Great Harmeston Solar Farm

Environmental Statement

Technical Appendix 7.10
Otter Survey and Water Vole Habitat Suitability Assessment and Results

Development of National Significance
Pre-Application Consultation

March 2026

Otter Survey and Water Vole Habitat Suitability Assessment

Great Harmeston Solar Farm, Pembrokeshire
26th February 2026

Tyler Grange

TG Report No. 16720_R05_LB

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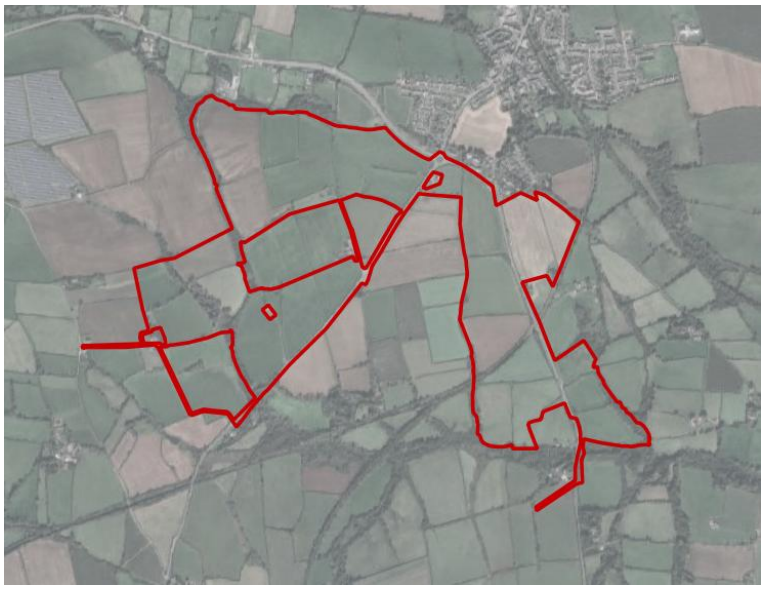
Section 1: Introduction and Context

Introduction

1.1. This report has been prepared by Tyler Grange Group Ltd (TG) on behalf of ASUK HoldCo4 Ltd. (Arise Renewable Energy UK Ltd.) ("the applicant"), and relates to the Proposed Development at Great Harmeston Solar Farm, Pembrokeshire, SA62 3HL (the 'Site'). This report sets out the findings of the otter *Lutra lutra* and water vole *Arvicola amphibius* survey undertaken in January of 2026 at the Site, see **Figure 1.1** for the finalised red line boundary.

1.1.



1.2. **Figure 1.1:** Site Red Line Boundary (© Google Aerial Imagery)

1.2. The boundary of the Proposed Development extends to approximately 128ha across a number of land parcels and is segregated by two 'A' roads and a railway line. The Site comprises arable and improved grassland fields, marshy grassland, neutral grassland, broadleaved woodland, ponds and boundary features including a ditch, hedgerows and hedgerows with trees.

1.3. **Quality Control**

1.3. All ecologists at Tyler Grange Group Limited are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or are working towards membership, and act under the direction of members and abide by the Institute's Code of Professional Conduct[1].

1.4.

[1] CIEEM (2022) Code of Professional Conduct, CIEEM, Winchester

Section 2: Legislation and Conservation Status

2.1. Otter is a European Protected Species and is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) (the "Habitats Regulations") and under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

2.2. Under the Habitats Regulations it is an offence, except under licence, to:

- Deliberately capture, injure or kill an otter;
- Deliberately disturb otters, particularly in a manner likely to impair their ability to survive, breed, rear young, or significantly affect the local distribution or abundance of the species;
- Damage or destroy a breeding Site or resting place (e.g. holt or couch), whether or not the animal is present at the time; and
- Possess, transport, sell or exchange an otter, or any part of one, unless lawfully obtained.

2.3. Under the Wildlife and Countryside Act 1981 (as amended), it is also an offence to intentionally or recklessly disturb otters while occupying a structure or place used for shelter or protection, or to obstruct access to such places.

2.4. Activities that would otherwise constitute an offence may be made lawful through the granting of a European Protected Species licence by Natural Resources Wales (NRW), subject to the relevant legal tests being satisfied.

