



SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.2 Appendix 10I: Outline Landscape and Ecology Management
Plan

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009



Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

Sunnica Energy Farm

**Environmental Statement
Appendix 10I: Outline Landscape and Ecology Management Plan**

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Table of contents

Chapter	Pages
1 Introduction	1
1.2 Purpose of this Document	4
2 Scheme Vision	5
2.2 Legislative and Policy Framework	6
2.3 Existing Landscape, Heritage and Biodiversity Features	9
3 Potential Impacts	16
3.1 Landscape and Visual	16
3.2 Biodiversity	16
3.3 Archaeology	17
4 Impact Avoidance measures	18
4.1 Introduction	18
4.2 Precautionary working methods	20
5 Proposed Green Infrastructure	27
5.1 Introduction	27
5.2 Design Principles and Green Infrastructure Proposals	29
5.3 Proposed planting	33
5.4 Hedgerows	36
5.5 Trees and woodland	39
5.6 Mixed Scrub	42
Grassland habitat creation and management	43
5.7 43	
5.8 Biodiversity features	48
5.9 Other environmental features	50
6 Monitoring	53
6.2 Roles and Responsibilities	53
Annex A Figures	57
Annex B Illustrative Sections	58
Annex C Field Management after Establishment	59
Annex D Hedgerow and Woodland Species	72
Annex E Sunnica Soil Types	75
Annex F Outline Historic Environmental Management Plan	76

Table of Plates

Plate 1-1 Stone Curlew plot in a Brecks arable field (RSPB Information note – Managing nest plots for Stone Curlews).....	41
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Table of Tables

Table 1 Notable Habitats within the Order limits	14
Table 2: Summary of impacts on trees subject to detailed tree survey	34
Table 3: Summary of estimated woodland and hedgerow loss and gain	34

Table of Figures

Figure 1: Landscape Masterplan – Sunnica East and West	
Figure 2: Landscape Masterplan – Sunnica East A	
Figure 3: Landscape Masterplan – Sunnica East B	
Figure 4: Landscape Masterplan – Sunnica West A	
Figure 5: Landscape Masterplan – Sunnica West B	
Figure 6: Landscape Masterplan – Cable Route and Burwell Substation	
Figure 7: Section location plan	
Figure 8: Illustrative Cross Section 1 – Sheldrick's Road to Sunnica East Site A	
Figure 9: Illustrative Cross Section 2 – Beck Road	
Figure 10: Illustrative Cross Section 3 – U6006	
Figure 11: Illustrative Cross Section 4 – Worlington	
Figure 12: Illustrative Cross Section 5 – Elms Road	
Figure 13: Illustrative Cross Section 6 – The Avenue	

1 Introduction

- 1.1.1 This Outline Landscape and Ecology Management Plan (OLEMP) has been prepared on behalf of Sunnica Limited (hereafter referred to as the Applicant). It forms part of the Environmental Statement (ES) and includes provision for the successful establishment and future management of biodiversity and landscaping works.
- 1.1.2 The Applicant is seeking development consent, under a Development Consent Order (DCO), for the construction, operation (including maintenance), and decommissioning of a solar farm. The Scheme is described in **Chapter 3: Scheme Description** of this Environmental Statement **[REP2-022]**.
- 1.1.3 The Scheme falls within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) under Section 14(1)(a) and Sections 15(1) and (2) of the 2008 Act, as it would have a generating capacity greater than 50MW electrical output (50MWe). As such, a DCO is required to authorise the Scheme in accordance with Section 31 of the 2008 Act.
- 1.1.4 This OLEMP provides a framework for achieving the 'vision' of the Landscaping Masterplan, as illustrated on **Figures 1 to 6**, in Annex A. Detailed landscaping and ecological management plans will be approved by the relevant local planning authority and will be required to be in accordance with this OLEMP.
- 1.1.5 The Scheme is set within a landscape consisting of ecological designations, 'pine lines', geometric fields and areas of mature woodlands. The OLEMP forms part of the strategy for successfully integrating the Scheme within this landscape, and also mitigating many of the related impacts identified within the ES.

The Order limits

- 1.1.6 With reference to the illustrative parameter plans **Figure 3-1** and **3-2** of this Environmental Statement **[APP-135 and APP-136]** and **Chapter 3: Scheme Description** of this Environmental Statement **[REP2-022]**, the Order limits comprises the following areas:

Sunnica East Site A

- 1.1.7 With reference to **Figure 3-1** of this Environmental Statement **[APP-135]**, Sunnica East Site A extends to the west of Ferry Lane and covers 223 hectares.
- 1.1.8 The landform across Sunnica East Site A is predominantly low lying, situated at around 10m AOD.
- 1.1.9 Sunnica East Site A does not cover any of the settlements in the study areas described in **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement **[APP-042]**. Isleham is approximately 0.5km to the north-west and Freckenham is approximately 0.6km to the south of Sunnica East Site A, at its closest point.

- 1.1.10 The land use across Sunnica East Site A is agricultural, based around Lee Farm, with either arable or pig farming land uses, consisting of large scale fields which are open in character.
- 1.1.11 Sunnica East Site A is crossed by one public right of way (PRoW), a footpath, W-257/007/7, W-257/002/X and W-257/002/0, which cross the eastern edge of ECO2, between Beck Road and Mortimer Lane.
- 1.1.12 Sunnica East Site A is not covered by any statutory landscape designations, neither is it covered by any Conservation Areas and nor does it contain any listed buildings.

Sunnica East Site B

- 1.1.13 With reference to **Figure 3-1** of this Environmental Statement [**APP-135**], Sunnica East Site B extends to the east of Freckenham Road and to the south of Elms Road and covers 319 hectares
- 1.1.14 The landform across Sunnica East Site B is generally flat, although there is also localised variation at the north-east edge, where the landform adjacent to the A11 rises up to 20m AOD.
- 1.1.15 Sunnica East Site B does not cover any of the settlements in the study areas described in **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [**APP-042**], although it borders the southern and eastern edges of Worlington. Red Lodge is approximately 0.4km to the east and Badlingham is approximately 0.5km to the south-west.
- 1.1.16 The land use across Sunnica East Site B is predominantly agricultural, as either arable or pig farming. The field pattern is a combination of large to smaller scale fields, which are generally geometric or planned in form. Whilst the fields themselves are open in character, the intervening pine lines or hedgerows along the boundaries of the fields results in a wooded context to Sunnica East Site B.
- 1.1.17 Sunnica East Site B is crossed by the following PRoW:
- a. U6006 extends from Elms Road to Worlington, across the eastern part of Sunnica East Site.
 - b. PRoW (footpath) W-257/003/0 forms the southern edge to Sunnica East Site B, to the south of E19 and E22.
- 1.1.18 Sunnica East Site B is not covered by any statutory landscape designations; neither is it covered by any Conservation Areas, nor does it contain any listed buildings.

Sunnica West Site A

- 1.1.19 With reference to **Figure 3-2** of this Environmental Statement [**APP-136**], Sunnica West Site A is in the central part of the study area, to the north-east of Newmarket and covers 373 hectares.
- 1.1.20 The Gallops forms the western boundary to Sunnica West Site A. Fields, woodland blocks, Chippenham Park and the B1085 form the northern boundary; fields to the

west of Kennett form the eastern boundary and the A14 forms the southern boundary.

- 1.1.21 There are two unnamed watercourses which flow across Sunnica West Site A. The first, flows across around the edge of Chippenham Park and across the northern part of Sunnica West Site A. The second flows between the A11 and The Willows, to the south of Dane Hill Farm, via Halfmoon Plantation.
- 1.1.22 The landform across Sunnica West Site A is gently undulating. At the western edge of Sunnica West Site A the landform rises from the A14, at 30m AOD, to a localised hill at 40m AOD before falling back to Chippenham Road at 35m AOD. In contrast, the landform falls very gradually across the central part of Sunnica West Site A, from the junction of the A14 and A11 at 25m AOD, to the edge of Chippenham Park, at 20m AOD. Similarly, in the eastern part of Sunnica West Site A, the landform falls from La Hogue Farm, at 30m AOD, northwards towards the unnamed stream bordering Chippenham Park at 20m AOD, whilst remaining generally flat across Dane Hill and Halfmoon Plantation to the south, at 30m AOD.
- 1.1.23 Sunnica West Site A does not directly cover or border any settlements. Chippenham is approximately 1km to the north of the northern part of Sunnica West Site A; Kennett is approximately 1.5km to the east of the eastern part of Sunnica West Site A and the eastern edge of Newmarket is approximately 1.5km to the south-west of Sunnica West Site A.
- 1.1.24 The A11 separates the eastern part of Sunnica West Site A. Chippenham Road and La Hogue Road form the north-west and north-east boundaries of Sunnica West A Site respectively.
- 1.1.25 The land use across Sunnica West A Site is agricultural, consisting of small to medium scale fields. The field pattern to the north of the A14 is more geometric than the fields to the south of the A11. There are several small wooded plantations and woodland belts within the fields.
- 1.1.26 The agricultural fields are bounded by trees, managed hedgerows, linear tree shelter belts, small woodland and copses, and farm access tracks.

Grid Connection Route A

- 1.1.27 Grid Connection Route A runs between Sunnica East Site A, Sunnica East Site B and Sunnica West Site A.
- 1.1.28 Heading south-east from Sunnica East Site A, the cable route for Grid Connection Route A crosses agricultural land and the B1102 immediately north of Sunnica East Site B. The cable route then passes through Sunnica East Site B before running south, crossing the River Kennett and Havacre Meadows and Deal Nook CWS using boring, micro-tunnelling or moling methods (more information on these techniques is provided in **Chapter 3: Scheme Description** of this Environmental Statement [REP2-022]). The cable route corridor then crosses the Chippenham footpath 49/7, before passing approximately 20m west of the Chippenham Gravel Pit CWS and crossing the B1085, before then joining Sunnica West Site A.
- 1.1.29 Cable Route A does not cross any designated landscapes.

Grid Connection Route B

- 1.1.30 Grid Connection Route B connects Sunnica West Site A to Burwell National Grid Substation.
- 1.1.31 Heading north-west from Sunnica West Site A, the cable route crosses Chippenham Road and Snailwell 1 PRoW. It then crosses PRoW 92/19 before crossing the railway line and the A142 Newmarket / Fordham Road, using boring, micro-tunnelling or moling methods.
- 1.1.32 The cable route corridor for Grid Connection Route B crosses agricultural fields and a number of roads including the B1102 and A142. Grid Connection Route B also crosses a number of watercourses, including the Burwell Lode, New River, and the River Snail, as well as a number of drainage ditches associated with Burwell Fen, Little Fen, the Broads, and agricultural drains. As such, the cable route for Grid Connection Route B passes through multiple areas of Flood Zones 2 and 3. For the main watercourses, the cable route crossings will require boring, micro-tunnelling or moling methods. For shallower and narrower drainage ditches, open cut trenching will be undertaken (more information on these techniques is provided in Chapter 3: Scheme Description of this Environmental Statement [REP2-022]).
- 1.1.33 Grid Connection Route B is not covered by any statutory landscape designations.

The Scheme

- 1.1.34 The Scheme is described in further detail in **Chapter 3: Scheme Description** of this Environmental Statement [REP2-022].

1.2 Purpose of this Document

- 1.2.1 The purpose of this OLEMP is to set out the measures proposed to mitigate the effects of the Scheme on landscape and biodiversity features, and to enhance the biodiversity, landscape and green infrastructure value of the Order limits, to secure compliance with relevant national and local planning policies.
- 1.2.2 The Scheme has been designed, as far as is practicable, to avoid or reduce effects on landscape, heritage and biodiversity features through siting of the Scheme components, including structures and new planting. These include measures to avoid impacts on protected species to ensure compliance with legislation (see **Chapter 8: Ecology and Nature Conservation** and **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [APP-042]).
- 1.2.3 This document outlines the landscape and biodiversity impact avoidance measures that would be implemented prior to, and during, construction of the Scheme, as well as the habitat restoration, enhancement, management and monitoring measures to be implemented once the Scheme is operational. Implementation of these measures is proposed to be secured by a Requirement of the draft DCO through the requirement for detailed Landscape and Ecology Management Plan(s) to be produced in accordance with this OLEMP

- 1.2.4 In order to avoid potential conflicts in approach to impact avoidance and enhancement, this document identifies the measures required for both landscape, heritage and biodiversity together, to demonstrate a cohesive strategy.
- 1.2.5 This OLEMP is structured as follows:
- a. **Section 2** sets out the Scheme Vision;
 - b. **Section 3** summarises relevant legislation and planning policy;
 - c. **Section 4** describes the existing landscape, heritage and biodiversity features and the potential impacts and effects of the Scheme;
 - d. **Section 5** outlines the requirements for impact avoidance, both during advance works and during the construction phase;
 - e. **Section 6** describes the proposals for landscape and biodiversity enhancement and the measures required for their effective management and maintenance. The areas of the Order limits to which the different proposals would be applied are shown for illustrative purposes in the Landscape Masterplan figures **Figure 1** to **6**, in Annex A and the Illustrative Cross sections, appended as Annex B (and labelled as **Figures 7** to **13**). In addition, Environmental Masterplans have been prepared [**EN010106/APP/8.47** and [**EN010106/APP/8.77**], which provide additional clarity on the mitigation being proposed for the Scheme rather than additional mitigation to what is proposed in this OLEMP; and
 - f. **Section 7** describes the roles and responsibilities of all parties involved in the delivery of the mitigation, enhancement and management proposals.

2 Scheme Vision

2.1.1 The Scheme offers the opportunity to increase Green Infrastructure and biodiversity across the Order limits, reflecting valued landscape characteristics which would aid in integrating the Scheme within the landscape and into Nature Recovery Schemes (see **Figures 1** to **6** in Annex A).

2.1.2 This OLEMP has been developed to ensure that the Scheme would reflect the existing landscape character and context, whilst accommodating mitigation principles established within the ES, so as to achieve the vision of:

“The Scheme will deliver a new network of environmental features which will also deliver a range of ecosystem services, incorporating biodiversity, heritage, landscape and access.”

- 2.1.3 The overarching objectives of the OLEMP are to:
- a. promote the conservation, protection and improvement of the physical, natural and historic environment across the Order limits and its setting, and to ensure the Scheme is appropriately sited, softened and integrated. The landscape framework should be seen as part of the essential infrastructure of the Scheme.
 - b. diversify ecological value through the retention of the existing hedgerows and trees, to enhance these through restoration and creation of diverse habitats offering greater botanical and faunal interest to the Scheme, and to safeguard the habitats with potential for protected species.

- c. ensure the design and maintenance of landscape and biodiversity components preserves and enhances the character of the landscape and local distinctiveness.
- d. protect and retain, where practicable, the hedgerows and trees which cross the Scheme boundary, particularly adjacent to the road networks and at site access points, by utilising existing breaks in boundary vegetation at field access points to minimise impacts on vegetation
- e. create new structural planting which links with existing habitats and to take account of species that are locally appropriate and the existing vegetation patterns.
- f. use native indigenous species of local provenance wherever appropriate.
- g. provide landscape amenity enhancement through the introduction or permissive routes.
- h. provide a variety of foraging, nesting and roosting opportunities for protected and notable species, including bats, badgers, invertebrates, amphibians, reptiles and birds.
- i. create floristically rich habitats, to support a greater assemblage of species and give rise to enhanced foraging opportunities.
- j. provide a framework for monitoring and reviewing the landscape implementation and establishment.
- k. ensure the mitigation proposed as part of the Scheme remains effective at reducing identified environmental effects as intended.

2.1.4 The contractor appointed by the Applicant to deliver the Scheme, shall deliver each of the OLEMP measures and commitments through the developed LEMP(s) that are developed for the Scheme, unless the contractor is able to define an alternative measure, or measures, which achieve the same landscape and biodiversity effects at the relevant location.

2.1.5 The assumption is that the decommissioning phase would be covered by a Decommissioning Environment Management Plan (DEMP) which would be submitted at a later time in the project timeline. Decommissioning matters are therefore not addressed in this OLEMP.

2.2 Legislative and Policy Framework

2.2.1 The legislation and policies relevant to biodiversity, landscape and visual amenity are summarised below.

Legislation

- a. Ancient Monuments and Archaeological Areas Act 1979 (Ref. 7-5) (amended by the National Heritage Act 1983 (Ref. 7-6) and 2002 (Ref. 7-7)) (excluding normal planning procedures, which are disapplied by the DCO, which if granted, would encompass all of the normal consents);
- b. Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref. 7-4) (excluding normal planning procedures, which are disapplied by the DCO, which if granted, would encompass all of the normal consents);

- c. Directive 2009/147/EC on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended) (Birds Directive);
- d. Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive);
- e. The Conservation of Habitats and Species Regulations 2017 (as amended);
- f. Wildlife and Countryside Act (WCA) 1981 (as amended);
- g. Countryside & Rights of Way Act 2000 (as amended);
- h. Natural Environment and Rural Communities (NERC) Act 2006 (as amended);
- i. Protection of Badgers Act 1992 (as amended);
- j. Hedgerow Regulations 1997 (as amended);
- k. Water Environment (Water Framework Directive) (England and Wales) Regulations 2017;
- l. Animal Welfare Act 2006; and
- m. Invasive Alien Species (Enforcement and Permitting) Order 2019

Planning Policy

- a. Overarching National Policy Statement for Energy (EN1), adopted 2011;
- b. National Policy Statement for Renewable Energy Infrastructure (EN3) 2011
- c. NPS for Electricity Networks Infrastructure (EN5), adopted 2011;
- d. National Planning Policy Framework (NPPF), adopted 2021;
- e. National Planning Practice Guidance (NPPG);
- f. Cambridgeshire and Peterborough Minerals and Waste Development Plan, adopted 2011;
- g. Cambridgeshire and Peterborough Minerals and Waste Local Plan, Further Consultation Draft (FCD), March 2019;
- h. Suffolk – Creating the Greenest Country – Suffolk Climate Change Partnership;
- i. Suffolk Climate Action Plan 3 (SCAP), 2017;
- j. East Cambridgeshire Local Plan (ECLP), 2015;
- k. East Cambridgeshire District Council Renewable Energy Development (Commercial Scale) Supplementary Planning Document, (EC RED), 2014;
- l. East Cambridgeshire District Council Design Guide (EC DG), SPD, 2012
- m. The West Suffolk, Forest Heath and St Edmundsbury Local Plan, Joint Development, Management Policies Document (WS MPD), 2015;
- n. Forest Heath Local Development Framework, Core Strategy Development Plan Document (FH CS), adopted 2010;
- o. Forest Heath District Council, Accessible Natural Greenspace Study (FH NGS), 2017
- p. Freckenham Neighbourhood Plan Landscape Character Assessment and Key Views Study (2020)

Other Guidance

- a. Natural England National Character Area (NCA) 46: The Fens;
- b. Natural England NCA 85: The Brecks;
- c. Natural England NCA 87: East Anglian Chalk;
- d. East of England Landscape Framework;
- e. Suffolk Landscape Character Assessment;
- f. Cambridgeshire Landscape Guidelines (CLG);
- g. Norfolk and Suffolk Brecks Landscape Character Assessment (NSB LCA);
- h. Cambridgeshire Green Infrastructure Strategy;
- i. The Brecks' Special Qualities (BSQ);
- j. Village Design Guides and Conservation Area Statements;
- k. Cambridgeshire and Peterborough Biodiversity Action Plan;
- l. Suffolk Biodiversity Action Plan;
- m. Biodiversity 2020 - A strategy for England's Wildlife and Ecosystem Services;
- n. Priority habitats and species listed on UK Post 2010 Biodiversity Framework which succeeds the UK Biodiversity Action Plan (UK BAP) (Joint Nature Conservation Committee (JNCC) and Defra, 2018);
- o. BRE's National Solar Centre Biodiversity Guidance for Solar Developments;
- p. Planning Practice Guidance, Conserving and enhancing the historic environment;
- q. Historic Environment Good Practice Advice in Planning Note 2. Managing Significance in Decision Taking in the Historic Environment. Historic England;
- r. Historic Environment Good Practice Advice in Planning Note 3. The Setting of Heritage Assets. Historic England (2nd edition, 2017);
- s. Historic England Advice Note 12 Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019); and
- t. Chartered Institute for Archaeologists, Code of Conduct and Standards and Guidance for Historic Environment Desk-based Assessment.
- u. Suffolk Green Access Strategy (2020).
- v. An Interim Nature Recovery Network for East Cambridgeshire, (2022).

Biodiversity Net Gain

- 2.2.2 The draft Environment Bill, published by the UK Government in January 2020 and currently going through the Parliamentary process, includes proposals to make BNG a mandatory requirement within the planning systems in England, including for Nationally Significant Infrastructure Projects (NSIPs). Once enshrined in law it is expected that all developments will be required to achieve a minimum 10% net gain in biodiversity units relative to the site's baseline biodiversity value.

- 2.2.3 Biodiversity metrics provide a measure of overall biodiversity value based on habitat type, area, condition and distinctiveness. The current approved metric is Defra's Metric 3.1 and this metric is a tool that allows a value to be measured, in this case biodiversity, which is calculated pre- and post-development. The change in biodiversity units indicates either a net loss, a net gain or no change in biodiversity.
- 2.2.4 The proposals within this OLEMP have been informed by BNG principles to ensure there is a net gain arising during the lifetime of the Scheme. Further details are set out in the Biodiversity Net Gain Assessment (BNG) **[APP-259]**. This will be kept up to date with respect to, for example, the biodiversity baseline and the Scheme design by submitting an updated BNG with each detailed LEMP.

2.3 Existing Landscape, Heritage and Biodiversity Features

- 2.3.1 The following section summarises the baseline analysis within **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement **[EN010106/APP/6.1]**. This is to facilitate the management measures being read in the context of the existing baseline and in one single document.

Existing Landscape and Heritage Features

Sunnica East Site A Site Level Landscape Character

- 2.3.2 To provide additional detail to the landscape character and land use within Sunnica East Site A and with reference to **Figure 3-1**, parts of Sunnica East Site A have been divided into the following parcel references (E):
- a. E01 to E04 are in the north-west of Sunnica East Site A. The Fen woodland forms the northern boundary and the reservoirs and access track at Lee Farm form the southern boundary. The Lee Brook forms the western boundary and an intermittent hedgerow tree group form the eastern boundary. The fields are open in character with hedgerows between E03 and E04;
 - b. E05 forms the north-west part of Sunnica East Site A, between Beck Road and the Lee Brook. E05 consisting of several fields which are open in character. There are a few individual trees along the southern edge of E05, adjacent to Beck Road and a small woodland block adjacent to the Lee Brook in the south-east part of E05;
 - c. Eco1 to Eco2 form the west part of Sunnica East Site A, located to the south of Beck Road, between the dismantled railway line and to the south of Beck Bridge. The fields are open in character, although the northern and western edges of Eco1 are bordered by intermittent hedgerows. PRow (footpath) W-257/007/7, W-257/002/X and W-257/002/0 crosses the eastern edge of Eco2, crossing between Beck Bridge and Mortimer Lane;
 - d. E08 to E10 are in the north-west of Sunnica East Site A, to the south of E03 and E04 and reservoirs and access track to Lee Farm. Ferry Lane forms the eastern boundary to E08 and E10, with Beck Road forming the southern boundary to E09 and E10. The elevated junction of Beck Road and Ferry Lane forms the south-east boundary to E10. The fields are open in character, although there is a hedgerow along the southern edge of fields E09 and E10 and hedgerows and trees along the eastern edge of E10, which extend to a small woodland block bordering the elevated junction of Beck Road and Ferry Lane; and

- e. E33 is located to between the reservoirs at Lee Farm and Ferry Lane and is contiguous with E04, which forms the northern boundary and E08 which forms the southern boundary.

2.3.3 With reference to **Appendix 10B: Tree Constraints Report** of this Environmental Statement [APP-101] and the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]** Ferry Lane, between Freckenham and West Row, is bordered by mature woodland on the east side of the lane at the junction with the B1102. From Freckenham, both sides of the lane are bordered by hedgerows, which extend into a row of mature trees. To the north of these trees, the vegetation patterns return to hedgerows, with some gaps and taller scrub and young trees at the elevated junction with Beck Road. To the north of the junction the lane is bordered by hedgerows, until the junction with the access road to the reservoirs by Lee Farm, where the lane to West Row is bordered by intermittent hedgerows and mature trees including Scots pine, particularly along the eastern side of the lane. A single potential veteran tree was identified via the 2019 site walkover well beyond the western edge of the Order limits, this tree is no longer thought to be present following a review of aerial imagery.

2.3.4 There are no scheduled monuments nor listed buildings within Sunnica East Site A. There are no registered parks and gardens within Sunnica East Site A or within 1km from this part of the Order limits. Sunnica East Site A is not covered any Conservation Areas, there are two conservation areas that fall within the 1km, with the Freckenham Conservation Area and Isleham Conservation Area.

Sunnica East Site B Site Level Landscape Character

- 2.3.5 To provide additional detail to the landscape character and land use within Sunnica East Site A and with reference to **Figure 3-1**, parts of Sunnica East Site A have been divided into the following parcel references (E):
- a. ECO3 and E12 are located in the western part of Sunnica East Site B, between the B1102 and U6006. The fields are open in character and bordered to the east by pig farming and Surprise Hill woodland and residential properties to the north, adjacent to the B1102;
 - b. E13 to E18 are to the east of U6006, extending to Elms Road, which forms the southern boundary to E16 and E18. The eastern boundary to E13-E18 consists of fields and woodland blocks, including mature woodland around Worlington Quarry. The fields within E13-E18 are small in scale, rectangular in form and divided by mature tree belts;
 - c. E19 to E22 are to the south of Elms Road, forming the southern part of Sunnica East Site B. Similar to E13 to E18, the fields are smaller in scale, rectangular in form and divided by mature tree belts, including Scots pine and a small reservoir. Residential land uses adjacent to Bridge End Road form the eastern boundary to E19 to E22, with PRow (footpath) W-257/003/0 adjacent to the southern boundary to E19 and E22;
 - d. E24 to E25 are two larger scale fields to the west of Newmarket Road. Both fields are open in character and divided by a vegetated access track to pig farms and woodland belts which form the western boundary;

- e. E26 to E29 are four fields to the east of Worlington Road at the north-east part of Sunnica East Site B. Each field is broadly the same, being small in scale and square in form. E26 to E29 are divided by mature vegetation such that they are well enclosed in relation to the wider landscape. There is small mature tree clump within the central part of E29; and
- f. E30 to E32 form the north-east part of Sunnica East Site B, located to the south of Golf Links Road and with the A11 forming the eastern boundary. A rectangular block of mature woodland forms the southern boundary to E30 and E32, across the rising ground at the base of Chalk Hill. E30 is rectangular in form and divided from E31 and E32 by a narrow tree belt, with all parcels open in character.

2.3.6 With reference to **Appendix 10B: Tree Constraints Report** of this Environmental Statement [APP-101] and the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]**, the main tree species within Sunnica East Site B include hybrid Black Poplar (*Populus x canadensis*), White Poplar (*Populus alba*), Oak (a species of *Quercus*), Scots Pine (*Pinus sylvestris*), Beech (*Fagus sylvatica*) and Corsican Pine (*Pinus nigra*).

2.3.7 Across the southern part of Sunnica East Site B there are several semi mature pine plantations and a large linear groups of pine and poplar which denote field boundaries. These groups also contain a number of large broadleaf woodlands, consisting of predominantly Oak and Beech mixed with occasional Pine. There are a small number of veteran trees located along field boundaries within Sunnica East Site B. There are no scheduled monuments, nor listed buildings within Sunnica East Site B. There are no registered parks and gardens within Sunnica East Site B or within 1km from this part of the Order limits. Sunnica East Site B is not covered any Conservation Areas.

Sunnica West Site A Site Level Landscape Character

2.3.8 To provide additional detail to the landscape character and land use within Sunnica West Site A and with reference to **Figure 3-2**, parts of Sunnica West Site A have been divided into the following parcel references (W):

- a. W03 and ECO5 forms the north-west part of Sunnica West Site A, situated between the Gallops and Foxborrow Plantation. W03 consists of four small square fields, situated across the relatively elevated and rising land to the south-east of Snailwell. The fields are open in character due to the land use, but the fields are bordered by woodland blocks along the western and southern edges and a narrow tree belt along the eastern edge which connects with Foxborrow Plantation.
- b. W04 and W05 form the western part of Sunnica West Site A and are adjacent to The Avenue. Both W04 and W05 are geometric in form and open in character due to their land use, although there is a mature woodland belt along the western edge of W04, through which a PRow crosses;
- c. W06 to W12 are located centrally within Sunnica West Site A and consist of smaller scale geometric fields divided by hedgerows. Sounds Plantation extends between W06 and W07 and there is also a rectangular woodland block between W08 and W10. La Hogue Road crosses the eastern edge of W10, W11 and W12;

- d. W15 form the eastern part of Sunnica West Site A to the east of the A11. W15 consists of several fields, which are open in character; and
- e. W17 is a rectangular field in the central part of the study area, situated in the centre of W06 to W12. The field is open in character and bordered by hedgerows and tree belts, with Sounds Plantation forming the western boundary. There are also several agricultural barns adjacent to the southern edge of W17.

- 2.3.9 With reference to **Appendix 10B: Tree Constraints Report** of this Environmental Statement [APP-101] and the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]**, the trees within Sunnica West Site A are semi mature to mature in age. The main species include Scots Pine, Corsican Pine, Beech, Sycamore (*Acer pseudoplatanus*), Common Oak, Ash (*Fraxinus excelsior*) and Crack Willow (*Salix fragilis*).
- 2.3.10 At the western side of Sunnica West Site A field boundaries consist of large linear Pine, Beech, Willow and Sycamore. To the north of Sunnica West Site A, within the grounds of La Hogue Farm are several high value mature oak trees surrounding the entrance of the farm shop, whilst at the rear of the farm shop there are two veteran status trees which were identified by the site walkover.
- 2.3.11 Around Dane Hill Farm the fields are bordered mainly by moderate quality tree groups dominated by Oak, Aspen (*Populus tremula*), Beech and Field Maple (*Acer campestre*). Within this group are three large mature individual native Black Poplar (*Populus nigra*) trees, which as a species are rarely distributed across Britain.
- 2.3.12 Other vegetation patterns include mature trees adjacent to The Avenue and adjacent to the watercourse which flows through Half Moon Plantation, to the south of Dane Hill Farm.
- 2.3.13 There are no listed buildings within Sunnica West Site A. There are no registered parks and gardens within Sunnica West Site A. Chippenham Park Registered Park and Garden (RPG) is to the north of this part of the Order limits, along with Chippenham Conservation Area. Snailwell Conservation Area is to the west of Sunnica West Site A.
- 2.3.14 In respect of the RPG, the formal parkland is defined by its brick boundary walls, with the south drive extending towards Newmarket. While the wider rural landscape is not visible from within the park, it does form part of its setting, revealing evidence of the impact landowners had on the landscape, and forming part of the informal parkland context. The RPG, including the Hall also have an important relationship with the village of Chippenham to the north and this influence is visible within the arrangement of buildings and the predominant architectural style.

Grid Connection Route A Site Level Landscape Character

- 2.3.15 With reference to **Appendix 10B: Tree Constraints Report** of this Environmental Statement [APP-101] and the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]**, most of the trees across Grid Connection Route A are classified as low quality, with the exception of those in Heath Plantation.
- 2.3.16 There are no designated heritage assets within Grid Connection Route A.

Grid Connection Route B Site Level Landscape Character

- 2.3.17 With reference to **Appendix 10B: Tree Constraints Report** of this Environmental Statement [APP-101], and the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]** the vegetation across Grid Connection Route B is assessed as moderate value plantations, with a moderate value group of beech trees adjacent to Chippenham Road, which are protected by a Tree Preservation Order.
- 2.3.18 There are no designated heritage assets within Grid Connection Route B. Burwell North Street Conservation Area is located within 1km of the Grid Connection Route B.

Burwell National Grid Substation Extension Site Level Landscape Character

- 2.3.19 The Burwell National Grid Substation Extension is located in the western part of the study area, to the north of the existing Burwell substation.
- 2.3.20 There are no scheduled monuments within 1km from the Burwell National Grid Substation Extension. There are no Registered Parks and Gardens within 1km of the Burwell National Grid Substation Extension. Burwell North Street Conservation Area is located within 1km of the Burwell National Grid Substation Extension. Burwell North Street Conservation Area also falls within the Grid Connection Route B study area and is described under the relevant section.

Existing Biodiversity Features

Habitats

- 2.3.21 Table 1 summarises the notable habitats to be found within the Order limits:

Table 1: Notable Habitats within the Order limits

Habitat type	Status
Woodland -Broad-leaved semi-natural	Local Biodiversity Action Plan (LBAP) Habitat; Lowland Mixed Deciduous Woodland – Habitat of Principal Importance
Grassland - Unimproved and Semi-Improved Acid	LBAP, Habitat of principal importance
Grassland - Semi-improved calcareous	LBAP, Habitat of Principal Importance
Grassland – Marshy / swamp	LBAP, Habitat of Principal Importance
Arable (including arable flora)	LBAP, Habitat of Principal Importance
Reedbed	Habitat of Principal Importance Reedbed
Running water	Including a network of ditches and rivers; Rivers are a habitat of Principal Importance
Hedge - Intact (species poor) and with trees (species poor)	LBAP, Habitat of Principal Importance

Species

- 2.3.22 With reference to **Appendix 8C: Terrestrial Habitats and Flora Report** of this Environmental Statement **[APP-079]** surveys of arable field margins recorded rare/scarce arable flora species, including Corn Spurrey (*Spergula arvensis*) and Corn Marigold (*Glebionis segetum*) listed as Vulnerable in the UK and England recorded, Fine-leaved Fumitory (*Fumaria parviflora*) classified as Vulnerable in the UK and Near Threatened in England and Corn Chamomile (*Anthemis arvensis*) classified as Endangered in the UK and England, (Stroh *et al.* 2015, Mcleod *et al.* 2017).
- 2.3.23 Within Sunnica East Site B, three Nationally Scarce species are present in dry acid grassland; Bearded Fescue (*Festuca subulata*), Sand Catchfly (*Silene conica*) and Bur Medick (*Medicago minima*) and a NERC Act Section 41 species Annual Knawel (*Scleranthus annuus*).
- 2.3.24 Narrow-leaved Water Plantain (*Alisma gramineum*) was present in all three ditches surveyed in Sunnica East Site A and is considered a Suffolk Rarity, however, it is not a priority species and is common throughout England.
- 2.3.25 With reference to **Appendix 8E: Aquatic Ecology Survey Report** of this Environmental Statement **[APP-081]** three species with a Local distribution were recorded at Sunnica East Site A; the Hairy Dragonfly (*Brachytron pratense*), the snail Leach's Bithynia (*Bithynia leachii*) and a caddisfly (*Agrypnia pagetana*).
- 2.3.26 The invasive Signal Crayfish (*Pacifastacus leniusculus*) was recorded in the desk study from the Lee Brook adjacent to Sunnica East Site A. The remains of this species were also found in a ditch within Sunnica East Site A.
- 2.3.27 With reference to **Appendix 8D: Terrestrial Invertebrate Scoping Survey Report** of this Environmental Statement **[APP-080]** there are notable terrestrial invertebrate species and assemblages present, particularly in dry acid grassland habitats identified within Sunnica East Site B.
- 2.3.28 With reference to **Appendix 8E: Aquatic Ecology Survey Report** of this Environmental Statement **[APP-081]**, there are records of protected fish species exist in the River Snail including Brook Lamprey (*Lampetra planeri*) and Bullhead (*Cottus gobio*). The River Snail fish community also comprises widespread common fish species including 3-spined Stickleback (*Gasterosteus aculeatus*) and 10-spined Stickleback (*Pungitius pungitius*).
- 2.3.29 With reference to **Appendix 8E: Aquatic Ecology Survey Report** of this Environmental Statement **[APP-081]** there are records of protected fish species exist in Lee Brook including Brook Lamprey, Bullhead, and Brown Trout (*Salmo trutta*) and these species may be present in the ditches onsite as they are connected to Lee Brook via River Lark within Sunnica East Site A and B.
- 2.3.30 With reference to **Appendix 8F: Great Crested Newt Survey Report** of this Environmental Statement **[APP-082]** Great Crested Newt (*Triturus cristatus*) has been detected in one waterbody within 500 m of the Order limits. This pond is approximately 150 m from Sunnica East Site B.

