SUNNICA ENERGY FARM

EN010106

Environmental Statement

Volume 6

6.7 Biodiversity Net Gain Assessment

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Sunnica Energy Farm

Environmental Statement
6.7 Biodiversity Net Gain Assessment

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1 Introduction

1.1.1 AECOM Ltd was commissioned by Sunnica Limited to undertake a Biodiversity Net Gain (BNG) assessment for Sunnica Energy Farm (hereafter referred to as the 'Scheme'). This report has been prepared as part of the Development Consent Order (DCO) Application for the Scheme.

1.1.2 This BNG assessment has been undertaken using Defra's Biodiversity Metric 3.1 (Ref 1 and Ref 2) to quantify the overall effect of the Scheme on biodiversity and to be a factor in informing habitat design as part of the Scheme. The report sets out the results of the BNG assessment that has been updated following discussions with stakeholders. It also accounts for changes made to the Scheme, including the proposed changes submitted at Deadline 5 of the Examination. Relevant legislation and policy, pertinent to BNG are presented in Section 2, the method for the assessment is outlined in Section 3, the results in Section 4, and the conclusions are provided in Section 5.

1.2 Supporting Documents

1.2.1 The following documents have been used to inform the BNG assessment, reported in this document:

a. **Chapter 8: Ecology and Nature Conservation** of the Environmental Statement **[EN010106/APP/6.1]**;

b. **Appendix 10I Outline Landscape and Ecology Management Plan (OLEMP)** of the Environmental Statement **[EN010106/APP/6.2]**;

c. **Works Plans [EN010106/APP/2.2]**

d. **Figure 3-1: Sunnica East Site A and B Parameter Plan** and **Figure 3-2: Sunnica West A and B Parameter Plan** of the Environmental Statement **[EN010106/APP/6.3]**;

e. **Appendix 8B: Preliminary Ecological Appraisal report** of the Environmental Statement **[EN010106/APP/6.2]**;

f. **Appendix 8C: Terrestrial habitats and flora report** of the Environmental Statement **[EN010106/APP/6.2]; and**

g. **Appendix 8E: Aquatic Ecology report** of the Environmental Statement **[EN010106/APP/6.2]**.

1.3 The Scheme

1.3.1 The Scheme is a new solar energy farm proposal that will deliver electricity to the national electricity transmission network. Sunnica Limited is proposing to install ground mounted solar photovoltaic (PV) panel arrays to generate electrical energy from the sun and combine these with a Battery Energy Storage System (BESS) which will connect to Burwell National Grid Substation in Cambridgeshire.

1.3.2 Electricity will be generated at Sunnica East Site A, near Isleham in Cambridgeshire; Sunnica East Site B, near Worlington and Freckenham in Suffolk; and Sunnica West Site A near Chippenham and Kennett in

Cambridgeshire. All locations will comprise ground mounted solar PV panel arrays, supporting electrical infrastructure and a BESS.

1.3.3 Supporting electrical infrastructure will include on-site substations on Sunnica East Site A and Sunnica East Site B and Sunnica West Site A, and on-site cabling between the different electrical elements across the Scheme. The generating equipment of the Scheme will be fenced and protected via security measures such as Closed-Circuit Television. Inside the fenced areas, in addition to the generating equipment will be, internal access tracks, and drainage. It is not proposed for any area to be continuously lit.

1.3.4 Visual, ecological, and archaeological mitigation is proposed which includes proposed grassland planting and new woodland; retention of existing woodland, wetlands, and other vegetation; provision of replacement habitat; and offsetting areas, where there will be no development. The BESS' will consist of a compound and battery array to allow for the importation, storage, and exportation of energy to the National Grid. There will also be areas at Sunnica East Site A and Sunnica East Site B for office and storage facilities for use during the Scheme's operation.

1.3.5 The Scheme will be connected to the existing Burwell National Grid Substation, using cables buried underground, of 400 kilovolt (kV) capacity. The cables will run between Sunnica East Site A, Sunnica East Site B and Sunnica West Site A (Grid Connection Route A), and then from Sunnica West Site A onwards to the Burwell National Grid Substation (Grid Connection Route B).

1.3.6 The Scheme will have two main access points, one north of Elms Road at Sunnica East Site B and one south of La Hogue Road at Sunnica West Site A. The main access route to Sunnica West Site A will be via the Chippenham junction of the A11, to the north of junction 38 of the A14. Sunnica East Site B will be accessed via the A11 and B1085. A number of secondary access points are proposed to access the individual land parcels through construction, operation, and decommissioning phases.

1.3.7 The Scheme is defined as a Nationally Significant Infrastructure Project (NSIP) and will require a Development Consent Order (DCO) from the Secretary of State for Business, Energy, and Industrial Strategy (Secretary of State), due to its generating capacity exceeding 50 megawatts (MW).

1.3.8 The Scheme comprises the following key areas:

a. solar farm sites:
    i. East Site A;
    ii. East Site B; and
    iii. West Site A
b. associated electrical infrastructure for connection to the national transmission system, and for the purposes of this BNG assessment, Grid Connection Routes A and B have each been split in to two sections which comprise:
    i. Grid Connection Route A ('A1' - connecting East Site A with ast Site B and then 'A2' connecting East Site B to West Site A); and

ii. Grid Connection Route B ('B1' - connecting West Site A to the existing Burwell National Grid Substation.

1.3.9 **Figure 1** in Appendix A shows the locations of these key areas.

1.4 Site description

1.4.1 The Order limits area is approximately 1,059 ha and the land use dominated by arable fields (818 ha). There are mature trees and hedges, small, wooded copses, ponds, rivers and ditches present within the Site. The surrounding habitat is mainly arable and small areas of mature broadleaved woodland (plantation, semi-natural). There are individual and clusters of residential properties located within and adjacent to the Order Limits.

1.4.2 Several Water Framework Directive (WFD) waterbodies are present within the Order limits area including the Kennett-Lee Brook, Lee Brook, River Snail (Soham Lode), New River and Burwell Lode. Intrusive works are to be undertaken on four ditches within the Order limits, including tributaries of the River Snail, River Lark and in the New River catchment.

2 Relevant Legislation and Policy for BNG

2.1.1 It is government policy that planning decisions should minimise impacts on and provide net gain for biodiversity (National Planning Policy Framework 2021). In addition, the Environment Act 2021 includes provisions to make biodiversity net gain (BNG) a mandatory requirement within the town and country planning system in England.

2.1.2 As a Nationally Significant Infrastructure Project (NSIP), the Scheme will instead require consent via a Development Consent Order (DCO) which is not currently subject to any mandatory biodiversity net gain requirements. It is however anticipated that secondary legislation mandating the need for NSIP's to provide a minimum of 10% net gain in biodiversity through development will become mandatory in the mid-2020s.

2.1.3 It is government policy that planning decisions should minimise impacts on and provide net gains for biodiversity (National Planning Policy Framework (NPPF) 2021) (Ref 1).

2.1.4 Paragraph 174, where specific to BNG, of the NPPF states that: "*planning policies and decisions should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan…. Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*".

2.1.5 Section 4.5 of the draft Overarching National Policy Statement for Energy (EN-1) states: "*Although achieving biodiversity net gain is not an obligation for projects under the Planning Act 2008, energy NSIP proposals should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity where possible*".

2.1.6 Relevant policies and summary sections on BNG, taken from local policy documents, are presented in **Table 2-1**.

Table 2-1: Relevant BNG sections within local policies

Relevant Document	Relevant policies on BNG	Policy Summary on BNG
East Cambridgeshire District Council Local Plan Adopted April 2015 (Ref 2)	Policy ENV7: Biodiversity and Geology	*All development proposals will be required to:* • *Protect the biodiversity and geological value of land and buildings and minimise harm to or loss of environmental features, such as trees, hedgerows, woodland, wetland and ponds.* • *Provide appropriate mitigation measures, reinstatement or replacement of features and/ or compensatory work that will enhance or recreate habitats on or off site where harm to environmental features and habitat is unavoidable; and*

Relevant Document	Relevant policies on BNG	Policy Summary on BNG
		• *Maximise opportunities for creation, restoration, enhancement and connection of natural habitats as an integral part of development proposals.*
East Cambridgeshire District Council Supplementary Planning Document Natural Environment September 2020 (Ref 3)	Policy SPD.NE6 Biodiversity Net Gain	*In addition to the provisions set out in the Local Plan, all development proposals should contribute to and enhance the natural and local environment by firstly avoiding impacts where possible, where avoidance isn't possible minimising impacts on biodiversity and providing measurable net gains for biodiversity If and when a nationally mandated mechanism to secure 'net gains' is introduced, then the following policy will not be implemented. In the absence of any nationally mandated mechanism to secure such 'net gains', the following policy applies: All development proposals (except householder applications – see below) must provide clear and robust evidence setting out: (a) information about the steps taken, or to be taken, to avoid and minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat, (b) the pre-development biodiversity value of the onsite habitat based on an up to date survey and ideally using the Defra metric, (c) the post-development biodiversity value of the onsite habitat ideally using the Defra metric; and (d) the ongoing management strategy for any proposals. Proposals which do not demonstrate that the post-development biodiversity value of the onsite habitat will not significantly exceed the pre-development biodiversity value of the onsite habitat will be refused.*
East Cambridgeshire District Council: Biodivieristy Net Gain: East Cambridgeshire November 2022 (Ref 4)	In late 2022 East Cambridgeshire District Council (ECDC) published "Biodiversity Net Gain: East Cambridgeshire". The document provides interim guidance on the application of BNG prior to it becoming mandatory. The guidance builds upon Net Gain policies set out in ECDC's 2020 Natural Environment SPD. The guidance sets out the approach ECDC expects developers to take to delivering BNG locally and establishes when the delivery of 10% BNG is expected and instances when developments will be exempt.	

Relevant Document	Relevant policies on BNG	Policy Summary on BNG
East Cambridgeshire District Council Supplementary Planning Documents Renewable Energy Development (Commercial Scale) October 2014 (Ref 5)	Section 5: Biodiversity and geology	*Biodiversity enhancement: Applicants for renewable energy development will be expected to provide robust evidence as part of their planning application to demonstrate that the proposal will result in a net biodiversity gain as outlined in the National Planning Policy Framework. Opportunities to create or improve existing biodiversity should form part of renewable energy proposals. Biodiversity enhancement can include habitat restoration, improved links between sites and the inclusion of new environmental features within the development. For example, there is the potential to create new grasslands and hedgerows on the area around solar panels. Where environmental features are removed appropriate compensation measures will be required by the District Council. Applicants should have regard to the best practice guidance for renewable energy developments and biodiversity enhancement measures which has been produced by Natural England, the RSPB and the Solar Trade Association.*
Forest Heath District Council Core Strategy Adopted 2010 (Ref 6)	Policy CS2: Natural Environment	*Areas of landscape, biodiversity and geodiversity interest and local distinctiveness within the District will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures.*
Forest Heath and St Edmundsbury Local Plan: Joint Development Management Policies Document (last updated February 2015) (Ref 7)	Policy DM12: Mitigation, Enhancement, Management and Monitoring of Biodiversity	*In addition to, or as part of the requirements of other policies in this Development Policy Document measures should be included, as necessary and where appropriate, in the design for all developments for the protection of biodiversity and the mitigation of any adverse impacts. Additionally, enhancement for biodiversity should be included in all proposals, commensurate with the scale of the development. For example, such enhancement could include watercourse improvements to benefit biodiversity and improve water quality, habitat creation, wildlife links (including as part of green or blue infrastructure) and building design which creates wildlife habitat (e.g., green roofs, bird and/or bat boxes).*
Fordham Neighbourhood Plan (made December 2018) (Ref 8)	Policy 8: Wildlife and Habitats	*Development proposals should, wherever possible, seek to enhance connectivity of green networks through the inclusion of strong landscaping schemes that include trees, shrubs, hedgerows, green roofs and green walls, for example.* *Wherever possible, development proposals should avoid the loss of wildlife habitats or natural features such as trees, hedgerows, watercourses or ponds. Where the loss of a feature is unavoidable, mitigation may be acceptable through the introduction of new features that will result in at least a neutral impact on the wildlife.* *Overall, a net gain in biodiversity should be achieved, demonstrated by appropriate evidence prepared by a suitably qualified person on behalf of the applicant.*

3 Methods

3.1.1 This report has been produced in accordance with the methods set out in the following guidance documents:

a. Biodiversity Metric 3.1 User Guide (Ref 9); and
b. Biodiversity Metric 3.1 – Technical Supplement (Ref 10).

