.11 Assumptions and limitations

2.11.1 The following assumptions, were made to complete the assessment:

- The difficulty factors applied currently significantly reduce unit calculations for habitats such as acid grassland, calcareous grassland and heathland, resulting in a lower overall unit values when attempting to create or enhance to these habitats. In the main development site dry acid grassland is a large component of the target community and has resulted in such a unit reduction. The Beta version of the metric tool may be amended in the future to more evenly weight these units.

- Considering EDF's long term ownership and management of the site and commitment to long term stewardship to be accompanied by regularly reviewed and updated management plans (such as the OLEMP) the risk around the dry acid grassland habitat creation is lower than that currently predicted in the metric (i.e. the units calculated are likely to be precautionary and an underestimate of the long term positive biodiversity unit outcome).

- Arcadis have used third party data as part of the assessments of the post-development and off-site habitats.

- Assumptions on the condition of the baseline habitats are largely inferred from existing data, with a small number of specific assessments undertaken.
- Baseline data was largely collected in the format of a Phase 1 Habitat Survey, but a conversion was required to UK habitat classification typology to enter this data into the tool.
- Minor variation was present between mapped woodland and the vegetation/clearance plans. This was due to differences in approach with regards to mapping areas of woodland, i.e. mapping to the trunks or the canopy extent. The precise extents of woodland may therefore vary between data sources, but it was ensured that retained woodland and trees were marked as such. As such, retained vegetation is appropriately accounted for within the calculations.
- Proposals for the long-term management of the MHHIA are yet to be finalised. It is assumed that the area will likely be managed to target a community akin to the DSG proposed across the estate.

2.11.2 It is not considered that these assumptions introduce a level of uncertainty into the assessment that would affect the veracity of the assessment.

3 ON-SITE BASELINE CONDITIONS AND VALUATION (PRE-CONSTRUCTION)

3.1.1 The main development site is approximately 365ha in area, although as outlined above, approximately 32ha were excluded from the assessment (due to the SSSI and SZB). This section describes each of the habitats present on the site, shown in **Figure 1** of this document. Codes utilised in this section are those from the JNCC Phase 1 Habitat Survey Handbook (JNCC, 2010). **Table 8** of this document details the UK habitat classification types used in the Biodiversity Metric 2.0 and how they relate to the Phase 1 Habitat Types. Also presented are the valuations of the condition, ecological connectivity and strategic significance of each habitat type. The baseline currently delivers 1244.45 biodiversity units for habitats. When data was entered into the tool, some of the habitat parcels were divided up for the purposes of data handling.

3.1.2 Hedgerows are assessed separately to habitats by the metric. **Table 9** of this document follows the same format as **Table 8**, but details hedgerows, rather than areas of habitat. The baseline delivers 117.26 hedgerow units from 20.56km of hedgerows.

a) Changes to the site boundary

3.1.3 There are no significant changes to the red line boundary relative to the ES submission. Additional wetland area is proposed in the MHHIA, as shown in **Figure 2** of this document.

b) Habitat typology and condition

3.1.4 The following habitats are present on site (headings show phase 1 typologies):

i. Arable

Habitat Typology

3.1.5 There is a large amount of arable land across the Sizewell Estate. It is not material to separate out the crop types as cereal and non-cereal crops are assessed in the same manner within the metric. Further, farming is highly fluid, with crop types potentially varying year on year. As non-cereal crops dominate, all arable land was classified as ‘non-cereal crops’ (this assumption does not necessarily reflect the approach taken beyond the scope of the biodiversity net gain assessments).

3.1.6 An arable weed survey found cultivation to be intensive, often under plastic and involving pesticide use, resulting in “clean” crops with weed species being restricted to the margins of the fields or small patches within the fields where crops have failed

to establish. Due to the small and sparse nature of arable field margins, they were not considered to be material to this assessment.

Condition

3.1.7 The condition of arable land is pre-defined within the metric as 'N/A -Agricultural'. As such, no condition assessment is required.

ii. Hardstanding

Habitat Typology

3.1.8 There is a large amount of hardstanding within the Sizewell Estate. This includes areas within the main platform and roads and buildings around the wider Sizewell Estate. These areas are categorised as 'Developed land; sealed surface'.

Condition

3.1.9 The condition of this habitat is pre-defined within the metric as 'N/A – Other'. As such, no condition assessment is required.

iii. Amenity grassland

Habitat Typology

3.1.10 Several areas of amenity grassland are present within the site. These are small patches around dwellings in the landscape. These are all of similar character, with a low sward height due to regular mowing and low diversity. These habitats align with the 'modified grassland' typology.

Condition

3.1.11 The condition sheet (Crosher et al. 2019b) guides the assessment of amenity grassland of low diversity with a low sward height, as is present here, to be assessed as being of poor condition.

iv. Species-poor semi-improved grassland

Habitat Typology

3.1.12 There is relatively little species-poor semi-improved grassland within the Sizewell Estate, for example to the north of the main platform. These habitats align with the 'modified grassland' typology, as they are dominated by the following species: perennial Rye-grass (*Lolium perenne*), Cock's-foot (*Dactylis glomerata*), White Clover (*Trifolium repens*), Dandelion (*Taraxacum officinale* agg.), Daisy (*Bellis*

perennis), Bristly Oxtongue (*Helminthotheca echioides*) and Ribwort Plantain (*Plantago lanceolata*).

3.1.13 A further area is present to the north of Upper Abbey Farm. This area contains the following species: Common Bent (*Agrostis capillaris*), Common Fleabane (*Pulicaria dysenterica*), Common Ragwort (*Jacobaea vulgaris*), Chicory (*Cichorium intybus*), Red Bartsia (*Odontites vernus*), Glaucous Sedge (*Carex flacca*), Compact Rush (*Juncus conglomeratus*), Germander Speedwell (*Veronica chamaedrys*), Spear Thistle (*Cirsium vulgare*) and willowherbs (*Epilobium* spp.). This area has a varied sward height and scattered Bramble (*Rubus fruticosus* agg.) throughout. This area also aligns with the 'modified grassland' typology.

3.1.14 Several other small areas of similar character were also present within the site. These were assessed in line with the habitats above as 'modified grassland'.

Condition

3.1.15 In the area to the north of the main platform there was little evidence of undesirable species, Bracken (*Pteridium aquilinum*) or scrub, with some bare ground present. However, the low diversity with few wildflowers present and clear alignment with the moderate condition assessment guidance (semi-improved character and species composition alignment) mean the habitats were assessed as being of moderate condition. This is a precautionary assessment.

3.1.16 The area to the north of Upper Abbey Farm was also assessed as being of moderate condition. The habitat clearly failed criteria 6 and contained a number of undesirable species. However, the species diversity was sufficiently high to prevent poor condition being appropriate.

3.1.17 The small areas across the site were assessed in line with the habitats above as being of moderate condition.

v. Plantation coniferous woodland

Habitat Typology

3.1.18 The main area of plantation coniferous woodland is Goose Hill. This area is predominantly an area of plantation coniferous woodland, dominated by Corsican Pine (*Pinus nigra*) and Scots Pine (*Pinus sylvestris*). The metric guides the classification of plantation coniferous woodland as 'other coniferous woodland'. Due to the high component of Corsican pine, this is considered to be appropriate. Other areas of coniferous woodland are present to the north of the main platform and adjacent to the studio fields complex. These areas are also dominated by Corsican pine and/or Scots pine, so were classified in the same way.

Condition

3.1.19 The areas of woodland clearly align with the description of poor condition woodland. Non-native trees are dominant. There is little age diversity, except in large, discrete areas where clearing has occurred. A consistent planting pattern remains. Some understorey is present, but the ground flora is dominated by Bramble, Bracken and Common Nettle (*Urtica dioica*). The areas of coniferous woodland are therefore assessed as being of poor condition.

vi. Plantation mixed woodland

Habitat Typology

3.1.20 There are several areas of mixed plantation woodland within the site, including around Sandlings Walk, Fiscal Policy woodland and to the north of the main platform. All of the mixed woodlands have a non-native coniferous component so align with the 'other woodland; mixed' typology.

Condition

3.1.21 The planation character of these woodland remain and they do support a non-native component, typically Corsican Pine. Within each area, the trees were predominantly of a similar age, with little height structure present. Much of the woodland is within an arable context, so is impacted by this activity. In each case some understorey and ground flora were present, of varying diversity, but due to the negative indicators described the woodlands were assessed as being of moderate condition.

vii. Broadleaved semi-natural woodland

Habitat Typology

3.1.22 There are several small areas of broadleaved semi-natural woodland. One such area is within Goose Hill, but two smaller areas are present immediately to the south-west and south of the main platform. None of the woodland on the Sizewell Estate is classified as ancient woodland on the ancient woodland inventory. These areas align with the 'Lowland mixed deciduous woodland' typology.

3.1.23 A small area of broadleaved woodland is present within Black Walks. This is a relatively small area of woodland that is not listed on the priority habitat inventory. As a result, this area was assessed as 'Other woodland; broadleaved'.

Condition

3.1.24 Condition assessment data were collected separately for each of these areas, with other areas being collated where comparable.

3.1.25 The area within Goose Hill was of poor condition as it failed condition criteria 2, 10 and 12. This was due to non-native species presence and low diversity. A large amount of Rhododendron (*Rhododendron ponticum*) and extensive evidence of planting lines are present.

3.1.26 An area of woodland is present adjacent to the ditch at the edge of the Sizewell Marshes SSSI. This woodland is of similar character to the woodland to the south-east. This woodland comprises a mix of Oak (*Quercus* sp.), Alder (*Alnus glutinosa*), Ash (*Fraxinus excelsior*) and Sycamore (*Acer pseudoplatanus*). The understorey comprises Bramble, Hawthorn (*Crataegus monogyna*) and Elder (*Sambucus nigra*), while the ground flora is dominated by Common Nettle, Ground-ivy (*Glechoma hederace*a), Cleavers (*Galium aparine*) and Cock's foot. The woodland clearly fails criteria 12, due to the insufficient diversity. Limited dead wood is present and there is limited age and height structure present. As such, the woodland is assessed as being of moderate condition.

3.1.27 The area of broadleaved woodland within Black Walks was of low species diversity. Due to its size, there was little scope for a diverse age and height structure or deadwood. As such, the area was assessed as being of moderate condition.

viii. Plantation broadleaved woodland

Habitat Typology

3.1.28 Several areas of plantation broadleaved woodland are present within the site. This includes a thin strip to the west of the studio fields complex. This areas all align with the 'Other woodland; broadleaved' typology.

Condition

3.1.29 The thin strip of woodland to the west of the studio fields complex was also assessed as being of moderate condition, due to low levels of diversity (criteria 12) and lack of diverse age and height structure (criteria 12).

ix. Bare sand foreshore

Habitat Typology

3.1.30 There is an area of bare sand at the land/sea interface to the east of the main platform. The BM 2.0 does not include all of the UK Habitat Classification typologies, including t2h (beach) and it is considered that the intertidal habitat classifications do not accurately reflect the nature of this foreshore habitat. The best fitting typology is therefore considered to be "Vacant/derelict land/ bareground". This is considered to reflect the nature of the habitat and its distinctiveness.

Condition

3.1.31 The condition sheet for this habitat type is not relevant to this habitat typology. As such, a precautionary approach was taken and moderate condition was assumed.

x. Dune grassland

Habitat Typology

3.1.32 'Coastal sand dune' habitat is present to the east of the main platform. The low-growing sward (between 3 and 5cm high) is species-rich, with 28 grass and forb species recorded in the quadrats. The most abundant grass species were Red Fescue (*Festuca rubra*), Smooth Meadow-grass (*Poa pratensis*), Sheep's-fescue (*Festuca ovina* agg.) and Sweet Vernal-grass (*Anthoxanthum odoratum*). The low growing forbs recorded included Common Bird's-foot trefoil (*Lotus corniculatus*), Strawberry Clover (*Trifolium fragiferum*), Buck's-horn Plantain (*Plantago coronopus*), English Stonecrop (*Sedum anglicum*), Lady's Bedstraw (*Galium verum*), Harebell (*Campanula rotundifolia*), Ribwort Plantain (*Plantago lanceolata*) and Rough Hawkbit (*Leontodon hispidus*).

Condition

3.1.33 Largely considered to meet all of the condition assessment criteria. It is considered to be a good example of the habitat, with native species dominant, variation in the vegetation structure and open ground is present. Some hard engineering is present, however negative indicators from damage are largely absent. As such, it is considered to be of good condition.

xi. Vegetated shingle

Habitat Typology

3.1.34 'Coastal vegetated shingle' habitat is present to the east of the main platform, supporting a mixture of sand specialists such as Marram (*Ammophila arenaria*) and Sand Sedge (*Carex arenaria*), together with shingle specialists including Sea-kale (*Crambe maritima*), Sea-holly (*Eryngium maritimum*), Sea Pea (*Lathyrus japonica*) and Sea Campion (*Silene uniflora*), aligning with the species included in the habitat definition.

Condition

3.1.35 Largely considered to meet all of the condition assessment criteria. It is a good example of the habitat with uncommon vegetation types present, it is native species dominant with variation in vegetation structure and open ground present. Negative

indicators from damage are largely absent. As such, it is considered to be of good condition.

xii. Semi-improved acid grassland

Habitat Typology

3.1.36 There are several areas of semi-improved acid grassland on the site. These include on Retsoms field, Broom covert and in the north of the site.

3.1.37 Retsoms field is composed of an area of semi-improved acid grassland and an area of dry heath mosaic, the latter of which is considered separately. Retsoms was formerly an arable field but the reversion to grassland occurred prior to the current Sizewell C proposals and so this reversion has been excluded from the assessment. There is now a short sward, due to regular sheep and rabbit grazing, dominated by Sheep's-fescue and Common Bent. The grassland was assessed as belonging to the U1d NVC community, which aligns with the 'other lowland acid grassland'.

3.1.38 Broom covert and the fields adjacent to Sandy Lane are dominated by Sheep's-fescue with an abundance of Common Bent, Fine-leaved Sheep's-fescue (*Festuca filiformis*) and Sweet Vernal-grass. These areas align with the 'other lowland acid grassland' typology.

3.1.39 The area of acid grassland at Black Walks is similar in composition to the above areas, aligning predominantly with the U1d and U1b NVC communities, so was also assessed as 'other lowland acid grassland'.

Condition

3.1.40 Retsoms Field was assessed as a poor example of priority grassland habitat, with abundant typical grassland, dominated in parts with non-specific acid indicator species. It was assessed as passing criteria 4 and 6 due to low levels of undesirable species and low cover bracken and scrub. As a result, it was assessed as being of moderate condition.

3.1.41 Broom covert contains stands of Common Nettle, Thistle species (*Cirsium* spp.), Bracken and Gorse (*Ulex europaeus*) scrub. There is limited bare ground within the area and localised damage to sward by stock. As a result, it was assessed as being of moderate condition.

3.1.42 The grassland at Black Walks passed condition criteria 1, 4 and 5 as it was a good example of the habitat type and low cover of undesirable species and scrub. The habitat failed the remaining criteria, including the bare ground cover. As a result, it was assessed as being of moderate condition.

3.1.43 The field adjacent to Sandy Lane was assessed as being of moderate condition, due to the paucity of positive indicator species and presence of undesirable species, such as ragwort.

xiii. Dry heath/acid grassland mosaic

Habitat Typology

3.1.44 A mosaic of dry heath and acid grassland mosaic is present within the corner of Retsoms field. Such a relatively small-scale mosaic is stated to be included within the 'Lowland Heathland' typology classification.

Condition

3.1.45 This habitat passed condition criteria 4, 5 and 6 due to low levels of grazing pressure, undesirable species and tree/scrub cover. However, there was a limited range of age diversity in the heather and evidence of physical damage. As a result, the habitat was assessed as being of moderate condition.

xiv. Semi-improved neutral grassland

Habitat Typology

3.1.46 A large area of semi-improved neutral grassland is present to the east of the main platform. This area of land was impacted by construction processes associated with the Sizewell B construction works. As a result, the habitat does not have a typical dune grassland character, due to changes to the hydrology and pedology caused by the construction works. This area is dominated by Cock's-foot and Wavy Hair-grass (*Avenella flexuosa*). Herb species include Carrot (*Daucus carota*), Curled Dock (*Rumex crispus*), Common Couch (*Elymus repens*), Creeping Thistle (*Cirsium arvense*) and Dandelion frequently occur. Scattered woody scrub is present across this area. This habitat aligns with the 'other neutral grassland' typology.

Condition

3.1.47 The habitat to the east of the main platform is of semi-improved character, dominated by Cock's-foot and common herbs. Undesirable species and scrub are present across the area. As a result, this habitat is considered to be of moderate condition.

xv. Dense scrub

Habitat Typology

3.1.48 Several areas of dense scrub are present within the site, including on the railway embankment in Leiston and around Upper Abbey Farm. These areas of largely woody scrub align with the 'mixed scrub' typology.

Condition

3.1.49 Due to access constraints, access was not available to the railway embankment, so a full condition assessment was not feasible. However, due to the linear nature of the habitat, many clearings and glades are not present. The area has not been managed for biodiversity purposes, so a range of age classes is considered to be unlikely. Undesirable species are common on railway embankments, such as nettles and common thistle, so it is considered most likely that the scrub was of poor condition. Several other small patches of scrub around the site were assessed in the same way, due to a lack of age range, lack of glades and clearings and lack of well-developed edge.

3.1.50 The two areas around Upper Abbey Farm were assessed as being of moderate condition, as the scrub in these areas showed age and structural diversity, along with a range of species being present.

xvi. Scattered broadleaved trees

Habitat Typology

3.1.51 There are scattered trees throughout the EDF Energy estate, including within the main platform. In the case of the latter, these are categorised as 'street trees', as they tend to be around car parks for ornamental purposes. The remaining trees outside of the areas of built development were classified as 'Wood-pasture and parkland', as the trees are often mature within a grassland or open area of habitat.

Condition

3.1.52 Street trees do not require a condition assessment, they have a pre-defined condition of moderate. A precautionary approach was taken to the assessment of the remaining scattered trees, all of which were assessed as moderate condition. This captures the variation in value of the trees, which ranges from large and mature, to smaller and immature. Further, there were not any areas that could be classified as a 'good' example of wood pasture and parkland. Moderate condition is therefore considered to be appropriate.

xvii. Ditches

Habitat Typology

3.1.53 A ditch is present to the south-west of the main platform (this ditch is not within the Sizewell Marshes SSSI, nor is it the Sizewell Drain). This man-made habitat aligns with the 'ditches' typology.

Condition

3.1.54 This retained ditch is present within an area of woodland, so is heavily shaded. The habitat was considered unlikely to support more than 10 species of emergent, floating or submerged species in a 20 m ditch length, based upon the species richness of ditches within this area. As a result, a precautionary assessment of moderate was taken.

xviii. Improved grassland

Habitat Typology

3.1.55 Several improved grassland fields, used for pasture, are present around Upper Abbey Farm. These agricultural fields contained low diversity grassland with a short sward height. This typology therefore aligned with the 'modified grassland' typology.

