



SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.4 Non-Technical Summary

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
Non-Technical Summary**

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1 Overview

- 1.1.1 This document has been prepared on behalf of Sunnica Ltd (the Applicant) and provides a Non-Technical Summary (NTS) of the Environmental Statement for the proposed Sunnica Energy Farm. The Applicant has submitted an application for a Development Consent Order (DCO) to the Secretary of State for Business, Energy, and Industrial Strategy for the construction, operation (including maintenance), and decommissioning of Sunnica Energy Farm (hereafter referred to as the Scheme).
- 1.1.2 The Scheme comprises a solar energy development with associated battery storage facility and connection to the UK electricity transmission system, located on the boundary of Cambridgeshire and Suffolk – see Figure 1 at the end of this NTS. Section 4 of this NTS provides a more detailed summary of the Scheme.

1.1 The Applicant and Author of the Environmental Statement

- 1.1.1 Sunnica Ltd is a joint venture between Tribus Energy and PS Renewables, two established solar energy companies.
- 1.1.2 This document has been compiled by AECOM and presents a non-technical summary of the results of the Environmental Statement. AECOM is a registrant to the Environmental Impact Assessment (EIA) Quality Mark scheme run by the Institute of Environmental Management and Assessment (IEMA).



1.2 Legislative and Planning Policy Context

EIA Regulations

- 1.2.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) (Ref 1) specify which developments are required to undergo environmental impact assessment (EIA) and stipulates which types of development automatically require EIA (Schedule 1 development) and those where EIA is required if likely significant effects are expected (Schedule 2 development). The Scheme falls under Schedule 2 of the EIA Regulations. The Applicant notified the Secretary of State in a letter to the Planning Inspectorate that it would apply the EIA process to the Scheme and prepare an Environmental Statement as part of the Application.
- 1.2.2 The issues that the Applicant considers the EIA would need to address were identified in the Sunnica Energy Farm Scoping Report submitted to the Planning Inspectorate on 13 March 2019 (**Appendix 1A** of the Environmental Statement [EN010106/APP/6.2]). The Sunnica Energy Farm Scoping Report was developed following initial consultation with a number of statutory consultees and was informed by the EIA team's experience working on a number of other solar farm projects.
- 1.2.3 The Planning Inspectorate reviewed and consulted on the Sunnica Energy Farm Scoping Report and published a Scoping Opinion, which included the formal

responses from the Planning Inspectorate and other consultees (**Appendix 1B** of the Environmental Statement [EN010106/APP/6.2]).

National Policy Statements

- 1.2.4 The EIA takes account of the following National Policy Statements (NPSs):
- a. Overarching National Policy Statement for Energy (EN-1) (Ref 3),
 - b. National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref 4), and
 - c. National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref 5).
- 1.2.5 Draft NPS's, which will update those NPSs referred to above, are also being consulted upon at the time of publication. Although, in draft the Applicant has given consideration to these documents.
- 1.2.6 A summary of the relevant considerations from the above NPSs for each technical assessment is provided for each environmental topic (**Chapters 6 to 16**) as appendices of the Environmental Statement [EN010106/APP/6.2].

National Planning Policy Framework

- 1.2.7 The National Planning Policy Framework (NPPF) (Ref 6) sets out the Government's planning policies for England and how these are to be applied. It is a material consideration in planning decisions. Paragraph 5 of the NPPF makes it clear that the document does not contain specific policies for Nationally Significant Infrastructure Project (NSIPs) and that applications in relation to NSIPs are to be determined in accordance with the decision making framework set out in the Planning Act 2008 (Ref 1) and relevant NPSs, as well as any other matters that are considered both important and relevant. However, paragraph 5 of the NPPF goes on to confirm that the NPPF may be a matter that is both important and relevant for the purposes of assessing DCO applications. The EIA for the Scheme therefore has regard to the relevant policies of the NPPF as part of the overall framework of national policy.

Local Planning Policy

- 1.2.8 Policies in Local Plans are frequently considered important and relevant matters and can influence the content of local impact reports. The Scheme lies within the administrative areas of two county councils: Suffolk County Council and Cambridgeshire County Council; and two district councils: West Suffolk Council¹ and East Cambridgeshire District Council. The local planning policy relevant to the Scheme is listed in **Chapter 1: Introduction** of the Environmental Statement [EN010106/APP/6.1].

¹ On 1 April 2019, Forest Heath District Council merged with St Edmundsbury District Council to form West Suffolk Council.

1.3 Purpose of the Environmental Statement

- 1.3.1 The Environmental Statement has been produced to accompany the DCO Application, as required by the EIA Regulations (Ref 1). The Environmental Statement complies with all the elements of Schedule 4 of the EIA Regulations, including the matters set out below:
- a. Provide a description of the Scheme, including its location, the physical characteristics, scale and design of the Scheme;
 - b. Provide a description of the reasonable alternatives considered, including the reasons for selecting the chosen options;
 - c. Set out the baseline scenario (the current and future state of the environment);
 - d. Examine the existing environmental character of the Order limits (i.e. the land where the Scheme is proposed) and the wider area likely to be affected by the Scheme;
 - e. Predict and describe the likely significant effects of the Scheme, including the methods used for the assessment;
 - f. Describe measures which would be taken to avoid, prevent, reduce or offset significant negative environmental impacts (referred to as mitigation); and
 - g. Provide the public, the Secretary of State, the planning authorities and other consultees with information on the Scheme, which would assist the Secretary of State in the determination of the Application.
- 1.3.2 The purpose of this NTS is to describe the Scheme and provide a summary in non-technical language of the key findings of the Environmental Statement.

2 EIA Process and Methodology

- 2.1.1 EIA is the process undertaken to identify and evaluate the likely significant effects of a proposed development on the environment and to identify measures to mitigate or manage any significant negative effects. The EIA should be informed by consultation with statutory consultees, other interested bodies, and members of the public. The purpose of identifying significant effects is to ensure decision makers are able to make an informed judgement on the environmental impacts of a proposal. The findings of the EIA are presented in the Environmental Statement (which is summarised in this NTS).
- 2.1.2 The process of assessing and minimising effects involves continually feeding back environmental information obtained through surveys and consultation into the project design and re-evaluating the likely effects of the Scheme as a result.
- 2.1.3 All the environmental assessments in the Environmental Statement follow a similar methodology. The likely effect that the Scheme may have on each receptor is influenced by a combination of the sensitivity of the receptor and the predicted magnitude of change from the baseline conditions (either positive (beneficial) or negative (adverse)).

- 2.1.4 The environmental sensitivity, value, or importance of a receptor may be categorised by a range of factors, such as threat to rare or endangered species, transformation of natural landscapes, or changes to soil quality and land-use.
- 2.1.5 The overall likely effect is determined by the interaction of the above two factors (i.e., sensitivity/importance and predicted magnitude of change from the baseline). Each chapter sets a threshold above which effects are considered to be 'significant' in terms of the EIA Regulations. Where the magnitude of change is identified as 'neutral', there is no effect.
- 2.1.6 Where significant effects are identified, mitigation is proposed, where possible, to reduce or prevent the likely significant negative effects occurring.
- 2.1.7 Residual effects are the effect that remains after the mitigation has been taken into account.
- 2.1.8 Cumulative effects have also been assessed, which take into account other developments in the area which could lead to additional effects in combination with the Scheme.

2.2 EIA Scoping

- 2.2.1 The aim of the scoping process is to identify expected key environmental issues at an early stage, to determine which elements of the Scheme are likely to result in likely significant effects on the environment and to establish the extent of survey and assessment requirements for the EIA.
- 2.2.2 The Applicant has notified the Secretary of State in writing under Regulation 8(1)(b) of the EIA Regulations that it intended to provide an Environmental Statement in respect of the Scheme. The Scheme is therefore 'EIA development' for the purposes of the EIA Regulations.
- 2.2.3 An EIA Scoping Report and a request for an EIA Scoping Opinion under Regulation 10 of the EIA Regulations was submitted to the Planning Inspectorate in March 2019. The EIA Scoping Report is presented in **Appendix 1A** of the Environmental Statement **[EN010106/APP/6.2]** and was developed with reference to standard guidance and best practice and informed by the EIA team's experience working on several other similar projects.
- 2.2.4 The EIA Scoping Report set out:
- a. details of the Scheme;
 - b. a summary of alternatives considered;
 - c. a summary of existing and future baseline conditions;
 - d. an outline of the likely environmental effects of the Scheme;
 - e. a description of the matters proposed to be scoped in and out of the EIA;
 - f. proposed assessment methods; and

g. the proposed structure of the Environmental Statement.

2.2.5 The Scoping Opinion was received from the Planning Inspectorate in April 2019 and is presented within **Appendix 1B** of the Environmental Statement [EN010106/6.2]. The Environmental Statement is based on the Scoping Opinion, with the matters raised having been reviewed and taken into consideration in the relevant technical assessments. Further details on the EIA Scoping Opinion are set out in each of the technical chapters (**Chapters 6 to 16** in the Environmental Statement [EN010106/APP/6.1]).

2.3 Preliminary Environmental Information Report

2.3.1 A Preliminary Environmental Information Report was prepared and published in September 2020. The purpose of the Preliminary Environmental Information Report was to “enable the local community to understand the environmental effects of the proposed development so as to inform their responses regarding the proposed development” (Planning Inspectorate, Planning Advice Note 7). It was also prepared to meet the requirements of Regulation 12(2) of the EIA Regulations.

2.3.2 The Preliminary Environmental Information Report provided the preliminary findings of the environmental assessment undertaken at that time in the Scheme design development. Upon completion of the Preliminary Environmental Information Report, the various assessments were at differing stages of completion due to ongoing design work and continued gathering of baseline information.

2.3.3 The Preliminary Environmental Information Report has been updated following completion of the design work and now constitutes the Environmental Statement, which this document summarises.

3 Consultation

3.1.1 Consultation is integral to the preparation of DCO applications and to the EIA process. The views of consultation bodies and the local community serve to focus the environmental studies and to identify specific issues that require further investigation, as well as to inform aspects of the design of the Scheme. The Planning Act (2008) requires applicants for DCOs to carry out formal (statutory) pre-application consultation on their proposals.

3.1.2 The Applicant adopted a two-stage approach to pre-application consultation on the Scheme. A non-statutory consultation was carried out during June / July 2019, and statutory consultation was undertaken from September through to December 2020 following the publication of the Preliminary Environmental Information Report.

3.1.3 The publication of the Preliminary Environmental Information Report in September 2020 formed an important part of the statutory consultation process, as it allowed consultees the opportunity to provide informed comments on the Scheme, the assessment process, and preliminary findings prior to the finalisation of the DCO Application and the Environmental Statement. The Applicant sought the views of consultees on the information contained within the Preliminary

Environmental Information Report, and there was an opportunity within the process up to submission of the DCO Application for both the EIA and the project design to have regard to comments received.

- 3.1.4 Statutory consultation was undertaken in November / December 2020 and further targeted consultation was undertaken in June / July 2021 following minor changes to the Order limits. This is described in the Consultation Report submitted as part of the DCO Application [EN010106/APP/5.1].
- 3.1.5 The issues that have been raised through consultation and how these have been considered and addressed within the design evolution of the Scheme and the EIA are set out in each of the technical chapters (**Chapters 6 to 16** of the Environmental Statement [EN010106/APP/6.1]).

4 The Scheme

4.1 The Order limits

- 4.1.1 The Scheme spans four sites, known collectively as the Sites. These are Sunnica East Site A, Sunnica East Site B, Sunnica West Site A and Sunnica West Site B. The Scheme comprises the construction, operation (including maintenance), and decommissioning of ground mounted solar photovoltaic (PV) modules, a Battery Energy Storage System, and supporting infrastructure. The locations of these are shown within Figures 1, 2, and 3 at the end of this NTS.
- 4.1.2 The Scheme includes the associated electrical infrastructure for connection to the National Grid. Grid Connection Route A will run between Sunnica East Site A and Sunnica East Site B, and between Sunnica East Site B and Sunnica West Site A. Grid Connection Route B will run between Sunnica West Site A and Sunnica West Site B, and Sunnica West Site B and Burwell National Grid Substation. To facilitate the connection to the National Grid, an extension to the Burwell National Grid Substation will also be undertaken as part of the Scheme.
- 4.1.3 The ‘Order limits’ encompasses all the above and includes all the proposed development associated with the Scheme. The maximum footprint of the Scheme and its location are shown in Figure 1 at the end of this NTS. This footprint includes areas of the Order limits to be used for landscaping, biodiversity enhancement and access, as well as operational areas associated with the solar and battery development.

Sunnica East Site A

- 4.1.4 Sunnica East Site A encompasses an area of approximately 223 hectares (ha) (551 acres) and is located approximately 3.5 kilometres (km) east of Mildenhall, 0.5km south-east of Isleham and 0.6km south-west of West Row. Sunnica East Site A straddles the boundary between the counties of Cambridgeshire and Suffolk and falls within the administrative areas of East Cambridgeshire District Council and West Suffolk Council.
- 4.1.5 Sunnica East Site A consists of agricultural fields interspersed with individual trees, hedgerow, linear tree belts, farm access tracks, and local transport roads (**Plate 1**). The arable fields are of moderate size and generally of regular shape.



Plate 1: Landscape within Sunnica East Site A.

- 4.1.6 The area immediately surrounding Sunnica East Site A comprises several small rural villages, including Isleham to the north-west and West Row to the north-east. There are limited industrial or commercial land uses within the immediate vicinity of Sunnica East Site A. The local transport network comprises several local roads. Beck Road, which bisects Sunnica East Site A to the west, runs south from Isleham and joins Isleham Road, and Sheldrick's Road which runs parallel to the eastern boundary of Sunnica East Site A.
- 4.1.7 Three Public Right of Ways (PRoW) are located within the boundary of Sunnica East Site A. PRoWs W-257/007/0, W-257/002/X and W-257/002/0 cross the south-west part of Sunnica East Site A, between Beck Road and Mortimer Lane. These are shown in Figure 13-1 of the Environmental Statement **[EN010106/APP/6.3]**.
- 4.1.8 Within a 10km radius of Sunnica East Site A, there are a number of statutory designated nature conservation sites including Ramsar Sites, Special Areas of Conservation (SACs), and Special Protection Areas (SPAs). The nearest designated site is Chippenham Fen Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR), which forms part of the Fenland SAC and Chippenham Fen Ramsar, and is located approximately 2.8km to the south of the Site. Breckland SPA is located approximately 4.8km to the east of the Site.
- 4.1.9 Two Scheduled Monuments are located within the village of Isleham. One (Historic Environment Record (HER) Reference 1006871) is known as the 'Lime kilns on east side of High Street' and is located approximately 850m to the north-west of Sunnica East Site A. The other (HER Reference 1013278) is known as 'Isleham priory: a Benedictine priory 100m west of St Andrew's Church' and is located approximately 950m to the north-west of Sunnica East Site A.
- 4.1.10 There are two Grade I listed buildings and a number of Grade II listed buildings located within Isleham and a number of Grade II Listed buildings within West Row. A number of previously unknown archaeology finds have been identified as part of the geophysical survey within Sunnica East Site A. These have been removed from the developable area to be retained as Archaeological Mitigation Areas. These are shown on Figure 2.

- 4.1.11 Sunnica East Site A is located predominantly within Flood Zone 1², with areas of Flood Zones 2³ and 3⁴ associated with the Lee Brook within the western extent, and also north from the River Lark.

Sunnica East Site B

- 4.1.12 Sunnica East Site B encompasses an area of approximately 319ha and is located approximately 1.5km south-east of Mildenhall, 1.5km east of Freckenham, and immediately south of Worlington. Sunnica East Site B is located with the county of Suffolk and falls within the administrative area of West Suffolk Council.
- 4.1.13 Sunnica East Site B consists of agricultural fields interspersed with individual trees, hedgerow, tree belts (linear) small woodland blocks, farm access tracks, and local transport roads (including the B1085). The arable fields are of small to moderate size, some of which are of irregular shape. **Plate 2** shows the landscape features within Sunnica East Site B.



Plate 2: Landscape features at the Sunnica East Site B

- 4.1.14 The area immediately surrounding the Sunnica East Site B comprises several small rural villages, including Worlington immediately to the north, Barton Mills 1km to the north-east, and Freckenham 1.5km to the west. Industrial land uses adjoin the A11 to the south of Sunnica East Site B and a 7.5 MW (peak) capacity solar farm is situated 400m to the south-east of the Sunnica East Site B. The Bay Farm Power Ltd Anaerobic Digestion plant is located approximately 250m to the south.
- 4.1.15 The local transport network comprises the A11, which runs adjacent to the east and south of Sunnica East Site B, and several local roads. These include: Elms Road (which bisects the Site to the south); Newmarket Road (which runs from Worlington to Red Lodge and bisects the Sunnica East Site B to the east); Golf

² Flood Zone 1 - land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). *Flood Map for Planning Risk, Environment Agency*

³ Flood Zone 2 - land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year. *Flood Map for Planning Risk, Environment Agency*.

⁴ Flood Zone 3 - land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year. *Flood Map for Planning Risk, Environment Agency*.

Links Road to the north-east of the Sunnica East Site B; and B1102 Freckenham Road which runs along the north-west of the Sunnica East Site B.

- 4.1.16 Environmental sensitivities in the vicinity of Sunnica East Site B include a number of designated ecological sites. Red Lodge Heath Site of Special Scientific Interest is the nearest designated site to the Sunnica East Site B, approximately 750m to the south east. Chippenham Fen Site of Special Scientific Interest and National Nature Reserve, which forms part of the Fenland Special Area of Conservation and Chippenham Fen Ramsar, is located approximately 2.6km to the south-west of the Sunnica East Site B. Breckland Special Protection Area is located approximately 1.4km to the north-east of the Sunnica East Site B. Cherry Hill and The Gallops, Barton Mills Site of Special Scientific Interest is located approximately 1km east of the Sunnica East Site B. Badlingham Lane County Wildlife Site and Worlington Heath County Wildlife Site both fall within the northern section of the Sunnica East Site B.
- 4.1.17 A Scheduled Monument known as 'Bowl barrow on Chalk Hill, 380m north-west of Chalkhill Cottages' is located immediately south of the eastern boundary of the Sunnica East Site B. Other Scheduled Monuments in the vicinity of the Sunnica East Site B include the remains of Freckenham Castle, approximately 450m to the west of the boundary.
- 4.1.18 A number of Grade II listed buildings are located in the vicinity of Sunnica East Site B, within Freckenham, Worlington and the hamlet of Badlingham 200m to the south-west. A number of previously unknown archaeology finds have been identified as part of the geophysical survey within Sunnica East Site B, including two ring ditch anomalies. These have been removed from the developable area to be retained as Archaeological Mitigation Areas. These are shown on Figure 2.
- 4.1.19 Sunnica East Site B is located on land with a low risk of flooding (less than a 1 in 1,000 chance of being flooded in any given year).

Sunnica West Site A

- 4.1.20 Sunnica West Site A encompasses an area of approximately 373ha and is located approximately 1km south of Chippenham and 1.5km west of Kennett. It is bounded by the A14 to the south and straddles the A11 to the east. Sunnica West Site A lies within the county of Cambridgeshire and in the East Cambridgeshire District Council administrative area.
- 4.1.21 Sunnica West Site A consists of agricultural fields bounded by trees, managed hedgerows, tree shelter belts (linear), small woodland and copses, and farm access tracks (**Plate 3**). A straight tree-lined avenue bisects the Sunnica West Site A and forms part of a former carriageway to Chippenham Hall, which is located immediately to the north. This avenue is included on Historic England's 'Register of Historic Parks and Gardens of special historic interest in England' as part of the Chippenham Hall Grade II Registered Park and Garden.



Plate 3: Landscape features within Sunnica West Site A.

- 4.1.22 The local transport network comprises the A14 and A11 trunk roads, and local roads such as Chippenham Road, and B1085 (to the east of Sunnica West A). The A14/A11 junction (Junction 38 of the A14) is located immediately to the south-east of the Sunnica West Site A boundary. The main railway line connecting Newmarket to Bury St Edmunds runs parallel to the A14. Snailwell 5 bridleway runs along the south-west boundary of the Sunnica West Site A.
- 4.1.23 Environmental sensitivities within the vicinity of Sunnica West Site A include Newmarket Heath Site of Special Scientific Interest and Chippenham Avenue Fields County Wildlife Site. Newmarket Heath Site of Special Scientific Interest is located approximately 1.1km to the south of the Sunnica West Site A, beyond the A14. Chippenham Avenue Fields County Wildlife Site is located adjacent to the northern section of Sunnica West Site A.
- 4.1.24 A Scheduled Monument is located at the south-eastern extent of Sunnica West Site A. This comprises four separate locations adjoining the A14 known as ‘Four bowl barrows north of the A11/A14 junction, part of the Chippenham barrow cemetery’. Two other Scheduled Monuments are present within 200m of the Sunnica West Site A to the south of the A11, known as ‘The Rookery bowl barrow, part of the Chippenham barrow cemetery, 250m south of Waterhall Farm’ and the ‘Hilly Plantation bowl barrow, part of the Chippenham barrow cemetery, 500m south-west of Waterhall Farm’.
- 4.1.25 A Grade II Listed Building is located on the southern side of the A11, separated from Sunnica West Site A by the A11 to the west and La Hogue / Chippenham Road to the east.
- 4.1.26 As described above, Sunnica West Site A is bisected by the avenue of the Chippenham Hall Grade II Registered Park and Garden, with Chippenham Hall itself being located 1km to the north. Also, immediately to the north of Sunnica West Site A is the Grade II* ‘Lodges, Gateway and Railings to South of Park’ Listed Building.
- 4.1.27 A number of previously unknown archaeology finds have been identified as part of the geophysical survey within Sunnica West Site A. All the identified features have been removed from the development footprint to be retained as Archaeological Mitigation Areas. These are shown on Figure 3.