3.1.2 Calculations for BNG within the following sections were made using the 'Biodiversity Metric 3.1 - Calculation Tool'.

3.2 Biodiversity Metric 3.1

3.2.1 A BNG assessment involves making a comparison between the biodiversity value of habitats present within the Order Limits prior to development (*i.e*., the 'baseline') and the predicted biodiversity value of habitats following the completion of the development (*i.e*., 'post-development'). The comparison is made in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.

3.2.2 Biodiversity Metric 3.1 calculates the overall loss or gain of biodiversity of development projects by assessing the distinctiveness (*i.e.,* type of habitat and its value), condition, extent, and strategic significance of habitats on site pre- and post-development. To achieve biodiversity net gain, the biodiversity unit score must have a post-development score higher than the baseline score. When calculating the post-development biodiversity units, the metric includes a series of standard risk multipliers to account for the inherent risk of creating and restoring habitats, the time taken to establish habitats and the location of the mitigation in relation to the habitats lost on site. The risk multipliers have the effect of reducing the value of the proposed habitats, which means larger areas, habitats of higher distinctiveness, and/or condition are required to achieve net gain.

3.2.3 The metric assesses and generates separate outputs for area-based habitats (measured in habitat units) and linear based habitats, including hedgerows (measured in hedgerow units) and rivers (measured in river units).

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

3.3 Baseline Data

3.3.1 All baseline and post-development habitats within the Order Limits have been included within the calculation to provide the baseline and post-development biodiversity values.

3.3.2 Phase 1 habitat data collected in November 2018 and updated throughout 2019, 2020 and 2022 (hereafter referred to as the 'baseline) have been utilised to determine the baseline area-based and linear habitats. All baseline habitats defined within the Order limits were assigned a condition, using criteria outlined in the Biodiversity Metric 3.1 – Technical Supplement (Ref 2).

3.3.3 The Baseline Phase 1 Habitat Map (Appendix A) was digitised in Geographic Information System (GIS) to provide area and length measurements of each

habitat type. The habitats recorded during the Phase 1 habitat survey (see **Appendix 8B: Preliminary Ecological Appraisal report** of the Environmental Statement **[EN010106/APP/6.2]** and **Chapter 8: Ecology and Nature Conservation** of the Environmental Statement **[EN010106/APP/6.1]**) were converted into UK Habitat Classification (UKHab) categories, for the purposes of the BNG Assessment. These data were then combined and entered into the metric to calculate the baseline biodiversity units.

3.4 River Habitats

3.4.1 Habitat categories, associated distinctiveness, and condition scores are approached differently for watercourses. In line with current guidance (Ref 10), a desk study was undertaken to identify all watercourse habitats present within the Order Limits using the 'Discovering Priority Habitat in England' river data map (Ref 11). If the riparian zone is within the Order Limits boundary, the watercourse is assessed in Metric 3.1. Following this, watercourse habitats were assigned a habitat category (according to the criteria: Priority Habitat, Other Rivers and Streams, Ditches, Canals, Culvert) and distinctiveness using Section 41 of the NERC Act's Priority Habitat descriptions (Ref 12).

3.4.2 All aquatic habitats to be directly impacted by the Scheme, i.e., through intrusive crossing along the cable corridor or culverting, in this instance were considered to be ditches. Ditches are assessed separately to rivers and streams and are defined for Biodiversity Metric 3.1 *as "artificially-created, linear water-conveyancing features that are less than 5m wide and are likely to hold water for more than four months of the year. Their hydraulic function is primarily for land drainage and although partially or fully connected to a river system, they would not have been present without human intervention"* (Ref 9).

3.4.3 Any watercourses that have been scoped into the assessment as ditches under this definition are therefore subjected to a Ditch Condition Assessment, which involves conducting a survey in the field that uses eight criteria to assess condition, which was undertaken. These criteria include water quality and levels, macrophyte abundance and morphotype diversity, presence of marginal vegetation, physical damage, shading and presence of invasive non-native species. The greater the number of criteria the ditch achieves, the better the condition score attributed to it.

3.4.4 Several watercourses within the Order limits that are not being impacted by the Scheme, were scoped in as potential areas of enhancement. These were surveyed in August 2022 and include both river and ditch habitats.

3.4.5 To assess condition of rivers and streams, Modular River Physical (MoRPh) surveys were undertaken in line with Natural England Guidance. The survey utilises the MoRPh5 survey methodology (Ref 9; Ref 10), to record the physical and vegetation structural features across the river bed, bank face and riparian zone (up to 10 m from the bank top). Using an online tool, the results of the field survey are combined with a desk-based assessment of the indicative geomorphic type of the river to generate a watercourse condition.

3.4.6 Habitat classification, length measurement values, strategic significance, condition data and watercourse and riparian encroachment information were then

inputted to the metric to determine the baseline biodiversity units for river habitats within the Order Limits boundary.

3.5 Post-development Data

3.5.1 The proposed landscape and habitat planting for the Scheme (shown in **Figure 3-1: Sunnica East Site A and B Parameter Plan** and **Figure 3-2: Sunnica West A and B Parameter Plan** of the Environmental Statement **[EN010106/APP/6.3]** and in the Outline Landscape Environmental Management Plan (OLEMP) were digitised in GIS to create the post-development habitat data, which were used to provide the measurements of the habitats to be retained and created within the Scheme.

3.5.2 The post-development habitat data were utilised to determine the post-development biodiversity units. Target conditions have been selected in accordance with the Natural England Biodiversity Metric 3.1 User Guide and Technical Supplement.

3.5.3 On receipt of the DCO, long-term ecological management and maintenance for the Order limits will be implemented through detailed Landscape and Ecological Management Plans (LEMP) in accordance with the OLEMP. Therefore, target condition scores for the proposed habitats have been predicted in accordance with Biodiversity Metric 3.1 User Guide and Technical Supplement (Ref 10) and using professional judgement to ensure the condition scores selected were realistic and achievable.

3.6 Strategic Significance

3.6.1 Metric 3.1 requires that the strategic significance of all baseline and post-development habitats be defined. Strategic significance refers to areas of local priority for biodiversity and nature improvement, identified within local planning policies. As part of this assessment, the relevant local planning policy documents (see **Table 2-1**) were reviewed to determine the strategic significance of the habitats on Site. In this instance the application of strategic significance has been guided by the East Cambridgeshire Nature Recovery Network. Habitats located within the following areas have been assigned a high strategic significance: West A and Grid Connection Route A. Sunnica West A falls within the “stepping-stone extension” lands of the Breckland Edge Priority Area and Chippenham Fen & River Snail Priority Area whilst Grid Connection Route A falls within the River Corridors (Great Ouse, Cam, Lark, Little Ouse, Soham Lode) Priority Area and “stepping-stone extension” land of the Breckland Edge Priority Area.

3.7 Assumptions and limitations

3.7.1 All habitat areas and lengths have been measured manually using ArcGIS based on the Phase 1 Habitat Plan (shown in Figure 8-3 of Chapter 8 of the Environmental Statement **[EN010106/APP/6.1]**) and the proposed landscape and habitat planting for the Scheme shown in **Figures 3-1** and **3-2** of the Environmental Statement **[EN010106/APP/6.3]** and the OLEMP. Habitat areas are therefore considered to be approximations only.

3.7.2 The total areas of the baseline and post-development plans may vary slightly within the metric calculation. This difference is caused by the rounding of areas of individual habitats within the dataset to two decimal places and the merging of third-party spatial datasets. This has a negligible impact on the BNG Assessment as a whole.

3.7.3 It is understood that habitats created and enhanced as part of the Scheme will be subject to appropriate ongoing management and monitored to enable correct establishment and growth, and that remedial action will be taken if this does not proceed as expected, otherwise the target conditions used in the calculations may not be met. The OLEMP will be the mechanism for delivering this monitoring and management.

3.7.4 Guidance published by BRE (Ref 13) recognises that on average 95% of a site used for solar farm development is “still accessible for plant growth and potentially for wildlife enhancements and complementary agricultural activities such as conservation grazing”. As such 95% of the solar array footprint has been categorised as ‘modified grassland’ in ‘Moderate’ condition with the remaining 5% allocated within the metric as ‘developed land - sealed surface’ to consider array infrastructure.

3.7.5 Seed mixes specified for these areas within any long-term management and monitoring plan should favour nectar and pollen rich species that are both stress and shade tolerant. This approach is supported by RSPB (Ref 14) which states “biodiversity gains are possible where intensively cultivated arable or grassland is converted to extensive grassland and/or wildflower meadows between and/or beneath solar panels and in field margins”.

3.7.6 A total of 20ha of ephemeral habitats have been assumed to be provided across ECO1, ECO2 and ECO3 as specific Stone Curlew mitigation.

3.7.7 Areas of modified grassland under panels have been assigned a post-development target condition of ‘moderate’ to acknowledge both the prolonged levels of shading these areas will receive over the lifetime of the Scheme and the seed mixes and management prescriptions as specified in the OLEMP.

3.7.8 Areas of high value arable flora are present within E14, E17, E30 and W09. These areas have been captured under the relevant UK Habitat classification.

3.7.9 This assessment considered all habitat losses, including those during construction from the temporary location of compounds, access routes and other activities associated with the Scheme. It is recognised that the Arboricultural Impact Assessment (AIA) **[EN010106/APP/8.46]** identifies, that in a worse-case scenario, 15,650m^2 of tree canopy cover will potentially be lost to facilitate construction of the Scheme, e.g., to widen existing access points and internal roads. However, the position presented in the Ecological Impact Assessment and in this BNG report, considers that there is sufficient flexibility in the Works Plans to avoid woodland loss at the detailed design stage and that this level of impact will not be realised.

3.7.10 Where temporary access points or visibility splays are proposed, hedgerows have been assumed to be temporarily lost and subsequently to be reinstated.

3.7.11 Where permanent access points or visibility splays are proposed, permanent hedgerow loss has been assumed.

3.7.12 The post-development plan assumes the creation and retention of grassland of varying condition and type. This variation is a reflection of the varying soil types across the 1,059 ha site. Where grassland is proposed to be created over soils with a calcareous influence 'Poor' condition 'Lowland Calcareous Grassland' has been selected as a target habitat for creation. Similarly, where underlying soils display an acid influence 'Moderate' condition 'Other Lowland Acid Grassland' is the target habitat for creation. This variation in condition has been included in the metric to take into account the lack of an 'other calcareous grassland' option within the metric. Where 'Other neutral grassland' has been identified for creation a 'Moderate' condition has been selected.

