



SUNNICA ENERGY FARM

Preliminary Environmental Information Report

Chapter 2: Scheme Location

Sunnica Ltd

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2. Scheme Location

2.1 Introduction

2.1.1 This chapter provides a description of the existing conditions within the DCO Site and the surrounding areas and the key receptors that will be assessed in detail within the technical topic chapters.

2.1.2 The existing constraints within the DCO Site outlined in this chapter were identified through a desktop search of readily available data, and include the following:

- Statutory nature conservation designations;
- Local nature designations;
- Scheduled monuments;
- Conservation areas;
- Protected roadside verges;
- Waterbodies;
- Flood zones;
- Areas of vegetation; and
- Public rights of way (PRoW).

2.1.3 The purpose of this is to provide an overview of the DCO Site and the surrounding areas. Constraints identified through further studies, such as buried archaeology, are described in the relevant technical chapters.

2.1.4 This chapter is supported by the following figures in Volume 3:

- Figure 2-1: Scheme Boundary
- Figure 2-2: Sunnica East Sites A and B Environmental Constraints
- Figure 2-3: Sunnica West Sites A and B Environmental Constraints

2.2 Existing Conditions Within and Surrounding the DCO Site

2.2.1 The Scheme comprises four sites (the Sunnica East Site A, Sunnica East Site B, Sunnica West Site A and Sunnica West Site B and known collectively as the 'Sites'). The Scheme includes the associated electrical infrastructure for connection to the national transmission system, comprising Grid Connection Route A, Grid Connection Route B and an extension to the Burwell National Grid Substation.

2.2.2 The maximum area of land required for the construction, operation (including maintenance) and decommissioning of the Scheme is shown in Figure 2-1. There will be no additional land required temporarily for construction or decommissioning outside of the permanent land take required for each of the sites during operation, as shown in Figure 2-1. It is important to note that this may be subject to change if the area of permanent land takes reduces following the statutory consultation process. The land-take for the DCO Site

will be refined as the Scheme design progresses, taking into account environmental and technical factors, and consultation responses.

Sunnica East Site A

- 2.2.3 The environmental constraints outlined in this section are shown on Figure 2-2.
- 2.2.4 The Sunnica East Site A encompasses an area of approximately 222.4ha 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, as shown on Figure 2-1. The developable area, which will contain the solar photovoltaic (PV) panels, battery energy storage systems (BESS), and associated infrastructure, comprises 179.0ha with the remaining area set aside for environmental mitigation and enhancement. The developable areas are described further and shown in figures in Chapter 3. The Sunnica East Site A straddles the boundary between the counties of Cambridgeshire and Suffolk and falls within the administrative areas of ECDC and WSC.
- 2.2.5 The landscape features within the Sunnica East Site A consist of agricultural fields interspersed with individual trees, hedgerow, linear tree belts, farm access tracks, and local transport roads (Plate 2-1). The hedgerows within Sunnica East Site A are predominantly thin lines of vegetation with sporadic trees present. The arable fields are of moderate size and generally of regular shape.



Plate 2-1. Landscape within Sunnica East Site A.

- 2.2.6 The area immediately surrounding the 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 the Sunnica East Site A. The local transport network comprises several local roads. Beck Road, which bisects the Sunnica East Site A to the west, runs south from Isleham and joins Isleham Road and Sheldrick's Road runs parallel to the eastern boundary of the Sunnica East Site A.
- 2.2.7 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 the Sunnica East Site A, between Beck Road and Mortimer Lane.
- 2.2.8 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 Scientific Interest (SSSI) and National Nature Reserve (NNR), which forms part of the Fenland SAC and

Chippenham Fen Ramsar, which is located approximately 2.8km to the south of the Site. Breckland SPA is located approximately 4.8km to the east of the Site.

- 2.2.9 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 the Sunnica East Site A. The other (HER Reference 1013278) is known as 'Isleham priory: an alien Benedictine priory 100m west of St Andrew's Church' and is located approximately 950m to the north-west of the Sunnica East Site A.
- 2.2.10 There are two Grade I listed buildings and a number of Grade II listed buildings located within Isleham and a number of Grade Listed II buildings within West Row.
- 2.2.11 Sunnica East Site A is located predominantly within Flood Zone 1¹, with areas of Flood Zones 2² and 3³ associated with the Lee Brook within the western extent, and also north from the River Lark.