Condition

3.1.56 Due to the low diversity, short sward height and agricultural usage, this habitat is considered to be of poor condition.

xix. Bare ground

Habitat Typology

3.1.57 A length of railway line is present within the red line boundary in Leiston. The most appropriate way to classify this artificial typology is considered to be 'Urban - Artificial unvegetated, unsealed surface'. Other areas of bare ground are present within the site. These are largely footpaths and tracks. As such it is appropriate to classify these areas as 'Vacant/derelict land/ bareground'.

Condition

3.1.58 The artificial railway typology has a pre-defined condition of 'N/A – Other'. The areas of tracks across the site were areas of compacted earth with little biodiversity value, so were assessed as being of poor condition.

xx. Sports pitches at Leiston

Habitat Typology

3.1.59 Several new artificial sports pitches will be created at Leiston, within an existing sports field. Due to the current sports usage, the existing grassland is short mown and of low diversity, aligning with the 'modified grassland' typology.

Condition

3.1.60 Short mown and low diversity grassland found on sports pitches is of poor condition.

c) Hedgerow typology and condition

3.1.61 A series of hedgerows are present within the site, largely in the west within an agricultural context. Hedgerows were grouped together for the purpose of assessment.

i. Species-poor defunct hedge

Habitat Typology

3.1.62 Some of the hedges present were species-poor defunct hedges. These align with the 'Native Hedgerow typology.

Condition

3.1.63 These hedges contain gaps and were not classified as important, so following the approach outlined above, they were assessed as being of poor condition.

ii. Species-poor hedge with trees

Habitat Typology

3.1.64 Some of the hedges present were species-poor hedges with trees. These align with the 'Native Hedgerow with trees' typology.

Condition

3.1.65 None of the hedgerows were assessed as being important and all were assessed as being of moderate condition.

iii. Species-rich intact hedge

Habitat Typology

3.1.66 Some of the hedges present were species-rich intact hedges. These align with the 'Native Species Rich Hedgerow' typology.

Condition

3.1.67 A high-level precautionary assessment was carried out for this typology, separating the hedges within this category into those that were assessed as being important and those that were not. The important hedges were assessed as being of good condition, while those that were not, were assessed as being of moderate condition.

iv. Species-poor intact hedge

Habitat Typology

3.1.68 Some of the hedges present were species-poor intact hedges. These align with the 'Native Hedgerow' typology.

Condition

3.1.69 These hedges are intact, but were not classified as important, so following the precautionary approach outlined above, they were assessed as being of moderate condition.

v. Species-rich hedge with trees

Habitat Typology

3.1.70 Some of the hedges present were native species-rich hedges with trees. These align with the 'Native Species Rich Hedgerow with trees' typology.

Condition

3.1.71 All of the hedges within this category were assessed as being important. As a precautionary assessment, these hedges were assessed as being of good condition.

vi. Line of trees

Habitat Typology

3.1.72 Several lines of trees are present on site comprising mainly native broadleaved species. These align with the 'Line of trees' typology.

Condition

3.1.73 The line of trees was assessed as being of moderate condition as the trees were largely mature trees, but with some gaps in the canopy.

d) Strategic significance

3.1.74 The Suffolk Nature Strategy lists the Suffolk Coast & Heaths AONB as one of the "areas of principle importance for landscape scale conservation in Suffolk". As such, areas within the AONB are considered to be of strategic significance. The site overlaps with several County Wildlife Sites (see **Section 1.2** of this document). These all lie within the AONB, so while also considered to be areas of strategic significance, are covered by the extent of the AONB. As such, they are not considered explicitly.

3.1.75 Several habitat types are regarded as a priority habitats in local plans and thus receive a score of 'Location ecologically desirable but not in local strategy'. These habitats are lowland mixed deciduous woodland, coastal sand dunes, coastal vegetated shingle, lowland heathland, acid grassland and all hedgerow habitats. This is a hierarchical classification system, so habitats present within the AONB are categorised as being of strategic significance and not just ecologically valuable. All other habitat types receive a strategic significance score of 'Area/compensation not in local strategy/ no local strategy'.

Table 8: Baseline biodiversity units for areas of habitat within the Sizewell C main development site, detailing the Phase 1 habitat and UK habitat conversions

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Arable	Cropland	Cropland - Non-cereal crops	106.9	Low	N/A -Agricultural	Low	Within area formally identified in local strategy	245.87
Arable	Cropland	Cropland - Non-cereal crops	75.96	Low	N/A -Agricultural	Low	Area/compensation not in local strategy/ no local strategy	151.92
Standing Water	Lakes	Lakes - Ditches	0.03	Medium	Moderate	Low	Within area formally identified in local strategy	0.28
Dry Heath/Acid Grassland	Heathland and shrub	Heathland and shrub - Lowland Heathland	0.35	High	Moderate	Low	Within area formally identified in local strategy	4.83
Semi-natural broadleaved woodland	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.8	High	Moderate	Low	Location ecologically desirable but not in local strategy	10.56
Semi-natural broadleaved woodland	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	6.34	High	Moderate	Low	Within area formally identified in local strategy	87.49

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Dense Scrub	Heathland and shrub	Heathland and shrub - Mixed scrub	0.75	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	6.00
Dense Scrub	Heathland and shrub	Heathland and shrub - Mixed scrub	0.37	Medium	Moderate	Low	Within area formally identified in local strategy	3.40
Dense Scrub	Heathland and shrub	Heathland and shrub - Mixed scrub	1.29	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	5.16
Dense Scrub	Heathland and shrub	Heathland and shrub - Mixed scrub	0.13	Medium	Poor	Low	Within area formally identified in local strategy	0.60
Species poor semi- improved Grassland	Grassland	Grassland - Modified grassland	1.25	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	5.00
Species poor semi- improved Grassland	Grassland	Grassland - Modified grassland	6.95	Low	Moderate	Low	Within area formally identified in local strategy	31.97
Improved Grassland	Grassland	Grassland - Modified grassland	10.12	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	20.24

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Amenity grassland	Urban	Urban - Amenity grassland	2.59	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	5.18
Amenity grassland	Urban	Urban - Amenity grassland	0.04	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	0.08
Amenity grassland	Urban	Urban - Amenity grassland	0.06	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	0.12
Plantation coniferous woodland	Woodland and forest	Woodland and forest - Other coniferous woodland	45.46	Low	Poor	Low	Within area formally identified in local strategy	104.56
Semi-Improved Acid Grassland	Grassland	Grassland - Other lowland acid grassland	14.56	Medium	moderate	Low	Within area formally identified in local strategy	133.95
Semi-Improved Acid Grassland	Grassland	Grassland - Other lowland acid grassland	3.96	Medium	moderate	Low	Within area formally identified in local strategy	36.43
Semi-Improved Acid Grassland	Grassland	Grassland - Other lowland acid grassland	0.33	Medium	moderate	Low	Within area formally identified in local strategy	3.04

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Semi-Improved Acid Grassland	Grassland	Grassland - Other lowland acid grassland	0.11	Medium	moderate	Low	Within area formally identified in local strategy	1.01
Semi improved neutral grassland	Grassland	Grassland - Other neutral grassland	9.95	Medium	Moderate	Low	Within area formally identified in local strategy	91.54
Plantation broadleaved woodland	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.11	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	0.88
Plantation broadleaved woodland	Woodland and forest	Woodland and forest - Other woodland; broadleaved	2.16	Medium	Moderate	Low	Within area formally identified in local strategy	19.87
Plantation mixed woodland	Woodland and forest	Woodland and forest - Other woodland; mixed	0.01	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	0.08
Plantation mixed woodland	Woodland and forest	Woodland and forest - Other woodland; mixed	11.01	Medium	Moderate	Low	Within area formally identified in local strategy	101.29

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Semi-natural broadleaved woodland	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.2	Medium	Moderate	Low	Within area formally identified in local strategy	1.84
Vegetated Dunes	Sparsely vegetated land	Sparsely vegetated land - Coastal sand dunes	4.05	High	Good	Low	Within area formally identified in local strategy	83.84
Vegetative Shingle	Sparsely vegetated land	Sparsely vegetated land - Coastal vegetated shingle	2.92	High	Good	Low	Within area formally identified in local strategy	60.44
Sand foreshore	Urban	Urban - Vacant/derelict land/ bareground	3.22	Low	Moderate	Low	Within area formally identified in local strategy	14.81
Bareground	Urban	Urban - Artificial unvegetated, unsealed surface	0.32	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0.00
Bareground	Urban	Urban - Vacant/derelict land/ bareground	2.98	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	5.96
Bareground	Urban	Urban - Vacant/derelict land/ bareground	2.06	Low	Poor	Low	Within area formally identified in local strategy	4.74

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Hardstanding	Urban	Urban - Developed land; sealed surface	7.35	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0.00
Hardstanding	Urban	Urban - Developed land; sealed surface	6.86	V.Low	N/A - Other	Low	Within area formally identified in local strategy	0.00
Scattered trees	Woodland and forest	Woodland and forest - Wood-pasture and parkland	0.01	High	Moderate	Low	Within area formally identified in local strategy	0.14
Scattered trees	Woodland and forest	Woodland and forest - Wood-pasture and parkland	0.06	High	Moderate	Low	Area/compensation not in local strategy/ no local strategy	0.72
Scattered trees	Woodland and forest	Woodland and forest - Wood-pasture and parkland	0.02	High	Moderate	Low	Area/compensation not in local strategy/ no local strategy	0.24
Scattered trees	Urban	Urban - Street Tree	0.08	Low	Moderate	Low	Within area formally identified in local strategy	0.37

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
N/A	Urban*	Urban - Developed land; sealed surface	7.64	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0.00
Totals			**339.28**					**1244.45**

*As outlined in section 2.6, certain habitats are three dimensional (3D) in nature, for example, trees and the underlying grassland. The post-development proposals include a greater extent of 3D habitats than in the baseline. This row was included to align the total areas of habitats in the baseline and post-development scenarios, without any change to the unit scores. This row is therefore excluded from the changes in broad habitat type calculations.

Table 9: Baseline biodiversity units for hedgerows within Sizewell C main development site, detailing the Phase 1 habitat and UK habitat conversions

Phase 1 habitat type	Hedgerow type	Length (km)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Hedgerow units
Defunct hedge - species-poor	Native Hedgerow	0.358	Low	Poor	Low	Within area formally identified in local strategy	0.82
Defunct hedge - species-poor	Native Hedgerow	1.301	Low	Moderate	Low	Within area formally identified in local strategy	5.98
Defunct hedge - species-poor	Native Hedgerow	0.010	Low	Moderate	Low	Location ecologically desirable but not in local strategy	0.05

Phase 1 habitat type	Hedgerow type	Length (km)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Hedgerow units
Hedge with trees - species-poor	Native Hedgerow	0.066	Low	Moderate	Low	Location ecologically desirable but not in local strategy	0.29
Hedge with trees - species-poor	Native Hedgerow with trees	1.938	Low	Moderate	Low	Location ecologically desirable but not in local strategy	8.53
Intact hedge - native species-rich	Native Species Rich Hedgerow	3.105	Medium	Moderate	Low	Within area formally identified in local strategy	28.56
Intact hedge - native species-rich	Native Species Rich Hedgerow	4.525	Medium	Moderate	Low	Location ecologically desirable but not in local strategy	39.82
Intact hedge - species-poor	Native Hedgerow	7.200	Low	Moderate	Low	Within area formally identified in local strategy	33.12
Intact hedge - species-poor	Native Hedgerow	6.342	Low	Moderate	Low	Location ecologically desirable but not in local strategy	27.91

Phase 1 habitat type	Hedgerow type	Length (km)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Hedgerow units
Intact hedge - species-poor	Native Species Rich Hedgerow	0.786	Medium	Moderate	Low	Location ecologically desirable but not in local strategy	6.92
Native species rich hedge with trees	Native Species Rich Hedgerow	1.234	Medium	Moderate	Low	Location ecologically desirable but not in local strategy	10.86
Total		**20.56**					**117.26**

4 ON-SITE POST-DEVELOPMENT CONDTIONS AND VALUATION

4.1.1 In line with the mitigation hierarchy, the approach to ecological mitigation taken on site has been to conserve, restore and enhance landscape character and biodiversity. Where possible, existing landscape features of importance for ecology and visual screening would be retained during the construction of the power station. Inevitably given the scale of development, construction would result in the removal of vegetation and habitat loss and fragmentation (but mainly of relatively lower value arable land and plantation woodland). Rather than simply reinstate the previous landscape pattern and features, the intention onsite is to create a large area of DSG bordered by native woodland and scattered trees/scrub. Once established, this 'mosaic' would have a higher biodiversity value than the existing habitats they replace. The new habitats would also contribute to enhancing the landscape character within the wider EDF Energy estate.

4.1.2 The proposed Outline Landscape and Ecological Management Plan (OLEMP) compartments were used as the basis for the post-development assessments, with additional data sources utilised as appropriate (for example, to include the wetlands area in the north of the site). These are shown in **Figure 2** of this document.

4.1.3 The sources used to assess the biodiversity value of each of these habitat compartments are presented in **Section 2.4** of this document.

4.1.4 The on-site post development biodiversity units total a predicted 918.51, representing a predicted loss of 325.94 biodiversity units from the baseline 1244.45 units. This loss will be offset by off-site gains in biodiversity, detailed in Section 5. Further details of the biodiversity units delivered is presented in Table 13.

4.1.5 A total of 117.96 hedgerow units would be delivered from 20.910km of hedgerows post-development from a baseline of 117.26 units resulting in an increase of 0.7 units. This is a 0.6% increase, although this will change, due to additional off-site hedgerow planting. Further details of the hedgerow units delivered is presented in **Table 14** of this document.

a) Retained habitats

4.1.6 Several habitats and hedgerows will be retained. The proposed plans retain 125.98 habitat units and 83.83 hedgerow units. An overview of retained and lost habitat units can be found in **Table 10** of this document and an overview of the retained and lost hedgerow units can be found in **Table 12** of this document.

i. Woodland and forest - Other coniferous woodland

4.1.7 Several areas of plantation coniferous woodland are to be retained. This includes areas of Goose Hill, Kenton Hills and an area to the east of the Studio Fields complex. These will be retained in their baseline state of poor condition. The existing woodland management plans detail proposed improvements to such areas of woodland, but these existing plans are excluded from the assessment.

ii. Woodland and forest - Other woodland; mixed

4.1.8 Several areas of plantation mixed woodland are to be retained. This includes areas of Fiscal Policy and in the south of Goose Hill. These will be retained in their baseline states of moderate condition. The existing woodland management plans detail proposed improvements to such areas of woodland, but these existing plans are excluded from the assessment.

iii. Woodland and forest - Lowland mixed deciduous woodland

4.1.9 Several areas of semi-natural broadleaved woodland are to be retained. This includes areas of in the south of Goose Hill and to the south and west of the main platform. These will be retained in their baseline state of poor and moderate condition. The existing woodland management plans detail proposed improvements to such areas of woodland, but these existing plans are excluded from the assessment.

iv. Woodland and forest - Other woodland; broadleaved

4.1.10 Several areas of plantation broadleaved woodland are to be retained. This includes areas to the west of the Studio Field complex. These will be retained in their baseline state of moderate condition. The existing woodland management plans detail proposed improvements to such areas of woodland, but these existing plans are excluded from the assessment.

v. Woodland and forest - Wood-pasture and parkland

4.1.11 Scattered broadleaved trees will be retained within the site, these align with the ‘wood-pasture and parkland’ typology and will be retained in their baseline state of moderate condition.

vi. Heathland and shrub – Mixed scrub

4.1.12 Several areas of dense scrub are to be retained along the railway embankments in the west of the site. These will be retained in their baseline state of poor condition.

vii. Urban – Vacant/derelict land/ bareground

4.1.13 Several areas of bare ground will be retained across the site, largely consisting of tracks and paths. These will be retained in their baseline state of poor condition.

viii. Urban – Artificial unvegetated, unsealed surface

4.1.14 The railway line will be retained during the development. This will be retained in its baseline state of NA/ - Other.

ix. Urban – Street Tree

4.1.15 Several street trees are retained around the main platform. These are retained in their baseline states of moderate condition.

x. Lakes – ditches

4.1.16 The ditch to the south-west of the main platform is to be retained in its baseline state of moderate condition.

xi. Grassland – Modified grassland

4.1.17 Two small areas of species-poor semi-improved grassland are to be retained in their baseline state of moderate condition. These are an area of grassland under a pylon to the west of the main platform and an area to the south of Studio Fields Complex between areas of woodland.

xii. Urban – Amenity grassland

4.1.18 Several areas of amenity grassland are retained in their baseline state of poor condition. These are largely around homes within the Sizewell Estate.

