

SUNNICA ENERGY FARM

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Volume 6

Environmental Statement

6.2 Appendix 8L: Report on Surveys for Riparian Mammals
APFP Regulation 5(2)(a)
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Infrastructure Planning (Applications: Prescribed Forms and
Procedure) Regulations 2009



Planning Act 2008

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

Sunnica Energy Farm

**Environmental Statement
Appendix 8L: Report on Surveys for Riparian Mammals**

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Executive summary

AECOM (on behalf of Sunnica Limited) undertook surveys of riparian mammals, including Otter *Lutra lutra* and Water Vole *Arvicola amphibius* for the proposed Sunnica Energy Farm (the Scheme).

Otter and Water Vole are both fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Otter is also classified under the Habitats Directive (92/43/EEC) as a species requiring strict protection in Europe. A licence is required from Natural England to intentionally damage or destroy burrows or displace Water Voles from their burrows for lawful development. Any operations that may impact upon Otters or their places of rest or shelter will require a Natural England European Protected Species (EPS) licence.

Aerial photographs of the Site and information gathered during the Preliminary Ecological Appraisal survey was used to identify riparian and wetland habitats within an appropriate buffer either side of the Site and this information was used to refine the survey area for Otter and Water Vole. In total, there were 33 watercourses and waterbodies within the survey area that were subject to field surveys for Otter and, or, Water Vole presence.

Evidence of Water Vole was recorded in peripheral watercourses of Sunnica East Site A, including assumed presence in Lee Brook; the River Kennett (Grid Connection Route A), watercourses within Sunnica West Site B (Including the River Snail); and eleven watercourses along Grid Connection Route B.

Evidence of Otter was recorded in peripheral watercourses of Sunnica East Site A, including assumed presence in Lee Brook; two watercourses along Grid Connection Route B; and one waterbody within 10m of Grid Connection Route B.

Any impacts upon Otter and Water Vole, arising as a result of construction or operation of the Scheme, are considered to have a potentially significant adverse impact. Therefore, through the implementation of a mitigation strategy, formalised through a Construction and Environment Management Plan (CEMP), the potential for deliberate harm and injury to Otter and Water Vole will be avoided.

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1 Introduction

- 1.1.1 In March 2019, AECOM (on behalf of Sunnica Limited) undertook a Preliminary Ecological Appraisal (PEA) (Ref 1) for the proposed Sunnica Energy Farm (hereafter referred to as the Scheme). This PEA identified the need for follow-up surveys to determine the potential impacts of the Scheme on protected and notable species¹, including riparian mammals, such as Water Vole *Arvicola amphibius* and Otter *Lutra lutra*. Therefore, AECOM was instructed by Sunnica Limited to undertake surveys of the waterbodies and watercourses within the Development Consent Order (DCO) Site (the Site) (the Order limits) and a 100m survey buffer from the DCO Site (referred to hereafter as the survey area) for their potential to support riparian mammals.

1.2 The Scheme

- 1.2.1 Sunnica Energy Farm (the Scheme) is a new solar energy farm proposal that will deliver electricity to the national electricity transmission network. Sunnica Limited is proposing to install ground mounted solar photovoltaic (PV) panel arrays to generate electrical energy from the sun and combine these with a Battery Energy Storage System (BESS) which will connect to Burwell National Grid Substation in Cambridgeshire.
- 1.2.2 Electricity will be generated at Sunnica East Site A, near Isleham in Cambridgeshire; Sunnica East Site B, near Worlington and Freckenham in Suffolk; Sunnica West Site A near Chippenham and Kennett in Cambridgeshire; and Sunnica West Site B, near Snailwell in Cambridgeshire. All locations will comprise ground mounted solar PV panel arrays, supporting electrical infrastructure and, with the exception of Sunnica West Site B, a BESS.
- 1.2.3 Supporting electrical infrastructure will include on-site substations on Sunnica East Site A and Sunnica East Site B and Sunnica West Site A, and on-site cabling between the different electrical elements across the Scheme. The generating equipment of the Scheme will be fenced and protected via security measures such as Closed Circuit Television. Inside the fenced areas, in addition to the generating equipment will be, internal access tracks, and drainage. It is not proposed for any area to be continuously lit.
- 1.2.4 Visual, ecological and archaeological mitigation is proposed which includes proposed grassland planting and new woodland; retention of existing woodland, wetlands and other vegetation; provision of replacement habitat; and offsetting areas, where there will be no development. The BESSs will consist of a compound and battery array to allow for the importation, storage and exportation of energy to the National Grid. There will also be areas at Sunnica East Site A and Sunnica East Site B for office and storage facilities for use during the Scheme's operation.
- 1.2.5 The Scheme will be connected to a new substation extension at the existing Burwell National Grid Substation, using 132 kilovolt (kV) cables buried underground. The cables will run between Sunnica East Site A, Sunnica East Site B and Sunnica West Site A (Grid Connection Route A), and then from Sunnica West Site A to Sunnica West B and onwards to the Burwell National Grid

¹ A notable species is a species with a conservation designation, but no legal protection.

Substation (Grid Connection Route B). The Burwell National Grid Substation Extension will convert the 132kV to 400kV. The 400kV cables will be buried and will connect the Scheme to the existing Burwell National Grid Substation to allow distribution to the national transmission network.