- 2.3.31 With reference to **Appendix 8G: Report on Surveys for Reptiles** Habitat within the Grid Connection Route B, east of the Burwell National Grid Substation Extension are a mixture of ditches, grassland and scrub and could be suitable for Grass Snake, Common Lizard and Slow worm (*Anguis fragilis*). Similarly, the ditches around the BNGSE could support Grass Snake.
- 2.3.32 With reference to **Appendix 8I: Report on Surveys for Breeding Birds** of this Environmental Statement [APP-085], a total breeding bird assemblage of 73 species was recorded within the Order limits between 2019 and 2021, with a breeding assemblage of 66 species recorded in 2019/2020 and 59 species in 2021. Territories of one Annex 1 species: Stone Curlew (*Burhinus oedicanus*) and five WCA Schedule 1 species (Stone Curlew, Hobby (*Falco subbuteo*), Quail (*Coturnix coturnix*), Little Ringed Plover (*Charadrius dubius*) and Barn Owl (*Tyto alba*) were confirmed within the survey area.
- 2.3.33 With reference to the **Appendix 8H: Wintering Bird Survey Report** of this Environmental Statement [APP-084], 71 bird species were recorded during the wintering bird surveys, including notable species such as Skylark (*Alauda arvensis*) and Yellowhammer (*Emberiza citrinella*).
- 2.3.34 With reference to the **Appendix 8J: Report on Surveys for Bats** of this Environmental Statement [APP-087], surveys of Sunnica East Site A recorded very low to high bat activity (depending on the season and location) of at least 8 species; Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Noctule (*Nyctalus noctule*), Leisler's bat (*Nyctalus leisleri*), Myotis species, Brown Long-eared bat (*Plecotus auratus*), Serotine (*Eptesicus serotinus*) and Barbastelle (*Barbastella barbastellus*). A few barns are present (not affected by the Scheme) with roosting potential and foraging activity was observed along the watercourses and hedges.
- 2.3.35 Surveys of Sunnica East Site B recorded very low to high bat activity (depending on the season and location) of at least eight species; Common Pipistrelle, Soprano Pipistrelle, Noctule, Leisler's bat, Myotis species (including Daubenton's bat (*Myotis daubentonii*), Brown long-eared bat, Serotine and Barbastelle.
- 2.3.36 The highest levels of activity were recorded over the reservoir to the south and along Badlingham Lane, but also foraging was noted in fields particularly in the summer (e.g. over maize crops). Numerous potential roost features are present in mature trees, none of which is affected by the Scheme.
- 2.3.37 Surveys of Sunnica West Site A recorded very low to high bat activity (depending on the season and location within the Scheme) of at least 8 species; Common Pipistrelle, Soprano Pipistrelle, Noctule, Leisler's bat, Myotis species (including Natterer's bat *Myotis nattereri* identified from netting survey), Brown Long-eared bat, Serotine and Barbastelle. Foraging was observed along tracks, field margins and adjacent to woodland. Numerous potential roost features are present in mature trees and farm buildings, none of which is affected by the Scheme).
- 2.3.38 Two bat roosts, supporting 1-2 individual bats, were identified in two trees at the Burwell National Grid Substation and surrounding area and are likely to be impacted by Option 1.

- 2.3.39 With reference to **Appendix 8K: Badger Survey Report** of this Environmental Statement [**APP-088**], four Badger (*Meles meles*) setts, in current use, were identified within the Order limits. Two setts, including an active main sett, in Sunnica East Site B, one outlier sett in Sunnica West Site A; and a main sett within the Option 1 location of the Burwell National Grid Substation Extension.
- 2.3.40 With reference to **Appendix 8L: Report on Surveys for Riparian Mammals** of this Environmental Statement [**APP-091**], Water Vole (*Arvicola amphibius*) presence was recorded in ditches, within ditches in Grid Connection Route B and in peripheral ditches of Sunnica East Site A and B. Otter (*Lutra lutra*) presence was recorded in six peripheral watercourses of Sunnica East Site A.

3 Potential Impacts

3.1 Landscape and Visual

- 3.1.1 The **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [**APP-042**] sets out the assessment of the Scheme in relation to landscape and visual receptors for the construction, Year 1 of operation, Year 15 of operation and the decommissioning phases.
- 3.1.2 For the construction phase, significant adverse effects were predicted to county landscape character areas, local landscape character areas and at the Order limits landscape character level and to a range of visual receptors (people's views). This was due to the presence of machinery and activity across the Order limits, with activities including excavation, boring, installation of panels, solar stations and the taller Battery Energy Storage System (BESS) and substations, which would require tall lifting equipment.
- 3.1.3 For the year 1 of operation phase, significant adverse effects were also predicted to county landscape character areas, local landscape character areas and at the Order limits landscape character level. This was due to the change in land use, with new massing via the panels and associated structures, the reduction in aesthetic and perceptual qualities of the landscape from the 'infrastructure' character of the Scheme. Whilst new planting was accounted for in the year 1 assessment, it would not have fully established.
- 3.1.4 By year 15, the landscape and visual assessment predicted that the degree of landscape and visual effects would reduce due to the establishment of the proposed Green Infrastructure that forms part of the Scheme and is discussed in this document, consisting of native grassland, new hedgerows and trees. Due to this, significant adverse landscape effects were predicted at the Site landscape character level only and one local landscape character area (LLCA 24: Lowland Estate Chalkland).
- 3.1.5 The assessment also identified significant effects on visual amenity in year 15 at one of the assessed viewpoints (Viewpoint 39: Limekilns). This was due to the open character of existing views across a valley and the elevated position of the receptor.
- 3.1.6 For all other visual receptors, the significant effects were avoided by the combination of the existing vegetation and proposed planting that forms part of the Scheme and is discussed in this document.

3.1.7 However, there remains a need to avoid impacts on trees, for appropriate restoration of the landscape following construction, and for enhancements to the landscape character and improvements to the green infrastructure network, to meet requirements of local and national planning policy.

3.2 Biodiversity

3.2.1 From the outset of the Scheme, the Applicant recognised the important opportunity to link the provision of renewable energy with landscape and nature recovery at a significant scale, enabling an intensively managed agricultural land to be restored to a sustainable state over a decadal period of recovery including contributing towards Nature Recovery Networks as referenced in the Draft Overarching National Policy Statement for Energy (EN-1). This has involved working down the hierarchy of avoidance, mitigation and offsetting followed by compensation. Given the nature of the Scheme, there has been no necessity for any compensation with respect to either habitat or species.

3.2.2 The Scheme will result in the temporary and permanent loss of the following habitats:

- a. semi-improved acid grassland;
- b. marshy grassland;
- c. arable (specifically arable flora);
- d. other flora; and
- e. hedgerows.

3.2.3 There will be potential adverse impacts on some protected or notable species during construction of the Scheme. These include adverse impacts to:

- a. terrestrial invertebrates due to loss of habitat;
- b. Common Lizard and Grass Snake due to killing/ injuring during construction; and
- c. birds due to adverse impacts to nesting bird species, including specially protected species (such as Stone Curlew) due to temporary and permanent loss of habitat and noise and visual disturbance during construction.

3.2.4 In addition, the presence of invasive non-native Signal Crayfish poses the risk of potential spread of crayfish plague and of impacting native plant and animal species through predation.

3.3 Archaeology

3.3.1 Appended to this LEMP is an Outline Historic Environment Management Plan (OHEMP) which deals with the Archaeological Protection Areas that have been put in place as part of the Scheme's embedded mitigation.

3.3.2 As set out in Appendix F, the OHEMP is a live document, which will be updated through the production of Historic Environment Management Plans (HEMPMS) for each of the Archaeological Protection Areas.

3.3.3 These HEMPMS' will be submitted alongside the detailed LEMP for the relevant Archaeological Protection Areas that are located within the phase of the Scheme

that is the subject of that detailed LEMP, so that the approving local authority can ascertain how heritage management will be undertaken alongside landscape and ecological management during the operational phase.

4 Impact Avoidance measures

4.1 Introduction

- 4.1.1 The impact avoidance measures outlined below would be implemented, as relevant and appropriate, prior to and during the construction phase of each relevant part of the Scheme, the purpose being to minimise the impact of works on landscape and biodiversity features and to achieve legislative compliance.
- 4.1.2 Standard environmental best practice and mitigation will be implemented to ensure construction and operation of the Scheme complies with legislation relating to protected species. It would also aim to ensure the Scheme does not compromise the local conservation status of ecological receptors present within the vicinity of the Scheme.
- 4.1.3 The implementation of these measures has been taken into account when assessing the likely impacts and effects of the Scheme on landscape and biodiversity features in **Chapter 8: Ecology and Nature Conservation** and **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [APP-042].
- 4.1.4 The impact avoidance approach allows for the retention of trees and hedgerows and the enhancement of watercourses including ditches to ensure that the connectivity of the existing green infrastructure network is maintained.
- 4.1.5 Actions have been taken that have contributed to avoid and, or reduce potential biodiversity and nature conservation effects.
- 4.1.6 These have included, through the parameters set out in the illustrative **Works Plans [REP2-005]**:
- a. reconfiguration of solar arrays;
 - b. creating undeveloped buffers throughout the Scheme of at least 5 m from existing boundary features which are embedded within the Scheme design, many of which would consist of new planting;
 - c. ensuring that sites designated for their biodiversity value within the Order limits are retained and measures are embedded within the Scheme design to ensure that their biodiversity is not impacted during construction, e.g. through siting construction routes outwith and away from designated sites;
 - d. ensuring that existing woodland, treelines and the majority of hedgerows are retained and will be protected during construction of the Scheme; and
 - e. retaining and managing existing grassland habitats.
- 4.1.7 These measures are depicted on illustrative sections in **Figure 7 to 13** in Annex 10B of the OLEMP.

- 4.1.8 The following provisions in respect of construction methods are set out in the Framework Construction Environmental Management Plan (CEMP) (which will follow through to the CEMP(s) produced post-construction, pursuant to the DCO):
- a. designing the Scheme to comply with industry good practice and environmental protection legislation during both construction and operation e.g. prevention of surface and ground water pollution, fugitive dust management, noise prevention or amelioration;
 - b. crossings of watercourses where the presence of Otter and Water Vole have been determined, as well as the River Kennett, River Snail, Lee Brook, New River and Burwell Lode, to be undertaken using boring, micro-tunnelling or moling methods, with appropriate setbacks from the top of the banks (depending on habitats and other individual ecological constraints);
 - c. the perimeter security fence around the Scheme to be implemented early in the construction phase to secure the site to prevent construction activity in proximity to retained vegetation, in particular designated sites within and adjacent to the Order limits and, where required by the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]** and any additional arboricultural surveys, specific tree protection measures will be implemented, including solid hoarding fencing and construction exclusion zones and with respect to protected species, e.g. Badgers and their setts;
 - d. utilising motion detection security lighting within substations and BESS compounds to avoid permanent lighting and developing a sensitive lighting scheme ensuring inward distribution of light and avoiding light spill on to existing boundary features during the construction phase. Infra-red lighting will be utilised for CCTV cameras to avoid the need for permanent lighting at the Scheme boundary;
 - e. the ecological measures within the CEMP(s) to be implemented by the selected construction contractor and overseen by an Ecological Clerk of Works (ECoW), where required;
 - f. an Invasive Species Management Plan to be developed which sets out procedures to ensure no invasive non-native species are spread from the Scheme and that any imported building/landscaping materials are free from invasive non-native species (e.g. Schedule 9 and Schedule 2 species). In the event that any future infestations of invasive non-native species are identified during the development process, exclusion zones will be established around them and the ecology team contacted for advice as detailed. This includes not undertaking in-channel works where invasive non-native species have been identified, e.g. Lee Brook, to avoid the spread of invasive non-native species. Where appropriate, cabling would be underneath the watercourse.
 - g. no permanent above ground infrastructure within 10 m of watercourses which will mitigate for potential hazards such as chemical and soils spills into watercourses;
 - h. preparing mitigation strategies for protected species and, where required, applying for species licences from Natural England. At present no such licences are required. Such works will be undertaken sufficiently in advance of the works to meet with the optimum time for mitigation and to minimise any changes to the construction programme;

- i. careful consideration of the access points to limit the loss of vegetation at access points and the number of field boundary crossings. Where access and crossings are necessary, they have been carefully aligned to pass through the field access points and hedgerows where it would have the minimal impact on mature trees. The width of the access points will be minimised as far as possible to retain the landscape structure and habitat connectivity. All access points will be re-instated to their condition prior to the construction;
- j. undertaking vegetation clearance in advance of construction and at an appropriate time of year so as to avoid incidental injuring or killing of reptiles and amphibians so that there will be no need to undertake any translocation of reptiles and/or amphibians;
- k. establishing reasonable avoidance measures along the cable corridors, including buffers of 30 m around any identified Badger setts or 15m around trees with bat roost potential; and
- l. restoring post-construction any habitat removed from within the Grid Connection cable corridors.

4.1.9 The following impact avoidance measures in relation to structures were highlighted as part of **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [APP-042] and shall be taken into consideration as part of the detailed design of the Scheme, which will be approved by the relevant local planning authority, pursuant to a DCO Requirement and in line with the Design Principles.

- a. suitable materials would be used, where reasonably practicable, to minimise reflection and glare and to assist with breaking up the massing and scale of the panels, solar-stations and associated structures;
- b. the selection of finishes for the infrastructure would be informed by the tonal colours of the landscape to minimise the visual impact of the Scheme; and
- c. visual clutter would be minimised, where possible, through careful siting and design.

4.2 Precautionary working methods

Updated Surveys

4.2.1 An ecologist will complete a Scheme walkover in advance of works to reconfirm the ecological baseline conditions and to identify any new ecological risks. The walkover will be completed sufficiently far in advance of the works to allow for the completion of any additional, seasonally constrained surveys (e.g. surveys in support of any identified requirements for protected species licences) that may be required. These surveys will be undertaken in advance of the final LEMP and the Plan will be developed in line with the findings of these surveys.

4.2.2 Immediately prior to site clearance and start of construction of each relevant part of the Scheme, further site walkover surveys will be undertaken by an ecologist, landscape architect and arboriculturalist to confirm that the risks associated with the Scheme remain as previously assessed and, or to confirm the correct impact avoidance measures are being implemented (e.g. tree protection fencing, protected species stand-offs and other protection measures).

- 4.2.3 The scope of the required walkovers will be defined on a case-by-case basis in consultation with the project team and Sunnica Ltd, based on the specific risks associated with each relevant part of the Scheme and informed by the preceding ecological walkover described above.
- 4.2.4 Should any new constraints be identified as a result of the updated surveys, these would be captured in the final version of LEMP. Any additional impact avoidance or mitigation requirements would be identified in consultation with Sunnica Ltd and/or the relevant statutory consultees. Implementation of these measures is proposed to be secured through this OLEMP which will be secured by a requirement of the draft DCO.
- 4.2.5 Any additional surveys would be instructed as necessary by the ecologist or landscape architect, based on professional judgement and the findings of the updated walkover surveys, or identified as appropriate by the Applicant or their contractor(s). These may be required, for example, based on the construction programme, working requirements or following identification of specific issues and constraints not covered by previous advice.

Protected Species Licences

- 4.2.6 A licence is required for a Badger sett closure at the Burwell National Grid Substation Extension. This will be secured as per the details set out in **Annex 8B of Appendix 8K: Badger Survey Report** of this Environmental Statement [APP-088]. All necessary protected species licences would be applied for and obtained prior to undertaking any works that might result in offences under the relevant legislation.

Ecological Clerk of Works

- 4.2.7 The scope of the Ecological Clerk of Works (ECoW) would be advised by the ecologist and landscape architect based on relevant environmental commitments, the findings of the updated surveys, protected species licensing requirements and with reference to the relevant project programmes.
- 4.2.8 Relevant site staff would receive toolbox talks as necessary from the ECoW on the relevant ecological risks present, legal requirements, and the working requirements necessary to comply with legislation, and the final approved landscaping and biodiversity management and enhancement measures. Toolbox talks would be repeated as necessary over the duration of the works.

Hedgerows

- 4.2.9 Some sections of species poor hedgerows crossed by the Scheme may need to be wholly or partially removed to facilitate construction works. Where possible this will be avoided by utilising existing gaps in vegetation.
- 4.2.10 During construction existing hedgerows which are to be retained shall be protected, retained and maintained by measures set out in the CEMP.
- 4.2.11 On completion of construction, affected hedgerow sections will be reinstated in full in accordance with the objectives, design principles and prescriptions set out in Section 5 below.

4.2.12 All hedgerow planting will be notch planted into cultivated ground at approximately 75 cm spacings in a double staggered row and supported by an appropriate timber stake and guard (all fitted as per manufacturer's recommendations). This will also include managing the structure and integrity of the hedgerows during the construction period, with any trimming undertaken outside of the bird breeding season.

Trees and woodland

4.2.13 The location of the Scheme would largely avoid the need for the removal of mature trees. However, some tree removals and pruning of trees would be required.

4.2.14 Where works in close proximity to retained trees cannot be practicably avoided, these works would be undertaken in accordance with current best practice at the time of the works. At the time of issue of this OLEMP, current best practice is defined in:

- a. British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations; and
- b. National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

4.2.15 A Precautionary Arboricultural Method Statement (PAMS) has been produced and is provided in Appendix 10B of this Environmental Statement **[APP-101]**. The PAMS identifies the specification for tree protection measures and the methodology for sensitive works in proximity to retained trees during construction.

4.2.16 The **Arboricultural Impact Assessment Report [EN010106/APP/8.46]** identifies the maximum extent of tree removals anticipated to facilitate the Scheme.

4.2.17 A pre-construction tree survey will be undertaken where construction works are likely to affect trees which have not been subject to detailed tree survey. The findings of this will be included within an Arboriculture Report, which will be accompanied by an updated impact assessment and Arboriculture Method Statement which will set out mitigation and protection measures to be undertaken. These reports will build on the PAMS provided in Appendix 10B of this Environmental Statement **[APP-101]**. The Arboricultural Report will be developed alongside the CEMP **[EN010106/APP/6.2]** and will be submitted in advance of commencement for approval. The findings and recommendations of these will be taken into account by the appointed contractor.

4.2.18 All necessary protective fencing would be installed prior to the commencement of any site clearance or construction works. This tree protection fencing will be rendered in a suitable colour to aid its integration in the landscape.

4.2.19 Trees within the Scheme footprint that cannot be retained will be replaced with native species (either the same species as the tree that has been removed or another suitable native species) within the Order limits boundary.

4.2.20 In a number of places, trees are proposed as visual screening to mitigate the visual impacts of the Scheme, as shown on the illustrative parameter plans **Figures 3-1 and 3-2** of this Environmental Statement **[APP-135 and APP-136]**. Smaller trees

have been specified across the Scheme to aid in their establishment. Existing mature vegetation within the Order limits which currently screens the site from public rights of way will be retained and managed in accordance with the principles set out for woodland in Section 5. This will assist in avoiding and mitigating effects of glint and glare as set out in Appendix 16A of the Environmental Assessment [APP-121].

- 4.2.21 The outline design is based on maximum parameters in terms of the space required to construct and operate the Scheme. The detailed design will minimise the extent of impacts on existing vegetation within these parameters by, for example, reducing the width of excavation for cable routes and access points or proposing horizontal directional drilling.
- 4.2.22 To facilitate the construction and operation of the Scheme, it has been estimated, that up to 1,068 m of existing hedgerow will need to be removed in the worst-case. In some cases, this may just require management of the hedgerow, but as a reasonable worst case, this is presented as lost. The figure incorporates widening of entry and access points for large construction vehicles, creation of passing places on existing highways, internal access roads and trenching for internal cables and works along the grid connection corridor. The detailed construction planning stage will seek to further refine the Scheme to minimise hedgerow loss. The results of this will be incorporated into the Arboricultural Report.
- 4.2.23 The **Arboricultural Impact Assessment Report [EN010106/APP/8.46]** indicates that, as a reasonable worst case, up to 1.565ha of tree canopy cover will be removed to facilitate the Scheme. This comprises 8,250m² of canopy cover of trees which have not been subject to detailed on site assessment and have been classified following a desktop study informed by a high-level site walkover where possible. Of those trees, 150m² are considered likely to be of high quality, 5,200m² are considered likely to be of moderate quality and 2,900m² of low quality. The remaining 7,4000m² of tree cover to be removed consists of trees which have been subject to a detailed tree survey to BS5837:2012.
- 4.2.24 Tree loss will be further reduced where feasible and all areas subject to potential impacts will be surveyed in detail as part of the detailed design process. Retained trees will be fully protected via Construction Exclusion Zones (CEZ) where possible. Where impacts are unavoidable but trees can be successfully retained they will be managed in accordance with the principles of an update to the Preliminary Arboricultural Method Statement (PAMS), including through watching briefs, included within Appendix 10B of the **Arboricultural Impact Assessment Report [EN010106/APP/8.46]**. This is secured through the Framework CEMP [EN010106/APP/6.2].
- 4.2.25 **Table 2** below summarises the number of tree features to be removed based on current detailed survey information and their quality category in accordance with BS5837:2012. The maximum extent of canopy area to be removed is provided and has been rounded up to the nearest 50m².
- 4.2.26 No veteran or ancient trees are to be removed.
- 4.2.27 Of the trees to be removed, part of three tree groups to the south of Worlington are subject to a Tree Preservation Order (TPO). In addition, two individual trees not subject to detailed tree survey are to be removed at Chippenham Road (east of

Snailwell) and these trees are protected by a recent TPO made by East Cambridgeshire District Council.

Table 2: Summary of impacts on trees subject to detailed tree survey

Impact	Category A (High Quality)	Category B (Moderate Quality)	Category C (Low Quality)	Category U (Unsuitable for retention for >10 years)
Trees to be removed to facilitate the Scheme	<i>Part of 4 woodland groups</i>	2 trees, 1 full group, part of 9 groups/hedgerows	3 trees, part of 6 groups/hedgerows	1 tree, 1 full group.
Tree canopy area in m ²	2,450m ²	3,300m ²	1,350m ²	300m ²
				Total = 7,400m²

4.2.28 **Table 3** below summarises the estimated losses and gains of new and enhanced woodland and hedgerow habitat.

Table 3: Summary of estimated woodland and hedgerow loss and gain

Common name	Worst-case loss	Gain/enhancement	Difference
Hedgerows	-1.068km	+7.4km	+6.332km
Woodland	-1.565ha	+52ha	+50.44ha

Ecology

4.2.29 The following precautionary working methods would be employed to minimise potential adverse effects on protected/notable species prior to and during construction. Precautionary working method statements would be produced as necessary to specify working requirements and other necessary impact avoidance measures. These measures would be controlled and implemented through the CEMP that would be developed by the contractor. A Framework CEMP has been submitted in **Appendix 16C** of this Environmental Statement [EN010106/APP/6.3], this is proposed to be secured by a Requirement of the DCO.

Nesting Birds

4.2.30 Where practicable, vegetation clearance works will be undertaken outside the bird nesting season, which is typically between March and August inclusive. Where it is not practicable to avoid the bird nesting season, an ecologist would inspect all areas of vegetation prior to clearance, and clearance would only be undertaken subject to the instruction and requirements of the ecologist to ensure the protection of birds and their nests. Cleared ground would be maintained in a disturbed state in the run-up to construction, to minimise the risk of ground nesting birds attempting to nest on cleared ground.

4.2.31 Where vegetation clearance works are required during the bird nesting season (*i.e.* between the months of March and August inclusive), these works can only proceed

following the completion of a nesting bird check which will be undertaken by an experienced ornithologist. Vegetation clearance will not be undertaken where any active bird nest is identified, and all nests will be protected from harm until the nesting attempt is complete. This will require a buffer of vegetation to be left around the nest, the size of which will depend upon the species involved. Vegetation clearance can only proceed once the nesting attempt has been deemed, by a suitably qualified ornithologist, to have finished.

Stone Curlew

- 4.2.32 Offsetting habitats have been embedded into the Scheme in areas where operational access will not be required. All operational staff working within 500m of the offsetting areas created for breeding Stone Curlew will be given a toolbox talk regarding the sensitivity of the species and, where possible, maintenance within 500m of the offsetting areas will be scheduled between November and February to avoid nesting Stone Curlew. This measure is included in the OEMP and will be finalised prior to operation in accordance with that outline. With these measures in place it is considered that no operational-related disturbance of nesting Stone Curlew will occur since they will not be present in areas subject to operational maintenance visits.

Badger

- 4.2.33 Due to the presence of Badger setts within the Order limits, it will be necessary to permanently exclude Badgers under licence from Natural England. Any setts within the Scheme will need to be closed prior to construction, and outside of the Badger breeding season (30 November until 30 June). One artificial sett is currently required to mitigate for the loss of a main sett and this will be delivered within existing territories of these Badger clans, although the location of this is not specifically provided in this application due to confidentiality. This mitigation will be secured as per the details set out in **Annex 8B of Appendix 8K: Badger Survey Report** of this Environmental Statement [**APP-088**]. Mitigation to prevent injury to Badger (and other mammals) during construction works will include the provision of ramps into any open excavations to allow any Badger that have fallen in to escape. Any retained setts within the Scheme will have an appropriate exclusion zone of 30m around the sett to prevent disturbance and accidental damage. Pre-construction surveys for Badger will be undertaken to determine baseline conditions remain the same as currently recorded and whether there have been any changes to Badger distribution. Where this occurs, Natural England licences and mitigation measures will be updated accordingly.

Reptiles

- 4.2.34 Precautionary working methods to avoid accidental killing or injury of reptiles will be implemented during construction of the Scheme. Precautionary methods will include initial clearance of potentially suitable vegetation down to a height of approximately 30 cm, followed by dismantling of any suitable features, such as log piles and tree stumps, under ecological supervision. Vegetation will be cleared to ground level once no risk of reptile presence remains. Vegetation within working areas will be kept short during construction to discourage reptiles from entering the Scheme.

Amphibians

- 4.2.35 Precautionary methods of working for amphibians, including Great Crested Newts, are similar to the ones outlined for reptiles (above).
- 4.2.36 Consideration would be given to proceed with any minor vegetation clearance works and minor construction activities using a precautionary method of working where appropriate.
- 4.2.37 In general, precautionary methods of working would consist of encouraging any amphibians to move away from the work's footprint into adjacent areas using habitat manipulation. These precautionary measures are implemented to discourage / displace any residual amphibians from the nearby area.
- 4.2.38 Habitat manipulation methodologies will vary between areas and seasons but will in general consist of a phased approach, outlined below:
- a. The on-site vegetation is cut short during winter (when amphibians are hibernating) if possible. If not possible (i.e. works during active season), the vegetation will be cut in a phased approach, firstly cutting to 30cm, then a cut to 15cm, then to ground level.
 - b. The vegetation should then be kept short to displace any amphibians, which may be present, away from the works when they emerge in the early spring and discourage amphibians from moving into the Scheme from the surrounding habitat.
 - c. Vegetation (including topsoil) should be carefully removed using an excavator with a toothed bucket. These works should be supervised by an ecologist if this is deemed appropriate to do so.
 - d. Any habitat features which may conceal sheltering amphibians (log piles, rubble mound bunds, any other debris etc.) will be dismantled by hand under supervision of the ecologist.
 - e. Dismantling of any rubble piles should be conducted during the amphibian active season (i.e. April to October) during warm weather conditions (i.e. above 5 degrees Celsius) to avoid killing or injuring potential hibernating amphibians.
- 4.2.39 In the unlikely event that any Great Crested Newts are discovered, works must cease immediately and an ecologist must be consulted to determine how to proceed. If other amphibians are discovered during vegetation clearance it is proposed that these are translocated to suitable habitat nearby in suitable weather conditions.

Animal Welfare Requirements

- 4.2.40 Construction excavations have the potential to trap wildlife, such as badger and otter, and result in offences under animal welfare legislation. This would be avoided through implementation of simple precautionary mitigation. All excavations deeper than 1m would be covered or fenced overnight, or where this is not practicable, a means of escape would be fitted (e.g. battered soil slope or scaffold plank), to provide an escape route should any animals stray into the construction site and fall into an excavation.

Invasive Species Management Plan

- 4.2.41 An Invasive Species Management Plan (ISMP) will be prepared as an integral section of the LEMP based on the findings of the update surveys. The ISMP will identify requirements for invasive plant management to achieve legislative compliance over the construction phase. There may be ongoing requirements to control invasive plant species during establishment of new habitats and soft landscape, or otherwise to address wider requirements for legislative compliance.
- 4.2.42 If necessary, the ISMP will be updated to allow it to be rolled forward into the operational phase of the Scheme.

Lighting

- 4.2.43 Construction temporary lighting would be arranged so that glare is minimised outside the Order limits as far as reasonably practicable, via the use of best practice measures. Permanent lighting will be activated by motion detection within the BESS and substation areas and infra-red CCTV cameras will be used to avoid operational light spill on areas outside the Order limits.

5 Proposed Green Infrastructure

5.1 Introduction

- 5.1.1 The proposed green infrastructure within the Scheme is illustrated on the Environmental Masterplans [**EN010106/APP/8.47 and EN010106/APP/8.77**], which show the spatial arrangement of existing vegetation and proposed planting in the context of the built elements of the Scheme. These Masterplans should be considered to form part of the OLEMP, and the detailed LEMPs that are submitted should include updates to those Environmental Masterplans.
- 5.1.2 Proposals for new habitat creation and landscaping are accommodated, where feasible, across the Order limits along with the focus on protection and enhancement of existing habitats. The implementation of these measures has been considered when assessing the likely impacts and effects of the Scheme on landscape and biodiversity features in **Chapter 8: Ecology and Nature Conservation** and **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [**APP-042**]. Annex C Table C1 provides a summary of each of the plots/fields across the Scheme, their present, i.e. baseline habitats and underlying soils, post-development habitats to be created and to be retained including their condition and an indication of proposed management. Table C1 links to the Environmental Management Plan which shows the distribution and extent of the post-development habitats and it was used to inform the assessment of biodiversity change (Biodiversity Net Gain). Table C1 will be developed for Deadline 6 to provide further detail of proposed habitat creation and retention including time to achieving condition and boundary habitats.
- 5.1.3 The proposed green infrastructure has been designed to work as a system, integrating with the wider green infrastructure network by providing connections with existing habitat and rights of way. It will be multi-functional and will deliver a range of benefits at the landscape and local scale. The design has been informed by the

management guidance contained within published landscape character assessments set out in Appendix 10D [APP-102] and the following strategies:

Cambridgeshire Green Infrastructure Strategy

5.1.4 This strategy, which covers a large part of the Scheme, identifies six strategic areas and a series of target areas and projects to reinforce the strategic green infrastructure network. Strategic Area 5: Chippenham Fen is the only area which coincides with parts of the Scheme and is focussed on Chippenham Fen and the surrounding landscape. Investment in this area is reported as offering significant opportunities for:

- a. Biodiversity: through enhancing and protecting the nationally and internationally important nature conservation area of Chippenham Fen.
- b. Climate Change mitigation: measures such as carbon sequestration and flood storage and alleviation.
- c. Working with partners to support the development of Gateways that may exist in neighbouring Authority areas that link to this area.
- d. Contributing to landscape character: through improving and maintaining the fen landscape.

5.1.5 One target area has been identified, which relates specifically to Chippenham Fen. This lies north of Cable Route B. The Applicant has undertaken to omit Sunnica West Site B from the Application and therefore no permanent changes are proposed in this area. Nevertheless, the design of these Scheme has been developed to contribute to the broader strategic aims of the strategy by:

- a. Enhancing habitat connectivity across Sunnica West Site A through new hedgerow and woodland planting;
- b. Converting intensively farmed arable land to species rich grassland;
- c. Creating a diversity of habitats along Lee Brook south and east of Chippenham Park.

An Interim Nature Recovery Network for East Cambridgeshire, 2022

This strategy was published after the Application had been made. It has been reviewed to demonstrate how the Scheme can contribute to its aims and objectives. Eleven priority area are identified in the document, which extend across parts of East Cambridgeshire and neighbouring authorities. There are two priority areas which intersect the operational parts of the Scheme. The contribution of the Scheme to these priority areas is described below.

Breckland Edge is an extension to the main area of Breckland in Suffolk and Norfolk. The western part of this area, which coincides with Sunnica West Site A, is described as farmland adjoining the Chippenham Fen Priority Area. The area includes the sandy soils in the eastern part of the Breckland Edge area as well as the calcareous soils in the west, forming a direct connection to the Newmarket chalk grasslands Priority Area. Conservation priorities in this area include:

- a. habitats suitable for Breckland flora and invertebrates, whether grasslands of various types or arable areas suitable for assemblages of rare arable flora. Such habitats are proposed within Sunnica West Site A.
- b. Small wetland areas could be restored and created around watercourses including the River Kennett along with in-channel enhancements and seasonally damp hollows. Such habitats are proposed along the eastern side of Lee Brook on the western edge of Sunnica West Site A.
- c. Other habitats such as tree belts and hedgerows, which would provide complementary habitats, are proposed across Sunnica West Site A.