3.7.13 It is standard practice to convert river habitats into linear features for metric calculations, with the spatial areas of the river absorbed into adjacent habitats. However, in this instance, whilst linear measurements have been used to calculate the river unit value within the Metric 3.1, river and stream area measurements have been retained when calculating the Site's overall extent. This approach is reflective of the size of the Site and ensures the extent of adjacent grassland habitats are not overestimated in the metric calculation.

3.7.14 The Scheme will only result in those impacts to the watercourses as described in this report within the post-development section below.

3.7.15 There are some watercourses and ditches within the Order limits that are not included within this BNG assessment as there will be no impacts to these watercourses or their riparian zones (10 m) from the bank-top either side, or ditches. However, these are assessed in the WFD assessment presented in Appendix 9B of this Environmental Statement [EN010106/APP/6.2].

3.7.16 The MoRPh and ditch condition assessment surveys assess watercourse condition based on physical and morphological features, not biological elements of watercourse condition. These are assessed in Appendix 8E of this Environmental Statement [EN010106/APP/6.2].

3.7.17 Some ditches were scoped out of the river metric based on the assessment that they likely do not hold water for four months of the year (Ref 1), and therefore they are assessed as part of the adjacent terrestrial area-based habitats or associated features.

3.7.18 Enhancements to the impacted wet ditches will consist of soft engineering techniques and improvements to the riparian corridor to improve channel diversity and biodiversity. These measures will be defined at detailed design stage, following grant of the DCO and prior to construction.

3.7.19 Reinstatement of watercourses and ditches after intrusive works (culverting or open trenching) will aim to provide an improved channel form with enhancement works to be carried out (where relevant and appropriate to do so) up to 10 m upstream and downstream of the open trench or culvert. The River Metric assessment assumes ("a best-case scenario") that 10 m upstream and 10 m downstream of the works will be enhanced.

3.7.20 Lee Brook (WFD water body ID: GB105033042970), which runs alongside the Order limits boundary at West Site A, was identified as an area of potential enhancement. However, at the time of survey, the watercourse was dry with terrestrial vegetation growing in the channel following a long period of extreme dry weather in summer 2022. As a result, a MoRPh survey could not be completed, and Lee Brook was scoped out of the river metric.

3.7.21 MoRPh and ditch condition assessment surveys for areas of potential enhancement were undertaken in August 2022 during a period of extreme dry weather in the United Kingdom, resulting in very low flows. Therefore, suggested enhancement measures are tailored to the prevailing habitat conditions, which are likely to become more normal as such extreme weather events increase in frequency. Therefore, this is not considered to have had an adverse effect on the watercourse condition generated, or the enhancement measures recommended as a result.

4 Results

4.1 On-site baseline habitats

4.1.1 The Order limits covers an area of 1,059 ha and the land use is dominated by arable fields. There are mature trees, small, wooded copses, and ponds. In addition, there are approximately 30 km of hedgerows and2.47 km of river and ditch habitats within the Order Limits.

Area-based habitats

4.1.2 A description of the area-based habitats present within the Order limits is provided below. The habitats listed in the following sections are presented in their UKHab classification.

Woodland and forest – other woodland; broadleaved

4.1.3 Small areas of newly planted broad-leaved woodland are present in the Sunnica East sites A and B and mostly consisted of Field Maple *Acer campestre*, Cherry *Prunus avium* and Ash *Fraxinus excelsior*. Many of the plantation woodlands found scattered along the Grid Connection Routes consisted of mixed broad-leaved and coniferous species.

Woodland and forest - other coniferous woodlands

4.1.4 This habitat was predominantly found within the Sunnica East Site B, with larger blocks present in the eastern section. These areas of woodland either solely consisted of or were dominated by Scots Pine *Pinus sylvestris*. In the western section of the Sunnica East Site, strips of mature Scots Pine formed field boundaries; planted as wind breaks and typical of the Breckland landscape. Dominant species of the ground flora in these areas where Chickweed *Stellaria media*, Common Nettle *Urtica dioica* and Dog's Mercury *Mercurialis perennis*. A few small areas of young conifer plantation woodland were present within the Sunnica West Sites and along the Grid Connection Routes, which either solely consisted of, or were dominated, by Scots Pine.

Woodland and forest – lowland mixed deciduous woodland

4.1.5 A number of mature semi-natural broad-leaved woodland blocks are present across the Sunnica West A and along the Grid Connection Routes. These woodland blocks typically included species such as Oak *Quercus robur*, Silver Birch *Betula pendula*, Field Maple, Beech *Fagus sylvatica*, Walnut *Juglans regia* and Ash with an understory of Privet *Ligustrum vulgare* and Hawthorn *Crataegus monogyna.*

4.1.6 A few areas of semi-natural broad-leaved woodland are present across the Sunnica East Sites A and B. These typically included species such as Beech and Ash with an understory of Snowberry *Symphoricarpos alba*, Privet and Hawthorn.

Heathland and shrub – mixed scrub

4.1.7 Pockets of dense and scattered scrub are throughout the Order Limits, consisting predominantly of Hawthorn and Blackthorn *Prunus spinosa*.

Woodland and forest – other woodland: mixed

4.1.8 Many of the woodlands found scattered across the Sunnica East Sites A and B consisted of mixed mature broad-leaved and coniferous specimens. Coniferous species were predominantly planted Scot's Pine, but a wide variety of broad-leaved species were present, including Field Maple, Cherry, Buckthorn *Rhamnus cathartica*, Oak, Sycamore *Acer pseudoplatanus*, Beech and Ash. Many of the woodlands found scattered across the Sunnica West Site A consisted of mixed mature broad-leaved and coniferous specimens. Coniferous species were predominantly planted Scots Pine, but a wide variety of broad-leaved species were present, Field Maple, Cherry, Buckthorn, Oak, Sycamore, Beech and Ash.

Acid Grassland – lowland dry acid grassland

4.1.9 Five fields in Sunnica East Site B are categorised as U1 *Festuca ovina-Agrostis capillaris-Rumex acetosa* grassland or categorised as SD10 *Carex arenaria* dune community. All are examples of lowland dry acid grassland priority habitat.

Acid Grassland – other lowland acid grassland

4.1.10 Two small areas within Sunnica East Site B, including a semi-improved grassland strip 10-20 m wide between a conifer woodland and arable fields of light acidic sandy soil with some calcareous influence; and a small area of unmanaged grassland and ephemeral/short perennial vegetation outside a corner of a livestock field.

Grassland – lowland calcareous grassland

4.1.11 This habitat is found around an irrigation reservoir on the Sunnica East Site B and is surrounded by arable fields. It comprises tall unmanaged grassland and ruderal herbs with calcareous influences (from chalk exposed through creation of the reservoir). The flora has frequent to abundant Wild Marjoram *Origanum vulgare*, Lady's Bedstraw *Galium verum*, False-oat Grass *Arrhenatherum elatius*, Mugwort *Artemisia vulgaris*, Common Nettle and Bramble *Rubus fruticosus*, with rare to occasional Clustered Bellflower *Campanula glomerata*, Greater Knapweed

Centaurea scabiosa, Dropwort *Filipendula vulgaris* and Small Scabious *Scabiosa columbaria*.

Grassland – other neutral grassland

4.1.12 Small areas of semi-improved neutral grassland, marshy grassland and semi-improved grassland are found across the Order Limits.

Grassland – modified grassland

4.1.13 A number of agricultural fields across the Order Limits consisted of Perennial Ryegrass *Lolium perenne* dominated improved grasslands. Isolated areas of semi-improved grassland are also present across Sunnica West A including clearings within mixed woodland in Sunnica West Site A, with dominant Cock's-foot *Dactylis glomerata*, False Oat-grass and Yorkshire-fog *Holcus lanatus*, along with Knapweed *Centaurea* sp. and frequent Tormentil *Potentilla erecta* and Agrimony *Agrimonia eupatoria*.

Sparsely Vegetated Land – ruderal / ephemeral

4.1.14 Small areas of tall ruderal and ephemeral habitat are present throughout the Order Limits and a number of the areas of hardstanding present across the Sunnica West Site A have ephemeral vegetation and bryophyte communities, including Silver Moss *Bryum argenteum*.

Cropland – cereal crops

4.1.15 The majority of the Order Limits consists of arable land with bordering grassland and hedgerows.

Ponds – Non-priority habitat

4.1.16 Several ponds located throughout the Order Limits, associated with woodland and scrub along arable boundaries.

Urban – vacant / derelict land / bare ground

4.1.17 Areas of bare ground can be found throughout the Order Limits, with larger areas of bare ground on the Sunnica East Sites A and B, with disturbed ground, which forms a pig farm on both sites.

Urban – developed land: sealed surface

4.1.18 Small areas of hardstanding are scattered throughout the Order Limits, consisting mainly of roads and access tracks. A small building is also present on Sunnica East Site B.

Linear-based habitats (hedgerows and trees)

4.1.19 A description of hedgerows and trees present within the Order Limits, summarised below. The habitats listed in the following sections are presented in their UKHab classification.

Line of trees

4.1.20 Individual trees are present across the Order Limits. Individual trees have been categorised in UK Habitats as 'Line of Trees'.

Native hedgerow

4.1.21 Native species-poor hedgerows can be found at field boundaries across the Order Limits. These species-poor hedgerows have been categorised in UKHab as 'Native Hedgerow'.

Native species-rich hedgerow with trees

4.1.22 One native species-rich hedgerow with trees includes Elm sp., Field Rose *Rosa arvensis*, Beech, Common Hawthorn, Wild Privet *Ligustrum vulgare* and Blackthorn.

Native hedgerow with trees

4.1.23 Native species-poor hedgerows with trees can be found at field boundaries across the Order Limits. These species-poor hedgerows have been categorised in UK Habitats as 'Native Hedgerow with Trees'.

Linear-based habitats (rivers and ditches)

4.1.24 A total of 2.47 km of river/ditch habitats were scoped in and assessed within the baseline habitats, consisting of 0.56 km of ditches impacted by the Scheme and 1.91 km of river and ditch habitats identified as areas of potential enhancement.

4.1.25 The directly impacted habitats are comprised of:

i. 393 m of a tributary ditch of the River Lark at TL 66870 74570 (between E01 and E02, as shown in **Figure 3-1** of the Environmental Statement **[EN010106/APP/6.3]**);
ii. 96 m of a tributary ditch of the River Snail at TL 63328 69099 (W7); and
iii. 66 m of a tributary ditch in the New River catchment at TL 60273 68642 (W13).

4.1.26 Habitats identified as areas of potential enhancement are comprised of:

i. 1,414 m of the Kennett – Lee Brook (Lee Brook) between TL 66465 74887 and TL 66396 72945; and
i. 500 m of a tributary ditch of the River Lark at TL 66431 74677 (referred to as Ditch 02 in **Appendix 8E** of the Environmental Statement **[EN010106/APP/6.2]**).

Impacted ditches

4.1.27 The tributary of the River Lark (E01-E02) is a linear drainage ditch bordered by pasture fields in The Fen. It held approximately 20 to 30 cm of clear water at the time of survey. A mixture of emergent, submerged, and floating macrophytes were present in the tributary and it was generally unshaded and dominated by silt substrate. No non-native plant species were recorded along the stretch surveyed. It is culverted for 11 m under a track between fields. This culverted section is

automatically assigned 'Poor' condition within the metric. The tributary fits the definition of a ditch and is therefore not a Priority River habitat and is not mentioned in the Local Plan, River Basin Management Plan or Catchment Plans. It is therefore classed as 'Low potential/action not identified in any plan' within the metric, which equates to a low strategic significance. The ditch condition assessment showed that the remaining 382 m of ditch was in moderate condition within the Scheme boundary and is therefore included within the baseline habitats metric calculation as such. A summary of this information can be found in Table 4-3.