- 1.2.6 The Scheme will have two main access points, one north of Elms Road at Sunnica East Site B and one south of La Hogue Road at Sunnica West Site A. The main access route to Sunnica West Site A will be via the Chippenham junction of the A11, to the north of junction 38 of the A14. Sunnica East Site B will be accessed via the A11 and B1085. A number of secondary access points are proposed to access the individual land parcels through construction, operation, and decommissioning phases.
- 1.2.7 The Scheme is defined as a Nationally Significant Infrastructure Project (NSIP) and will require a Development Consent Order (DCO) from the Secretary of State for Business, Energy and Industrial Strategy (Secretary of State), due to its generating capacity exceeding 50 megawatts (MW).
- 1.2.8 The Scheme comprises the following key areas:
- a. Solar Farm Sites:
 - i. Sunnica East Site A;
 - ii. Sunnica East Site B;
 - iii. Sunnica West Site A; and
 - iv. Sunnica West Site B.
 - b. associated electrical infrastructure areas for connection to the national transmission system:
 - i. Grid Connection Route A (connecting the Sunnica East Site A with the Sunnica East Site B and then connecting to the Sunnica West Site A);
 - ii. Grid Connection Route B (connecting the Sunnica West Site A and Sunnica West Site B and the Burwell National Grid Substation); and
 - iii. Burwell National Grid Substation Extension.
- 1.2.9 **Figure 1** in Annex A shows the locations of these key areas.

1.3 Site description

- 1.3.1 A summary description of the habitats within the Scheme boundary (made up of the four Sites (see section 1.2.1)) is provided below and a more detailed description of the habitats is provided in the PEA report (Ref 1). The extent of the Scheme is shown in **Figure 1**.

Sunnica East Site

- 1.3.2 Sunnica East is split into two sub-sites, one to the north of Freckenham (referred to as Sunnica East Site A) and the other to the south of Worlington (referred to as Sunnica East Site B). These two sites are approximately 1km apart and are separated by agricultural fields. The Sunnica East Site A encompasses an area of approximately 224ha and includes land within the county of Suffolk and Cambridgeshire. Sunnica East Site B lies within Suffolk and encompasses an area of approximately 319ha (**Figure 1**).

- 1.3.3 The landscape features within the Sunnica East Site A and Sunnica East Site B consist of arable agricultural fields interspersed with individual trees, hedgerows, linear tree belts, small woodland blocks, farm access tracks and local roads.
- 1.3.4 The landscape features immediately surrounding the Sunnica East Site A and Sunnica East Site B comprise small rural villages, including Worlington to the north, Barton Mills to the north-east, Red Lodge and Freckenham to the south and Isleham to the west. Industrial land uses adjoin the A11 to the south of the Sunnica East Site with an industrial installation of a 7.5 MW solar farm situated adjacent to the south-eastern extent of the Sunnica East Site and an anaerobic digestion (AD) plant located to the south of the Sunnica East Site.

Sunnica West Site

- 1.3.5 The Sunnica West Site is located within the East Cambridgeshire District Council administrative area, approximately 3km north east of Newmarket and 6.5km east of Burwell.
- 1.3.6 Sunnica West is split into two sub-sites, one to the south-east (referred to as Sunnica West Site A) and the other to the north-west of Snailwell (referred to as Sunnica West Site B). These two sites are approximately 1 km apart, separated by agricultural fields and Chippenham Road. The Sunnica West Site A encompasses an area of approximately 373ha and includes land to the east and west of the A11, consisting of agricultural fields bounded by trees, managed hedgerows, linear tree shelter belts, small woodland and copses and farm access tracks. Sunnica West Site B encompasses an area of approximately 66ha and comprise of agricultural fields, grassland, small woodland and copses, farm access tracks and irrigation ditches fed by the River Snail which runs along the western and northern boundaries of the Site (**Figure 1**).
- 1.3.7 The surrounding landscape comprises regularly 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 area is also characterised by grazed paddocks, horse gallops and exercise tracks.

Cable route corridors

- 1.3.8 The Scheme will connect to the existing Burwell National Grid Substation via a cable route corridor. The cable route corridors under consideration are Grid Connection Route A, which connects the Sunnica East Site A with the Sunnica East Site B and then runs between the Sunnica West Site A and the Sunnica East Site B; and Grid Connection Route B, between the Sunnica West Site A and Sunnica West Site B and the Burwell National Grid Substation.

Grid Connection Route A

- 1.3.9 Grid Connection Route A connects the Sunnica East Site A with Sunnica East Site B and crosses two minor roads and arable farmland (**Figure 1**).
- 1.3.10 Heading south from the Sunnica East Site B, the cable route corridor for Grid Connection Route A crosses the River Kennett, pastoral farmland, the Chippenham footpath 49/7 (a Public Right of Way (PRoW)) and B1085 (**Figure 1**).

Grid Connection Route B

- 1.3.11 Heading east from the Burwell National Grid Substation, 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 (**Figure 1**).
- 1.3.12 The cable route corridor for Grid Connection Route B crosses a PRoW (footpath 92/19) before crossing the railway line and the A142 Newmarket / Fordham Road. The Route then runs alongside Snailwell Road and across the River Snail into Sunnica West Site B.