5.1.6 The landscape and biodiversity effects of the Scheme are considered to be localised. While there will be a short-term impact during construction, the land and associated field boundary features (hedgerows, drainage ditches, trees) will be retained overall. Opportunities for meaningful landscape and biodiversity enhancement within the Scheme have been identified where appropriate via grassland and new tree and hedgerow planting.

5.1.7 Biodiversity offsetting metrics have been used to quantify the biodiversity value of the proposed enhancement and to compare these to the biodiversity value of proposed losses to demonstrate that the Scheme can achieve no net loss and net gain of biodiversity. This information is presented in Biodiversity Net Gain Assessment **[APP-259]**.

5.1.8 The Green Infrastructure proposals are illustrated on the Environmental Masterplan **[EN010106/APP/8.47 and EN010106/APP/8.77]** and in **Figures 3-1 and 3-2** of this Environmental Statement **[APP-135 and APP-136]** and secured through the **Works Plans [REP2-005]** and this document.

5.2 Design Principles and Green Infrastructure Proposals

5.2.1 With reference to Parameter Plan **Figure 3-1 [APP-135]**, a number of design principles have been incorporated across the Sunnica East Sites A and B by:

- a. Siting the primary construction compound, BESS and substation in E33 adjacent to reservoirs and Lee Farm, so that their massing and land uses are perceived in the context of existing infrastructure features and built structures in the landscape. The tonal rendering of shades to integrate the permanent structures within the landscape will help to reduce their perceived overall mass, the detailed design of such structures to be approved by the relevant local planning authority pursuant to a DCO Requirement.
- b. Siting the BESS and substation in E18 so that it is enclosed and screened by existing woodland along its northern edges and in part by roadside vegetation adjacent to Elms Road to its south-east. The tonal rendering of shades which are suitable to integrate within the landscape will help reduce the perceived overall mass of these structures, secured via the OEMP. Additionally, these land uses and proposed structures are consolidated in proximity to Worlington Quarry and Bay Farm solar farm, so that the cumulative impact of these land uses are localised within the landscape;
- c. Siting the solar arrays away from Freckenham, Isleham and Worlington to avoid the Scheme resulting in the physical coalescence of settlements, and retaining

the open character to the west of Beck Road, between Isleham and Freckenham via ECO1 and ECO2;

- d. Conserving the field boundaries and the vegetation patterns, including the pine lines, overall by offsetting the solar panels from the field edges. This also retains views across the landscape to valued features including the pine lines in long distance views and vegetation adjacent to the Lee Brook, as well as responding positively to the Freckenham Neighbourhood Plan Landscape Character Assessment guidance *“by using and extending the existing woodland structure to help assimilate and provide screening, arrays contained in land parcels surrounded by belts of woodland would, over time, become well assimilated”*;
- e. Implementing new woodland and hedgerows, as set out in the OLEMP to aid in visually screening the Scheme, including impacts of glint and glare, and improving the landscape structure, as well as new native grassland mixes beneath the solar panels to improve the range of fauna and increase the biodiversity across the Site in comparison to intensive agriculture, including pig farming; and
- f. New permissive routes linking Freckenham and Isleham parallel to Beck Road and a circular route around parcel E05, to the south of Worlington next to Worlington Heath County Wildlife Site, (which would then enable users to pass along the existing U6006), adjacent to Elms Road and around the perimeter of E19 and E22, to link with existing routes to Red Lodge, between U6006 and E24 and across E26 to E27 to connect with Golf Links Road. These permissive paths will enable increased public access across the landscape and respond positively to published Green Infrastructure strategies.

5.2.2 Other embedded mitigation measures across the Sunnica East Sites A and B which are shown on **Figure 3-1 [APP-135]** and within the Landscape Masterplan and Environmental Masterplans **[EN010106/APP/8.47 and EN010106/APP/8.77]** in **Figures 1 to 6** in Annex A are:

- a. Parcel E01 – the solar panels are offset from the Fen woodland to the north and by 8m from the Lee Brook to the west. The proximity to the woodland aids in screening views from the wider landscape to the north. New willow tree planting is proposed along the Lee Brook edge of E01 to provide additional riparian planting;
- b. Parcel E02 – new broadleaved woodland planting along the eastern edge of the parcel, to reinforce the vegetation structure adjacent to Ferry Lane and screen the panels in longer distance views from the east.
- c. Parcel E03 – new broadleaved woodland to the north and south of the parcel, to screen views from the wider landscape to the north and from Lee Farm. The linear form of the woodland reflects the linear form of pine lines within the wider landscape and provides vegetation linkages east to west across this part of the scheme, between the Lee Brook and vegetation bordering Ferry Lane;
- d. Parcel E04 – as per E03, additional broadleaved woodland along the northern edge and the eastern edge, adjacent to Ferry Lane, so as to screen the panels and improve the vegetation cover;
- e. Parcel E05 - the solar panels have been sited back from Beck Road via a landscape buffer of native grassland, to reduce the proximity of the panels to

- road users, retain views along the road corridor of the churches in Isleham and Freckenham and to retain a perception of travelling through the landscape that separates the settlements. Proposed broadleaved woodland planting, mixed scrub and rush pasture around the edges of the parcel assist with landscape integration and screening of views. The proposed permissive route in E05 surrounds the outskirts of the solar panels, running parallel to Beck Road on western edge. Additional habitats along western grassland strip will deter people close to stone-curlew plots;
- f. Parcel ECO1 – the proposals are for an area of native chalk grassland implemented via non-invasive methods, as a positive response to the below ground archaeology. In combination with ECO 2, this will retain the open character of land between Isleham and Freckenham, to the west of Beck Road;
 - g. Parcel ECO2 – native chalk grassland and stone curlew plots, which in combination with ECO2 will retain the open character of the land between Isleham and Freckenham, to the west of Beck Road;
 - h. Parcels E08, E09 and E10 are enclosed by new hedgerows, to screen views of the panels and reinforce existing hedgerow patterns. There is also a proposed area of chalk grassland within E09, above an archaeological mitigation area;
 - i. Parcels ECO3 will establish a substantial offset from Freckenham Road, to reduce the perception of the solar panels and proximity to residents. The U6006 County Wildlife Site will be retained and is proposed for native chalk grassland as an improvement to the land cover compared to the agricultural fields;
 - j. Parcels E12 – solar panels have been sited to the south of Worlington and offset from the residential land uses by native chalk grassland. These grassland areas would also provide opportunities for stone curlew mitigation. New proposed hedgerow along eastern edge of E12 to join existing hedgerow to act as screening barrier from the solar panels for PRow users;
 - k. Parcels E12 to E17 – solar panels have been located within the smaller field parcels and offset from the intervening pine lines, so as to retain the field pattern and vegetation cover. The panels have also been offset from U6006, which is retained as a recreational route through this part of the Scheme;
 - l. Parcels E19 to E22 – the solar panels in this part of the Site have also been located within the smaller field parcels, to reflect the landscape pattern and retain the intervening pine lines. New woodland is proposed around the perimeter of the parcels to reduce the visibility from residents adjacent to Bridge End Road and local PRow, as well as screen the structures and reduce the perception of the Scheme from Badlingham;
 - m. Parcels E24 and E25 – new woodland planting is proposed to the north, east and south of these parcels to screen the structures and reduce the perception of the scheme when travelling along Worlington Road;
 - n. Parcels E26 to E29 – the solar panels have been located within the small-scale fields and are offset from the boundary vegetation. This is to retain the landscape pattern and screen the panels from wider views;
 - o. Parcels E30 to E32 – the woodland in the south-east part of the Site and around the field parcels has been retained for visual screening and retaining the vegetation cover. Additional hedgerow and woodland planting are proposed

adjacent to Golf Links Road to screen views for motorists and from views from the wider landscape to the north, as well as reduce the perception of the Scheme in relation to Worlington.

5.2.3 With reference to Parameter Plan **Figure 3-2 [APP-136]**, the design principles have been incorporated across Sunnica West Site A by:

- a. Siting the primary construction compound and the BESS and substation within W17, so that it is in part adjacent to existing barns and bordered by the mature woodland of Sounds Plantation which aids in screening the structures from the west and in views from the east, their suitable rendering in the context of the woodland, to aid in reducing the perceived overall massing of the structures;
- b. Conserving the field boundaries and the vegetation patterns by locating the solar panels within the fields and offsetting them from the existing hedgerows and trees. This also retains views across the landscape to valued features including Avenue and plantations; and
- c. Implementing new woodland and hedgerows to aid in visually screening the Scheme and reflect the vegetation patterns, as well as new modified grassland mixes beneath the solar panels to improve the range of fauna and increase the biodiversity across the Site in comparison to intensive agriculture.

5.2.4 Other embedded mitigation across the Sunnica West Site A site which is shown on **Figure 3-2 [APP-136]** and secured within the Landscape Masterplan and Environmental Masterplans [**EN010106/APP/8.47** and **EN010106/APP/8.77**] in **Figures 1 to 6** shown in Annex A are:

- a. Parcel W03 – siting the solar panels between woodland blocks and Foxburrow Plantation and reinforcing the vegetation patterns with new woodland planting to aid in screening this part of the Scheme from the wider landscape and retaining a physical separation from Chippenham Road and Snailwell;
- b. Parcel W04 – new native chalk grassland across part of the parcel, in response to below ground archaeology. The solar panels have also been sited away from The Avenue so that new woodland can be implemented. A temporary fence, rendered in a colour to aid its integration in the landscape will also be implemented in relation to views from Godolphin Gallops, until the establishment of the proposed planting, secured via the OLEMP;
- c. Parcel W05 – siting the solar panels away from The Avenue so that new woodland can be implemented along the southern edges of the parcel, which is considered appropriate in the context of the Avenue and Chippenham Parl. There would also be a new woodland mix along the southern edge of the parcel which would include a higher percentage of evergreen species and a temporary fence, rendered in a suitable colour, to screen views from motorists on the A14, secured via the OLEMP.
- d. Parcels W06 and W07 – new woodland planting to the west of the parcels, to reduce their visibility in longer distance views from The Limekilns, as well as provide new vegetation links across the landscape. The existing woodland between these parcels has also been retained, with panels and associated infrastructure offset from the woodland;

- e. Parcels W08 and W09 – limiting the extent of the solar panels across these fields, so as to respond positively to below ground archaeology. New native grassland would extend across the archaeological areas, to create a continuous sward of grassland with that which will be present under the panels;
- f. Parcels W10, W11 and W12 – the extent of the solar panels has been located to ensure a physical separation from the boundary wall of Chippenham Park and Chippenham Hall. New hedgerow and woodland are proposed along the northern edge of these parcels to provide visual screening from La Hogue Road. New woodland, hedgerow, mixed scrub and rush pasture is also proposed along the northern edge of W10, to provide visual screening from the same road and reinforce the existing vegetation patterns;
- g. Parcel W15– the solar panels have been offset from the watercourse, along with the retention of the riverside trees and vegetation and road networks. New woodland is proposed around the perimeter of the parcels to screen the Scheme, as well as to soften views of the A11 from Kennett and increase the vegetation.

5.2.5 In relation to the below ground cable routes, there would be new planting to replace vegetation removed during the construction phase where practicable.

5.2.6 At Burwell National Grid Substation Extension, there would be new boundary woodland planting along the eastern edge of Option 1. There would also be replacement planting along the Newnham drove where the vegetation is to be removed for cable route construction. These elements are set out in the Landscape Masterplan and Environmental Masterplans [EN010106/APP/8.47 and EN010106/APP/8.77] proposals, in **Figures 1 to 6** in Annex A.

5.3 Proposed planting

Introduction

5.3.1 This section addresses the objectives, design principles and outline specification for woodland, hedgerow and tree planting, including the replacement of vegetation lost due to construction.

General objectives

5.3.2 The proposed planting will deliver the following:

- a. Assist in integrating the Scheme into the landscape by responding to local character through layout and species selection.
- b. Replacement of vegetation removed to facilitate construction of cable routes and access tracks to reinstate connectivity.
- c. Creation and establishment of new hedgerow and woodland habitats that link with and enhance existing green infrastructure networks.
- d. Provide multiple functions and benefits, including visual screening, habitat, shade, flood attenuation, climate change resilience and amenity.

General design principles

5.3.3 The following design principles will guide the detailed design of proposed planting:

- a. Proposed planting will be designed to integrate with existing vegetation to provide continuous habitat as far as practicable.
- b. The edges of areas of planting will be feathered to increase habitat diversity with a greater proportion of shrubs.
- c. Native species will typically make up the larger proportion of a planting mix within the proposed green infrastructure.
- d. Plant mixes will comprise a diversity of species and provenances to maximise resilience to pests and diseases and climate change.
- e. Plant mixes will be adapted to each part of the site to respond to local character and site conditions.

Outline specification

- 5.3.4 As set out above, various habitats and species have been identified through baseline assessments, which are prevalent and adapted to the local environment. The longer a tree species has been present in the British Isles the wider the range of other species it can support to maximise biodiversity. These species will form an important part of the planting mixes for the Scheme, which will be adapted to respond to and reinforce the different character areas of the landscape across the Scheme.
- 5.3.5 Species diversity is important as a diverse range of plants can help cope with warmer climates and limit the damage caused by pest and disease outbreaks, enhancing biosecurity. Current Forest Research guidance stresses this, by suggesting a mix of provenances of recommended species that are resilient and adaptable for an unpredictable future climate. A mix of provenances will therefore be specified:
- a. 1/3 of seed from same local seed source as the site.
 - b. 1/3 of seed from source up to 2° of latitude south of the site.
 - c. 1/3 of seed from slightly warmer climate sources from 2 to 5° of latitude south of the site.
- 5.3.6 Detail on species mixes for proposed areas of habitat and indicative plant numbers, and specifications for plant material, planting, establishment maintenance and long-term aftercare will be developed post-consent. This will also include consideration of their resilience to predicted changes in climate. Indicative plant species lists are set out in Annex D Tables 1-3, responding to the three National Character Areas defined by Natural England, as follows:
- a. NCA 46: The Fens
 - b. NCA 85: The Brecks
 - c. NCA 87: East Anglian Chalk
- 5.3.7 Reference has also been made where relevant to the locally characteristic species listed in the Cambridgeshire Landscape Guidelines (Cambridgeshire County Council, 1991) (CLG).

Plant specification

- 5.3.8 There are many factors which will influence the selection and specification of plants for the Scheme, including:
- a. Geology and soils;
 - b. Climate;
 - c. Latitude;
 - d. Availability of irrigation;
 - e. Function – e.g., habitat creation or visual screening;
 - f. Prevalence of pest and diseases in the environment, for example oak processionary moth;
 - g. Commercial availability; and
 - h. Management arrangements.
- 5.3.9 Climate change resilience and biosecurity, including the control of Invasive Non-Native Species (INNS), will be important considerations in developing the detailed specification for plants, implementation and management post-consent. The specification will be developed with reference to legislation and best practice including:
- a. Forest Reproductive Material Regulations (Great Britain) (HMSO, 2002);
 - b. UK Forestry Standard (Forestry Commission, 2017);
 - c. Ecological Site Classification for Forestry in Great Britain – a tool to help select ecologically suited species to specific sites (Forest Research, 2019a);
 - d. Plant Health and Biosecurity: The Landscape Consultant’s Toolkit, (Landscape Institute, 2019);
 - e. Tree Species Selection for Green Infrastructure: A Guide for Specifiers (TDAG, 2018);
 - f. Trees in hard landscapes: A guide for delivery (TDAG, 2014);
 - g. The Right Trees for Changing Climate Database (Forest Research, 2019b);
 - h. Urban Tree Manual (Forest Research, 2018); and
 - i. Blue Green Infrastructure Manual (Institution of Civil Engineers, 2023).
- 5.3.10 Relevant standards that will be applied include:
- a. PAS 100:2018 - *Specification for composted materials*
 - b. BS 3882:2015 - *Specification for topsoil*
 - c. BS 3936-1:1992 - *Nursery stock - Specification for trees and shrubs*
 - d. BS 3936-4:2007 - *Nursery stock - Specification for forest trees, poplars and willows*
 - e. BS 4428:1989 - *Code of practice for general landscape operations (excluding hard surfaces)*

- f. BS 8545:2014 - *Trees: from nursery to independence in the landscape. Recommendations*
- g. BS 42020:2013 - *Biodiversity. Code of practice for planning and development*
- h. BS 8683:2021 - *Process for designing and implementing Biodiversity Net Gain.*

General principles for establishment maintenance

- 5.3.11 All new tree planting will be subject to a five-year establishment maintenance regime. During this time, all plants found to be dead or dying at the end of each growing season will be replaced within the next planting season.
- 5.3.12 If areas of planting are seen to be failing, soil samples may be needed to identify potential soil issues affecting tree health. Either soil remediation would be required or, if not practical, a more suitable tree species or location would be chosen.

General principles for long-term management

- 5.3.13 Maintenance works to existing trees will, as far as practicable, be planned to avoid the bird nesting season. If essential tree works are required during the bird nesting season, then an ornithologist will be required to check for the presence of active nests prior to any tree works.
- 5.3.14 Following the completion of the initial five-year establishment maintenance period all new planting plots will undergo a condition assessment twice annually until year 15 of operation and then annually until decommissioning. An appropriate programme of works will be developed to address changes in condition and site requirements. Such work may include; additional replacement planting, tube/stake removal, pruning, coppicing, or thinning out of plots to encourage establishment.

5.4 Hedgerows

Introduction

- 5.4.1 Native species hedgerows across the Order limits will provide valuable habitat and food source for local wildlife. Proposed hedgerows linking to the existing hedgerows will provide a continuation of wildlife corridors and protect adjacent fragile habitats. Hedgerows also provide a visual screening function.
- 5.4.2 The Scheme will introduce 5.5km of hedgerow infill planting and new hedgerow creation. Detailed surveys will be carried out at the detailed design stage to determine the extent of gapping up of existing hedgerows required.

Objectives

- 5.4.3 The proposed hedgerow planting will deliver the following:
 - a. Establish continuous, dense hedgerows with closed canopy by year 15 of operation.
 - b. Reinforce existing hedgerows by filling out gaps and providing a more resilient age structure and species composition.

- c. Connect existing and proposed habitats within Scheme and the wider landscape, to enhance the nature network.

Design principles

5.4.4 The following design principles will guide the detailed design of proposed planting:

- d. Proposed hedgerows will, as far as practicable, follow the lines of existing or historic field boundaries.
- e. The ultimate spread of hedgerows will be considered to allow for future maintenance and proximity to public rights of way and permissive paths when setting out.
- f. Plant species mixes will be tailored for each plot depending on the soil, habitat and character at the detailed design stage, post-consent.
- g. A wide range of native woody species of local provenance will be used to maximise biodiversity value.

Outline specification

5.4.5 On completion of construction, sections of existing hedgerow removed to facilitate construction will be replanted. If existing hedgerows have been coppiced and protected during construction, material protecting stools will be removed and the stumps allowed to regrow.

5.4.6 Hedgerow planting will be notch planted into cultivated ground in a double staggered row at five plants per linear metre with 60cm between rows. Gaps in existing hedgerows will be filled by interplanting with excavation by hand where necessary to minimise ground disturbance around existing plants.

5.4.7 Hedgerow planting will comprise a mix of 40-60cm and 60-80cm transplants. The exact species mix for each hedgerow will be developed at the detailed design stage to respond to the character and context of the site and species which are prevalent in the local landscape.

5.4.8 Hedgerow trees will also be introduced and it is assumed that these would be planted as feathered trees of 150-175cm and 200-250cm, depending on species, at approximately 15m to 20m centres within the sections of infill and creation to allow for canopy spread. Fruit and nut bearing species would provide a food source for birds and small mammals.

5.4.9 An indicative list of key hedgerow shrub and tree species is given in **Annex D** Table D2.

Establishment maintenance

5.4.10 The following specific maintenance will be carried out within the five-year establishment period after planting:

- a. Remove litter, rubbish and debris from the base of the hedgerow;
- b. Clear weeds from around the base of each plant twice annually;
- c. Spot treat undesirable species;

- d. Re-firm plants after high winds or frost heave;
- e. Inspect and adjust guards;
- f. Check and record failed or defective plants for replacement in the next available planting season;
- g. Replacement of failed or defective plants.

5.4.11 No cutting of hedgerows planted as part of the Scheme is anticipated within the five-year establishment period.

Long term management

5.4.12 The following principles will apply to the management of existing hedgerows within the Scheme and hedgerow planting once it has fully established.

- a. Non-desirable woody species will be removed during management operations and at other times as necessary, where this does not prejudice screening functions.
- b. In order to fulfil the OLEMP objectives, each hedgerow will be managed as appropriate, i.e. by trimming, laying, coppicing, bulking up, etc.
- c. If managed by laying, this should be on a rotational basis. This is a traditional management technique and seeks to retain the structural integrity of hedgerows and maintain connections with other habitats. Cutting should be carried out at the end of the winter in February, thereby retaining berries through the winter months for wildlife, and avoiding the bird breeding season.
- d. Where trimmed, hedges should, wherever possible, be managed on a three year rotation with only one side cut a year to help develop the desired tall bushy structure.
- e. Cutting back undergrowth, overgrowing or overhanging shrubs and minor tree branches from any pathways to maintain an unobstructed width of at least 2m or the existing width of the pathway, whichever is the greater.
- f. The treatment of arisings will be considered along roadsides and may determine maintenance techniques such as cutting with a tractor-mounted reach arm with reciprocating cutter bar.
- g. Retaining dead, over-mature or dying hedgerow trees wherever possible, but those which are considered dangerous for health and safety reasons, for example adjacent to public footpaths or residences, to be felled or lopped as appropriate to maintain safety, and in accordance with protected species constraints. This includes native Elm (*Ulmus procera*) where it has naturally colonised hedgerows.
- h. In the interests of wildlife, hand weeding, where feasible, should take precedence over the use of herbicides in hedgerows. However, for example in the treatment of Non-Native Invasive Species, herbicide may be required.
- i. Where herbicide application is required, an appropriate herbicide will be applied in July - August in small, controlled areas around the base. Such herbicide application will only be undertaken by an appropriately certified operative whose company was a member of recognised trade association.

5.4.13 To sustain a dense structure requires frequent cyclical operations or phased maintenance in the initial years following planting. All proposed and existing hedgerows will be allowed to grow tall and wide and maintained between 2m and 3m in height to provide maximum benefits for biodiversity and this natural regeneration will encourage a mosaic of successional habitats, forming broad habitat corridors throughout the Scheme.

5.5 Trees and woodland

Introduction

5.5.1 A total of 44ha of woodland is proposed, which together with the 36ha of existing woodland which will be retained, totals approximately 80ha of woodland across the Scheme. This equates to an approximate increase of 122% in woodland cover across Sunnica East Sites A and B and Sunnica West Site A.

5.5.2 Groups of feathered trees will also be planted to reinforce existing vegetation patterns and aid in enclosing the Scheme (refer to Environmental Masterplan [EN010106/APP/8.47 and EN010106/APP/8.77]). It is envisaged that these tree groups will be located within areas of grassland on the peripheries of the Scheme. The location and extent of each tree group will be determined on site at the detailed design stage. It is assumed that there will be up to 20 tree groups across the Scheme, each of approximately 20 feathered or standard trees. Therefore, the total number of trees in groups will be approximately 400.

Objectives

- 5.5.3 The proposed woodland and tree planting will deliver the following:
- a. Establishment of trees and shrubs to the required density and species composition within the first five years following planting.
 - b. A closed canopy by year 15 of operation.
 - c. Reinforce existing woodland by filling out gaps and providing a more resilient age structure and species composition.
 - d. Connect existing and proposed habitats within Scheme and the wider landscape, to enhance the nature network.
 - e. The long-term objectives of woodland creation will be to establish woodland with a well-developed structure and the following characteristics:
 - i. A ground layer - supporting grasses, ferns, flowering plants and lichens that cover the ground;
 - ii. A field layer - supporting low-growing plants and shrubs that reach up to about 5m in height;
 - iii. An understorey layer - consisting of low-growing shrubs and coppice stools, smaller tree species and emerging larger tree species;
 - iv. A canopy layer - with trees that are a range of different heights;
 - v. Retained deadwood - in all woodland layers, particularly edges which provide a useful habitat for insects and fungi; and
 - vi. Open areas – designating open ground as glades (at least 10%) that have no mature trees, letting light reach the ground and field layers.

Design principles

- 5.5.4 The following design principles will guide the detailed design of proposed planting:
- a. Woodland planting will be designed to integrate with existing vegetation patterns to enhance habitat connectivity
 - b. The density of proposed woodland planting will be determined based on its typology and primary function.
 - c. Three principal types of woodland habitat are proposed with different primary functions. These different types of woodland are indicated on the Environmental Masterplans and are described below.
 - i. *Woodland* – blocks with an area greater than 0.5ha and generally wider than 20m with a higher proportion of trees to shrubs and a defined woodland edge where there will be a higher proportion of shrubs and gaps where scrub can naturally colonise;
 - ii. *Linear belts of trees and shrubs* – generally less than 20m wide and with a higher proportion of shrubs than trees and a higher density of planting to maximise visual screening and enclosure at ground level;
 - iii. *Pine lines* – specific to the Breckland, these linear belts of trees will be planted with predominantly Scots Pine and shrubs and ground cover adapted to the acid soils.
 - d. Other sub-types of woodland may be defined at the detailed design stage, for example if opportunities to create wet woodland are identified.
 - e. The density of proposed woodland planting will be designed to as far as possible limit the need for future thinning.
 - f. The extent of woodland planting proposed will take account of the future shading of the solar panel arrays by trees when fully established.
 - g. Woodland will be designed to respond to the conditions and character of each part of the site with reference to the landscape character assessment set out in Appendix 10D of the Environmental Statement and relevant updates to the evidence base available at the detailed design stage. For example, the planting palette for the parts of the Scheme which lie on the fringes of the Breckland will be characterised by stands of Scots Pine, interspersed with birch and occasional oak trees.
 - h. The understorey will be more sparsely planted, particularly at the edges, to allow natural colonisation with shrubs and perennial and annual ground flora. On the parts of the site which lie on the edge of the Fens, tree species in wetter areas will include Willow and Alder, which are characteristic of watercourses in the area.

Outline specification

- 5.5.5 The exact number of plants and stock size will be determined at the detailed design stage, taking consideration of the interface between proposed planting and existing vegetation and the need for interplanting.
- 5.5.6 The density of planting will reflect the function of each woodland block and will be determined at the detailed design stage, with reference to the following guidelines:

- a. Woodland – 1.8m to 2.5m centres;
- b. Linear belts of trees and shrubs – 1.2 to 1.8m centres;
- c. Pine lines – 3m centres for trees, with 1.2 – 1.8m for shrubs.

- 5.5.7 The majority of plants will be nursery transplants, supplied at a height of between 40-60cm and 60-80cm. Such plants are easier to establish in the field than larger trees as their root systems adapt better to the growing position.
- 5.5.8 Approximately 20% of the planting mix will be larger feathered trees of 150-175cm and 200-250cm, depending on species.
- 5.5.9 English Elm (*Ulmus procera*) was once a prolific tree species in the Cambridgeshire landscape but were decimated by Dutch Elm Disease in the 20th century. They are important for the diversity associated with them, primarily invertebrates as opposed to the species as part of floral diversity per se. They are important in parts of the study area, but rarely grow beyond 5m in height before succumbing to the disease. Elm will be allowed to colonise hedgerows and woodland through natural regeneration but will not form part of the planting mix.
- 5.5.10 All transplants will be notch planted into cultivated ground and will be enclosed by a biodegradable plant protection tube supported by a cane during establishment.
- 5.5.11 Feathered and standard trees will be pit planted supported by an appropriate timber stake and tree shelter, fitted as per manufacturer's recommendations.
- 5.5.12 A list of indicative woodland plant species is given in **Annex D** Table D3. This will be tailored and expanded for each plot depending on location to respond to character and context at the detailed design stage.

Establishment maintenance

- 5.5.13 The following specific maintenance will be carried out within the five-year establishment period after planting:
- a. Remove litter, rubbish and debris from within woodland planting plots;
 - b. Clear weeds from around the base of each plant twice annually;
 - c. Spot treat undesirable species with an appropriate translocated herbicide;
 - d. Re-firm plants after high winds or frost heave;
 - e. Inspect and adjust guards;
 - f. Check and record failed or defective plants for replacement in the next available planting season;
 - g. Replacement of failed or defective plants.
- 5.5.14 No thinning of woodland plot is anticipated within the five-year establishment period.

Long term management

- 5.5.15 The following principles will apply to the management of existing woodland within the Scheme and woodland planting once it has fully established.

- a. Non-desirable woody species will be removed during management operations and at other times as necessary, where this does not prejudice screening functions.
- b. Cutting back undergrowth, overgrowing or overhanging shrubs and minor tree branches from any pathways to maintain an unobstructed width of at least 2m or the existing width of the pathway, whichever is the greater.
- c. Retaining dead, over-mature or dying hedgerow trees wherever possible, but those which are considered dangerous for health and safety reasons, for example adjacent to public footpaths or residences, to be felled or lopped as appropriate to maintain safety, and in accordance with protected species constraints. This includes native Elm (*Ulmus procera*) where it has naturally colonised hedgerows.
- d. Coppicing of species which strongly regenerate on rotation to maintain habitat condition and woodland density.
- e. Thinning of woodland will:
 - i. Commence early to maintain light penetration to the woodland floor for biodiversity development at the lower layers (e.g. crown reduction);
 - ii. Thin the trees that are suppressed (i.e. negative selection) by more dominant (i.e. positive selection) established trees;
 - iii. Remove less than 15-20% of trees;
 - iv. Select trees for thinning that are based on the management objectives, such as overrepresented species or those of poor form and condition; and
 - v. Provide a continuity of different tree ages over time to support the woodland habitat.
- f. Hibernacula will be created within woodland once fully established using brash and logs and poles from coppicing and thinning.

5.6 Mixed Scrub

Introduction

- 5.6.1 Mixed scrub will be allowed to naturally regenerate within two areas of wide grassland. These are the area south of E05 and north of Beck Road within Sunnica East Site A and the area east of Lee Brook and south of La Hogue Road within Sunnica West Site A.

Objectives

- 5.6.2 The proposed mixed scrub will deliver the following:
- a. Habitat mosaics comprising scrub edge and shrubs which increase habitat diversity which respond to local soil conditions.
 - b. Create connections with adjacent habitat types.
 - c. Provide cover and food sources for birds and mammals.

Design Principles

- 5.6.3 The following design principles will guide the detailed design of proposed planting:

- a. Scrub will be encouraged to colonise the areas shown on the Environmental Masterplans and on the edges of proposed woodland adjacent to grassland.
- b. Species will be appropriate to soil type, fertility and pH based on soil analysis.
- c. Natural regeneration through the exposure of the bare ground will be used which encourages germination from the local seed bank, existing root systems and cut stumps.

Long term management

- a. The extent of scrub will be controlled through cyclical cutting with no more than one third of each area cleared in each year.
- b. The composition of scrub will be monitored to maximise structural variety and biodiversity benefit.
- c. Chemical weed control may be necessary when controlling bramble if this becomes dominant.

5.7 Grassland habitat creation and management

Introduction

5.7.1 The Sunnica Scheme includes 757ha of grassland of which 645ha is created grassland, the remaining 112ha being grassland in Local Wildlife sites and grassland riparian to streams and ditches. The grassland habitat creation will include the components of:

- a. planning
- b. measures/actions to be undertaken pre-construction
- c. implementing grassland creation
- d. enhancing existing grassland
- e. maintenance of grassland
- f. monitoring.

5.7.2 The grassland habitat creation will include management plans for:

- a. lowland farmland birds including Skylark, Turtle Dove, Lapwing, Yellow-hammer, Barn Owl and Corn Bunting;
- b. Local Wildlife Sites; and
- c. riparian habitats.

5.7.3 The planning for grassland creation is underpinned by the objectives for a given grassland area or plot within the Scheme and the soils and other related factors including shading.

Objectives

5.7.4 There are a number of objectives that grassland creation needs to meet:

- a. a diversification of the flora of the parcels/fields over and above that presently found at a landscape scale on what are mostly arable fields, encouraging a

- species composition as indicated by the soil characteristics, e.g. relatively acid or relatively calcareous with plots being given target species mixes to be attained within a fixed time period to meet biodiversity net gain (BNG) criteria;
- b. the provision of resources for a range of insects and other invertebrates achieving a broader increase in biodiversity;
 - c. habitat for a number of lowland farmland birds including provision of foraging for Stone Curlew;
 - d. enabling the restoration of the soils across the Scheme including a reduction in nutrients and an increase in the organic content;
 - e. the stabilisation of the soils under and around the solar arrays to prevent any loss of soil in run-off; and
 - f. a resilience to changing climate and its impacts.

Design principles

5.7.5 The design of the proposed grassland will be governed by:

- a. the nature of the landscape occupied by the Scheme which sits in between Breckland and the Fens, the former being the more dominant;
- b. the nature of the soils which will be further investigated prior to construction;
- c. consideration of the previous and current land usage throughout the working landscape (see in Annex C Table 1); and
- d. the planned biodiversity net gain (BNG) as inputted to the BNG assessment and calculation to ensure that the Scheme meets its biodiversity targets.

5.7.6 Breckland soils are mostly sands and loamy sands with variable amounts of a stone, mainly flint and are typically far from simple in nature and distribution. Within short distances, variation in the amount of silt, clay, chalk and stone can result in variations in acidity, alkalinity and moisture retention, which affect the vegetation and its species composition. Blown sand is a key element of the edaphic environment, which can vary from a few to many centimetres in depth, underneath of which, or mixed in lie the weathered surface of the chalk, chalky sandy tills, more loamy tills and chalky boulder clays, or chalk-sand mixtures, loams and gravels derived from them.

5.7.7 Fen peat soils, in contrast, are high in organic content accumulated over the millennia. Leaching nutrient ions from these soils depends to a certain extent on the drainage of the soils. A relatively high water table will accelerate this process as well as providing the conditions needed for the plant species of wet lowland grassland.