- 4.1.28 The majority of the Sunnica West Site A is located on land at low risk of flooding (less than 1 in 1,000 annual probability), however, an area at higher risk (1 in 100 to 1,000 annual probability) encroaches into Sunnica West Site A from an ordinary watercourse along the northern boundary (a tributary of the Lee Brook). These flood zones then extend further into the Sunnica West Site A in a south-easterly direction perpendicular to the ordinary watercourse.

Sunnica West Site B

- 4.1.29 Sunnica West Site B encompasses an area of approximately 66ha and is located to the north-east of Snailwell and approximately 5.5km east of Burwell. The Sunnica West Site B lies within the county of Cambridgeshire, and in the East Cambridgeshire District Council administrative area. The Sunnica West B Site is located approximately 1.5km to the north-west of Sunnica West Site A, separated by agricultural fields and Chippenham Road.
- 4.1.30 The River Snail adjoins Sunnica West Site B to the west (**Plate 4**). Avenue planting is a characteristic of the immediate area, with mature trees present within Sunnica West Site B, and newer tree planting evident along the Chippenham Road. To the west of the Sunnica West B Site, there is commercial and industrial land use, along the A142 (Newmarket Road / Fordham Road) and to the south of Snailwell Road.



Plate 4: Landscape within Sunnica West Site B

- 4.1.31 The local transport network comprises the A142 to the west, the A14 to the south, and Snailwell / Fordham Road to the south-west. The railway line connecting Newmarket to Ely runs in a north-west direction from Newmarket, approximately 600m to the south-west of the Sunnica West Site B at its closest point.
- 4.1.32 The Sunnica West Site B adjoins Chippenham Fen Ramsar and National Nature Reserve, Chippenham Fen and Snailwell Poor's Fen Site of Special Scientific Interest, and Fenland Special Area of Conservation. Snailwell Meadows Site of Special Scientific Interest is located directly to the south of the Sunnica West Site B. A Scheduled Monument, the 'Roman Villa south of Snailwell Fen, is located along the western boundary of Sunnica West Site B, on the western side of the River Snail. Two Grade II listed buildings are located approximately 600m east of the northern extent of the Sunnica West Site B. A number of Grade II and II* Listed Buildings are also found in Snailwell, approximately 400m south of the Sunnica West Site B. A number of previously unknown archaeology finds have been identified as part of the geophysical survey within Sunnica West Site B, including a complex area of multi-phase (likely late prehistoric to roman period) activity. These have been removed from the developable area, as shown on Figure 3.

- 4.1.33 The majority of the Sunnica West Site B is located within land with a low risk of flooding (less than 1 in 1,000 annual probability). Where the Sunnica West Site B adjoins the River Snail, at the north-western extent, the land comprises areas at higher risk of flooding (1 in 100 to 1,000 annual probability of flooding).

Cable Route

- 4.1.34 The Scheme will be connected to the existing Burwell National Grid Substation. Grid Connection Route A will run between Sunnica East Site A, Sunnica East Site B and Sunnica West Site A. Grid Connection Route B will run between Sunnica West Site A, Sunnica West Site B and Burwell National Grid Substation. Both cable routes will be required for the Scheme.

Grid Connection Route A

- 4.1.35 Heading south-east from the 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 underneath the River Kennett and Havacre Meadows and Deal Nook County Wildlife Site. The cable route then crosses the Chippenham footpath 49/7, before then passing approximately 20m west of the Chippenham Gravel Pit County Wildlife Site and crossing the B1085 before joining the Sunnica West Site A.

Grid Connection Route B

- 4.1.36 Grid Connection Route B connects Sunnica West Site A with Sunnica West Site B, and Sunnica West Site B with the Burwell National Grid Substation. Heading north-west from Sunnica West Site A, the cable route corridor crosses Chippenham Road and Snailwell 1 public right of way before joining Sunnica West Site B.
- 4.1.37 Heading west from Sunnica West Site B, the cable route for Grid Connection Route B crosses a PRow 92/19 before crossing the railway line and the A142 Newmarket / Fordham Road, using boring, micro-tunnelling or moling methods.
- 4.1.38 The cable route 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 be tunnelled underground. For shallower and narrower drainage ditches, open cut trenching will be undertaken.

Burwell National Grid Substation Extension

- 4.1.39 There are two potential areas identified for the Burwell National Grid Substation Extension, both of which are currently agricultural fields. These are shown in Figure 7 at the end of this NTS. Option 1 is within National Grid land ownership 70m east of the existing substation, adjacent to Weirs Drove, approximately 200m

west of Burwell. Option 2 is to the north of Newnham Drove and the existing substation, approximately 450m from Burwell. The effects associated with both options have been assessed in the Environmental Statement.

4.2 Description of the Scheme

Scheme Components

4.2.1 The Scheme comprises an energy farm with solar photovoltaic (PV) and Battery Energy Storage System (BESS) infrastructure. The panels will convert the sun's energy into electricity for export to the National Grid via the cable route and storage onsite. The layout of the Scheme has been determined through consultation with landowners and utilities asset owners (such as Cadent Gas). The solar PV infrastructure will be offset from watercourses by a minimum of 10m, measured from the water margins and bank under normal flow conditions.

4.2.2 The Scheme will comprise the following components throughout Sunnica East Site A, Sunnica East Site B, Sunnica West Site A, and Sunnica West Site B. Images of the equipment are included in **Plate 5**, and the proposed layout of the equipment throughout the Sites are shown in Figures 2 and 3 at the end of this NTS. The Scheme components are:

- a. Solar photovoltaic⁵ (PV) modules: solar PV panels convert sunlight into electrical current. Solar PV panels will be mounted on structures. One PV module will be made up of one solar PV panel and its mounting structure. The maximum height of the highest part of the solar PV modules will be 2.5m above ground level;
- b. Inverters: these container-like structures convert the direct current (DC) electricity collected by the PV modules into alternating current (AC). The maximum height of these will be 3.5m. Inverters, along with transformers and switchgear, will be located within solar stations, which will be installed throughout the Scheme;
- c. Transformers: these units control the voltage of the electricity generated across each of the Sunnica Sites before it reaches the substations. The maximum height of these will be 3.5m. Transformers, along with inverters and switchgear, will be located within solar stations, which will be installed throughout the Scheme;
- d. Switchgear: a combination of electrical disconnect switches, fuses or circuit breakers used to control, protect and isolate electrical equipment. The maximum height of these will be 3.5m. Switchgear, along with inverters and transformers, will be located within solar stations, which will be installed throughout the Scheme;
- e. Battery Energy Storage Systems (Battery Energy Storage System) (expected to be formed of lithium ion batteries storing electrical energy) in Sunnica East

⁵ The generation of electricity using energy from the sun.

Site A, Sunnica East Site B, and Sunnica West Site A. These will be up to 6m in height;

- f. Onsite buried high and low voltage cabling: to connect the PV modules and Battery Energy Storage System to inverters, and the inverters to the transformers onsite. These will be buried to a maximum depth of 1.5m;
- g. Three substations and control building (Sunnica East Site A, Sunnica East Site B and Sunnica West Site A only). These will be a maximum of 10m in height;
- h. Electrical compound at Burwell National Grid Substation comprising a substation and control building, up to a maximum of 12m in height. There are currently two options for the location of this extension.
- i. Two operational offices/warehouses (on Sunnica East Site A and Sunnica East Site B only). These will be a maximum of 8m in height;
- j. Fencing and security measures within all operational areas;
- k. Drainage features, comprised of a series of interconnected swales and infiltration ponds;
- l. Internal access roads and car parking;
- m. Landscaping including habitat creation areas;
- n. Temporary parking during construction; and
- o. Temporary construction laydown areas.

4.2.3 The electricity generated by the Scheme is to be exported via 132 kilovolt (kV) buried cables from the onsite substations to the Burwell National Grid Substation Extension. The cable route will be directed across open countryside and requires crossings of the railway, watercourses, various utilities, and roads. The total length of the cable route for Grid Connection Route A will be approximately 7km, and 13km for Grid Connection Route B.



Typical solar panels



Typical centralised inverter



Typical transformer



Typical switchgear



Typical battery storage compound configuration



Typical deer security fencing

Plate 5: Images to show the types of equipment to be used within the Scheme

Areas Set Aside for Landscaping, Archaeological and Ecological Mitigation and Enhancement

- 4.2.4 A number of mitigation areas for loss of habitat, to screen the Scheme from view and to protect buried archaeology have been proposed throughout the Sites. These will include planting of a selection of trees, hedgerows, grassland, and wetland habitats. The areas proposed for this are shown in Figures 2 and 3 at the end of this NTS and are secured through the operation of the **Works Plans [EN010106/APP/2.2]** and **Appendix 10I: Outline Landscape and Ecological Management Plan (OLEMP)** of the Environmental Statement **[EN010106/APP/6.2]**.
- 4.2.5 New permissive routes have been included within the Scheme design to enable increased public access across the landscape; these are paths on private land where the landowner allows access and are secured through the **OLEMP**. One will be located to the north-west of Sunnica East Site A on Beck Road during the course of scheme operation. Two permissive paths will be located to the north-east of Sunnica East Site B to the south of Freckenham Road, where they will intersect the existing unclassified bridleway (U6006). One of these will create a loop to the western side of U6006, and the other will create a route to the east of U6006 to connect with Golf Links Road. Another permissive route will be located to the south of Sunnica East Site B on Elms Road, which will intersect the unclassified bridleway U6006.
- 4.2.6 These permissive routes have been discussed between the Applicant and landowners and will form part of the land agreements with those landowners. The permissive routes will be in place throughout operation, but the landowner has the right to remove these following the decommissioning of the Scheme.

Site Access

- 4.2.7 The Scheme will have two main access points: one on Sunnica East Site B and one on Sunnica West Site A. During construction, all construction worker vehicles will access the Order limits at these locations and park in the centralised car parks. Staff will then be distributed to the working area via minibus, or similar, predominantly using internal tracks within the Order limits where practical. Sunnica East Site B will be accessed via the A11 and B1085 (access point C) and the access to Sunnica West Site A (access point A) will be via the Chippenham junction of the A11, to the north of junction 38 of the A14. These two main access points will remain in place throughout construction, operation and decommissioning of the Scheme.
- 4.2.8 A number of secondary access points have been provided to access individual land parcels within the Order limits. Secondary access points for Sunnica East Sites A and B will be as described below and shown in Figure 4:
- a. Secondary access points A and B will be located along Elms Road southeast of the main access point C. Access point A will be in use during construction, decommissioning, and operation for emergency vehicles only. B will be in use for construction, operation, and decommissioning;

- b. Secondary access points D and H will be located along Newmarket Road. D will be in use during construction, operation, and decommissioning. H will be in use during construction and decommissioning only;
- c. Secondary access point J will be located along Golf Links Road. This will be in use during operation only;
- d. Secondary access points F, G and K will be located along Beck Road. F and G will be in use during construction, operation and decommissioning. K will be in use for crane access during construction and decommissioning and will be used for emergency access only during operation; and
- e. Secondary access point E will be located along Isleham Road, which will be in use during construction, operation and decommissioning.

4.2.9 Secondary access points for Sunnica West Sites A and B will be from farm tracks, Chippenham Road, Dane Hill Road, and Snailwell Road (see Figure 5). These will be in use during construction, operation, and decommissioning. The access points enable approach from two different directions to the Battery Energy Storage System in case of emergency. Access will be controlled through a Construction Traffic Management Plan during construction. A Framework Construction Traffic Management Plan has been submitted with the DCO Application in **Appendix 13C** of the Environmental Statement **[EN010106/APP/6.2]**.

4.2.10 A number of the existing roads to be used for access are single carriageways; therefore, hedgerows may need to cut back and the access points may need to be widened/upgraded to assist with any wide loads. Where this is needed and how it will be managed to minimise disturbance is described in the Transport Assessment in **Appendix 13B** of the Environmental Statement **[EN010106/APP/6.2]** and have been assessed accordingly in **Chapters 8: Ecology** and **Chapter 10: Landscape and Visual Amenity** of the Environmental Statement **[EN010106/APP/6.1]**

Construction Phase

4.2.11 Subject to being granted consent and following a final investment decision, the earliest construction will start is Summer 2023. A construction programme of approximately 24 months is anticipated if the Scheme is built in one continuous phase. This has been assessed within the Environmental Statement as it is considered to be a worst case in terms of environmental effects, although technical topics have considered if there are any additional implications if the construction period is slightly longer or constructed in phases. The final programme will be dependent on the final Scheme design and potential environmental constraints on the timing of construction activities.

4.2.12 The Scheme has been split into construction zones, which are described in **Chapter 3: Scheme Description** of the Environmental Statement **[EN010106/APP/6.1]**. The final programme will be dependent on the final Scheme design and potential environmental constraints on the timing of construction activities.

- 4.2.13 For the purposes of construction of the cable route, the cable route has been split into 15 sections. Construction of the cable route is expected to be undertaken over a 30 week period.
- 4.2.14 Construction works on the four Sites are described below. Site preparation works will involve:
- a. Preparation of land for construction, including localised land levelling (where required). The land level changes will be localised, and will not be noticeable;
 - b. Import of construction materials, plant and equipment to site;
 - c. Establishment of the perimeter fence;
 - d. Establishment of the construction compounds;
 - e. Construction of the internal access roads; and
 - f. Marking out the location of the Scheme infrastructure.
- 4.2.15 Installation of the solar PV modules will involve:
- a. Import of components to site;
 - b. Ramming and erection of module mounting structures;
 - c. Mounting of modules by hand;
 - d. Trenching and installation of electric cabling;
 - e. Transformer, inverter, and switchgear foundation excavation and construction;
 - f. Installation of transformers, inverters and switchgears using cranes; and
 - g. Installation of control systems, monitoring and communication.
- 4.2.16 The construction of online electrical infrastructure will include the following activities:
- a. Site preparation;
 - b. Excavation and construction of the concrete foundations. Piling may be required for foundations;
 - c. Construction of the reinforced concrete pads supporting the external electrical equipment;
 - d. Installation of electric cabling;
 - e. Import of components to site; and
 - f. Installation of the substations and battery, transformers, inverters, and switchgear for the three onsite Battery Energy Storage System areas.

- 4.2.17 The following activities would be required to construct the cable routes and the Burwell Substation Extension:
- a. Site preparation and appropriate searches;
 - b. Excavation will be undertaken using an appropriately sized tracked excavator. Excavation will normally be carried out in layers;
 - c. Topsoil will be segregated and stored on site to be reused;
 - d. The trench will be cleared and bottomed out, ensuring there are no hard protrusions;
 - e. Sand bedding will be installed at the bottom of the trench; and
 - f. Cable installation will follow behind excavation in the same sequence. However, it is not expected that cable installation will be continuous. Cables will be installed in groups or sections to ensure that works are completed in the most efficient manner possible.
- 4.2.18 In places where trenchless techniques are to be used (e.g. to cross watercourses or the railway line using underground, drilling/tunnelling techniques), the following activities would be required:
- a. Site preparation and appropriate searches;
 - b. Launch and reception pits will be excavated;
 - c. Once the launch pit has been excavated, work will then commence on the initial drill;
 - d. Upon completion of the initial drill the diameter of the hole (the 'bore') will be widened; and
 - e. Once the bore is enlarged to the required size the pipe or cable will then be connected to the cutting tool and installed as the tool makes its way through the ground.
- 4.2.19 Joint bays will be required along the cable route, where cabling is brought together. The following activities would be required to construct the joint bays:
- a. Excavation activities will be as listed above;
 - b. Joint bay locations will be re-measured to verify their position before excavation commences; and
 - c. Joint bay excavation will be coordinated with the cable pulling programme to ensure that joint bays are not left open for longer than necessary.
- 4.2.20 Commissioning of the Scheme will include testing and commissioning of the process equipment. Commissioning of the PV infrastructure will involve mechanical and visual inspection, electrical and equipment testing, and commencement of electricity supply into the grid.

- 4.2.21 The development of a detailed Construction Environmental Management Plan, Construction Traffic Management Plan, and Construction Resource Management Plan is secured by Requirement in the DCO. These will include measures to be used to minimise environmental effects during construction works and will be in line with the Framework Construction Environmental Management Plan and Framework Construction Traffic Management Plan, which are presented in **Appendix 16C** and **Appendix 13C** respectively of the Environmental Statement [EN010106/APP/6.2].
- 4.2.22 At the peak of construction, up to an estimated 1,393 staff per day will be required to work across the Scheme. This number will be less at other times of the construction phase. Working days will be one 12-hour shift, with working hours on site from 7am until 7pm Monday to Saturday. All deliveries (HGV trips) will be within core working hours and worker trips to and from the Sites are assumed to be the hour before and after core working hours. All construction traffic including HGV and worker trips will be controlled by the Construction Traffic Management Plan. **Appendix 13C** of the Environmental Statement [EN010106/APP/6.2] presents the Framework Construction Traffic Management Plan.
- 4.2.23 Construction compounds will be located within Sunnica East A, Sunnica East B, Sunnica West A, and Sunnica West B Sites. The compounds will each contain offices, mobile welfare units, canteens, storage and waste skips, parking areas and space for storage, download and turning area. These construction compounds will also be used as compounds during the construction of the cable route corridor.
- 4.2.24 Appropriate measures to mitigate temporary impacts on users of public rights of way during the construction and decommissioning phases have been proposed. The temporary closures will be supported by appropriate and clearly signed alternative existing routes and where possible will be planned and programmed to minimise disruption to users. The temporary closures and diversions will be for no longer than three weeks.
- 4.2.25 Following construction, a programme of site reinstatement and habitat creation will commence. The areas under the solar panels and areas outside of the developable areas will be planted with native grassland mix, and hedgerows and woodland will be planted in strategic locations to provide visual screening, as shown on Figures 2 and 3 at the end of this NTS.

Operation Phase

- 4.2.26 During the operation phase, activities within the Scheme will be minimal and will be restricted principally to vegetation management, equipment maintenance and servicing, replacement of any components that fail, and monitoring to ensure the continued effective operation and environmental performance of the mitigation measures of the Scheme. Along the cable route, operational activity will consist of routine inspections (schedule to be determined) and any reactive maintenance such as where a cable has been damaged.
- 4.2.27 It is anticipated that there will be up to 17 permanent staff onsite during the operational phase. It is expected that there will be approximately 11 vehicles travelling to the Sites on a daily basis.

Decommissioning Phase

- 4.2.28 The design and operational life of the Scheme is expected to be and will be no longer than 40 years, with decommissioning of the Scheme therefore expected in 2065. Some parts of the Scheme may be decommissioned earlier if the landowner requires it.
- 4.2.29 Decommissioning is expected to take between 12 and 24 months and will be undertaken in phases. A Decommissioning Environmental Management Plan (DEMP) will be secured by Requirement in the DCO which will include measures to be used to minimise environmental effects during any decommissioning works. All PV modules, mounting structures, structures, foundations, on-site cabling, inverters and transformers will be removed and recycled or disposed of in accordance with good practice and market conditions at that time. The 132kV cables along the cable route and Burwell National Grid Substation Extension will remain *in situ* following decommissioning. A Framework Decommissioning Environmental Management Plan (DEMP) has been prepared and is provided in **Appendix 16E** of the Environmental Statement [EN010106/APP/6.2]. The DEMP will need to adhere with this Framework DEMP when it is produced prior to decommissioning.

5 Assessment of Alternatives and Design Evolution

- 5.1.1 **Chapter 4: Alternatives and Design Evolution** of the Environmental Statement [EN010106/APP/6.1] details the alternatives considered for the Scheme. This describes the process undertaken to assess alternative sites, technologies, layouts, cable route alignments and locations for Burwell National Grid Substation Extension. It also describes how the design of the Scheme has evolved. An Alternative Sites Assessment has also been submitted as **Appendix 4A** of the Environmental Statement [EN010106/APP/6.2].

6 Assessing Environmental Effects

6.1 Topics Assessed

- 6.1.1 **Chapters 1 to 5** of the Environmental Statement [EN010106/APP/6.1] provide an introduction to the policy and legislative context, a description of the Order limits and surrounds, an overview of the Scheme and alternatives that were considered during the design process, and the approach and methodology to the EIA.

- 6.1.2 The following topic specific chapters have been produced and assessed in the Environmental Statement:

Chapter 6: Climate Change

Chapter 7: Cultural Heritage

Chapter 8: Ecology and Nature Conservation

Chapter 9: Flood Risk, Drainage and Water Resources

Chapter 10: Landscape and Visual Amenity

Chapter 11: Noise and Vibration

Chapter 12: Socio-Economics and Land Use

Chapter 13: Transport and Access

Chapter 14: Air Quality

Chapter 15: Human Health

Chapter 16: Other Environmental Topics

- 6.1.3 **Chapter 16** of the Environmental Statement [EN010106/APP/6.1] provides an overview of the topics that can be addressed more concisely than the other topic specific chapters and therefore do not merit an individual chapter. These topics include glint and glare; major accidents and disasters; telecommunications, television reception, utilities; and waste.