2.5. Otter is listed as a Species of Principal Importance in Wales under Section 7 of the Environment (Wales) Act 2016. Public authorities, including Local Planning Authorities and Welsh Ministers, must seek to maintain and enhance biodiversity in the exercise of their functions and have regard to the conservation of Section 7 species when determining planning applications.

2.6. Water vole Arvicola amphibius is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take a water vole;
- Possess, sell, transport or offer for sale a water vole or any part of one; and
- Use prohibited methods for taking or killing.

2.7. In Wales, water vole breeding and resting places are not afforded the same level of protection as European Protected Species. However, disturbance, killing or injury of water voles remains an offence under the Wildlife and Countryside Act 1981, and habitat loss may still be considered a material planning consideration through policy and biodiversity duty.

2.8. Water vole is listed as a Species of Principal Importance in Wales under Section 7 of the Environment (Wales) Act 2016. Public authorities, including Local Planning Authorities and Welsh Ministers, are required to seek to maintain and enhance biodiversity and have regard to the conservation of Section 7 species when exercising their functions, including in planning decision-making.

Section 3: Otter and Water Vole Methodology

Otter Lutra lutra survey

3.1. The Site was subject to a presence/likely absence survey on 26th January 2026 by Rebecca Gibbs and Lucy Boulton, both suitably experienced ecologists, following best practice guidance . The weather conditions during the survey were windy, wet, and overcast with a temperature of 5°C, 100% cloud cover, and strong winds.

3.2. The survey aimed to identify evidence of otter presence and to assess aquatic and riparian habitat suitability for otters.

3.3. The survey comprised a walkover assessment of all watercourses, ponds, ditches, and associated riparian habitats near to the proposed cable route, where access permitted. This included the full extent of the north-western watercourse fork and an additional approximate 200m of the south-eastern watercourse section. Both surveyors conducted a thorough visual search of the bank to the water's edge to identify any field signs of otter. The adjacent habitat, such as woodland and scrub, was surveyed when it was considered suitable for otter activity or shelter.

3.4. Any field signs, or features with potential to support otter, were recorded using a GPS-enabled device.

3.5. Features were inspected visually, with particular attention paid to:

- Bridge structures, culverts, and fallen trees;
- Areas of bankside vegetation;
- Changes in channel morphology;
- Pond margins and embankments.

3.6. A summary of the field signs searched for by surveyors included:

- Footprints;
- Spraints (blackish, contains visible flesh, bones and scales, and smells sweet);
- Couches (above ground/covered resting places);
- Holts (below ground/covered resting places);
- Feeding remains such as fish carcasses; and
- Slides (where otter access water from the bank side).

Water Vole Arvicola amphibius survey

3.7. The Site was subject to a habitat suitability assessment on 26th January 2026 by Rebecca Gibbs and Lucy Boulton, both suitably experienced ecologists, following best practice guidance . The weather conditions during the survey were windy, wet, and overcast with a temperature of 5°C, 100% cloud cover, and strong winds.

3.8. The survey aimed to assess suitability of aquatic and riparian habitats for water vole within the Site.

3.9. The survey comprised a walkover assessment of all watercourses, ponds, ditches, and associated riparian habitats near to the proposed cable route, where access permitted. This included the full extent of the north-western watercourse fork and an additional approximate 200m of the south-eastern watercourse section.

3.10. The survey methodology was informed by known water vole habitat preferences, including the species' use of burrow systems excavated into suitable banks, the presence of dry areas above water level for nesting, and the availability of above-ground nesting opportunities where banks are absent or shallow.

3.11. Any evidence or features with potential to support water voles were recorded using a GPS-enabled device.

3.12. Features were inspected visually, with particular attention paid to:

- Bank profile, stability, height, and suitability for burrowing;
- Bank substrate type;
- Bankside vegetation structure and continuity;
- Pond margins and embankments;
- Locations offering suitable refuge from flooding and disturbance.

3.13. A summary of the field signs searched for by surveyors included:

- Burrows (including burrow entrances at water level);
- Latrines (piles of droppings used for territorial marking);
- Feeding signs (e.g., characteristic "lawns" and gnawed vegetation);
- Footprints and runs within bankside vegetation; and
- Suitable habitat features indicative of potential water vole use.