Table 10 Retained and lost habitat units

Broad habitat type	Habitat type	Condition	Strategic significance	Baseline Habitat units	Retained habitat units	Loss of habitat units
Cropland	Cropland - Non-cereal crops	N/A - Agricultural	High strategic significance	245.87	0.00	245.87
Cropland	Cropland - Non-cereal crops	N/A - Agricultural	Low Strategic Significance	151.92	0.00	151.92

Broad habitat type	Habitat type	Condition	Strategic significance	Baseline Habitat units	Retained habitat units	Loss of habitat units
Lakes	Lakes - Ditches	Moderate	High strategic significance	0.28	0.28	0.00
Heathland and shrub	Heathland and shrub - Lowland Heathland	Moderate	High strategic significance	4.83	0.00	4.83
Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	Moderate	Medium strategic significance	10.56	10.56	0.00
Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	Moderate	High strategic significance	87.49	41.68	45.82
Heathland and shrub	Heathland and shrub - Mixed scrub	Moderate	Low Strategic Significance	6.00	0.00	6.00
Heathland and shrub	Heathland and shrub - Mixed scrub	Moderate	High strategic significance	3.40	0.00	3.40
Heathland and shrub	Heathland and shrub - Mixed scrub	Poor	Low Strategic Significance	5.16	5.00	0.16
Heathland and shrub	Heathland and shrub - Mixed scrub	Poor	High strategic significance	0.60	0.00	0.60
Grassland	Grassland - Modified grassland	Moderate	Low Strategic Significance	5.00	0.00	5.00
Grassland	Grassland - Modified grassland	Moderate	High strategic significance	31.97	1.20	30.77

Broad habitat type	Habitat type	Condition	Strategic significance	Baseline Habitat units	Retained habitat units	Loss of habitat units
Grassland	Grassland - Modified grassland	Poor	Low Strategic Significance	20.24	0.00	20.24
Urban	Urban - Amenity grassland	Poor	Low Strategic Significance	5.18	0.00	5.18
Urban	Urban - Amenity grassland	Poor	Low Strategic Significance	0.08	0.08	0.00
Urban	Urban - Amenity grassland	Poor	Low Strategic Significance	0.12	0.12	0.00
Woodland and forest	Woodland and forest - Other coniferous woodland	Poor	High strategic significance	104.56	21.99	82.57
Grassland	Grassland - Other lowland acid grassland	moderate	High strategic significance	133.95	0.00	133.95
Grassland	Grassland - Other lowland acid grassland	moderate	High strategic significance	36.43	0.00	19.23
Grassland	Grassland - Other lowland acid grassland	moderate	High strategic significance	3.04	0.00	0.00
Grassland	Grassland - Other lowland acid grassland	moderate	High strategic significance	1.01	0.00	0.00
Grassland	Grassland - Other neutral grassland	Moderate	High strategic significance	91.54	0.00	91.54
Woodland and forest	Woodland and forest - Other woodland; broadleaved	Moderate	Low Strategic Significance	0.88	0.88	0.00

Broad habitat type	Habitat type	Condition	Strategic significance	Baseline Habitat units	Retained habitat units	Loss of habitat units
Woodland and forest	Woodland and forest - Other woodland; broadleaved	Moderate	High strategic significance	19.87	18.86	1.01
Woodland and forest	Woodland and forest - Other woodland; mixed	Moderate	Low Strategic Significance	0.08	0.08	0.00
Woodland and forest	Woodland and forest - Other woodland; mixed	Moderate	High strategic significance	101.29	14.90	86.39
Woodland and forest	Woodland and forest - Other woodland; broadleaved	Moderate	High strategic significance	1.84	0.00	1.84
Sparsely vegetated land	Sparsely vegetated land - Coastal sand dunes	Good	High strategic significance	83.84	0.00	83.84
Sparsely vegetated land	Sparsely vegetated land - Coastal vegetated shingle	Good	High strategic significance	60.44	0.00	60.44
Urban	Urban - Vacant/derelict land/ bareground	Moderate	High strategic significance	14.81	0.00	14.81
Urban	Urban - Artificial unvegetated, unsealed surface	N/A - Other	Low Strategic Significance	0.00	0.00	0.00
Urban	Urban - Vacant/derelict land/ bareground	Poor	Low Strategic Significance	5.96	4.28	1.68

Broad habitat type	Habitat type	Condition	Strategic significance	Baseline Habitat units	Retained habitat units	Loss of habitat units
Urban	Urban - Vacant/derelict land/ bareground	Poor	High strategic significance	4.74	4.74	0.00
Urban	Urban - Developed land; sealed surface	N/A - Other	Low Strategic Significance	0.00	0.00	0.00
Urban	Urban - Developed land; sealed surface	N/A - Other	High strategic significance	0.00	0.00	0.00
Woodland and forest	Woodland and forest - Wood-pasture and parkland	Moderate	High strategic significance	0.14	0.14	0.00
Woodland and forest	Woodland and forest - Wood-pasture and parkland	Moderate	Low Strategic Significance	0.72	0.60	0.12
Woodland and forest	Woodland and forest - Wood-pasture and parkland	Moderate	Low Strategic Significance	0.24	0.24	0.00
Urban	Urban - Street Tree	Moderate	High strategic significance	0.37	0.37	0.00
Urban	Urban - Developed land; sealed surface	N/A - Other	Low Strategic Significance	0.00	0.00	0.00
Total				1244.45	125.98	1097.21

b) Enhanced habitats and Accelerated Succession

i. Grassland - Other lowland acid grassland

4.1.19 At least some of the area of Retsoms Field within the red line boundary will be used as a water management zone during the construction phase although the precise profile is still to be finalised. It is likely that this will result in the loss of approximately half of the grassland habitat present within this area. It is assumed that the Dry Heath/Acid Grassland mosaic present on the southern edge will be lost. The remainder of the grassland will be retained and improved to DSG (which includes higher quality grassland and heathland), in line with much of the estate, to further support the natterjack toad population. A proportion will be subject to accelerated succession to wood pasture and parkland (A component of DSG), largely around the periphery of the site. The area and habitat value of these enhanced and accelerated succession areas of Retsoms Field are presented in **Table 11** of this document, below. Good condition grassland is considered to be achievable, as existing habitat is being enhanced rather, than created. The remaining habitats will be assessed as in Section 4.1.

Table 11: Habitats undergoing enhancement or accelerated succession

Habitat Enhanced	Target habitat	Area Enhanced	Area subject to Accelerated Succession	Units delivered
Grassland - Other lowland acid grassland	Grassland - Lowland dry acid grassland	1.87		28.51
Grassland - Other lowland acid grassland	Heathland and shrub - Lowland Heathland	0.33		3.77
Grassland - Other lowland acid grassland	Woodland and forest - Wood-pasture and parkland		0.11	1.49
TOTAL		2.2	0.11	33.77

c) Retained Hedgerows

4.1.20 A proportion of the hedgerows will be retained on the site. An overview of the retained and lost hedgerow units can be found in **Table 12** of this document.

i. Native Hedgerow

4.1.21 Several native hedgerows are retained on site. These hedgerows are assigned a condition score of poor and moderate in line with their baseline assessment.

ii. Native hedgerow with trees

4.1.22 Several native hedgerows with trees are retained on site. These hedgerows are assigned a condition score of moderate in line with their baseline assessment.

iii. Native Species Rich Hedgerow

4.1.23 Several native species rich hedgerows are retained on site. These hedgerows are assigned a condition score of moderate in line with their baseline assessment.

iv. Line of trees

4.1.24 Several lines of trees are retained on site. These lines of trees are assigned a condition score of moderate in line with their baseline assessment.

Table 12 Retained and lost hedgerow units

Hedgerow type	Baseline hedgerow units	Retained hedgerow units	Loss of hedgerow units
Native hedgerow	68.64	42.28	-26.36
Native hedgerow with trees	2.49	1.83	-0.66
Native Species Rich Hedgerow	44.46	38.70	-5.76
Line of trees	1.67	1.02	-0.65
Total	**117.26**	**83.83**	**33.43**

d) Created habitats

4.1.25 Much of the site will be impacted by construction activities. In these areas new habitat creation will take place, once the temporary construction area has been

removed, with the long term aim of producing a more biodiverse landscape. Further details regarding habitat creation can be found within the OLEMP (and are shown on **Figure 2** of this document). The headings in this section are taken from the landscape typologies.

i. Dry Sandlings Grassland

4.1.26 The majority of the post-construction area would be DSG, which was formerly much more extensive in the local landscape. This area would not comprise a single habitat type, but form a complex mosaic of dry summer parched grassland, scrub and scattered trees/woodland (particularly around the edges).

4.1.27 Some flexibility is required for the creation and management of this area, since there is some uncertainty over the future nature of the post-construction soils. It is anticipated that the area would be underlain by dry and low fertility soils, which would naturally support dry summer parched grassland. This could be created through seeding with seeds harvested from acid grassland/heathland habitats in the local area. Management would primarily comprise mowing/topping during the establishment period, with extensive grazing at a sufficiently low density used once the site becomes established to allow natural colonisation of patches of scrub and woodland – giving the area a more natural and wild quality. The ultimate vision for the DSG (summer parched grassland) is that these develop over time into an acid grassland / heathland mosaics depending on the realities of soil pH and structure and water availability.

4.1.28 As stated above, the long-term target is a mosaic of acid grassland, heathland and scattered trees. It is assumed that these habitats will be maintained in the following approximate proportions:

- Acid grassland – 80%
- Heathland – 15%
- Scattered trees – 5%

4.1.29 It is considered to be achievable to target a ‘Lowland dry acid grassland’ sward in most areas of the site. Actions to revert arable habitat to an acidic grassland sward is already underway within Aldhurst Farm and the Studio Fields complex. These areas are off-site, but provide an indication of what can be achieved and can be learned from for future habitat creation interventions. A species-rich sward will be targeted, with wildflower cover around 30%. Positive management will target achievement of the condition assessment criteria. As such, a condition of ‘fairly good’ is predicted. This reflects the challenges of creating areas of such habitat and remains realistic, while targeting a positive outcome.

4.1.30 Areas of 'Lowland Heathland' will also be targeted within this mosaic. These heathland habitats would be managed positively, for environmental benefit. As such, a condition of 'fairly good' is predicted. This reflects the challenges of creating areas of such habitat and remains realistic, while targeting a positive outcome.

4.1.31 Scattered trees will be allowed to develop, although largely around the peripheries of the habitat areas. These trees are predicted to align with the 'Wood-pasture and parkland' typology as they will largely be individual (or small clusters of) trees within a grassland landscape. As with other elements of the DSG, a condition of 'fairly good' will be targeted, a balance of targeting quality, while remaining realistic. Due to the nature of the habitat, this would likely involve management of invasive species and a lack of nutrient enrichment, which are considered to be achievable.

4.1.32 There are areas of overlap between the red line boundary and the Studio Field Complex and Aldhurst Farm. In these cases, the areas of DSG have been assessed in the same manner as the habitats in the off-site areas, as outlined in **Section 5.3** of this document.

ii. Mixed woodland

4.1.33 Extensive new areas of woodland would be established through a combination of planting and natural regeneration. The new woodlands would buffer and link the existing areas of woodland within the site. Unlike the existing site, which has extensive blocks of coniferous plantation at Kenton Hills and Goose Hill, the new woodland would be predominantly native broadleaved with a small component of mixed woodland (to increase climate change resilience). It would have a greater structural and species diversity, and form a closer spatial mosaic with areas of grassland and scrub. Management would be aimed at enhancing biodiversity value rather than commercial timber management.

4.1.34 The goal is to create a high quality area of woodland, with a long-term view of success. As such, 'Lowland mixed deciduous woodland' will be targeted. It is recognised that this is a difficult habitat to create and this is reflected in the biodiversity unit return predicted for this habitat. However, the woodland will be managed for biodiversity, rather than timber production, as much of the woodland currently is. It is therefore considered that in the long term, this typology is achievable. Through positive management, it will be possible to meet the condition assessment criteria. Proposed management practices are predicted to achieve this:

- A native woodland with a complete canopy and diverse age structure;
- Minimal negative anthropogenic and faunal impacts;
- Retained dead wood; and

- Management of invasive species.

4.1.35 As such, good condition is predicted.

4.1.36 Several small areas of woodland planting are present in the west of the site around the new roundabout. These areas are small in size and therefore are not expected to align with the lower distinctiveness 'other woodland; broadleaved' category. Through positive management, good condition is predicted to be achievable. They key factors relating to species diversity, retention of deadwood and range of age classes and structure are predicted to be achieved.

iii. Coastal habitats

4.1.37 The vegetated dunes and vegetated shingle habitats will be lost and reinstated due to the implementation of coastal defences. This same process was carried out during the construction of Sizewell B. Subsequently, both habitats have developed to achieve good condition. It is therefore predicted that in the long-term these habitats can also reach their baseline state of good condition, using the experience of reinstating these habitats previously. The vegetated dunes and vegetated shingle habitats are predicted to achieve good condition 'Coastal sand dune' and 'Coastal vegetated shingle' habitat respectively.

4.1.38 As a precautionary approach the bare sand foreshore area is assumed to also be lost and recreated, due to the likely impacts from the sea defence works. This area will be returned to its baseline state of 'Vacant/derelict land/ bareground' of moderate condition.

iv. Hardstanding

4.1.39 New areas of hardstanding are due to be created. These are largely composed of new roads and areas of expansion of the main platform to accommodate Sizewell C. These areas are assessed as 'Developed land; sealed surface'. The condition of this habitat is pre-defined within the metric as 'N/A – Other'. Hardstanding is of no biodiversity value, so returns no biodiversity units. To simplify the calculations, it is assumed that all hardstanding is lost and recreated. As this typology returns no biodiversity units, this has not impact on the biodiversity unit outcome.

v. Amenity landscape and car parks

4.1.40 Limited areas of this typology are proposed, predominantly within the car park to the north of the main platform and around the new roundabout in the west of the site. The car park grassland would comprise native species and will maintain 'internal' green corridors which break up hardstanding and block paving around the car parks. This typology is also proposed in the west of the site around junctions. The requirement to maintain sight lines around junctions limits the potential for habitat

provision. As a worst-case scenario, it is assumed that the grassland in both cases will be of relatively low diversity align with the 'modified grassland' typology. Due to the aspiration to provide 'green corridors' (as outlined in the OLEMP), it is assumed that the grassland will be of greater quality than the 'urban – amenity grassland' typology and will align with the 'modified grassland' typology. Through appropriate seed mixes and management, a moderate condition is considered to be achievable. Several other small amenity planting areas are present within the main platform area. It is assumed that these area will also be of the same typology and condition.

4.1.41 The car park to the north of the main platform is assumed to consist of 80% hardstanding and 20% grassland. The grassland will be assessed as described above. The hardstanding is assessed in the same manner as in **Section 4.1** of this document ('Developed land; sealed surface' of 'N/A – Other' condition). The car park to the north of the main platform will also contain trees. These are predicted to align with the 'street tree' typology. This typology has a pre-defined condition of moderate. Approximately 256 street trees will be planted in this area.

vi. Semi-improved grassland

4.1.42 Following completion of construction, several fields to the west of Bridleway 19 around Upper Abbey Farm would be reseeded with grass and returned to pasture. These fields would continue to be managed for agriculture as they are at present. As these fields will be used for agricultural purposes, it is assumed that these areas will align with the 'modified grassland' typology and be of poor condition.

vii. Arable land

4.1.43 Several fields in the west of the site will be returned to arable usage post-construction. It is assumed that these areas will be of 'non-cereal crops' typology. As with the arable habitats in the baseline, it is not material to separate out types of arable land. This typology does not require a condition assessment, it has a pre-defined condition of 'N/A -Agricultural'.

viii. Marsh, fen and reedbed

4.1.44 Much of this proposed broad typology would be created in the north of the site, wherein an area of reedbed surrounds an area of open water. The reedbed element surrounding the open water is predicted to align with the 'Reedbeds' typology. The area will be managed for ecological purposes, so the habitat is predicted to align as follows with the following condition assessment criteria:

1. Created habitat, so artificial hydrology;
2. Surface water is expected throughout the year;
3. Undesirable species will be managed;

4. Scrub cover will be managed;
5. Minimal bare ground is expected;
6. Not applicable (fen focus);
7. Not applicable (bog focus);
8. Not applicable; and
9. Reedbed will be dominated by common reeds.

4.1.45 The habitat will be created, meaning the hydrology will be not be natural. As such, good condition is not achievable. However, as the remaining the applicable criteria are predicted to pass, moderate condition is predicted.

4.1.46 Within the reedbed area described above will be an area of open water. The size of the habitat is around the boundary of what would be expected for a pond and a lake. Further, as this waterbody will be created, it is predicted that a pond typology will more accurately reflect this habitat than a lake typology. A precautionary approach is taken and it is assumed that the habitat will not be a priority habitat quality. As such, it is predicted to align with the 'Ponds (Non- Priority Habitat)' typology. The predicted habitat is assessed as follows against the condition criteria:

1. Good water quality is expected
2. The pond will be surrounded by semi-natural riparian land
3. Some aquatic plants are expected to be present
4. Significant shading is not expected
5. A fish assemblage is not expected
6. The pond will be connected to adjacent wetland habitat
7. Water levels area expected to be able to fluctuate through the year
8. It is expected that native species will be absent
9. It is expected that there will be low levels, if any, duckweed present.

4.1.47 As such, a condition of good is expected to be achievable, through appropriate habitat creation and management.

viii. Dense scrub

4.1.48 Several areas of woody scrub will be created post development. Predominantly this includes woody scrub on banks to the west of the main platform. A smaller area will also be present to the east of Aldhurst Farm. These are predicted to achieve moderate condition as woody species diversity will be targeted, undesirable species

will be managed and a good age range targeted. However, due to the size and shape, many clearings and glades are not expected.

e) Sports pitches at Leiston

Habitat Typology

4.1.49 Several new artificial sports pitches will be created at Leiston, within an existing sports field. The artificial 3G pitch and MUGA areas are both expected to align most closely with the 'Artificial unvegetated, unsealed surface' typology, as they are expected to be constructed from porous materials. As a worst case scenario, it is assumed that the surrounding amenity grassland will be lost and then replaced as part of the construction works.

Condition

4.1.50 The 'artificial unvegetated, unsealed surface' typology has a pre-defined condition of N/A – Other. The amenity grassland will be reinstated to the baseline condition of poor.

f) Created Hedgerows

Habitat Typology

4.1.51 The created hedgerows are predicted to align with the 'Native Species Rich Hedgerow with trees' typology as they will be planted to be species-rich and will be managed to allow trees to develop.

Condition

4.1.52 Good condition is considered to be achievable due to the sympathetic management proposed in the OLEMP. This outlines how cutting will be carried out on a rotational basis every 2-3 years, with hedges not being cut in their entirety. Further, 2m margins will be left, which will allow for edge habitat to develop. Invasive species will be managed. This is expected to result in at most 2 condition criteria failing, resulting in good condition.

g) Strategic significance

4.1.53 As in the baseline, areas within the Suffolk Coast & Heaths AONB are considered to be of strategic significance.

4.1.54 The Aldhurst Farm area is marked as a Habitat Mitigation Area within the Leiston Neighbourhood Plan. This inclusion within this plan means that this area is considered to be of strategic significance in the post development state.

4.1.55 Several habitat types are regarded as a priority habitats in local plans and thus receive a score of 'Location ecologically desirable but not in local strategy'. These habitats are lowland mixed deciduous woodland, coastal sand dunes, coastal vegetated shingle, lowland heathland (including areas of DSG), acid grassland (including areas of DSG), reedbeds (including those in the north of the site) and all hedgerow habitats. This is a hierarchical classification system, so habitats present within the AONB are categorised as being of strategic significance and not just ecologically valuable. All other habitat types receive a strategic significance score of 'Area/compensation not in local strategy/ no local strategy'.

h) Habitat creation excluded from the assessment

4.1.56 This section provides an overview of areas excluded from the assessment within the red line boundary. These areas are shown in **Figures 1** and **2** of this document. Further details are provided in **Sections 2.10** and **7** of this document.

i. Sizewell Marshes SSSI

4.1.57 As discussed in **Sections 2.10** and **7**, the red line boundary of the site extends into the Sizewell Marshes SSSI, in an area to the west and north of the main platform (shown in red hashing in **Figure 2** of this document). Part of this area will become built development for the main nuclear platform and the SSSI crossing, but areas of wet woodland, grassland, woodland and scrub are also proposed. These areas are excluded from the assessment.

ii. Wetland habitat

4.1.58 An area of wet woodland will be created within the MHHIA (located within the red hashed area in the MHHIA in **Figure 2** of this document). This habitat will help to compensate for the loss for wet woodland within Sizewell Marshes SSSI. As such, this area of habitat is excluded from the assessment (including from the baseline). The northern section of the open water and reedbed habitat are included within this assessment as they are beyond that which has been agreed as the required level of compensation for these wetland habitats.