4.1.28 The tributary of the River Snail (W7) is a ditch that drains from the Fordham Woods Nature Reserve, although in the stretch surveyed it was bordered by pasture fields. Access was limited to a small stretch of this tributary, however the water that was observed was clear, heavily shaded by trees and the bed was dominated by leaf litter and silt. No non-native plant species were recorded along the stretch surveyed. It was culverted for 6 m under a track between fields. This culverted section is automatically assigned 'Poor' condition within the metric. The tributary fits the definition of a ditch and is therefore not a Priority River habitat and is not mentioned in the Local Plan, River Basin Management Plan or Catchment Plans. It is therefore classed as 'Low potential/action not identified in any plan' within the metric, which equates to a low strategic significance. The ditch condition assessment on the remaining open section of the tributary showed that it was in poor condition. A total of 90 m of this ditch was present within the Scheme boundary. This is therefore included within the baseline habitats metric calculation. A summary of this information can be found in Table 4-3.

4.1.29 The tributary of the New River (W13) runs parallel to the B1102 Ness Road and is bordered by pasture fields to the right. At the time of survey, it was mostly dry and unshaded, although some wetted areas were dominated by bulrush. It has steep banks, likely due to historic dredging and its bank tops had been recently cut back at the time of survey. No non-native plant species were recorded along the stretch surveyed. It is culverted for 8 m under a track. This culverted section is automatically assigned 'Poor' condition within the metric. The tributary fits the definition of a ditch and is therefore not a Priority River habitat and is not mentioned in the Local Plan, River Basin Management Plan or Catchment Plans. It is therefore classed as 'Low potential/action not identified in any plan' within the metric, which equates to a low strategic significance. The ditch condition assessment showed that the remaining open section of the tributary is in poor condition and a total of 58 m of this is present within the Order Limits and was therefore included within the baseline habitats metric calculation. A summary of this information can be found in Table 4-3.

Watercourses and ditches identified for enhancement opportunities

4.1.30 The following watercourses were scoped in as potential enhancement opportunities with the aim of achieving a 10% net gain in the river metric.

4.1.31 The Kennett – Lee Brook (Lee Brook) (WFD water body ID: GB105033043020) flows north from Freckenham through Lee Farm until it joins the River Lark; 240 m of the river lies within the Order Limits, plus an additional 1,174 m^2 of its riparian zone. At the southern end of the reach near Beck Road, substrate consisted of a gravel and sand bed with areas of fine silt deposits. At the northern end of the

reach there was no perceived flow and a layer of floating macrophytes covering the whole width of the river. Substrate here consisted of silt and leaf litter. The river is bordered by arable fields for most of its length and its riparian zone consists mainly of grassy banks and short reaches of trees. An area of marshy reedbed is present towards the northern end of the reach. The Kennett – Lee Brook (Lee Brook) is assigned as having major watercourse encroachment, due to the presence of a weir directly upstream of the bridge at Beck Road. Based on the MoRPh survey, the river is considered to be in "Moderate" condition. The section of the Kennett – Lee Brook (Lee Brook) within the Order Limits is a Priority River habitat and is mentioned within the Chalk Stream Restoration Strategy (Ref 15). The Kennett – Lee Brook (Lee Brook) has been recorded in the metric as "Within River Basin Management Plans" and is therefore classed as being of high strategic significance.

4.1.32 The tributary to the River Lark (Ditch 02) runs parallel to the Kennett – Lee Brook (Lee Brook) and is bordered by arable fields and marshy grassland. At the time of survey, the water was clear, heavily shaded by bankside vegetation and the bed was dominated by leaf litter and silt. The ditch has steep banks, likely due to historic dredging, with un-managed bank tops. No non-native plant species were recorded in the reach surveyed. The tributary fits the definition of a ditch and is therefore not a Priority River habitat and is not mentioned in the Local Plan, River Basin Management Plan or Catchment Plans. It is therefore classed as 'Low potential/action not identified in any plan' within the metric, which equates to a low strategic significance.

4.2 On-site biodiversity value

4.2.1 Using Defra's Biodiversity Metric 3.1, the respective baseline biodiversity value for area-based and linear habitats are outlined in **Tables 4-1, 4-2** and **4-3**. In total, the estimated baseline biodiversity value of the habitats present is calculated as 3110.26 habitat units, 151.16 hedgerow units and 19 river units.

Table 4-1: Baseline area-based habitats

Habitat (UKHab)	Distinctiveness	Condition	Strategic Significance	Area (ha)	Habitat Units
Cereal crops	Low	Condition Assessment N/A	Low	290.87	581.74
Cereal crops	Low	Condition Assessment N/A	Medium	127.75	281.05
Cereal crops	Low	Condition Assessment N/A	High	398.91	917.49
Developed land; sealed surface	V.Low	N/A - Other	Low	12.47	0.00
Lowland calcareous grassland	High	Moderate	Medium	0.91	12.01
Lowland dry acid grassland	V.High	Good	High	6.41	176.92

Lowland mixed deciduous woodland	High	Moderate	Low	1.92	23.04
Lowland mixed deciduous woodland	High	Moderate	Medium	0.19	2.51
Lowland mixed deciduous woodland	High	Moderate	High	8.98	123.92
Mixed scrub	Medium	Moderate	Low	0.14	1.12
Mixed scrub	Medium	Moderate	Medium	0.87	7.66
Mixed scrub	Medium	Moderate	High	3.67	33.76
Modified grassland	Low	Poor	High	53.92	124.02
Other coniferous woodland	Low	Moderate	Low	1.38	5.52
Other coniferous woodland	Low	Moderate	Medium	0.04	0.18
Other coniferous woodland	Low	Moderate	High	4.35	20.01
Other lowland acid grassland	Medium	Moderate	Low	1.23	9.84
Other lowland acid grassland	Medium	Good	Medium	4.49	59.27
Other lowland acid grassland	Medium	Moderate	High	0.05	0.46
Other neutral grassland	Medium	Good	Medium	2.03	26.80
Other neutral grassland	Medium	Good	Medium	0.22	2.90
Other neutral grassland	Medium	Moderate	Medium	8.5	74.80
Other neutral grassland	Medium	Poor	Low	6.63	26.52
Other neutral grassland	Medium	Poor	Medium	10.86	47.78
Other neutral grassland	Medium	Poor	High	17.27	79.44
Other woodland; broadleaved	Medium	Moderate	Low	0.13	1.04
Other woodland; broadleaved	Medium	Moderate	Medium	0.14	1.23
Other woodland; broadleaved	Medium	Moderate	High	3.12	28.70
Other woodland; mixed	Medium	Moderate	Low	1.2	9.60
Other woodland; mixed	Medium	Moderate	Medium	0.08	0.70
Other woodland; mixed	Medium	Moderate	Low	14.85	118.80

Ponds (Non-Priority Habitat)	Medium	Moderate	Medium	1.58	13.90
Ruderal/Ephemeral	Low	Moderate	Low	1.77	7.08
Ruderal/Ephemeral	Low	Moderate	Medium	0.26	1.14
Ruderal/Ephemeral	Low	Moderate	High	2.11	9.71
Vacant/derelict land/ bareground	Low	Moderate	Low	55.7	222.80
Vacant/derelict land/ bareground	Low	Moderate	Medium	5.62	24.73
Vacant/derelict land/ bareground	Low	Moderate	High	6.97	32.06
TOTAL				**1057.59**	**3110.26**
*The calculation excludes 1.46 ha of rivers and streams and 0.30 ha of unsurveyed land, hence the total does not equate to the 1059.35 ha of the Order Limits					

Table 4-2: Hedgerow baseline habitats

Habitat (UKHab)	Distinctiveness	Condition	Strategic Significance	Length (km)	Habitat Units
Line of Trees	Low	Moderate	Medium	5.15	22.66
Line of Trees (Ecologically Valuable) - with Bank or Ditch	Medium	Moderate	Medium	0.04	0.35
Native Hedgerow	Low	Moderate	Medium	19	83.60
Native Hedgerow	Low	Poor	Medium	2.29	5.04
Native Hedgerow with trees	Medium	Moderate	Medium	2.6	22.88
Native Hedgerow with trees - Associated with bank or ditch	High	Moderate	Medium	0.54	7.13
Native Hedgerow - Associated with bank or ditch	Medium	Moderate	Medium	1.08	9.50
TOTAL				**30.70Km**	**151.16**

Table 4-3: River baseline habitats

River habitat	Length within Order Limits (m)	Distinctiveness	Condition	Strategic Significance	Watercourse encroachment	Riparian encroachment	River Habitat Units
Tributary ditch of the River Lark (E01-E02)	382	Medium	Moderate	Low potential/ action not identified in any plan	None	None	3
Culverted section of the tributary ditch of the River Lark (E01-E02)	11	Low	Poor	Low potential/ action not identified in any plan	None	None	<1
Tributary ditch of the River Snail (W7)	90	Medium	Poor	Low potential/ action not identified in any plan	None	None	<1
Culverted section of the tributary ditch of the River Snail (W7)	6	Low	Poor	Low potential/ action not identified in any plan	None	None	<1
Tributary ditch of the New River (W13)	58	Medium	Poor	Low potential/ action not identified in any plan	None	None	<1

Culverted section of the tributary ditch of the New River (W13)	8	Low	Poor	Low potential/ action not identified in any plan	None	None	<1
Kennett – Lee Brook (Lee Brook)	1414	Very High	Moderate	Within River Basin Management Plan	Major	None	13
Tributary ditch to the River Lark (Ditch 02)	500	Medium	Poor	Low potential/ action not identified in any plan	None	None	2
Total length (km)	**2.47**	**-**	**-**	**-**	**-**	**Total river habitat units**	**19**

4.3 On-site Post-development Retained Habitats

4.3.1 The Post-Development Plan (**Figure 3-1: Sunnica East Site A and B Parameter Plan** and **Figure 3-14: Sunnica West A and B Parameter Plan** of the Environmental Statement **[EN010106/APP/6.3] and the OLEMP**) indicates those habitats to be retained and/or created post-development.

4.3.2 Based on the current proposals several habitats are to be retained (refer to **Tables 4-4**, **4-5** and **4-6**). In total, the predicted biodiversity value of the habitats retained within the Scheme is calculated as 1013.08 habitat units, 146.01 hedgerow units and 5.32 river units.