Habitat Suitability Assessment

3.14. As the habitat requirements for otters and water vole are similar, the two surveys were combined. Notes for each watercourse were taken throughout the survey. Habitat suitability was assessed by evaluating the features of each waterbody and its surrounding habitat. Species-specific requirements of water voles were considered throughout.

3.15. Habitat suitability assessments were carried out throughout the survey. The assessment considered:

- Rate of water flow;
- Bank profiles;
- Degree of shading from overhanging trees;
- Extent of suitable emergent and bankside herbaceous vegetation for providing food, shelter, and nesting material;
- Level of Site disturbance;
- Potential for the waterbody to dry out;
- Suitability of bank substrates for burrowing/holt creation;
- Water quality.

Limitations

3.16. It should be noted that the survey information is accurate at the time of survey; otter and water vole activity can vary seasonally and in response to weather conditions, habitat changes, and disturbance. Dense vegetation, water levels, bank erosions, flooding, and rainy weather, may obscure field signs.

3.17. Some areas of the Site along the watercourse could not be safely accessed due to the presence of densely vegetated and/or steep sided river banks. As such, those areas were surveyed from a distance with binoculars where possible.

3.18. Otters are active throughout the year and therefore survey timing is not seasonally constrained;, however, surveys are ideally conducted between May to September when the water levels are less variable.

3.19. The optimum timing for undertaking water vole surveys is during the water vole's breeding season, when field signs are more evident; for most of the UK this is considered to be mid-April to the end of September. It is possible to undertake habitat assessments outside of these periods, although consideration will need to be given to how the habitat might change during the course of the year. Field sign surveys outside of the periods described above should be avoided as the absence of water voles cannot be confirmed.

3.20. It is not considered that the limitations encountered on Site had a significant impact on the findings.

3.21. Biological records obtained from third parties and presented in the desk study do not represent a full and complete species list for the area. The records are mostly provided by individuals on an ad-hoc basis, often meaning there are areas of deficiency in the data. If species records are not present, it may be as a result of the area being under-surveyed, and as such no records have been returned. Therefore, the lack of species should not be disregarded.

Section 4: Results

Desk Based Data

4.1. A search of local biological records undertaken by the West Wales Biodiversity Information Centre (WWBIC) within a 2 km radius of the Site boundary returned six historical records of Eurasian otter *Lutra lutra* within the wider study area. The closest record was located approximately 300 m east of the Site and dates from 2005.

4.2. No records of water vole were returned as part of the data search.

4.3. The presence of otter records in proximity to the Site supported the need for targeted field surveys to assess current use of the on-Site watercourse and associated riparian habitats, while the absence of water vole records informed the subsequent habitat suitability assessment and field verification.

Habitat Suitability Assessment

4.4. The Site comprises watercourses, wet ditches, and ponds within a predominantly arable landscape. Farm buildings, work yards, and residential properties occur locally, particularly within the south-eastern section of the survey area. Watercourses are bordered by deciduous woodland and scrub, including oak, willow, hawthorn, and alder, providing approximately 70% shading along river margins in most areas.

4.5. Channel width ranged from 1.0m—2.0m and depths ranged from less than 0.3m to approximately 1.0m, with moderate flow. Channel substrates comprised sandy silt and pebble material. Bank profiles varied from low and shallow to locally elevated (up to approximately 1m above water level). Bankside erosion and evidence of flooding were recorded throughout the Site.

4.6. Bankside vegetation ranged from sparse to moderate and included grasses, bramble, bracken, hawthorn hedgerow, alder woodland, light ivy cover, reeds, and rushes. Canopy cover was generally open, and several sections lacked continuous herbaceous vegetation. Some shallow, narrow channel sections with muddy banks, sparse vegetation, or polluted standing water were recorded and were considered unsuitable for otter or water vole.

4.7. Ponds within the survey area varied in habitat quality. One pond supported grassy, sloping verges with reeds, rushes, and bramble, whilst the other was surrounded by herbaceous vegetation on muddy sloping banks . No evidence of water vole activity was recorded at any pond. Ponds and adjacent riparian habitats were considered suitable for otter foraging.

4.8. The north-western watercourse section was approximately 1.5m wide, with natural banks, moderate flow, and depths of 0.3—1.0m. Vegetation cover was limited, with light ivy and exposed soil present. The majority of this section was situated within an alder woodland area. The south-eastern section displayed similar channel characteristics, but was adjacent to residential properties, and a working yard. Bankside vegetation was denser in some areas of this section, with heavy bramble coverage. In other areas of the south-eastern section, the banks were primarily exposed soil with low-growth herbaceous vegetation.