Sunnica East Site B

- 2.2.12 The environmental constraints outlined in this section are shown on Figure 2-2.
- 2.2.13 The Sunnica East Site B encompasses an area of approximately 322.7ha and is located approximately 1.5km south-east of Mildenhall, 1.5km east of Freckenham and immediately south of Worlington, as shown on Figure 2-1. The developable area, which will contain the solar PV panels, BESS, and associated infrastructure, comprises 238.7ha with the remaining area set aside for environmental mitigation and enhancement. The developable areas are described further and shown in figures in Chapter 3. The Sunnica East Site B is located with the county of Suffolk and falls within the administrative area of WSC.
- 2.2.14 The landscape features within Sunnica East Site B consist of agricultural fields interspersed with individual trees, hedgerow, tree belts (linear) small woodland blocks, farm access tracks, and local transport roads (including the B1085) (see Plate 2-2 and Plate 2-3). The hedgerows within the Sunnica East Site B range between lengths of dense tall vegetation (shrub and tree species) and thin lines of vegetation with sporadic trees present, although the former is a dominant feature. The arable fields are of small to moderate size, some of which are of irregular shape.

¹ 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.* <http://apps.environment-agency.gov.uk/wiyby/cy/151263.aspx>

² 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.* <http://apps.environment-agency.gov.uk/wiyby/cy/151263.aspx>

³ 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.* <http://apps.environment-agency.gov.uk/wiyby/cy/151263.aspx>



Plate 2-2 Landscape features at the Sunnica East Site B.



Plate 2-3 Flat agricultural land within the Sunnica East Site B boundary.

- 2.2.15 The area immediately surrounding the Sunnica East Site B comprise several small rural villages, including Worlington immediately to the north, Barton Mills 1km to the north-east, Red Lodge 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 (direct current) 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 to the south.
- 2.2.16 The operational area of Worlington Quarry is located adjacent to the south-eastern area of Sunnica East Site B, operated by Frimstone Ltd since its commencement in 2004 and includes a concrete batching plant operated by Hanson. Part of Sunnica East Site B lies within working area 5 of the extant 2004 planning permission for the quarry (application reference F/04/0227). This area was confirmed by Frimstone to be barren of sand and gravel and has therefore not been worked and is currently in agricultural use. The operational quarry covers some 70ha of land accessed from Elms Road, approximately 700m north of the A11 Red Lodge junction. The quarry has been operational since planning permission was originally granted for mineral extraction in 2004, extracting sand and gravel and importing inert material for recycling and to utilise for the restoration of the site. The consent for quarry extraction expires on 30 October 2025, after which it will be restored in accordance with an approved restoration plan. Extensions areas to the quarry are allocated in the Suffolk Minerals and Waste Local Plan adopted in July 2020. Frimstone identified in 2019 that it planned to submit applications for future extraction outside of the existing quarry site and DCO Site. These will be considered as cumulative developments, where relevant. The Suffolk Minerals and Waste Local Plan identifies 250m safeguarding zones around existing and proposed minerals and waste sites. Sunnica East Site B therefore falls within this zone for the existing and proposed areas of Worlington quarry and also for a metal recycling facility adjacent to the south-east and Barton Mills Chalk Quarry to the east.
- 2.2.17 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 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.

- 2.2.18 One PRoW is located within the boundary of Sunnica East Site B. PRoW W-257/003/0 runs along the south-western boundary of the Sunnica East Site B from Turnpike Road at Red Lodge in the south-east to Badlingham Manor in the north-west. An unclassified road (U6006), which is a publicly accessible route, including for equestrians, extends northwards from Elms Road to Worlington.
- 2.2.19 Within a 10km radius of the Sunnica East Site B, there are a number of statutory designated nature conservation sites including Ramsar Sites, SACs and SPAs. The nearest designated site is Red Lodge Heath SSSI, located approximately 750m to the south-east of the Sunnica East Site B. Chippenham Fen SSSI and National Nature Reserve (NNR), which forms part of the Fenland SAC and Chippenham Fen Ramsar, is located approximately 2.6km to the south-west of the Sunnica East Site B. Breckland SPA is located approximately 1.4km to the north-east of the Sunnica East Site B. Cherry Hill and The Gallops, Barton Mills SSSI is located approximately 1km east of the Sunnica East Site. Badlingham Lane County Wildlife Site (CWS) and Worlington Heath CWS both fall within the northern section of the Sunnica East Site B.
- 2.2.20 A Scheduled Monument (HER Reference 1018097) is located immediately south of the eastern boundary of the Sunnica East Site B, known as 'Bowl barrow on Chalk Hill, 380m north-west of Chalkhill Cottages'. Other Scheduled Monuments in the vicinity of the Sunnica East Site B include the remains of Freckenham Castle (HER Reference 1006070), approximately 450m to the west of the boundary.
- 2.2.21 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.
- 2.2.22 The Sunnica East Site B is located predominantly within Flood Zone 1.

