



Tillbridge Solar

PEI Report Volume II Appendix 9-5: Badger Survey Report
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1. Introduction

1.1 Background

- 1.1.1 AECOM (on behalf of the Applicant) undertook a Preliminary Ecological Appraisal (PEA) (Ref 5-1 and **PEI Report Volume II Appendix 9-2**) for the Tillbridge Solar scheme (hereafter referred to as the Scheme). The PEA identified the need for follow-up surveys to determine the potential impacts of the Scheme on Badger *Meles meles*, a species protected under the Protection of Badgers Act 1992 (Ref 5-2). Therefore, AECOM was instructed by the Applicant to undertake a survey for Badger within the Scheme Boundary (see Figure 1 within Annex A) to determine the presence or likely absence of Badger.
- 1.1.2 Owing to the confidentiality surrounding reporting of locations of Badger, the survey results, evaluation and conclusions have been redacted from this report and are included as a confidential annex (Annex A). This separate annex will be provided separately to key stakeholders.

1.2 The Scheme

- 1.2.1 The Scheme comprises the construction, operation (including maintenance) and decommissioning of ground mounted solar photovoltaic (PV) panel arrays to generate electricity, a Battery Energy Storage System (BESS) and infrastructure to export and import electricity to the national electricity transmission network.

1.3 Site Description

- 1.3.1 The Scheme is located approximately 5km to the east of Gainsborough, Lincolnshire, within the administrative district of West Lindsey. The Cable Route Corridor tracks south of the Principal Site, to the east of Willingham by Stow before tracking west towards the River Trent and to the south of Gate Burton. The Cable Route Corridor crosses into Nottinghamshire (within the administrative district of Bassetlaw) before connecting to National Grid Cottam Substation.
- 1.3.2 The Scheme Boundary is dominated by arable fields. There are numerous mature trees and hedges within the Scheme Boundary, with woodlands and small wooded copses. The Scheme Boundary is surrounded by mainly arable fields.

1.4 Scope of this Report

- 1.4.1 The objective of the Badger survey, reported in this document is to determine the presence or likely absence of Badger within the Scheme Boundary and, if present, to report on any mitigation that may be required.
- 1.4.2 This report includes the following information:
- Relevant legislation and policy;
 - Methods for desk and field-based assessments undertaken in 2022;

- Limitations to the surveys undertaken and any assumptions made as a result of incomplete data;
- Survey results (Annex A);
- Evaluation and potential impacts (Annex A); and
- Conclusions and mitigation (Annex A).

1.4.3 This report is a technical appendix to accompany **PEI Report Volume I Chapter 9: Ecology and Nature Conservation** and provides preliminary baseline information of the Scheme, as of December 2022, which has been used to inform the design of the Scheme and, where necessary, appropriate mitigation. Surveys are ongoing within both the Principal Site Boundary and the Cable Route Corridor Boundary and any updates to surveys will be provided within an updated report and included in the Environmental Statement (ES) as part of the DCO submission.

2. Legislation and Planning Policy

2.1 Relevant legislative context

2.1.1 Badgers and their setts¹, are protected under various legislation, drawn together under the Protection of Badgers Act 1992 (Ref 5-2), which protects Badgers from deliberate harm and injury. Restrictions under this Act, which apply to development, make it an offence to:

- Wilfully kill, injure, possess or cruelly ill-treat a Badger, or attempt to do so;
- Interfere with a sett by damaging or destroying it;
- Obstruct access to, or an entrance of, a sett; and
- Disturb a Badger when it is occupying a sett.

2.1.2 This legislation prevents development on a site occupied by Badgers without any mitigation being agreed and undertaken prior to development commencing. If potential impacts are perceived on Badger setts, such as disturbance or loss, then a licence to close a sett would be required from Natural England. It would also be necessary to undertake appropriate mitigation that comprises construction of artificial sett(s).

2.1.3 The Protection of Badgers Act, 1992, was introduced to combat the cruel ill-treatment and persecution to which Badgers are sometimes subjected. This report identifies the location of a number of Badger setts and therefore to safeguard these animals, the report should be treated as confidential and not released into the public domain.

2.2 Local Biodiversity Action Plan

2.2.1 Badger is not listed as a Priority Species on the Lincolnshire Biodiversity Action Plan (Ref 5-3) or the Nottinghamshire Biodiversity Action Plan (Ref 5-4).

¹ A sett is a Badger's home (den), comprising a network of underground tunnels and entrance holes

3. Methods

3.1 Desk Study

- 3.1.1 A desk study was undertaken in July 2022 through the Lincolnshire Environmental Records Centre (LERC) and the Nottinghamshire Biological and Geological Record Centre (NBGRC) to obtain records of Badger within the preceding ten years and within a 2km radius of the Scheme Boundary.
- 3.1.2 Only records up to ten years old from the request date were considered within the assessment, as any records older than ten years are unlikely to be still representative of Badger presence in the local area.