4.9. Overall, habitat suitability across the Site was assessed as moderate for otter due to the presence of linear water features and areas for resting opportunities, and low to moderate for water vole, constrained by bank instability, limited food resources, and insufficient nesting opportunities. Some habitat features recorded can be located in Table 4.1

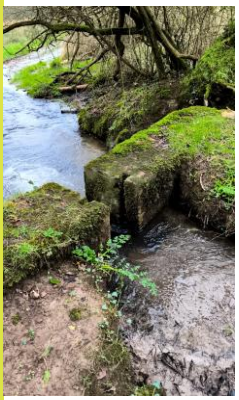
4.10. The survey confirmed regular use of the on Site watercourse by Eurasian otter for commuting and foraging, with multiple spraints and anal jelly recorded along riparian features. Habitat across the Site provides moderate suitability for otter, particularly along wooded and vegetated sections of the watercourse.

4.11. No evidence of water vole was recorded, nor was there any record returned from the desk study and habitat was assessed as low suitability, constrained by unstable banks, limited food resources and frequent flooding. The Site is therefore considered laragely unsuitable for water vole

Table 4.1: Habitat Features

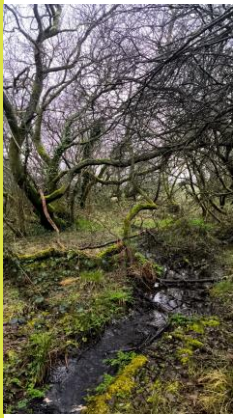
XY	Description	Photograph
-558230.139831336, 6753900.15482012	Bridge	
-558352.405738724, 6754905.5144329	Bridge	

XY	Description	Photograph
-558086.352155728, 6753477.97085074	Bridge	
-558047.047656403, 6753485.65731069	Cascade	
-558558.717861661, 6755388.91046489	Cascade	
-558557.604666753, 6754215.3838458	Culvert	

XY	Description	Photograph
-558293.082024517, 6753980.81162836	Culvert	
-558516.416455159, 6755250.45187258	Fallen trees — underneath would provide a suitable otter couch habitat.	
-558791.190064934, 6754568.98229216	The watercourse thins in this area; grasses and herbaceous vegetation overtake the banking, and the surrounding area provides more suitability for water voles but no evidence was found.	

XY	Description	Photograph
-558188.245066371, 6753946.3653378	The river thins into a stream - low bankings in this area, and interspersed grassy herbaceous vegetation. Banks are very eroded and prone to flooding.	
-558475.78484102, 6754154.85412947	Area of decreased habitat suitability; banks have mostly eroded and flooding onto the adjacent grassland present.	
-558520.127104852, 6754196.50571755	High, vegetated bankings with small mammal burrows (likely rat).	
-558093.587922629, 6753494.15066947	Suitable otter couch area. Vegetated banking with overturned fallen trees.	

XY	Description	Photograph
-558209.112413468, 6753893.62778511	Bankside erosion high in this area, but river widens. Most bank-side areas damaged by flooding.	
-558353.504473468, 6754069.26756588	Fast-flowing area; low banks, with patchy vegetation.	
-558411.590601329, 6754108.10871664	Bankside lined with grasses. Rodent burrows in this area.	

XY	Description	Photograph
-558700.093614968, 6755581.01817897	Lightly vegetated, low, banks with overhead woodland canopy.	
-558604.91545034, 6755434.76415537	Banks increase in height and vegetation. Cluttered deciduous woodland canopy overhead. Rock/sand substrate in watercourse.	
-558584.877941997, 6755404.49469667	Narrow area of the watercourse with patchily vegetated, muddy banks and overhanging deciduous trees.	
-558543.13313295, 6755372.72687123	Watercourse forks slightly; deciduous woodland canopy overhead, with muddy, sparsely vegetated banks.	