5.7.8 The plans for grassland creation at this stage are based on existing knowledge of the soils (Appendix 12B) and the soil map (Annex E), the baseline data for which will be further expanded prior to construction. The soils are generally quite basic due to the presence of chalk and are light and sandy with a relatively low surface area for the retention of nutrient cations and phosphate. Nitrate is very weakly retained in these soils such that any unused excess is rapidly leached out. Ammonia is very rapidly consumed and given that fertilisation will cease, nitrogen will decline to a low equilibrium. Phosphate binds very strongly to the narrow edges of clay mineral sheets (cations being held on the larger faces between clay sheets), so the decline

in current phosphate availability will be slower. Given that these are sandy soils with low clay content, this leaves relatively fewer sites in a volume of soil to which phosphate can bind. See data tables from page 91 in Appendix 12B.

5.7.9 Forward planning and preparation pre-construction would include:

- a. determining the areas and locations of different grassland types, quantifying the amount of seed needed for each and identifying sources of seed;
- b. identifying those plots/field where rapid grassland establishment is necessary, e.g. Stone Curlew plots, and how to achieve this;
- c. identifying and procuring seed with local, i.e. East Anglia, provenance including seed houses and donor grassland sites;
- d. planning the soil preparation ahead of grassland creation for all plots/fields and ensuring that this is integrated into other pre-construction Scheme preparation works;
- e. developing a grazing strategy for the Scheme based on successful implementation of grazing on other solar farm schemes including procurement and establishing key resources on-site; and
- f. for some plots/fields, pre-sowing with a nurse crop.

5.7.10 The end point of the planning stage will be a table listing all of the plots/fields with a prescription for the grassland creation (and for any other habitat) and proposed maintenance and monitoring.

Implementing grassland creation

5.7.11 The grassland habitat created will not be treated with any insecticides, molluscicides or other such pesticides. In order to enable target species to establish and to maintain bare areas, herbicide will be used in those fields/plots where such undesirable plants appear from existing seed banks, volunteer (self-sown) crops and, or via wind dispersal. This control can be achieved in a targeted manner using a weed wiper or targeted spraying using a knapsack sprayer. There will be no application of fertilisers.

5.7.12 There will be three main approaches to implementing grassland creation, partly in recognition of different conditions and constraints across the Scheme, the needs of particular grassland types and the objectives of the grassland, e.g. habitat for lowland farmland birds. These approaches will be developed with input and comment from the Ecology Advisory Group and other local stakeholders. The approaches include sowing appropriate seed mixes on plots/fields prepared by:

- a. **Ploughing:** Plots/fields will be ploughed by the present land owner prior to the plots/fields being handed over. The field will receive light harrowing to prepare for the sowing of the seeds. Where the dry acid soil was the pre-arable situation, the soil will naturally approach a natural equilibrium once fertiliser inputs cease, a process which will take a number of years.
- b. **Soil skimming:** A part of the existing ploughed topsoil would be skimmed off particularly for those areas where the amount of chalk influence is low. This effectively reduces phosphate availability and removed topsoil can then be

stored as with that from the areas of track and hard standing. This soil remains available for reinstatement on decommissioning were the grassland area so created is not to be retained. If it is being retained the topsoil can be beneficially spread with similar material outside the habitat area. This approach avoids ploughing as this would dilute what topsoil was left, which although good for grassland creation, would be a loss of the productive topsoil resource.

- c. Natural regeneration: A small number of plots/fields or parts thereof will be selected which will be allowed to regenerate naturally with selective removal of unwanted species.

5.7.13 Recognising the variations that are likely to be encountered in soil conditions across a plot/field, the success rates in germination and establishment will be spatially variable, necessitating follow up with respect to local conditions and the need to alter the species composition of a given mix, e.g. responding to drier soil with more sand. Overall, as for Breckland, this variation will enhance floral biodiversity.

5.7.14 For those areas of lowland wet grassland, the drainage will be managed to ensure a higher water table to enable appropriate plant species to establish. This could be through manipulating in-field drainage or through raising water levels in ditches and streams, e.g. using woody debris to hold water back.

5.7.15 Seed used on the Scheme will be of local provenance, i.e. with respect to East Anglia. The three main sources would be:

- a. commercially available seed, necessitating contacting appropriate seed houses well ahead of construction;
- b. seed harvested from sites in East Anglia, for some species preferably from Breckland and, or the Breckland edge; and
- c. green hay, again, from sites in East Anglia, for some species preferably from Breckland and, or the Breckland edge.
- d. Seed sowing would be using drills appropriate to the size of parcel/field or plot.

Enhancement

5.7.16 There is relatively little existing grassland habitat within the Scheme. That which is present, is either within a Local Wildlife Site or riparian to streams and ditches. Based on the biodiversity objectives for a given area of such grassland (these will already exist for Local Wildlife Sites), measures will be determined to enhance the biodiversity of these grasslands. This would be as part of the grassland maintenance programme and could be through, e.g. introducing a grazing regime or by through raising water levels in ditches and streams, e.g. using woody debris to hold water back. In the case of Local Wildlife Sites, the Ecology Advisory Group would have a key role in deciding on appropriate regimes.

Establishment maintenance and long-term management

5.7.17 The maintenance of the grasslands will comprise post-sowing remediation works and establishment of on-going management including frequency and levels of intensity as well as the responsible agency.

- 5.7.18 Depending on the level of plant establishment, post seed sowing remediation could entail:
- understanding why establishment is low or failed and determining follow up measures;
 - measures to deal with unacceptable weed growth using spot weeding and including herbicide treatment where appropriate;
 - boost soil mycorrhiza using soil or commercial inocula; and, or
 - re-seeding with the same or a modified seed mix.
- 5.7.19 On-going management will be based on either sheep grazing and, or mowing depending on the objectives for a given plot/field of grassland and type of grassland. The sheep grazing programme would have been established pre-construction with an element of flexibility built in to accommodate differential rates of establishment and, where necessary, complement mowing.
- 5.7.20 An example of a grazing regime would be through low intensity pulse grazing using sheep with a stocking density of:
- January-February: Light grazing on any new growth
 - Early March: Remove grazing to allow plants to grow and create good habitat for ground nesting birds
 - September - end of December: Main grazing period with light grazing down to a short sward height.
- 5.7.21 The mowing programme would likewise need to be flexible, particular at the early stages of sward establishment. The programme will include criteria for decisions on whether or not to gather cuttings, criteria which will alter as the soil changes and flora establishes. Specific mowing regimes will be needed to accommodate certain insect and invertebrate biodiversity more generally, e.g. a mosaic of plant heights helps encourage insects, and for particular lowland farmland birds. Where cut vegetation is removed from the grassland area, it will be taken to a composting location located nearby to avoid the need for material to be moved long distances. Composting points can be sited to provide nesting and hibernating habitat for reptiles.

Monitoring

- 5.7.22 Based on the objectives for the different areas of grassland across the Scheme, a monitoring regime will be established including:
- criteria against which the grassland will be monitored;
 - when monitoring will take place: year post construction and season;
 - who will undertake the monitoring;
 - inclusion of any proposed remediation; and
 - to whom the outcome of the monitoring is communicated.
- 5.7.23 The planned monitoring will be included in the table of all plots/fields and their grassland type and management.

5.8 Biodiversity features

Stone Curlew plots

Introduction

- 5.8.1 Stone Curlews are very susceptible to human disturbance and birds may also abandon nests if they are suddenly faced with a new type of disturbance at any time within the breeding cycle. Therefore, during the Stone Curlew breeding season (March to September, inclusive), the Stone Curlew plots should be avoided by energy farm personnel and there should be no entry to these plots unless essential to the maintenance or monitoring of them.
- 5.8.2 ECO1, ECO2 and ECO3 will have anti-predator fencing around them during the breeding season (in place between February to October). There will also be stock proof fencing around these areas at certain times. Any footpaths made around new stone curlew habitat areas will have signposts highlighting that they are sensitive areas and that dogs should be kept on leads.
- 5.8.3 A successful breeding plot will provide a predominately open area of bare ground with sparse vegetation from February to September. Excessive vegetation growth can cause birds to abandon nests or severely restrict the area in which chicks can feed.
- 5.8.4 The following cultivation programme is required in ECO1 and ECO3:
- a. By mid-March prior to construction, prepare the whole 2 ha plot by discing/ light cultivation, ideally in February. This creates a rough bare fallow that provides suitable conditions for the first Stone Curlew nesting attempt.
 - b. During May of the plots being operational, spray the whole plot using a non-selective herbicide ideally when the vegetation is no more than a few centimetres tall. This will create bare ground rather than a mat of dead vegetation. Spraying reduces the risk associated with intrusive management (such as through mowing) to a level that will not impact the population of Stone Curlew. The only danger from spraying, to Stone Curlew nests/chicks, is from tractor wheels. If the nest location is known it may be possible to reduce this risk by avoiding the area around the nest and/or by spraying only half of the plot.
 - c. Retain the fallow through the autumn/winter (at least until the end of September). Stone Curlew can nest late into the year so the fallow must be left until the end of September. If left through winter, it will provide a vital source of seeds for farmland birds.
- 5.8.5 The timing of any management may need to be adjusted in accordance with any breeding attempts and this will be informed by the post-construction monitoring.
- 5.8.6 Whilst cultivation of plots is generally preferred to suppress vegetation, it may be necessary to spray plots with an appropriate herbicide, rather than mow. Again, this would be informed by the post-construction monitoring.
- 5.8.7 Within ECO2 the Scheme would replicate ploughed field conditions within the plots to constitute bare-earth. This would be managed through visual inspection and manual removal of aggressive weeds, to keep the plots bare.

- 5.8.8 To create the grassland outside the plots, the surface would be raked followed by hydroseeding across the existing surface.
- 5.8.9 The short-term management (0-5 years) would involve the following:
- a. visual inspections during the growing season;
 - b. looking for establishment rates and whether certain species are at risk of out-competing the grassland;
 - c. grassland mown between two and four times at even intervals throughout the growing season to control the more competitive species and allow the newly sown less competitive species to establish;
 - d. grassland cut in autumn (once grassland has set seed) with cut grass left in situ for 24hrs;
 - e. Removal of cut vegetation from the grassland area (in combination with a litter pick); and
 - f. Targeted weeding (including no residual herbicide) if invasive species recorded.
- 5.8.10 The long-term management (5+ years) will involve low intensity conservation grazing once the grassland has established.

Wildlife Boxes

- 5.8.11 Bird and bat boxes made from long lasting materials (such as Woodcrete) will be used and would be expected to have a life expectancy of 20-25 years. However, the condition of all wildlife boxes installed would be monitored every five years during the operation of the scheme and replacements will be made as necessary. Inspections can be timed to coincide with the required inspections of new tree and shrub plantings.
- 5.8.12 All wild birds, their active nests and eggs are protected under the Wildlife and Countryside Act (1981), as amended. This makes it an offence to deliberately, or recklessly kill or injure any wild bird or damage or destroy any active nest or eggs of a wild bird.
- 5.8.13 Therefore, annual cleaning of bird boxes cannot be undertaken between the months of March and August inclusive, when birds may be using the boxes. Therefore, bird boxes should be cleaned between October and February to prevent the build-up of nest parasites in the boxes whilst avoiding the risk of disturbing birds using the boxes as a roost site during the cold winter months.
- 5.8.14 Bat boxes will be inspected by an appropriately licensed bat surveyor for evidence of uptake, and any evidence of roosting bats will be recorded to assist with ongoing management of the woodland on site.
- 5.8.15 Bat boxes are, in most circumstances, unlikely to be used by hibernating bats during winter months (between November and February inclusive). Therefore, any maintenance that is required on bat boxes should be undertaken during these months, when bat droppings and any bird nests will be removed.

- 5.8.16 If bats are inadvertently discovered during maintenance, the person undertaking the maintenance should replace the box and leave site.

5.9 Other environmental features

Provision of wildlife boxes

- 5.9.1 A range of artificial bird and bat boxes will be installed in existing woodland areas to increase the availability of nesting and roosting features and enhance the value of the woodlands for these species' groups.
- 5.9.2 A total of 40 bird nest boxes and 30 bat roost boxes of varying types to suit different species of birds and bats will be installed within the retained woodland areas on suitable trees, in locations to be determined by an ecologist at the time of installation.

Creation of habitat piles

- 5.9.3 Habitat piles and hibernacula would be constructed throughout the Scheme areas using natural materials generated during clearance of the site, such as logs, turf and grass strimmings. These would provide refuge and hibernation opportunities for amphibians and reptiles, as well as dead wood habitat for invertebrates, which would in turn benefit fauna such as bats and birds.

Integration with existing public rights of way and creation of permissive paths

Introduction

- 5.9.4 The existing public rights of way (PRoW) network is shown in **Figure 10-4** of the Environmental Statement. The network is sparse, particularly in the southern part of the Scheme.
- 5.9.5 Several PRoW which intersects the Scheme will be affected by construction, requiring short-term, temporary closures and diversions as described in the ???. These PRoW will be restored following completion of construction of each section of cable route.
- 5.9.6 Badlingham Road (U6006) is identified as an "other route with public access" on Ordnance Survey maps. It passes through the centre of Sunnica East Site B and is enclosed by dense trees and scrub on both sides through the section where solar panels are proposed (E12 and E13). Additional planting is proposed along the western edge of parcels E14, E15 and E16 and the northern edges of E12 and E13 to screen views of panels from U6006 whilst retaining longer views towards the wooded skyline.
- 5.9.7 Although no PRoW will be located within the Scheme, a small number will be located in proximity. The Scheme has been designed to make use of existing dense vegetation to provide screening and preserve alternative views. Bridleway 204/5 is located to the west of Sunnica West Site A, connecting Snailwell to the north with Newmarket to the south. It is open in the north but enclosed by dense woodland along the majority of its length. Additional planting is proposed on the northern edge of parcel W03 and the southern edge of W04 to reinforce the screening provided by

existing woodland. The amenity of this route and existing views across the Snailwell Gallops and north towards Chippenham Fen will be preserved.

Objectives

- 5.9.8 The Scheme will deliver the following benefits to the existing PRoW network:
- a. Restore the character and condition of existing PRoW affected by construction.
 - b. Retain and enhance existing vegetation to screen built elements of the Scheme, including from glint and glare effects.
 - c. Retain longer distance views which contribute to sense of place and wayfinding.
 - d. Provide new permissive routes which connect with the existing PRoW network and enhance access to the countryside with a choice of longer and shorter routes.
 - e. Encourage use of existing PRoW and new permissive routes and discourage incursions into ECO areas through signage and fencing.
 - f. Contribute to enhancement of the wider PRoW beyond the Scheme through s106 contributions.

Design principles

- 5.9.9 The Scheme will implement new permissive routes during the lifetime of the Scheme as illustrated on the **Environmental Masterplans [EN010106/APP/8.47 and EN010106/APP/8.77]** and **Works Plans [APP-136]**, as follows:
- a. around the solar panels in parcel E05 and running parallel with Beck Road within Sunnica East Site A. This will provide a connection between Isleham to the west and Freckenham to the south via bridleway W-257. It will also provide opportunities for shorter circular routes and will connect with a new space to the west of E05 where a memorial to the B50 crash site will be constructed.
 - b. along the southern edge of Sunnica East Site B and adjacent to Elms Road; to connect existing routes from Red Lodge with U6006; and
 - c. along the north part of Sunnica East Site B, between U6006 and Golf Links Road.
- 5.9.10 The following design principles will be applied to the proposed permissive paths:
- a. The interface of proposed permissive paths with existing PRoW and roads will be clearly marked.
 - b. The permissive route between Sheldricks Road and Beck Road south of E05 within Sunnica East Site A will be constructed as a minimum 2m wide and finished with self-binding gravel without edging. It will be routed close to the proposed planting and with additional scrub and tree planting to deter access further south across Beck Road within ECO1 and ECO2. A formal space will be created at a gap in the proposed linear belt of trees and shrubs south of E05 to dwell with interpretation materials and views towards the B50 aircraft crash site and RAF Mildenhall beyond.

- c. The remaining routes either follow existing tracks or will be marked with signage and trimmed through grassland. They will neither be surfaced or bound to retain the existing field character.
- d. Routes will be located outside of security fencing with clear lines of sight to avoid a sense of being fenced in.
- e. Routes will be designed to integrate with existing vegetation and proposed planting to enhance amenity.
- f. Where routes pass through existing vegetation or proposed planting, the minimum width will be 2m with occasional glades to increase openness.

Establishment maintenance and long term management

- 5.9.11 The self-binding gravel path south of E05 will be monitored during the first year of use and additional rolling will be applied if the surface begins to lift. If puddles form, depressions will be filled with self-binding gravel and compacted.
- 5.9.12 Other permissive paths will follow existing tracks or will be trimmed through the grass sward.

Environmental fencing

Introduction

- 5.9.13 Temporary fencing for visual screening and to protect ECO areas will be installed in addition to the security fencing which will enclose parcels or groups of parcels.
- 5.9.14 A good, attractive PRow network is key to the success of Stone Curlew mitigation. Stock proof fencing and signage is needed to manage potential impacts with the ecology ECO areas by making permissive paths attractive alternatives and discouraging access.

Objectives

- 5.9.15 The environmental fencing will be designed to deliver the following objectives:
- a. Screening of solar panel arrays in key locations while proposed planting establishes.
 - b. Protect ECO areas from public access, including dogs.

Design principles

- a. Temporary timber screening fencing shall be located along the southern edge of W5, the western edge of W4 and the eastern edge of E20 at the start of the construction phase. The fencing shall be up to 2.5m in height and toned to be integrated into the landscape, e.g. olive green.
- b. Stock proof fencing to BS 1722 shall be installed around the perimeter of ECO areas to prevent access to stone curlew plots. Signage and interpretation material will be provided during the nesting period.

Establishment maintenance long-term management

- c. Temporary screening fencing shall be removed once the proposed planting has reached 2.5m in height.
- d. Stock proof fencing will be checked annually before the nesting season and any gaps will be fixed.

6 Monitoring

Post-construction Monitoring

- 6.1.1 Monitoring will be undertaken to determine that the objectives documented within this OLEMP are being achieved and whether remedial action may be required.
- 6.1.2 Quarterly inspections will be carried by the project Landscape Architect during the first five years following completion to monitor and report on the establishment of proposed planting. These reports will be provided to the appointed contractor as part of the formal contract administration process. Remedial actions will be formalised through written instructions.
- 6.1.3 For ecology, the baseline against which the effects of the actions resulting from the monitoring can be compared against, comprise the pre-construction baseline data.
- 6.1.4 A post-construction monitoring programme will be formalised and included within the finalised LEMPs. Walkover surveys of the Order limits will be undertaken by the project ecologist between April and June in years 1, 3, 5 and 10 post-construction and will involve an inspection of the hedgerows and grassland habitats to record habitat condition and recommend any remedial actions.
- 6.1.5 Post-construction monitoring of the success of the Stone Curlew plots will be undertaken by the project ecologist annually between March and September for five years post-construction and then again in year 10.
- 6.1.6 Post-construction monitoring for flora, birds (breeding and non-breeding), riparian mammals, Badger, bats and reptiles will be undertaken by the project ecologist in the respective seasons, in years 1, 3, 5 and 10 post-construction.
- 6.1.7 An annual check of wildlife boxes would be made by the project ecologist each winter to ensure that all boxes are still in position and secure.
- 6.1.8 The management plan will be amended accordingly, based on the post-construction monitoring.

6.2 Roles and Responsibilities

Introduction

- 6.2.1 The Applicant and/or the Appointed Contractor(s) will appoint a suitably qualified ecologist, landscape architect and arboriculturist to monitor the creation, establishment and long-term management of planting and existing habitats. Their roles are defined as follows:

- a. Ecologist – responsible for undertaking ecological surveys and watching briefs and recording and reporting on the biodiversity of the site against project commitments, including Biodiversity Net Gain.
- b. Landscape architect – responsible for finalising the design and specification of proposed planting and management of existing habitats and overseeing the planting, establishment aftercare and long-term management of new habitats,
- c. Arboriculturist – responsible for carrying out tree surveys during construction establishment maintenance and long-term management to monitor tree health and the safety of the public and the operation of the Scheme.

The Applicant and/or the Appointed Contractor(s)

6.2.2 The Applicant and appointed contractor(s) and their Environmental Clerk of Works would be responsible for:

- a. correct instruction of all parties contributing to delivery of the final approved LEMP (including but not restricted to the Applicant's staff and their appointed ecologists, landscape architects, landscape contractors, construction contractors and management organisations) based upon the principles stated within the OLEMP;
- b. compliance with the final approved LEMP, relevant legislation and any relevant planning commitments;
- c. keeping the appointed ecologist, landscape architect and arboriculturist informed of work activities that require support and supervision, so that it is clear when attendance at the Order limits is required;
- d. Enacting and, or enforcing recommendations made by the appointed ecologist, landscape architect and arboriculturist, or otherwise agreeing an appropriate alternative course of action, if it is subsequently determined that previous advice is not practicable or is out of date; and
- e. keeping a record of measures taken to deliver the requirements of the final LEMP, to provide an auditable record of compliance.

The Appointed Ecologist

6.2.3 The appointed ecologist would be responsible for:

- a. advising the Applicant and the appointed contractor(s) on ecological matters and requirements for compliance with relevant legislation and protected species licences, providing support as instructed, and monitoring compliance with the final approved LEMP;
- b. reviewing the LEMP at appropriate intervals and revising management requirements as necessary for the following five year period and subsequently for the duration of the Plan;
- c. where a European Protected Species Mitigation Licence (EPSML) has been granted it is the responsibility of the 'Named Ecologist' and licence holder or otherwise appointed ecologists to ensure the compliance of the licence and working activities associated with the agreed licence; and

- d. providing the Applicant and the appointed contractor(s) with survey reports and other written evidence required in accordance with the agreed scope of work and contractual obligations.

The Appointed Landscape Architect and arboriculturist

6.2.4 The appointed landscape architect and arboriculturist will be responsible for:

- a. providing specialist site supervision in the form of walkover assessments relating to relevant landscape areas. This would be to assess landscape components and their condition and identify the need for landscape enhancement as instructed and in accordance with the agreed scope of work and contractual obligations, once the power station is operational;
- b. monitoring and assessing the landscape related elements of the approved LEMP for their effectiveness on an annual basis for the first ten years following commencement of operation of the Scheme and then for the following five year period and subsequently for the duration of the Plan;
- c. ensuring that the landscape related elements of the approved LEMP are reviewed at the end of the five year establishment maintenance period and amended accordingly for the following five year period and subsequently for the duration of the Plan. The LEMP shall be amended accordingly to suit any changing landscape conditions and ultimately inform the maintenance operations throughout the operational life of the Scheme; and
- d. ensuring that any reviews associated with landscape related elements of the approved LEMP clearly identifies any changes to site conditions and circumstances, whether the aims and objectives of the approved Plan are being met, and where identified changes are needed to existing management practices and timeframes.
- e. The project landscape architect will carry out quarterly inspections to monitor the establishment of planting during the first five years post-planting and then twice annually until year 15 of operation. Thereafter annual inspections will be carried out. The results of these inspections will be formalised in a report to monitor progress against the objectives set out in the LEMP and any remedial actions required.
- f. The Appointed Landscape Architect and arboriculturist will note any outbreaks of pests and diseases and instruct remedial action if required. If large scale unavoidable loss of vegetation which is relied upon for visual screening cannot be avoided, for example through an outbreak of Ash dieback, additional planting with alternative species will be carried out.

The Ecology Advisory Group

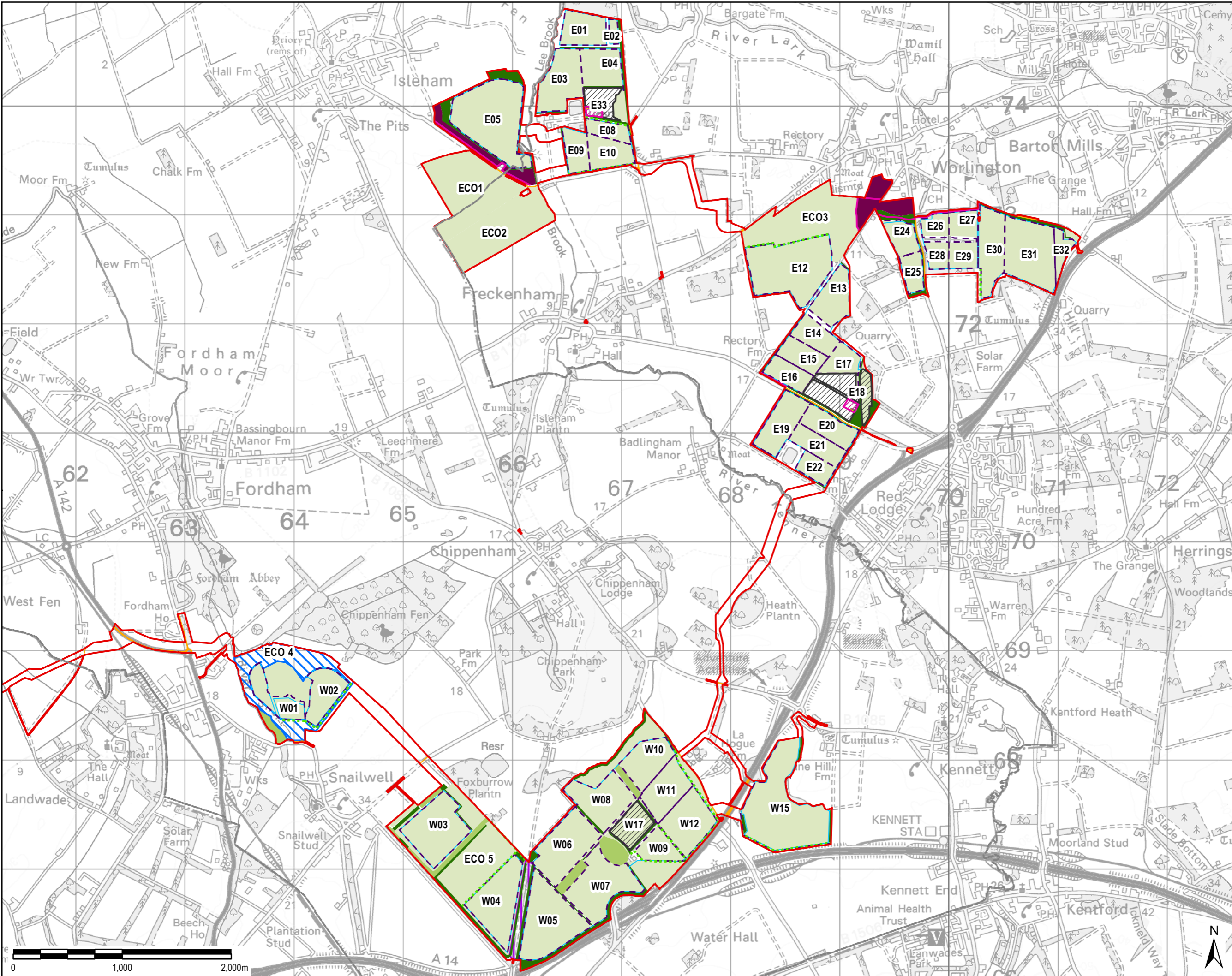
6.2.5 The Ecology Advisory Group is a long-term partnership providing an interactive and sustainable vehicle for dealing with biodiversity matters to meet the ambition for the Scheme. The Group will advise on:

- a. the achievement of biodiversity enhancement as laid out in the Development Consent Order
- b. communication regarding biodiversity matters between the Scheme and relevant stakeholders;

- c. the need to respond within these terms of reference of the Group to the changes that will occur over its lifetime, e.g. in policy and legislation; and
- d. the co-ordination of any research projects planned around the Scheme and dissemination of the outcomes providing both feedback within the Scheme and externally.

- 6.2.6 This will cover the pre-construction phase, post-construction phase and decommissioning.
- 6.2.7 The Ecology Advisory Group comprises Scheme representative(s), Natural England, local host authorities, wildlife trusts, other relevant stakeholders and, if relevant, research group representative(s).
- 6.2.8 Further details of the Ecology Advisory Group will be included in the detailed LEMP with terms of reference including such aspects as scrutiny of monitoring data, adaptive habitat management, site conditions and working practices where necessary to meet the ambition for the Scheme.

Annex A Figures



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LEGEND

- The Order Limits
- County Boundary
- District Boundary
- Potential Provision of Permissive Route
- Proposed Hedgerow (new planting or infilling of existing vegetation)
- BESS and Substation
- Developable Area
- Native Grassland Planting
- Office/Warehouse
- Boundary Fence
- Public Highway within Scheme
- Compound Area (Permanent)
- Landscape Offset with Chalk Grassland
- Native Grassland/Wetland
- Heritage Offset with additional planting along The Avenue
- Proposed Woodland (new planting or infilling of existing vegetation)
- Retained Woodland

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NOTE:
Document Reference: EN010106/APP/6.3
AFPP Regulation: 5(2)(a)

Existing vegetation along the Cable Route alignment which is required to be removed during the construction phase would be replaced with the same species to recreate the vegetation cover

Purpose of Issue
FOR DCO SUBMISSION

Client
SUNNICA LTD

Project Title
sunnica energy farm

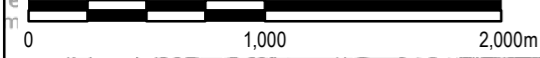
Drawing Title
**FIGURE 1
LANDSCAPE MASTERPLAN
SUNNICA EAST SITE
AND WEST SITE**

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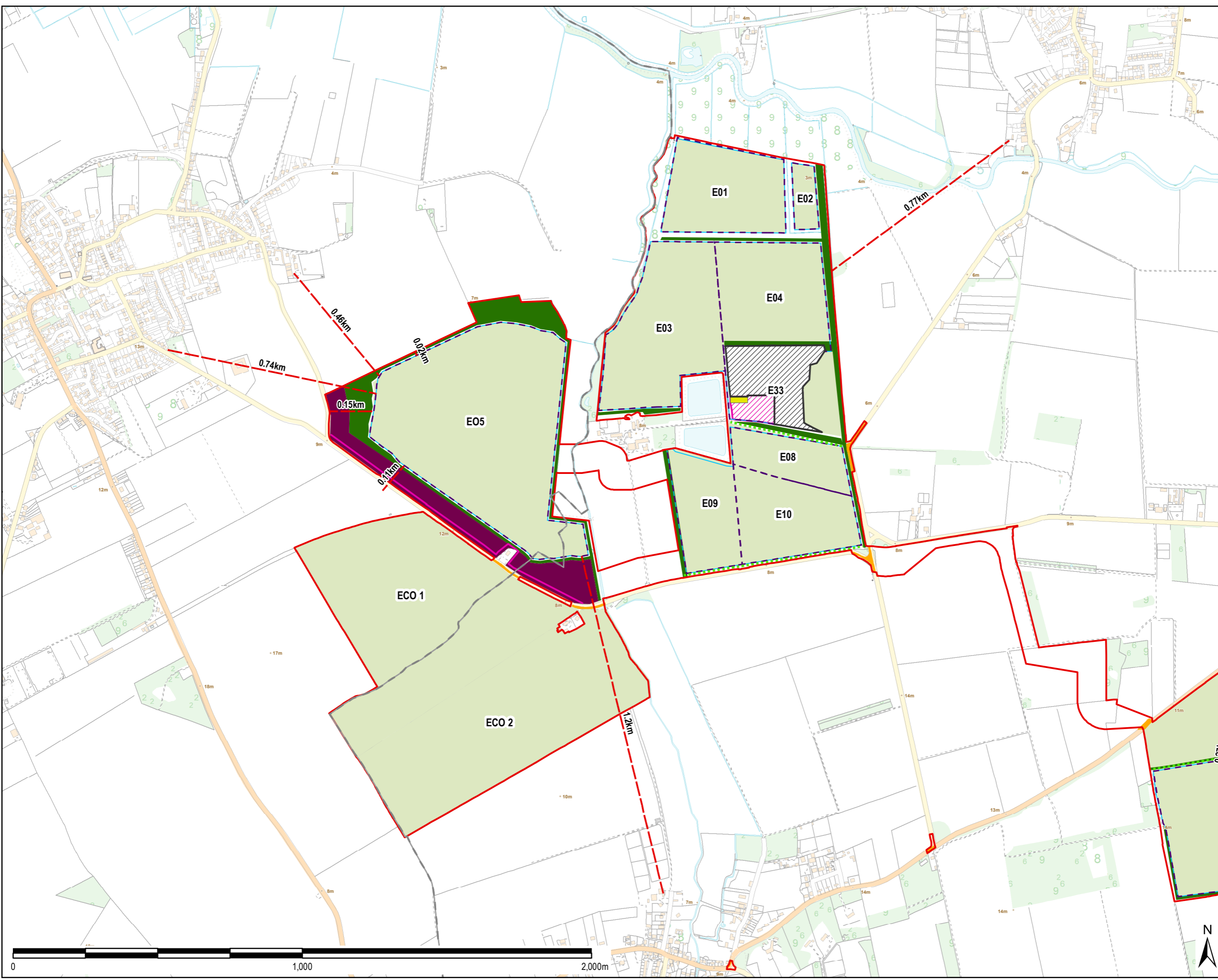
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 - Proposed Woodland (new planting or infilling of existing vegetation)