Burwell National Grid Substation Extension

- 1.3.13 The habitat within the Burwell National Grid Substation Extension (surrounding the existing substation) comprises small grassland fields to the east of the existing substation (bordered by hedgerows and mature trees) and arable land to the south and west of the existing substation (**Figure 1**).

1.4 Scope of the report

- 1.4.1 The objective of the riparian mammal survey, reported in this document, is to determine the presence or absence of Water Vole and Otter in areas of suitable habitat located within the survey area and identify any potential impacts of the Scheme on these species.
- 1.4.2 This report includes the following information:
- a. relevant legislation and policy;
 - b. methodologies for desk and field-based assessments undertaken between 2018 and 2021;
 - c. limitations to the surveys undertaken and any assumptions made as a result of incomplete data;
 - d. survey results; and
 - e. conclusions and further survey requirements.
- 1.4.3 This report is a technical appendix to accompany the Environmental Statement (ES) for the DCO application.

2 Legislative and Policy Framework

2.1 Relevant legislative context

2.1.1 Water Vole and Otter are both fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) (Ref 2). They are afforded protection under Section 9 parts 9 (1), (2), (4) and (5) of the Act, making it an offence to:

- a. intentionally kill, injure or take these species;
- b. possess or control live or dead individuals of these species or their derivatives;
- c. intentionally or recklessly damage, destroy or obstruct access to any structure or place used for their shelter or protection;
- d. intentionally or recklessly disturb these species whilst occupying a structure or place of shelter used for that purpose;
- e. sell these species or offer or expose for sale or transport for sale; and
- f. publish or cause to be published any advertisement which conveys the buying or selling of these species.

2.1.2 Otter is also classified under the Habitats Directive (92/43/EEC) (Ref 3) as a species requiring strict protection in Europe. In the UK this is enabled by The Conservation of Habitats and Species Regulations 2017 (as amended) (Ref 4). Otter is also included in the following international legislation / conventions:

- a. Appendix II and IV of the Habitats Directive, Appendix II of the Bern Convention (Ref 5) and Appendix I of CITES (Ref 6); and
- b. globally threatened on the IUCN/WCMC Red Data List (Ref 7).

2.2 Natural England licencing

2.2.1 A licence is required from Natural England to intentionally damage or destroy burrows or displace Water Voles from their burrows for lawful development. Any operations that may impact upon Otters or their places of rest or shelter will require a Natural England European Protected Species (EPS) licence. There is no provision for licencing development or other construction activities under the Wildlife and Countryside Act. Such works should therefore be undertaken under a conservation licence. This licence requires demonstration of a conservation benefit for Water Vole and Otter and this benefit can be achieved by delivering a net gain in the amount of habitat available to the Water Vole and Otter population.

2.3 National and local planning policy

2.3.1 National and local planning policy relevant to nature conservation is provided in detail in the PEA report (Ref 1), which is also included as Appendix 8B of the ES [EN010106/APP/6.2].

2.4 Priority species

2.4.1 The Natural Environment and Rural Communities (NERC) list of Species of Principal Importance (Ref 8) is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act (2006); under Section 40 every public authority (e.g.

a local authority or local planning authority) must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

- 2.4.2 In addition, with regard to those species on the list of Species of Principal Importance listed under Section 41 (S41), the Secretary of State must:
- a. “(a) take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or
 - b. (b) promote the taking by others of such steps.”
- 2.4.3 The UK Biodiversity Action Plan (UKBAP) (Ref 9) was launched in 1994 and established a framework and criteria for identifying species of conservation concern. From this list, action plans for priority species of conservation concern were published and have subsequently been succeeded by the UK Post-2010 Biodiversity Framework (July 2012) (Ref 10). The UK Post 2010 Development Framework is relevant in the context of Section 40 of the Natural Environment and Rural Communities (NERC Act) 2006, meaning that Priority Species are material considerations in planning. These species are identified as those of conservation concern due to their rarity or a declining population trend.
- 2.4.4 Water Vole and Otter are included as a priority species under Section 41 of the NERC Act 2006.

2.5 Local biodiversity action plan

- 2.5.1 The Scheme is located within two counties, Cambridgeshire and Suffolk. The Cambridgeshire and Peterborough Biodiversity Action Plan (Ref 11) and Suffolk Biodiversity Action Plan (Ref 12) provides the local nature conservation strategy for identifying threats to species within these counties and sets out the actions necessary to conserve them. The Biodiversity Action Plans provides context to inform identification of threatened / uncommon species within the district / county. The plans also identify priorities for conservation and enhancement but confers no particular legislative or policy protection to the species identified, however in some cases this is provided through related legislation and local planning policy.
- 2.5.2 Water Vole and Otter are both listed as priority species on the Cambridgeshire and Peterborough Biodiversity Action Plan (Ref 11) and on the Suffolk Biodiversity Action Plan (Ref 12).

3 Methods

3.1 Desk study

- 3.1.1 A desk study was undertaken in December 2018 through Cambridgeshire & Peterborough Environmental Records Centre (CPERC) and Suffolk Biodiversity Information Service (SBIS), to obtain records of Water Vole and Otter within the preceding ten years and within a 2km radius of the Order limits.
- 3.1.2 Only records up to ten years old were considered within the assessment, as any records older than ten years are unlikely to be still representative of either species' presence in the local area.