XY	Description	Photograph
-558440.34813645, 6755111.69595444	Highly vegetated banks, varying in height, surrounded by deciduous woodland and overgrown herbaceous vegetation with interspersed overhanging trees.	
-558339.418464798, 6754839.88507585	Banks vary from highly vegetated to low, eroded, with pollution present.	
-558343.50017946, 6754851.87213345	Wide section of the channel with overgrown scrub vegetation, low soil banks, with sparse ground cover in some areas.	
-555756.991810879, 6753143.59514583	Tall banks with scrub overgrowth and tunnel leading under a road.	

XY	Description	Photograph
-558047.047656403, 6753485.65731069	Lightly vegetated open banking, fast-flowing area of the watercourse with a small cascade and overhanging trees.	
-555767.196097535, 6753139.40055594	Within the south-east survey area — residential area directly adjacent to watercourse, which has sparsely vegetated banks.	
-559237.024625561, 6754751.78074544	Small off site pond — muddy banks, vegetated by mostly bramble and light grass coverage. Rodent burrows present along muddier areas.	

4.12. **Otter Survey**

1.4. Evidence of otter presence was recorded at multiple locations within the survey area. Otter spraints and anal jelly were identified along the watercourse (see Table 4.2 for locations). Spraint deposits were recorded on exposed and elevated features, including bridges, branches, and fallen or wind-blown trees.

1.5. Fallen trees and areas of dense bankside vegetation were recorded throughout the Site and provide potential otter laying-up habitat. Several sections of the watercourse were identified as suitable for otter couches; however, no evidence of these being used was recorded.

1.6. Potential commuting routes were identified along shallow sections of the watercourse. Paths of flattened vegetation leading into the water were recorded at two locations; however, these could not be conclusively attributed to otter activity.

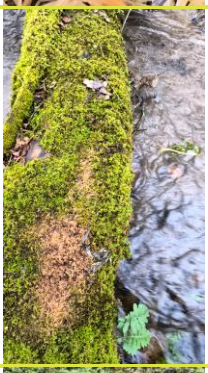
1.7. One small off site pond and one larger pond (Pond 3) within the survey area contained features suitable for otter foraging. No confirmed otter holts or breeding Sites were identified during the survey. The habitat was therefore considered to be primarily used for commuting, resting, and foraging. The results of otter signs are shown in Table 4.2. below. Given the absence of holts or breeding Sites and the presence of widespread commuting and foraging evidence, otter use of the Site is considered to be primarily transient and associated with movement through the riparian corridor rather than long-term residence.