Table 13: Biodiversity units for Sizewell C main development site from created habitats post-development

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
Amenity Grassland	Grassland - Modified grassland	3.5	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	9.80
Amenity Grassland	Grassland - Modified grassland	0.17	Low	Moderate	Low	Within area formally identified in local strategy	10	Low	0.55
Arable	Cropland - Non-cereal crops	43.8	Low	N/A - Agricultural	Low	Area/compensation not in local strategy/ no local strategy	1	Low	84.53
Arable	Cropland - Non-cereal crops	5.37	Low	N/A - Agricultural	Low	Within area formally identified in local strategy	1	Low	11.92
Bareground	Urban - Vacant/derel	1.33	Low	Poor	Low	Area/compensation not in local strategy/	1	Low	2.57

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
	ict land/ bareground					no local strategy			
Bareground	Urban - Vacant/derelict land/ bareground	0.37	Low	Poor	Low	Within area formally identified in local strategy	1	Low	0.82
Car Park	Grassland - Modified grassland	3.57	Low	Moderate	Low	Within area formally identified in local strategy	10	Low	11.50
Car Park	Urban - Developed land; sealed surface	0.89	V.Low	N/A - Other	Low	Within area formally identified in local strategy	0	Low	0.00
Car Park	Urban - Street Tree*	1.04	Low	Moderate	Low	Within area formally identified in local strategy	27	Low	1.83
Dry Sandlings Grassland	Grassland - Other lowland acid grassland	6.92	Medium	Good	Low	Within area formally identified in local strategy	15	Low	55.96

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
Dry Sandlings Grassland	Heathland and shrub - Lowland Heathland	0.87	High	Fairly Good	Low	Within area formally identified in local strategy	25	High	2.03
Dry Sandlings Grassland	Heathland and shrub - Mixed scrub	0.87	Medium	Fairly Good	Low	Within area formally identified in local strategy	5	Low	8.37
Dry Sandlings Grassland	Grassland - Other lowland acid grassland	6.35	Medium	Good	Low	Location ecologically desirable but not in local strategy	15	Low	49.12
Dry Sandlings Grassland	Heathland and shrub - Lowland Heathland	1.12	High	Fairly Good	Low	Location ecologically desirable but not in local strategy	25	High	2.50
Dry Sandlings Grassland	Woodland and forest - Wood-pasture and parkland	0.37	High	Fairly Good	Low	Area/compensation not in local strategy/ no local strategy	32+	Very High	0.18

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
Hardstanding	Urban - Developed land; sealed surface	9.05	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00
Hardstanding	Urban - Developed land; sealed surface	31.09	V.Low	N/A - Other	Low	Within area formally identified in local strategy	0	Low	0.00
Neutral Grassland	Grassland - Other neutral grassland	0.42	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Low	2.95
Open Water	Lakes - Ponds (Non-Priority Habitat)	0.76	High	Good	Low	Within area formally identified in local strategy	5	Low	13.16
Reedbed	Wetland - Reedbeds	3.01	High	Good	Low	Within area formally identified in local strategy	15	Medium	24.46

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
Sandy foreshore	Urban - Vacant/derelict land/ bareground	3.21	Low	Moderate	Low	Within area formally identified in local strategy	1	Low	14.25
Species-poor semi-improved grassland	Grassland - Modified grassland	30.83	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	86.36
Sports Pitch	Urban - Artificial unvegetated, unsealed surface	0.81	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00
Vegetated Dunes	Sparsely vegetated land - Coastal sand dunes	5.09	High	Good	Low	Within area formally identified in local strategy	20	Very High	5.17
Vegetated Shingle	Sparsely vegetated land - Coastal	3.95	High	Good	Low	Within area formally identified in local strategy	20	Very High	4.01

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
	vegetated shingle								
Woodland Planting	Woodland and forest - Lowland mixed deciduous woodland	44.94	High	Good	Low	Within area formally identified in local strategy	32+	High	98.17
Woodland Planting	Woodland and forest - Other woodland; broadleaved	0.73	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	32+	Medium	1.88
Woody Scrub	Heathland and shrub - Mixed scrub	0.13	Medium	Moderate	Low	Within area formally identified in local strategy	3	Low	1.07
Dry Sandlings Grassland	Heathland and shrub - Lowland Heathland	14.86	High	Fairly Good	Low	Within area formally identified in local strategy	25	High	34.71

Habitat type	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Biodiversity units
Dry Sandlings Grassland	Woodland and forest - Wood-pasture and parkland	4.95	High	Fairly Good	Low	Within area formally identified in local strategy	32+	Very High	2.73
Dry Sandlings Grassland	Grassland - Lowland dry acid grassland	84.23	V.High	Fairly Good	Low	Area/compensation not in local strategy/ no local strategy	25	High	228.14
Totals		**313.56**							**758.76**

*"Urban – street trees" are not included in the area calculations by the metric, only the habitat underneath them. As such, this 0.13ha are not included in the area total.

Table 14: Hedgerow units for Sizewell C main development site from hedgerows post-development

Hedgerow type	Length (km)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Hedgerow units
Native Hedgerow	0.294	Retained	Low	Poor	Low	Within area formally identified in local strategy	N/A	0.68
Native Hedgerow	4.129	Retained	Low	Moderate	Low	Within area formally identified in local strategy	N/A	18.99
Native Hedgerow	5.139	Retained	Low	Moderate	Low	Location ecologically desirable but not in local strategy	N/A	22.61
Native Hedgerow with trees	0.417	Retained	Low	Moderate	Low	Location ecologically desirable but not in local strategy	N/A	1.83
Native Species Rich Hedgerow	0.095	Retained	Medium	Moderate	Low	Within area formally identified in local strategy	N/A	0.87
Native Species Rich Hedgerow	0.672	Retained	Medium	Moderate	Low	Location ecologically	N/A	5.91

Hedgerow type	Length (km)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Hedgerow units
						desirable but not in local strategy		
Native Species Rich Hedgerow	0.960	Retained	Medium	Good	Low	Within area formally identified in local strategy	N/A	13.25
Native Species Rich Hedgerow	1.414	Retained	Medium	Good	Low	Location ecologically desirable but not in local strategy	N/A	18.66
Line of trees	0.211	Retained	Low	Moderate	Low	Within area formally identified in local strategy	N/A	1.02
Native Species Rich Hedgerow with trees	6.616	Created	Medium	Good	Low	Within area formally identified in local strategy	20	30.00
Native Species Rich Hedgerow with trees	0.953	Created	Medium	Good	Low	Location ecologically desirable but not in local strategy	20	4.13
Total	**20.91**							**117.69**

5 OFF-SITE BASELINE AND POST- DEVELOPMENT CONDITIONS AND VALUATION

5.1 Introduction

5.1.1 Off-site[2] mitigation was required for to offset the following factors:

- Net loss of biodiversity on-site;
- Reptile receptor areas; and
- Loss of marsh harrier foraging habitat.

5.1.2 Landscape design has been carried out to maximise the benefits to a range of species, maximise biodiversity value and provide ecosystem service benefits. The design is layered in this way, for example, the reptile mitigation areas also provide benefits to a range of other species, for example bats and invertebrates. BNG as presented in the biodiversity metric guidance is a holistic landscape scale assessment of the overall long-term status of the site and the habitats within. As such, it is appropriate that where mitigation for species which results in a change of habitat (such as within the Studio Fields Complex) is assessed within the biodiversity metric.

5.1.3 As a result, the off-site interventions shown in Table 15 are proposed to mitigate the impacts listed above. All of the sites are located immediately adjacent to the site.

Table 15: Off-site mitigation areas

Site	Data	Purpose	Change in management
Aldhurst Farm – grassland area	ELMP (EDF Energy, 2014)	Creation of additional grassland and heathland habitat.	DSG habitats created from farmland area.
Studio Fields Complex	Figure 14E.4 and Figure 14E.5	Creation of reptile habitat and deliver biodiversity units.	Conversion from arable to grassland with enhancements for reptiles (bunds, refugia, hibernacula) and biodiversity (bare ground mosaics).
St James covert	Figure 14E.6	Creation of reptile habitat and deliver biodiversity units.	Reversion of plantation coniferous woodland to heathland habitat.

[2] Off site in the BNG report means outwith the application boundary so far as it relates to the EDF Energy estate

Site	Data	Purpose	Change in management
Kenton Hills	Figure 14E.3	Creation of reptile habitat and deliver biodiversity units.	Reversion of plantation coniferous woodland to heathland habitat.
Marsh Harrier Improvement Area	Appendix 14C5	Provide additional foraging habitat for marsh harrier to compensate for that which is lost during the construction phases of the development.	Largely conversion of arable and semi-improved grassland to a mosaic of grasslands and linear features of value to marsh harrier.
Great Mount Walk (within MHHIA)	Figure 14E.7	Creation of reptile habitat and deliver biodiversity units. This area lies within the marsh harrier habitat improvement area, detailed below.	Conversion from arable to grassland with enhancements for reptiles (bunds, refugia, hibernacula) and biodiversity (bare ground mosaics).
Fen meadow*	Appendix 14C4	Provide additional fen meadow habitat to mitigate that which will be lost within Sizewell Marshes SSSI.	Altering water management regime to create fen meadow habitat.

*Not included within net gain calculations, see Section 2.8

5.1.4 The pre- and post-development plans for these sites are detailed in Figures presented at the end of the report. Additional pre- and post-development data were obtained from discussion with Graham Hinton of Cedar Land Management Limited.

5.1.5 The baseline and post-development conditions are presented in Sections 5.2 and 5.3, respectively.

5.2 Baseline habitats

5.2.1 The combined area covered by the off-site mitigation area is approximately 140.22ha. The baseline currently delivers 429.99 biodiversity units for habitats (this total excludes areas of SSSI mitigation).

5.2.2 Hedgerows are also present in the off-site mitigation areas. There are assessed separately to habitats by the metric. Table 17 details the that the baseline currently delivers 18.99 hedgerow units from 4.129km of hedgerows. Table 16 and Table 17 provide further details, separated into the different mitigation areas.

a) Aldhurst Farm

5.2.3 The habitats present within the Aldhurst Farm baseline are assessed in this section. Wetland habitats providing compensation for lost SSSI habitats are excluded from the assessment, so are not assessed (see Sections 1.3 and 2.10 above).

i. Arable

Habitat Typology

5.2.4 Much of the Aldhurst Farm area was arable land. As outlined previously, it is not material to separate out cereal and non-cereal crop typologies. Therefore, the 'cereal crops' typology was assumed.

Condition

5.2.5 The condition of this habitat is pre-defined within the metric as 'N/A – Agricultural. As such, no condition assessment is required.

ii. Plantation mixed woodland

Habitat Typology

5.2.6 An area of plantation broadleaved woodland mostly consisting of Pine (*Pinus* sp.) and Willow (*Salix* sp.) was present in the baseline. This typology aligns with the 'Other woodland; mixed' typology.

Condition

5.2.7 The plantation character was clear from the consistent planting pattern, planting lines remaining and similar age class across the area. As such, poor condition was assessed.

iii. Semi-improved neutral grassland

Habitat Typology

5.2.8 An area of semi-improved neutral grassland was present near the centre of the site. This habitat aligns with the 'other neutral grassland' typology.

Condition

5.2.9 There was abundant scattered bramble scrub across this area, but a precautionary approach was taken and moderate condition is assumed.

iv. Scattered broadleaved trees

Habitat Typology

5.2.10 Scattered broadleaved trees are present across the site. The most appropriate way to assess these was as 'Wood-pasture and parkland'.

Condition

5.2.11 A precautionary approach was taken to the assessment of the scattered trees, all of which were assessed as moderate condition. This captures the variation in value of the trees, which ranges from large and mature, to smaller and immature. Further, there were not any areas that could be classified as a 'good' example of wood pasture and parkland. Moderate condition is therefore considered to be appropriate.

v. Species-poor hedge with trees

Habitat Typology

5.2.12 A species-poor hedge with trees is present running along the edge of the sewage works and houses to the south of the site. This aligns with the 'Native Hedgerow with trees' typology.

Condition

5.2.13 This hedgerow is intact, but was not classified as important, so following the precautionary approach outlined in section 3.1.c), they were assessed as being of moderate condition.

b) Studio fields complex

i. Arable

Habitat Typology

5.2.14 Much of the Studio Fields Complex was arable land. As outlined previously, it is not material to separate out cereal and non-cereal crop typologies. Therefore, the 'cereal crops' typology was assumed.

Condition

5.2.15 The condition of this habitat is pre-defined within the metric as 'N/A – Agricultural'. As such, no condition assessment is required.

ii. Semi-improved acid grassland

Habitat Typology

5.2.16 The eastern section of the Studio Fields Complex (Broom Covert) was semi-improved acid grassland. This area was dominated by sheep's fescue with an abundance of common bent, fine-leaved sheep's fescue and sweet vernal grass. This habitat aligns with the 'other lowland dry acid grassland' typology.

Condition

5.2.17 Broom covert contains stands of nettles, thistles, bracken and gorse scrub. There is limited bare ground within the area and localised damage to sward by stock. As a result, it was assessed as being of moderate condition.

iii. Plantation broadleaved woodland

Habitat Typology

5.2.18 An area of plantation broadleaved woodland was present in the south of the Studio Fields Complex. This typology aligns with the 'Other woodland; broadleaved' typology.

Condition

5.2.19 This woodland was assessed as being of moderate condition, due to low levels of diversity (criteria 12) and lack of diverse age and height structure (criteria 12).

iv. Pond

Habitat Typology

5.2.20 A pond is present within the Studio Field Complex. The pond is within an agricultural context and is of low value.

Condition

5.2.21 The pond within the Studio Field Complex is within an arable context, so fails criteria 2, due to the lack of semi-natural riparian land surrounding the pond. Further, there is little aquatic vegetation and likely water quality impacts due to the surrounding agriculture. As a result, the pond was assessed to be of moderate condition.

v. Species-poor intact hedge

Habitat Typology

5.2.22 A series of species-poor intact hedges are present around some of the fields within this area. These align with the 'Native Hedgerow' typology.

Condition

5.2.23 These hedges are intact, but were not classified as important, so following the precautionary approach outlined in section c), they were assessed as being of moderate condition.

c) St James covert

Habitat Typology

5.2.24 This area was composed entirely of plantation mixed woodland, containing Oak, Silver Birch (*Betula pendula*), Sweet Chestnut (*Castanea sativa*) and Corsican Pine. The scrub layer was often dominated by Hawthorn and Elder, while the ground flora was sparse in most places with frequent Common Nettle, Bracken, Bramble and Bluebell (*Hyacinthoides non-scripta*). This area was assessed as 'other woodland, mixed'.

Condition

5.2.25 The woodland is of plantation origin, containing native and non-native species. The trees were of a similar age and height structure throughout the woodland. The woodland therefore aligns with the description of moderate condition woodland.

d) Marsh Harrier Habitat Improvement Area

i. Arable

Habitat Typology

5.2.26 Much of the Marsh Harrier Habitat Improvement Area was arable land. As outlined previously, it is not material to separate out cereal and non-cereal crop typologies. Therefore, the 'cereal crops' typology was assumed.

Condition

5.2.27 The condition of this habitat is pre-defined within the metric as 'N/A – Agricultural'. As such, no condition assessment is required.

ii. Semi-improved neutral grassland

Habitat Typology

5.2.28 A small area of semi-improved neutral grassland was present in the north of this area. This area was described as being of similar character to other areas of neutral grassland within the site, so this area is assessed in the same manner. As such, it was classified as 'other neutral grassland'.

Condition

5.2.29 This grassland was assessed as being of moderate condition, in line with the other neutral grassland within the site.

iii. Semi-improved acid grassland

Habitat Typology

5.2.30 A small area of semi-improved acid grassland was present in the centre of this area. This area was described as being of similar character to the grassland at the adjacent Black Walks, so this area is assessed in the same manner. As such, it was classified as 'other lowland dry acid grassland'.

Condition

5.2.31 This grassland was assessed as being of moderate condition, in line with the Black Walks grassland.

iv. Bare ground

Habitat Typology

5.2.32 A bare ground track was present in the west of this area, which was classified as 'Vacant/derelict land/ bareground'.

Condition

5.2.33 The track was composed of compacted earth with little biodiversity value, so were assessed as being of poor condition.

v. Species-poor intact hedge

Habitat Typology

5.2.34 A pair of intact species-poor hedges are present in the north of this area, either side of a track, with a further hedge separating arable fields in the south of the area. These were assessed as aligning with the 'native hedgerow' typology.

Condition

5.2.35 These hedges are intact, but were not classified as important, so following the precautionary approach outlined in section 3.1.c), they were assessed as being of moderate condition.

e) Kenton Hills

Habitat Typology

5.2.36 This section of Kenton Hills was composed entirely of plantation coniferous woodland, dominated by Corsican pine. The metric guides the classification of plantation coniferous woodland as 'other coniferous woodland'. Due to the high component of Corsican pine, this is considered to be appropriate.

Condition

5.2.37 The area of woodland clearly aligns with the description of poor condition woodland. Non-native trees are dominant. There is little age diversity, except in large, discrete areas where clearing has occurred. A consistent planting pattern remains. Some understorey is present, but the ground flora is dominated by Common Nettle, Bracken and Bramble. The areas of coniferous woodland are therefore assessed as being of poor condition.

f) Strategic significance

5.2.38 As outlined in section d), areas within the Suffolk Coast & Heaths AONB are considered to be of strategic significance.

5.2.39 Several habitat types are regarded as priority habitats in local plans and thus receive a score of 'Location ecologically desirable but not in local strategy'. These habitats are acid grassland and all hedgerow habitats. This is a hierarchical classification system, so habitats present within the AONB are categorised as being of strategic significance and not just ecologically valuable. All other habitat types receive a strategic significance score of 'Area/compensation not in local strategy/ no local strategy'.