3.2 Field survey

- 3.2.1 The Water Vole and Otter surveys were carried out by experienced AECOM ecologists on the following dates between 2019 and 2021:
- a. 9 May; 5 July and 23 August 2019;
 - b. 27 May, 1 July and 28 September 2020; and
 - c. 19, 20 and 21 April 2021.

Survey area

- 3.2.2 Aerial photos and information gathered during the PEA survey (Ref 1) was used to identify riparian and wetland habitats within an appropriate buffer either side of the Order limits and this information was used to refine the survey area for Otter and Water Vole. The survey area was refined to include all waterbodies within the Order limits and watercourses within and, or, connected to the Order limits. A walkover of the survey area was then undertaken by an experienced surveyor to locate the features identified in the survey area and if still present, undertake a habitat suitability assessment for Otter and Water Vole.
- 3.2.3 Watercourses and waterbodies that were identified during the habitat suitability assessment as being dry; were in heavy agricultural use with no marginal vegetation; or where there were significant barriers to movement between the waterbody or watercourse and the Order limits, were considered as not being suitable for Otter and Water Vole and were scoped out from further survey. This assessment was made with reference to the criteria presented in **Table 3-1**. No further mention or reference of waterbodies and watercourses that have been scoped out, is made within this report.

Table 3-1: Summary of riparian mammal habitat suitability assessment criteria

Otter	Water Vole
<ul style="list-style-type: none"> proximity to the Site; presence of barriers to dispersal and movement through the territory; habitats present and suitability for use by Otter (including terrestrial habitats); adjoining land use; level of disturbance; 	<ul style="list-style-type: none"> rate of water flow; bank profile; degree of shading from overhanging trees or scrub; extent of suitable emergent and bankside herbaceous vegetation for shelter, food and nesting material;

Otter	Water Vole
<ul style="list-style-type: none"> features of watercourse or waterbody (estimated depth, level of flow, width of channel); connectivity with other areas of suitable or sub-optimal habitat; and pollution. 	<ul style="list-style-type: none"> levels of site disturbance (e.g. proximity to public rights of way, farm vehicle access tracks or road traffic); potential for the waterbody or watercourse to dry out; suitability of bank substrates for burrowing; and pollution and water quality.

3.2.4 In total, there were 33 watercourses (additionally a network of ditches around the Burwell National Grid Substation Extension) and one waterbody (see **Table 3-2**) that were potentially suitable for Water Vole and Otter within the survey area. All watercourses and waterbodies that were surveyed for riparian mammal surveys are shown in **Figure 2** in Annex A.

Table 3-2: Watercourses and waterbodies within the survey area

Scheme Area	Watercourse reference (see Figure 8L-2).
Sunnica East Site A	Lee Brook, 01, 01a, 02, 03, 04, 05 and 06
Grid Connection Route A	River Kennett
Sunnica West Site A	Ditch on western edge
Sunnica West Site B	River Snail, 27, 27a, 08
Grid Connection Route B	Catchwater Drain, Burwell Lode, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 2, 43, 44, 45, 46, WB19
Burwell National Grid Substation Extension	Network of ditches on site and surrounding, all connected

Water Vole survey

3.2.5 Water Voles typically inhabit slow-moving streams, canals, ditches, dykes and rivers, feeding mostly on waterside vegetation. They are active in daylight hours and leave several indications of their presence and these signs can be used to identify the presence of Water Vole and, by quantifying the presence of certain signs, can be used to estimate the population size.

3.2.6 The Water Vole survey involved identification of evidence of Water Vole activity up to 5m from the bank of the surveyed watercourses and waterbody. Field surveys were based on the standard methodologies as described by Strachan et al. (2011) (Ref 13) and Dean et al. (2016) (Ref 14). Field signs searched for included:

- latrine sites – distinct piles of Water Vole droppings found near burrows, at the ranges of territorial boundaries and where the animals enter and leave the water;
- feeding stations – areas with distinct neat piles of chewed lengths of vegetation along pathways or haul out platforms along the water's edge;

- c. burrows – burrow entrances are typically wider than high with a diameter between 4 and 8cm. Burrow entrances are generally located at the water's edge;
- d. lawns – short grazed areas at the entrances to burrows;
- e. prints – identifiable prints in soft margins of the watercourse; and
- f. runways – low tunnels that are pushed through the vegetation and often leading to burrows or feeding stations.

3.2.7 In accordance with the guidance set out in Water Vole Mitigation Handbook (Ref 14), one survey was conducted in the first half of the breeding season (April to June) and a second survey was carried out in the second half of the breeding season (July to September). All surveys were conducted during suitable weather conditions and by experienced AECOM ecologists.

3.2.8 Any information gathered during the survey on Water Vole signs were used to calculate and estimate Water Vole population and, or activity within those specific waterbodies or watercourses. The presence or absence of American Mink *Mustela vison* and Brown Rat *Rattus norvegicus* was also recorded if the species or signs of their presence were noted.

3.2.9 It is not possible to make robust estimates of the number of Water Voles from latrine counts, but latrines do provide an indication of activity suitable for assessment of impacts and designing mitigation (Ref 14).