3.2 Field Survey

Survey Area

- 3.2.1 The area surveyed for Badger (the Survey Area) included all habitat within the Scheme Boundary (see Figure 1 within Annex A).
- 3.2.2 Where access allowed, the Survey Area was extended to 50m beyond the Scheme Boundary. Any evidence of Badger, including Badger setts, that were found during the course of other ecological surveys, both within and outside of this Survey Area, were also recorded.

Badger Activity

- 3.2.3 The survey was based on standard survey methodology for surveying Badger, as described in the Mammal Society publication: Surveying Badgers (Ref 5-5); in Surveying for Badgers: Good Practice Guidelines, Version 1 (Ref 5-6) and in the National Badger Survey method (Ref 5-7).
- 3.2.4 A walkover survey of the Principal Site to look for evidence of Badger activity was carried out on the following dates:
- 29 November 2022;
 - 1 December 2022; and
 - 17 February 2023.
- 3.2.5 Furthermore, any evidence of Badger activity that was noted whilst undertaking other Ecology surveys of the Survey Area was also recorded.
- 3.2.6 The Survey Area was searched for all signs of Badger activity within the Principal Site including:
- Setts;
 - Pathways in vegetation;
 - Footprints;
 - Hairs;
 - Latrines/dung pits; and
 - Snuffle holes/signs of foraging activity.

3.2.7 Any holes considered to be a Badger sett were categorised using sett classification criteria (Ref 5-7) and identified setts were classified using the following criteria:

- **Main sett:** These are large setts with a number of active holes and conspicuous spoil heaps around the sett. There will be well used paths to and from sett entrances and they are usually in continuous use. A main sett is most likely to be where cubs are born and there is only one main sett per Badger clan.
- **Annexe sett:** These setts are often close to main setts and are linked to main setts through well-worn paths in vegetation. There are usually several entrance holes to an annexe sett, but these may not be in use all the time.
- **Subsidiary sett:** These are smaller setts and usually comprise three to five entrance holes, often >50 metres from a main sett, with usually no connectivity to other setts.
- **Outlier sett:** There are usually one to three holes in an outlier sett, with small spoil heaps outside the hole. They are often used sporadically and have no connectivity with other setts. When not in use by Badger, they may be taken over by other ground-dwelling mammals

3.2.8 Once a sett was identified, entrance holes were classified further as being one of the following:

- **'Good' foraging potential:** where habitat was considered to provide Badgers with a variety of foraging opportunity throughout the year;
- **'Moderate' foraging potential:** where foraging opportunities are seasonal and limited; and
- **'Poor' foraging potential:** areas with no food value for Badger.

3.3 Assumptions and Limitations

Desk Study

3.3.1 The aim of the desk study was to help characterise the baseline context of the Scheme and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of the 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 Badger does not necessarily mean that Badger does not occur in the study area. Likewise, the presence of records for Badger 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 At the time of writing this report, there was no access to land parcels in the northwest of the Principal Site or land within the Cable Route Corridor and therefore, no Badger surveys were carried out in these areas. These areas will need to be surveyed for Badger activity once access has been arranged, to check for both Badger setts and activity, in order to inform mitigation.

3.3.3 Sufficient information was gathered during the assessment to provide a representative evaluation of Badger present within the Principal Site, where access allowed.

4. Results and Evaluation

- 4.1.1 The results of the Badger survey are presented in confidential Annex A, which will be provided separately to key stakeholders.

5. References

- Ref 5-1 AECOM. (2021) Tillbridge Solar Farm Preliminary Ecological Appraisal.
- Ref 5-2 Anon. (1992) Protection of Badgers Act 1992. HMSO.
- Ref 5-3 Lincolnshire Biodiversity Action Plan. (2012-2020) 3rd edition.
<http://www.southkesteven.gov.uk/CHttpHandler.ashx?id=7371&p=0>
- Ref 5-4 Nottinghamshire Biodiversity Action Group (2008) Local Biodiversity Action Plan.
<https://nottsbadg.org.uk/lbap/lbap-introduction-and-sections-1-to-6/>
- Ref 5-5 Harris, S., Cresswell, P. and Jefferies, D. (1989) Surveying Badgers, Mammal Society.
- Ref 5-6 Scottish Badgers. (2018). Surveying for Badgers: Good Practice Guidelines. Version 1.
- Ref 5-7 Cresswell, P., Harris, S. and Jefferies, D.J., 1990. The history, distribution, status and habitat requirements of the badger in Britain. Nature Conservancy Council, Peterborough.
- Ref 5-8 Territories - About how badgers live their lives across the UK (undated) Available at: <http://www.badgerland.co.uk/animals/family/territories.html>
- Ref 5-9 European Badger Territoriality & Home Range (2022). Available at: <https://www.wildlifeonline.me.uk/animals/article/european-badger-territoriality-home-range>