1.8. Ecological importance The Otter population is considered to be of county ecological importance.

Table 4.2 Presence/likely absence survey field signs

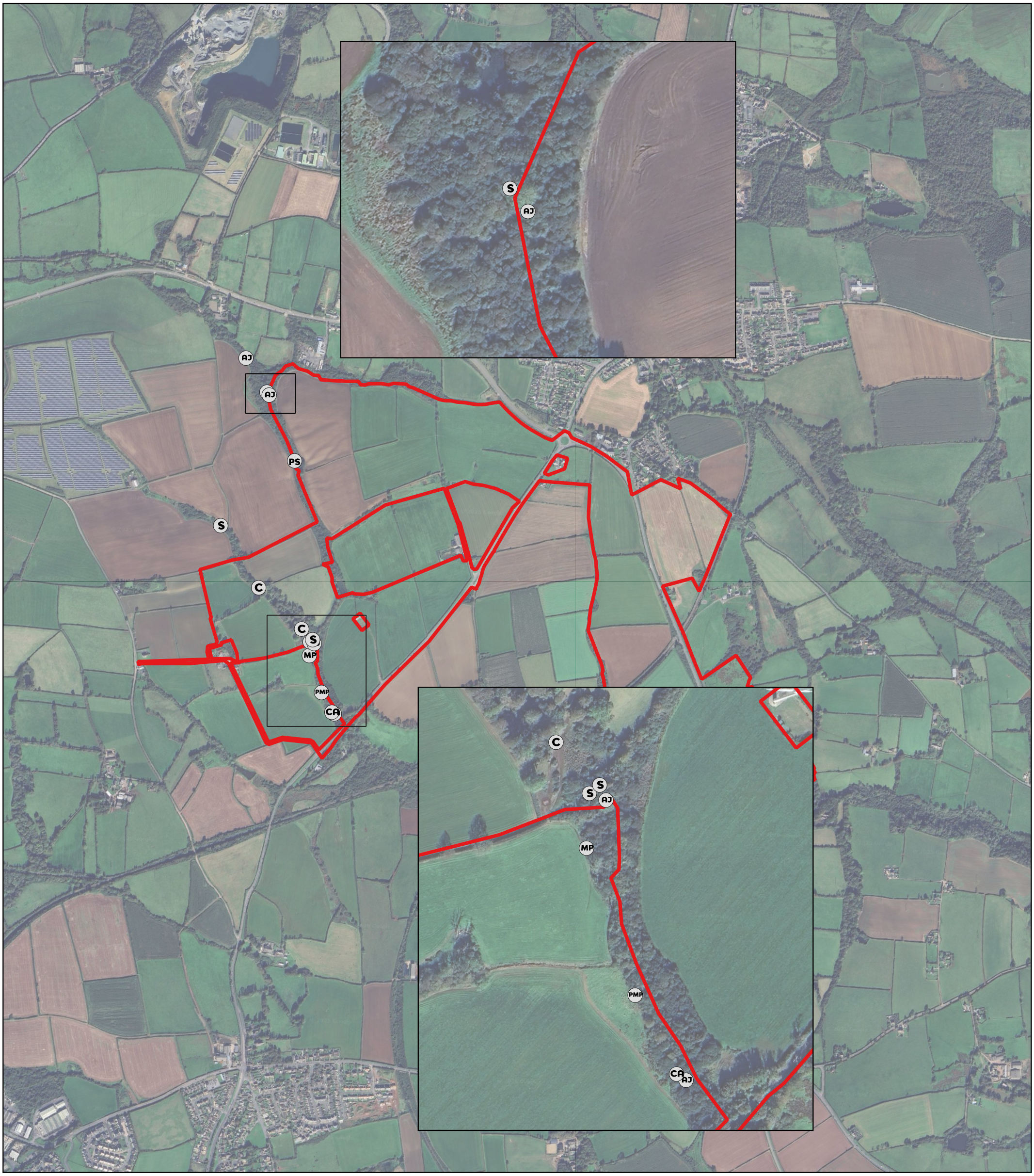
Date	Species	Evidence Type	XY	Notes	Photograph
26/01/26	Otter	Anal Jelly	-558215.297232563, 6753897.75768809	Anal jelly found on fallen tree trunk.	
26/01/26	Otter	Anal Jelly	-558079.116388826, 6753485.46150355	Anal jelly found on bridge.	
26/01/26	Otter	Anal Jelly	-558688.961665889, 6755575.3238132	Anal jelly found bank-side rock.	

26/01/26	Otter	Anal Jelly	-558240.300885581, 6753906.74264149	Anal jelly found amongst moss on fallen tree.	
26/01/26	Mammal sp.	Run	-558241.271780415, 6753824.94513972	Mammal path leading leading towards watercourse.	
26/01/26	Mammal sp.	Run	-558160.008552136, 6753608.90845686	Mammal path leading leading towards watercourse.	
26/01/26	Mammal sp.	Run/Potential slide	-559259.102991235, 6754784.14549045	Mammal path leading leading towards watercourse - potentially an otter slide.	

26/01/26	Otter	Spraint	-558240.300885581, 6753906.74264149	Otter spraint - characteristic jasmine smell, fur and bones present.	
26/01/26	Otter	Spraint	-558556.677004329, 6755378.42109496	Otter spraint - characteristic jasmine smell, fur and bones present.	
26/01/26	Otter	Spraint	-558797.776484208, 6754574.62109498	Otter spraint amongst grass on bankside - characteristic jasmine smell, fur and bones present.	
26/01/26	Otter	Spraint	-558225.501519219, 6753919.93118638	Two otter spraint piles	
26/01/26	Otter	Spraint	-558225.501519219, 6753919.93118638	Otter spraint - characteristic jasmine smell, fur, scales, and bones present.	

Plans:

Plan 1: Otter Survey Plan **16720_P10**



Project	Great Harmeston Solar Farm
Drawing Title	Otter Survey
Scale	As Shown (Approximate)
Drawing No.	16720/P10
Date	Feburary 2026
Checked	JE/DB

Redline Boundary

Otter Field Signs

- AJ — Anal Jelly (Otter)
- C — Culvert
- MP — Mammal path
- S — Otter Spraint
- PMP — Potential Mammal Paths
- CA — Potenital Resting Place

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