Otter survey

3.2.10 The aim of the survey was to determine the presence or absence of Otter on those waterbodies and watercourses deemed suitable for Otter following the habitat suitability assessment. The methodology used was in accordance with guidance in the New Rivers and Wildlife Handbook (RSPB, NRA & RSNC, 1994) (Ref 15); the Environment Agency's Fifth Otter Survey of England 2009-2010 (Ref 16) and 'Monitoring the Otter' (Ref 17).

3.2.11 Otter surveys can be carried out at any time of year, though the period May to September is optimal when water levels are less variable. Surveys should not be undertaken following periods of heavy rain and, or, high-water levels as it can obscure or remove signs of Otter and result in false negative survey results. Ideally, there should be a period of at least five days without rain before surveying.

3.2.12 Due to the low likelihood of making an actual observation of Otter, the survey concentrated on locating field signs indicating Otter presence or use within the survey area. Such field signs include:

- a. spraints (droppings) – characteristic sweet-smelling, black tar-like (where fresh/relatively recent i.e. within a few weeks) or grey crumbly (when old) faecal deposits usually containing fish scales, bones and occasionally invertebrate exoskeleton and bird feathers;
- b. footprints – in good substrate typically asymmetrical and showing five toes arched around a large pad and, depending on substrate, webbing and claw marks. Poorer, generally coarser substrates do not often enable the identification of Otter footprints. Additional signs of Otter presence may occur,

although without additional evidence is not usually conclusive proof of current Otter presence;

- c. feeding remains – feeding remains may include partially eaten fish, frogs, piles of mussel shells or crayfish remains;
- d. slides/ haul-outs – routes into and out of the water, which are usually associated with terrestrial routes such as short cuts around meanders or along traditionally used otter paths/routes;
- e. couches/ hovers – above ground resting places. Usually associated with cover such as dense scrub, rushes or reed, flood debris or fallen trees. Many couches are rarely used whilst others more so. Difficult to prove use without radio tracking; and
- f. holts – below ground resting site usually associated with sprainting. Sometimes used with greater frequency than couches and can be important for breeding (natal holts) where other signs are usually absent. Notoriously difficult to find or prove without radio tracking.

3.3 Limitations

Desk study

- 3.3.1 The aim of a desk study is to help characterise the baseline context of the Site and provide valuable background information that would not be captured by site surveys alone. Information obtained during the course of a desk study was dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular species does not necessarily mean that the species does not occur in the study area. Likewise, the presence of records for particular species does not automatically mean that these still occurred within the area of interest or were relevant in the context of the Scheme.

Field survey

- 3.3.2 Watercourses 04, 05 and 06 were only surveyed once in spring 2019, rather than the recommended two surveys as there was no access to these areas, which are now outside of the Order limits, beyond spring 2019. However, the results of the survey in spring 2019 have been used to inform on species presence or absence in these areas and a precautionary approach, assuming presence, will be taken where the habitat quality is considered as optimal for Water Vole or Otter.
- 3.3.3 Watercourses present along the Grid Connection Routes were only surveyed once in spring 2021, due to access restrictions. However, the results of surveys in spring 2021 provide a robust assessment of species presence and absence, and where necessary, a precautionary approach, assuming presence, will be taken where habitat quality is considered as optimal.
- 3.3.4 It was not possible to survey the entire margins of Lee Brook for Water Vole and Otter, due to dense vegetation, high water levels and steep banks. Furthermore, only one survey was undertaken in July 2019. However, the habitat quality of these areas and presence of both Otter and Water Vole in adjacent habitats and stretches of the watercourses has been used to inform on species presence in

this watercourse and a precautionary approach, assuming presence, will be taken forward in consideration of both species' legal status.

4 Results

4.1 Desk study

- 4.1.1 The data search returned 92 records of Water Vole and 24 records of Otter within 2km of the Order limits and within the preceding ten years from the request date.
- 4.1.2 The closest Water Vole record to the Order limits was returned 275m from Sunnica East Site A. The closest Otter record was recorded approximately 125m from the Burwell National Grid Substation Extension.

4.2 Field survey

- 4.2.1 Thirty-three watercourses and one waterbody (**Figure 2**) were surveyed for Water Vole and Otter presence or absence between 2019 and 2021. A summary of the results of these surveys are presented in in **Table 4-1**.

Table 4-1: Results of Water Vole and Otter Surveys carried out within the survey area

Scheme Area	Watercourse or waterbody reference (see Figure 8L-2)	Survey Date(s)	Summary of Results
Sunnica East Site A	Lee Brook	5 July 2019	No signs of Water Vole or Otter recorded, but assumed presence.
	01	5 July 2019 and 28 September 2020	Water Vole latrines, pathways, feeding remains and lawns. Otter spraints
	01a	5 July 2019 and 28 September 2020	Water Vole latrines, burrows, pathways and feeding remains. No signs of Otter.
	02	5 July 2019 and 28 September 2020	Water Vole latrines, pathways, feeding remains and lawns. Otter spraints.
	03	5 July 2019 and 28 September 2020	Water Vole latrines, burrows, pathways and feeding remains. Remains of Signal Crayfish <i>Pacifastacus leniusculus</i> , likely Otter feeding remains.
	04	9 May 2019	Water Vole burrows and footprints identified. Possible Otter or Mink spraint.
	05	9 May 2019	Water Vole burrows, feeding remains and lawns present. Otter footprint and runs.
	06	9 May 2019	No Water Vole Signs. Possible Otter runs identified.