Table 4-4: Retained on-site area-based habitats

Habitat (UKHab)	Distinctiveness	Condition	Strategic Significance	Area (ha)	Habitat Units
Cereal crops	Low	Condition Assessment N/A	Low	0.64	1.28
Cereal crops	Low	Condition Assessment N/A	Medium	96.75	212.85
Cereal crops	Low	Condition Assessment N/A	High	1.37	3.15
Developed land; sealed surface	V.Low	N/A - Other	Low	11.8	0.00
Lowland calcareous grassland	High	Moderate	Medium	0.91	12.01
Lowland dry acid grassland	V.High	Good	High	6.41	176.92
Lowland mixed deciduous woodland	High	Moderate	Low	1.92	23.04
Lowland mixed deciduous woodland	High	Moderate	Medium	0.19	2.51
Lowland mixed deciduous woodland	High	Moderate	High	8.98	123.92
Mixed scrub	Medium	Moderate	Medium	0.02	0.18
Mixed scrub	Medium	Moderate	High	3.45	31.74
Modified grassland	Low	Poor	High	15.22	35.01
Other coniferous woodland	Low	Moderate	Low	1.38	5.52
Other coniferous woodland	Low	Moderate	Medium	0.04	0.18
Other coniferous woodland	Low	Moderate	High	4.35	20.01

Other lowland acid grassland	Medium	Good	Medium	4.49	59.27
Other lowland acid grassland	Medium	Moderate	High	0.05	0.46
Other neutral grassland	Medium	Good	Medium	0.13	1.72
Other neutral grassland	Medium	Good	Medium	0.16	2.11
Other neutral grassland	Medium	Moderate	Medium	8.5	74.80
Other neutral grassland	Medium	Poor	Low	0.76	3.04
Other neutral grassland	Medium	Poor	Medium	0.15	0.66
Other neutral grassland	Medium	Poor	High	5.38	24.75
Other woodland; broadleaved	Medium	Moderate	Low	0.13	1.04
Other woodland; broadleaved	Medium	Moderate	Medium	0.14	1.23
Other woodland; broadleaved	Medium	Moderate	High	3.12	28.70
Other woodland; mixed	Medium	Moderate	Low	1.2	9.60
Other woodland; mixed	Medium	Moderate	Medium	0.08	0.70
Other woodland; mixed	Medium	Moderate	Low	14.85	118.80
Ponds (Non-Priority Habitat)	Medium	Moderate	Medium	1.58	13.90
Ruderal/Ephemeral	Low	Moderate	Low	0.63	2.52
Vacant/derelict land/ bareground	Low	Moderate	Low	1.39	5.56
Vacant/derelict land/ bareground	Low	Moderate	Medium	0.97	4.27
Vacant/derelict land/ bareground	Low	Moderate	High	2.53	11.64
TOTAL				**199.67**	**1013.08**

Table 4-5: Retained on-site linear habitats (hedgerows and trees)

Habitat (UKHab)	Distinctiveness	Condition	Strategic Significance	Length (km)	Habitat Units
Line of Trees	Low	Moderate	Medium	5	22.00

Line of Trees (Ecologically Valuable) - with Bank or Ditch	Medium	Moderate	Medium	0.04	0.35
Native Hedgerow	Low	Moderate	Medium	18	79.20
Native Hedgerow	Low	Poor	Medium	2.29	5.04
Native Hedgerow with trees	Medium	Moderate	Medium	2.6	22.88
Native Hedgerow with trees - Associated with bank or ditch	High	Moderate	Medium	0.54	7.13
Native Hedgerow - Associated with bank or ditch	Medium	Moderate	Medium	1.07	9.42
TOTAL					**1.46.01**

Table 4-6: Retained on-site linear habitats (rivers)

Habitat Retained	Length (m)	Distinctiveness	Condition	Strategic significance	Watercourse encroachment	Riparian encroachment	Habitat Units
Tributary ditch of the River Lark (E01-E02)	355	Medium	Moderate	Low potential/action not identified in local plan	None	None	3
Culverted section of the tributary ditch of the River Lark (E01-E02)	11	Low	Poor	Low potential/action not identified in local plan	N/A Culvert	None	<1
Tributary ditch of the River Snail (W7)	70	Medium	Poor	Low potential/action not identified in local plan	None	None	<1
Culverted section of the tributary ditch of the River Snail (W7)	6	Low	Poor	Low potential/action not identified in local plan	N/A Culvert	None	<1
Tributary ditch of the New River (W13)	38	Medium	Poor	Low potential/action not identified in local plan	None	None	<1

Habitat Retained	Length (m)	Distinctiveness	Condition	Strategic significance	Watercourse encroachment	Riparian encroachment	Habitat Units
Culverted section of the tributary ditch of the New River (W13)	8	Low	Poor	Low potential/action not identified in local plan	N/A Culvert	None	<1
Tributary ditch of the River Lark (Ditch 02)	500	Medium	Poor	Low potential/action not identified in local plan	None	None	2
Total Length (km)	**0.99**	**-**	**-**	**-**	**-**	**Total River Habitat Units**	**5**

4.4 On-site Post-development Created and Enhanced Habitats

4.4.1 The habitats proposed to be created as part of the Scheme are detailed in **Table 4-7**, hedgerows being created are detailed in **Table 4-8** and rivers or ditches being created in **Table 4-9**.

4.4.2 The created habitats vary in ecological value, ranging from very low to high distinctiveness. The management regime required for the created and enhanced habitats to reach their target condition in the specified timeframe is provided in Outline Landscape and Ecology Management Plan (OLEMP) (**Appendix 10I** of the Environmental Statement **[EN010106/APP/6.2]).** In total, the predicted biodiversity value of the habitats created within the Scheme is calculated as 3398.86 habitat units, 47.86 hedgerow units and, 1 river unit, with a further 16 river units enhanced.Impacted ditches

Tributary ditch of the River Lark (E01-E02)

4.4.3 A total of 366 m of this ditch will be retained at its current condition. An enhancement length of 20 m is proposed to offset the loss of habitat from the creation of a new culvert. This culvert will be approximately 7 m long and its impact would be mitigated through inclusion of a buried culvert base and natural bed, maintaining a continuous gradient with the current ditch, and sizing the culvert so that it will not impact flow velocities or back up flood flows. This new culvert is classed as creation of poor habitat within the metric. It is likely that this ditch crossing will be amended to a clear span bridge rather than a culvert. If this is confirmed at detailed design, the River Metric calculations will be updated to reflect this.

Tributary ditch of the River Snail (W7)

4.4.4 A total of 76 m of this ditch will be retained at its current condition. An enhancement length of 20 m (10 m both upstream and downstream of the works) is proposed to offset any minor impacts from the intrusive crossing proposed by the cable corridor. Intrusive crossing techniques are only considered suitable on these ditches, none of which are designated under the WFD (although they may form tributaries to WFD water bodies). Impacts from intrusive crossings largely arise from direct disturbance of the riparian zone and channel, and indirect impacts during the construction period from the potential risk of fine sediment and chemical pollutants draining into the ditch if not adequately controlled. Mitigation will be delivered through good industry practice as outlined in the Construction Environmental Management Plan (CEMP) and Water Management Plan (WMP). The ditch will be reinstated to at least its previous condition, if not better, within two years and therefore any impacts from these works will be temporary and do not require including within the metric – this assumes that sections of the ditch lined with semi-mature or mature trees will remain unaffected, as it would not be feasible to reinstate these habitats within two years.

Tributary of the New River (W13)

4.4.5 A total of 46 m of this ditch is to be retained at its current condition. An enhancement length of 20 m (10 m both upstream and downstream of the works) is proposed for this tributary to offset any minor impacts from the intrusive

crossing proposed by the cable corridor. Intrusive crossing techniques are only considered suitable on the smaller, less significant ditches, none of which are designated under the WFD (as described above). Impacts from intrusive crossings largely arise from direct disturbance of the riparian zone and channel, and indirect impacts during the construction period from the potential risk of fine sediment and chemical pollutants draining into the ditch if not adequately controlled. Mitigation will be delivered through good industry practice as outlined in the CEMP and WMP. The ditch will be reinstated to at least its previous condition, if not better, within two years (refer to assumption for W7 above) and therefore any impacts from these works will be temporary and do not require including within the metric.

Un-impacted watercourses

4.4.6 In order to increase net gain in the river metric, two additional watercourses were identified as areas for potential on-site enhancement: a tributary ditch to the River Lark (Ditch 02); and the Kennett – Lee Brook (Lee Brook). Where planting of vegetation is required, either within the channel or riparian zone, plants of local provenance should be used. Alternatively, vegetation may be allowed to develop naturally over time where adjacent habitats allow. Care must be taken to avoid transferring or introducing INNS. Details of planting specification should be further presented in Landscape and Ecological Management Plans brought forward to include the measures set out in the OLEMP.

Table 4-7: Created on-site area-based habitats

Habitat (UKHab)	Distinctiveness	Target Condition	Time to Target Condition (Years)	Area (ha)	Habitat Units
Developed land; sealed surface	53.22	N/A - Other	0	53.22	0.00
Lowland calcareous grassland	2.44	Poor	5	2.44	4.65
Lowland calcareous grassland	24.95	Poor	5	24.95	41.34
Lowland calcareous grassland	62.53	Poor	5	62.53	113.97
Mixed scrub	0.72	Good	10	0.72	6.05
Modified grassland	178.96	Moderate	4	178.96	620.76
Developed land; sealed surface	9.42	N/A - Other	0	9.42	0.00
Modified grassland	24.71	Moderate	4	24.71	94.28
Developed land; sealed surface	1.3	N/A - Other	0	1.3	0.00
Modified grassland	241.27	Moderate	4	241.27	962.43
Developed land; sealed surface	12.7	N/A - Other	0	12.7	0.00
Other lowland acid grassland	15.51	Moderate	10	15.51	86.89

Other lowland acid grassland	4.69	Moderate	10	4.69	28.90
Other lowland acid grassland	138.64	Moderate	10	138.64	893.20
Other neutral grassland	22.02	Good	10	22.02	203.55
Other woodland; broadleaved	22.56	Moderate	15	22.56	105.76
Other woodland; broadleaved	0.88	Moderate	15	0.88	4.54
Other woodland; broadleaved	20.91	Moderate	15	20.91	112.73
Purple moor grass and rush pastures	1.38	Good	30	1.38	4.32
Ruderal/Ephemeral	20	Good	5	20	115.48
TOTAL				**858.81**	**3398.86**

Table 4-8: Created hedgerow habitats

Habitat (UKHab)	Distinctiveness	Target Condition	Time to Target Condition (Years)	Length (km)	Habitat Units
Native Species Rich Hedgerow	Medium	Good	12	5.56	47.86
TOTAL				**5.56**	**47.86**

Table 4-9: Created on-site river habitats

Habitat Created	Length (m)	Condition	Time to target condition (years)	Difficulty of creation	Watercourse encroachment	Riparian encroachment	River Units delivered
Tributary ditch of the River Lark (E01-E-02) – New Culvert	7	Poor	1	Low	N/A Culvert	Major	<1
Total Length (m)	**7**	**-**	**-**	**-**	**-**	**Total River Habitat Units**	**<1**

Table 4-10: Enhanced on-site linear-based habitats (rivers)

Habitat Enhanced	Length (m)	Condition	Time to target condition (years)	Difficulty of enhancement	Watercourse encroachment	Riparian encroachment	River Units delivered
Tributary ditch of the River Lark - 10m either side of culvert (E01-E02)	20	Good	4	Medium	None	None	<1
Tributary ditch of the River Snail – 10m both upstream and downstream of the works (W7)	20	Moderate	4	Medium	None	None	<1
Tributary ditch of the New River - 10m both upstream and downstream of the works (W13)	20	Moderate	4	Medium	None	None	<1
Kennett – Lee Brook (Lee Brook)	1414	Good	4	Medium	Major	None	15
Total Length (km)	**1.47**	**-**	**-**	**-**	**-**	**Total River Habitat Units**	**15**

4.5 Summary of Results

4.5.1 All baseline habitats and habitats created, retained, or enhanced are presented within the accompanying metric assessment for the Scheme (Appendix A).

4.5.2 A summary of the results is shown in **Table 4-11**. Based on the current Post-Development Plan, the Scheme would result in an estimated net gain of 53% habitat units, a net gain of 33.83% linear hedgerow units, and a net gain of 10.08% river units.