Sunnica West Site A

- 2.2.23 The environmental constraints outlined in this section are shown on Figure 2-3.
- 2.2.24 The Sunnica West Site A encompasses an area of approximately 459.8ha and is located approximately 1km south of Chippenham and 1.5km west of Kennett (refer to Figure 2-1). It is bounded by the A14 to the south and straddles the A11 to the east. The Sunnica West Site A lies within the county of Cambridgeshire and in the ECDC administrative area. The developable area, which will contain the solar PV panels, BESS, and associated infrastructure, comprises 345.5ha with the remaining area set aside for environmental mitigation and enhancement. The developable areas are described further and shown in figures in Chapter 3.
- 2.2.25 The Sunnica West Site A consists of agricultural fields bound by trees, managed hedgerows, tree shelter belts (linear), small woodland and copses,

and farm access tracks (see Plate 2-4 and Plate 2-5). 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 (RPG). The southern boundary of the Sunnica West Site A, adjacent to the A14 / A11, is formed by a post and rail fence and sporadic sparse vegetation. Sounds Plantation is a deciduous copse and is located towards the eastern extent of the Sunnica West Site A.

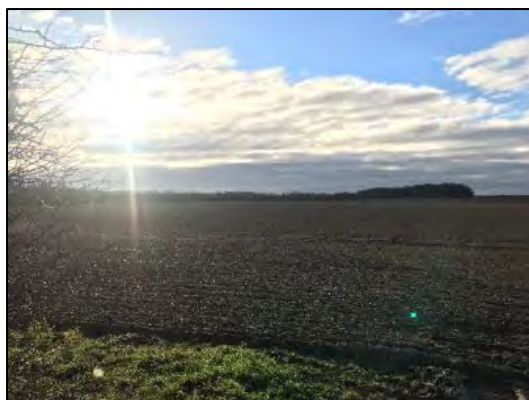


Plate 2-4 View of the land within Sunnica West Site A from the north-eastern boundary.



Plate 2-5 View of the land within Sunnica West Site A from the south-western boundary.

- 2.2.26 The surrounding landscape comprises regular shaped arable fields interspersed with managed hedgerows, tall shelter belts of trees and in the Chippenham Hall area, a parkland landscape with mature individual trees. Much of the surrounding area of the Sunnica West Site A is also characterised by grazed paddocks, horse gallops and exercise tracks, and the British Racing School is located to the south, beyond the A14, and the Horseracing Forensic Laboratory to the north-west.
- 2.2.27 The local transport network comprises the A14 and A11 trunk roads, and local roads such as Chippenham Road, and B1085 (to the east). 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 (PRoW) runs along the south-west boundary of the Sunnica West Site A. Snailwell 1 PRoW crosses the land to the north-west of the Sunnica West Site A boundary. No PRoWs are situated within the boundary of the Sunnica West Site A itself.
- 2.2.28 Within a 10km radius of the Sunnica West Site A, there are a number of statutory designated nature conservation sites including Ramsar Sites, SACs, SPAs and SSSIs. Newmarket Heath SSSI is located approximately 1.1km to the south of the Sunnica West Site A, beyond the A14. Chippenham Avenue Fields CWS is located adjacent to the northern section of the Sunnica West Site A.
- 2.2.29 A Scheduled Monument (HER Reference 1015246) is found at the south-eastern extent of the 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'. Other Scheduled Monuments in the vicinity of the Sunnica West Site A include 'The Rookery bowl barrow, part of the Chippenham barrow cemetery, 250m south of Waterhall Farm' (HER Reference 1015244) and the 'Hilly Plantation bowl barrow, part of the Chippenham barrow cemetery, 500m south-west of Waterhall Farm' (HER Reference 1015245), both within 200m of the Sunnica West Site A to the south of the A11.