Scheme Area	Watercourse or waterbody reference (see Figure 8L-2)	Survey Date(s)	Summary of Results
Grid Connection Route A	River Kennett	20 April 2021	One Water Vole latrine. No signs of Otter.
Sunnica West Site A	Ditch on western edge	19 April 2021	Dry in 2019 and 2020. No signs of Water Vole or Otter in 2021.
Sunnica West Site B	27	23 August 2019 and 27 May 2020	Five Water Vole burrows, 15 Water Vole latrines and 34 feeding remains. No signs of Otter.
	27a	23 August 2019 and 27 May 2020	Water Vole feeding remains in 2019. No signs of Otter. Dry in 2020.
	08	23 August 2019 and 27 May 2020	Water Vole feeding remains. No signs of Otter.
	River Snail	23 August 2019 and 19 April 2021	33 Water Vole latrines, seven burrows and feeding remains. No signs of Otter.
Grid Connection Route B	Catchwater Drain	1 July 2020 and 20 April 2021	Six Water Vole burrows, seven Water Vole latrines and 10 feeding remains to the east of First Drove road and one Water Vole burrow, two latrines and three feeding remains to the west of First Drove road. No sign of Otter.
	29	20 April 2021	No signs of Water Vole or Otter.
	30	20 April 2021	Two Water Vole burrows and one latrine. No signs of Otter.
	Burwell Lode	20 April 2021	Fifteen Water Vole latrines and one sighting of a live animal. No signs of Otter.
	31	20 April 2021	No signs of Water Vole or Otter.
	32	20 April 2021	No signs of Water Vole or Otter.
	33	20 April 2021	No signs of Water Vole or Otter.
	34	20 April 2021	No signs of Water Vole or Otter.
	35	20 April 2021	One Water Vole burrow. No signs of Otter.
	36	20 April 2021	No signs of Water Vole or Otter.
	37	20 April 2021	Five Water Vole burrows and six latrines. No signs of Otter.

Scheme Area	Watercourse or waterbody reference (see Figure 8L-2)	Survey Date(s)	Summary of Results
	38	20 April 2021	Fifteen Water Vole burrows and 16 latrines. No signs of Otter.
	39	20 April 2021	No signs of Water Vole or Otter.
	42	21 April 2021	Five Water Vole burrows and six latrines. No signs of Otter.
	43	21 April 2021	Four Water Vole burrows and 31 latrines. One Otter spraint.
	44	21 April 2021	Eight Water Vole burrows and eight latrines. One Otter spraint.
	45	21 April 2021	One Water Vole latrine. No signs of Otter.
	46	21 April 2021	Four Water Vole burrows and six latrines. No signs of Otter.
	WB19	21 April 2021	No signs of Water Vole. One Otter spraint.
Burwell National Grid Substation Extension	On site and surrounding	1 July 2020 and 28 September 2020	No signs of Water Vole or Otter in any watercourses within the Burwell National Grid Substation Extension area or adjacent habitat. Ditches dry in September 2020 and thereafter.

4.2.2 Possible signs of Mink were found within Watercourse 04. No signs of Brown Rat were recorded within the watercourses.

4.2.3 No evidence of Otter holts were recorded within the surveyed areas.

5 Evaluation

5.1 Summary

5.1.1 Evidence of Water Vole (see **Figure 2**) was recorded in:

- a. peripheral watercourses of Sunnica East Site A, including assumed presence in Lee Brook;
- b. the River Kennett (Grid Connection Route A);
- c. watercourses within Sunnica West Site B, including the River Snail; and
- d. eleven watercourses along Grid Connection Route B.

5.1.2 Evidence of Otter (see **Figure 2**) was recorded in:

- a. peripheral watercourses of Sunnica East Site A, including assumed presence in Lee Brook;
- b. two watercourses along Grid Connection Route B; and
- c. one waterbody, 8m from Grid Connection Route B.

Sunnica East Site A

5.1.3 In Sunnica East Site A, Water Vole were found to be present in the following watercourses:

- a. 01, 01a, 02, 03, 04 and 05.

5.1.4 Whilst the full extent of Lee Brook was not surveyed for evidence of Water Vole, the habitat quality in the Lee Brook is suitable to support this species. Furthermore, the evidence of Water Vole in connecting ditches to the Lee Brook (02 and 04) would suggest that Water Vole is also present along the full length of the Lee Brook.

5.1.5 Otter was found to be present, with evidence (either spraints, footprints, feeding remains and, or, runs) found in watercourses 01, 02, 04, 05 and 06. Otter is assumed to also be present in the Lee Brook.

Grid Connection Route A

5.1.6 A single Water Vole latrine was recorded in the River Kennett, but no other signs (such as burrows), were recorded.

5.1.7 No evidence of Otter, including Otter holts, was recorded in the River Kennett.

Sunnica West Site B

5.1.8 Evidence of Water Vole (burrows, latrines and feeding remains) were recorded within watercourse 27, 27a, 08 and the River Snail (see **Figure 2**).