Table 16: Baseline biodiversity units for areas of habitat within the off-site mitigation areas for Sizewell C main development site, detailing the Phase 1 habitat and UK habitat conversions

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Aldhurst Farm								
Arable	Cropland	Non-cereal crops	49.15	Low	N/A - Agricultural	Low	Area/compensation not in local strategy/ no local strategy	98.30
Plantation mixed woodland	Woodland and forest	Other woodland; mixed	0.76	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	3.04
Semi-improved neutral grassland	Grassland	Other neutral grassland	1.07	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	8.56
Broadleaved scattered trees	Woodland and forest	Wood-pasture and parkland	0.05	High	Moderate	Low	Area/compensation not in local strategy/ no local strategy	0.60
Studio fields complex								
Arable	Cropland	Non-cereal crops	36.72	Low	N/A - Agricultural	Low	Within area formally identified in local strategy	84.46

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Semi-improved acid grassland	Grassland	Grassland - Other lowland acid grassland	7.52	Medium	Moderate	Low	Within area formally identified in local strategy	69.18
Plantation broadleaved woodland	Woodland and forest	Woodland and forest - Other woodland; broadleaved	1.13	Medium	Moderate	Low	Within area formally identified in local strategy	10.40
Pond	Lakes	Lakes - Ponds (Non- Priority Habitat)	0.05	High	Moderate	Low	Within area formally identified in local strategy	0.69
St James Covert								
Mixed plantation woodland	Woodland and forest	Other woodland; mixed	5.98	Medium	Moderate	Low	Within area formally identified in local strategy	55.05
Marsh harrier habitat improvement area								
Arable	Cropland	Cereal crops	31.57	Low	N/A - Agricultural	Low	Within area formally identified in local strategy	72.61
Semi-improved neutral grassland	Grassland	Other neutral grassland	0.71	Medium	Moderate	Low	Within area formally identified in local strategy	6.53

Phase 1 habitat type	UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Habitat units
Semi-improved acid grassland	Grassland	Other lowland acid grassland	1.15	Medium	Moderate	Low	Within area formally identified in local strategy	10.57
Bareground	Urban	Vacant/derelict land/ bareground	0.21	Low	Poor	Low	Within area formally identified in local strategy	0.48
Kenton Hills								
Plantation coniferous woodland	Woodland and forest	Other coniferous woodland	4.15	Low	Poor	Low	Within area formally identified in local strategy	9.55
Total			**140.22**					**429.99**

Table 17: Baseline biodiversity units for hedgerows within the off-site mitigation areas of the Sizewell C main development site, detailing the Phase 1 habitat and UK habitat conversions

Phase 1 habitat type	Hedgerow type	Length (km)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Hedgerow units
Aldhurst Farm							
Species-poor hedge with trees	Native Hedgerow with trees	1.362	Low	Moderate	Low	Location ecologically desirable but not in local strategy	5.99

Phase 1 habitat type	Hedgerow type	Length (km)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Hedgerow units
Studio Field Complex							
Species-poor intact hedge	Native Hedgerow	2.046	Low	Moderate	Low	Within area formally identified in local strategy	9.41
Marsh harrier habitat improvement area							
Species-poor defunct hedge	Native Hedgerow	0.747	Low	Moderate	Low	Within area formally identified in local strategy	3.44
Species-poor intact hedge	Native Hedgerow	0.064	Low	Poor	Low	Within area formally identified in local strategy	0.15
Total		**4.219**					**18.99**

5.3 Post-development habitats

5.3.1 The off-site post-development habitats were assessed in the same manner as the on-site post-development habitats, but with a spatial risk multiplier included. This takes the distance of the mitigation area from the Proposed Development Site into account.

5.3.2 The off-site areas post-development deliver 980.27 biodiversity units, representing a gain of 550.28 units from the baseline 429.99 units. This gain is used to offset the loss of biodiversity units on-site.

5.3.3 A total of 18.46 hedgerow units would be delivered from 3.997km of hedgerows post-development from a baseline of 18.46 hedgerow units resulting in decrease of 0.53 units, or 2.79%.

5.3.4 Table 22 and Table 23 detail the off-site biodiversity and hedgerow units delivered, respectively.

a) Aldhurst Farm

5.3.5 The habitats present within Aldhurst Farm are assessed in this section. Wetland habitats providing compensation for lost SSSI habitats are excluded from the assessment, so are not assessed. Further details can be found within the Aldhurst Farm ELMP.

i. Retained habitats

Plantation mixed woodland

5.3.6 An area of plantation mixed woodland is retained in its baseline state of poor condition ‘other woodland, mixed’.

Scattered broadleaved trees

5.3.7 Scattered broadleaved trees are retained in their baseline state of moderate condition ‘Wood-pasture and parkland’.

Species-poor intact hedgerow

5.3.8 The species-poor intact hedgerow is retained in its baseline state of moderate quality ‘native hedgerow’.

ii. Created habitats

Acid grassland/heathland

5.3.9 Much of the Aldhurst Farm area has been transition to a mosaic of acid grassland and heathland, targeting a similar character to the DSG across the wider estate. As such, this habitat will be assessed assuming similar proportions of acid grassland, heathland and scattered trees (80%, 15% and 5%, respectively).

5.3.10 The creation of acid grassland has begun, with a currently in place, however, it has been challenging to achieving the targeted level of diversity. As such, a precautionary approach is taken and it is assumed that the highest distinctiveness typology will not be achieved. The 'other lowland acid grassland' typology is therefore predicted. It is predicted that good condition can be achieved, through the positive management outlined in the Aldhurst Farm ELMP and due to a lower distinctiveness typology predicted.

5.3.11 The areas of heathland and scattered trees are predicted to achieve a similar character as that predicted for the remainder of the site. These typologies are therefore assessed in the same manner as in section 4.1.d) (heathland as fairly good condition 'lowland heathland' and scattered trees as fairly good condition 'wood pasture and parkland').

Plantation mixed woodland

Habitat Typology

5.3.12 Several new belts of woodland are proposed. These will be of mixed character, containing broadleaved and coniferous character. Species will be similar to those within the exiting area of mixed woodland. These habitats are predicted to align with the 'other woodland, mixed' typology.

Condition

5.3.13 Through positive management, moderate condition is considered to be achievable.

Semi-improved neutral grassland

Habitat Typology

5.3.14 Areas of semi-improved neutral grassland have been created adjacent to the wetland habitats, as part of the transition from the wetland to terrestrial habitats. This area has already been seeded and in future years will be enhanced through the

spreading of green hay and/or seed (etc) from nearby SSSIs. As such, the 'other neutral grassland' typology is predicted.

Condition

5.3.15 The positive management outlined in the Aldhurst Farm ELMP is targeted to result in good condition habitat.

Scattered broadleaved trees

Habitat Typology

5.3.16 Scattered broadleaved trees will be planted within the area of neutral grassland. The most appropriate way to assess these is as 'Wood-pasture and parkland'.

Condition

5.3.17 These are assessed in the same manner as the other scattered trees outlined in section 5.3.a) ('Wood-pasture and parkland' of fairly good condition.

Hedgerows

Habitat Typology

5.3.18 Limited areas of new hedgerows are proposed. These are predicted to be species-rich, but not contain trees, from the proposed species lists within the Aldhurst Farm ELMP. As such, the 'Native Species Rich Hedgerow' typology is predicted.

Condition

5.3.19 It is predicted that good condition can be achieved through positive management (for example, not gappy and with ecotones etc).

b) Studio fields complex

i. Retained habitat

Plantation broadleaved woodland

5.3.20 An area of plantation broadleaved woodland is retained in the south of the Studio Field complex, in its baseline state of 'Other woodland; broadleaved' of moderate condition.

Species-poor semi-improved grassland

5.3.21 The small patch of species-poor semi-improved grassland is retained in its baseline state of moderate condition modified grassland.

Species-poor intact hedge

5.3.22 The species-poor intact hedges are retained in their baseline state of moderate condition 'native hedgerows'.

ii. Created habitat

Acid grassland

5.3.23 Much of the Studio Fields Complex will be dominated by acid grassland, with smaller patches of scrub, heathland and reptile features (such as hibernacula and brash piles).

5.3.24 The grassland has been created as an acid grassland sward. Following a precautionary approach, it is predicted to be of 'other lowland acid grassland' character, as the area will predominantly be managed to be of value to reptiles, so achieving very high distinctiveness grassland is not the top priority in this area. Targeting this lower distinctiveness habitat does mean that good condition is predicted to be achievable. Approximately 80% of the area is predicted to be grassland. The area of acid grassland will be enhanced to this grassland typology.

5.3.25 Heathland creation areas and scrub planting are predicted to cover approximately 10% of the area of grassland each, based upon planting plans. The heathland areas are assessed in the same manner as within the DSG. Fairly good 'lowland heathland' is predicted, as outlined in section 4.1.d). The area of heathland within existing areas of acid grassland will be created through enhancement. As a result, a better condition is predicted to be achieved. As such, good condition is predicted for this area.

5.3.26 Scrub planting will include a range of species, including woody species, so is predicted to align with the 'mixed scrub' typology. Moderate condition is predicted as scrub areas will have a well-developed edge and 'pernicious weeds' and undesirable species will be managed. The areas will not be of sufficient size to contain many clearings and glades and limited age ranges are expected. At least three woody species may be present in some instances.

c) St James covert

5.3.27 This area will be managed to be of value to reptiles. The plantation woodland has been enhanced back to its historic acid grassland state. As with other reptile

mitigation areas, it is assumed that the highest distinctiveness acid grassland typology will not be achieved. As such, it is predicted that 'other lowland acid grassland' will be achieved. As with other reptile mitigation areas, it is predicted that good condition of this medium distinctiveness habitat will be achieved, through positive management.

d) Marsh Harrier Habitat Improvement Area

5.3.28 During the construction period, this area will be managed to be of value to marsh harrier. Post construction, this area will not be required for this defined purpose. It is assumed that the area will be managed in similar manner to the DSG (dominated by acid grassland, with scattered heathland). It is likely that a scrub component will be present, from where hedgerow management ceases and they become areas of scrub. The predicted proportions are similar to the DSG – 80% acid grassland, 15% heathland and 5% scrub. The acid grassland and heathland are assumed to be of the same character as in the DSG. The areas created on former arable land are predicted to achieve fairly good condition 'Lowland dry acid grassland' and fairly good condition 'lowland heathland'. The areas of these habitats created on existing areas of grassland will be treated as enhancement and are predicted to achieve better condition as a result. Good condition is therefore predicted in these areas. The predicted scrub will come from the unmanaged sections of hedgerows that are retained. They are therefore expected to contain a diverse mixture of woody species. The 'mixed scrub' typology is therefore appropriate. Moderate condition is predicted as a precautionary approach, as at least three woody species will be present, a well-developed edge will be present and it is expected that 'pernicious weeds' and invasive species will be absent through management. However, due to their likely size, glades and clearings are not expected and a good age range is unlikely to be present throughout.

5.3.29 The Marsh Harrier Habitat Improvement Area includes both on-site and off-site areas. They are largely assessed in the same way, assuming 80% acid grassland and 15% heathland. The off-site portion contains the majority of the hedgerow/scrub belt habitat, so it is assumed that some will be retained as scrub (in accordance with current high level proposals), however the on-site portion contains virtually none of this. As such, the on-site portion is assumed to not contain any scrub. However, this area is assumed to contain 5% scattered trees, in line with DSG elsewhere within the site.

i. Retained hedgerows

5.3.30 The two species-poor intact hedges are retained in their baseline state of a moderate condition native hedgerow.

e) Kenton Hills

5.3.31 This area will be managed to be of value to reptiles. The plantation woodland has been enhanced back to its historic acid grassland state. As with other reptile mitigation areas, it is assumed that the highest distinctiveness acid grassland typology will not be achieved. As such, it is predicted that 'other lowland acid grassland' will be achieved. As with other reptile mitigation areas, it is predicted that good condition of this medium distinctiveness habitat will be achieved, through positive management.

f) Strategic significance

5.3.32 As outlined in section 4.1.g), areas within the Suffolk Coast & Heaths AONB and Aldhurst Farm are considered to be of strategic significance.

5.3.33 Several habitat types are regarded as a priority habitats in local plans and thus receive a score of 'Location ecologically desirable but not in local strategy'. These habitats are lowland heathland (including areas of DSG), acid grassland (including areas of DSG) and all hedgerow habitats. This is a hierarchical classification system, so habitats present within the AONB are categorised as being of strategic significance and not just ecologically valuable. All other habitat types receive a strategic significance score of 'Area/compensation not in local strategy/ no local strategy'.

g) Habitat creation excluded from the assessment

5.3.34 This section provides an overview of areas excluded from the assessment within the red line boundary. Further details are provided in sections 2.10 and 7.

Aldhurst Farm

5.3.35 The wetland areas of Aldhurst Farm provide compensatory habitats for the SSSI (see above in Sections 1.3 and 2.10). As such, these areas are excluded from the assessment. This area is shown in red hashing on Figures 1 and 2.

6 CHANGES IN BROAD HABITAT TYPES

6.1 Changes in Broad Habitat Types

6.1.1 The development will result in changes to the amount and quality of the habitats on the site. The UK habitat classification system used within the metric contains a tiered system, grouping similar habitats into “Broad habitats” and more specific “Habitat types”. For example, “Grassland” is a “Broad habitat”, that can contain “Other lowland acid grassland” and “Other neutral grassland”, among others. The area and biodiversity unit changes in these broad habitat types are shown in Table 18 and Table 19. It can be seen in that all of the broad habitat types are predicted to increase in area, with the exception of cropland and woodland. Cropland was considered to be the least valuable of the habitats on the so, it was the most acceptable to undergo reductions in area. An increase in woodland is predicted within the site, with lower quality woodland being replaced with higher quality woodland. Off-site a decrease in woodland is predicted due to the reversion of plantation woodland to acid grassland in Kenton Hills and St James Covert. The largest predicted increase in area is in grassland, with approximately 193 additional hectares planned. The remaining habitats increase in smaller quantities.

6.1.2 Grassland and Heathland and shrub are predicted to show increases of approximately 907 and 134 units, respectively. Despite the predicted increase in area of woodland and coastal habitats (sparsely vegetated land), these habitat types are predicted to show decreases in biodiversity unit value. This is due to the penalty paid in the metric accrued when creating ‘difficult’ habitats, such as woodland, coastal sand dunes and vegetated shingle. This is despite the woodland created will target higher quality than the predominantly low-quality plantation woodland currently present. Other habitats are predicted to undergo smaller changes.

Table 18: The changes in the total areas of the broad habitat types on and off-site

Broad habitat type	On-site baseline	On-site post-development	Off-site baseline	Off-site post-development	Change in area
Cropland	182.86	49.17	117.44	0.00	-251.13
Grassland	47.23	138.12	10.45	113.46	193.9
Heathland and shrub	2.89	19.43	0.00	22.02	38.56
Lakes	0.03	0.79	0.05	0.05	0.76
Sparsely vegetated land	6.97	9.04	0.00	0.00	2.07
Urban	25.56	52.49	2.39	0.21	24.75
Wetland	0.00	3.01	0.00	0.00	3.01
Woodland and forest	66.18	68.35	12.07	6.66	-3.24

Table 19: The changes in the total biodiversity unit values of the broad habitat types on and off-site

Broad habitat type	On-site baseline	On-site post-development	Off-site baseline	Off-site post-development	Change in biodiversity units
Cropland	397.79	96.45	255.37	0.00	-556.71
Grassland	323.18	474.09	94.86	851.00	907.05
Heathland and shrub	19.99	57.46	0.00	96.85	134.32
Lakes	0.28	13.44	0.69	0.69	13.16
Sparsely vegetated land	144.280	9.18	0.00	0.00	-135.1
Urban	31.26	29.05	0.48	0.48	-2.21
Wetland	0.00	24.46	0.00	0.00	24.46
Woodland and forest	327.67	214.37	78.60	31.25	-160.65

7 AREAS EXCLUDED FROM ASSESSMENT

7.1 Sizewell Marshes SSSI

7.1.1 A small portion of the site extends into the Sizewell Marshes SSSI. This can be seen in Image 3. The metric is not designed to assess the impacts to statutory designated sites, due to their greater value when compared to areas not within designated sites. Therefore, areas within the SSSI and any areas providing mitigation for the loss of SSSI habitat are excluded from net gain calculations. These areas are shown in red hashing in Figures 1 and 2.

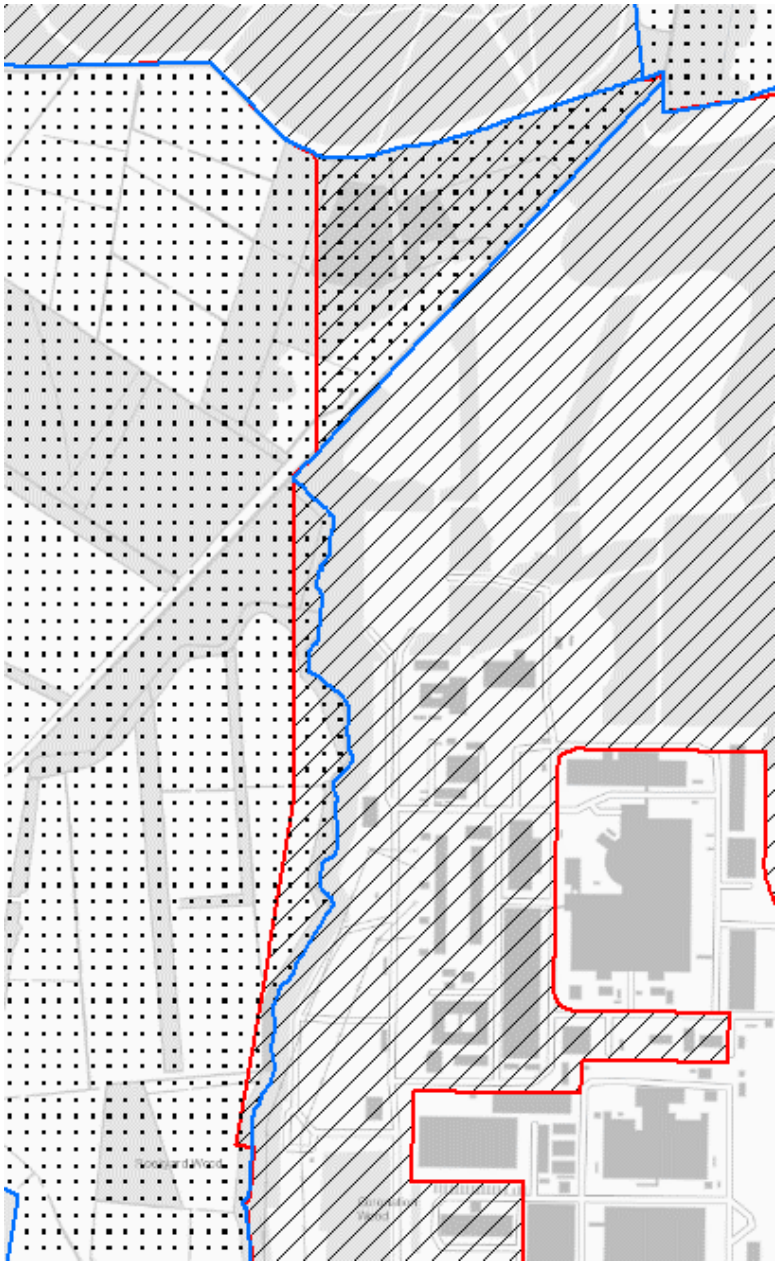


Image 3: Areas of Sizewell Marshes SSSI (black dots and blue outline) within the Proposed Development (hashes within red line)

7.2 Sizewell B Relocated Facilities

7.2.1 Separate BNG calculations were carried out as part of the Sizewell B relocated facilities development. These works are required to enable the Sizewell C development to take place. The Sizewell B calculations were carried out under two scenarios, one in which the Sizewell C development took place and one where it did

not. To avoid double counting any areas, the area within the red line boundary for these Sizewell B works have been excluded from this assessment (black hashing shown in Figures 1 and 2). Details of the Sizewell B BNG assessment can be found in the dedicated Sizewell B report, included in APPENDIX C: . This assessment predicted a 22.1% increase in biodiversity units and 16.7% increase in hedgerow units under the scenario in which Sizewell C proceeds.