6.2 Terminology Used in the Environmental Statement

- 6.2.1 To enable comparison between technical topics and to aid understanding of the Environmental Statement findings, standard terms are used wherever possible to describe the relative significance of effects throughout the Environmental Statement (i.e. 'major', 'moderate', 'minor' and 'negligible'). The effects are also described as being adverse or beneficial. Where the quality standards for each technical discipline result in deviations in the standard assessment methodology, these are described in the relevant chapters as applicable within **Chapters 6 to 16** of the Environmental Statement [EN010106/APP/6.1].
- 6.2.2 Each of the technical chapters within the Environmental Statement provides further description and definition of the significance criteria relevant to each topic. Where possible, this has been based upon quantitative and accepted criteria (for example, noise assessment guidelines), together with the use of value judgement and expert interpretation to establish to what extent an effect is significant.
- 6.2.3 Typically, effects that are considered to be negligible or minor are judged to be 'not significant', whereas those that are moderate or major are 'significant'. Where the EIA predicts a significant adverse effect on one or more receptors, proposed mitigation measures are identified to avoid or reduce the effect, or to reduce the likelihood of it happening. The use of such mitigation will be secured through the DCO, should it be granted. As the design of the Scheme has evolved, the Applicant has worked with environmental specialists to ensure the design avoids or reduces environmental effects on receptors where possible through the use of embedded mitigation measures (meaning measures that form part of the design or methods for construction or operation), such as the use of a Construction Environmental Management Plan. These measures are taken into account in the EIA and assessment of effects of the Scheme.

7 Findings of the Environmental Statement

- 7.1.1 An assessment of the environmental effects of the Scheme during its construction, operation (including maintenance), and eventual decommissioning has been completed for each of the topics identified in Section 6.1.2 above.
- 7.1.2 The likely significant environmental effects of the Scheme are fully described within the Environmental Statement. This section provides a brief summary of the overall findings of the report.
- 7.1.3 A summary of the cumulative effects identified is also presented below for each of the technical topics. The shortlist of schemes identified as having a potential to have cumulative effects when considered in-combination with the Scheme is provided in **Appendix 5A** of the Environmental Statement **[EN010106/APP/6.2]**.

7.2 Climate Change

- 7.2.1 **Chapter 6** of the Environmental Statement **[EN010106/APP/6.1]** presents the findings of an assessment of the potential significant effects of the Scheme on climate change (i.e. greenhouse gas emissions from the construction, operation, and decommissioning of the Scheme). The resilience of the Scheme to projected future climate change impacts is also assessed through a Climate Change Resilience Review.

Baseline and Context

- 7.2.2 It is the duty of the UK Government to achieve 'net zero' carbon emissions by 2050. 'Net zero' refers to achieving net zero carbon dioxide emissions from electricity generation, industry, transport, and domestic sources by balancing carbon emissions with carbon removal, or simply eliminating carbon emissions altogether. The physical impacts of climate change are accelerating and pose a threat to housing, business operations and financial earnings through extreme weather events such as storms, floods and droughts. Understanding the nature of these risks will allow new facilities to be designed in a manner which increases resilience and takes advantage of opportunities from the outset, thereby reducing costs in the future.
- 7.2.3 Based on a review of the baseline conditions, the global climate is the receptor for the lifecycle GHG impact assessment. The sensitivity of this receptor is high, in line with IEMA guidance on assessing GHG emissions in EIA, which highlights the importance of mitigating GHG emissions to reduce the impacts of climate change.
- 7.2.4 The baseline for greenhouse gas (GHG) emissions is a 'do nothing' scenario whereby the Scheme is not implemented. The land use within the Order limits currently has minor levels of GHG emissions associated with the farming activity. However, it is anticipated that these emissions will not be material in the context of the overall Scheme. Therefore, for the purposes of the lifecycle GHG impact assessment, a conservative GHG emissions baseline of zero is applied, which represents a robust worst-case approach.

- 7.2.5 The receptor for the review of climate change resilience is the Scheme itself, including all infrastructure, assets, and workers on site during construction, operation, and decommissioning. Baseline conditions such as daily temperature and precipitation were identified. The Met Office historic 10-year averages for the East Anglia region identify gradual warming (although not uniformly so) between 1971 and 2020, with increased precipitation.
- 7.2.6 The future baseline for climatic conditions is expected to differ from the present-day baseline. For the purpose of the assessment, projections for pre-defined 30-year periods for a number of average climate variables (e.g. temperature, precipitation, cloud cover etc.) have been obtained and analysed in **Chapter 6: Climate Change** of the Environmental Statement [EN010106/APP/6.1].

Assessment of Effects

- 7.2.7 Overall, a net GHG emissions saving will be achieved as a result of the Scheme. Electricity generation from solar energy is a less GHG intensive form of energy generation than the national grid average, which includes energy generation from a range of sources including fossil fuels.
- 7.2.8 The change of land use from arable land to grassland will increase the sequestration of carbon across the Sites. The assessment does not rely on this land use change however and instead makes a worst-case assumption that any sequestration of carbon in the soil would be reversed at the end of the project lifetime (if the grassland is returned to agricultural use by the farmer after the land is handed back by the Applicant).
- 7.2.9 Taking a conservative approach to the assessment to avoid inadvertently overestimating the benefits of the Scheme, the assessment identifies that the Scheme is considered to have a **major beneficial, significant effect** on the climate during operation.
- 7.2.10 The climate change impacts during the construction period would likely arise from embodied carbon in construction materials. Other sources of emissions during construction include water, energy and fuel use for construction activities including fuel consumed by construction plant and machinery, fuel use for the transportation of construction materials to the Order limits, transportation of construction workers to and from the Scheme and the transportation and disposal of waste. Annual emissions from the construction of the Scheme do not contribute to equal to or more than 1% of the UK's annualised 4th carbon budget. The magnitude of effect during construction of the Scheme on the climate is considered to be **minor adverse**, and therefore **not significant**.
- 7.2.11 The greatest GHG impacts during the decommissioning phase will be as a result of transportation of any waste materials and fuel use in vehicles on site. Other sources of emissions during decommissioning include water use for decommissioning activities, transportation of construction workers to and from the Scheme and waste disposal. GHG emissions from the decommissioning phase are considered to have a **minor adverse, not significant** effect on the climate.
- 7.2.12 The climate change resilience review provided within **Chapter 6: Climate Change** of the Environmental Statement [EN010106/APP/6.1] describes the

potential impacts during construction, operation and decommissioning and comments on the adequacy of the climate change resilience measures built into the Scheme. Impacts identified include risks such as severe weather events leading to inaccessible construction sites or damaged infrastructure and increased temperatures leading to an increase in the ambient temperature of BESS units, resulting in higher ventilation and cooling requirements.

- 7.2.13 The embedded mitigation measures integrated into the Scheme design (described in below) are considered an adequate response to the projected climate change impacts to which the Scheme would be exposed.

Mitigation Measures

- 7.2.14 A number of embedded construction mitigation measures are included within the Scheme, as set out within the Framework Construction Environmental Management Plan in **Appendix 16C** of the Environmental Statement [EN010106/APP/6.2]. Specific embedded mitigation measures include increasing the recyclability of materials, minimising the creation of waste and maximising the use of alternative materials with lower embodied carbon, and encouraging the use of lower carbon modes of transport.
- 7.2.15 Climate change resilience measures are also included within the embedded mitigation measures in the Scheme design. To embed resilience to projected increases in temperature, inverters will have a cooling system installed to control the temperature and continue to operate efficiently in warmer conditions. As the PV modules and transformers have a wide range of acceptable operational temperatures, it has been determined that increasing temperatures will not adversely affect their operation. The specific flood risk impacts and associated mitigation measures required during operation, such as drainage system design, are discussed in more detail in **Chapter 9: Flood Risk, Drainage and Water Resources** of the Environmental Statement [EN010106/APP/6.1].
- 7.2.16 Climate change resilience measures required during construction and decommissioning are listed within **Appendix 16C: Framework CEMP** and **Appendix 16E: Framework DEMP** of the Environmental Statement [EN010106/APP/6.2]. These include measures associated with protecting the Scheme, materials and mobile plant from increased flood risk on the construction and decommissioning sites.
- 7.2.17 The nature of the Scheme itself will have a beneficial effect in terms of GHG emissions on climate change. No additional mitigation or monitoring beyond the measures described above are required during construction, operation, or decommissioning of the Scheme.

Cumulative effects

- 7.2.18 Most development results in GHG emissions and consequently all development therefore have the potential to result in a cumulative effect on GHG emissions. As such it is not possible to define a study area for the assessment of cumulative effects on GHG emissions nor to undertake a cumulative effects assessment, as the identified receptor is the global climate and effects are therefore not geographically constrained.

7.2.19 Given the Scheme has an overall beneficial significant effect, it will not contribute to any adverse cumulative effects. Other schemes falling under the EIA Regulations (Ref 1) will also need to consider climate change within their own planning or DCO application. As the Climate Change Resilience Review is only concerned with the assets of the Scheme and a broader consideration of existing interdependent infrastructure, a cumulative assessment is not required.

7.3 Cultural Heritage

Baseline and Context

7.3.1 **Chapter 7** of the Environmental Statement [EN010106/APP6.1] considers potential impacts on designated and non-designated heritage and archaeological assets. Heritage assets include buildings, monuments, sites, places, areas or landscapes identified as having a degree of significance due to their heritage interest.

7.3.2 The Scheme occupies a large area which has largely not been subject to previous archaeological study. A number of scheduled monuments, conservation areas and listed buildings are present within the vicinity of the Scheme as outlined in Section 4 of this NTS. In particular, Chippenham Hall Registered Park and Garden is within 1km of Sunnica West Site A.

Assessment of Effects

7.3.3 The assessment of effects has been undertaken while taking embedded mitigation for the Scheme into account. These measures include mitigation planting to reduce the impacts on the setting of built heritage and historic landscape assets. Setback areas have been designed around settlements.

7.3.4 The assessment undertaken to date has been informed through a desk study, non-intrusive geophysical surveys, and intrusive archaeological trial trenching surveys. Geophysical surveys have been undertaken throughout the Order limits in 2019, 2020, and 2021, and archaeological trial trenching was undertaken in later winter and early spring of 2021 throughout the Sites within the developable areas. The trial trenching characterises archaeological assets likely to be impacted by the Scheme and to ground truth the geophysical survey results. Some fields could not be trial trenched pre-application, but these fields are scheduled to be trenched in autumn of 2021 following harvest.

7.3.5 Additionally, a number of areas in Sunnica East Site A will be required for stone curlew mitigation (see further details in Section 7.4 below). These will be contained within the ECO1 and ECO2 areas, shown in Figure 2. These contain archaeological remains, which are assessed within **Chapter 7** of the Environmental Statement [EN010106/APP/6.1]. The stone curlew mitigation has been designed to avoid disturbing any archaeology when establishing grassland in these areas, but nevertheless these areas will still be subject to further evaluation through trial trenching in autumn 2021.

7.3.6 Final versions of the trial trenching reports and updates to the cultural heritage assessment to take account of the findings in the autumn 2021 trial trenching will

therefore be provided prior to DCO examination but are not expected to change the predicted effects or mitigation presented in the Environmental Statement.

- 7.3.7 Direct construction impacts can occur from activities such as breaking up the ground, heavy machinery compacting the ground, levelling the fields, installation of solar panel foundations and associated infrastructure, and connecting the panels to the National Grid through new cable routes.
- 7.3.8 Additional construction activities associated within the Scheme that could have an impact on the setting of heritage assets include construction traffic and parking, moving of construction equipment, and establishment of temporary compound areas.
- 7.3.9 Without adequate mitigation, the construction of the Scheme has the potential to affect heritage assets through partial or total removal of heritage assets, compaction of archaeological deposits by construction traffic and structures, and adverse effects on the setting of heritage assets as a result of visual intrusion, noise, severance, access and amenity.
- 7.3.10 Direct effects on buried archaeology are being prevented or minimised as far as possible through the design of the Scheme, whereby the Scheme layout has been developed to avoid development in areas of potential archaeological risk; such areas will be planted to provide visual screening and ecological habitat, or left as buffer zones or archaeological mitigation areas. Embedded mitigation for archaeological assets includes:
- a. Avoiding areas of significant archaeological potential;
 - b. Minimising vegetation clearance, land disturbance and land take and consequent loss of archaeological remains; and
 - c. Installing buffer/setback zones around any sensitive areas during construction.
- 7.3.11 However, during construction there is a potential for some buried archaeological features that have been recorded through the geophysical and trial trenching works to be physically disturbed where they fall within the footprint of the solar arrays, leading to **moderate adverse, significant** effects. In total, 11 areas of buried archaeological features have been identified and assessed to be potentially physically affected by the construction works in **Chapter 7** of the Environmental Statement **[EN010106/APP/6.1]**.
- 7.3.12 During construction and operation, there is the potential for impacts to the setting of local heritage assets from the presence of the Scheme infrastructure and construction machinery. Impacts on the setting potentially includes impacts from the visual aspect of larger structures, security lighting, noise and associated traffic as well as a result from glint and glare.
- 7.3.13 The effects on the setting of the majority of heritage assets have been assessed to be **minor adverse**, and therefore **not significant**. In addition, ten areas of significant archaeological activity have been removed from the developable area of the Scheme and designated as native grassland planting within archaeological mitigation areas, so as to prevent adverse effects on these areas.

- 7.3.14 A residual effect on the setting of Chippenham Registered Park and Gardens is considered to be **moderate adverse**, and therefore **significant**, although such effects are minimised by the use of setback areas around the Park and Garden where no development will take place.
- 7.3.15 **Moderate adverse** residual setting effects are predicted on the Bronze Age bowl barrows on Beacon Hill and Chalk Hill Round Barrows and the four bowl barrows north of the A11/A14 junction (part of the Chippenham barrow cemetery) due to a change in the character of the landscape immediately to the north-west of the barrow cemetery. Other heritage assets in the form of buried archaeology are expected to experience **moderate adverse**, and therefore **significant** residual effects on their setting because they are located within or adjacent to the Order limits.
- 7.3.16 A number of heritage assets are anticipated to experience **minor adverse, not significant** effects on their setting during operation. These include Snailwell, Freckenham and Isleham Conservation Areas, Lumber Hill bowl Barrow scheduled monument, three scheduled barrows forming part of the Chippenham barrow group, Howe Hill bowl barrow, and a number of listed buildings in the vicinity of the Scheme.
- 7.3.17 During decommissioning, the adverse effects from the construction and operation phases will cease to exist and the setting of the scheduled monuments, Chippenham Registered Park and Gardens, listed buildings and conservation areas within 1km of the Scheme will be restored to the existing state. Potential direct effects of the decommissioning phase will be managed through the detailed DEMP.

Mitigation Measures

- 7.3.18 Embedded mitigation measures already incorporated into the design will be secured by the draft DCO (either through the parameters within the Works Plans, measures within the Framework Construction Environment Management Plan or the OLEMP and have been taken into account in the assessment of residual effects in the section above. These measures include mitigation planting to reduce the impacts on the setting of built heritage and historic landscape assets. Setback areas have been designed around settlements (including Chippenham Registered Park and Gardens, with no development taking place adjacent to the formal park boundary).
- 7.3.19 Prior to construction beginning within the Order limits, a Detailed Archaeological Mitigation Strategy detailing proposed mitigation works will be submitted for review to Cambridgeshire County Council, and Suffolk County Council following receipt of the results of evaluation trenching works. Once agreed, this document would establish the objectives for the historic environment works and set out the mechanisms for the appointed archaeological contractor to design the investigation, undertake evaluation, analysis, reporting and deposit the archive prior to construction. Mitigation for potential direct physical impacts on buried archaeology identified in the assessment will likely take the form of strip, map and sampling or targeted archaeological excavation.

- 7.3.20 Where non-intrusive trenching methods are required for cable routes, a strategy will be developed which will detail the monitoring of this, and it will include an action plan detailing the required mitigation in the event that there is any breakout in the vicinity of known archaeological remains. Where intrusive methods (i.e. trenching) for cable installation is to be applied along the cable route, archaeological strip, map and record excavation will be carried out.

Cumulative effects

- 7.3.21 Physical effects on heritage assets would be on highly localised features, wholly within the Scheme, upon where there would be no cumulative effects from other developments.
- 7.3.22 The potential for a cumulative effect on the setting of the scheduled Snailwell Roman Villa (NHLE 1006868) has been identified as a result of an approved proposal for a laboratory/office development on south of Biggin Farm (East Cambridge District Council planning reference 17/01838/ESF). The Roman Villa is located immediately west of the proposed location of Sunnica West Site B, on the opposing side of the River Snail, although outside the Order limits. The asset is well screened to the east by an extant belt of woodland at its eastern edge. There may, however, be fleeting views from the northern boundary of the asset onto Sunnica West Site B to the north east. It is not considered that the cumulative effect of both developments would increase the significance of effect above that already assessed by the proposed laboratory/office development and the Scheme.
- 7.3.23 Given the intervening distance and nature of the identified schemes, there would be no additional cumulative effects on the setting of any other archaeological remains, historic buildings or historic landscapes within the Site's zone of influence additional to those already identified for the Scheme in isolation.

7.4 Ecology and Nature Conservation

Baseline and Context

- 7.4.1 **Chapter 8** of the Environmental Statement [EN010106/APP/6.1] presents the findings of an assessment of the potential significant effects of the Scheme on ecology and biodiversity within the Order limits and the surrounding area. The assessment considers effects on designated sites, habitats, and protected species.
- 7.4.2 Ecological receptors considered in the Environmental Statement include species and habitat that are important at an international, national, and local level (i.e. how rare and important the species and habitat are). The majority of the Order limits consists of arable land, with areas of grassland, woodland and hedgerows throughout.
- 7.4.3 There are 17 statutory sites for nature conservation within the study area set out in **Chapter 8** of the Environmental Statement [EN010106/APP/6.1]. There are 29 non-statutory sites designated for nature conservation within 2km of the Order limits. Surveys of the Order limits identified species of terrestrial invertebrates,

fish, breeding birds, wintering birds, bats, water vole, otter, and some rare species of plants.

- 7.4.4 The ecological assessment was undertaken and reported with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for EIA in the UK and Ireland. All designated sites and protected and/or notable habitat and species present within the study area were identified through a desk-based study. A range of further surveys were also undertaken to characterise the baseline environment within the area affected by the Scheme and their potential impacts were then assessed.

Assessment of Effects

- 7.4.5 Whilst there is the potential for effects upon ecological receptors during construction, mitigation measures designed to prevent adverse impacts upon ecological receptors will be embedded in the Scheme, including measures within the Construction Environmental Management Plan. These include the enhancement and creation of habitat to mitigate and compensate for habitat loss during construction and operation. A total of 292ha of biodiverse habitat creation has been embedded in the Scheme design. The Scheme will lead to a biodiversity net gain of 83% habitat units, 16% hedgerow units and 1% river units. Details of this assessment, including a definition of the units, are provided in the **Biodiversity Net Gain Assessment [EN010106/APP/7.7]**.
- 7.4.6 During construction, effects have the potential to include direct loss of habitats, temporary loss of habitat for breeding bird assemblages across the Order limits, and disturbance to breeding bird assemblages.
- 7.4.7 Habitat loss during construction will be minimal. Following implementation of mitigation measures, the effect on most species and the effect of the loss of most habitats will be **negligible, not significant**. With the inclusion of mitigation, temporary **minor adverse (not significant)** effects are predicted for the loss of acid grassland and habitat for breeding stone-curlew and terrestrial invertebrates. The potential for disturbance to breeding bird populations (including stone-curlew, quail and little-ringed plover) during construction is also considered to have a temporary **minor adverse** effect, that is **not significant**.
- 7.4.8 During operation, if there were to be no embedded mitigation through the design of the Scheme, there would be a potential for the following effects from the Scheme: changes to foraging and commuting habitats for wildlife; attraction to or avoidance by species such as bats and birds to solar panels; nesting and/or roosting in new infrastructure; and indirect beneficial impacts through a reduction of agriculture chemical inputs to soil and watercourses. However, taking into account embedded mitigation, there are no impacts on important ecological features during the operation of the Scheme.
- 7.4.9 The assessment identified a potential for disturbance to breeding stone-curlew in Sunnica East Sites A and B during operation. Embedded design mitigation measures are therefore proposed to minimise the effects on stone-curlew. Nesting and foraging plots for stone-curlew will be created in advance of construction and in advance of the stone-curlew breeding season. In addition to these, the areas of arable land within the Order limits set aside for reversion to

grassland will be specifically managed to create a close-cropped sward, suitable for stone-curlew. These will be contained within the ECO1 and ECO2 areas, shown in Figure 2. Small areas of existing acid grassland have also been retained within the Scheme design in Sunnica East Site B and these will form the basis of reverting adjacent areas in Sunnica East Site B to semi-natural grassland, characteristic of the Breckland heaths. In time this will provide a high-quality habitat, offering both nesting and foraging opportunities for stone-curlew.

- 7.4.10 Disturbance to breeding stone-curlew during operation is predicted to be **negligible**, and **not significant**, due to the proposed provision of mitigation areas for stone curlew as part of the Scheme design to reduce the disturbance.
- 7.4.11 Disturbance effects and temporary habitat loss during decommissioning are expected to be similar to those assessed for the construction phase. Therefore, temporary **minor adverse (not significant)** effects are expected during any decommissioning works.

Mitigation Measures

- 7.4.12 A detailed Construction Environment Management Plan (CEMP) will be in place during construction and a detailed DEMP during decommissioning to reduce the effects on habitats, designations, and species. Stone-curlew breeding plots have been provided within Sunnica East Site A and Sunnica East Site B as part of the embedded mitigation.
- 7.4.13 **Appendix 10I: Outline Landscape and Ecology Management Plan (OLEMP)** of the Environmental Statement [EN010106/APP/6.2] has also been provided as part of the DCO Application. This presents embedded mitigation measures within the design of the Scheme for the protection and enhancement of ecological receptors, against which a detailed Landscape and Ecology Management Plan will be brought forward.
- 7.4.14 In addition, the Applicant is committed to achieving net biodiversity gain. The embedded mitigation in the Scheme includes areas of habitat creation and enhancement throughout the Sites to provide benefit to the local wildlife. A **Biodiversity Net Gain Assessment [EN010106/APP/7.7]** has been submitted with the DCO Application. This assessment concludes that the Scheme will lead to a biodiversity net gain of 83% habitat units, 16% hedgerow units and 1% river units.