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**FIGURE 2
 LANDSCAPE MASTERPLAN
 SUNNICA EAST SITE A**

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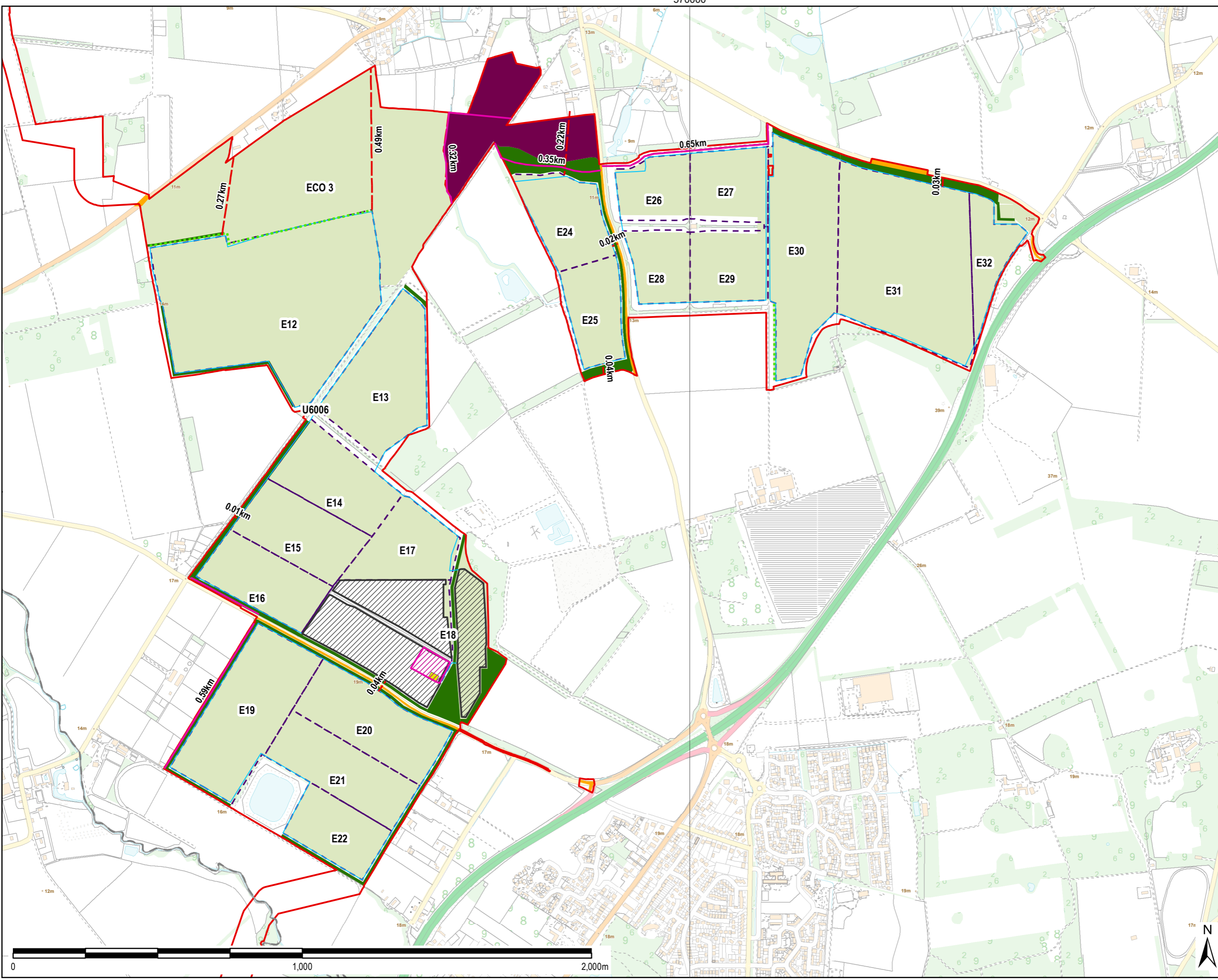
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LEGEND

- The Order Limits
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- Compound Area (Permanent)
- Landscape Offset with Chalk Grassland
- Proposed Woodland (new planting or infilling of existing vegetation)



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Drawing Title
**FIGURE 3
LANDSCAPE MASTERPLAN
SUNNICA EAST SITE B**

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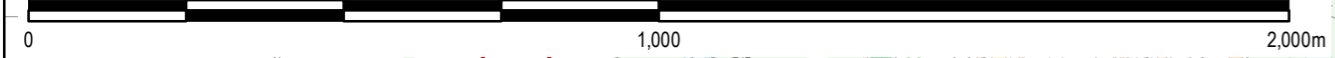
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 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland

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Drawing Title
**FIGURE 4
LANDSCAPE MASTERPLAN
SUNNICA WEST SITE A**

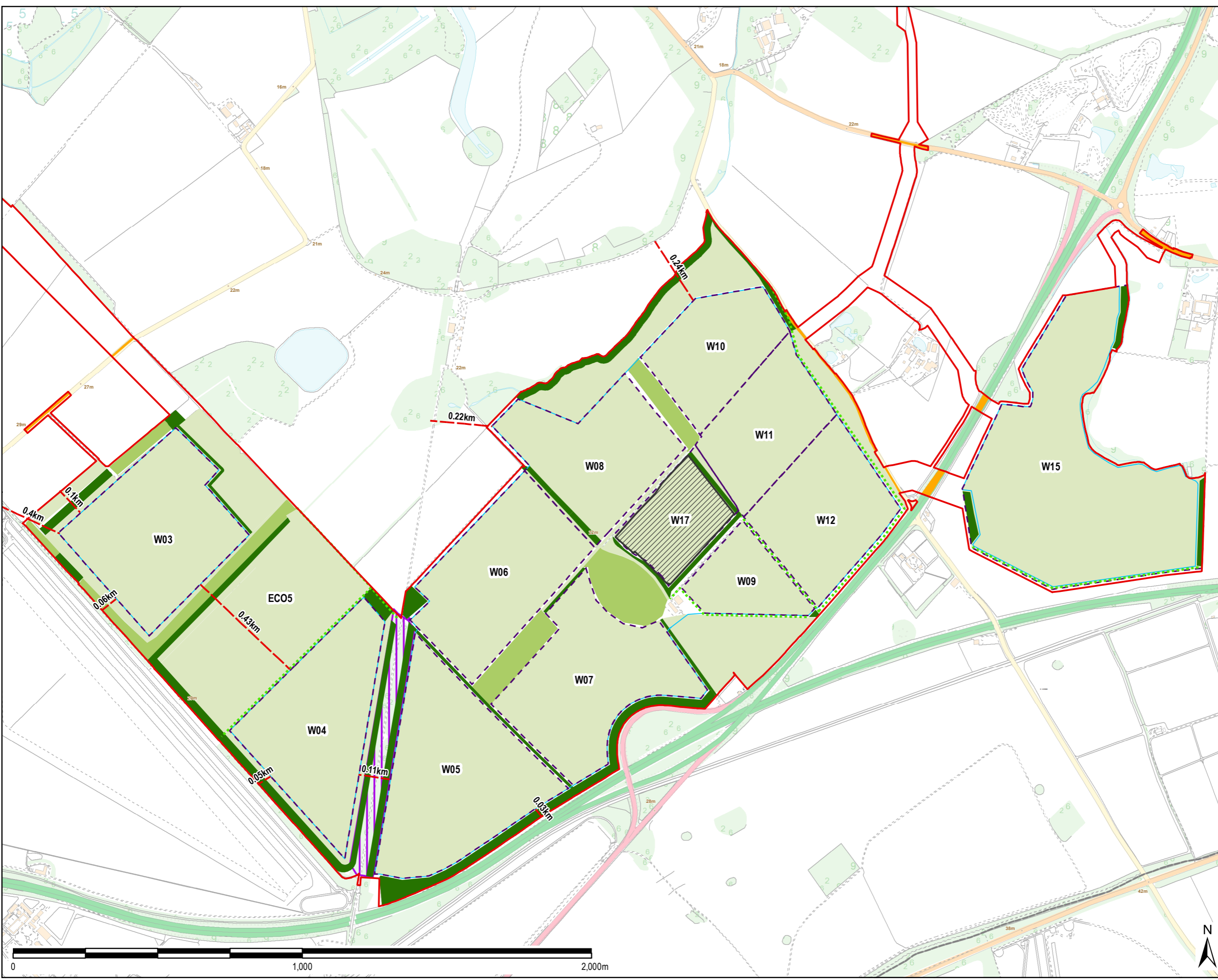
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LEGEND

- The Order Limits
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Drawing Title
**FIGURE 5
LANDSCAPE MASTERPLAN
SUNNICA WEST SITE B**

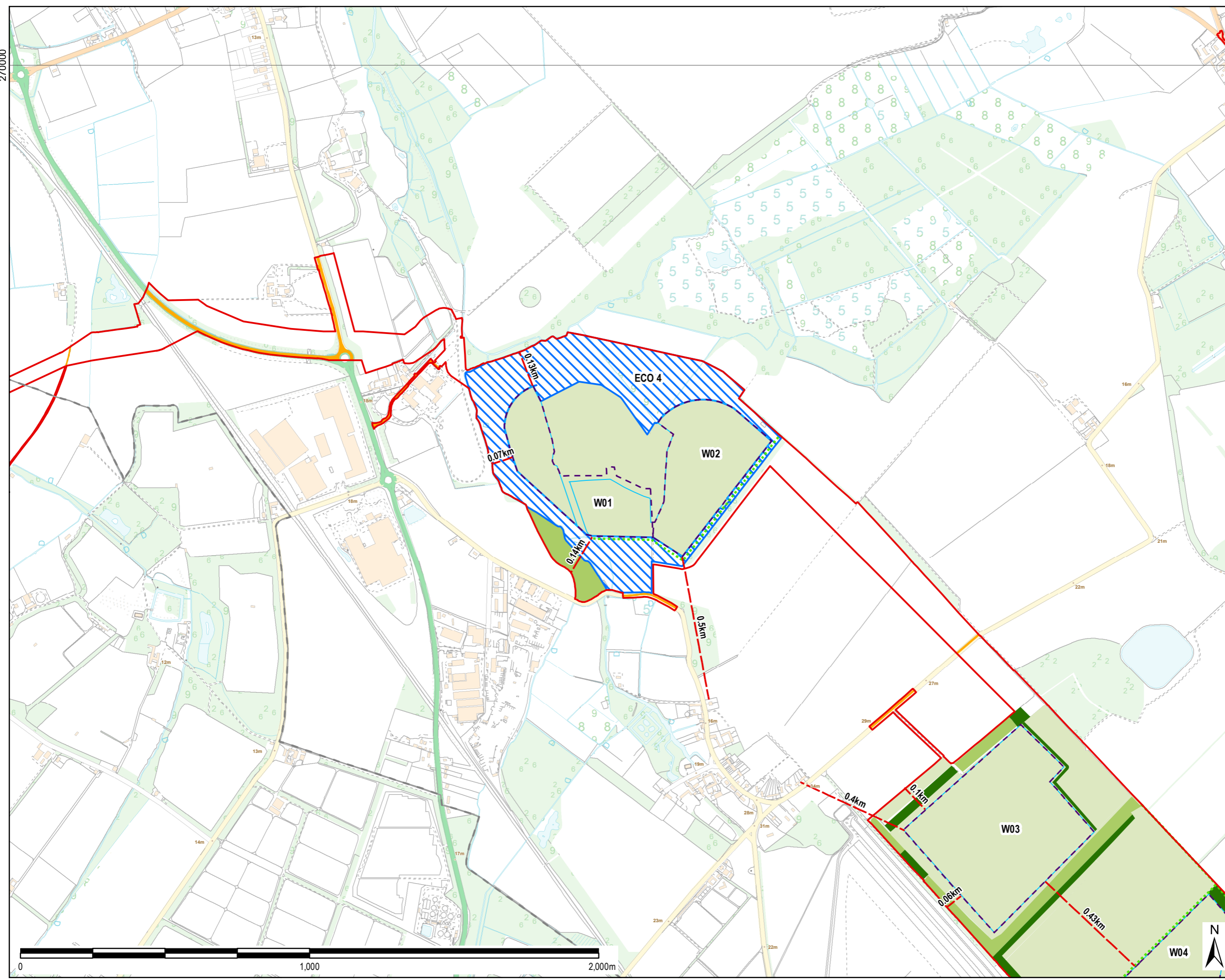
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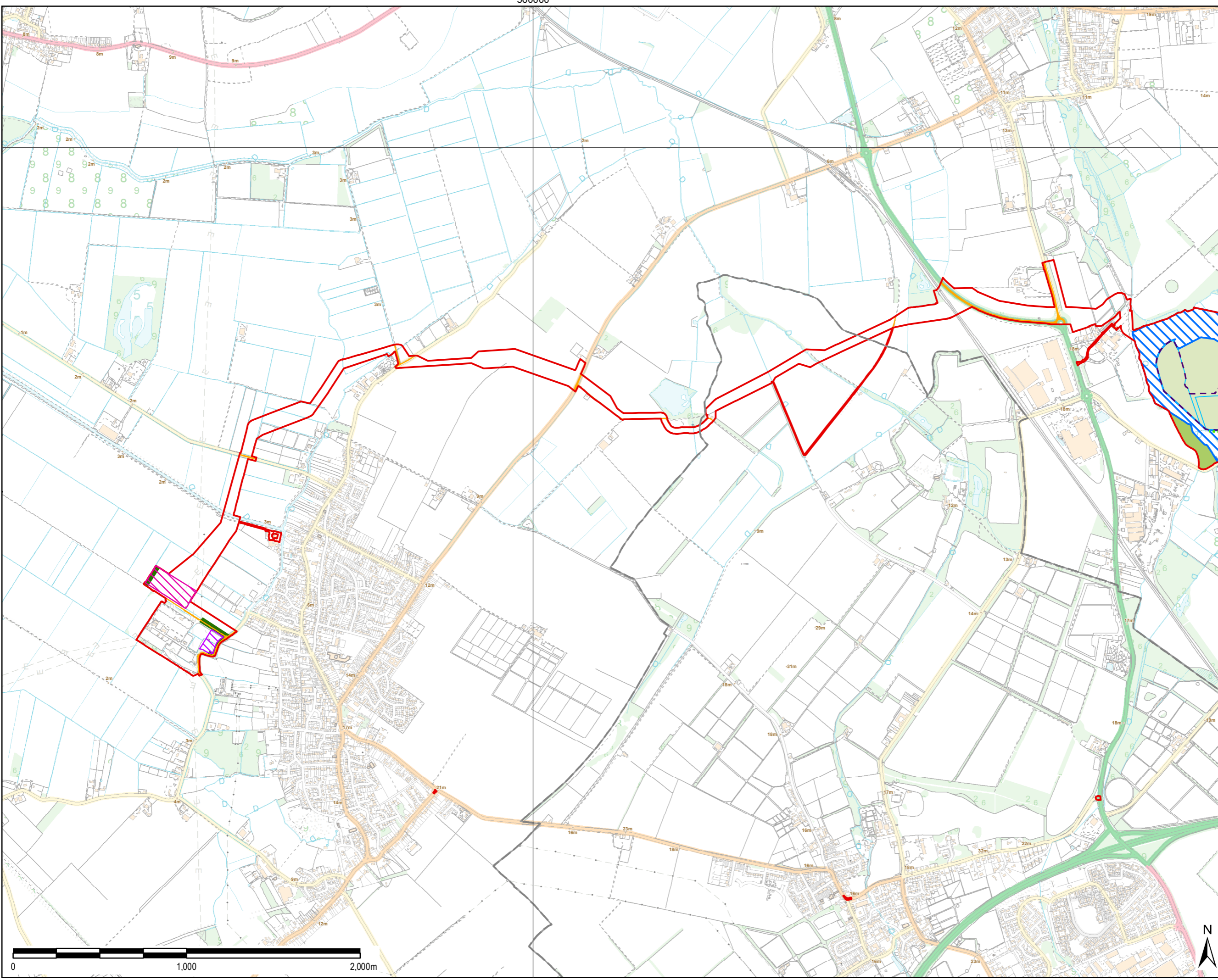
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LEGEND

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- Retained Woodland
- National Grid Substation Extension Burwell - Option 1
- National Grid Substation Extension Burwell - Option 2



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Drawing Title
**FIGURE 6
 LANDSCAPE MASTERPLAN
 CABLE ROUTE
 TO BURWELL SUBSTATION**

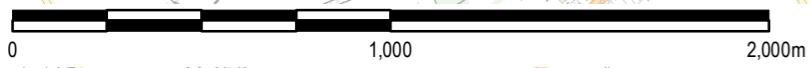
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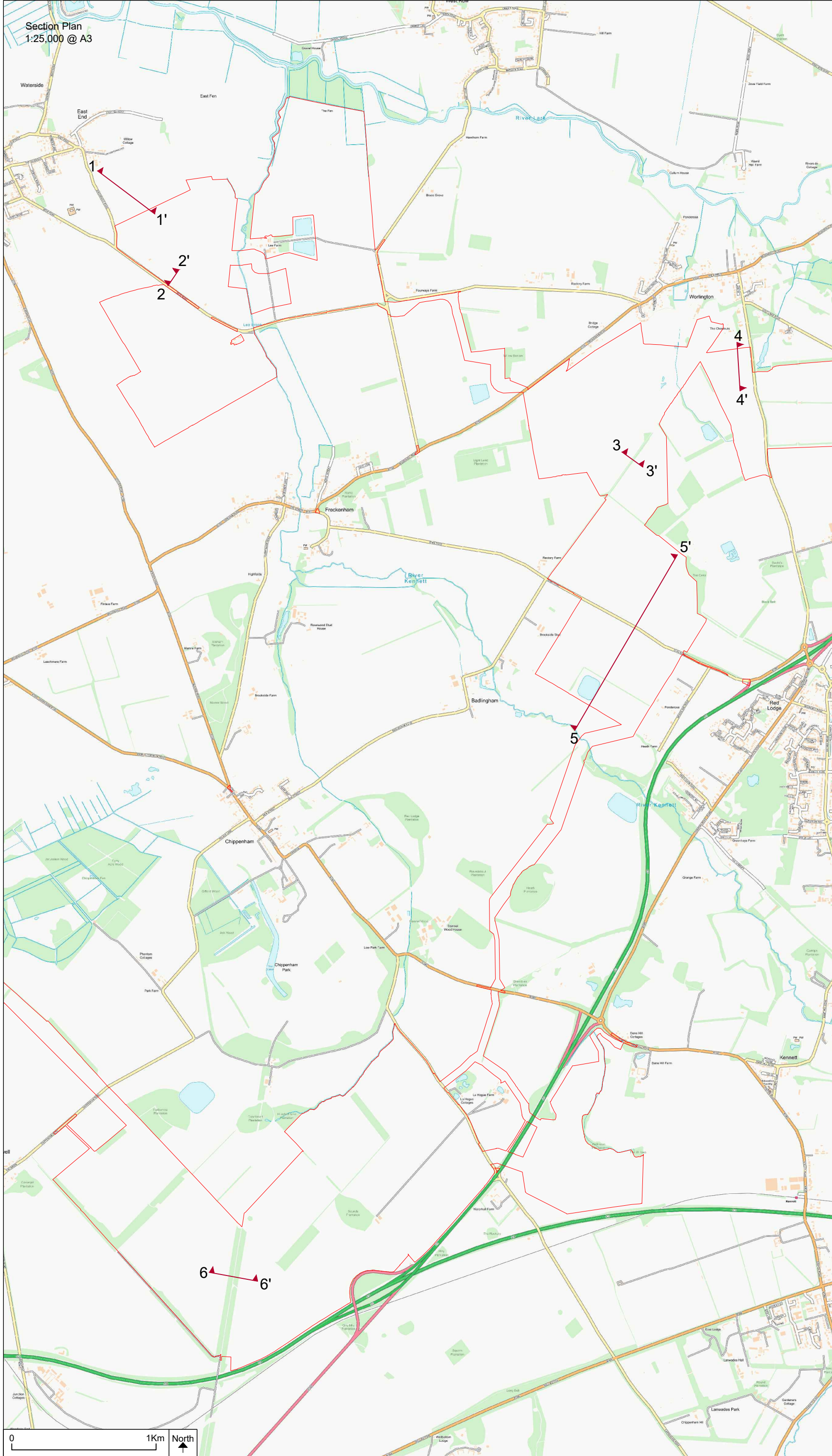
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Annex B Illustrative Sections



Section Plan
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Drawing Title
 Figure 7
 Section location plan

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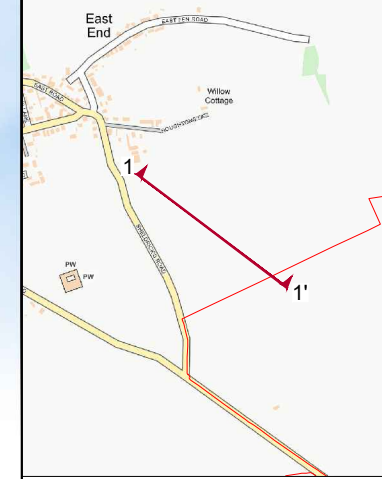


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Section 1-1'
1:1,500 @ A3

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Section 1-1'
Between properties on Sheldrick's Road and the north-west edge of Sunnica East Site A (E05)

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Drawing Title
Figure 8
Illustrative Cross Section 1 - Sheldrick's Road to Sunnica East Site A

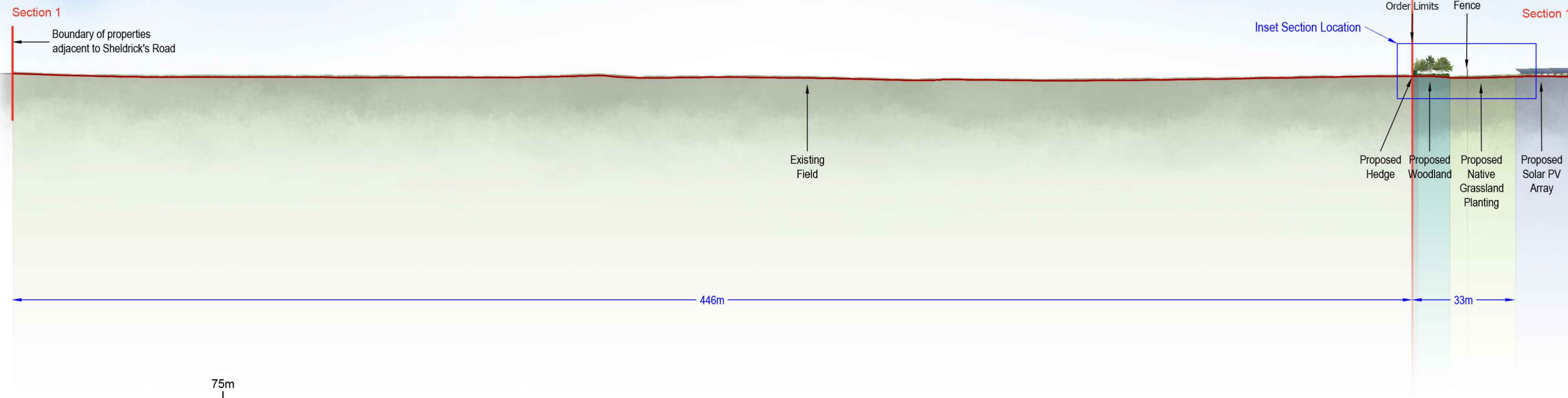
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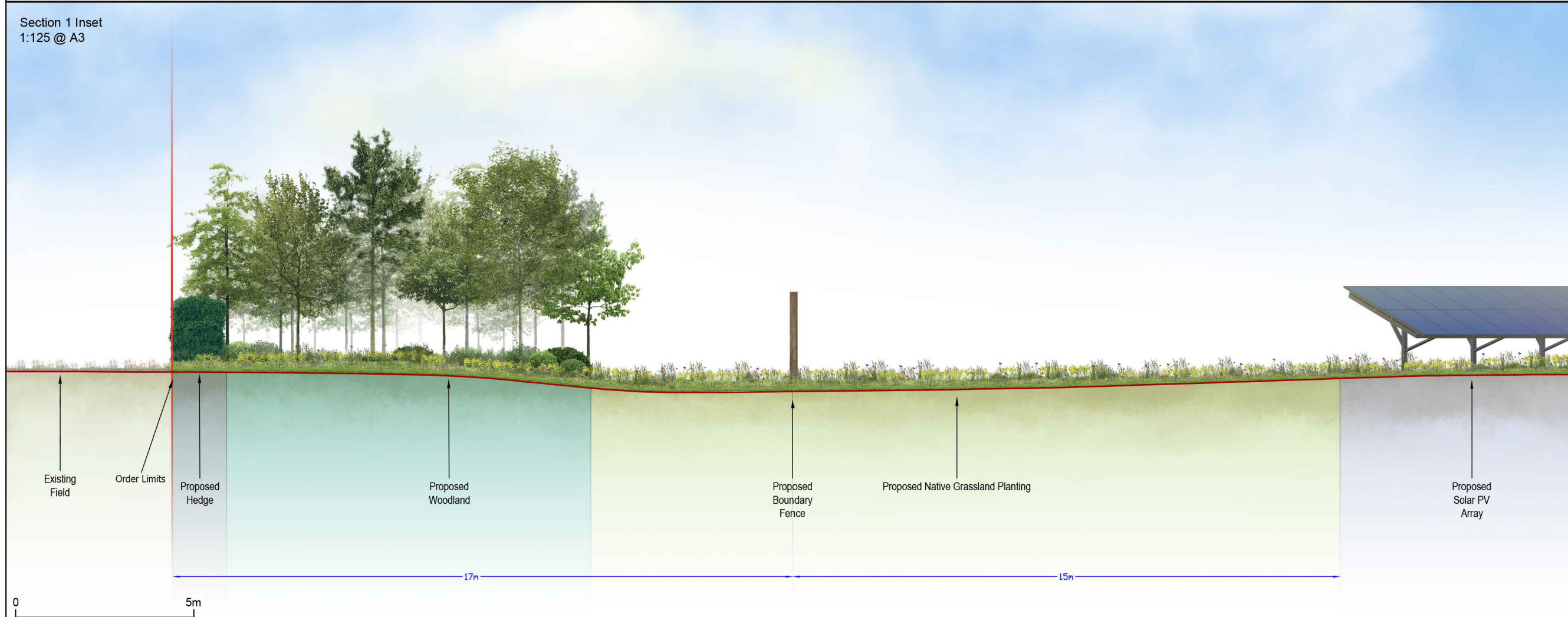
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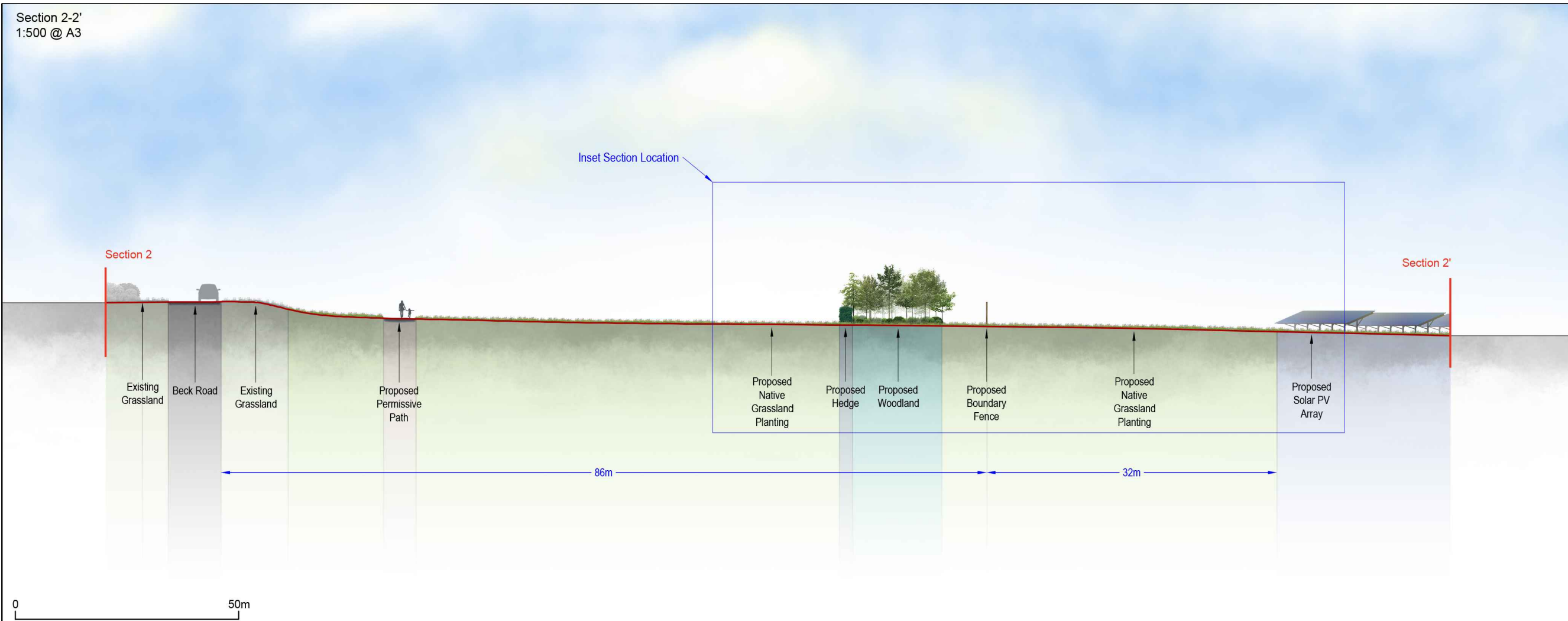
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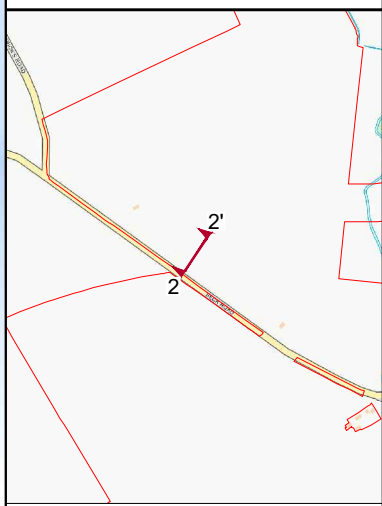
Section 1 Inset
1:125 @ A3



Section 2-2'
1:500 @ A3



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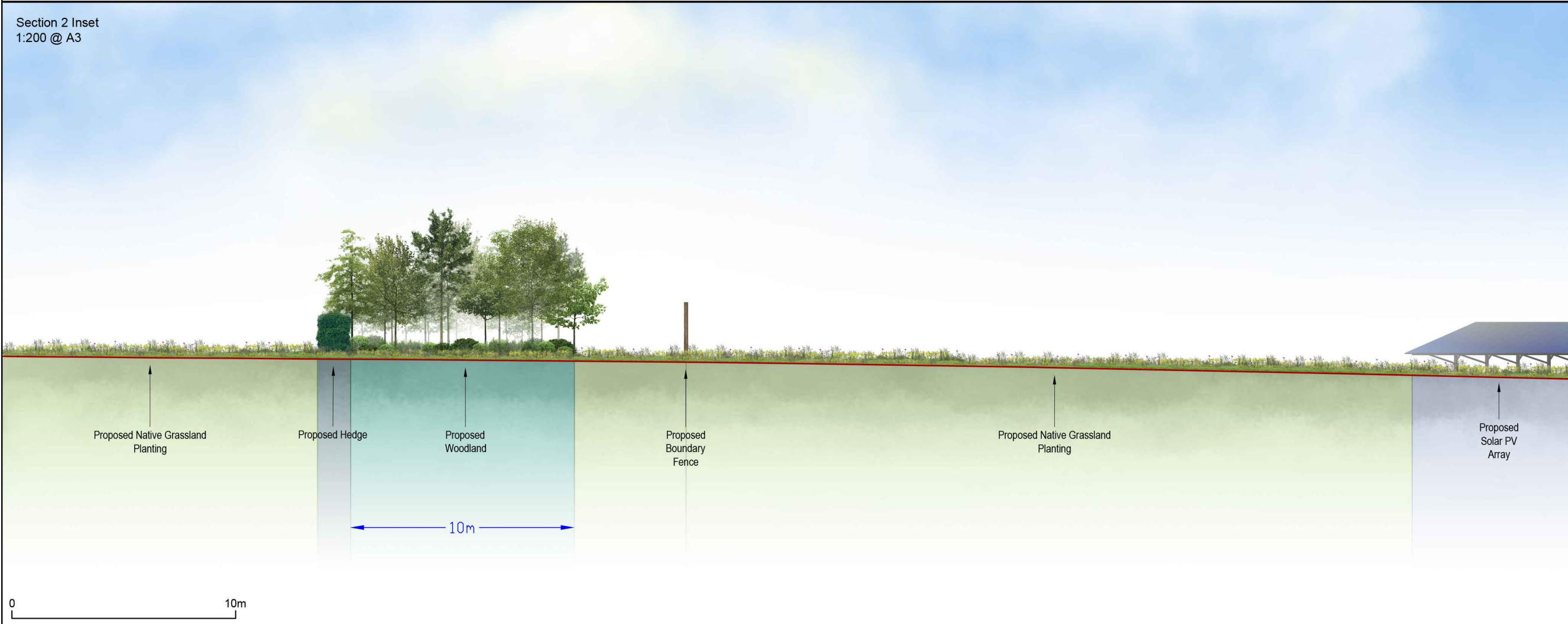
Key Plan 1:20,000 @ A3

Section 2-2'
Between Beck Road and Sunnica
East Site A (E05)

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Drawing Title
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Illustrative Cross Section 2 - Beck Road**

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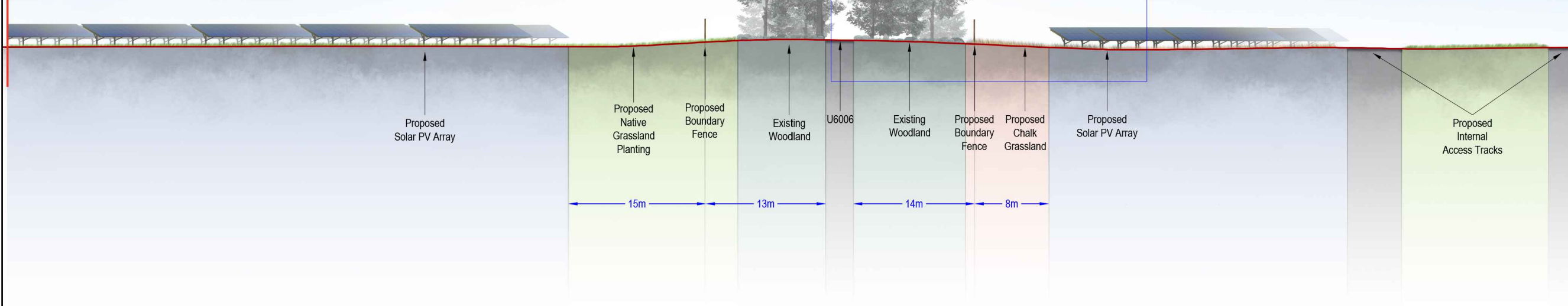
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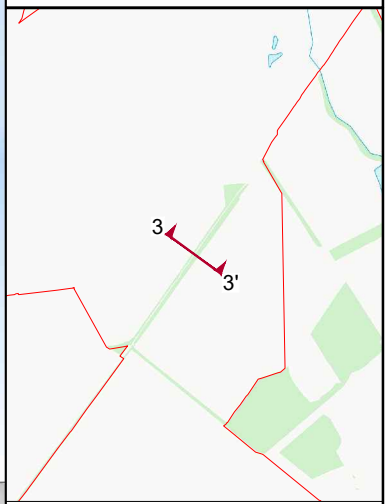
Section 3-3'
1:500 @ A3

Section 3



0 50m

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Key Plan 1:20,000 @ A3

Section 3-3'
Adjacent to Public Right of Way
U6006

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0 5m

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Drawing Title
Figure 10
Illustrative Cross Section 3 - U6006