8 SUMMARY

8.1 Summary

8.1.1 The summary results of the assessment, using the biodiversity metric 2.0 calculator are presented in Image 4 below.

On-site baseline	*Habitat units*	1244.45
	Hedgerow units	117.26
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	918.51
	Hedgerow units	117.96
	River units	0.00
Off-site baseline	*Habitat units*	429.99
	Hedgerow units	18.99
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	980.27
	Hedgerow units	18.46
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	224.33
	Hedgerow units	0.18
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	18.03%
	Hedgerow units	0.16%
	River units	0.00%

Image 4: Summary results

8.1.2 Under current plans, an **18.03%** increase in biodiversity units and **0.16%** increase in hedgerow units is predicted for the main development site.

8.1.3 The changes in the area and biodiversity units of each broad habitat type are shown in Table 20. Most broad habitat types are predicted to increase in quantity and quality. However, cropland and woodland is predicted to decrease in area and biodiversity units. The area of woodland on-site will increase in area post-development, with higher quality woodland targeted for creation. The decrease in woodland area off-site is due to the reversion of plantation woodland to acid grassland.

Table 20: Changes in area and biodiversity units of broad habitat types

Broad habitat type	Change in area	Change in biodiversity units
Cropland	-251.13	-556.71
Grassland	193.9	907.05
Heathland and shrub	38.56	134.32
Lakes	0.76	13.16
Sparsely vegetated land	2.07	-135.1
Urban	24.75	-2.21
Wetland	3.01	24.46
Woodland and forest	-3.24	-160.65

8.1.4 It is not appropriate to use the metric to assess statutory designated sites. As such the areas of the site which overlap with Sizewell Marshes SSSI and the associated compensatory habitats are not included within the calculations and are presented separately in Section 7. The area of the Sizewell B Relocated Facilities is also not included within this assessment. Details of which can be found in the dedicated Sizewell B report, included in APPENDIX C: .

9 DEVELOPMENT OVERVIEW RESULTS

9.1 Overview

9.1.1 The results of this assessment can be considered within the context of the portion of the development that has been assessed using the biodiversity metric (i.e. main development site and three of the AD sites). These AD sites were chosen for assessment via the metric as they are permanent and are considered to have potential for permanent habitat change. Table 21 shows the changes in biodiversity units for each of these elements. An increase of approximately 320 units is predicted across these main development site and ADs, corresponding to an approximate 19% increase in biodiversity units. This increase demonstrates that the portion of the development that has been assessed using the biodiversity metric, is predicted to have a positive impact on the biodiversity value of the Sizewell area.

Table 21: Overview of entire development results

Site	Baseline units	Change in units	Percentage change
Main development site	1244.45	224.33	18.03%
Two village bypass	160.61	-13.28	-8.27%
Sizewell Link Road	240.96	109.92	45.62%
Yoxford Roundabout	5.84	-1.08	-18.48%
Net	**1651.86**	**319.89**	**19.37%**

10 CONCLUSION

10.1 Conclusion

10.1.1 Under current proposals it is estimated that for the main development site there is a potential increase in biodiversity unit values for habitats of **18.03%,** and an increase in hedgerow unit values of **0.16%**. The increase in habitat units is due to the suite of enhancement and creation presented within this report. The items which have created the greatest uplift in units are as follows:

- On-site
  - Creation of a large area of 'Dry Sandlings Grassland', a collection of acid grassland, heathland scrub and scattered trees, created on mostly arable land.
  - Creation of woodland in the centre of the site, increasing the area of woodland relative to the baseline.
  - Creation of semi-improved grassland on arable and improved pasture land, in the west of the site.
- Off-site
  - Creation of a high-quality reptile habitat within Studio Fields Complex, Kenton Hills and St James Covert, largely composed of acid grassland, on the site of arable land and plantation woodland.
  - Creation of areas of acid grassland and heathland within the Aldhurst Farm area, largely on the site of arable land.
  - Creation of further acid grassland on predominantly arable land, within the Marsh Harrier Improvement Area.

10.1.2 There are a series of off-site associated developments (ADs), three of which were also assessed via the biodiversity metric (Sizewell Link Road, Two Village Bypass, Yoxford Roundabout) and these are presented in separate reports. These sites were chosen for assessment via the metric as they are permanent developments and are considered to have the potential for permanent habitat loss. When considered as a whole there is predicted to be an approximate 19% increase in biodiversity units across the main development site and three ADs.

10.1.3 The achievement of these units scores is reliant upon achieving the target condition for the created habitats.

10.1.4 The proportions of the broad habitat types present on the site will change under current plans. The largest decrease in area will be in arable, a 250ha decrease, while the largest increase will come in grassland, an 193ha increase. An increase in woodland is predicted within the site, with lower quality woodland being replaced with higher quality woodland. Off-site a decrease in woodland is predicted due to the reversion of plantation woodland to acid grassland in Kenton Hills and St James Covert to provide reptile habitats. Moderate increases will occur in the remaining other broad habitat types.

10.1.5 A small portion of Sizewell Marshes SSSI overlaps with the western extent of the main power plant site. Within this portion of the site, 0.46ha of fen meadow and 3.12ha of wet woodland will be permanently lost. The metric cannot assess such an impact on statutory designated sites, so specific compensatory habitat provision is required. The portion of the site overlapping with Sizewell Marshes was excluded from the baseline and post-development calculations, along with the SSSI habitat compensation sites.

10.1.6 Separate BNG calculations were carried out as part of the Sizewell B relocated facilities development. These works are required to enable the Sizewell C development to take place. The Sizewell B calculations were carried out under two scenarios, which assumed the Sizewell C development either did or did not take place. To avoid double counting any areas, the area within the red line boundary for these Sizewell B works have been excluded from this assessment. Details of the Sizewell B BNG assessment can be found in the dedicated report, included in APPENDIX C: . This assessment predicted a 22.1% increase in biodiversity units and 16.7% increase in hedgerow units under the scenario in which Sizewell C proceeds.

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APPENDIX A: BASELINE PHASE 1 MAP (FIGURE 1)

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NOTES

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE BOUNDARY
- DEMARCATION LINE
- OFFSITE AREAS
- EXCLUDED AREA -SSSI OR SSSI MITIGATION
- EXCLUDED AREA -SIZEWELL B
- BROADLEAVED PARKLAND/SCATTERED TREES
- STANDING WATER
- INTACT HEDGE - NATIVE SPECIES-RICH
- INTACT HEDGE - SPECIES-POOR
- DEFUNCT HEDGE - SPECIES-POOR
- HEDGE WITH TREES - SPECIES-POOR
- HARDSTANDING
- BROADLEAVED WOODLAND - SEMI-NATURAL
- BROADLEAVED WOODLAND - PLANTATION
- CONIFEROUS WOODLAND - PLANTATION
- MIXED WOODLAND - PLANTATION
- SCRUB - DENSE/CONTINUOUS
- SI ACID GRASSLAND - SEMI-IMPROVED
- SI NEUTRAL GRASSLAND - SEMI-IMPROVED
- I IMPROVED GRASSLAND
- SI POOR SEMI-IMPROVED GRASSLAND
- DRY HEATH/ACID GRASSLAND
- STANDING WATER
- SAND FORESHORE
- SHINGLE ABOVE HIGH TIDE
- DUNE GRASSLAND
- A CULTIVATED/DISTURBED LAND -
- A CULTIVATED/DISTURBED LAND - AMENITY GRASSLAND
- BARE GROUND

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DOCUMENT:
SIZEWELL C
MAIN DEVELOPMENT SITE
BIODIVERSITY NET GAIN REPORT 2021

DRAWING TITLE:
BIODIVERSITY NET GAIN
BASELINE PLAN

DRAWING NO:
FIGURE 1

DATE:	DRAWN:	SCALE :	REV:
FEB 2021	R.G.	1:15,000 @A3	01

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APPENDIX B: POST DEVELOPMENT PLAN (FIGURE 2)

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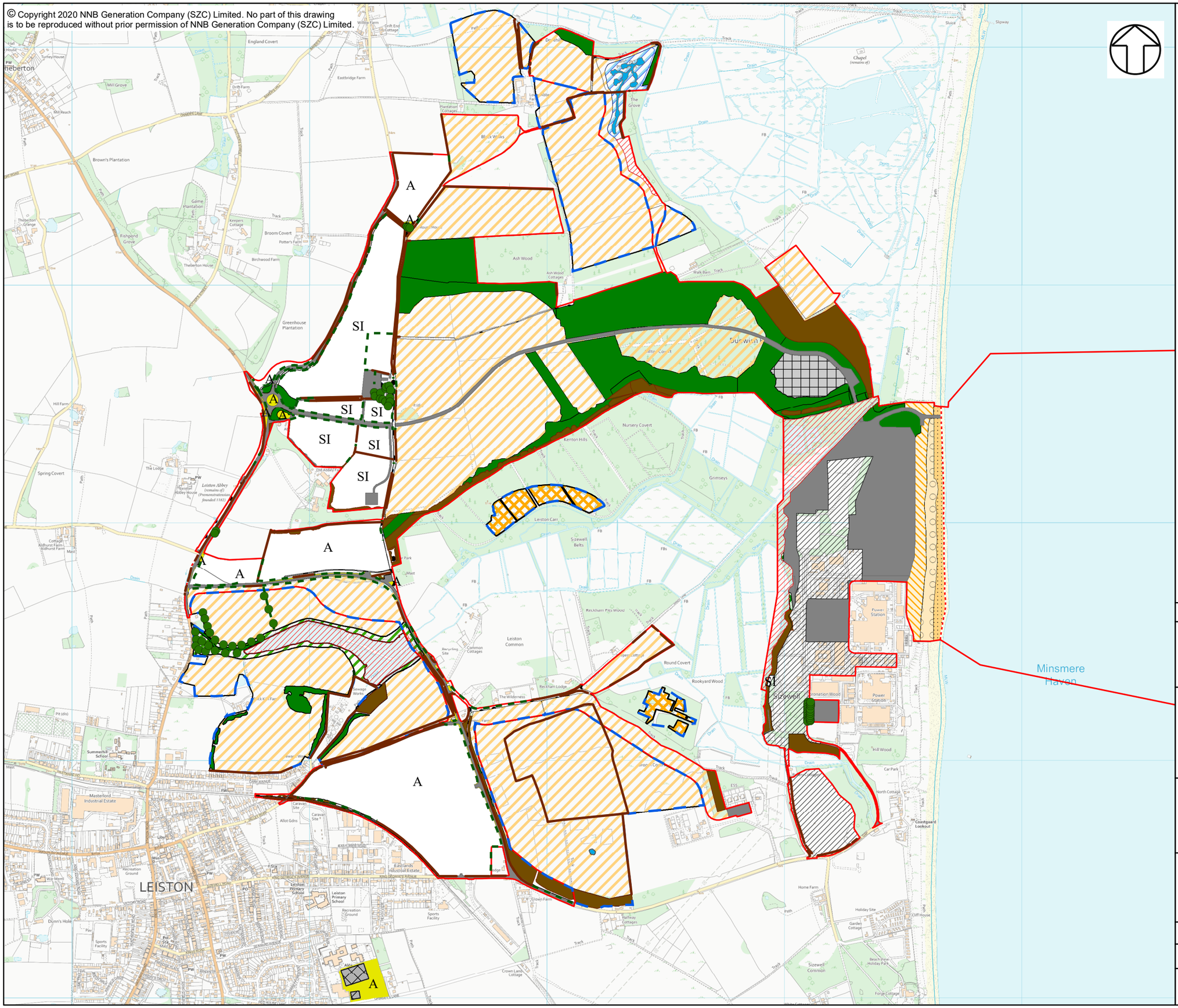

NOTES

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE BOUNDARY
- DEMARCATION LINE
- OFFSITE AREAS
- EXCLUDED AREA -SIZEWELL B
- EXCLUDED AREA -SSSI OR SSSI MITIGATION
- TREES
- CREATED SPECIES RICH HEDGE WITH TREES
- RETAINED HEDGE
- A — AMENITY GRASSLAND
- A — ARABLE
- BAREGROUND
- CAR PARK
- DRY SANDLINGS GRASSLAND
- HARDSTANDING
- NEUTRAL GRASSLAND
- OPEN WATER
- REEDBED
- RETAINED WOODLAND
- RETAINED WOODY SCRUB
- SANDY FORESHORE
- SI — SPECIES POOR SEMI- IMPROVED GRASSLAND
- SPORTS PITCH
- VEGETATED DUNES
- VEGETATED SHINGLE
- WOODLAND PLANTING
- WOODY SCRUB
- REPTILE RECEPTOR AREA - ACID GRASSLAND

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EDF CGN

DOCUMENT:
SIZEWELL C
MAIN DEVELOPMENT SITE
BIODIVERSITY NET GAIN REPORT 2021

DRAWING TITLE:
BIODIVERSITY NET GAIN
POST-DEVELOPMENT PLAN

DRAWING NO:
FIGURE 2

DATE:	DRAWN:	SCALE :	REV:
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APPENDIX D: OFF-SITE POST-DEVELOPMENT HABITAT AND HEDGEROW DATA

SIZEWELL B RELOCATED FACILITIES
BIODIVERSITY METRIC CALCULATIONS

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CONTENTS

TABLES

FIGURES

EXECUTIVE SUMMARY

EDF Energy Nuclear Generation Limited[1], hereafter referred to as 'EDF Energy (NGL)', is seeking hybrid planning permission from East Suffolk Council (ESC) for the relocation and demolition of a number of existing facilities at Sizewell B nuclear power station that are currently located on the proposed Sizewell C nuclear power station site or otherwise impacted as a consequence of the relocation of the facilities from the proposed Sizewell C land (known as the Sizewell B Relocated Facilities Project and herein referred to as the 'proposed development').

This Biodiversity Metric calculations report has been prepared to inform the planning application for the proposed development.

Two scenarios have been tested:

- Scenario 1 assumes that the Sizewell C Project is consented and implemented; and areas within the northern part of the site would be left ready for Sizewell C construction;
- Scenario 2 assumes that the Sizewell C Project is not consented or implemented and, therefore, areas which would have been used by the Sizewell C Project in the northern part of the site would be landscaped instead.

In Scenario 1, the assessment estimates that there would be **a potential increase in biodiversity unit values for habitats of 22.08% and an increase in biodiversity unit values for hedgerows of 16.71%.**

In Scenario 2, both the landscape proposals in scenario 1 and the additional 'restoration area' to the north of the site are considered within the calculations. The assessment estimates that there would be **a potential increase in biodiversity unit values for habitats of 45.39% and an increase in hedgerow value of 16.71%** (as per scenario 1).

The achievement of these credit scores is reliant upon meeting the target condition for created habitats, which will require creation and management plans.

[1] EDF Energy Nuclear Generation Limited (company number 03076445), part of the EDF Energy group

1. INTRODUCTION

1.1 Background

1.1.1 EDF Energy (NGL), is proposing the construction of replacement facilities within the existing Sizewell power station complex, and to the south-west of this location, followed by the demolition and removal of existing facilities which are currently located to the north and west of the existing Sizewell B station (hereafter referred to as the 'proposed development').

1.1.2 For this document, the application site ('the site') is defined as the areas from which the Sizewell B facilities are to be removed, together with the land that will be used to construct the new facilities, this being the area that falls within the site boundary illustrated on SZC-RF0000-XX-000-DRW-100044 Location Plan. The location of the existing facilities to be demolished is illustrated on SZC-RF0000-XX-000-DRW-100045 Existing Site Layout Plan and the location of the replacement facilities is illustrated on SZC-RF0000-XX-000-DRW-100046 Proposed Site Layout Plan.

1.1.3 The site is located on the Suffolk coast between the coastal towns of Aldeburgh and Southwold, partly within an area of high landscape and ecological sensitivity. It is within an Area of Outstanding Natural Beauty (AONB) and is in close proximity to the Minsmere to Walberswick Heath and Marshes Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar and Site of Special Scientific Interest (SSSI); the Sandlings SPA; the Outer Thames Estuary SPA; Sizewell Marshes SSSI; and Leiston to Aldeburgh SSSI. There are shingle beaches and dunes to the east and lowland grazing marsh and unimproved grassland to the west. The site itself comprises largely semi-improved grassland (poor to the north and neutral to the south), buildings and hardstanding. There are also areas of woodland within the site as well as small areas of scrub and amenity grassland (see **Figure 1.1** below).

1.1.4 A detailed description of the site and the proposed development is provided in **ES Volume I: Chapter 3 Proposed Development**.

1.2 Biodiversity targets

1.2.1 This report has been prepared in response to EDF Energy (NGL), government and stakeholder interest around quantifying biodiversity net gain. Defra (Department for Environment Food and Rural Affairs) has presented their intentions for biodiversity, in their summary of responses to the biodiversity net gain consultations published in July 2019 (Ref. 1). EDF Energy (NGL) is committed to a minimum 10% net gain in biodiversity for the proposed development.

1.2.2 Two scenarios have been tested:

- **Scenario 1:** the proposed development with a landscape scheme, and the northern areas of the site left ready for Sizewell C construction, without the additional habitat restoration which would take place should Sizewell C not be consented; and
- **Scenario 2:** the development with the landscape scheme AND with the landscape restoration proposed within the northern areas of the site if Sizewell C is not consented and implemented.