Cumulative effects

- 7.4.15 The Scheme is not considered to impact important ecological features identified in this assessment in combination with plans and projects considered as part of the cumulative assessment. The other schemes considered in the cumulative assessment have provided sufficient mitigation on their site and no significant impacts have been reported. Therefore, the main potential for ecological impacts during construction, operation, and decommissioning of the Scheme is considered within the Order limits itself. Other schemes are not likely to contribute to the effects on protected species identified in this chapter and therefore the effects are not significant

7.5 Flood Risk, Drainage and Water Resources

Baseline and Context

- 7.5.1 **Chapter 9** of the Environmental Statement [EN010106/APP/6.1] assesses the potential impacts on the water environment from the construction, operation, and decommissioning of the Scheme. The water environment includes consideration of surface waterbodies in the vicinity of the Order limits (e.g. rivers, streams, ditches, canals, lakes and ponds, etc.), groundwater bodies, as well as flood risk (which also includes consideration of the risk of flooding to the Scheme) and drainage.
- 7.5.2 The assessment of impacts on waterbodies considers changes in water quality, physical form and natural processes (i.e. hydromorphology), and water resources. An important consideration is also the impact on the water environment where it is critical for the biodiversity and conservation value of water dependent ecological sites that may be designated at a local, national, or international level.
- 7.5.3 The Order limits lie within the catchments of a number of surface waterbodies, including the River Kennett, River Lark, River Snail, Lee Brook (tributary of the River Lark), and the Burwell Lode.
- 7.5.4 The Order limits are underlain by the Cam and Ely Ouse Chalk Groundwater body, classified as a Principal aquifer. The aquifer is important for water supplies and baseflow to rivers. The Chalk aquifer is overlain by River Terrace Deposits, classified as a Secondary A aquifer.
- 7.5.5 The majority of the Order limits lie within land at low risk of flooding (less than 1 in 1,000 annual probability). Some areas of higher risk are present in areas associated with the rivers (1 in 100 and 1,000 annual probability).

Assessment of Effects

- 7.5.6 A number of activities during construction, operation, and decommissioning phases are likely to generate impacts, which, if unmitigated, have the potential to affect the water environment. Environmental considerations were taken into account during the design of the Scheme in order to avoid and/or reduce potential impacts on water environment receptors. This iterative approach has led to a range of mitigation measures being embedded in the design of the Scheme, such as offsetting solar infrastructure by at least 10m from watercourses, crossing of sensitive watercourses with trenchless techniques, ensuring infrastructure is not located within areas of high flood risk, and implementation of swales / drainage ditches. In addition to the mitigation through design, embedded measures through good industry practices to prevent or minimise effects on the water environment are presented with the Framework Construction Environmental Management Plan in **Appendix 16C** of the Environmental Statement [EN010106/APP/6.2].
- 7.5.7 Wastewater generation on construction sites has the potential to affect the water quality of the surface and groundwater bodies in the vicinity without mitigation. With standard good industry practice measures implemented through the Construction Environmental Management Plan and embedded mitigation in place, this effect is anticipated to be **minor adverse, not significant** for the River

Kennett, Lee Brook, River Snail, and the Burwell Lode during construction. All other water resources receptors during construction are expected to experience either **negligible** effects or **no change**.

- 7.5.8 During the operational phase, there is the potential for negative impacts on water quality in watercourses from run-off and spillages from new permanent hardstanding and maintenance activities if not properly mitigated. There is the potential for impacts on hydrology to occur from alterations to natural flow pathways from runoff from areas of hardstanding. This may also have a subsequent effect on aquatic habitats and water-dependant nature conservation sites. There is also a potential for reduced chemical loading of watercourses associated with arable farmland (e.g. nitrates, pesticides, herbicides and insecticides) to provide benefits to surface and groundwater.
- 7.5.9 During the operational phase, the Scheme would apply good industry practice measures and adhere with environmental legislation. The battery sites and solar panels will be located away from watercourses, with surface water drainage controlled by swales and small ponds. As such it is considered that the potential for impacts to occur as a result of runoff and spillages from maintenance activities would be low. This would result in a **minor adverse** effect, which is **not significant**.
- 7.5.10 The potential for direct impacts to groundwater resources and/or quality, surface water or abstraction receptors has been assessed as **neutral** across the whole of the Order limits and therefore no mitigation has been proposed.
- 7.5.11 A Flood Risk Assessment has been submitted with the DCO Application in **Appendix 9C** of the Environmental Statement [**EN010106/APP/6.2**]. The FRA takes into account predicted climate change and has demonstrated that the Scheme does not increase flood risk within or surrounding the Order limits.
- 7.5.12 The residual effects for the decommissioning phase are expected to be similar in nature and scale to, and no worse than, the construction phase, and therefore **minor adverse** or **negligible**.

Mitigation Measures

- 7.5.13 The Scheme has been designed, as far as possible, to avoid and minimise impacts and effects on the water environment through the process of design development, and by embedding measures into the design of the Scheme.
- 7.5.14 A number of standard and embedded measures have been identified (as described in paragraph 7.5.6 above), which would be implemented by the contractor to manage the impacts and reduce the effects that the construction of the Scheme would have on the water environment. The Drainage Strategy (presented in Annex F of **Appendix 16C** of the Environmental Statement [**EN010106/APP/6.2**]) also includes the use of Sustainable Urban Drainage Systems (SuDS), which would mimic the natural drainage system as far as possible; this would be secured through a DCO Requirement. Any areas of the site containing oils, such as transformers, would be bunded or have self-contained drainage systems. This would ensure that any leaks are contained and do not enter the surface water drainage system.

- 7.5.15 There are no significant residual effects following implementation of the in-built design measures and good industry practice measures. Additional mitigation measures are therefore not deemed necessary.

Cumulative effects

- 7.5.16 A number of planning applications within the same catchment as the Scheme have been considered in the cumulative assessment. For these applications, it is assumed they would follow good industry practice in terms of the management of construction works and surface water runoff (and risk to groundwater of minor chemical leaks from static and mobile equipment) in the long term, compliant with all relevant environmental legislation, including that relating to flood risk. It is not predicted that there would be any significant changes to the baseline conditions of the water resources in the area, nor any significant cumulative effects.

7.6 Landscape and Visual Amenity

Baseline and Context

- 7.6.1 **Chapter 10: Landscape and Visual Amenity** of the Environmental Statement [EN010106/APP/6.1] presents the findings of an assessment of the potential significant effects on the existing landscape, designations and views, which have been identified as part of the baseline. Landscape effects relate to changes to the landscape as a resource, including physical changes to the fabric or individual elements of the landscape, its aesthetic or perceptual qualities and landscape character. Visual effects relate to changes to existing views of identified visual receptors (people), from the loss or addition of features within their view due to the Scheme.
- 7.6.2 The Landscape and Visual Impact Assessment identifies the sensitivity and overall significance of landscape and visual effects within the identified study area. The landscape and visual baseline assessments have been based on desk study and field work, during both winter and summer between March 2019 and July 2020.
- 7.6.3 Landscape receptors of the Scheme include three National Character Areas (NCAs): The Fens, The Brecks and the East Anglian Chalk. A number of regional, county and local landscape receptors were also identified as part of the baseline. These include Local Landscape Character Areas (LLCAs) which have been identified by the Applicant, which often consist of villages, agricultural/ecological fens, Conservation Areas and Registered Park and Gardens. Visual receptors in the area include recreational users, residents, visitors to the area, and motorists using the highway network.

Assessment of Effects

- 7.6.4 Embedded mitigation has been included within the Scheme design to reduce the landscape and visual effects of the Scheme. Without these measures, the effects of the Scheme on the landscape and visual receptors assessed within **Chapter 10** of the Environmental Statement [EN010106/APP/6.1] would be. Areas of planting and positioning of the Scheme have been designed around the following principles:

- a. Careful siting of the Scheme within the landscape;
- b. Conserving landscape, ecology and archaeological features across the Sites;
and
- c. Creating new planting and vegetation for screening within the Sites.

- 7.6.5 A landscape masterplan has been produced to show the areas of mitigation planting embedded within the Scheme. This is included in Figure 6 at the end of this NTS and is secured through operation of the Works Plans and the OLEMP.
- 7.6.6 Visualisations have been produced to accompany the landscape and visual impact assessments. These are provided in Figures 10-90 to 10-102 of the Environmental Statement [EN010106/APP/6.3].
- 7.6.7 The landscape and visual impact assessment has assessed the impacts of each of the four Sites individually as well as in combination aspects of the four Sites and the different aspects of the Scheme. Effects from the construction phase are expected to include changes in surface landform, landcover, presence of construction machinery and the associated activity which is required to implement the Scheme. During construction, the character of the landscapes throughout Sunnica East Site A, Sunnica East Site B, Sunnica West Site A, and Sunnica West Site B, Grid Connection Route A, and Grid Connection Route B are likely to experience **major adverse, significant** effects due to substantial alteration to the character of the area within those sites, albeit this only lasts for the duration of construction.
- 7.6.8 In terms of the Landscape Character Areas across and within sight of the Order limits (including NCA 46 The Fens, NCA 87 East Anglian Chalk, Landscape Character Type (LCT) Lowland Village Chalklands, LCT Planned Peat Fen, LCT Forested Estate Sandlands, Landscape Type (LT) Estate Sandlands, LT Rolling East Chalklands and LT Settled Fenlands), effects are expected to range from **negligible to moderate adverse**, with the latter being **significant**. This is because most of the effects are expected to be small and localised in relation to the wider extent of these areas.
- 7.6.9 Changes to landform, landcover and the presence of the construction machinery in LLCA 13 (from Sunnica East Site B) and LLCA 24 (Sunnica West Site A), balanced with the scale of the activity, has been assessed to potentially result in temporary **major adverse** effects (**significant**). LLCA 11 has been assessed to potentially result in **moderate adverse** effects (**significant**).
- 7.6.10 LLCA 8, LLCA 9, LLCA 10, LLCA 12, LLCA 21, LLCA 23B and LLCA 26 are expected to experience **minor adverse** effects (**not significant**) from the construction of the whole Scheme. LLCA 14 will experience **minor adverse** effects (**not significant**) from the construction of Grid Connection Route A. LLCA 36, LLCA 39 and LLCA 43 will experience **minor adverse** effects (**not significant**) from the construction of Grid Connection Route B. This is due to the small scale and short duration of effects.
- 7.6.11 Recreational users and residents with close range views of the construction sites across the Order limits will experience **major to moderate adverse, significant**

visual effects during construction, due to the change in the composition of existing views. The full list of receptors that will experience these effects are listed in **Chapter 10** of the Environmental Statement [EN010106/APP/6.1].

- 7.6.12 The operation phase has been assessed for two different years for the LVIA: the year 1 opening phase of the Scheme during winter time (without leaves on vegetation); and year 15 of operation of the Scheme, which will take in to account the establishment of the proposed vegetation, screening and planting during summertime. This is in line with national landscape and visual assessment guidance.
- 7.6.13 The year 1 operational phase residual effects will be due to the change in land use from agriculture to infrastructure, via the solar panels and associated structures, resulting in impacts to the aesthetic and perceptual aspects of the landscape and the introduction of new features within views. The effects on the landscape character **within** each of the four Sunnica sites (i.e. the Order limits) would not be reduced from the significance expected at the construction phase due to the introduction of new massing and structures across the sites, resulting in an infrastructure character and changes to the tonal colour of the landscape via the solar panel frames and arrays. This would result in **major adverse** effects, which are **significant**.
- 7.6.14 The Landscape Character Areas within the Order limits during the year 1 operational phase are expected to experience effects ranging from **negligible (not significant)** to **moderate adverse (significant)**. This is because the Scheme would introduce new infrastructure to the landscape. **Moderate adverse (significant)** residual effects are predicted for the Freckenham Rural 2: North LCA and Freckenham Rural 3:East LCA.
- 7.6.15 The effects on the LLCAs described for construction above will remain during operation year 1 because of the presence of the solar infrastructure across the Sites.
- 7.6.16 The visual effects on recreational users and residents within close views of the Order limits during construction will largely remain during operation year 1 due to the presence of the infrastructure and lack of established vegetation (**major to moderate adverse, significant**). However, some receptors will no longer experience significant effects following the end of the construction phase (due to the removal of machinery and vehicles). All effects from the cable route corridor construction will no longer be relevant, as the cables would be installed below ground, so the receptors that were to be affected by the construction of the cable corridors only will no longer experience effects.
- 7.6.17 The year 15 post opening phase effects reflects that of the year 1 assessment, due to the continued, long term but reversible presence of the solar panels and associated structures, but there is a reduction in the number of significant adverse effects, particularly to visual receptors, due to the establishment of the proposed planting; as explained below.
- 7.6.18 The effects on the character of the landscape within each of the Sunnica sites (i.e. the Sites) for operation year 15 will be reduced to the following: Sunnica East Site A (**moderate adverse, significant**); Sunnica East Site B (**moderate**

adverse, significant); Sunnica West Site A (**moderate adverse, significant**); and Sunnica West Site B (**minor adverse, not significant**). The reduction in magnitude of landscape effects is due to the establishment of vegetation planting around the Sites. The effect is still considered to be significant (except for Sunnica West Site B) due to the presence of the solar infrastructure within the landscape.

- 7.6.19 A number of Landscape Character Areas across the Scheme (including NCA 85: The Brecks, LCT Forested Estate Sandlands, LCT Lowland Village Chalklands, LT Estate Sandlands, LT Rolling Estate Chalklands, the Brecks Arable Heathlands Mosaic and Low Chalk Farmland) will be affected by the Scheme during year 15 of operation. In combination with the establishment of the native grassland beneath and surrounding all of the panels, the vegetation structure and biodiversity would be improved within these published landscape character areas. These beneficial changes are balanced with continued long-term presence of the solar panels, the small scale of the vegetation in relation to the wider extent of the published character areas, along with the reversibility of the Scheme. Therefore, the effects are predicted to range between **negligible adverse** and **minor adverse (not significant)** during the year 15 phase. These effects are considered not significant.
- 7.6.20 The effects on LLCAs during year 15 of operation will be reduced due to the establishment of the vegetation around the Sites. The infrastructure character of the land use would remain, although the magnitude of impact would reduce, due to the balance between the establishment of the proposed planting and the improved opportunities for vegetation cover and biodiversity within the LLCA, along with the Scheme remaining reversible. The effects would be reduced to **minor adverse (not significant)** at year 15 for LLCA 11, LLCA 12 and LLCA 26, and **moderate adverse (significant)** for LLCA 13 and LLCA 24.
- 7.6.21 Effects on recreational and residential visual receptors with close range views of the Scheme will be reduced to **negligible** or **minor adverse (not significant)** at operational year 15 due to the establishment of embedded mitigation (vegetation) surrounding the Scheme. This is excluding the recreational users and users of the training grounds at the Limekilns, who are expected to experience **moderate adverse (significant)** visual effects from the presence of the Scheme infrastructure in the background of their views.
- 7.6.22 The decommissioning phase residual effects are due to the long-term establishment of the vegetation, which would remain following the removal of the solar panels and associated structures. The landscape effects of decommissioning of the Scheme would mimic the construction phase and would be temporary in nature, albeit returning the Sites back to the current state plus retaining any vegetation planting that has been incorporated into the Scheme.

Mitigation Measures

- 7.6.23 The embedded mitigation measures (including planting, offsetting and design layout) reduces the number and extent of significant effects on landscape and visual receptors. The remaining residual effects are few in number and small in extent. These residual effects cannot be mitigated further as no further measures are available without compromising the renewable energy generation onsite,

however this is considered acceptable in the context of the importance and benefits that the Scheme as a whole will bring.

Cumulative effects

- 7.6.24 Cumulative effects of the Scheme with other plans and projects within the vicinity of the Order limits have been identified in relation to landscape and visual effects. For some receptors, effects from the Scheme alone would increase in magnitude (and significance for some receptors) when considered in-combination with other plans.
- 7.6.25 During construction, the cumulative effects on landscape and visual receptors would be possible from construction activity, excavation, presence of construction machinery and alterations to land form. The following receptors have been assessed to experience a significant effect when considered in-combination compared to when they are considered in isolation during construction. For further details on the schemes and the assessment, refer to Section 10.11 in **Chapter 10: Landscape and Visual Amenity** of the Environmental Statement [EN010106/APP/6.1].
- a. Employees at the Horseracing Forensic Laboratory: minor adverse (not significant) to **moderate adverse** (significant).
 - b. Motorists on Weir's Drove Road: minor adverse (not significant) to **moderate adverse** (significant).
 - c. Lowland Village Chalklands: minor adverse (not significant) to **moderate adverse** (significant).
 - d. Settled Fenlands: minor adverse (not significant) to **moderate adverse** (significant).
 - e. Cambridge Area 2: minor adverse (not significant) to **moderate adverse** (significant).
 - f. LLCA 19: minor adverse (not significant) to **moderate adverse** (significant).
 - g. Recreational users on Burwell Lode and Hightown Drove: minor adverse (not significant) to **moderate adverse** (significant).
- 7.6.26 During construction, the cumulative effects on LLCAs 20, 33, 36 and 38 are expected to increase from negligible (or neutral in the case of LLCA 33) to **minor adverse** (not significant).
- 7.6.27 During operation, the cumulative effects on landscape and visual receptors would be possible from the presence of the Scheme's infrastructure in views and within the landscape. The following receptors have been assessed to experience an increase in the magnitude of the effect identified from the Scheme alone when considered in-combination during operation. For further details on the schemes and the assessment, please refer to Section 10.11 in **Chapter 10: Landscape and Visual Amenity** of the Environmental Statement.

- a. Lowland Village Chalklands: minor adverse (not significant) to **moderate adverse** (significant).
- b. Recreational users on Burwell Lode and Hightown Drove: negligible (not significant) to **moderate adverse** (significant). However, the Scheme itself will have a negligible contribution and this increase in magnitude of effect is due to the other developments identified to have a cumulative effect on these receptors.

7.6.28 During operation, the cumulative effects on the Settled Fenlands, Cambridge Area 2, and LLCAs 33, 36 and 38 are expected to increase from negligible to **minor adverse** (not significant).

7.7 Noise and Vibration

Baseline and Context

7.7.1 **Chapter 11** of the Environmental Statement [EN010106/APP/6.1] presents the findings of an assessment of the potential significant effects of the Scheme on noise and vibration of the Site and surrounding area. Baseline noise monitoring based on a methodology agreed with relevant stakeholders, was carried out to establish the existing noise climate in the area. Sensitive receptors which have the potential to be affected by the Scheme were identified.

7.7.2 During the surveys, the dominant noise source at the majority of the locations was observed to be road traffic from the surrounding road network. Some receptors were also influenced by aircraft noise.

Assessment of Effects

7.7.3 Construction noise levels are predicted to be at their highest during site preparation and civil phases of works, which include ground works and piling activities. The duration of any construction noise effects is considered to be temporary, short-term, with no permanent residual effect once works are completed. Working hours during construction will be from 7am to 7pm Monday to Saturday, with worker trips the hour before and after the core working hours. It is considered that noise impacts are likely to be greatest during the early stages of the works programme, where ground works are required. In practice, works noise levels and resulting impacts are likely to vary during the different construction phases. The nature of construction work means that the highest levels of noise may exist for only a matter of days or even hours and there would be regular periods, even during the course of a single day, when the assumed noisy plant will not be in operation during breaks or changes of working routine. Construction and decommissioning noise levels will be controlled through the use of embedded mitigation and the use of the detailed Construction Environmental Management Plan and DEMP (Framework Construction Environmental Management Plan and DEMP are included in **Appendices 16C** and **16E** respectively of the Environmental Statement [EN010106/APP/6.2]).

7.7.4 Noise and vibration impacts from construction and decommissioning works are predicted to range from **minor adverse** to **negligible**, which are **not significant**.

- 7.7.5 A worst-case construction programme of 24 months duration has been assessed. Changes in noise due to construction traffic are predicted to result in a **negligible** effect at any identified receptor, which is **not significant**.
- 7.7.6 During operation, plant such as the substation and batteries will be designed to have minimal tonal, impulsive or intermittent features. Predicted rating levels of operational solar plant at the nearest receptors are below the existing background levels, and effects are predicted to be **negligible**, and therefore **not significant**.
- 7.7.7 Noise from the Burwell National Grid Substation Extension at the nearest residential receptor (property in Burwell, Weirs Drove) is predicted to be below background levels during the day but to exceed the night-time background noise level by 6 decibels (dB). This exceedance is based on the monitoring location used within the assessment (R1) and located outside. This does not consider attenuation from walls or glazing and has not taken into account internal noise affecting room occupants during night-time hours. Assuming that, at night, residents will be inside their property, they would benefit from noise attenuation from the building envelope. Whilst noise may be audible inside the property, it is not predicted to give rise to any significant adverse effect based on the criteria specified in the British Standard (for further details on this, please refer to **Chapter 11: Noise and Vibration** of the Environmental Statement [EN010106/APP/6.1]. Consequently, night-time noise at even the closest residential property is considered to be **minor adverse** and **not significant**.