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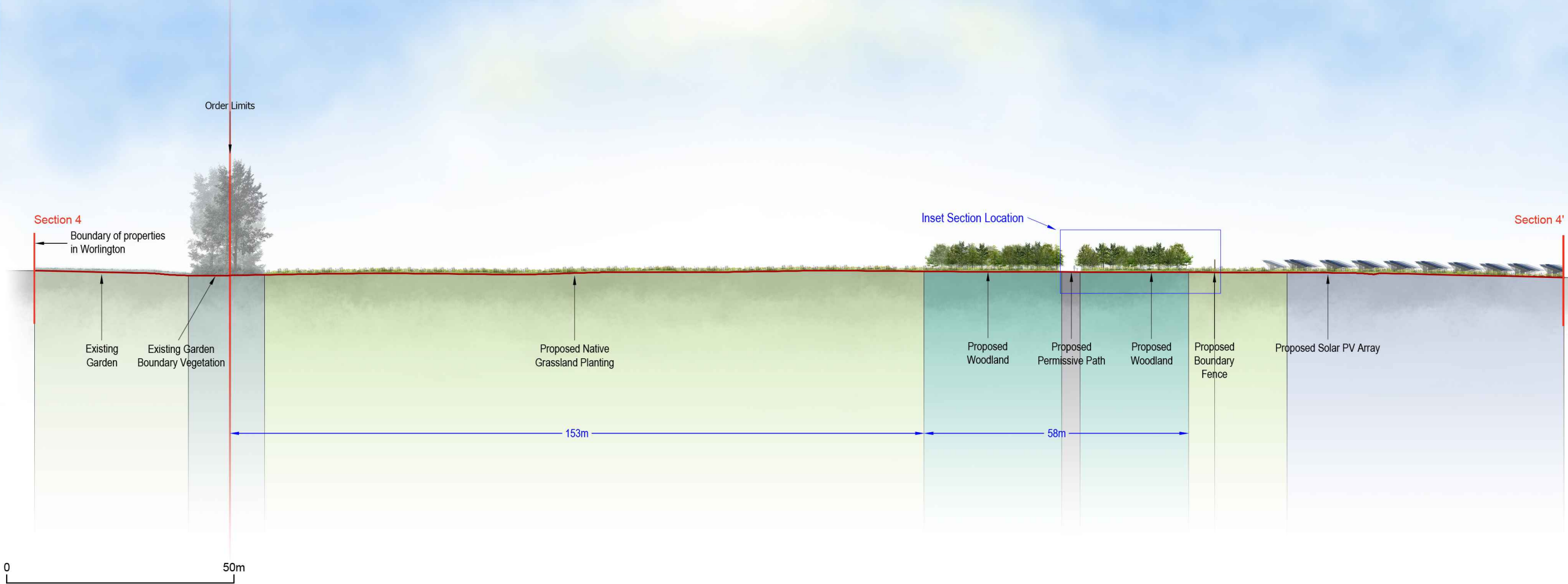
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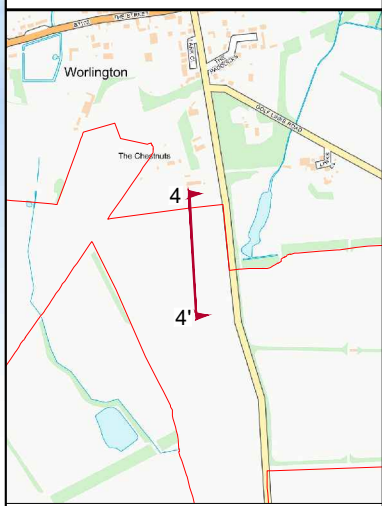
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Section 4-4'
1:1,000 @ A3



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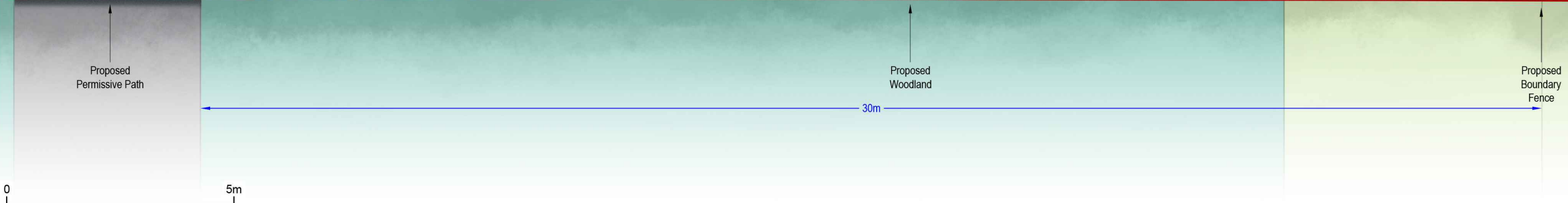
Key Plan 1:20,000 @ A3

Section 4-4'
Between properties at the southern edge of Worlington and Sunnica East Site B (E25)

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0 5m

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Drawing Title
Figure 11
Illustrative Cross Section 4 - Worlington

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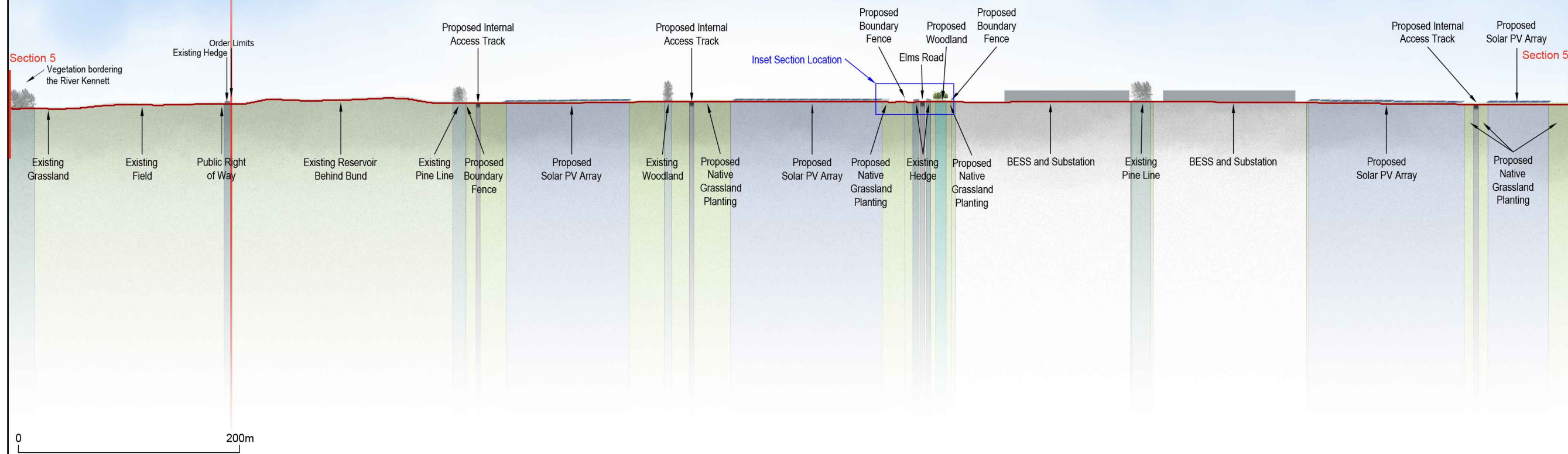
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Section 5-5'
1,4000 @ A3



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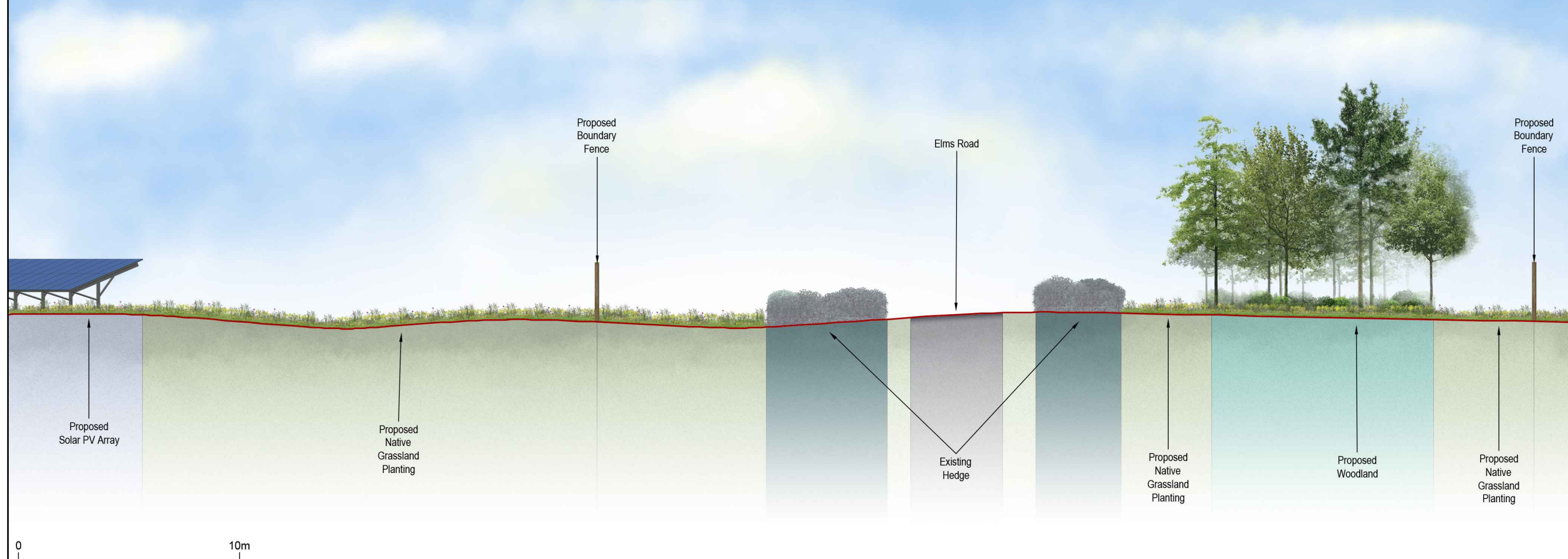


Section 5-5'
Across Sunnica East Site B, either side of Elms Road

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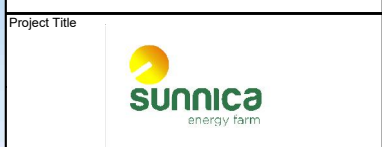
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Drawing Title
Figure 12
Illustrative Cross Section 5 - Elms Road

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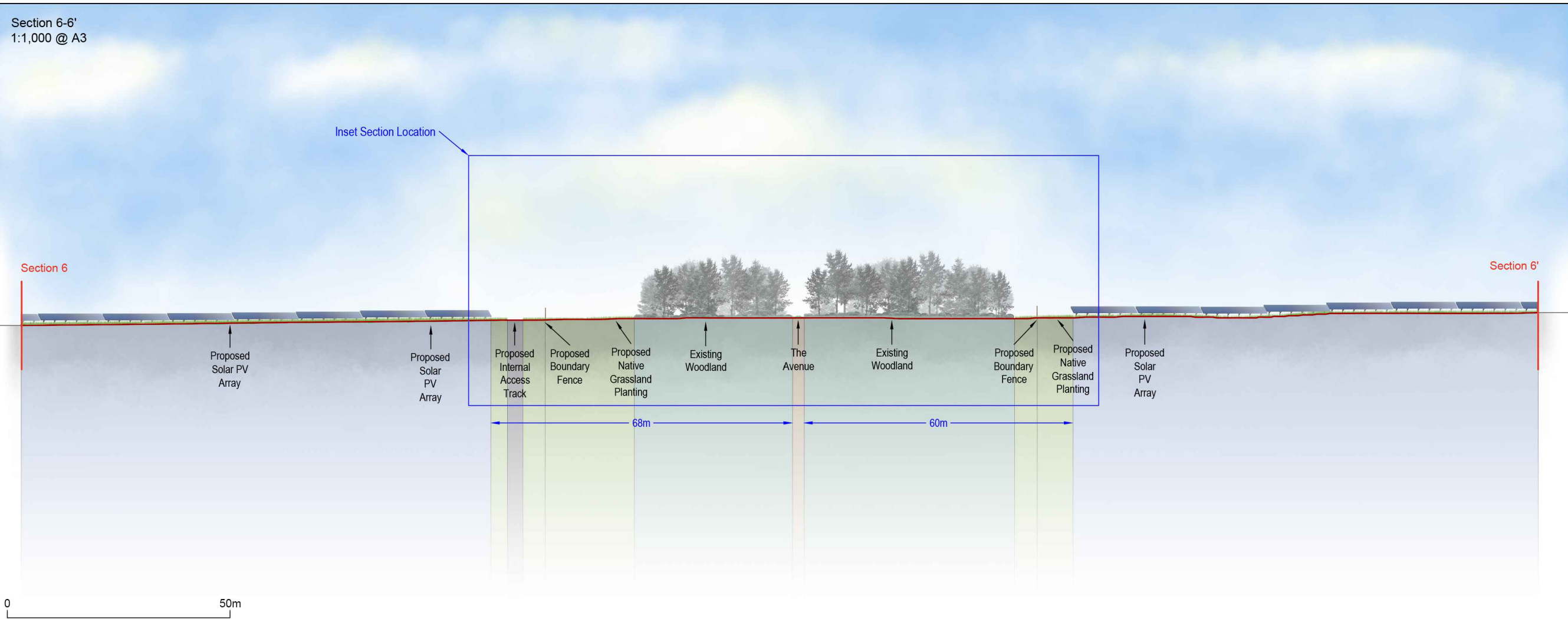
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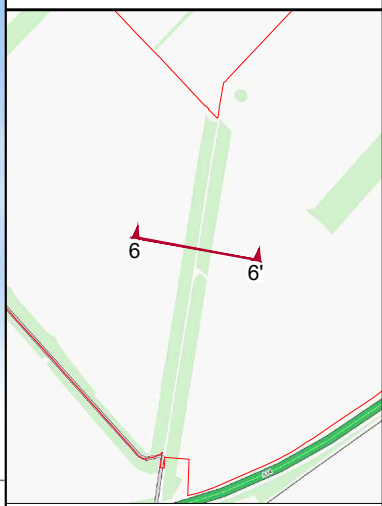


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Section 6-6'
1:1,000 @ A3



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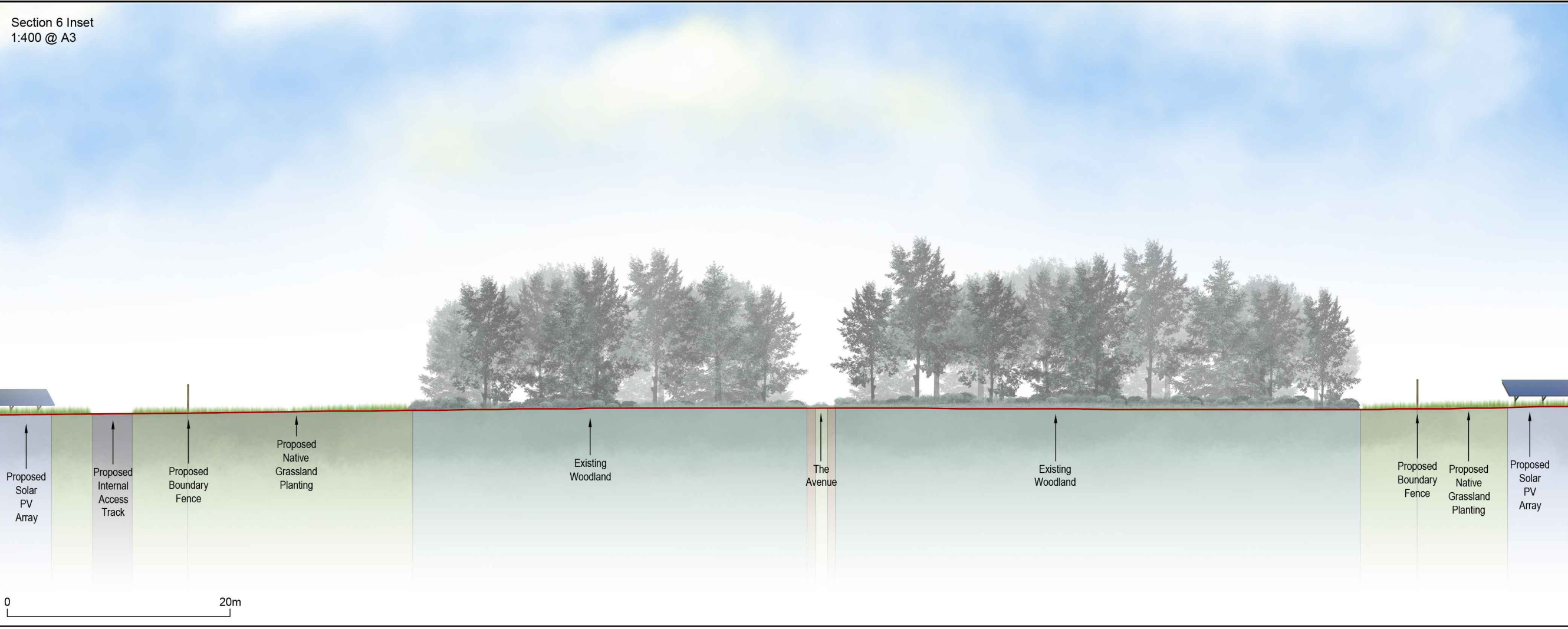
Key Plan 1:20,000 @ A3

Section 6-6'
Across The Avenue at Sunnica
West Site A

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Drawing Title
**Figure 13
Illustrative Cross Section 6 - The Avenue**

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Annex C Field Management after Establishment

Table C1. Field Habitat Descriptions and Management Sunnica East Site A and B, and West Site A

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
E01	11.7	East A	Fen peat soils (30%, northern). Shallow lime-rich soils over chalk or limestone (70%, southern side)	Poor semi improved grassland (retained), marshy grassland (retained with additional created), arable (removed)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Marshy grassland (retained) (LBAP, Habitat of Principal Importance)	The solar panels are offset from the Fen woodland to the north and by 8m from the Lee Brook to the west.
					Low	Other neutral grassland	Good			
					High	Rush pasture	Moderate			
E02	1.8	East A	Fen peat soils (65%, northern), freely draining slightly acid but base-rich soils (35%, southern)	Tall ruderal, (retained), ephemeral/ short perennial (retained), intact hedge to the north (retained), bare ground (removed)	Low	Modified Grassland*	Moderate	Conservation Grazing (Low density, September – February)		New woodland planting along the eastern edge of the parcel, to reinforce the vegetation structure adjacent to Ferry Lane and screen the panels in longer distance views from the east.
					Low	Other neutral grassland	Good			
					Low	Rush pasture	Moderate			
					Low	Mixed Scrub	Good			
					Low	Other woodland; broadleaved	Moderate			
E03	22	East A	Shallow lime-rich soils over chalk or limestone (35%, north-west side). Freely draining slightly acid but base-rich (65%, south-east side)	Marsh/ marshy grassland (retained), intact hedge to the east (retained), arable (removed)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Marshy grassland (retained) (LBAP, Habitat of Principal Importance)	Proposed new woodland to the north and south of the parcel, to screen views from the wider landscape to the north and from Lee Farm. The linear form of the woodland reflects the linear form of pine lines within the wider landscape and provides vegetation linkages east to west across this part of the scheme, between the Lee Brook and vegetation bordering Ferry Lane.
					Low	Other lowland acid grassland	Good			
					High	Rush pasture	Moderate			
					Low	Other woodland; broadleaved	Moderate			
E04	12.5	East A	Freely draining slightly acid but base-rich soils (85%). Shallow lime-rich soils over chalk or limestone (15%, north-west corner)	Bare ground (removed), ephemeral/ short perennial (removed), tall ruderal to the east (removed)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Additional woodland along the northern edge and the eastern edge, adjacent to Ferry Lane, so as to screen the panels and improve the vegetation cover.
					Low	Lowland calcareous grassland	Poor			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
					Low	Other woodland; broadleaved	Moderate			
E05	37.6	East A	Freely draining lime-rich loamy soils (90%). Shallow lime-rich soils over chalk or limestone (10%, eastern side)	Arable (removed), defunct hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		The solar panels have been sited back (80m) from Beck Road via a landscape buffer of native grassland, to reduce the proximity of the panels to road users, retain views along the road corridor of the churches in Isleham and Freckenham and to retain a perception of travelling through the landscape that separates the settlements.
					Low	Other neutral grassland	Good			
					Low	Other woodland; broadleaved	Moderate			
					Low	Rush pasture	Moderate			
					Low	Mixed Scrub	Good			
ECO1	40.6	East A	Freely draining lime-rich loamy soils (100%)	Arable (removed), defunct hedge (retained), intact hedge (retained), hedge and trees (retained)	Medium	Lowland calcareous grassland	Poor	Conservation grazing (Low density, September – February).	Sensitive management for Stone Curlew. *Archaeological site Mitigation - no construction	
					Medium	Ephemeral	-			
ECO2	34.6	East A	Freely draining lime-rich loamy soils (100%)	Arable (removed), intact hedge (retained), defunct hedge (retained)	Medium	Lowland calcareous grassland	Poor	Conservation grazing (Low density, September – February).	Sensitive management for Stone Curlew	
					Medium	Ephemeral	-			
E08	5.9	East A	Freely draining slightly acid but base-rich (100%)	Bare ground (removed), intact hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Enclosed by new hedgerows planting to strengthen existing vegetation patterns and to enclose the BESS and substation and enhance habitat connectivity.
					Low	Other lowland acid grassland	Good			
					Low	Native hedgerow; species rich	Good			
					Low	Other woodland; broadleaved	Moderate			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
E09	7.8	East A	Freely draining slightly acid but base-rich (100%)	Arable (removed), intact hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay	*Archaeological site Mitigation - no construction	New woodland planting to the west of E09
					Low	Other lowland acid grassland	Good			
					Low	Native hedgerow; species rich	Good			
					Low	Other woodland; broadleaved	Moderate			
E10	10.5	East A	Freely draining slightly acid but base-rich soils (100%)	Bare ground (removed), intact hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		
					Low	Other lowland acid grassland	Good			
					Low	Native hedgerow; species rich	Good			
					Low	Other woodland; broadleaved	Moderate			
E33		East A	Freely draining slightly acid but base-rich soils (100%)	Bare ground (removed)	Low	Other woodland; broadleaved	Moderate		*Archaeological site Mitigation - no construction	
					Low	Developed land; Sealed Surface	N/A			
ECO3	51.3	East B	Freely draining sandy Breckland soils (50%, weter), Freely draining slightly acid sandy soils (45%, eastern), freely draining slightly acid but base-rich soils (5%)	Arable (removed), dense scrub (removed), unimproved acid grassland (including Worlington Heath CWS) (retained), Semi improved acid grassland (retained), intact hedge (retained)	High	Other lowland acid grassland	Good	Conservation grazing (Low density, September – February)	Sensitive management for Stone Curlew. Worlington Heath (CWS). Semi improved acid grassland and unimproved acid grassland (both LBAP, Habitat of principal importance).	establish a substantial offset from Freckenham Road, to reduce the perception of the solar panels and proximity to residents.
					High	Lowland Acid Grassland	Good			
					High	ephemeral				

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
E12	35.5	East B	Freely draining slightly acid but base-rich (78%). Freely draining slightly acid sandy soils (15%, southern), Freely draining slightly acid but base-rich soils (7%, north-west)	Arable (removed), woodland (retained)	High	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Sensitive management for Stone Curlew	solar panels have been sited to the south of Worlington and offset from the residential land uses
					High	Other lowland acid grassland	Good			
					High	Native hedgerow; species rich	Good			
					High	Other woodland; broadleaved	Moderate			
E13	12.9	East B	Freely draining slightly acid sandy soils (80%). Freely draining slightly acid but base-rich (20%, north-west side).	Arable (removed), semi improved acid grassland to the south-east (retained), woodland (retained)	High	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Sensitive management for Stone Curlew. Managed for pollinators (B-Lines)	
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			
E14	8.8	East B	Freely draining slightly acid sandy soils (100%)	Arable (removed), mixed semi-natural woodland in the edges (retained)	Medium	Modified Grassland*	Moderate/Poor	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Medium	Other lowland acid grassland	Good			
					Medium	Other woodland; broadleaved	Moderate			
					Medium	Arable field margins pollen & nectar	NA			
E15	8.8	East B	Freely draining slightly acid sandy soils (100%)	Arable (removed), mixed semi-natural woodland in the edges (retained)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Low	Other lowland acid grassland	Good			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
					Low	Other woodland; broadleaved	Moderate			
E16	8.1	East B	Freely draining slightly acid sandy soils (60%, north-east) and freely draining slightly acid but base-rich soils (40%, south-west)	Arable (removed), mixed semi-natural woodland in the edges (retained)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Low	Other lowland acid grassland	Good			
					Low	Other woodland; broadleaved	Moderate			
E17	7.5	East B	Freely draining slightly acid sandy soils (100%)	Arable (removed), bare ground (removed)	Medium	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay	Managed for pollinators (B-Lines)	
					Medium	Other lowland acid grassland	Good			
					Medium	Other woodland; broadleaved	Moderate			
					Medium	Arable field margins pollen & nectar	NA			
E18	19	East B	Freely draining slightly acid sandy soils (100%)	Arable (removed), bare ground (removed), mixed semi-natural woodland in the edges (retained)	Low	Other woodland; broadleaved	Moderate	General grazing (March-August) or mowing for hay	Managed for pollinators (B-Lines)	
					Low	Developed land; Sealed Surface	NA			
E19	15.1	East B	freely draining slightly acid but base-rich soils (100%)	Arable (removed), intact hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Woodland planting within a minimum width of approximately 25m proposed along the western edge of Parcel E19 to reinforce habitat connectivity south of Elms Road and visual screening, particularly for Brookside Stud.
					Low	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
E20	10.9	East B	Freely draining slightly acid sandy soils (100%)	Arable (removed), intact hedge (retained), Broad leaved plantation woodland (retained), Broad leaved semi-natural woodland (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Tree belts proposed along the eastern edge, with panels set back from the boundaries to reinforce habitat connectivity and separation from Red Lodge to the east.
					Low	Other lowland acid grassland	Good			
					Low	Other woodland; broadleaved	Moderate			
E21	9.5	East B	Freely draining slightly acid but base-rich soils (35%, southern). Freely draining slightly acid but base-rich soils (65%, north-eastern side)	Arable (removed), Broad leaved semi-natural woodland (retained), Broad leaved plantation woodland (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Tree belts is proposed along the eastern edge to reduce the visibility from residents adjacent to Bridge End Road and local PRow, as well as screen the structures and reduce the perception of the Scheme from Badlingham.
					Low	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			
E22	6.7	East B	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), semi-improved neutral grassland (retained), semi-improved calcareous grassland (retained), Broad leaved semi-natural woodland (retained)	Low	Modified Grassland*	Moderate	General Grazing (March-August) or mowing for hay	Semi-improved calcareous grassland (LBAP, Habitat of Principal Importance)	Tree belts is proposed along the eastern edge to reduce the visibility from residents adjacent to Bridge End Road and local PRow, as well as screen the structures and reduce the perception of the Scheme from Badlingham.
					High	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			
					Low	River	Moderate			
E24	7.5	East B	Freely draining lime-rich loamy soils (80%). Freely draining slightly acid sandy soils (20%, north-west corner)	Arable (removed)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	New woodland planting is proposed to the north and east of this parcel to screen the structures and reduce the perception of the scheme when travelling along Worlington Road.
					Low	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
E25	6.2	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	New woodland planting is proposed to the east and south of this parcel to screen the structures and reduce the perception of the scheme when travelling along Worlington Road.
					Low	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			
E26	5.2	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), Broad leaved semi-natural woodland (retained), intact hedge (retained)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Low	Lowland calcareous grassland	Poor			
E27	6.7	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), Broad leaved semi-natural woodland (retained), intact hedge (retained)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Low	Lowland calcareous grassland	Poor			
E28	5	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), Broad leaved semi-natural woodland (retained), intact hedge (retained)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Low	Lowland calcareous grassland	Poor			
E29	6.6	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), Broad leaved semi-natural woodland (retained), intact hedge (retained)	Low	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					Low	Lowland calcareous grassland	Poor			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
E30	16.7	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), existing coniferous plantation woodland (retained)	Medium	Modified Grassland*	Moderate	General Grazing (March-August) or mowing for hay		The woodland in the south-east has been retained for visual screening. Additional hedgerow and woodland planting are proposed adjacent to Golf Links Road to screen views for motorists and from views from the wider landscape to the north, as well as reduce the perception of the Scheme in relation to Worlington.
					Medium	Lowland calcareous grassland	Poor			
					Medium	Native hedgerow; species rich	Good			
					Medium	Other woodland; broadleaved	Moderate			
					Medium	Arable field margins pollen & nectar	NA			
E31	25.9	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), existing coniferous plantation woodland (retained), intact hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay	*Archaeological site Mitigation - no construction	The woodland in the south has been retained for visual screening. Additional hedgerow and woodland planting are proposed adjacent to Golf Links Road to screen views for motorists and from views from the wider landscape to the north, as well as reduce the perception of the Scheme in relation to Worlington.
					Low	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			
E32	4.7	East B	Freely draining lime-rich loamy soils (100%)	Arable (removed), intact hedge (retained)	Low	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay	*Archaeological site Mitigation - no construction	The woodland in the south-east has been retained for visual screening. Additional hedgerow and woodland planting are proposed adjacent to Golf Links Road to screen views for motorists and from views from the wider landscape to the north, as well as reduce the perception of the Scheme in relation to Worlington.
					Low	Lowland calcareous grassland	Poor			
					Low	Other woodland; broadleaved	Moderate			
W03	24.7	West A		Improved grassland (retained/removed), coniferous plantation	High	Modified Grassland*	Moderate		*Archaeological site Mitigation - no construction	Siting the solar panels between woodland blocks and Foxburrow

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
			Freely draining slightly acid but base-rich soils (100%)	woodland (retained), broad leaved semi-natural woodland (retained), mixed semi-natural woodland (retained), hedgerow (retained)	High	Other lowland acid grassland	Good	General grazing (March-August) or mowing for hay		Plantation and reinforcing the vegetation patterns with new woodland planting to aid in screening this part of the Scheme from the wider landscape and retaining a physical separation from Chippenham Road and Snailwell.
					High	Other woodland; broadleaved	Moderate			
ECO5	25,2	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), mixed semi-natural woodland (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay	*Archaeological site Mitigation - no construction	New woodland planting to extend the existing belt a minimum width of approximately 65m to reinforce visual separation between parcel W03 and ECO5. Hedgerow proposed along the southern and eastern edge of ECO5
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			
					High	Native hedgerow; species rich	Good			
W04	23.3	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), tall ruderal (removed), mixed semi-natural woodland (retained), broad leaved semi-natural woodland (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		A temporary fence, rendered in a colour to aids its integration in the landscape will also be implemented in relation to views from Godolphin Gallops, until the establishment of the proposed planting. The solar panels have also been sited away from The Avenue so that new woodland can be implemented. Planting to enhance habitat connectivity and reinforce existing vegetation which provides screening between the Snailwell Gallops and Parcel W04.
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			
					High	Native hedgerow; species rich	Good			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
W05	30.1	West A	Freely draining slightly acid but base-rich soils (55%) and Shallow lime-rich soils over chalk or limestone (45%)	Arable (removed), broad leaved semi-natural woodland (retained), coniferous plantation woodland (retained), intact hedge (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Siting the solar panels away from The Avenue so that new woodland can be implemented along the southern edges of the parcel, which is considered appropriate in the context of the Avenue and Chippenham Parl. There would also be a new woodland mix along the southern edge of the parcel which would include a higher percentage of evergreen species and a temporary fence, rendered in a suitable colour, to screen views from motorists on the A14.
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			
					High	Native hedgerow; species rich	Good			
W06	24.5	West A	Freely draining slightly acid but base-rich soils (80%, north-east side) and Shallow lime-rich soils over chalk or limestone (20%, south-west side)	Arable (removed), grassland to the west (removed), broad leaved semi-natural woodland (retained), hedgerow (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		New woodland planting to the east of the parcel, to reduce their visibility in longer distance views from The Limekilns, as well as provide new vegetation links across the landscape. The existing woodlands between parcels W06 and W07 has also been retained, with panels and associated infrastructure offset from the woodland.
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			
W07	25.1	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), mixed semi-natural woodland (retained), coniferous plantation woodland (retained)	High	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines). *Archaeological site Mitigation - no construction	New woodland planting to the south of the parcel, to reduce their visibility. The existing woodlands between parcels W06 and W07 has also been retained, with panels and associated infrastructure offset from the woodland.
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
W08	16.7	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), mixed semi-natural woodland (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay	*Archaeological site Mitigation - no construction	Limiting the extent of the solar panels across this field, so as to respond positively to below ground archaeology. New native grassland would extend across the archaeological areas, to create a continuous sward of grassland with that which will be present under the panels. New hedgerow and woodland are proposed along the northern edge of this parcel to provide visual screening from La Hogue Road. New woodland is also proposed along the northern edge of W10, to provide visual screening from the same road and reinforce the existing vegetation patterns.
					High	Other lowland acid grassland	Good			
					High	rush pasture	Moderate			
					High	Mixed Scrub	Good			
					High	Other woodland; broadleaved	Moderate			
W09	8.5	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), intact hedge (retained)	High	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines). *Archaeological exclusion area	Limiting the extent of the solar panels across this field, so as to respond positively to below ground archaeology. New native grassland would extend across the archaeological areas, to create a continuous sward of grassland with that which will be present under the panels.
					High	Other lowland acid grassland	Good			
					High	Other woodland; broadleaved	Moderate			
					High	Native hedgerow; species rich	Good			
					High	Arable field margins pollen & nectar	NA			
					High	Arable field margins game bird mix	NA			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
W10	14.7	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), mixed semi-natural woodland (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		New hedgerow and woodland are proposed along the northern edge of this parcel to provide visual screening from La Hogue Road. New woodland is also proposed along the northern edge of W10, to provide visual screening from the same road and reinforce the existing vegetation patterns.
					High	Other lowland acid grassland	Good			
					High	rush pasture	Moderate			
					High	Mixed Scrub	Good			
					High	Other woodland; broadleaved	Moderate			
					High	Native hedgerow; species rich	Good			
W11	15.3	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), intact hedge (retained)	High	Modified Grassland*	Moderate	General grazing (March-August) or mowing for hay		Grassland and hedgerow planting to create a buffer up to 75m wide between parcels W11 and La Hogue Road.
					High	Other lowland acid grassland	Good			
					High	Native hedgerow; species rich	Good			
W12	18.3	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), intact hedge (retained)	High	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	
					High	Other lowland acid grassland	Good			
					High	Native hedgerow; species rich	Good			
W15	46.4	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), tall ruderal (removed)	High	Modified Grassland*	Moderate	Conservation grazing (Low density, September – February)	Managed for pollinators (B-Lines)	The solar panels have been offset from the watercourse, along with the retention of the riverside trees and vegetation and road networks. New woodland is proposed around the
					High	Other lowland acid grassland	Good			