Table 4-11: Biodiversity Metric 3.1 Calculation Tool Output

Area / Linear Units	On-Site Baseline	On-Site Post-Intervention	Total Unit Net Change	Total Net % Change
Habitat Units	3110.26	4411.94	1301.68	**41.85**
Hedgerow Units	151.16	193.87	42.71	**28.26**
River Units	18.71	20.83	2.13	**11**

5 Conclusions

5.1.1 Based on the current proposals and outlined assumptions, the Scheme is predicted to result in an overall net gain of 53% habitat units, 34% hedgerow units and 11% river units. For the purposes of reporting these figures in other documents supporting the DCO submission. These values exceed the 10% net gain target for habitat, hedgerow and river units set out in the Environment Act. As the Scheme is expected to achieve the 10% BNG target across all three measures (area base habitats, hedgerows and rivers and streams).

5.1.2 The trading rules within the metric are a set of rules that try to prevent the trading down of habitat distinctiveness. Under the trading rules, losses of habitat are to be compensated for on a “like for like” or “like for better” basis. The trading rules within the Metric are currently satisfied for each level of habitat distinctiveness. It is important to note that the outputs of the metric are dependent on all created and retained and enhanced habitats meeting the target conditions, subject to the criteria outlined within Natural England’s Biodiversity Metric 3.1 Technical Note and within the allotted time to condition. Management methods to meet this condition target have been outlined within the Landscape and Ecology Management Plan brought forward to include the measures set out in the OLEMP. The OLEMP is presented as **Appendix 10I** of the Environmental Statement **[EN010106/APP/6.2].**

5.1.3 All of the habitat enhancement/creation options taken forward will need to be monitored to ensure correct establishment and growth, and that remedial action is taken if this does not proceed as expected, otherwise the target conditions used in the calculations may not be met and the predicted biodiversity units might not be achieved. The long-term monitoring and management is therefore secured through the OLEMP.

6 References

Ref 1. Her Majesty's Stationery Office (2021) National Planning Policy Framework

Ref 2. East Cambridgeshire District Council Local Plan. Adopted April 2015

Ref 3. East Cambridgeshire District Council Supplementary Planning Document Natural Environment September 2020

Ref 4. East Cambridgeshire District Council 2022 Biodiversity Net Gain

Ref 5. East Cambridgeshire District Council Supplementary Planning Documents Renewable Energy Development (Commercial Scale) October 2014

Ref 6. Forest Heath District Council Core Strategy Adopted 2010

Ref 7. Forest Heath and St Edmundsbury Local Plan: Joint Development Management Policies Document (last updated February 2015)

Ref 8. Fordham Neighbourhood Plan (made December 2018)

Ref 9. Natural England's Biodiversity Metric 3.1 User Guide

Ref 10. Natural England (2022). The Biodiversity Metric 3.1 – Technical Supplement.

Ref 11. Discovering Priority Habitats in England. River data

Ref 12. Natural Environment and Rural Communities Act (2006) Section 41.

Ref 13. BRE (2014) Biodiversity Guidance for Solar Developments. Eds G E Parker and L Greene

Ref 14. RSPB Policy Briefing on Solar Energy. December 2014

Ref 15. Catchment Based Approach (CaBA). Chalk Stream Restoration Strategy 2021

Appendix A Order Limits

560000 565000 570000

275000 270000 265000

Grid Connection Route A

Sunnica East Site A

Sunnica East Site B

Grid Connection Route A

Grid Connection Route B

Grid Connection Route B

Sunnica West Site A

0 1 2Km

N

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LEGEND

The Order Limits

NOTE:
Document Reference: EN010106/APP/6.7

Purpose of Issue

EXAMINATION

Client

SUNNICA LTD

Project Title

sunnica energy farm

Drawing Title

SITE LOCATION

Drawn	Checked	Approved	Date
LL	DW	NC	13/01/23

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Appendix B Phase 1 Habitat Plan

565000 566000 567000 568000

275000 274000 273000

E01 E02 E03 E04 E05 E08 E09 E10 E33 ECO1 ECO2

East Fen Waterside Waterside East Fen East Fen Lee Farm Gravel Gardens New Park Farm Poppes Farm Bargate Farm Hawthorn Farm Jude's Ferry Bridge Fourways Farm Pump House Inhams East End Farm Bus Depot Pruce Grove Pen Villa

River Lark Lee Brook Ferry Drove (Track) Dismantled Railway

0 100 200 300m

N

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Mixed scrub
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Other rivers and streams
- Tree

Sheet Layout

1 2 3 4 5 6 7 8 9

Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
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Drawing Title
BIODIVERSITY NET GAIN BASELINE

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274000 273000 272000

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Mixed scrub
- Lowland dry acid grassland
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Tree

Sheet Layout

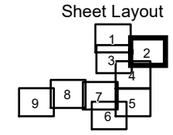

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FIGURE 1.2

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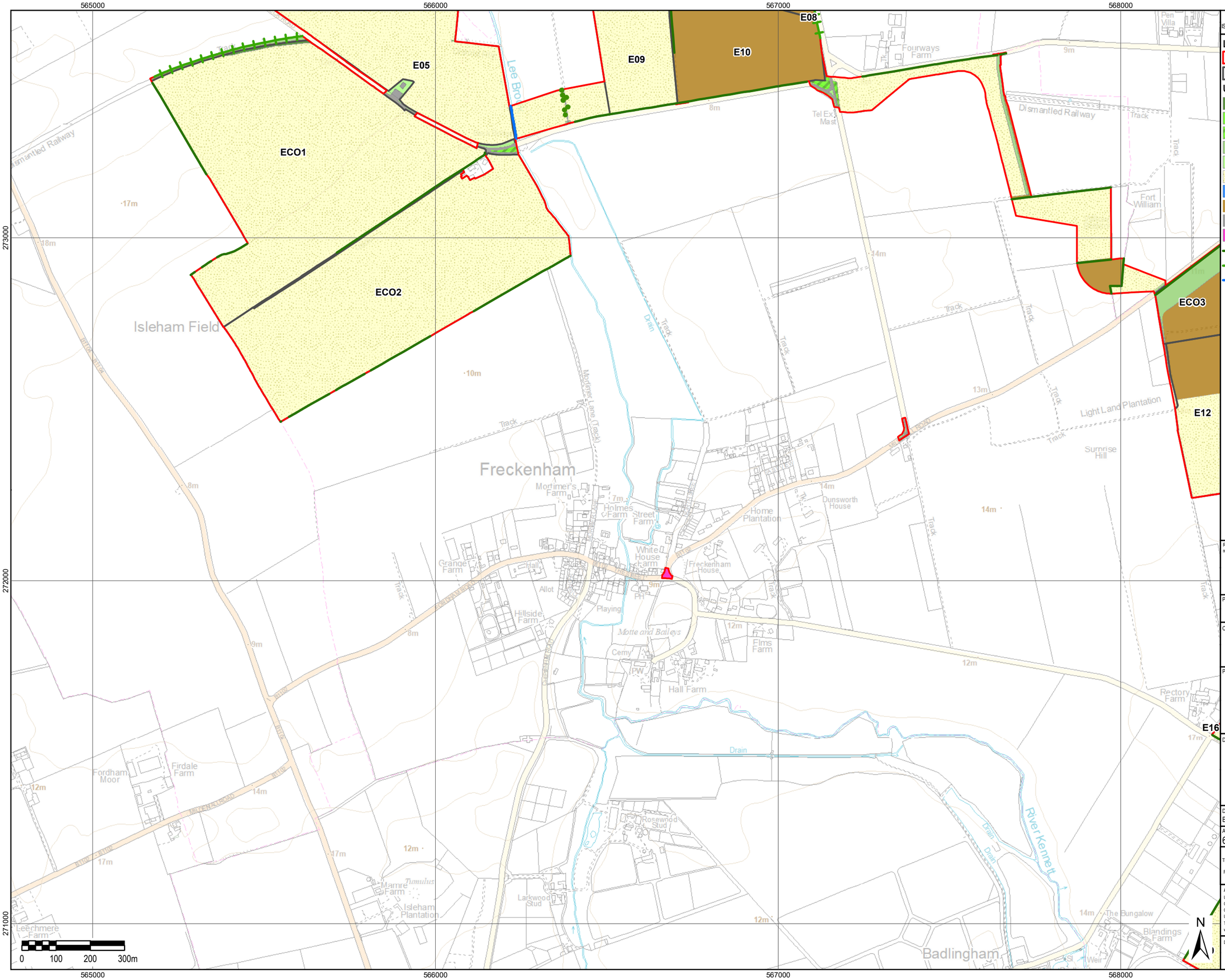

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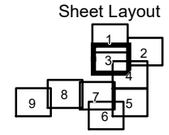
LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Unsurveyed
- Native hedgerow
- Native hedgerow with trees
- Other rivers and streams
- Tree

Sheet Layout



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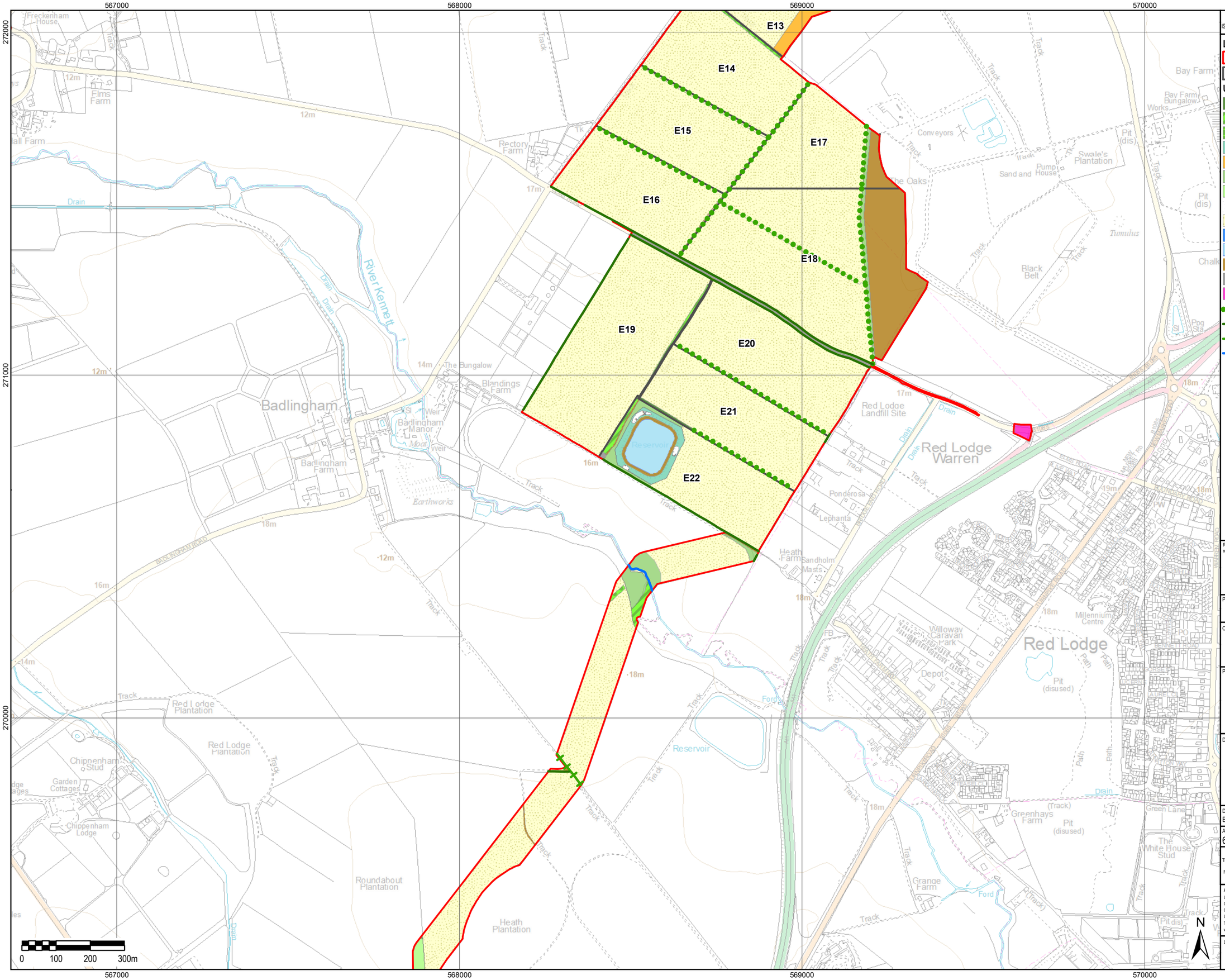