Mitigation Measures

- 7.7.8 Embedded mitigation includes the use of measures identified in the Framework Construction Environmental Management Plan in **Appendix 16C** of the Environmental Statement [EN010106/APP/6.2], such as avoiding unnecessary revving of engines, shutting off equipment when not in use, and appropriate routing of construction traffic on public roads. A construction noise monitoring scheme shall be developed, as part of the Section 61 consent, and agreed with appropriate stakeholders prior to commencement of construction works. Consideration will also be given to traffic routing, timing and access points to the Order limits to minimise noise impacts at existing receptors following appointment of a principal contractor, and as construction working methods are developed. The Scheme infrastructure will be selected to minimise any tonal, impulsive or intermittent noise.

Cumulative effects

- 7.7.9 Cumulative noise effects during construction and operation phases may occur when developments are within 500m of each other. At greater distances, any noise emissions would be attenuated such that there would normally be no combined effect. Any overlapping of construction phases between the Scheme and the developments identified has the potential to contribute to in-combination cumulative effects, which could increase the overall level of construction noise as well as the overall duration of construction noise effects.
- 7.7.10 The cumulative noise and vibration assessment concluded that, should the Scheme be constructed at the same time as four applications identified within the vicinity of Burwell Substation, then cumulative effects from construction noise

affecting the nearest receptors at Burwell may be up to **moderate adverse** (significant), but temporary with no permanent effect. It is unlikely in reality that the construction of all these developments will overlap together. However, to minimise the potential for cumulative effects, a designated Site Manager during construction who will liaise with these other developments to identify measures that can be undertaken to minimise disruptions and noise effects.

- 7.7.11 The operation of all four developments at the same time could increase the overall level of industrial-type noise experienced by receptors in Burwell. However, it is not expected that this would result in any significant adverse operational noise effects on local noise receptors. As such, cumulative effects from operational noise affecting the nearest receptors at Burwell are considered to be limited to **minor adverse** (not significant).

7.8 Socio-Economics and Land Use

Baseline and Context

- 7.8.1 **Chapter 12** of the Environmental Statement [EN010106/APP/6.1] presents the findings of an assessment of the likely significant effects on socio-economics and land use as a result of the Scheme.
- 7.8.2 The study area for the socio-economics assessment includes a 45-minute travel zone from the Order limits. The study area is mostly rural and relatively sparsely populated. The construction sector contributes 7% of employment within the study area, which are both higher than the proportions recorded regionally and nationally. There are around 4,900 construction jobs found within the socio-economics study area.
- 7.8.3 Both the East Cambridgeshire and West Suffolk Local Plan documents emphasise the importance of ensuring existing public rights of way are maintained and that minimal disruptions to public rights of way occur during the construction phase.
- 7.8.4 An Agricultural Land Classification (ALC) survey has been undertaken for the Sites (the study area for the ALC survey comprised the Sunnica East Sites A and B and Sunnica West Sites A and B). Agricultural land is classified ranging from Grade 1, which is the best quality, through to Grade 5, with Grades 1-3a being categorised as 'Best and Most Versatile' land. This is the land which is most flexible in terms of the range of crops that can be grown, the level and consistency of yield and the cost of obtaining it.
- 7.8.5 The survey identified small areas of Grade 3a, which is the lowest category of Best and Most Versatile land. In Sunnica East Site A the land is comprised mostly of Grade 3b land and a few small pockets of Grade 4. The survey identified Sunnica East Site B as being formed of largely Grade 4 land, which is low value agricultural land. There is a small pocket of Grade 3a land towards the northern most section of the Site near Golf Links Road.
- 7.8.6 In Sunnica West Site A, the ALC shows that the Site is formed largely of Grade 3b land. There are some medium sized pockets of Grade 4 land found in the middle and northern portion of the Site. There is also a larger patch of land in the

north east of the Site with Grade 3a and Grade 3b land near Dane Hill Road and Red Lodge Bypass. Sunnica West Site B comprises Grade 3b land.

Assessment of Effects

- 7.8.7 Embedded mitigation has been included within the Scheme design to reduce impacts on receptors from the outset. These are detailed in the next section below (from paragraph 7.8.12). During construction of the Scheme, an estimated average of 964 full-time jobs will be created. Other indirect jobs would be generated through support services and local spending. The impact of construction employment generation on the local economy through the direct, indirect and induced employment, expenditure and upskilling, has been assessed as temporary **moderate beneficial** effect. This is considered **significant**.
- 7.8.8 Gross value added (GVA) is an economic productivity metric that measures the contribution of a scheme to an economy, producer, sector or region. The impact of GVA generation from the construction phase on the local economy has been assessed as a temporary **moderate beneficial** effect. This is considered **significant**.
- 7.8.9 Effects on users of public rights of way during construction through temporary disruption from closures (closures will be for no longer than three weeks per public right of way) were assessed as **negligible (not significant) to moderate adverse (significant)**, depending on the public right of way in question; albeit this is temporary and reversible at the end of the three weeks. This is taking into account the effects of the embedded mitigation discussed below.
- 7.8.10 The areas of 'Best and Most Versatile' land (Grade 3a, approximately 3.8% of the Sites) fall within the developable area of the Scheme and will be temporarily lost as arable farmland during the lifetime of the Scheme. However, for the duration of the Scheme the soil resource will remain in place and benefit from an extended fallow. Grassland cover and the suspension of cultivation will allow a return to a higher equilibrium for soil organic matter, conferring multiple benefits to soil health including fertility, moisture retention and structural stability. Improving the structural stability of the light textured topsoil has benefits beyond future agricultural productivity, improving rainfall infiltration, reducing wind and water erosion and cutting the discharge of sediment to surface waters where it is detrimental to both water quality and flood risk. The 40-year suspension of farming a substantial area of land will result in a **moderate beneficial** effect associated with the improvement of the soil quality, which is considered **significant**.
- 7.8.11 The effects during decommissioning are expected to be similar to those identified for the construction phase.

Mitigation Measures

- 7.8.12 Primary mitigation measures are embedded within the Scheme, as set out in the respective chapters, to reduce other operational effects (such as noise, air quality and landscape) which in turn will mitigate the effects on the local community and existing facilities from a socio-economic and land use perspective.

- 7.8.13 **Appendix 10I: Outline Landscape and Ecology Management Plan** of the Environmental Statement [EN010106/APP/6.2] details the management of the landscape and habitat planting in place during operation.
- 7.8.14 Appropriate measures to mitigate temporary impacts on users of public rights of way during the construction and decommissioning phases have been included within **Appendix 16C: Framework CEMP** and **Appendix 16E: Framework DEMP** of the Environmental Statement [EN010106/APP/6.2]. The temporary closures and diversions will be supported by appropriate and clearly signed alternative routes and where possible will be planned and programmed to minimise disruption to users. New permissive routes have been included within the Scheme design to be in place during operation, as described in paragraph 4.2.5 above. These will enable increased public access across the landscape during operation.
- 7.8.15 No other additional mitigation measures, over and above that stated in the other relevant technical chapters within the Environmental Statement [EN010106/APP/6.1], are required to avoid or minimise the socio-economic or land-use effects identified in **Chapter 12** of the Environmental Statement [EN010106/APP/6.1].

Cumulative effects

- 7.8.16 Cumulative effects have been considered for the socio-economics and land use assessment. The assessment has concluded that there would be no change to the conclusions of the assessment of the Scheme in isolation.
- 7.8.17 Unlike built development, consent for a solar power site is temporary with little or no loss of agricultural land or the soil resource. Best and most versatile land is not lost to the Scheme, as the agricultural land resource will not change due to the installation of the Scheme. There is therefore no cumulative construction effect for soil and agricultural land resource.

7.9 Transport and Access

Baseline and Context

- 7.9.1 **Chapter 13 Transport and Access** of the Environmental Statement [EN010106/APP/6.1] reports the findings of an assessment of the likely significant effects on traffic and transport as a result of the Scheme during construction and reports on the likely effects during decommissioning. It was agreed with the councils and Planning Inspectorate that the operational effects of the Scheme would be scoped out due to the low number of trips (11 staff vehicles travelling to site per day) associated with operational activities.
- 7.9.2 The Scheme is located in a rural area with limited dedicated footways and pedestrian and cycle facilities in the area along the road network. This is due to the rural nature of the surrounding local roads; however, these are lightly trafficked. There are several public rights of way crossing and connecting the Order limits.

- 7.9.3 The closest bus stops to Sunnica West Sites A and B are located in Snailwell on Newmarket Road, where a pair of bus stops are provided. The nearest stops to Sunnica East Site A are located over a 1km to the north east in Isleham. The bus stop nearest to Sunnica East Site B is located on B1085 Turnpike Road in Red Lodge approximately 500m to the south-east.
- 7.9.4 The two closest train stations are located in Kennett and Newmarket, and both stations are on the line between Ipswich and Cambridge.
- 7.9.5 A number of roads on the strategic and local highways border the Order limits. The largest roads in the vicinity are the A14 and A11, which run adjacent to Sunnica West Site A on the southern and eastern edge.

Assessment of Effects

- 7.9.6 The magnitude of change in traffic associated with operation of the Scheme has been scoped out of this assessment. This is because the number of staff vehicles travelling to and from the site on a daily basis is expected to be minimal (11 per day) and does not require an assessment.
- 7.9.7 During construction, there will be an average of 93 Heavy Goods Vehicles (HGVs) movements to and from the Sites per day, and an average of 90 and 42 HGV movements per day will be required to construct the cable route and Burwell National Grid Substation Extension respectively. There is a potential for the incoming and outgoing construction traffic to cause: increased congestion on the highway network; delays to motorists through slow moving HGVs and increased congestion; increased risk of accidents from the increased number of HGVs on the road; and severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation; and closures of public rights of way. The effects from decommissioning traffic are anticipated to be similar to construction.
- 7.9.8 To reduce the potential impact of the HGV deliveries, the arrival and departure times will be managed to minimise the number of HGVs travelling to the Order limits during the highway peak hours. In addition, the HGVs can be delayed in the afternoon to avoid being released from the Order limits during the highway peak hour. The HGV deliveries will be controlled through a Construction Traffic Management Plan, an outline of which is provided in the Framework Construction Traffic Management Plan in **Appendix 13C** of the Environmental Statement **[EN010106/APP/6.2]**.
- 7.9.9 Through the embedded mitigation measures included in the Framework Construction Traffic Management Plan, the effect of the construction on non-motorised users with regard to severance, pedestrian / cycle amenity and delay within the vicinity of the Order limits is anticipated to be **minor adverse** in the Scheme peak hours. This is because the forecast flows would be similar to those experienced in the highway peak hours, and the effect would be short-term. Therefore, the effect is considered to be **not significant**.
- 7.9.10 The level of traffic forecast in the Scheme morning peak hour and existing highway morning peak hour are similar, therefore the delay that the vehicle travellers are forecast to experience due to the Scheme is predicted to be no worse than in the highway morning peak hour. As the vehicles associated with the

construction are anticipated to travel outside of the highway peak hours, it is considered that the magnitude of change on vehicle travellers in terms of driver delay is **negligible, not significant**. This effect would be temporary and lasting only for the duration of construction.

- 7.9.11 The assessment of previous accidents on the highway network does not indicate any significant safety design issues at these locations. As the construction staff and HGV traffic will travel outside of the highway peak hours, it is considered that development traffic will be added to the network when it is generally operating at a lower level of stress than under peak hour conditions. As such, the overall significance of effect on vehicles travellers in terms of accidents and safety is **minor adverse** during the construction period, which is **not significant**.

Mitigation Measures

- 7.9.12 Embedded mitigation measures have been included in the Scheme through the provision of a Construction Traffic Management Plan, to be secured through the DCO, a Framework version of which is provided in **Appendix 13C** of the Environmental Statement [EN010106/APP/6.2]. This includes routing of HGVs on the strategic road network and major roads where possible and minimising the use of minor local roads. It also includes measures to reduce the potential impact of the HGV deliveries, such as the arrival and departure times being managed to minimise the number of HGVs travelling to the Sites during the highway peak hours. In addition, the HGVs can be delayed in the afternoon to avoid being released from the Order limits during the highway peak hour.
- 7.9.13 To reduce the potential impact of vehicles associated with staff, workers will be encouraged to lift share with colleagues to reduce the number of vehicles travelling to/from the Order limits each day. Staff will also be encouraged to use the strategic road network in the vicinity of the Order limits such as the A11, A14 and A142 to travel to/from the Order limits where appropriate to minimise the amount of construction traffic using local roads through the nearby villages, in line with the routes identified in the access strategy for the HGVs.
- 7.9.14 Working hours during construction will be from 7:00 to 19:00, so workers will be travelling to and from the Sites on the strategic road network outside of peak traffic hours (i.e. 6:00 to 7:00 and 19:00 to 20:00). The measures described above are included within **Appendix 13C: Framework Construction Traffic Management Plan and Travel Plan**.
- 7.9.15 A car parking permit system will be implemented across the two car parking areas. Before commencing work on site, staff will be allocated to one of the two car parking areas which will be based on their starting location for their travel to the Order limits. A mini-bus service will be used to transport staff around and between Sunnica East Site (A and B) and Sunnica West Site (A and B) making use of internal routes where possible.
- 7.9.16 No significant adverse effects are anticipated during construction and therefore no additional mitigation, other than the embedded mitigation, is required.

Cumulative effects

- 7.9.17 The future baseline has been calculated using TEMPro growth factors, which include forecast development growth. Therefore, the baseline includes cumulative growth and the cumulative effects are already captured within the transport assessment provided in **Chapter 13: Transport and Access** of the Environmental Statement [EN010106/APP/6.1].

7.10 Air Quality

Baseline and Context

- 7.10.1 **Chapter 14** of the Environmental Statement [EN010106/APP/6.1] presents the findings of an assessment of the likely significant effects on local air quality as a result of the Scheme. The assessment relates to dust generation and additional road traffic and plant emissions during the construction phase. The potential for operational impacts is also addressed. The decommissioning phase will be similar in nature, duration, and extent to the construction phase, albeit likely to be shorter and of lower magnitude. It has therefore not been necessary to assess this phase separately and the effects are assumed to be the same as the construction phase.
- 7.10.2 The air quality in the study area is generally good. There are no Air Quality Management Areas⁶ (AQMA) in this region, and West Suffolk Council and East Cambridgeshire District Council do not monitor the air quality around the Order limits as there are no concerns about air quality.

Assessment of Effects

- 7.10.3 The dust assessment has identified the potential for a high risk of adverse effects on ecology at the Red Lodge Heath Site of Special Scientific Interest, medium risk associated with dust deposition generally, and low risk to human health, prior to the use of any embedded mitigation. The high risk to the ecological site is a worst-case assessment assuming that the surrounding area is sensitive to dust deposition. Following implementation of the Construction Environmental Management Plan, which will incorporate dust control and mitigation measures, and the Construction Traffic Management Plan, which will set out traffic management procedures, the effect on ecology, dust deposition, and human health is anticipated to be **not significant**.
- 7.10.4 An assessment of the effect of road traffic emissions on local air quality during the construction phase shows that the effect on air quality during construction is **not significant**.
- 7.10.5 Given that the number of trips associated with the worker arrivals during operation is predicted to be 11, it was agreed with statutory consultees at scoping stage that

⁶ National air quality objectives have been put in place to protect people's health and the environment. If a local authority finds any places where the objectives are not likely to be achieved, it must declare an Air Quality Management Area there. This area could be just one or two streets, or it could be much bigger.

an operational air quality assessment would be scoped out of the EIA, as the effect is clearly **not significant**.

Mitigation Measures

- 7.10.6 Embedded mitigation measures appropriate for the risk of dust nuisance will be implemented through the Construction Environmental Management Plan in accordance with Institute of Air Quality Management's (IAQM's) Guidance. A Dust Management Plan will be produced to ensure that dust is minimised during construction. These measures to reduce dust emissions include avoiding stockpiling of soils and materials near to site boundaries, use of water suppression on earth moving activities if undertaken in dry weather, and sheeting or enclosing any dusty materials being transported on or off site. Measures to minimise the risk of dust during construction are listed within **Appendix 16C: Framework Construction Environmental Management Plan** and **Appendix 16E: Framework Decommissioning Environmental Management Plan** of the Environmental Statement [EN010106/APP/6.2].

Cumulative effects

- 7.10.7 There are no residual effects on air quality from the Scheme that have been assessed to have greater than negligible significance. Any development occurring at the same time as the Scheme will be required to undertake its own dust risk assessment and implement mitigation to ensure that there are no off-site impacts. In addition, the CEMP requires regular liaison meetings with other high-risk construction sites within 500m of the Order limits which will assist in avoiding cumulative effects.
- 7.10.8 Therefore there is no potential for cumulative effects to occur when considering the Scheme along with other nearby projects. Any significant effects would be due to these other projects on their own, and not together.

7.11 Human Health

Baseline and Context

- 7.11.1 **Chapter 15** of the Environmental Statement [EN010106/APP/6.1] assesses the potential effects of the construction, operation, and decommissioning stages of the Scheme on human health, taking into account the results from the other technical chapters within the Environmental Statement.
- 7.11.2 Based on the 2011 Census data, the study area has a slightly better health status than the wider region and other nearby counties. The proportion of physically active people is similar to surrounding areas.

Assessment of Effects

- 7.11.3 The assessment has considered access to healthcare services and other social infrastructure; air quality, noise and neighbourhood amenity; accessibility and active travel; access to work and training; and social cohesion and lifetime neighbourhoods.

- 7.11.4 There is not likely to be any severance between local residents and the healthcare facilities and other social infrastructure which they use during the construction, operation, or decommissioning phase. This is because neither the additional construction/decommissioning traffic or the traffic generated during the operational phase result in the transport network becoming over capacity. Therefore, effects are considered to be **not significant**.
- 7.11.5 During the operational phases some residents on Weirs Drove and Hythe Lane in Burwell, Cambridgeshire may experience some minor adverse effects from noise from the operational Burwell National Grid Substation Extension (as described above in paragraph 7.7.7). Any tonal, impulsive or intermittent acoustic features will be carefully considered and specific noise control and mitigation measures will be included. This includes procuring equipment with lower (than modelled) sound power levels, silencers and/or acoustic barriers on equipment, and dynamic vibration absorbers and acoustic active cancelling for power transformers as necessary. These effects on human health are considered to be **not significant**.
- 7.11.6 During the construction and decommissioning phases, the Scheme will result in temporary impacts on a number of pedestrian and cyclist facilities in the area through increased traffic, diversions, and public rights of way closures. There will be diversions in place for all impacted routes; however, many of these diversions will result in users interacting with the road network. All closures of public rights of way will be avoided as far as possible including along the cable route. Affected public rights of way will be closed for up to three weeks. This will result in a potential adverse health impact during construction, which is considered to be **not significant**.
- 7.11.7 During the operational phase, the Scheme will provide new permissive routes, which will improve safety, wellbeing and reduce journey times. The Scheme is therefore expected to lead to a positive health impact during the operational phase. Given the scale of this positive impact however, these effects are considered to be **not significant**.
- 7.11.8 During the construction and decommissioning phases, the Scheme will create over 1,000 jobs. The majority of these are likely to be taken up by the local workforce within the 45-minute commuting study area. During these periods the Scheme is therefore expected to lead to a positive health impact on access to work and training. During the operational period, the scheme is assessed to have minimal impact on access to work as 17 jobs will be required onsite per annum. These effects are considered to be **not significant** on local health.

Mitigation Measures

- 7.11.9 Primary mitigation measures are embedded within the Scheme, as set out in the respective chapters in the Environmental Statement [EN010106/APP/6.1], to reduce other operational effects (such as noise, air quality and landscape) which in turn will mitigate the effects on the local community and existing facilities from a human health perspective.

7.11.10 The Scheme design has embedded sufficient mitigation to avoid significant adverse effects on human health and wellbeing, without additional mitigation measures being required.

Cumulative effects

7.11.11 The construction phases of the Scheme and the other committed developments would both be expected to generate employment, and therefore improve wellbeing to those benefitting from the employment. It is expected that there would be a cumulative beneficial effect on construction related employment, and therefore human health, within the local area.

7.11.12 Similarly, once the committed developments are built there will be new commercial, retail and leisure space created that will provide further opportunities for residents to access work and training in the local area. The new employment space would provide job opportunities for existing and new residents to the area, resulting in a cumulative beneficial effect on the health and wellbeing of the local community.

7.12 Other Environmental Topics

7.12.1 **Chapter 16** of the Environmental Statement [EN010106/APP/6.1] assesses the following topics: glint and glare; ground conditions; major accidents and disasters; telecommunications, television reception and utilities; and waste. None of these warrant individual chapters in the Environmental Statement, either due to the brevity of the assessment or the small impact associated with the Scheme. This has been agreed through the Scoping Opinion.

Glint and Glare

7.12.2 'Glint' refers to a momentary flash of bright light typically received by moving receptors or from moving reflectors. 'Glare' refers to a continuous source of bright light typically received by static receptors or from large reflective surfaces.

7.12.3 A number of potential receptors to glint and glare are present in the vicinity of the Order limits. These include aircraft, trains, road vehicles, recreational users of public rights of way, bridleways and residents.

7.12.4 The assessment has been carried out using a numerical model based on the design parameters and local weather and climate data. The majority of receptors assessed will experience **no effects or low impact (not significant)** due to visibility of any panels being screened from view by existing vegetation and landform. **No effects (not significant)** are anticipated for aviation receptors at RAF Mildenhall, RAF Lakenheath and Cambridge Airport due to their distance from the Scheme and orientation of the runways.

7.12.5 A major significant effect is anticipated on a short section (approximately 200m) of the A14, adjacent to Sunnica West A prior to the establishment of mitigation. A short section (approximately 300m) of 2m high solid hoarding will be erected along the Order limits at this location which will reduce this to a **low** impact that is **not significant**. Vegetation planting is included in the landscape design in front of

the hoarding to provide visual screening of the hoarding from the road as it matures, after which the temporary hoarding will be removed.