- 2.2.30 A Grade II Listed Building (Waterhall Farmhouse, HER Reference 1126383) is located on the southern side of the A11, separated from the Sunnica West Site A by the A11 to the west and La Hogue / Chippenham Road to the east.
- 2.2.31 As described above, the Sunnica West Site A is bisected by the avenue of the Chippenham Hall Grade II RPG, with Chippenham Hall itself being located 1km to the north. Also, immediately to the north of the Sunnica West Site A is the Grade II* 'Lodges, Gateway and Railings to South of Park' Listed Building (HER Reference 1126376).
- 2.2.32 The majority of the Sunnica West Site A lies in Flood Zone 1, however, an area of Flood Zones 2 and 3 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

- 2.2.33 The Sunnica West Site B encompasses an area of approximately 68.8ha 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 ECDC administrative area. The Sunnica West Site B is located approximately 1.5km to the north-west of Sunnica West Site A, separated by agricultural fields and Chippenham Road (refer to Figure 2-1). The developable area, which will contain the solar PV panels and associated infrastructure, comprises 36.2ha with the remaining area set aside for environmental mitigation and enhancement.
- 2.2.34 The River Snail adjoins the Sunnica West Site B to the west (Plate 2-6). Avenue planting is a characteristic of the immediate area, with mature trees present within the Sunnica West Site B, and newer tree planting evident along the Chippenham Road. To the west of the Sunnica West Site B, there is commercial and industrial land use, along the A142 (Newmarket Road / Fordham Road) and to the south of Snailwell Road.



Plate 2-6. Landscape within Sunnica West Site B.

- 2.2.35 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.
- 2.2.36 The Sunnica West Site B is adjacent to Chippenham Fen Ramsar and NNR, Chippenham Fen and Snailwell Poor's Fen SSSI, and Fenland SAC. Snailwell Meadows SSSI is located directly to the south of the Sunnica West Site B.
- 2.2.37 The 'Roman villa S of Snailwell Fen' (HER Reference 1006868) is located along the western boundary of Sunnica West Site B, on the western side of the River Snail.
- 2.2.38 The Grade II Listed Phantom Cottage (HER Reference 1126385) and Park Farmhouse (HER Reference 1162059) 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.
- 2.2.39 The majority of the Sunnica West Site B is located within Flood Zone 1. Where the Sunnica West Site B adjoins the River Snail, at the north-western extent, the land comprises areas of Flood Zones 2 and 3.
- 2.2.40 The environmental constraints outlined in this section are shown on Figure 2-3.

Cable Route Corridors

- 2.2.41 The Scheme will be connected to the existing Burwell National Grid Substation. The cable route corridor for Grid Connection Route A, between Sunnica East Site A, Sunnica East Site B and Sunnica West Site A, and Grid Connection Route B, between Sunnica West Site A, Sunnica West Site B to Burwell National Grid Substation, are shown in Figures 1-2 and 1-3 from **Chapter 1: Introduction** and Figure 2-1.

Grid Connection Route A

- 2.2.42 Heading south-east from the Sunnica East Site A, the cable route corridor Grid Connection Route A crosses agricultural land and the B1102 immediately north of Sunnica East Site B. The cable route then passes through Sunnica East Site B before running south, crossing the River Kennett and Havacre Meadows and Deal Nook CWS using boring, micro-tunnelling

or moling methods (more information on these techniques is provided in **Chapter 3: Scheme Description**). The cable route corridor then crosses the Chippenham footpath 49/7. The cable route corridor then passes approximately 20m west of the Chippenham Gravel Pit CWS and crosses the B1085 before joining the Sunnica West Site A.

Grid Connection Route B

- 2.2.43 The 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 PRow before joining Sunnica West Site B.
- 2.2.44 Heading west from Sunnica West Site B, the cable route corridor 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.
- 2.2.45 The cable route corridor for Grid Connection Route B crosses agricultural fields and a number of roads including the B1102 and A142. Grid Connection Route B also crosses a number of watercourses, including the Burwell Lode, New River, and the River Snail, as well as a number of drainage ditches associated with Burwell Fen, Little Fen, the Broads, and agricultural drains. As such, the cable route corridor for Grid Connection Route B passes through multiple areas of Flood Zones 2 and 3. For the main watercourses, the cable route corridor crossings will require boring, micro-tunnelling or moling methods. For shallower and narrower drainage ditches, open cut trenching will be undertaken.

Burwell National Grid Substation Extension

- 2.2.46 The three potential areas identified for the Burwell National Grid Substation Extension are currently agricultural fields. The preferred location is within National Grid land ownership to the east of the existing substation, adjacent to Weirs Drove, approximately 200m west of Burwell. The alternative two locations are to the north and north-west of the existing substation approximately 450 and 650m from Burwell, respectively.
- 2.2.47 The substation will house a transformer compound, which will transform the 132kV export voltage from the Sites to the National Grid 400kV connection voltage.