5.1.9 No evidence of Otter, including Otter holts, was recorded in any of the other watercourses surveyed.

Grid Connection Route B

- 5.1.10 Evidence of Water Vole (burrows, latrines and feeding remains) were recorded within watercourse 30, 35, 37, 38, 42, 43, 44, 45, 46, Catchwater Drain and Burwell Lode (see **Figure 2**).
- 5.1.11 Otter was found to be present, with evidence (either spraints, footprints, feeding remains and, or, runs) found in watercourses 43, 44 and WB19. No evidence of Otter holts was recorded.

Burwell National Grid Substation Extension

- 5.1.12 No Water Vole or Otter (including Otter holts) were recorded in any of the watercourses within the Burwell National Grid Substation Extension in July 2020.
- 5.1.13 Furthermore, these watercourses were found to be dry from September 2020 onwards.

6 Conclusions

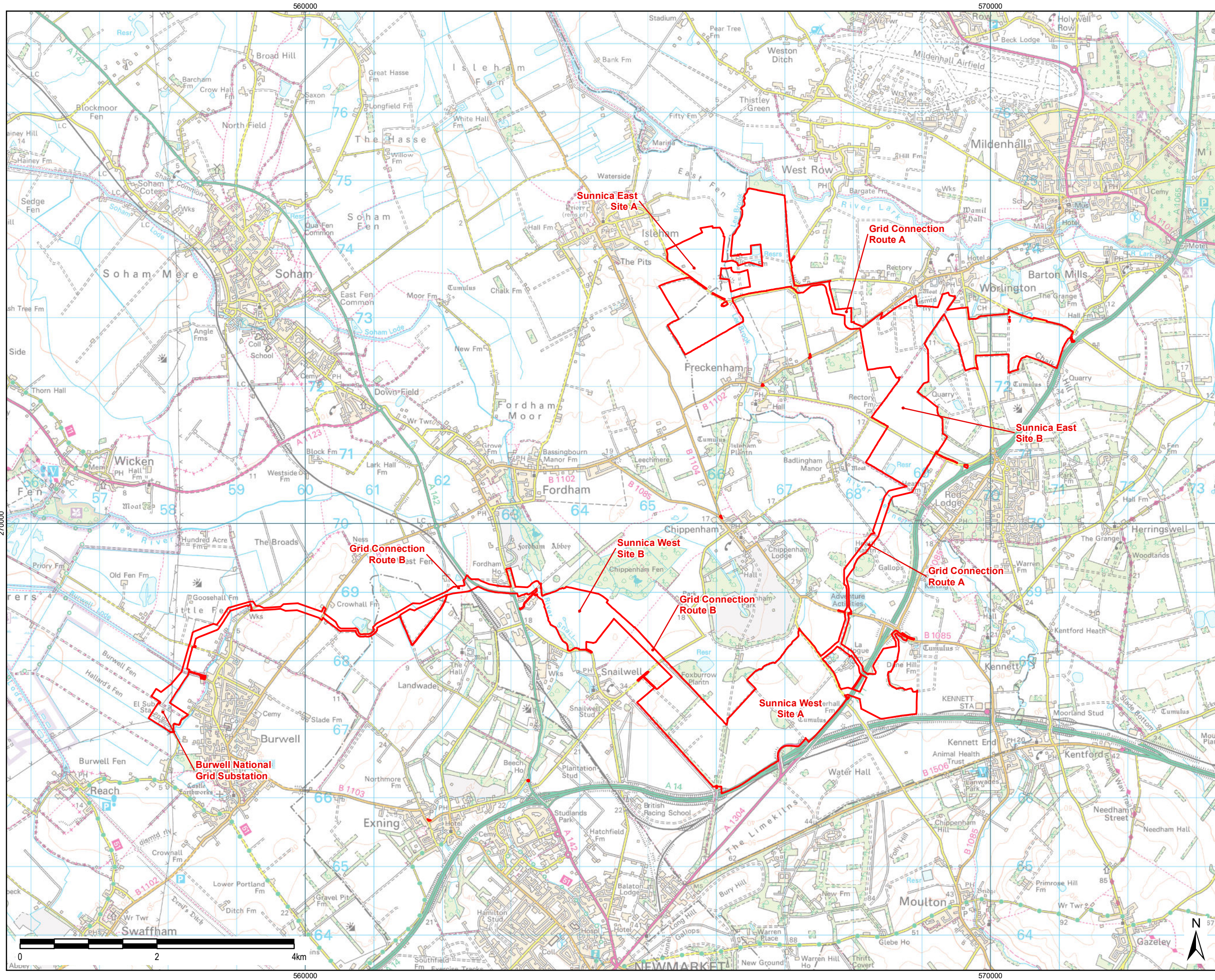
- 6.1.1 The riparian mammal surveys, undertaken between 2019 and 2021 recorded Otter and Water Vole within the Order limits. Otter and Water Vole are both fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended).
- 6.1.2 Any impacts upon riparian mammals, arising as a result of construction of the Scheme, are considered to have a potentially significant adverse impact. Potential impacts upon riparian mammals include those arising from direct effects (such as loss of habitat) and indirect effects (such as disturbance, pollution effecting watercourses).
- 6.1.3 Through the implementation of a mitigation strategy, formalised through a Construction and Environment Management Plan (CEMP), the potential for deliberate harm and injury to Otter and Water Vole will be avoided. Mitigation is required to:
 - a. ensure compliance with relevant legislation; and
 - b. avoid impacts that would give rise to a potential “significant effect”, therefore contrary to planning policy and biodiversity obligations of the NERC Act 2006.
- 6.1.4 A significant negative effect is one which undermines nature conservation objectives or changes the conservation status of a species population.