- 7.12.6 Fifteen proposed solar farms have been identified in the short list of cumulative schemes presented in **Appendix 5A** of the Environmental Statement **[EN010106/APP/6.2]**. It is anticipated that the cumulative developments will be designed to ensure that there will be effective screening to prevent glint and glare effects from the individual proposed developments. Therefore, cumulative effects would be unlikely and are not considered to arise for glint and glare.

Ground Conditions

- 7.12.7 The land condition within the Order limits has been assessed to identify existing potential environmental land quality liabilities and constraints.
- 7.12.8 The land within the Order limits is located within Source Protection Zones (SPZs) designated by the Environment Agency for the protection of potable water supply. A number of rivers, drains and isolated ponds are also located within the study area. There are identified areas of nationally designated ecological significance within 250m of the Order limits.
- 7.12.9 A number of current and historical uses that are potentially contaminative are present on-site or in the surrounding areas, although most of the Order limits has remained undeveloped throughout the historical period studied. Areas of note include active and former landfills, historical and current mining sites, former sewage works and current waste water treatment works, various industrial and commercial activities, farmlands, active and historical (dismantled) railway lines, and a number of infilled pits and ponds, scattered across the land within the Order limits, which may have been filled with a variety of (unlicensed) waste materials.
- 7.12.10 A risk assessment of the potential contaminated linkages has been undertaken for the Site. Potential contaminant linkages include hazards to human health, controlled waters, ecological receptors, properties, or impacts to mining / mineral sites. The depth of construction is relatively shallow and potential contaminant linkages associated with the current use or the Scheme are classified as **not significant** after taking into account mitigation/control measures, such as appropriate use of personal protective equipment (PPE), containment measures and installation of equipment (i.e. inverters, transformers and switchgear) on concrete bases as outlined in the Framework Construction Environmental Management Plan (**Appendix 16C** of the Environmental Statement **[EN010106/APP/6.2]**) and site specific geo-environmental ground investigation data.
- 7.12.11 Mitigation measures and standard best practice will be followed during construction, operation, and decommissioning of the Scheme. A DCO requirement is proposed which would require site investigation to be undertaken at the post-consent stage to provide geo-environmental data to evaluate soil and groundwater quality. This in turn will allow for recommendations for any remediation works to remove any unacceptable pollutant linkages on completion of the Scheme. The measures outlined in the detailed CEMP and DEMP will be followed throughout construction and decommissioning respectively.

7.12.12 The shortlisted cumulative schemes provided in **Appendix 5A** of the Environmental Statement **[EN010106/APP/6.2]** are expected to result in some degree of excavation or ground disturbance. Provided that the requirements of relevant policy and legislation relating to land contamination and remediation are integrated within the design and appropriate mitigation measures are applied during the demolition and construction phases of each cumulative scheme, it is considered that the cumulative effect on ground conditions will be negligible.

Major Accidents and Disasters

- 7.12.13 This section summarises the potential effects of the Scheme on the environment as a result of the vulnerability of the Scheme to risks of major accidents or disasters occurring and affecting it. 'Accidents' are an occurrence resulting from uncontrolled developments in the course of construction, operation and decommissioning (e.g. major emission, fire or explosion). 'Disasters' are naturally occurring extreme weather events or ground related hazard events (e.g. subsidence, landslide, earthquake).
- 7.12.14 A number of receptors are present in the vicinity of the Scheme which could be vulnerable to major accidents or disasters, either because of their proximity to the Scheme or their importance to the surrounding area. These include towns, villages, farms and residential homes; commercial sites and buildings; roads; railways; designated ecological sites, woodland, farmland, and waterbodies; and underground infrastructure services including electricity, water, communications, and gas.
- 7.12.15 The risk of criminal damage, birdstrike, fire, and rail accidents have been assessed for the construction, operation, and decommissioning phases of the Scheme. Minimising the risk of major accidents during construction and decommissioning will be addressed through appropriate risk assessments as required in the Construction Environmental Management Plan. Security fencing and cameras will be installed to prevent criminal activity.
- 7.12.16 There is a theoretical, potential fire risk associated with certain types of batteries such as lithium ion. An Outline Battery Fire Safety Management Plan has been prepared in consultation with the Suffolk and Cambridgeshire Fire and Rescue Services and is provided with the DCO Application **[EN010106/APP/7.6]**. The implementation of the Fire Safety Management Plan will be secured by a Requirement to the DCO. This fully explores the risks associated with fires from Battery Energy Storage System equipment and minimises the impact of an incident during construction, operation and decommissioning of the facility through implementation of regulatory requirements, good practice design, and incorporating suggestions from the fire and rescue services.
- 7.12.17 The Outline Fire Safety Management Plan outlines the inclusion of two sources of firefighting water on site during operation. These include:
- a. Internal automated sprinkler or water mist system; and
 - b. Firefighting water for the Fire and Rescue team.

- 7.12.18 Further information on the measures to be included within the Scheme design to suppress and manage the risk of fire are included within the Outline Fire Safety Management Plan [EN010106/APP/7.9] and **Chapter 16** of the Environmental Statement [EN010106/APP/6.1].
- 7.12.19 Given the nature of accidents and disasters, there is the potential for significant effects if an event does occur, however, the assessment has concluded that the risk of such events occurring is low for the Scheme and significant effects on the environment are therefore not anticipated. The focus is on prevention of major accidents and disasters, and mitigation if an event does occur. Taking into account the good industry practice and additional mitigation measures discussed above, the risk of accidents and disasters is considered low.
- 7.12.20 The shortlisted cumulative schemes provided in **Appendix 5A** of the Environmental Statement [EN010106/APP/6.2] located in close proximity to the Order limits are residential developments, solar farms and battery storage around Burwell Substation. The solar developments in close proximity to the Order limits are located around Burwell Substation and adjacent to Grid Connection Route B. They are not positioned in close proximity to the developable area of the Order limits. Additionally, with embedded mitigation and additional mitigation to reduce the risk of fire, no significant effects are expected from the Scheme alone. For these reasons, it is concluded that no significant cumulative effects would arise from the Scheme.

Telecommunications, Television Reception and Utilities

- 7.12.21 This section evaluates the effects of the Scheme on telecommunication infrastructure, television reception, and existing utilities.
- 7.12.22 Two mobile phone masts are present within the Order limits; one within Sunnica East Site B, and other in Sunnica West Site A. The Scheme is not expected to interfere with telecommunication infrastructure due to its low height and therefore **no effects** are anticipated in the construction, operation, and decommissioning phases.
- 7.12.23 The area within and surrounding the Order limits is predominantly served by the Tacolneston transmitter (Norfolk) and the Sandy Heath transmitter (Central Bedfordshire). The Linnet Valley and Bury St Edmunds repeat transmitters are located approximately 15km south-east of Sunnica West Site A, both of which are part of the Tacolneston transmitter group. The Scheme consists of fixed low-lying infrastructure and is therefore unlikely to interfere with digital television signals and therefore **no effects** are anticipated in the construction, operation, and decommissioning phases.
- 7.12.24 On-site utilities could include water, sewers, gas or oil pipelines and electrical cables. Knowledge of the utilities during design and construction allows any effects to be negated by avoiding them or by use of suitable structures, such as pipe bridges. Consultation is being undertaken with a number of organisations to identify the existing utilities infrastructure within the Order limits and to agree provisions to include in the DCO for the protection of that infrastructure. The potential exists for utilities to be affected during the construction of the Scheme through damage caused as a result of excavation and engineering operations. In

the absence of precautionary measures to avoid damage to utilities, this could theoretically lead to a short-term adverse effect.

- 7.12.25 Precautionary measures will therefore be included as part of the embedded mitigation, such as mapping infrastructure that crosses the Scheme and avoiding it through the design. The DCO also includes protective provisions, which reflect the requirements of utility undertakers which must be complied with in order to protect their infrastructure. This would reduce the likelihood of effects on utilities during construction. Therefore, **no significant** adverse effects are expected during construction.
- 7.12.26 The decommissioning phase would require below ground works to remove the on-site infrastructure; however, works would be undertaken within the footprint excavated during construction. Additionally, the embedded mitigation measures used during construction would also apply during decommissioning. Therefore, **no significant** adverse effects are predicted during decommissioning.
- 7.12.27 **No effects** on utilities are predicted as a result of the operational phase of the Scheme because no below-ground works should be required during operation.
- 7.12.28 The Scheme has been assessed to have no effect on telecommunication, television or utilities. It is expected that the other developments included within the cumulative schemes shortlist (**Appendix 5A** of the Environmental Statement **[EN010106/APP/6.2]**) would also have no effect on telecommunications and television reception and would adhere to mitigation to reduce the risk of damaging utilities. All developments will need to be managed through a CEMP and would include mitigation measures to reduce the risk of damaging utilities during construction. Therefore, no cumulative effects are expected on telecommunications, television reception, or utilities.

Waste

- 7.12.29 This section discusses the expected waste streams during each phase of the Scheme and the effects that may arise from waste as a result of the Scheme. Wastes include surplus spoil, scrap, recovered spills, unwanted surplus materials, packaging, office waste, wastewater, broken, worn-out, contaminated or otherwise spoiled plant, equipment and materials.
- 7.12.30 The waste carriers and landfill sites used will be determined by the contractor pre-construction. Two Authorised Landfill Sites are located adjacent to the site, to the east of the A11. These are Kennett Hall Farm and Kennett Phase 2A.
- 7.12.31 Given the nature of the Scheme, significant quantities of waste are not anticipated. Expected waste streams during the construction, operation and decommissioning phases are discussed below. A Construction Resource Management Plan (Construction Resource Management Plan), a Decommissioning Resource Management Plan (DRMP), a detailed CEMP, and a detailed DEMP will be prepared for the construction and decommissioning phases. These will include measures to control and manage waste on-site. A Framework CEMP and a Framework DEMP are provided in **Appendices 16C** and **16E** of the Environmental Statement **[EN010106/APP/6.2]**.

- 7.12.32 All waste transported off site will be delivered to the appropriately licenced receivers of such materials. Waste arisings will be prevented and designed out where possible. Opportunities to re-use material resources will be sought where practicable. Toxic and / or hazardous waste must be treated by an authorised operator. Transportation of hazardous waste will also require an authorised carrier. Materials are to be dealt with in accordance with the detailed Construction Environmental Management Plan and a Construction Resource Management Plan. With these in place and the appropriate control measures followed, **no effects** are anticipated during construction.
- 7.12.33 During operation, waste arisings are expected to be substantially less than during the construction phase and would include: welfare facility waste; equipment needing replacing; waste metals; and general waste (paper, cardboard, wood, etc.). **No significant** effects are anticipated during operation.
- 7.12.34 During decommissioning, waste streams are expected to include, but not be limited to, solar infrastructure, batteries, cables, welfare facility waste, waste metals, and waste water. Prior to decommissioning, opportunities to minimise waste as far as possible will be explored. Possibilities to re-use or recycle materials will be explored before resorting to landfill options. There is a new industry emerging for recycling solar panels and it is expected that this industry will be mature by the time the Scheme is decommissioned. This would be explored, in addition to any resale of any operational panels. Therefore, taking this into account, **no significant** effects are anticipated during decommissioning.
- 7.12.35 If the construction or decommissioning phases of the Scheme happen at the same time as the construction phase of another significant scheme within the local area, there may be some cumulative effects associated with waste. There are a number of potential schemes that, depending on construction dates, may have cumulative effects with the Scheme. These include a number of new residential developments within the local area, solar schemes, and two new battery storage facilities.
- 7.12.36 Cumulative volumes of waste may put pressure on the capacity of local recycling plants or landfill sites. This would be managed through the Construction Resource Management Plan and in consultation with waste providers. Therefore, effects from cumulative volumes are not expected to be significant.

7.13 Summary and Conclusions

- 7.13.1 The Environmental Statement explains the findings of the EIA process that has been undertaken for the Scheme. Feedback from the formal consultation process has been taken into account when preparing the DCO Application and in undertaking the EIA process.
- 7.13.2 A number of environmental impact avoidance, design and mitigation measures have been identified to mitigate and control environmental effects during construction, operation (including maintenance) and decommissioning of the Scheme. It is proposed that these will be secured through appropriate requirements and other controls within the DCO Application for the Scheme, should this be granted.

8 References

- Ref 1 Her Majesty's Stationary Office (HMSO) (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- Ref 2 HMSO (2008) The Planning Act 2008
- Ref 3 Department of Energy and Climate Change (DECC), (2011) National Policy Statement for Energy (EN-1)
- Ref 4 DECC (2011) National Policy Statement for Renewable Energy Infrastructure (EN-3)
- Ref 5 DECC (2011) National Policy Statement for Electricity Networks Infrastructure (EN-5)
- Ref 6 Ministry of Housing, Communities and Local Government (MHCLG) (2019) National Planning Policy Framework

9 Figures

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- LEGEND**
- The Order limits
 - Sunnica East Site A
 - Sunnica East Site B
 - Sunnica West Site A
 - Sunnica West Site B
 - Maximum corridor for Grid Connection Route A
 - Maximum corridor for Grid Connection Route B
 - High Voltage Connection
 - Corridors
 - Public Highway within Scheme
 - Local Authority Boundary
 - Strategic Highway
 - Town
 - Village

NOTE:
Public highways run through the Sunnica East Site, which are not part of the site boundary. These have been digitised based on the 1:1250 scale OS Mastermap.

Small areas of the Order limits are shown on some small sections of roads where works will need to be undertaken to accommodate construction traffic.

High voltage cables will be required to cross internal roads and to connect areas of the sites throughout. These are not shown on the plans.

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APPF Regulation: 5(2)(a)

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**FIGURE 1
SCHEME LOCATION**

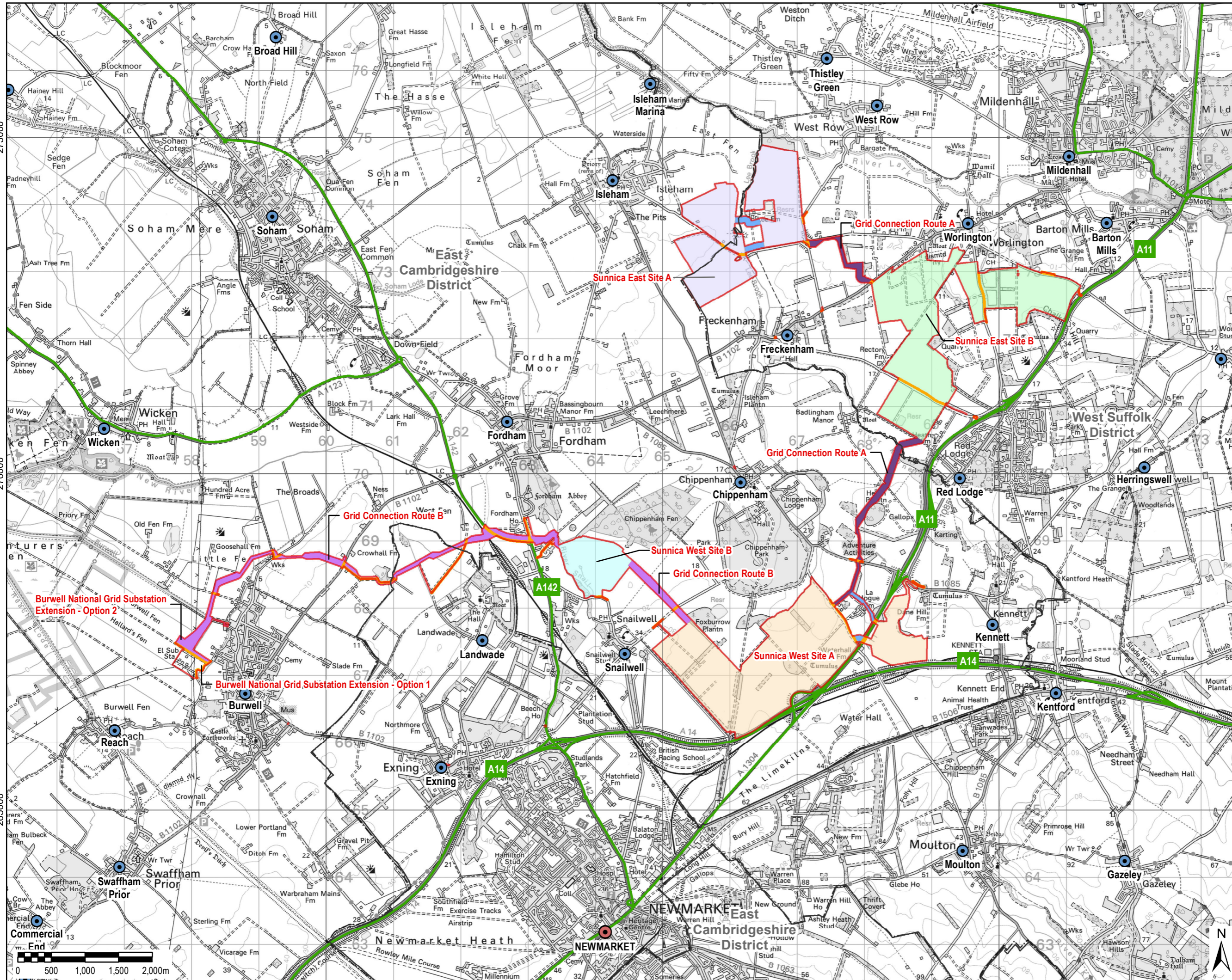
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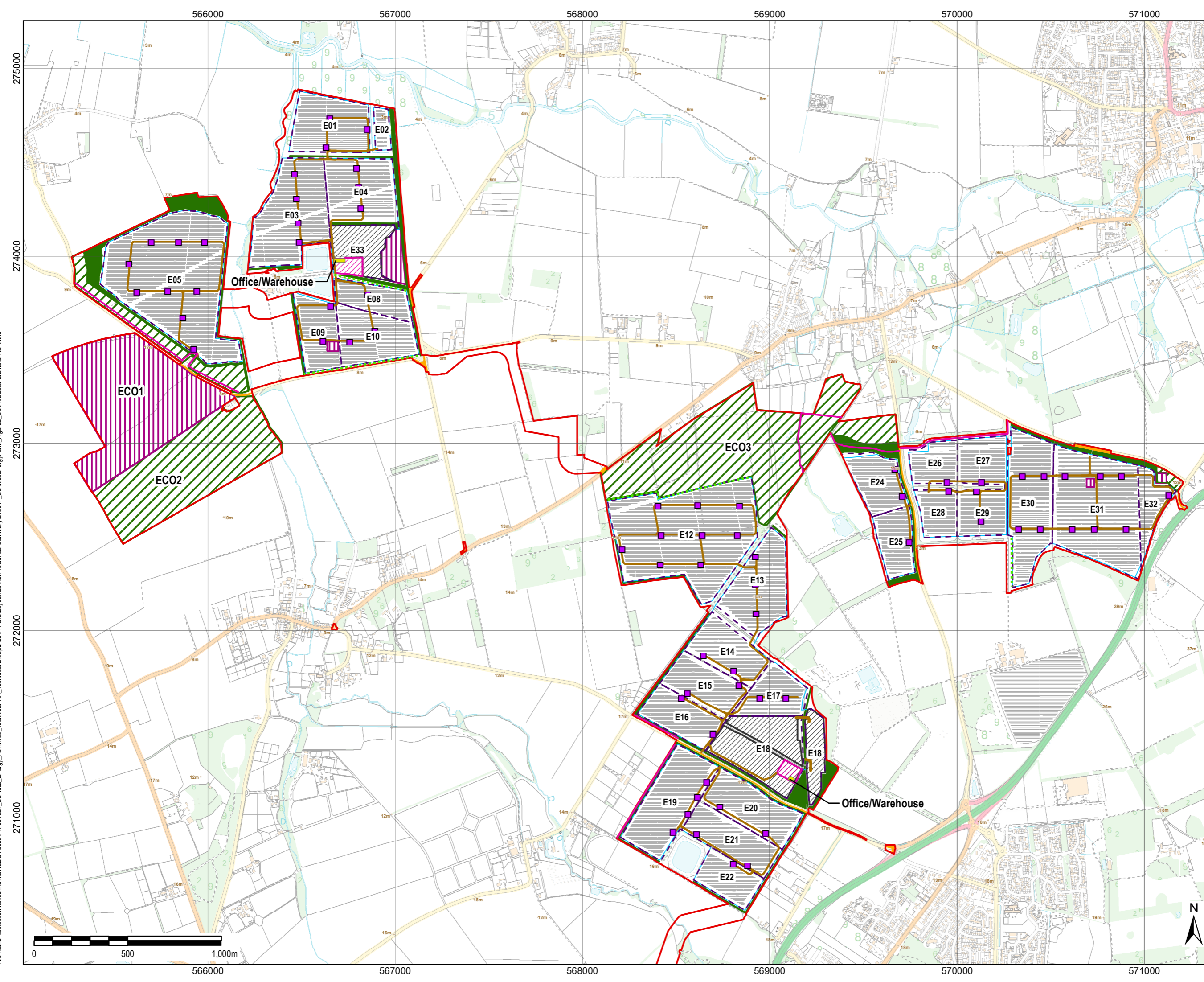
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LEGEND

- The Order limits
- Public Highway within Scheme
- Proposed Scheme Plan**
 - Developable Area
 - Boundary Fence
 - BESS and Substation
 - Compound Area (Permanent)
 - Solar PV Array
 - Illustrative Locations of Solar Stations
 - Proposed Road
 - Potential Provision of Permissive Route
- Green Infrastructure**
 - Native Grassland Planting
 - Native Grassland Planting within Archaeological Mitigation Areas
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Proposed Hedgerow (new planting or infilling of existing vegetation)

Note: Developable fields previously referred to as E06, E07, E11 and E23 are no longer being developed with solar infrastructure and now form part of the mitigation strategy, however, the field numbering for the remaining developable fields has been retained for consistency.