Plot / field	Area (ha)	Location within the Scheme	Soil types (approx.)	Habitat type (baseline)	BNG strategic significance	BNG UKHab (post development)	BNG habitat condition (post development)	Management after establishment of the grassland	Special features / ecological receptor	Mitigation measures
					High	Other woodland; broadleaved	Moderate			perimeter of the parcels to screen the Scheme, as well as to soften views of the A11 from Kennett and increase the vegetation.
					High	Native hedgerow; species rich	Good			
W17	8.9	West A	Freely draining slightly acid but base-rich soils (100%)	Arable (removed), intact hedge (retained)	High	Developed land; Sealed Surface	NA	General grazing (March-August) or mowing for hay		Proposed woodland to the east, south and west edges.
					High	Other woodland; broadleaved	Moderate			

*95% Modified Grassland 5% Developed land: Sealed Surface

Annex D Hedgerow and Woodland Species

Table D1. Indicative Tree Species including hedgerow trees -

Common Name	Latin Name	Root Condition	Height (cm)	National Character Area
Beech	<i>Fagus sylvatica</i>	Bare root (2x)	150-175	The Brecks
Pedunculate Oak	<i>Quercus robur</i>	Bare root (2x)	150-175	East Anglian Chalk
Scots Pine	<i>Pinus sylvestris</i>	Root balled (3x)	150-175	The Brecks

Table D2. Indicative hedgerow shrub species -

Common Name	Latin Name	Root Condition	Height (cm)	National Character Area
Blackthorn	<i>Prunus spinosa</i>	Bare root	40-60	The Brecks
Buckthorn	<i>Rhamnus cathartica</i>	Bare root	40-60	East Anglian Chalk The Brecks
Dog rose	<i>Rosa canina</i>	Bare root	40-60	East Anglian Chalk
Elder	<i>Sambucus nigra</i>	Bare root	40-60	The Brecks
Field Maple	<i>Acer campestre</i>	Bare root	40-60	East Anglian Chalk
Guelder rose	<i>Viburnum opulus</i>	Bare root	40-60	East Anglian Chalk
Hawthorn	<i>Crataegus monogyna</i>	Bare root	40-60	East Anglian Chalk The Brecks
Hazel	<i>Corylus avellana</i>	Bare root	40-60	East Anglian Chalk
Holly	<i>Ilex aquifolium</i>	Container grown (1L)	30-40	The Brecks
Spindle	<i>Euonymus europaeus</i>	Bare root	40-60	East Anglian Chalk The Brecks


Wild privet	<i>Ligustrum vulgare</i>	Bare root	40-60	East Anglian Chalk
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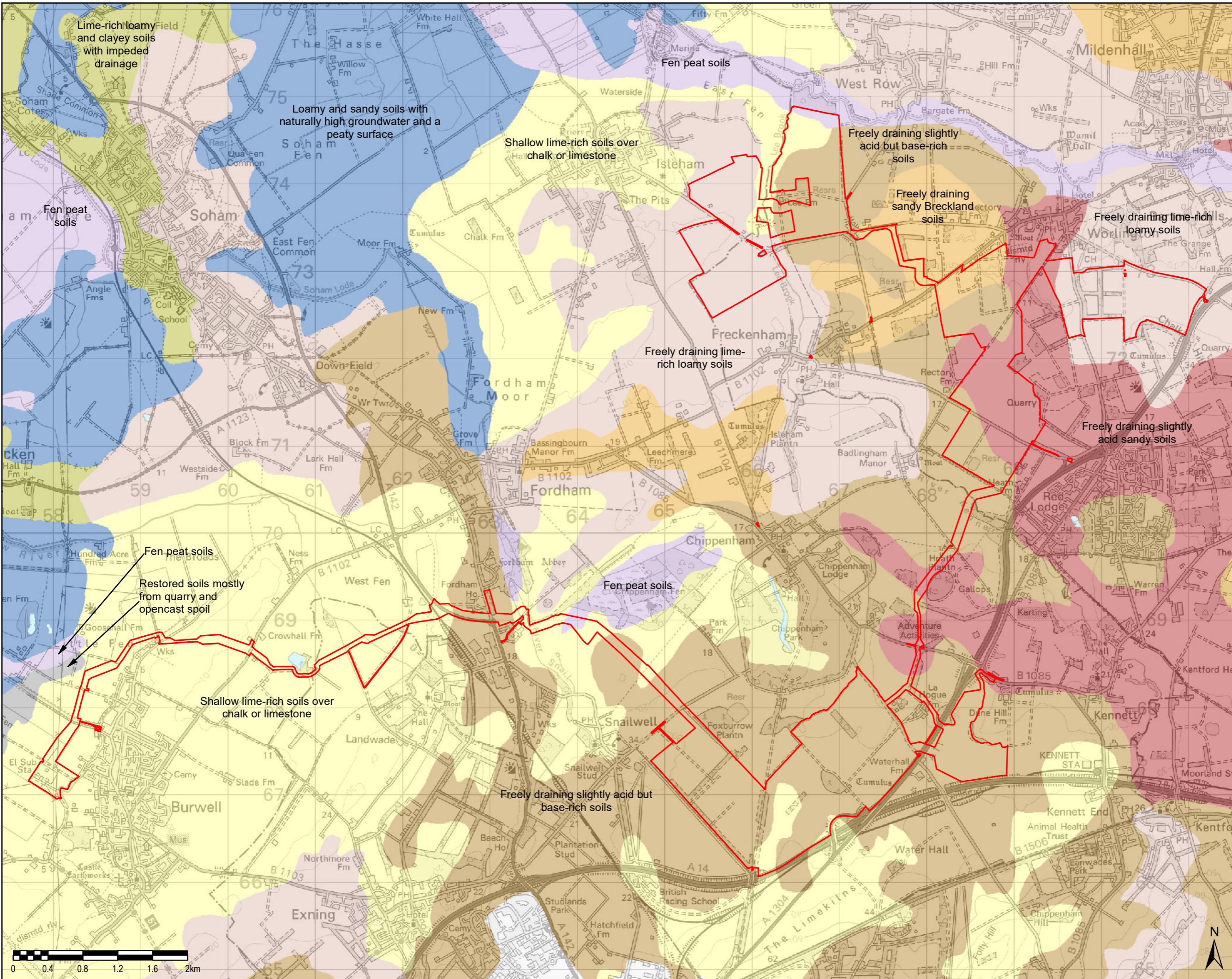
Table D3. Indicative species for woodland planting -

Common Name	Latin Name	Root Condition	Height (cm)	National Character Area
Alder	<i>Alnus glutinosa</i>	Bare root	40-60	The Fens
Beech	<i>Fagus sylvatica</i>	Bare root	40-60	East Anglian Chalk The Brecks
Blackthorn	<i>Prunus spinosa</i>	Bare root	40-60	East Anglian Chalk The Brecks
Field Maple	<i>Acer campestre</i>	Bare root	40-60	East Anglian Chalk
Gorse	<i>Ulex europaeus</i>	Bare root	40-60	The Brecks
Hawthorn	<i>Crataegus monogyna</i>	Bare root	40-60	East Anglian Chalk The Brecks
Hazel	<i>Corylus avellana</i>	Bare root	40-60	East Anglian Chalk
Heather	<i>Calluna vulgaris</i>	Container grown (1L)	30-40	East Anglian Chalk The Brecks
Holly	<i>Ilex aquifolium</i>	Container grown (1L)	30-40	The Brecks
Hornbeam	<i>Carpinus betulus</i>	Bare root	40-60	East Anglian Chalk The Brecks
Pedunculate Oak	<i>Quercus robur</i>	Cell grown	40-60	East Anglian Chalk
Scots Pine	<i>Pinus sylvestris</i>	Bare root	40-60	The Brecks
Silver Birch	<i>Betula pendula</i>	Bare root	40-60	East Anglian Chalk

White Willow	<i>Salix alba</i>	Bare root	40-60	The Fens
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Annex E Sunnica Soil Types

LEGEND
 The Order Limits



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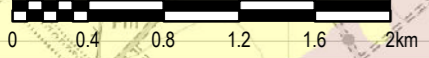
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Annex F Outline Historic Environmental Management Plan



Outline Historic Environment Management Plan

Planning Act 2008 Infrastructure Planning (Examination Procedure)
Rules 2010



Planning Act 2008

**The Infrastructure Planning
(Examination Procedure) Rules 2010**

Sunnica Energy Farm

Outline Historic Environment Management Plan

Planning Inspectorate Scheme Reference	EN010106
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Author	Sunnica Energy Farm Project Team

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Rev 00	13 January 2023	Deadline 5

Executive summary

This document is the Outline Historic Environment Management Plan (OHEMP) for the Sunnica Energy Farm. Powers to define, construct and maintain ten Archaeological Protection Areas (APAs) within the wider scheme (Figure 1) are being sought by Sunnica through an application for a Development Consent Order (DCO).

The APAs are defined areas that have been removed from development because they contain significant archaeological remains initially identified through geophysical survey **[APP-062]**. The APAs will be protected from any impact during the construction phase, operation phase and during the decommissioning works of the Scheme and as such are one of the embedded mitigation measures identified by the ES **[APP-039]**.

The OHEMP provides outline information on measures relating to the protection during the construction phase, operation phase and during the decommissioning works for the Scheme. These have been defined by the requirements which arise from the technical assessments presented in the ES, together with ongoing design development and stakeholder feedback.

The OHEMP provides information on the project team roles and defines the responsibilities associated with the Scheme.

The OHEMP is a living document that is required be regularly updated, with APA specific HEMP method statements (HEMPMS) by the Archaeological Clerk of Works (ACOW) in consultation with the relevant Consultees (as identified in this document) during the construction phases.

Executive summary

	ii
1 Introduction	1
1.1 Purpose of the report	1
2 Project team roles and responsibilities	3
2.1 Site roles and responsibilities	3
3 Archaeological Protection Areas (APA)	4
3.1 Construction Phase	4
3.2 Roles and Responsibilities during Construction	4
3.3 Protective fencing	4
3.4 Long-Term Management of the APAs (Operation Phase)	4
3.5 Decommissioning Works	5
Figures	6
Appendix A APA Gazetteer	7

Figures

Figure 1. Overview of Scheme and Archaeological Protection Areas (APA's)

Figure 2. Overview of Sunnica West APA's

Figure 3. Overview of Sunnica East APA's

Figure 4. APA E07

Figure 5. APA E09

Figure 6. APA E31

Figure 7. APA E32

Figure 8. APA W03

Figure 9. APA W04

Figure 10. APA W07

Figure 11. APA W08

Figure 12. APA W09 (Chippenham Barrow Group)

Figure 13. APA E05 (B50 Crash Site)

Tables

Table 1.1 List of proposed preliminary works

Table 1.2: Key target milestones relevant to the OHEMP

1 Introduction

1.1 Purpose of the report

- 1.1.1 This document is the Outline Historic Environment Management Plan (OHEMP) for the Sunnica Energy Farm. Powers to define, construct and maintain ten Archaeological Protection Areas (APAs) within the wider scheme (Figure 1) are being sought by Sunnica through an application for a Development Consent Order (DCO).
- 1.1.2 An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and an Environmental Statement [**APP 039**] has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). In accordance with the requirements of the EIA Regulations, the ES contains the assessment of the potential impacts on the environment that may be caused during construction, operation and maintenance of the Scheme on the archaeological resource.
- 1.1.3 Ten APAs, see Appendix A, have been identified in consultation with the Historic Environment Teams for Cambridgeshire County Council, Suffolk County Council and Historic England. The APAs are defined areas that contain significant archaeological remains initially identified through geophysical survey [**APP-062**] within the wider Scheme. The APAs will be protected from any impact during the construction phase, operation phase and during the carrying out of decommissioning works of the Scheme and as such are one of the embedded mitigation measures identified by the ES [**APP-039**]. An overview of the APAs is shown on Figures 1 – 3 with detailed plans for each area on Figures 4-13.
- 1.1.4 The establishment of the APAs shall be subject to measures and procedures defined within Heritage Environmental Management Plan Method Statements (HEMPMS) prepared for the relevant phase of work that may affect the APA, as set out in the LEMP. The measures defined in the HEMPMS will be applied by the contractors as stipulated in the relevant parts of the OHEMP with the aim of controlling potential impacts upon the natural and historic environment.
- 1.1.5 All contractors will be required to comply with applicable environmental legislation together with any additional environmental controls imposed in the DCO. For this reason, the applicable statutory requirements are not stated within this OHEMP.
- 1.1.6 The measures to be implemented in specific areas, such as fencing, are set out in each discipline section of this OHEMP.
- 1.1.7 For the purposes of the OHEMP, the following definitions apply:
- a. The Client – Sunnica Ltd, or their representative (hereafter referred to as the Client’s representative).
 - b. The Principal Contractor (i.e., the construction contractor for the Scheme).
 - c. Archaeological Clerk of Works (ACoW) (as appointed by the Client).
 - d. Archaeological Contractor (as appointed by the Client).

- e. Historic England (in respect of the APA number APA W09 only) and Cambridgeshire County Council Historic Environment Team and Suffolk County Council Historic Environment Team (for all other APAs) are the statutory consultees for the purposes of the development of the OHEMP throughout the construction of the Scheme and shall collectively be known as the Consultees. References to consultation with the Consultees means consultation with each of those organisations. The Consultees will advise Sunnica on evaluation, assessment and mitigation on matters pertaining to the Archaeological APAs.

2 Project team roles and responsibilities

2.1 Site roles and responsibilities

- 2.1.1 The project team roles will be defined in the HEMPMS and will include the responsibilities associated with the roles for construction phase, operation phase and the decommissioning works.

3 Archaeological Protection Areas (APA)

3.1 Construction Phase

3.1.1 Ten APAs have been identified that require preservation of archaeological remains. The APAs will require protective fencing to prevent unintended incursion/damage by plant or other vehicles during construction (Entire Field EC01 and locations within Fields E09, E18, E31, E32, E33 (ES Figure 3.1)) and an area relating to an aircraft crash crater in E05 and locations to the northeast of field W04, south of Field W09 and within Fields W08 and W07 (E.S Figure 3.2).

3.2 Roles and Responsibilities during Construction

3.2.1 The HEMPMS for the APAs during construction will be submitted as part of the CEMP for the phase in which the APA sits.

3.2.2 It will be prepared by the archaeological contractor following engagement with the landscape specialist and ecological clerk of works for that phase of works.

3.2.3 The draft HEMPMS for the APAs during construction will be reviewed by the Archaeological Clerk of Works (ACoW) who will be appointed by the Client. The ACoW will be responsible for ensuring that monitoring of the performance of the ACoW is carried out and considering whether any updates are required whilst construction is carried out.

3.3 Protective fencing

3.3.1 In order to demarcate the APA's that require protection and to avoid unintentional damage during construction, initial temporary hi-visibility fencing followed by secure timber fencing will be installed. The permanent fencing will be installed by a fencing contractor under the supervision of the Archaeological Contractor. Signs will inform all parties of the protected designation of the site and to "keep out".

3.3.2 The location and type of fencing for each site for preservation of archaeological remains will be set out in a HEMPMS prepared by the ACoW, to be submitted as part of the CEMP for the phase in which the APA in question sits. The Archaeological Contractor and the Clients ACoW will be responsible for regularly monitoring the condition of the fencing and will be responsible for its maintenance until either construction work in that area is complete or at Scheme opening..

3.3.3 Notices prohibiting works will be attached to the fencing, detailing the purpose of the fenced off area. This is to ensure that no impacts are made to the remains which are being protected. These areas should **not** be used for any Scheme works.

3.3.4 The ACoW will give Tool Box Talks to inform all site personnel of the archaeological and historic environment constraints on site, recognition of archaeological deposits, the protection measures that are required and their obligations under this OHEMP and any further HEMPMS, and generally to ensure that these are put in place and complied with.

3.4 Long-Term Management of the APAs (Operation Phase)

3.4.1 The HEMPMS will detail the long-term measures agreed with the Client that seek to protect the identified archaeological interest and the broad approaches that will

be applied to future management measures during the operational phase of works.

3.4.2 The HEMPMS will indicate how the historic environment (relevant to the phase of works) is to be protected in a consistent and integrated manner, coordinated with all other relevant environmental topics. The HEMPMS shall address:

- a. The long-term management proposals for each APA, including vegetation type and how this will be managed alongside the other aims of the LEMP.
- b. Details of fencing and gates
- c. Methods of routine maintenance
- d. For the scheduled barrow cemetery (South of W09) and in consultation with Historic England, details of long-term management during the operation of the Scheme.

3.4.3 The HEMPMS for the operational phase will seek to achieve the following aims:

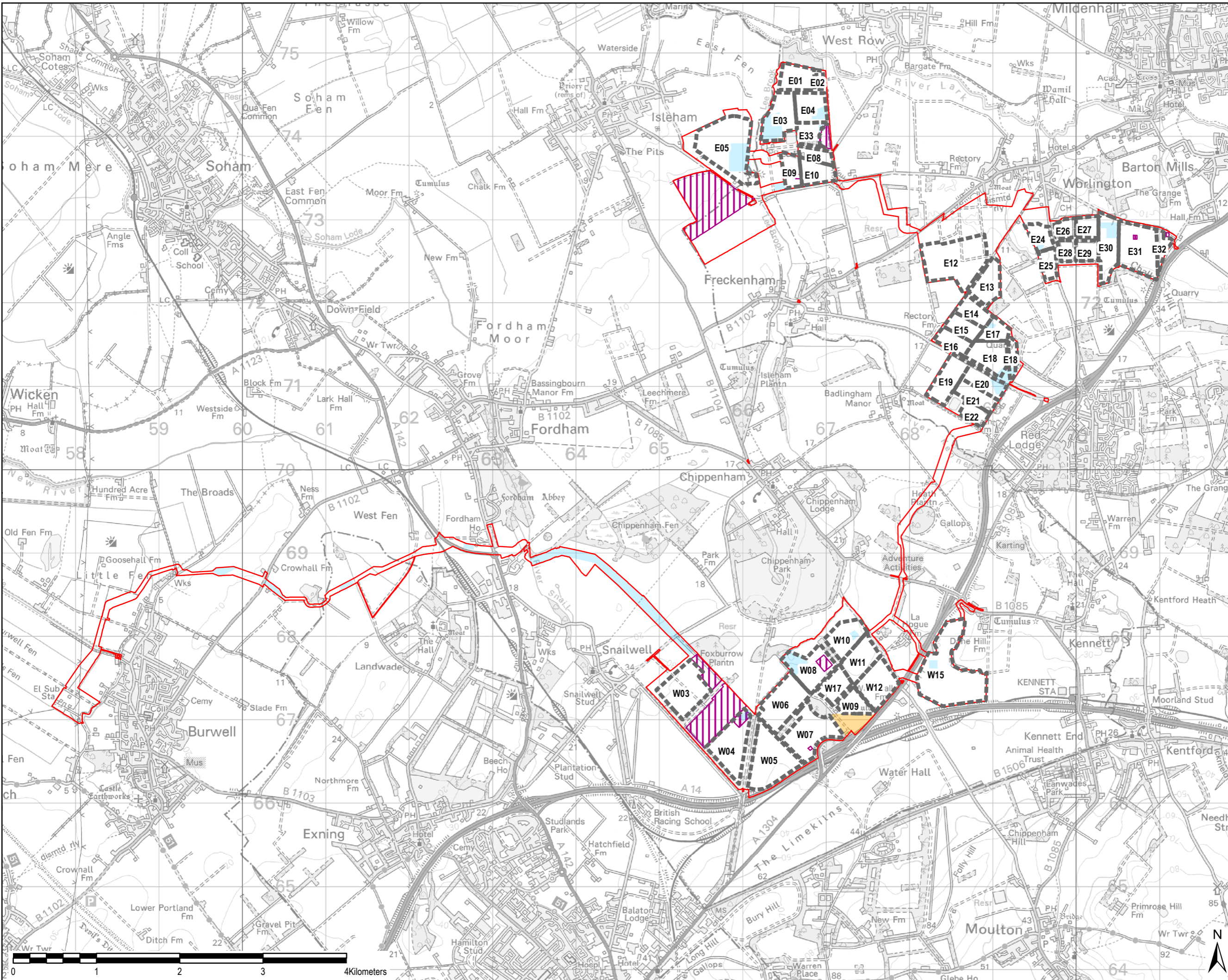
- a. **Protecting, Respecting and Responding to the Historic Landscape.** The APAs should take full account of the character of the historic landscape in which they sit.
- b. **User experience and safety.** The APAs should improve the understanding of the archaeological landscape to local communities.

3.4.4 For the operational phase, this HEMPMS for each APA will be submitted alongside the detailed LEMP for the relevant phase in which the APA in question is located

3.5 Decommissioning Works

3.5.1 Updated HEMPMS will be submitted as part of the Decommissioning Environmental Management Plan to demonstrate how the APAs will be protected during decommissioning works for the Scheme; to be consistent with the principles of the construction phase set out in this OHEMP.

Figures



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- LEGEND**
- The Order Limits
 - Archaeological Protection Area
 - Archaeological Mitigation Area
 - Chippenham Barrow Group
 - Developable Area

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Purpose of Issue
HERITAGE ENVIRONMENTAL MANAGEMENT PLAN

Client
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Drawing Title
FIGURE 1. OVERVIEW OF SCHEME AND ARCHAEOLOGICAL PROTECTION AREAS (APAS)

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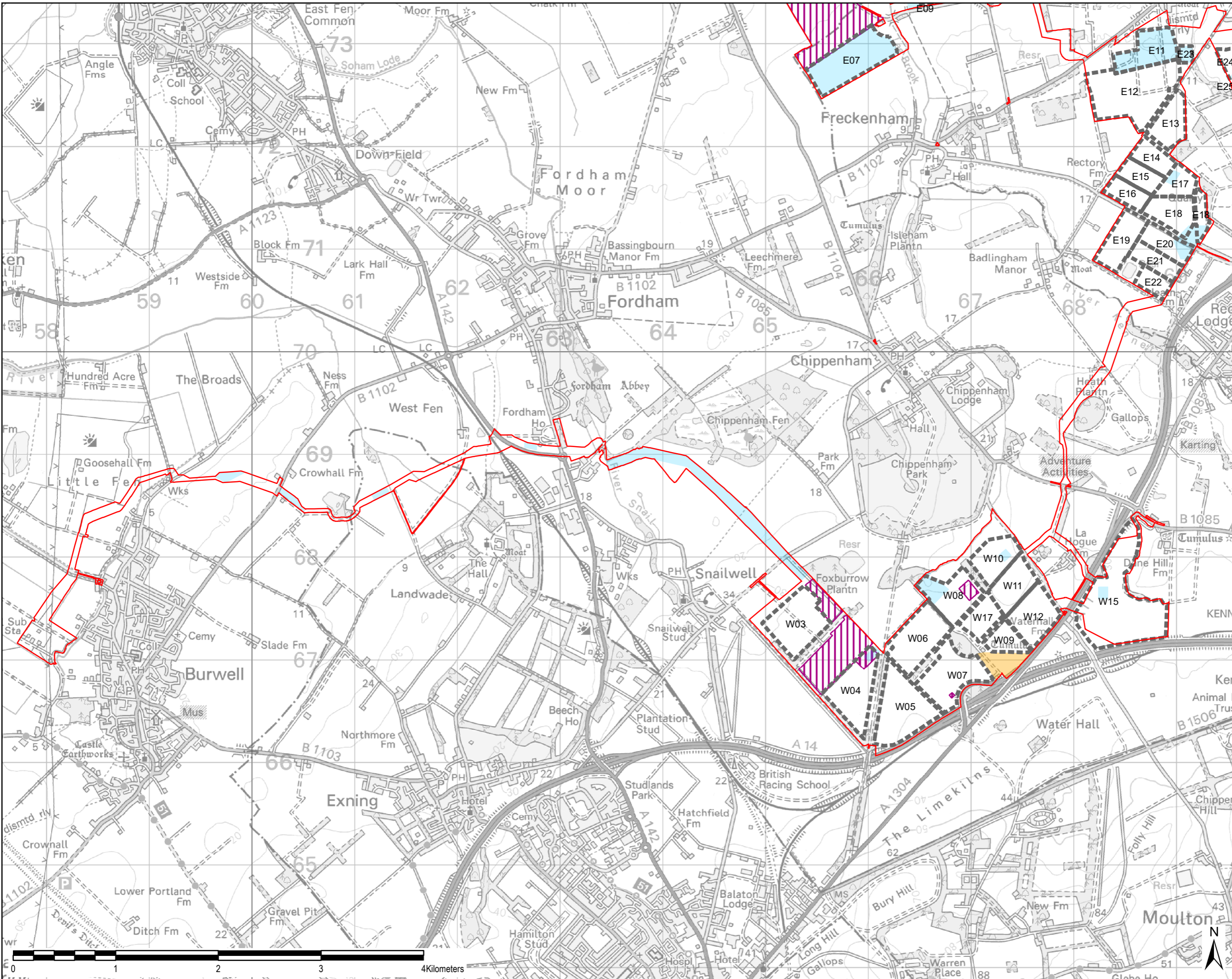


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- LEGEND**
- The Order Limits
 - Archaeological Protection Area
 - Archaeological Mitigations Area
 - Chippenham Barrow Group
 - Developable

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Purpose of Issue
HERITAGE ENVIRONMENTAL MANAGEMENT PLAN

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Drawing Title
FIGURE 2. OVERVIEW OF SUNNICA WEST APAS

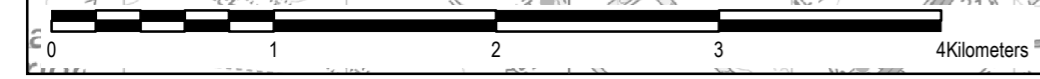
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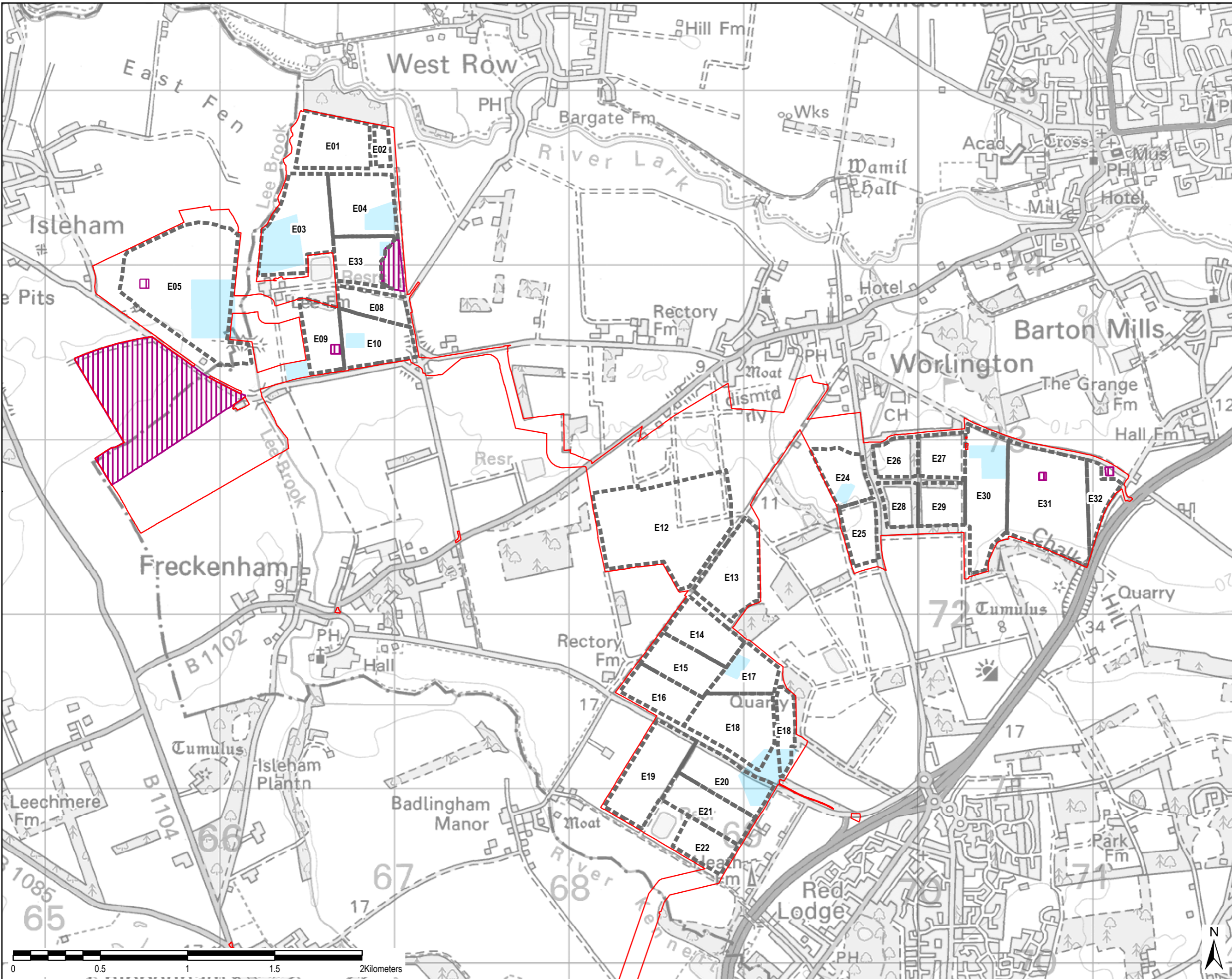
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- LEGEND**
-  The Order Limits
 -  Archaeological Protection Area
 -  Archaeological Mitigation Area
 -  Developable Area



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Purpose of Issue
 HERITAGE ENVIRONMENTAL MANAGEMENT PLAN

Client
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Drawing Title
 FIGURE 3. OVERVIEW OF SUNNICA EAST APA'S

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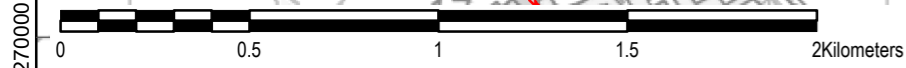
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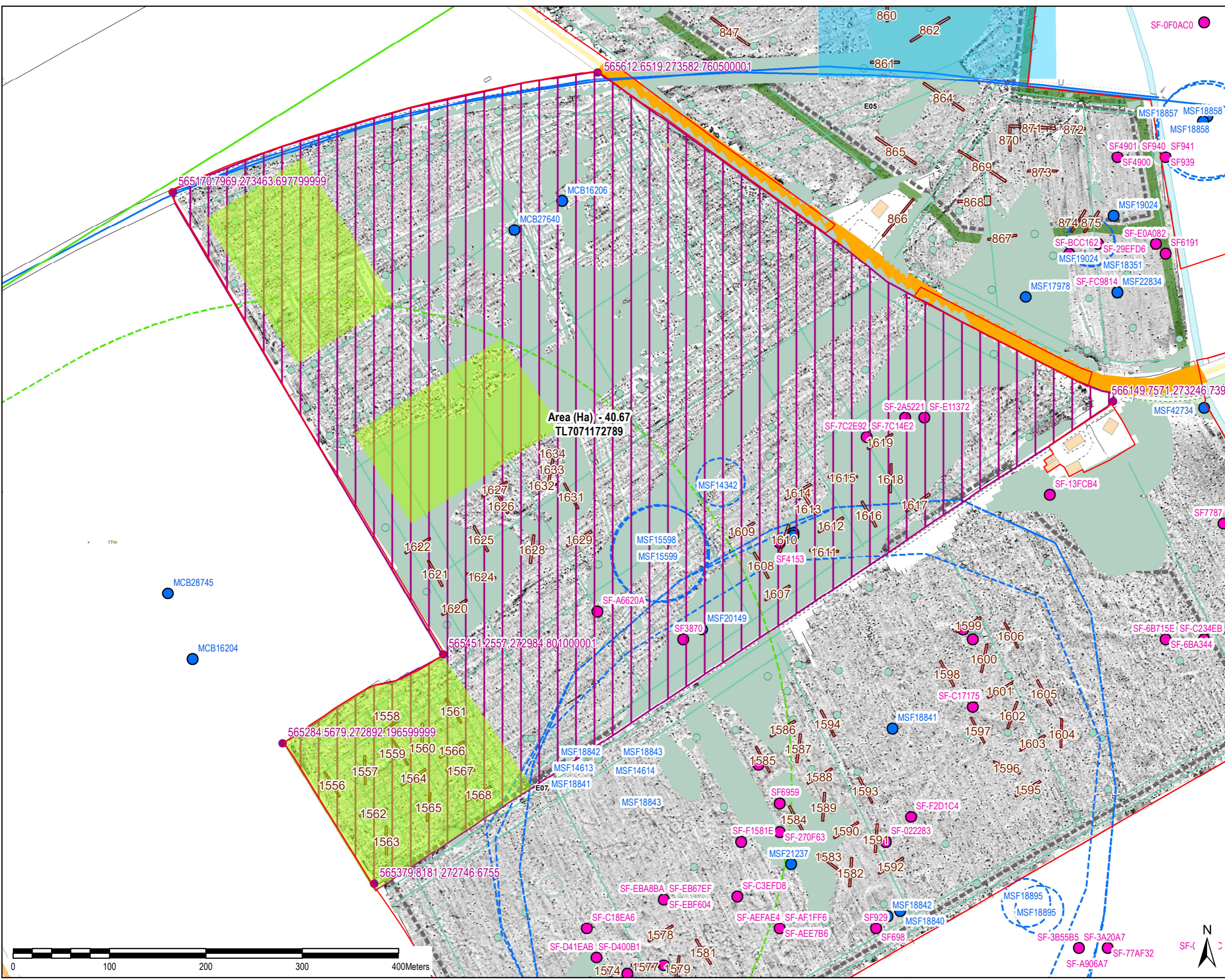
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- LEGEND**
- The Order Limits
 - Archaeological Mitigation Area
 - Archaeological Protection Area
 - Stone Curlew Mitigation Area
 - PAS Find - Point
 - HER Monument - Point
 - HER Event - Line
 - HER Event - Area
 - HER Monument - Line
 - HER Monument - Area
 - Trench
 - Geophysical Interpretation (Point)
 - Geophysical Interpretation (Line)
 - Geophysical Interpretation (Area)
 - Deposits
 - Interventions
 - Public Highway within Scheme