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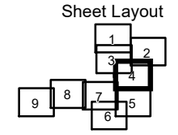
LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Lowland calcareous grassland
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Ponds (Priority habitat)
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Unsurveyed
- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Other rivers and streams

Sheet Layout



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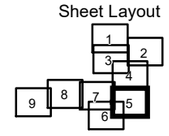
LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Native hedgerow
- Native hedgerow with trees

Sheet Layout



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Snailwell Manor Farm Allot Gdns Church Farm Gravelpit Plantation Foxburrow Plantation Coachroad Plantation Hundred Acre Plantation Hilly Plantation One Mile Plantation Square Plantation The British Racing School Junction Cottages Woodland End The Railway Field Chippenham Junction The Limekilns Training Ground (Horses) Oak Cottage Oak Wood Pheasantry Moulton Paddocks Stud Water

Track Exercise Track Gallop Tumuli Tumulus Dismantled Railway Path Snailwell Belt Wellbrook

0 100 200 300m

N

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Mixed scrub
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native hedgerow

Sheet Layout

1 2 3 4 5 6 7 8 9

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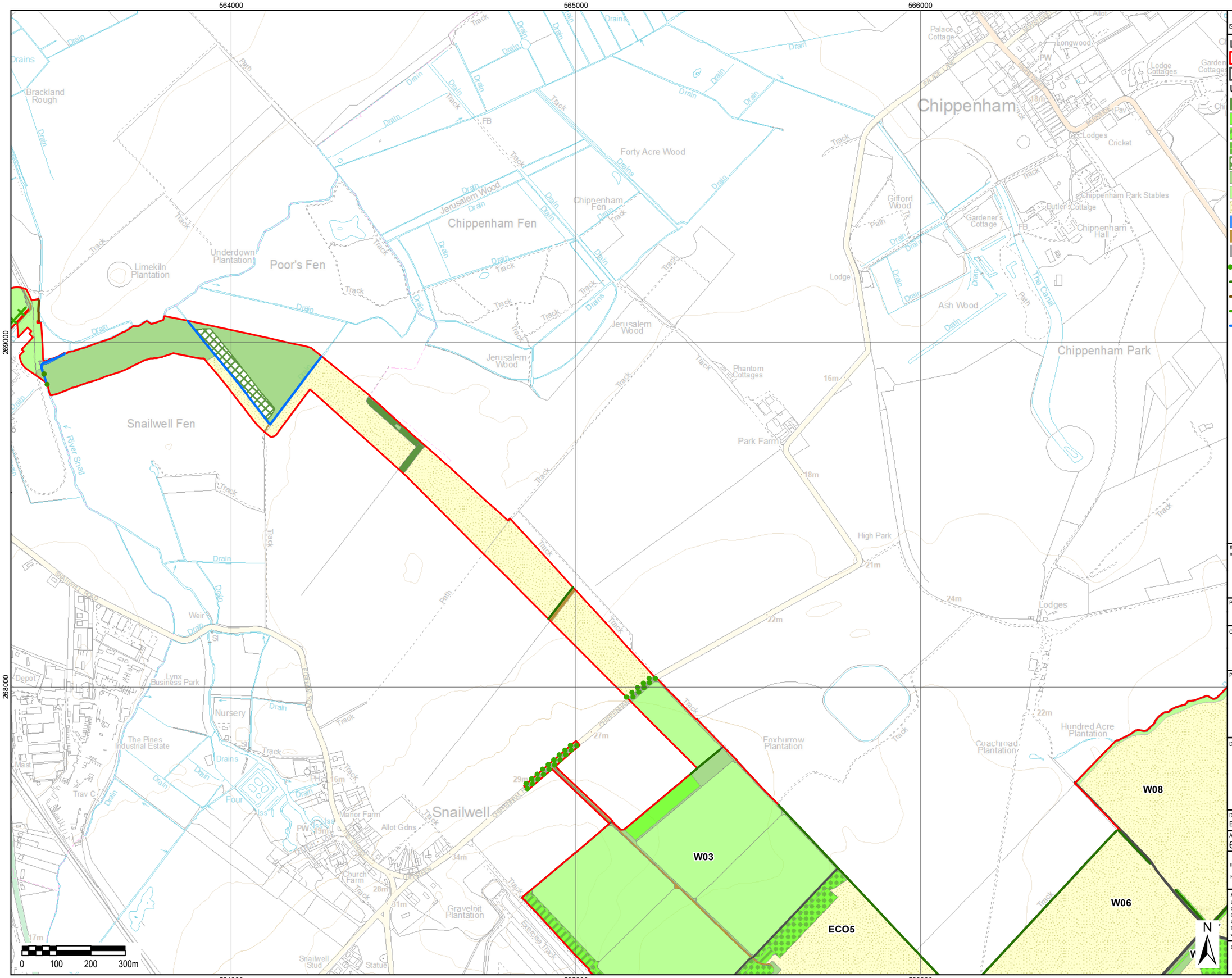

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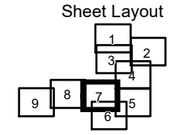
LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Mixed scrub
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Other rivers and streams
- Tree

Sheet Layout



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LEGEND

Order Limits

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Mixed scrub
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Native hedgerow with trees; with ditch
- Other rivers and streams
- Tree

Sheet Layout

1 2 3 4 5 6 7 8 9

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Project Title

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Drawing Title

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FIGURE 1.8

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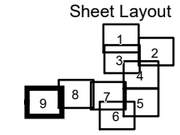
LEGEND

- Order Limits

UK Habitat

- Other woodland; broadleaved
- Lowland mixed deciduous woodland
- Mixed scrub
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees; with ditch
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Native hedgerow with trees; with ditch
- Other rivers and streams
- Tree

Sheet Layout



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Appendix C Parameter Plans

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275000 274000 273000

E01 E02 E03 E04 E05 E08 E09 E10 E33 ECO1 ECO2

0 100 200 300m

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Mixed scrub
- Lowland calcareous grassland
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Purple moor grass and rush pastures
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native Species Rich Hedgerow
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Other rivers and streams
- Urban tree

Sheet Layout

1 2 3 4 5 6 7 8 9

Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
sunnica energy farm

Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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FIGURE 2.1

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Lowland calcareous grassland
- Lowland dry acid grassland
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native Species Rich Hedgerow
- Native hedgerow
- Native hedgerow with trees
- Urban tree

Sheet Layout

1 2 3 4 5 6 7 8 9

Purpose of Issue
FOR INFORMATION

Client
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Project Title
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Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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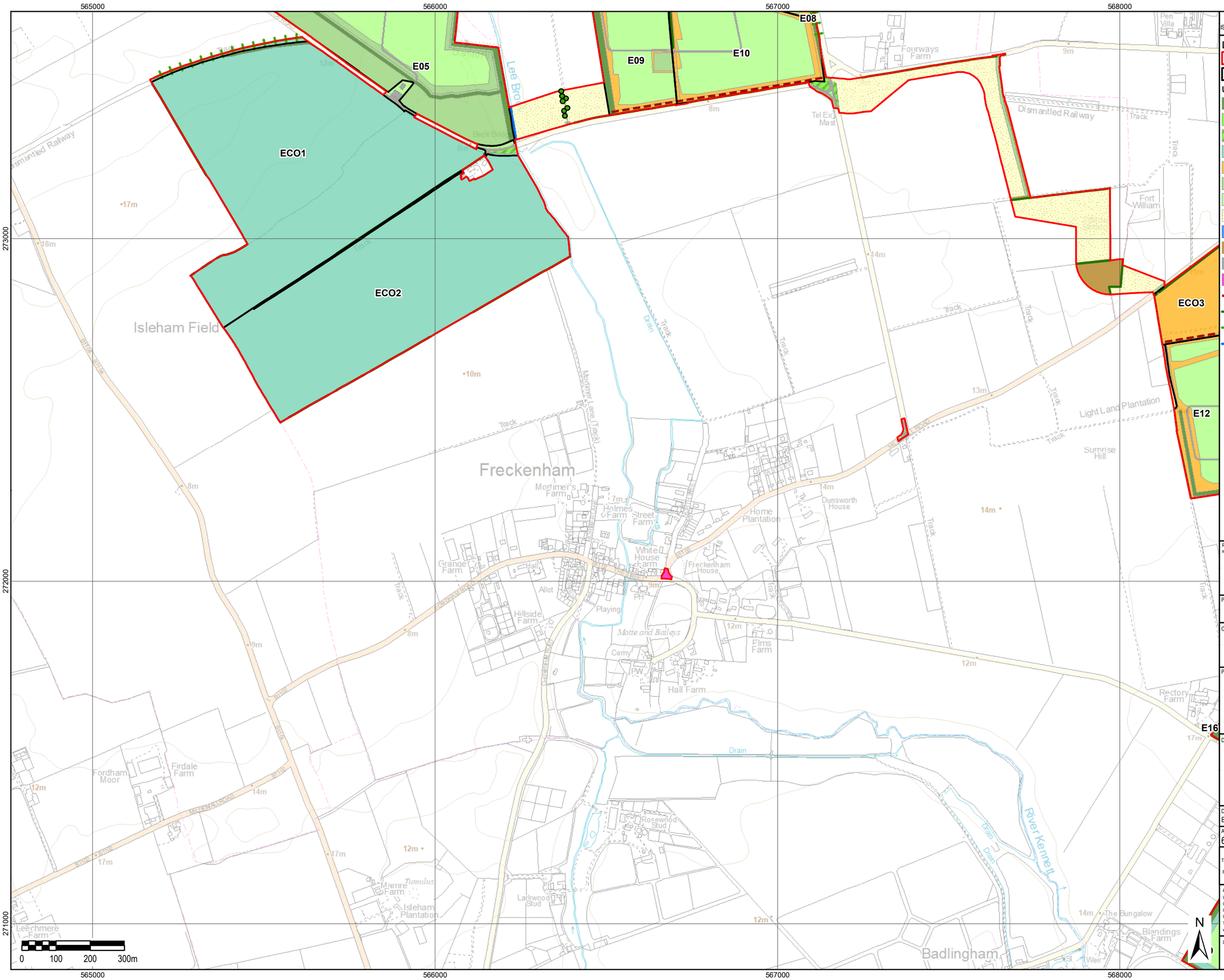

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LEGEND

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- Field Reference Boundary

UK Habitat Description

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- Other coniferous woodland
- Lowland mixed deciduous woodland
- Lowland calcareous grassland
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Unsurveyed
- Native Species Rich Hedgerow
- Native hedgerow
- Native hedgerow with trees
- Other rivers and streams
- Urban tree

Purpose of Issue
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Client
SUNNICA LTD