7 References

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- Ref 7. IUCN, 2020. The IUCN Red List of Threatened Species. Available at: [REDACTED] [Accessed September 2020].
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Annex A Figures

Figure 1 Order limits boundary



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LEGEND


The Order Limits

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

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Purpose of Issue
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Client
SUNNICA LTD

Project Title


Drawing Title
**FIGURE 1:
SITE LOCATION**

Drawn BF	Checked AB	Approved NC	Date 21/10/2021
AECOM Internal Project No. 60589004		Scale @ A3 1:50,000	

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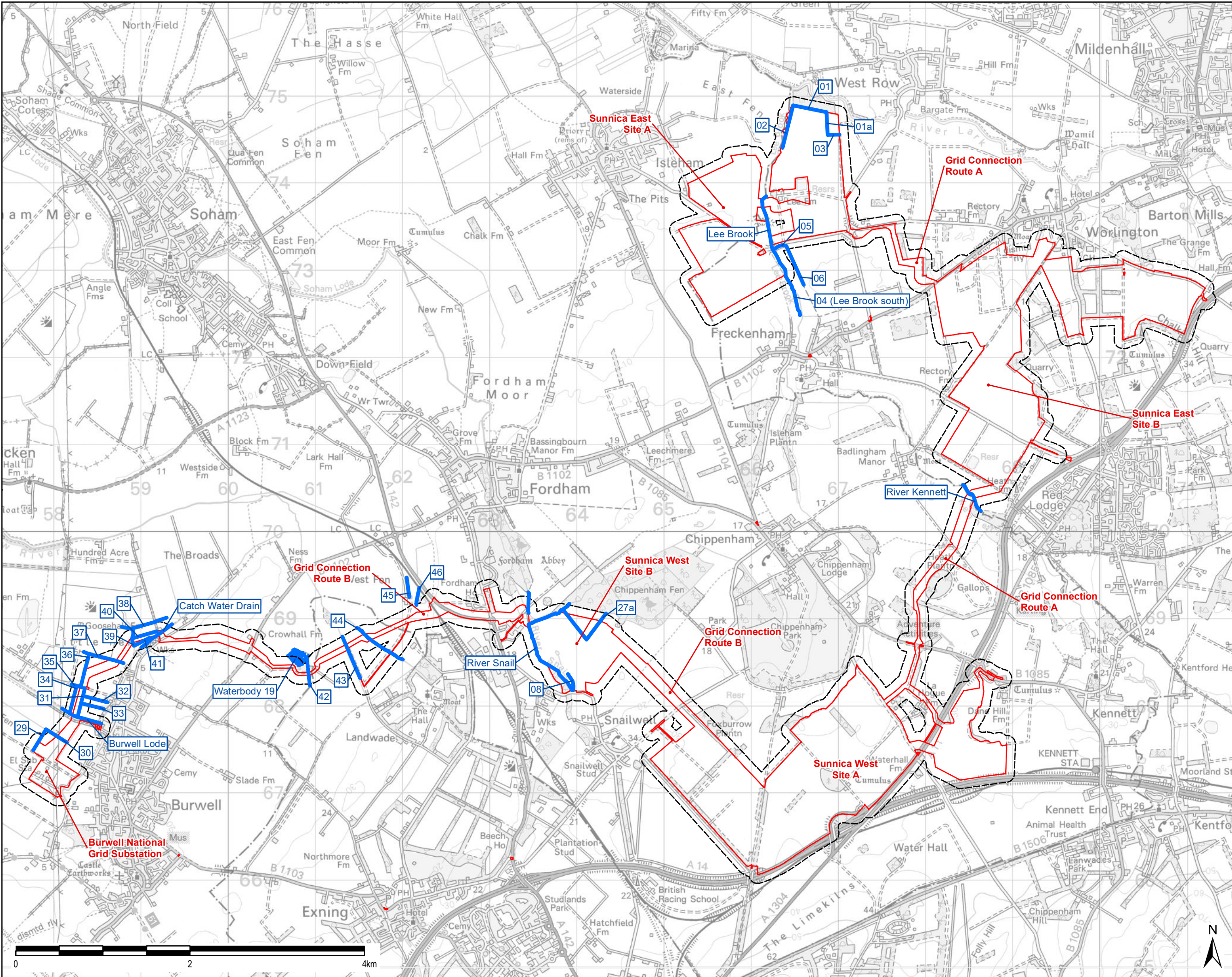
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Figure 2 Waterbodies and watercourses surveyed for Water Vole and Otter

File Name: W:\Active Projects\Solar Associates\GIS\02_Maps\SEF_020_Riparian Mammals.mxd



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- LEGEND**
- The Order Limits
 - 100m buffer
 - Waterbodies surveyed for riparian mammals

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

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Purpose of Issue
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Client
SUNNICA LTD

Project Title


Drawing Title
FIGURE 2: LOCATIONS OF WATERBODIES AND WATERCOURSES SURVEYED FOR RIPARIAN MAMMALS

Drawn AD	Checked NG	Approved CLB	Date 21/10/2021
AECOM Internal Project No. 60589004		Scale @ A3 1:40,000	

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