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FIGURE 4. APA E07

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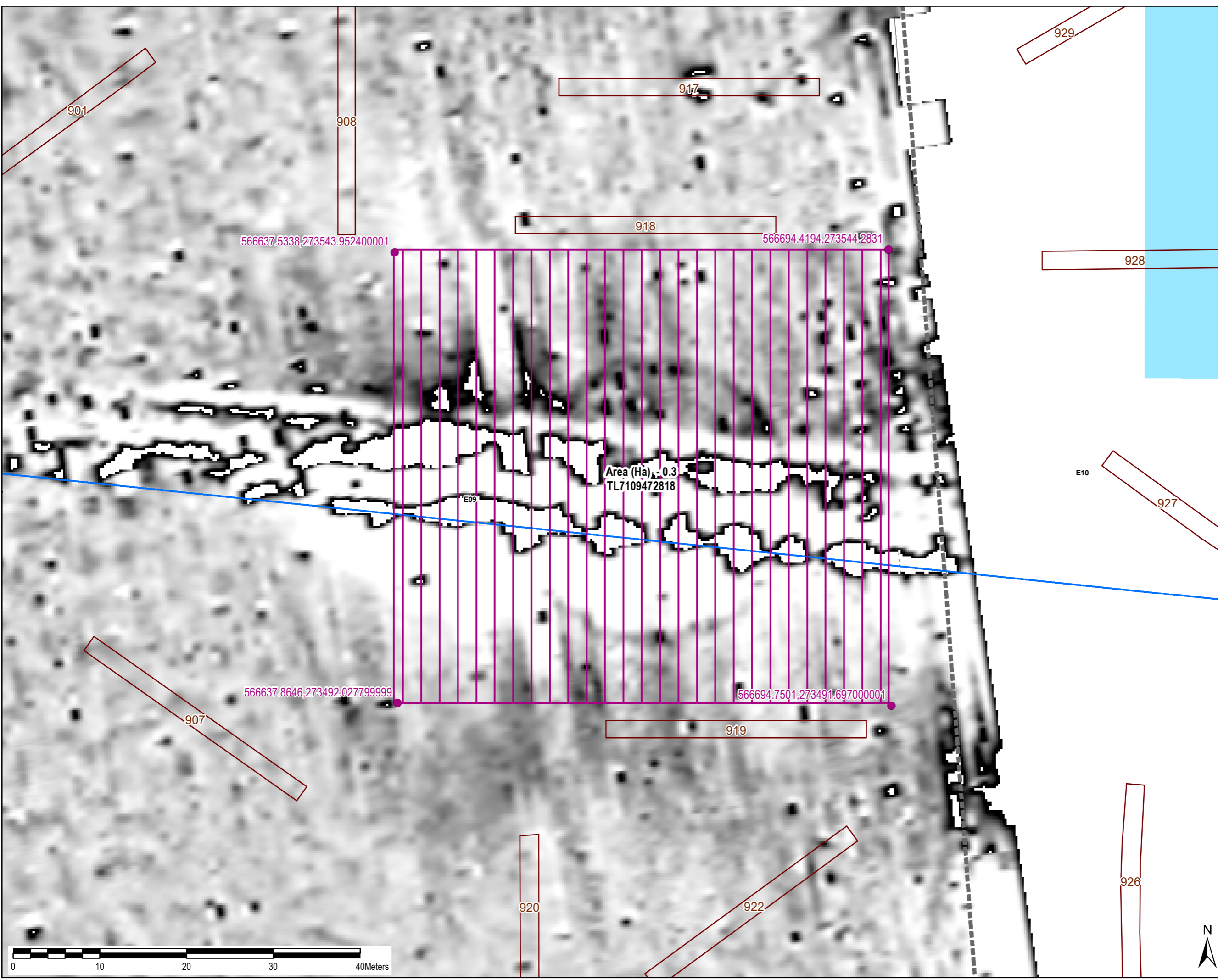
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- LEGEND**
- The Order Limits
 - Archaeological Mitigation Area
 - Archaeological Protection Area
 - HER Monument - Line
 - Trench



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FIGURE 5. APA E09

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- The Order Limits
 - Archaeological Protection Area
 - HER Monument - Area
 - Trench
 - Geophysical Interpretation (Point)
 - Geophysical Interpretation (Line)
 - Geophysical Interpretation (Area)
 - Interventions

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 FIGURE 6. APA E31

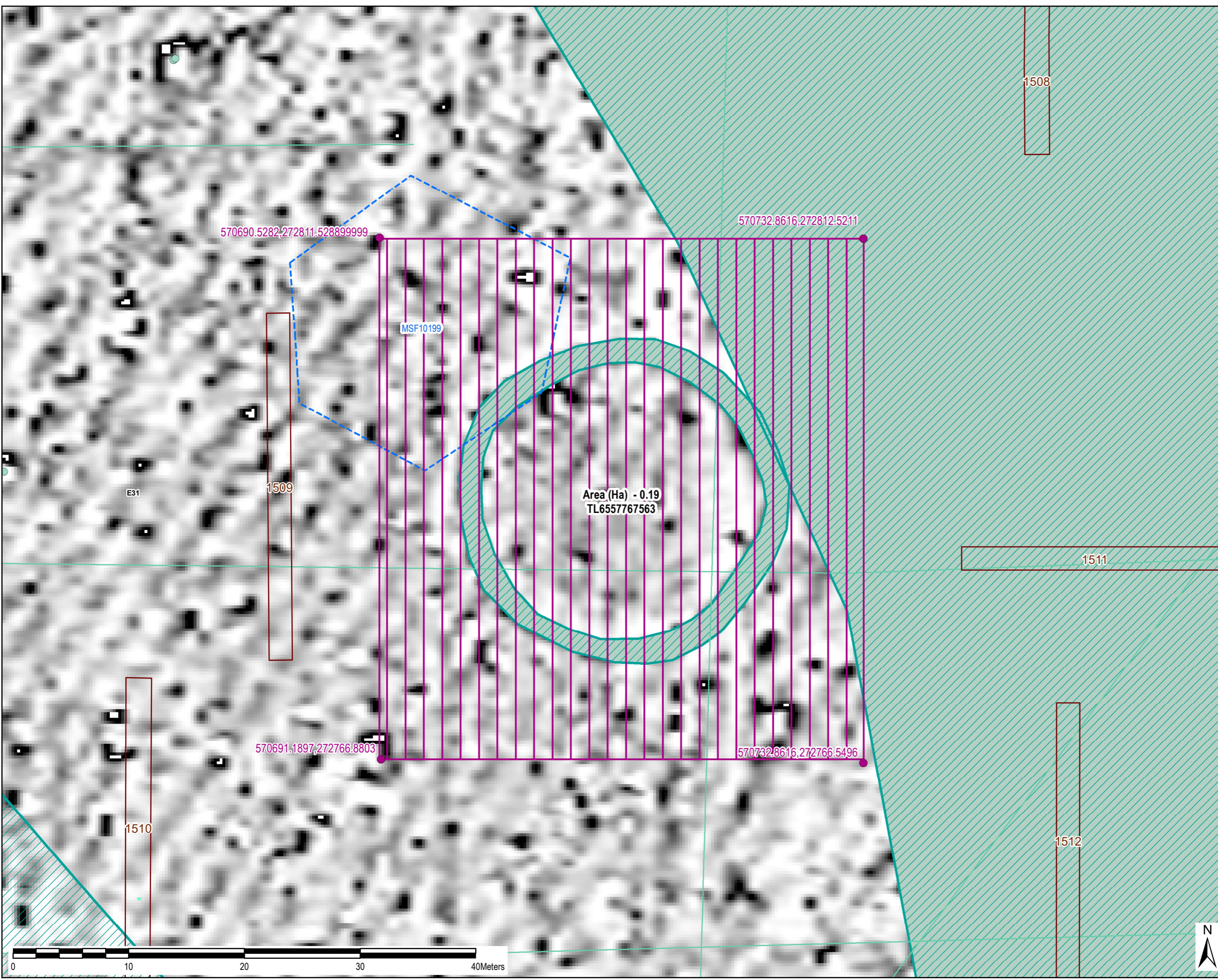
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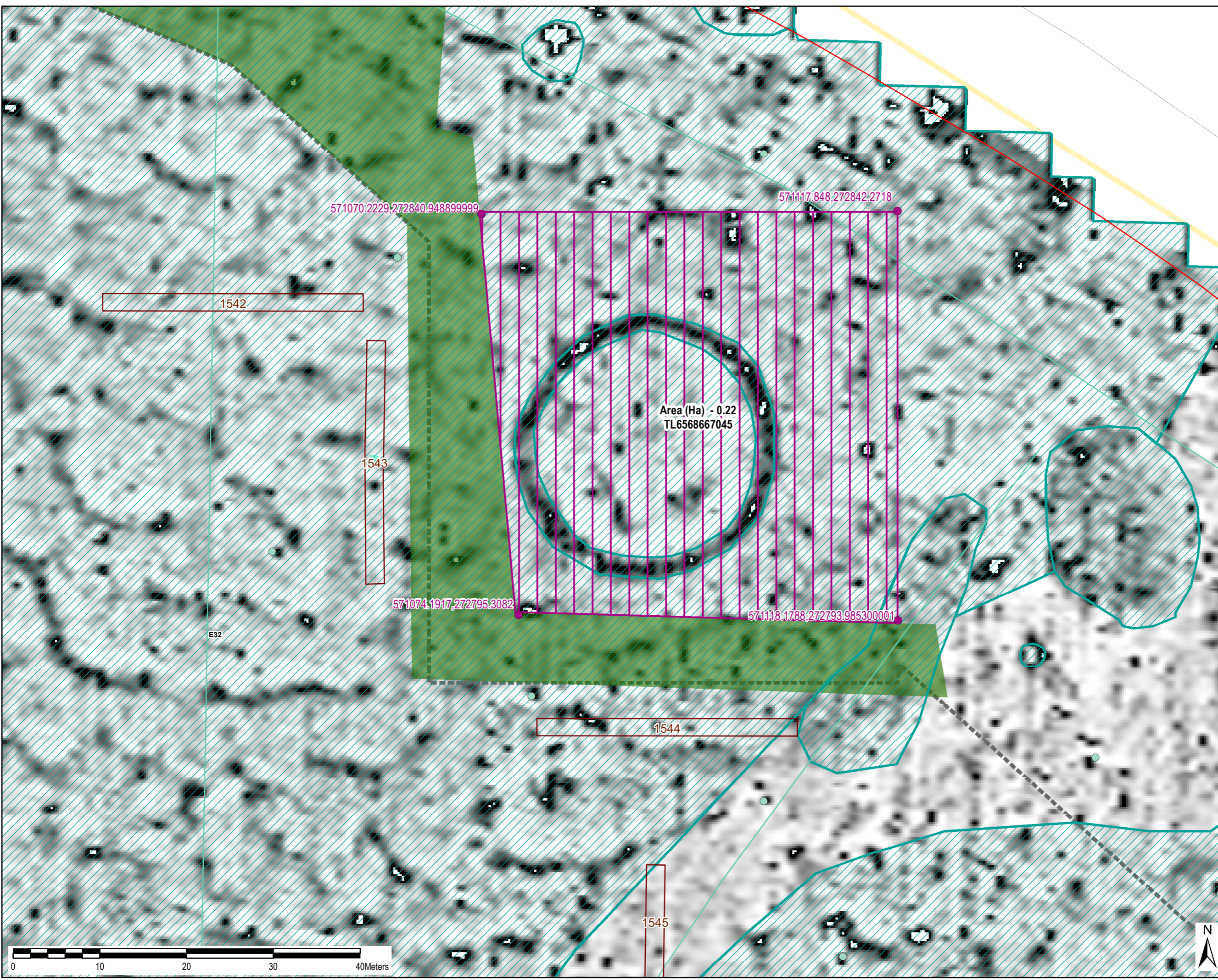
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- LEGEND**
- The Order Limits
 - Archaeological Protection Area
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Trench
 - Geophysical Interpretation (Point)
 - Geophysical Interpretation (Line)
 - Interventions



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FIGURE 7. APA E32

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- LEGEND**
- The Order Limits
 - Archaeological Mitigation Area
 - Archaeological Protection Area
 - Proposed Hedgerow (new planting or infilling of existing vegetation)
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland
 - HER Event - Area
 - HER Monument - Area
 - HER Monument - Point
 - Trench
 - Geophysical Interpretation (Point)
 - Geophysical Interpretation (Line)
 - Geophysical Interpretation (Area)
 - Interventions

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FIGURE 8. APA W03

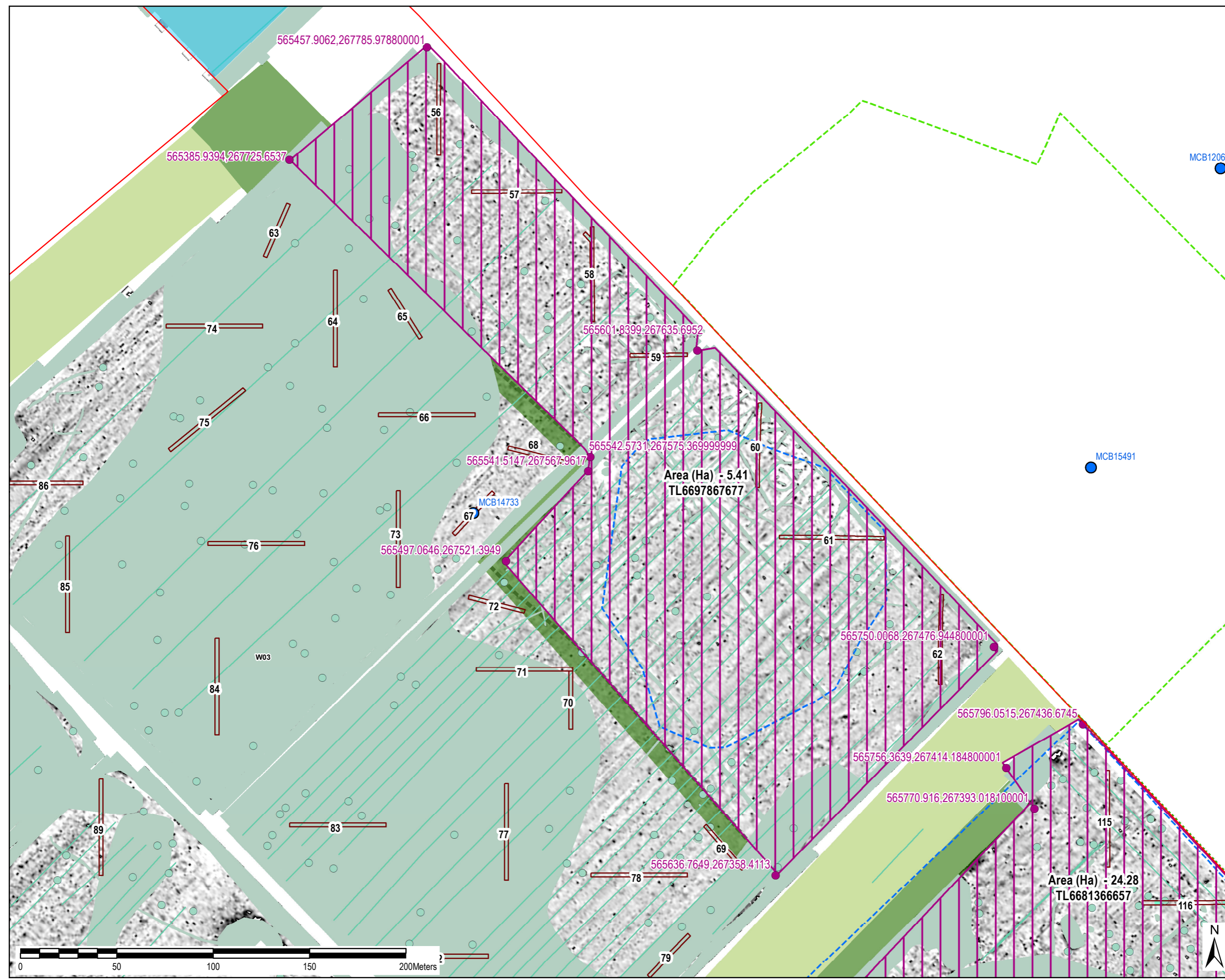
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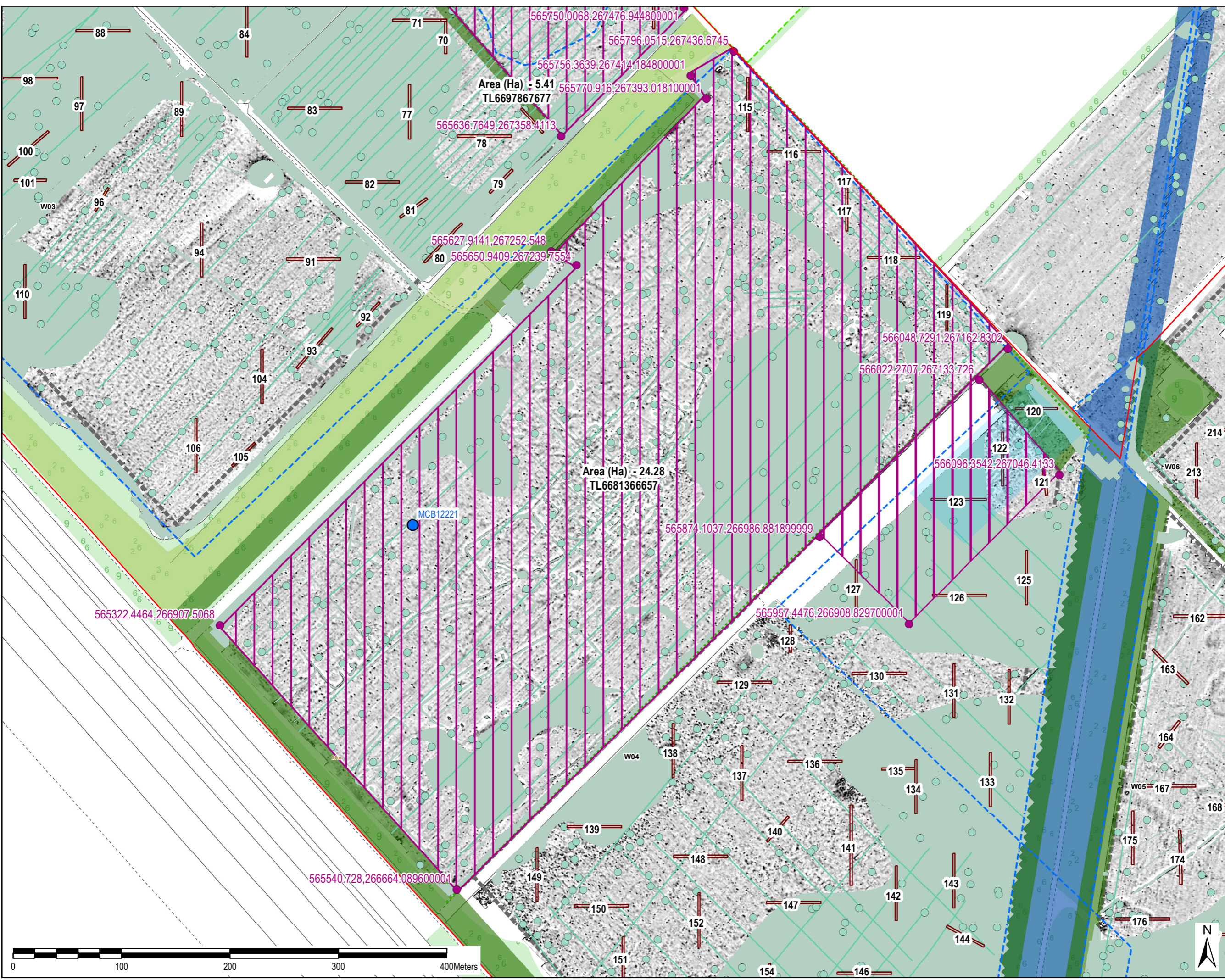


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- LEGEND**
- The Order Limits
 - Archaeological Mitigation Area
 - Archaeological Protection Area
 - Proposed Hedgerow (new planting or infilling of existing vegetation)
 - HER Monument - Point
 - HER Event - Area
 - Trench
 - HER Monument - Area
 - Trench
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland
 - Registered Park and Garden
 - Geophysical Interpretation (Point)
 - Geophysical Interpretation (Line)
 - Geophysical Interpretation (Area)
 - Deposits
 - Interventions

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FIGURE 9. APA W04

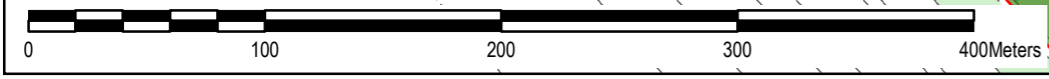
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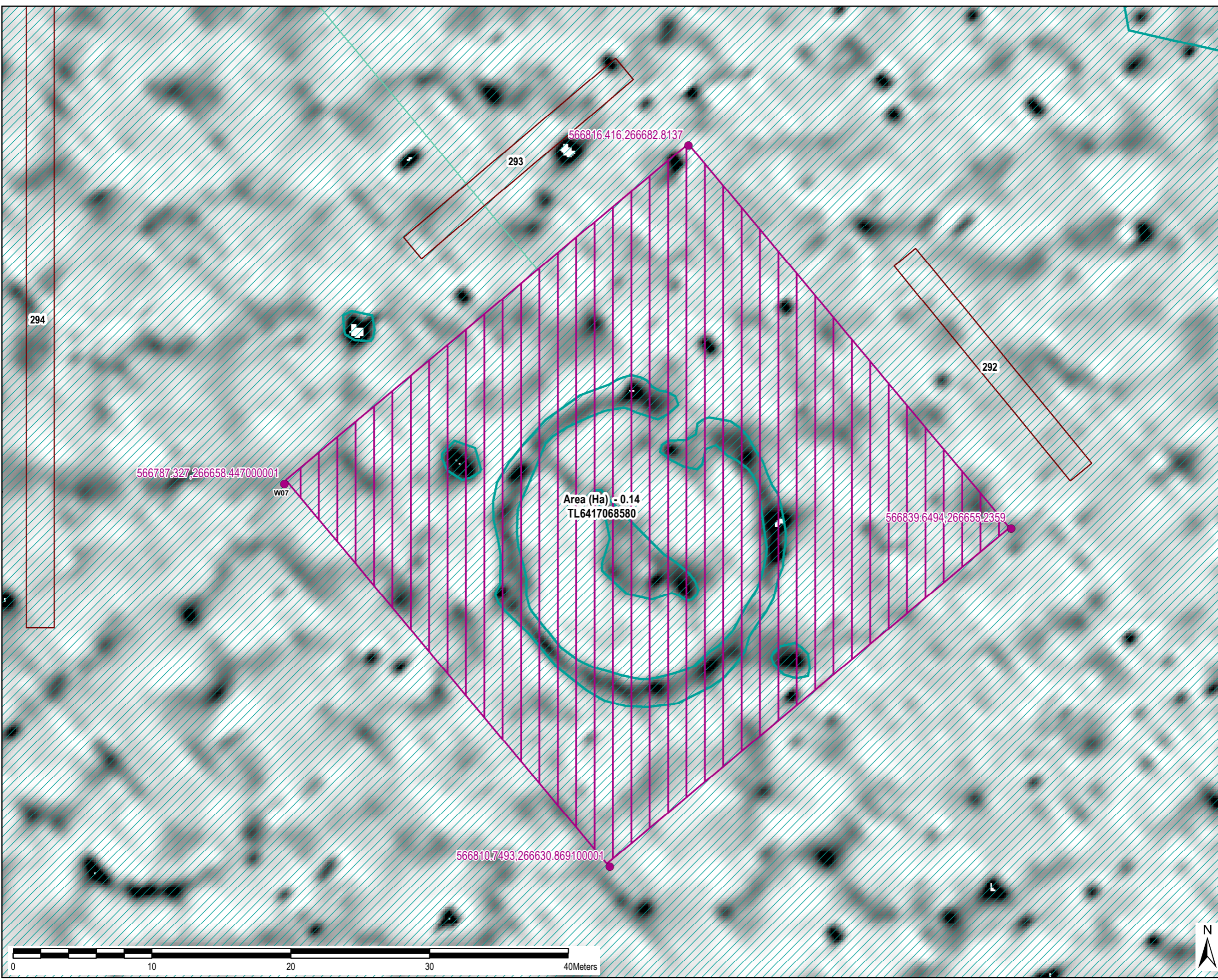
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LEGEND

- The Order Limits
- Archaeological Protection Area
- Trench
- Geophysical Interpretation (Line)



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Drawing Title
FIGURE 10. APA W07

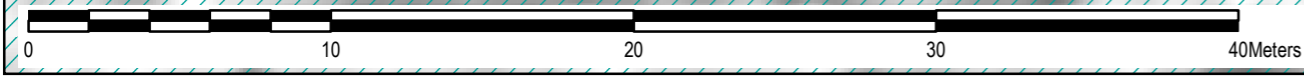
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- LEGEND**
- The Order Limits
 - Archaeological Mitigation Area
 - Archaeological Protection Area
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland
 - HER Monument - Line
 - Trench
 - Geophysical Interpretation (Point)
 - Geophysical Interpretation (Line)
 - Geophysical Interpretation (Area)
 - Interventions

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FIGURE 11. APA W08

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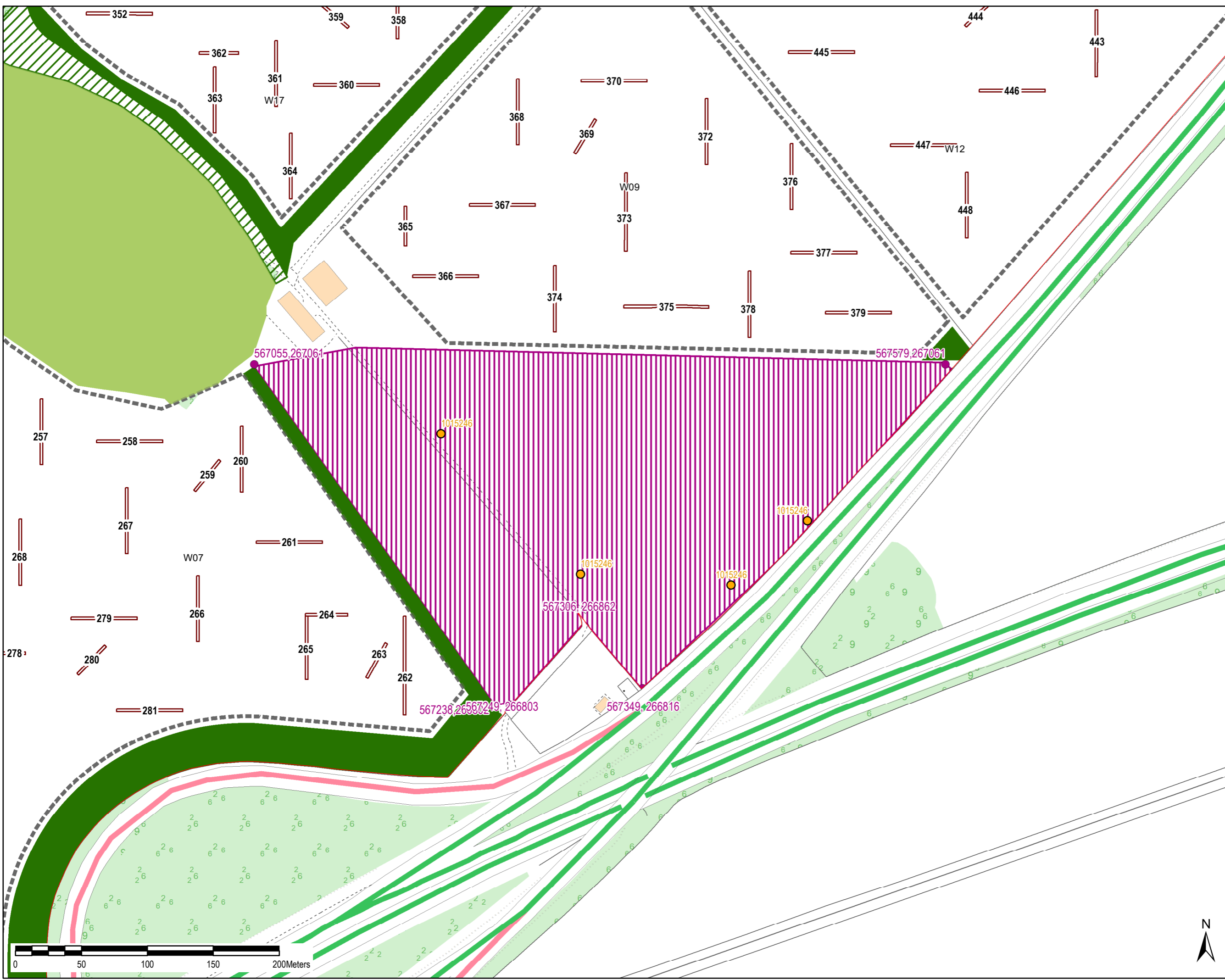


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- Legend**
- The Order Limits
 - Designated Asset Number
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland
 - Native Grassland Planting
 - Native Grassland Planting within Archaeological Mitigation Areas
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland

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FIGURE 12. CHIPPENHAM BARROW GROUP APA

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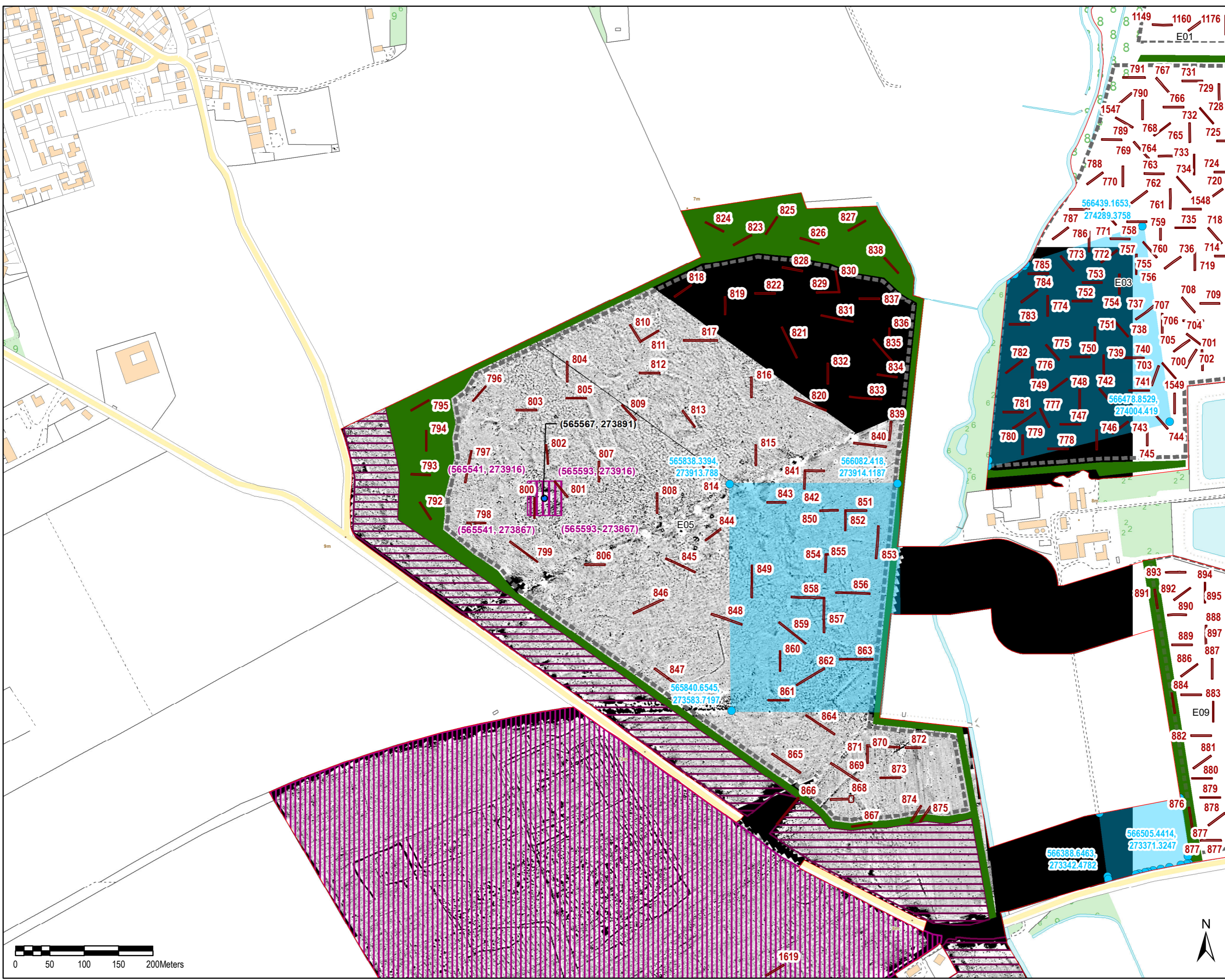
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- Legend**
- The Order Limits
 - Site of B50 Crash Site
 - Crash Site Protection Area (Subject to Licence)
 - Trench
 - Archaeological Mitigation Area
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Native Grassland Planting within Archaeological Mitigation Areas
 - Landscape Offset
 - Proposed Woodland (new planting or infilling of existing vegetation)

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Sheel Layout

Purpose of Issue

DETAILED ARCHAEOLOGICAL MITIGATION STRATEGY

Client

SUNNICA LTD

Project Title



Drawing Title

FIGURE 13. APA E05 (B50 CRASH SITE)
TBC SUBJECT TO POMRA LICENCE

Drawn HW	Checked LL	Approved NC	Date 04/01/2023
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Appendix A APA Gazetteer

APA Reference	Description
APA E07	Settlement. Undesignated archaeological remains of probable Roman date
APA E09	Ring Ditch. Undesignated archaeological remains of
APA E31	Ring Ditch. Undesignated archaeological remains of Prehistoric date
APA E32	Ring Ditch. Undesignated archaeological remains of Probable Prehistoric date
APA W03	Settlement. Undesignated archaeological remains of Roman date
APA W04	Settlement. Undesignated archaeological remains of Roman date
APA W07	Settlement. Undesignated archaeological remains of Roman date
APA W08	Settlement. Undesignated archaeological remains of Roman date
APA W09 (Chippenham Barrow Group)	Scheduled Monument NHLE 1015246 Chippenham Barrow group
APA E05 (B50 Crash Site)	Site of B50 Bomber crash impact crater. Extent of APA either 100m radius of 50m x 50m box subject to granting of Licence under the Protection of Military Remains Act 1986.