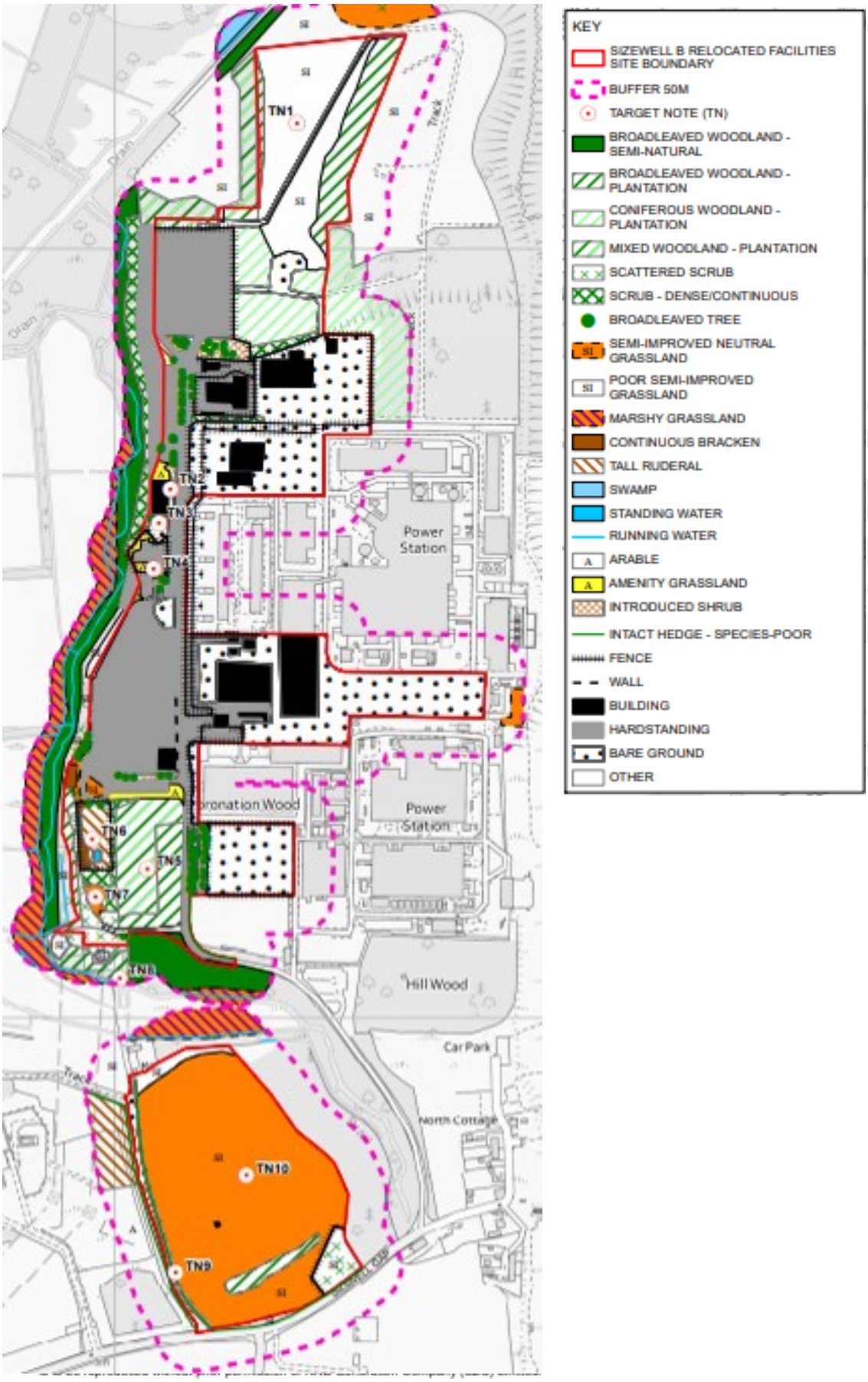
1.3 Structure of this report

1.3.1 This report is structured as follows:

- Section 2: Methodology;
- Section 3: Baseline Conditions and Valuation (Pre-construction);
- Section 4: Post-development on Site Habitats;
- Section 5: Summary; and
- Section 6: Conclusion.

1.3.2 Both Sections 4 and 5 comprise details of both Scenario 1 and Scenario 2.

Figure 1.1 Phase 1 habitat map of the site and surrounds, Oct 2020



2. METHODOLOGY

2.1 Defra biodiversity metric 2.0

2.1.1 The purpose of this document is to calculate the biodiversity net gain potential of the proposed development. This approach utilises information on the habitats and features of the site before and after the development to calculate a biodiversity value for each so that this information can be utilised to calculate a change in the biodiversity value. It was determined that the appropriate net gain calculation method (or 'metric') was the Defra biodiversity metric 2.0 (Ref. 2) and it is this methodology that is utilised within this report.

2.2 Baseline calculations

2.2.1 The number of biodiversity units provided by each habitat currently within the proposed development site is calculated by multiplying the values for distinctiveness, condition, connectivity, strategic location and the size of each habitat in hectares (ha). There is a separate method which looks at hedgerow length in kilometres (km). This value represents the baseline condition of the site, in terms of biodiversity units. The Phase 1 habitat map presented in **Figure 1.1** was used to provide these baseline calculations.

2.3 Post-development calculations

2.3.1 The site has then been reassessed under the two scenarios discussed for the post-development conditions that will be present after the landscape treatments are implemented. This was achieved using the following documents and drawings:

- **Design and Access Statement** (a standalone document submitted with the planning application);
- Landscape Plan: SZC-RF0000-XX-000-DRW-100088_ Rev1 (see **Figure 4.1**);
- Landscape Plan: SZC-RF0000-XX-000-DRW-100083_ Rev1 (see **Figure 4.2**); and
- Landscape Restoration Plan: SZC-RF0000-XX-000-DRW-100087_Rev1 (see **Figure 4.3**).

2.4 Calculation of gains or losses

2.4.1 The net change in biodiversity units is calculated by subtracting the baseline biodiversity units from the post-development biodiversity units. A positive value indicates a net gain has been made and a negative value indicates a net loss has been made. The following information was used to complete the assessment:

- Calculations are based on post-development data as presented on planning drawings.
- The condition of the baseline habitats was collected during a Phase 1 Habitat survey of the site in July 2020.
- A tool for assessing connectivity was released in December 2019; however, following the beta test consultation, Defra and Natural England took the decision to "*fix connectivity at Low (x1 multiplier) for all habitats until the Metric is next reviewed*" due to functional issues with the connectivity tool (Ref. 3). This was therefore replicated within the calculations.

3. BASELINE CONDITIONS AND VALUATION (PRE-CONSTRUCTION)

3.1.1 The site is approximately 31.4ha in area, of which approximately 55% (17.12ha) comprises buildings and hardstanding and 14.28ha comprises a mixture of habitat types. This section describes each of the habitats listed on site. Codes utilised in this section are those from the JNCC Phase 1 Habitat Survey Handbook (Ref. 4). **Table 3.1** details the UK habitat classification types used in the Defra Metric 2.0 and how they relate to the Phase 1 Habitat Types. Also presented are the valuations of the condition, ecological connectivity and strategic significance of each habitat type. The strategic significance category selected for all habitats within the site was: "*Area/compensation not in local strategy/ no local strategy*". The baseline currently delivers 62.54 biodiversity units for habitats.

Table 3.1 Baseline biodiversity units for the Biodiversity units for Sizewell B Relocated Facilities, detailing the Phase 1 habitat and UK habitat conversions

Phase 1 habitat type	UK habs / habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Units
Neutral semi-improved grassland	Grassland - Other neutral grassland	6.17	Medium	Moderate	Low	49.36
Poor semi-improved grassland	Grassland - Other neutral grassland	2.50	Medium	Fairly poor	Low	15.00
Bracken	Grassland - Bracken	0.03	Medium	Poor	Low	0.12
Dense and scattered scrub	Heathland and shrub - Mixed scrub	0.62	Medium	Poor	Low	2.48
Standing Water	Lakes - Temporary lakes, ponds and pools	0.02	High	Moderate	Low	0.24
Tall Ruderal	Sparsely vegetated land - Ruderal/Ephemeral	0.38	Low	Poor	Low	0.76
Buildings and hardstanding	Urban - Developed land; sealed surface	17.28	Very Low	N/A	N/A	0.00
Broad-leaved tree	Urban - Street Tree	2.03*	Low	Moderate	Low	8.12
Amenity grassland	Urban - Amenity grassland	0.54	Low	Fairly Poor	Low	1.62
Coniferous plantation woodland	Woodland and forest - Other coniferous woodland	1.50	Low	Poor	Low	3.00
Mixed plantation woodland	Woodland and forest - Other woodland; mixed	1.00	Medium	Moderate	Low	8.00
Mixed plantation woodland	Woodland and forest - Other woodland; broadleaved	0.74	Medium	Poor	Low	2.96

Phase 1 habitat type	UK habs / habitat type	Area (ha)	Distinctiveness	Condition	Ecological connectivity	Units
Broadleaved plantation woodland	Woodland and forest - Other woodland; broadleaved	0.56	Medium	Moderate	Low	4.48
Semi-natural broad-leaved woodland	Woodland and forest - Lowland mixed deciduous woodland	0.06	High	Moderate	Low	0.72
Totals		**31.4**				**96.86**

*NB: as per the Defra biodiversity metric 2.0 (Ref. 2) this area does not contribute towards the total area of the site.

4. POST-DEVELOPMENT ON-SITE HABITATS

4.1 Introduction

4.1.1 Post-development calculations of biodiversity value were based upon the same parameters as the baseline, pre-development valuations. Where a habitat was to be retained (and was not to be isolated within the proposed development) the same valuation was used post-development as pre-development. Hedgerows pre-and post-development are also included within this section.

4.1.2 The valuations are based upon the two scenarios:

- **Scenario 1:** the proposed development with a landscape scheme, and the northern areas of the site left ready for Sizewell C construction, without the additional habitat restoration which would take place should Sizewell C not be consented; and
- **Scenario 2:** the development with the landscape scheme AND with the landscape restoration proposed within the northern areas of the site if Sizewell C is not consented and implemented.

4.2 Scenario 1

4.2.1 Scenario 1 includes the proposals within the Pillbox Field and Coronation Wood areas; (see **Figure 4.1** and **Figure 4.2**), respectively (as per the proposed landscape plans SZC-RF0000-XX-000-DRW-100088_ Rev1 and SZC-RF0000-XX-000-DRW-100083_ Rev1). Habitat types have been transposed from the landscape plans in association with the information presented in the Design and Access Statement.

4.2.2 The total approximate soft landscape area created in Pillbox Field, by typology, is as follows:

- Existing grassland and scrub habitats: 53,295m^2 (5.3ha) – retained and managed.
- New native hedgerow: 50 linear metres;
- New native broadleaved woodland and woodland edge planting: 10,673m^2 (1.07ha); and
- New heathland scrub planting: 1,666m^2 (0.16ha).
- The total approximate soft landscape area created in the Coronation Wood development area, by typology, is as follows:
- New native woodland edge habitat planting: 792m^2 (0.08ha);
- New native shrub planting (perimeter planting on parking and laydown areas): 1,189m^2 (0.12ha); and
- New Grass and Groundcover: 2,914m^2 (0.29ha).

Figure 4.1 Scenario 1 Pillbox Field Proposed Landscape Plan

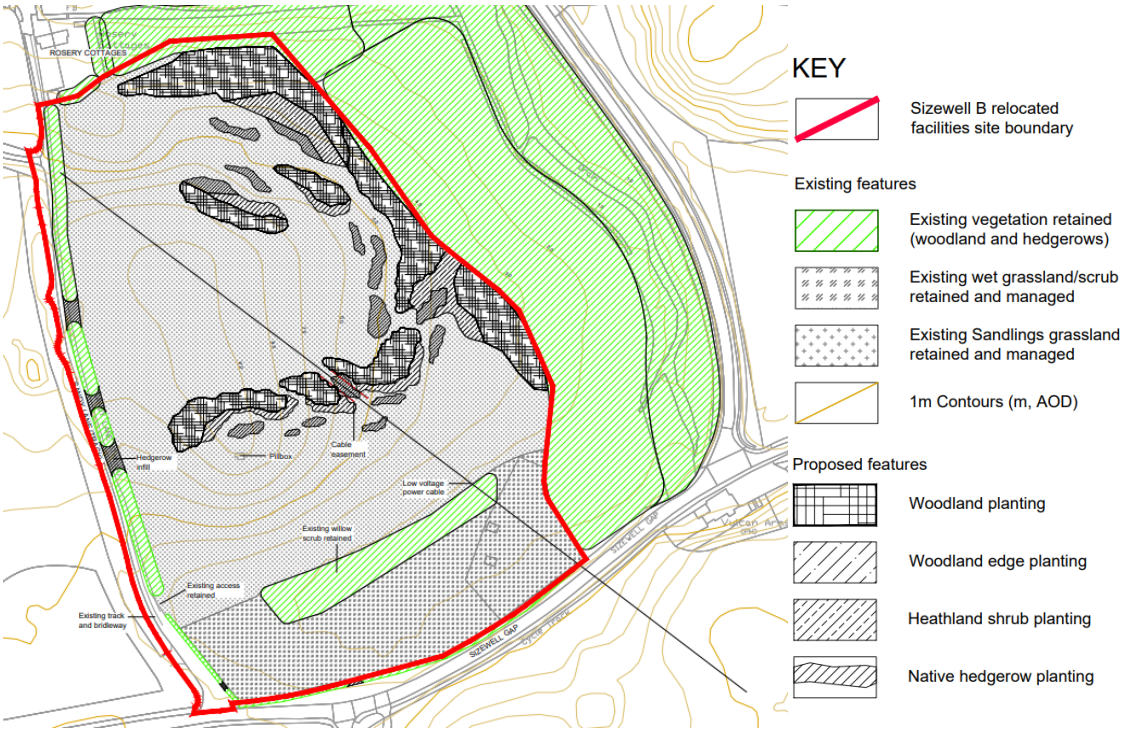
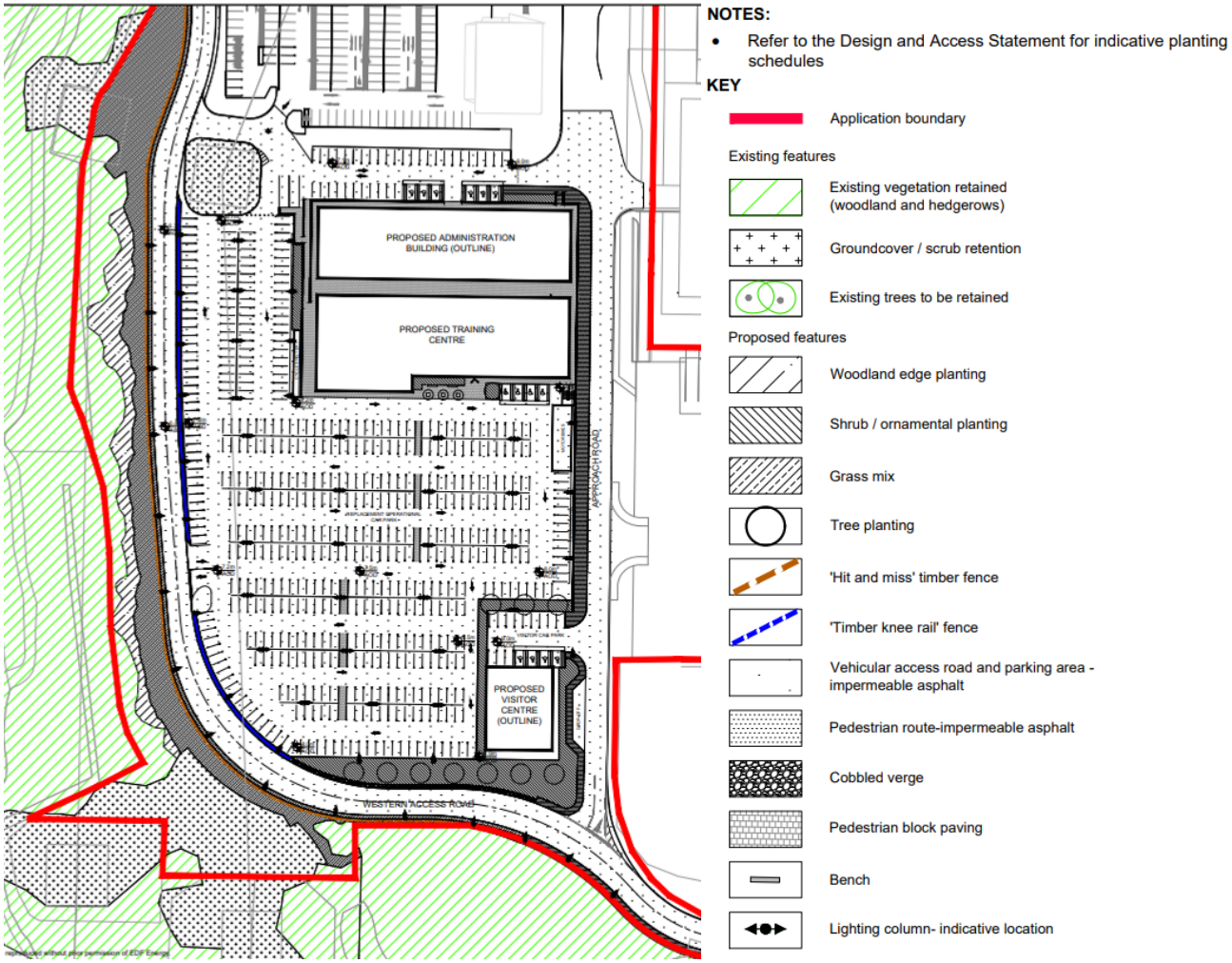


Figure 4.2 Scenario 1 Proposed Coronation Wood Development Area Landscape Plan



4.2.3 **Table 4.1** provides a full breakdown of the retention category biodiversity values associated with Scenario 1 and **Table 4.2** provides a breakdown of habitat creation and habitat succession proposed (NB: no habitat enhancement is proposed). The strategic significance category selected for all habitats within the site was: "*Area/compensation not in local strategy/ no local strategy*".

Table 4.1: Retention category biodiversity values for Sizewell B Relocated Facilities for Scenario 1

Habitat type	Condition	Area retained (Ha)	Area succession (Ha)	Units retained	Units succession	Area lost (Ha)	Units lost
Other neutral grassland	Moderate	4.99	1.07	39.92	8.56	0.11	0.88
Other neutral grassland	Fairly Poor	0	0	0.00	0.00	2.50	15.00
Bracken	Poor	0.03	0	0.12	0.00	0.00	0.00
Mixed scrub	Poor	0.31	0	1.24	0.00	0.31	1.24
Temporary lakes, ponds and pools	Moderate	0	0	0.00	0.00	0.02	0.24
Ruderal/Ephemeral	Poor	0	0	0.00	0.00	0.38	0.76
Developed land; sealed surface	N/A - Other	17.12	0	0.00	0.00	0.16	0.00
Street Tree	Moderate	0.03*	0	0.12	0.00	2.00	8.00
Amenity grassland	Fairly Poor	0	0	0.00	0.00	0.54	1.62
Other coniferous woodland	Poor	1.5	0	3.00	0.00	0.00	0.00
Other woodland; mixed	Moderate	1	0	8.00	0.00	0.00	0.00
Other woodland; mixed	Poor	0	0	0.00	0.00	0.74	2.96
Other woodland; broadleaved	Moderate	0	0	0.00	0.00	0.56	4.48
Lowland mixed deciduous woodland	Moderate	0.03	0	0.36	0.00	0.03	0.36
	Total:	**25.01**	**1.07**	**52.76**	**8.56**	**7.35**	**35.54**

*NB: as per the Defra biodiversity metric 2.0 (Ref. 2) this area does not contribute towards the total area of the site.