Project Title
sunnica energy farm

Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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FIGURE 2.3

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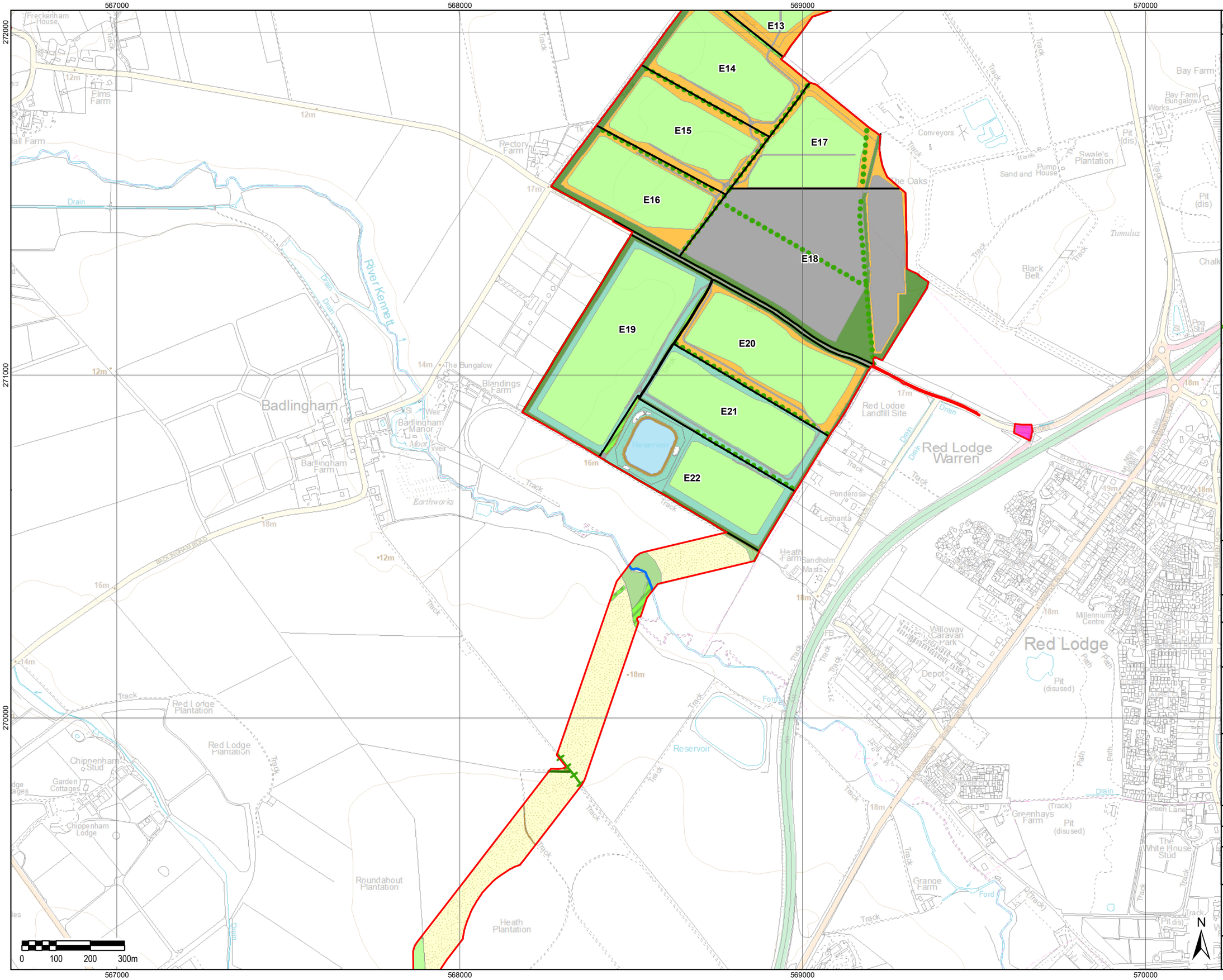

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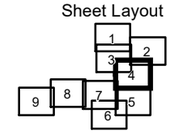
LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Lowland calcareous grassland
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Ponds (Priority habitat)
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Unsurveyed
- Line of trees
- Native hedgerow
- Native hedgerow with trees
- Other rivers and streams

Sheet Layout



Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
sunnica energy farm

Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

Drawn	Checked	Approved	Date
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FIGURE 2.4

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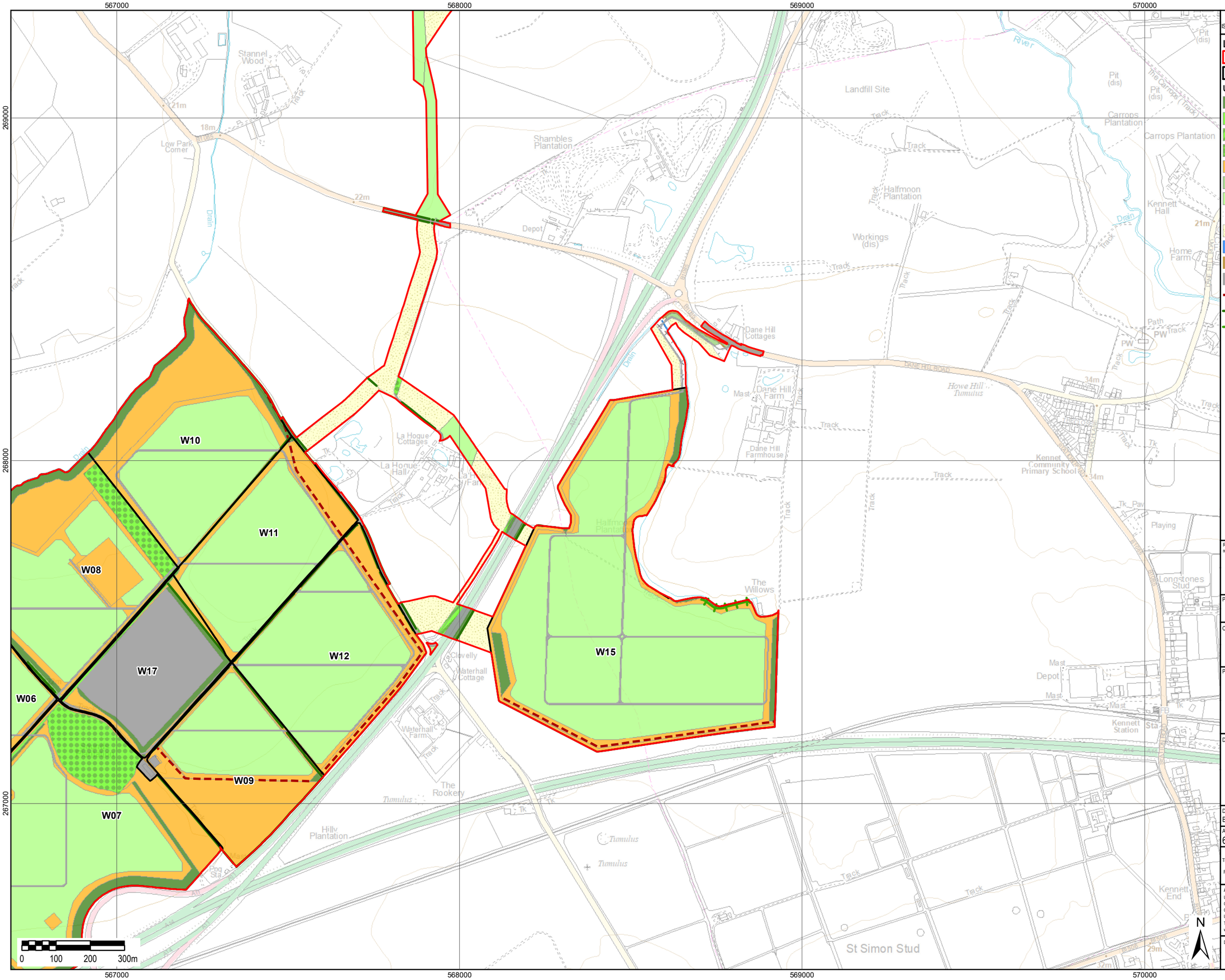

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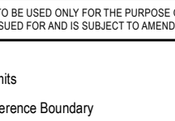
LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Native Species Rich Hedgerow
- Native hedgerow
- Native hedgerow with trees

Sheet Layout



Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
sunnica energy farm

Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

Drawn	Checked	Approved	Date
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FIGURE 2.5

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565000 566000 567000

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W03 W04 W05 W06 W07 W08 W09 W10 W11 W12 W17 ECO5

Snailwell Foxburrow Plantation Coachroad Plantation Hundred Acre Plantation Manor Farm Allot Gdns Church Farm Gravelpit Plantation Statue Lower Yard Woodland End Junction Cottages Hilly Plantation One Mile Plantation Square Plantation Water F The Railway Field Chippenham Junction The Limekilns Training Ground (horses) The British Racing School Moulton Paddocks Stud Oak Cottage Oak Wood Pheasantry Tumuli Tumulus Gallop Exercise Track Track Path Dismantled Railway Shallwell Belt

0 100 200 300m

N

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native Species Rich Hedgerow
- Native hedgerow

Sheet Layout

1 2 3 4 5 6 7 8 9

Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
sunnica energy farm

Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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FIGURE 2.6

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564000 565000 566000

269000 268000

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LEGEND

- Order Limits
- Field Reference Boundary

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Mixed scrub
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Line of trees
- Native Species Rich Hedgerow
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Other rivers and streams
- Urban tree

Sheet Layout

1 2 3 4 5 6 7 8 9

Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
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Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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FIGURE 2.7

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270000 269000 268000

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LEGEND

- Order Limits

UK Habitat Description

- Other woodland; broadleaved
- Other coniferous woodland
- Lowland mixed deciduous woodland
- Other woodland; mixed
- Mixed scrub
- Other lowland acid grassland
- Other neutral grassland
- Modified grassland
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Native hedgerow with trees; with ditch
- Other rivers and streams
- Urban tree

Sheet Layout

1 2 3 4 5 6 7 8 9

Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
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Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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BF	JW	ML	16/01/2023

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FIGURE 2.8

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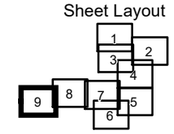
LEGEND

- Order Limits

UK Habitat Description

- Other woodland; broadleaved
- Lowland mixed deciduous woodland
- Mixed scrub
- Other neutral grassland
- Modified grassland
- Ruderal/Ephemeral
- Cereal crops
- Other rivers and streams
- Vacant/derelict land/ bareground
- Developed land; sealed surface
- <all other values>
- Line of trees; with ditch
- Native hedgerow
- Native hedgerow; with ditch
- Native hedgerow with trees
- Native hedgerow with trees; with ditch
- Other rivers and streams
- Urban tree

Sheet Layout



Purpose of Issue
FOR INFORMATION

Client
SUNNICA LTD

Project Title
sunnica energy farm

Drawing Title
BIODIVERSITY NET GAIN
POST DEVELOPMENT

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Appendix D Natural England's Biodiversity Metric 3.1 Calculation

SUNNICA

Headline Results

Return to results menu

On-site baseline	*Habitat units*	3110.26
	Hedgerow units	151.16
	River units	18.71
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	4411.94
	Hedgerow units	193.87
	River units	20.83
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	41.85%
	Hedgerow units	28.26%
	River units	11.37%
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 & enhancement)	*Habitat units*	1301.68
	Hedgerow units	42.71
	River units	2.13
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	41.85%
	Hedgerow units	28.26%
	River units	11.37%
Trading rules Satisfied?		Yes ✓