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**FIGURE 2
SUNNICA EAST
SITE A AND B
PARAMETER PLAN**

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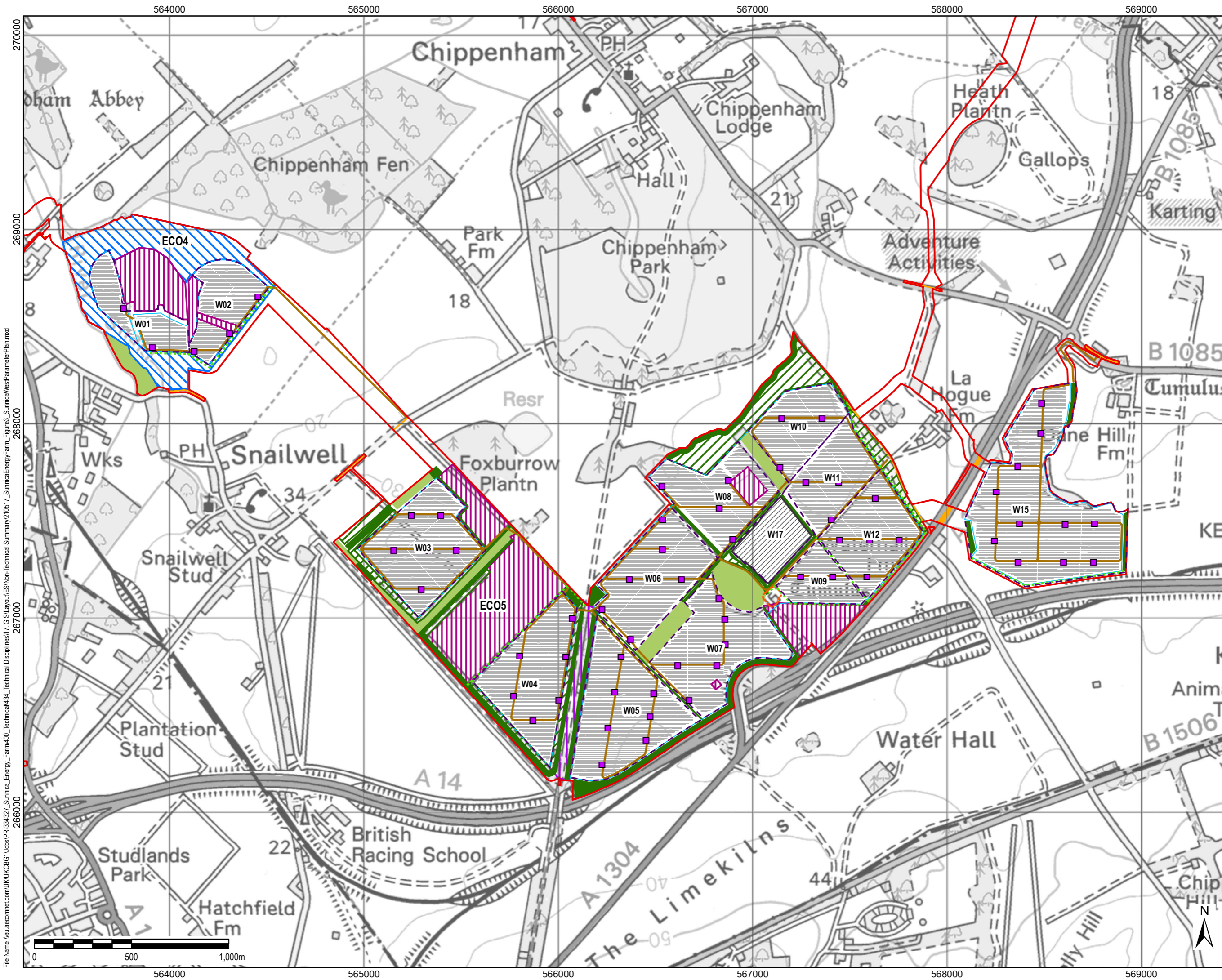
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LEGEND

- The Order limits
- Woodstore - 20m Buffer
- Public Highway within Scheme

Proposed Scheme Plan

- Developable Area
- Solar PV Array
- BESS and Substation
- Boundary Fence
- Illustrative Location of Solar Stations
- Proposed Road

Green Infrastructure

- Native Grassland Planting
- Native Grassland Planting within Archaeological Mitigation Areas
- Native Grassland/Wetland
- Heritage Offset with additional planting along The Avenue
- Proposed Woodland (new planting or infilling of existing vegetation)
- Retained Woodland
- Proposed Hedgerow (new planting or infilling of existing vegetation)

Note: Developable fields previously referred to as W13, W14 and W15 are no longer within the Order limits; however, the field numbering for the remaining developable fields has been retained for consistency.

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Drawing Title
**FIGURE 3
SUNNICA WEST A AND B
PARAMETER PLAN**

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LEGEND

- The Order limits
- Public Highway within Scheme
- Proposed Scheme Plan**
- Developable Area
- BESS and Substation
- Compound Area (Permanent)
- Proposed Road
- Potential Provision of Permissive Route
- Access Point**
- Primary Access: Construction, Operation and Decommissioning
- Crane Access: Construction, Decommissioning and for Emergency Vehicles in Operation Only
- Secondary Access: Construction and Decommissioning Only
- Secondary Access: Construction, Operation and Decommissioning
- Secondary Access: Construction, Operation and Decommissioning (Not for HGV)
- Secondary Access: Construction, Decommissioning and for Emergency Vehicles in Operation Only
- Secondary Access: Operation only

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**FIGURE 4
SUNNICA EAST ACCESS PLAN**

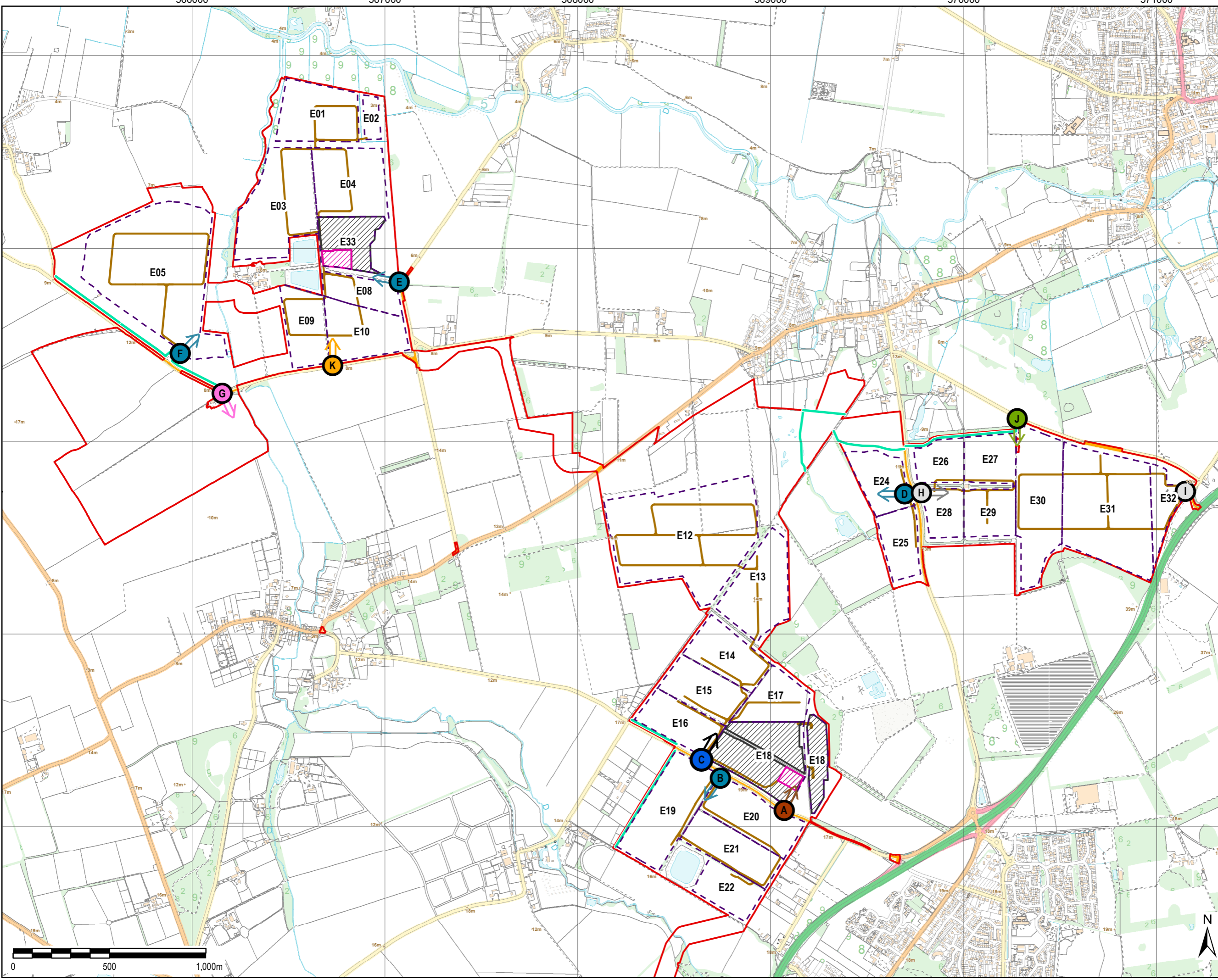
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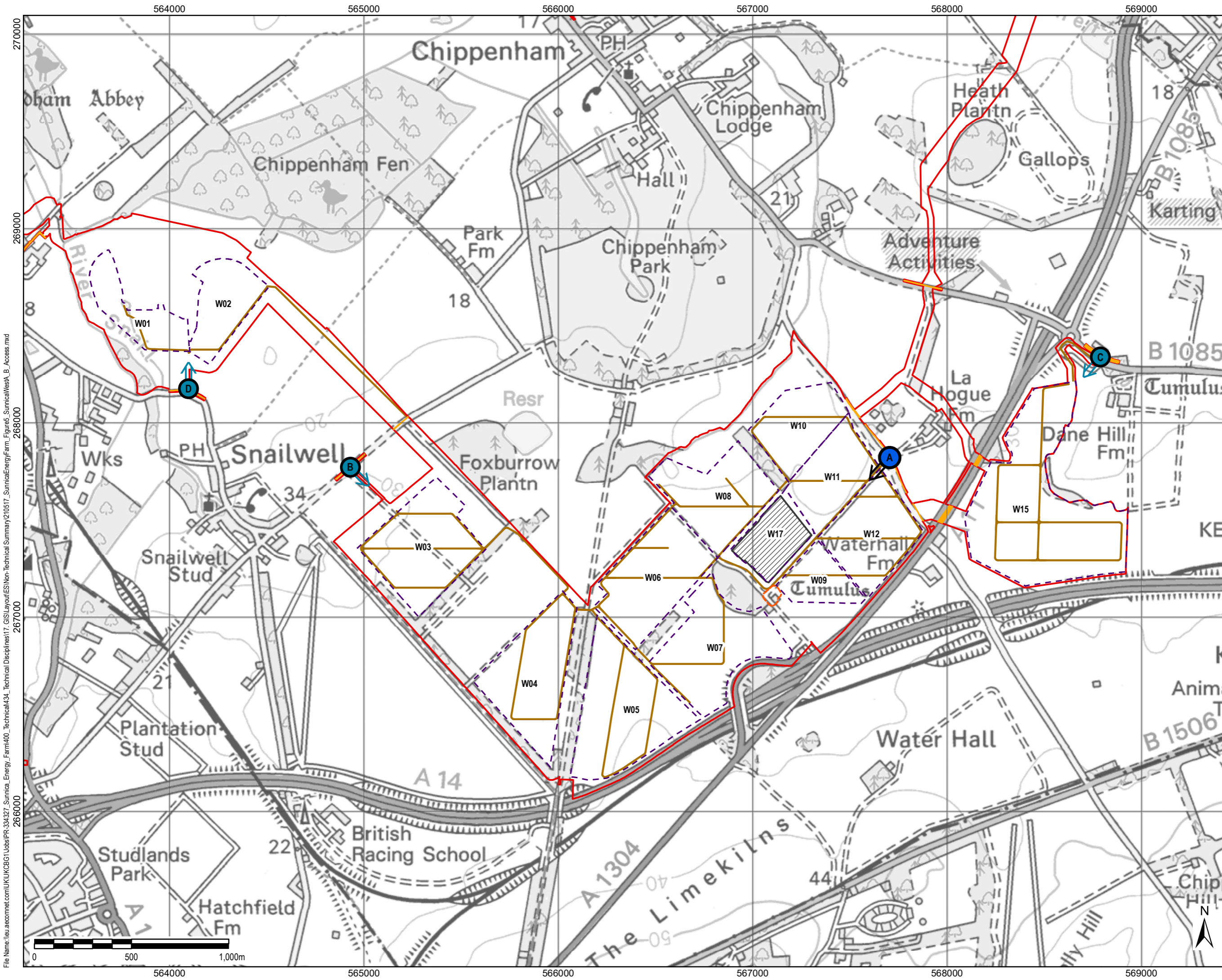
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LEGEND

- The Order limits
- Woodstore - 20m Buffer
- Public Highway within Scheme

Proposed Scheme Plan

- Developable Area
- BESS and Substation
- Proposed Road

Access Point

- Primary Access: Construction, Operation and Decommissioning
- Secondary Access: Construction, Operation and Decommissioning

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**FIGURE 5
SUNNICA WEST ACCESS PLAN**

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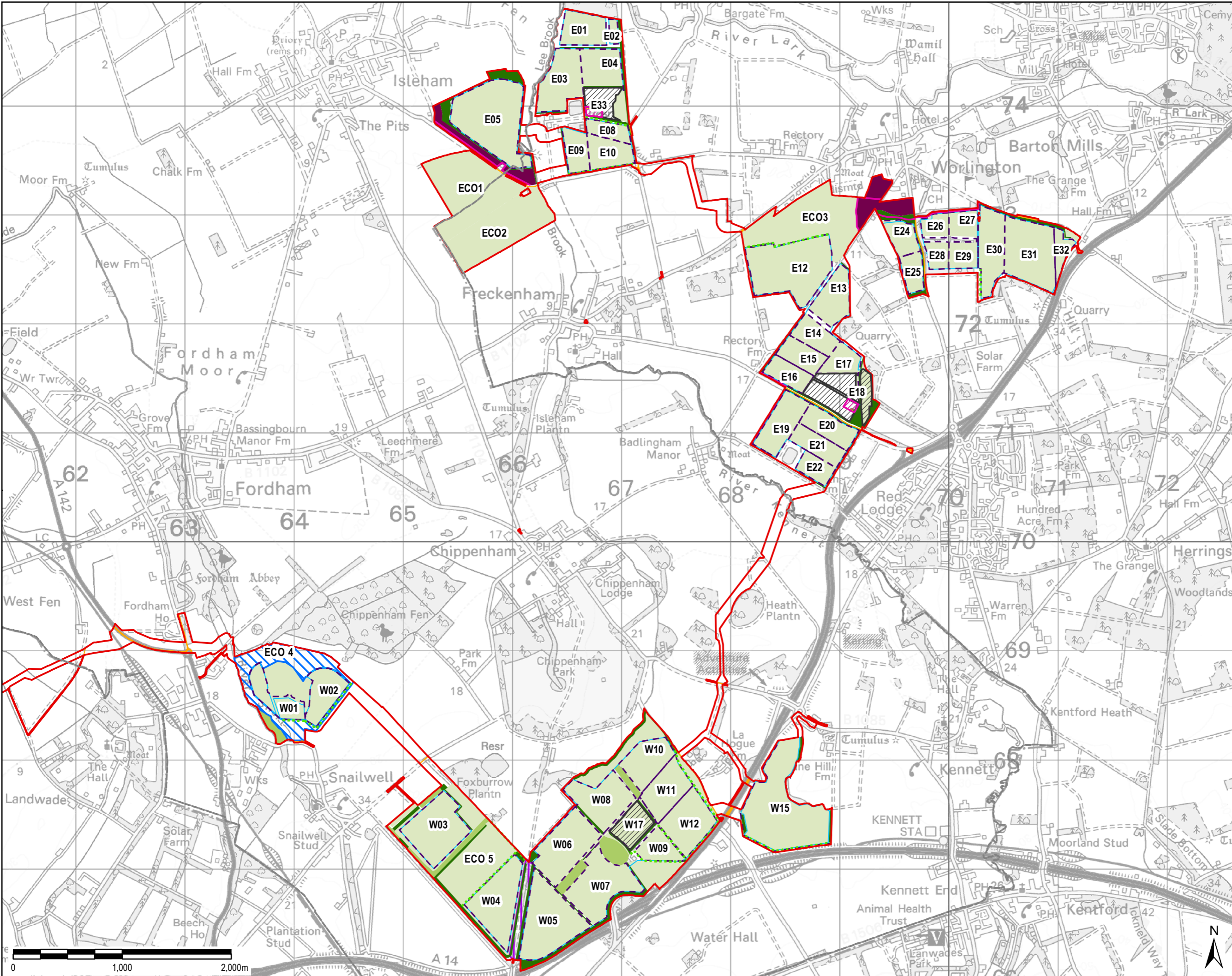
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LEGEND

- 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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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

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Drawing Title
**FIGURE 6A
LANDSCAPE MASTERPLAN
SUNNICA EAST SITE
AND WEST SITE**

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

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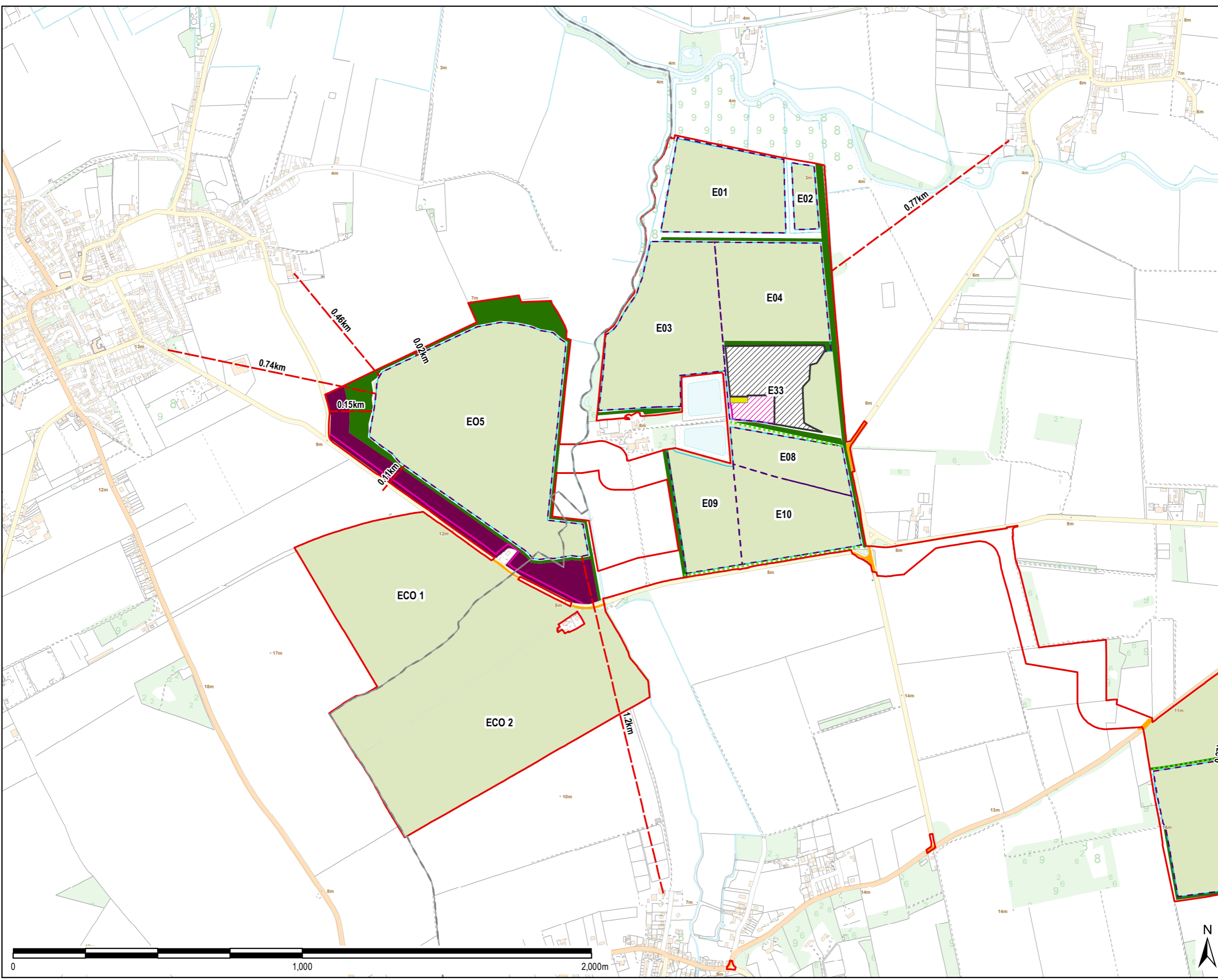
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**FIGURE 6B
LANDSCAPE MASTERPLAN
SUNNICA EAST SITE A**