Table 4.2: Biodiversity units for Sizewell B Relocated Facilities from habitats post-development for Scenario 1

Habitat type	Area (ha)	Distinctiveness	Target Condition	Years to target condition	Difficulty	Units
SITE HABITAT CREATION						
Mixed scrub	0.28	Medium	Good	7	Low	2.62
Street Tree	0.01*	Low	Moderate	27	Low	0.02
Amenity grassland	0.29	Low	Poor	1	Low	0.56
Developed land; sealed surface	5.40	Very Low	N/A - Other	0	Low	0.00
Sub Total:	**7.35**				**Habitat Creation Sub Total:**	**3.19**
SITE HABITAT SUCCESSION						
Other neutral grassland to Lowland mixed deciduous woodland	1.07	High	Moderate	32+	High	62.29
Sub Total:	**1.07**				**Habitat Succession Sub Total:**	**62.29**
					TOTAL HABITAT UNITS DELIVERED:	**65.48**

*NB: as per Defra biodiversity metric 2.0 (Ref. 2) this area does not contribute towards the total area of the site.

4.2.4 Hedgerow units have been calculated using length, pre- and post-development (see **Table 4.3** and **Table 4.4**). No hedgerow loss is proposed as part of the development.

Table 4.3: Baseline biodiversity units for Sizewell B Relocated Facilities from hedgerows for Scenario 1

UK habs / habitat type	Length (km)	Distinctiveness	Condition	Hedgerow units
Native hedgerow	0.59	Low	Poor	1.18

Table 4.4: Biodiversity units for Sizewell B Relocated Facilities from hedgerows post-development for Scenario 1

UK habs / habitat type	Length (km)	Distinctiveness	Condition	Years to target condition	Units
Native species rich hedgerow with trees	0.05	Medium	Good	20	0.20

4.3 Scenario 2

4.3.1 The habitats for scenario 2 were calculated using the previous post-development area AND the landscape restoration area that will be used if Sizewell C is not consented or implemented (See **Figure 4.3**).

4.3.2 The total approximate soft landscape area created on restored land to the north of Sizewell B power station, by typology, is as follows:

- New acidic grassland: 42,600m^2 (4.26ha);
- New native broadleaved woodland: 6,494 m^2 (0.65ha); and
- New native scattered scrub: 975m^2 (0.01ha).

4.3.3 **Table 4.5** provides a full breakdown of the retention category biodiversity values associated with Scenario 1 and **Table 4.6** provides a breakdown of habitat creation and habitat succession proposed (NB: no habitat enhancement is proposed). The strategic significance category selected for all habitats within the site was: "*Area/compensation not in local strategy/ no local strategy*".

Figure 4.3 Scenario 2 Addition of the habitat proposed in the Landscape Restoration Plan for Sizewell C SZC-RF0000-XX-000-DRW-100087_Landscape Restoration Plan

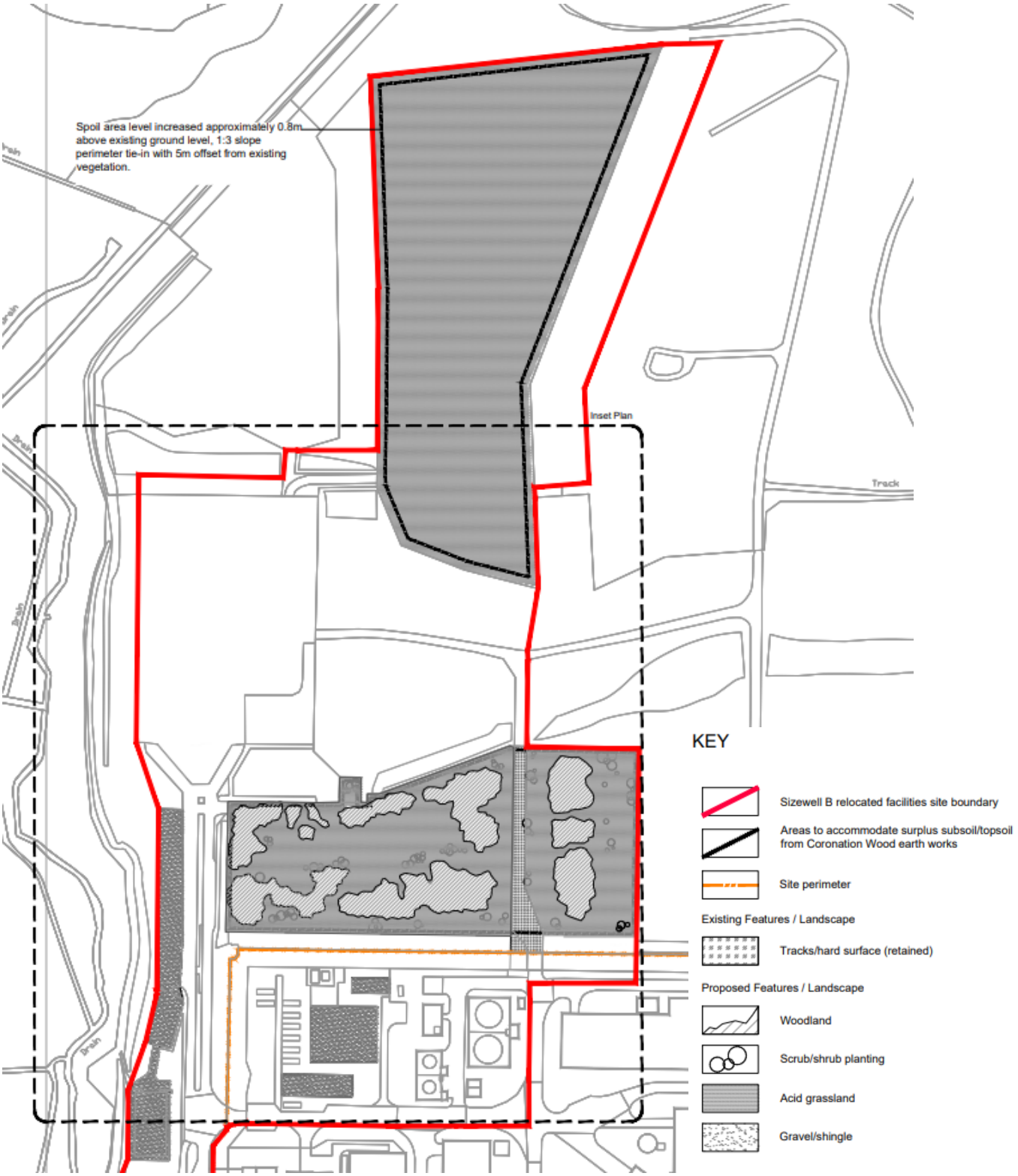


Table 4.5: Retention category biodiversity values for Sizewell B Relocated Facilities for Scenario 1

Habitat type	Condition	Area retained (Ha)	Area succession (Ha)	Units retained	Units succession	Area lost (Ha)	Units lost
Other neutral grassland	Moderate	4.99	1.07	39.92	8.56	0.11	0.88
Other neutral grassland	Fairly Poor	0	0	0.00	0.00	2.50	15.00
Bracken	Poor	0.03	0	0.12	0.00	0.00	0.00
Mixed scrub	Poor	0.31	0	1.24	0.00	0.31	1.24
Temporary lakes, ponds and pools	Moderate	0	0	0.00	0.00	0.02	0.24
Ruderal/Ephemeral	Poor	0	0	0.00	0.00	0.38	0.76
Developed land; sealed surface	N/A - Other	12.20	0	0.00	0.00	0.16	0.00
Street Tree	Moderate	0.03*	0	0.12	0.00	2.00	8.00
Amenity grassland	Fairly Poor	0	0	0.00	0.00	0.54	1.62
Other coniferous woodland	Poor	1.5	0	3.00	0.00	0.00	0.00
Other woodland; mixed	Moderate	1	0	8.00	0.00	0.00	0.00
Other woodland; mixed	Poor	0	0	0.00	0.00	0.74	2.96
Other woodland; broadleaved	Moderate	0	0	0.00	0.00	0.56	4.48
Lowland mixed deciduous woodland	Moderate	0.03	0	0.36	0.00	0.03	0.36
	Total:	**20.09**	**1.07**	**52.76**	**8.56**	**12.27**	**35.54**

*NB: as per the Defra biodiversity metric 2.0 (Ref. 2) this area does not contribute towards the total area of the site.

Table 4.6: Biodiversity units for Sizewell B Relocated Facilities from habitats post-development for Scenario 2

UK habs / habitat type	Area (ha)	Distinctiveness	Target Condition	Years to target condition	Difficulty	Units
SITE HABITAT CREATION						
Grassland - Other lowland acid grassland	4.26	Medium	Fairly Good	12	Low	27.78
Heathland and shrub - Mixed scrub	0.29	Medium	Good	7	Low	0.82
Urban - Street Tree	0.01*	Low	Moderate	27	Low	0.02
Urban - Amenity grassland	0.29	Low	Poor	1	Low	0.56
Urban - Developed land; sealed surface	6.78	Very Low	N/A - Other	0	Low	0.00
Woodland and forest - Lowland mixed deciduous woodland	0.65	High	Moderate	32+	High	0.82
Sub Total:	**12.27**				**Habitat Creation Sub Total:**	**31.89**
SITE HABITAT SUCCESSION						
Woodland and forest - Lowland mixed deciduous woodland	1.07	High	Moderate	32+	High	62.29
Sub Total:	**1.07**				**Habitat Succession Sub Total:**	**62.29**
					TOTAL HABITAT UNITS DELIVERED:	**94.18**

*NB: as per Defra biodiversity metric 2.0 (Ref. 2) this area does not contribute towards the total area of the site.

4.4 Summary

4.4.1 The summary results of the scenario 1 assessment, using the Defra biodiversity metric 2.0 calculator are presented in **Figure 4.4** below; demonstrating a net gain of **22.08%** for biodiversity units from habitats and **16.71%** units from hedgerows.

Figure 4.4 Summary of results for scenario 1

On-site baseline	*Habitat units*	96.86
	Hedgerow units	1.18
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	118.25
	Hedgerow units	1.38
	River units	0.00
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement &	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	21.39
	Hedgerow units	0.20
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	22.08%
	Hedgerow units	16.71%
	River units	0.00%

4.4.2 The summary results of the scenario 2 assessment, using the Defra biodiversity metric 2.0 calculator are presented in **Figure 4.5** below; demonstrating a net gain of **45.39%** for biodiversity units from habitats and **16.71%** units from hedgerows.

Figure 4.5 Summary of results for scenario 2

On-site baseline	*Habitat units*	96.86
	Hedgerow units	1.18
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	140.83
	Hedgerow units	1.38
	River units	0.00
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement &	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	43.97
	Hedgerow units	0.20
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	45.39%
	Hedgerow units	16.71%
	River units	0.00%

5. CONCLUSION

5.1.1 **In Scenario 1**, in which the additional 'restoration area' proposed to be undertaken should Sizewell C not be consented is not taken forward, the assessment predicts **a potential increase in biodiversity unit values for habitats of 22.08%, and an increase in biodiversity unit values for hedgerows of 16.71%.** It should be noted that while the percentage increase for hedgerows seems high, this is an increase of only 0.2 units due to the relatively short length of hedgerow existing on the site (0.59km). The increase in habitat units is due to the proposed habitat creation presented and summarised within this report but is largely due to the proposed woodland creation measures proposed within Pillbox Field.

5.1.2 **In Scenario 2**, both the proposals in scenario 1 and the additional 'restoration area' to the north of the site are considered within the calculations. This assessment estimates that there would be **a potential increase in biodiversity unit values for habitats of 45.39% and an increase in hedgerow value of 16.71%** (as per scenario 1). As above, the increase in habitat units largely due to the woodland creation measures proposed within Pillbox Field, but also an additional 22.58 units associated with habitat creation within the restoration area.

5.1.3 The achievement of these credit scores is reliant upon achieving the target condition for created habitats, which will require creation and management plans.

6. REFERENCES

Ref. 1 Defra (2019). Net Gain – Summary of Responses and Government Response [Accessed at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819823/net-gain-consult-sum-resp.pdf?_ga=2.137222000.1116181503.1566577712-286758354.1537538178]

Ref. 2 Crosher, I., Gold, S., Heaver, M., Heydon, M., Moore, L., Panks, S., Scott, S., Stone, D. and White, W. (2019a) The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value. User guide (Beta version, July 2019). Natural England.

Ref. 3 Natural England (2020). The Biodiversity Metric 2.0 – Beta Test Version Consultation Response August 2020 [Accessed at file:///C:/Users/nma77429/Downloads/Biodiversity%20Net%20Gain%20Metric%202_0%20Beta%20Test%20consultation%20-%20Summary%20and%20Response%20FINAL%20(1).pdf]

Ref. 4 JNCC (2010). Handbook for Phase 1 habitat survey. JNCC.

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APPENDIX C: SIZEWELL B RELOCATED FACILITIES BIODIVERSITY METRIC CALCULATIONS

Table 22: Post-development biodiversity units for areas of habitat within the off-site mitigation areas for Sizewell C main development site

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
Aldhurst Farm											
Woodland and forest	Other woodland; mixed	0.76	Retained	Medium	Poor	Low	Within area formally identified in local strategy	N/A	N/A	N/A	3.04
Woodland and forest	Wood-pasture and parkland	0.05	Retained	High	Moderate	Low	Within area formally identified in local strategy	N/A	N/A	N/A	0.60
Woodland and forest	Other woodland; mixed	1.07	Succession	Medium	Moderate	Low	Within area formally identified in local strategy	25	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	12.37
Grassland	Other lowland acid grassland	37.05	Created	Medium	Good	Low	Within area formally identified in local strategy	15	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site	299.62

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
										of biodiversity loss	
Heathland and shrub	Lowland Heathland	6.54	Created	High	Fairly Good	Low	Within area formally identified in local strategy	25	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	15.28
Woodland and forest	Wood-pasture and parkland	2.18	Created	High	Fairly Good	Low	Within area formally identified in local strategy	32+	Very High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1.20
Woodland and forest	Other woodland; mixed	1.43	Created	Medium	Moderate	Low	Within area formally identified in local strategy	25	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	3.62
Grassland	Other neutral grassland	4.09	Created	Medium	Good	Low	Within area formally	15	Low	Compensation inside LPA or NCA, or	33.08

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
							identified in local strategy			deemed to be sufficiently local, to site of biodiversity loss	
Woodland and forest	Wood-pasture and parkland	0.04	Created	High	Fairly Good	Low	Within area formally identified in local strategy	32+	Very High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.02
Studio field complex											
Woodland and forest	Other woodland; broadleaved	1.13	Retained	Medium	Moderate	Low	Within area formally identified in local strategy	N/A	N/A	N/A	10.40
Lakes	Pond (non-Priority Habitat)	0.05	Retained	High	Moderate	Low	Within area formally identified in local strategy	N/A	N/A	N/A	0.69
Grassland	Other lowland acid grassland	6.02	Enhanced	Medium	Good	Low	Within area formally identified in local strategy	15	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site	71.61

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
										of biodiversity loss	
Heathland and shrub	Lowland heath	0.75	Enhanced	High	Good	Low	Within area formally identified in local strategy	32+	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	8.75
Grassland	Other lowland acid grassland	29.38	Created	Medium	Good	Low	Within area formally identified in local strategy	Low	1	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	237.60
Heathland and shrub	Lowland Heathland	3.67	Created	High	Fairly Good	Low	Within area formally identified in local strategy	High	0.33	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	8.57

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
Heathland and shrub	Mixed scrub	3.67	Created	Medium	Moderate	Low	Within area formally identified in local strategy	Low	1	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	30.34
Heathland and shrub	Mixed scrub	0.75	Created	Medium	Moderate	Low	Within area formally identified in local strategy	Low	1	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	6.20
St James covert											
Grassland	Other lowland acid grassland	5.98	Enhanced	Medium	Good	Low	Within area formally identified in local strategy	15	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	71.14
Marsh harrier habitat improvement area											

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
Urban	Vacant/derelict land/ bareground	0.21	Retained	Low	Poor	Low	Within area formally identified in local strategy	N/A	N/A	N/A	0.48
Grassland	Lowland dry acid grassland	0.56	Enhanced	V.High	Fairly Good	Low	Within area formally identified in local strategy	25	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	7.28
Heathland and shrub	Lowland Heathland	0.11	Enhanced	High	Fairly Good	Low	Within area formally identified in local strategy	25	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1.26
Grassland	Lowland dry acid grassland	0.92	Enhanced	V.High	Good	Low	Within area formally identified in local strategy	20	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	14.03

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
Heathland and shrub	Lowland Heathland	0.17	Enhanced	High	Good	Low	Within area formally identified in local strategy	32+	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1.98
Grassland	Lowland dry acid grassland	25.25	Created	V.High	Fairly Good	Low	Within area formally identified in local strategy	25	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	78.65
Heathland and shrub	Lowland Heathland	4.74	Created	High	Fairly Good	Low	Within area formally identified in local strategy	25	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	11.07
Heathland and shrub	Mixed scrub	1.58	Created	Medium	Moderate	Low	Within area formally identified in local strategy	3	Low	Compensation inside LPA or NCA, or deemed to be sufficiently	13.06

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
										local, to site of biodiversity loss	
Heathland and shrub	Mixed scrub	0.04	Created	Medium	Moderate	Low	Within area formally identified in local strategy	3	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.33
Heathland and shrub	Mixed scrub	0.06	Created	Medium	Moderate	Low	Within area formally identified in local strategy	3	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.50
Kenton Hills											
Grassland	Other lowland acid grassland	4.15	Enhanced	Medium	Good	Low	Within area formally identified in local strategy	15	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	37.51

UK habs/ broad habitat	UK habs/habitat type	Area (ha)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Time to target condition	Difficulty	Spatial risk category	Biodiversity units
	Total	142.40 *									980.72

Table 23: Post-development biodiversity units for hedgerows within the off-site mitigation areas of the Sizewell C main development site

Hedgerow type	Length (km)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Spatial risk category	Time to target condition	Difficulty	Hedgerow units
Aldhurst Farm										
Native Hedgerow with trees	1.362	Retained	Low	Moderate	Low	Within area formally identified in local strategy	N/A	N/A	N/A	5.99
Native Species Rich Hedgerow	0.187	Created	Medium	Good	Low	Within area formally identified in	Compensation inside LPA or NCA, or deemed	10	Medium	1.21

Hedgerow type	Length (km)	Habitat scenario for creation	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Spatial risk category	Time to target condition	Difficulty	Hedgerow units
						local strategy	to be sufficiently local, to site of biodiversity loss			
Studio field complex										
Native Hedgerow	2.046	Retained	Low	Moderate	Low	Within area formally identified in local strategy	N/A	N/A	N/A	9.41
Marsh harrier habitat improvement area										
Native Hedgerow	0.402	Retained	Low	Moderate	Low	Within area formally identified in local strategy	N/A	N/A	N/A	1.85
Total	**3.997**									**18.46**