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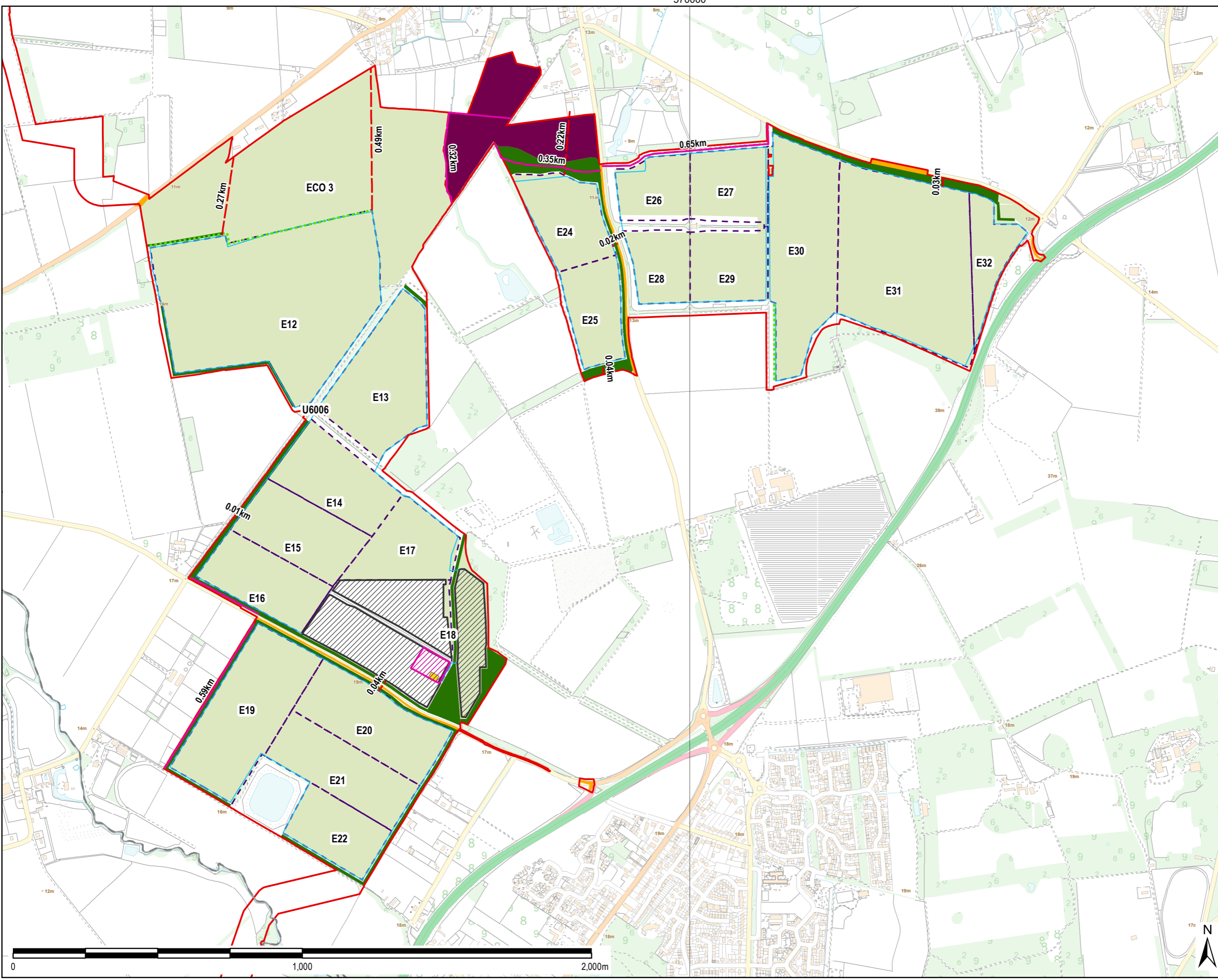


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- County Boundary
- District Boundary
- Potential Provision of Permissive Route
- Proposed Hedgerow (new planting or infilling of existing vegetation)
- BESS and Substation
- Developable Area
- Native Grassland Planting
- Office/Warehouse
- Boundary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



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**FIGURE 6C
LANDSCAPE MASTERPLAN
SUNNICA EAST SITE B**

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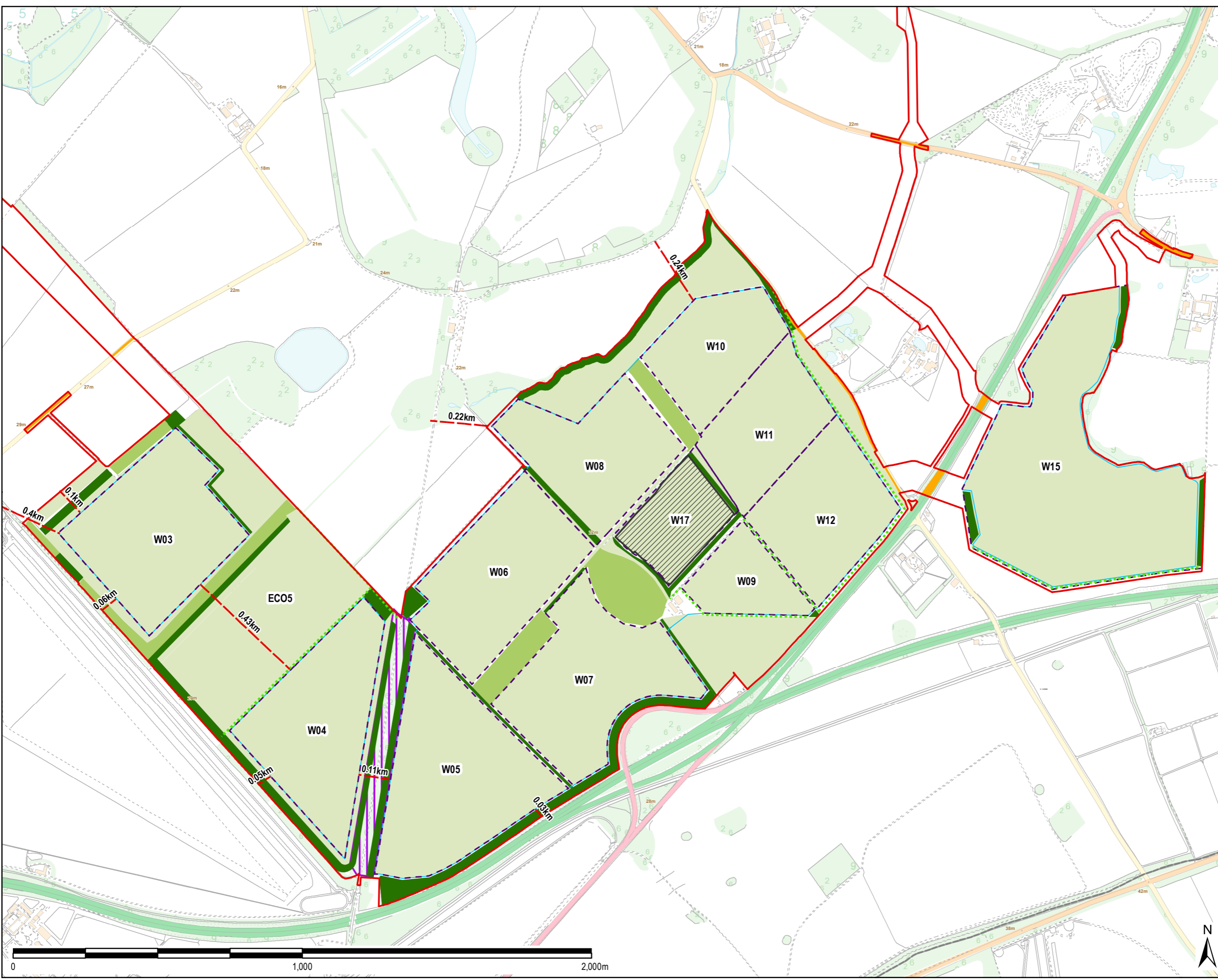


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 - County Boundary
 - District Boundary
 - Proposed Hedgerow (new planting or infilling of existing vegetation)
 - BESS and Substation
 - Developable Area
 - Native Grassland Planting
 - Boundary Fence
 - Public Highway within Scheme
 - Heritage Offset with additional planting along The Avenue
 - Proposed Woodland (new planting or infilling of existing vegetation)
 - Retained Woodland



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Drawing Title
**FIGURE 6D
LANDSCAPE MASTERPLAN
SUNNICA WEST SITE A**

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- Developable Area
- Native Grassland Planting
- Boundary Fence
- Public Highway within Scheme
- Native Grassland/Wetland
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Drawing Title
**FIGURE 6E
LANDSCAPE MASTERPLAN
SUNNICA WEST SITE B**

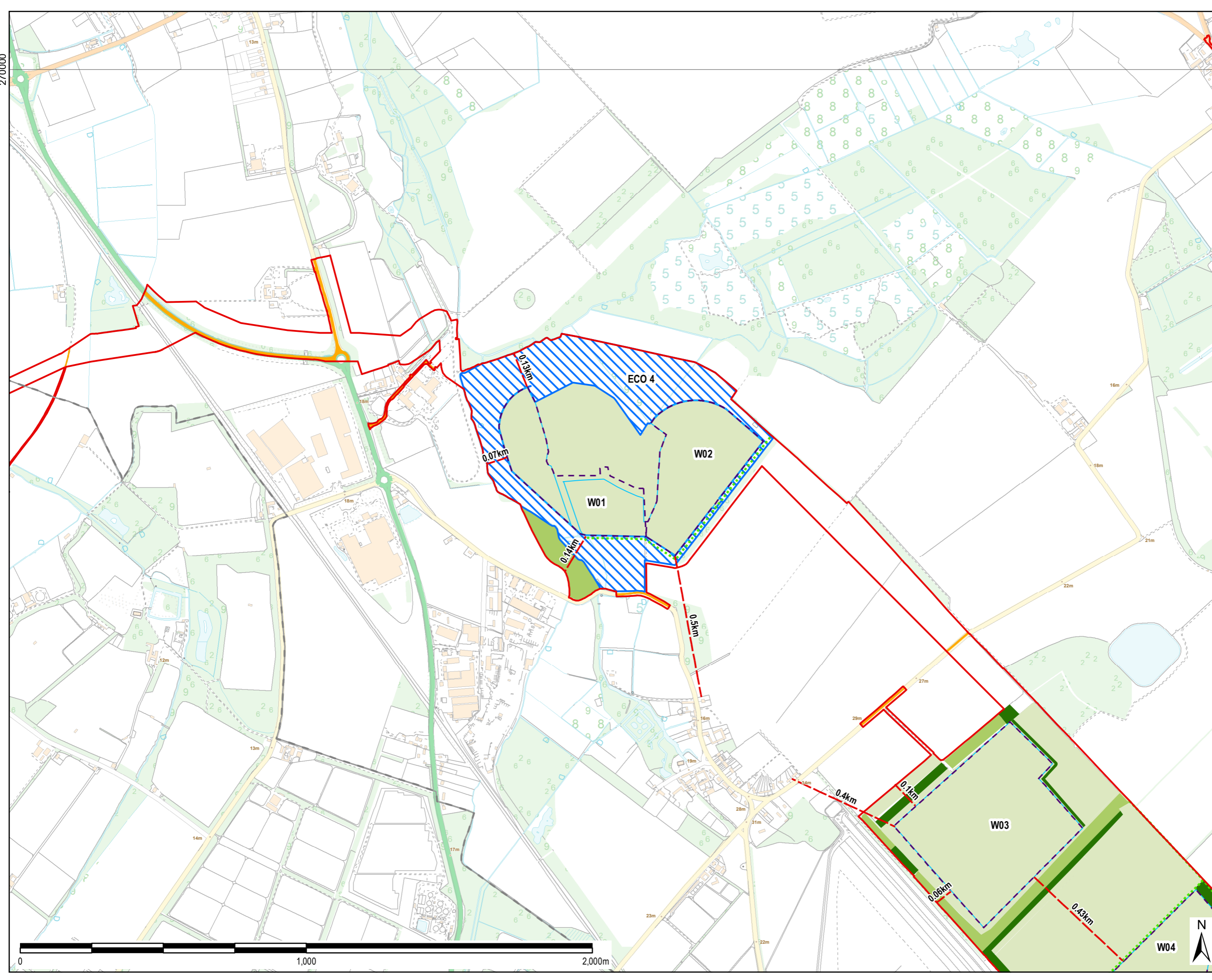
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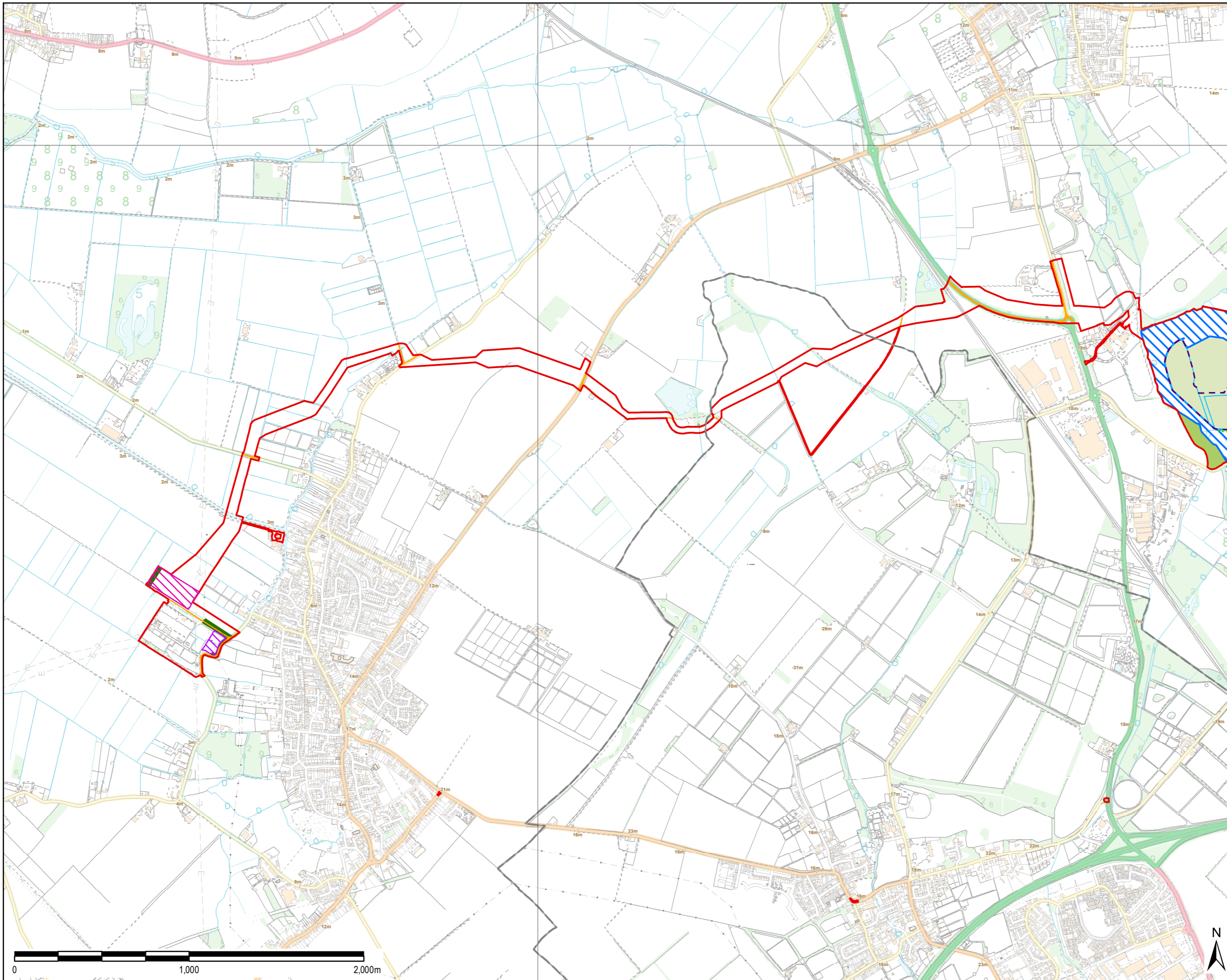
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LEGEND

- The Order Limits
- County Boundary
- District Boundary
- Proposed Hedgerow (new planting or infilling of existing vegetation)
- Developable Area
- Native Grassland Planting
- Boundary Fence
- Public Highway within Scheme
- Native Grassland/Wetland
- Proposed Woodland (new planting or infilling of existing vegetation)
- Retained Woodland
- National Grid Substation Extension Burwell - Option 1
- National Grid Substation Extension Burwell - Option 2



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NOTE: Document Reference: EN010106/APP/6.4 APFF Regulation: 5(2)(a)

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

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LEGEND

- The Order limits
- National Grid Substation Extension Burwell - Option 1
- National Grid Substation Extension Burwell - Option 2

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Drawing Title
**FIGURE 7
LOCATION OF OPTIONS 1
AND 2 FOR BURWELL
SUBSTATION EXTENSION**

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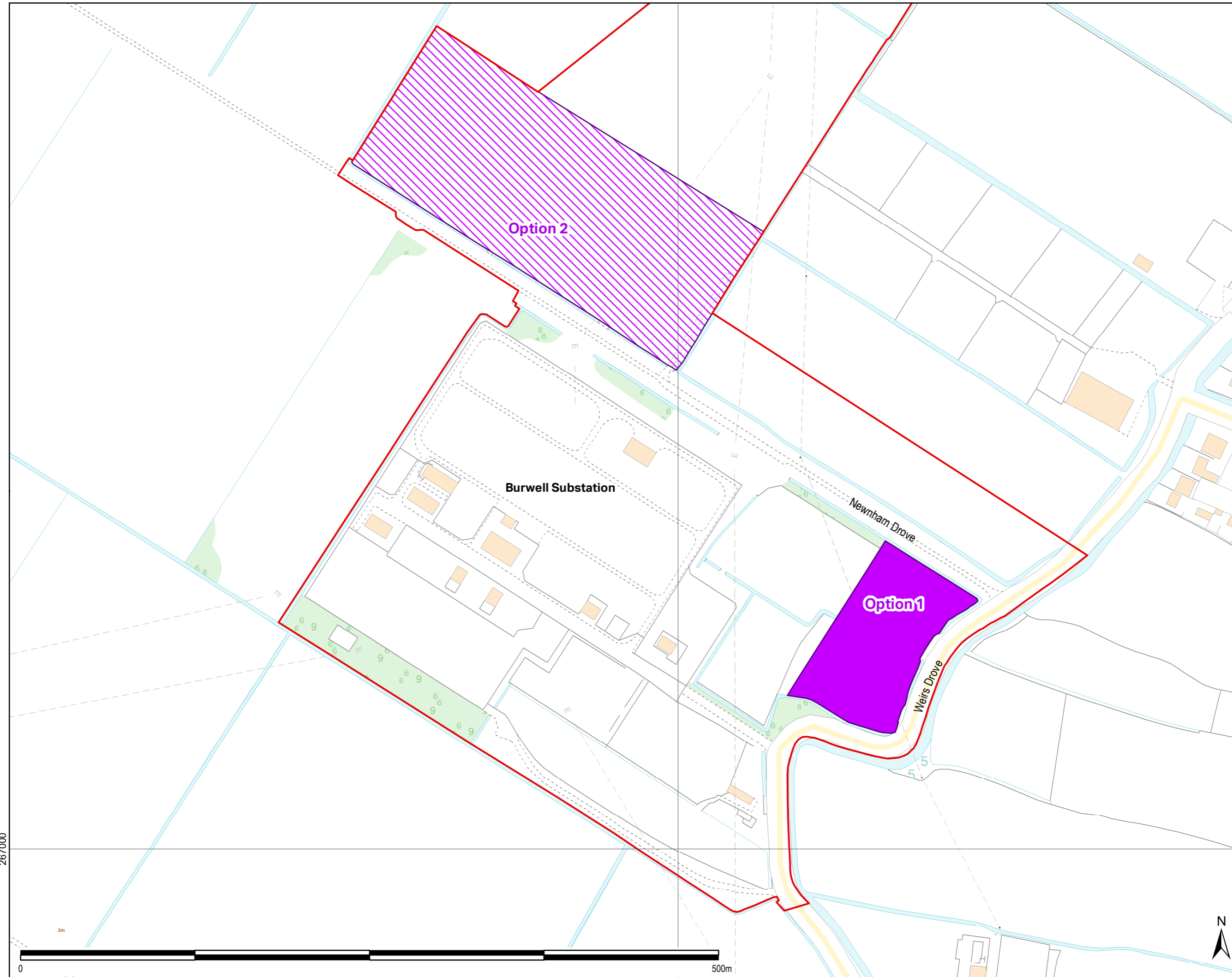
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10 Acronyms

AC	Alternating Current
ALC	Agricultural Land Classification
AQMA	Air Quality Management Area
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CRMP	Construction Resource Management Plan
CWS	County Wildlife Site
dB	Decibels
DC	Direct Current
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
DRMP	Decommissioning Resource Management Plan
EIA	Environmental Impact Assessment
ES	Environmental Statement
GHG	Greenhouse Gases
GVA	Gross Value Added
HGV	Heavy Good Vehicle
IAQM	Institute of Air Quality Management
IEMA	Institute of Environmental Management
kV	Kilovolts
NNR	National Nature Reserve
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
OLEMP	Outline Landscape and Ecological Management Plan
PEI	Preliminary Environmental Information
PV	Photovoltaic
RPG	Registered Park and Garden
SAC	Special Area of Conservation
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Urban Drainage System
TTWA	Travel To Work Area