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Our reference: 2485116 – Peartree Hill Solar Farm Badger Survey Report Rev01

Dear Mike,

Peartree Hill Solar Development – pre-construction badger survey

(**CONFIDENTIALITY All references to the location of badgers in the original version (dated 28th November 2023, Rev00) of this report have been removed. Figure 1 and the Appendices have also been removed.** *Badgers are protected in Britain under the Protection of Badgers Act 1992 and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended).)*

This short letter report presents the results of a badger (*Meles meles*) survey undertaken at land proposed to be used for the large-scale solar farm at Peartree Hill Solar, east of Beverley, East Riding of Yorkshire. The aims of the survey were to assess the presence or absence of badgers within a 30 m buffer of the proposed development works area.

The badger survey was based on the red line boundary plan of the 'site', though final site plans (including cable routes and construction access tracks) are yet to be confirmed. Therefore, the recommendations made here may need to be revised as more information regarding the project footprint becomes available.

Ecological Context

The *c*.1,300 ha site is located to the east of the town of Beverley, close to the hamlet of Meaux and villages of Routh, Leven and Long Riston. The site comprises several smaller parcels of land (labelled A to I), and each field or area is given a code (e.g. A1). Most of these areas are arable fields. However, there are also some fields of grazed grassland, and relatively small areas of neutral grassland, broadleaved woodland and scrub in some of these parcels. The fields are bordered by a mix of hedgerows, wet ditches and some of the many major, named drains and dikes in the area. The site also comes close to the River Hull to the north-west.

The surrounding area is dominated by agricultural land, farmsteads and minor settlements with a complex network of drains and dikes. The main group of land parcels has few roads other than Meaux Lane which cuts through the centre of the area. However, the northernmost parcel is separated from the others by the A1035 road, and the small, easternmost parcel is separated from the rest of the parcels by this road and the adjoining A165. The River Hull runs close to the western edges of the site, beyond which is the town of Beverley (*c*.1.3 km at its nearest point). The North Sea and the Humber Estuary each lie *c*.10 km to the east and south respectively.

The development proposal is a large-scale ground mounted solar photo-voltaic (PV) installation. It is assumed that existing areas of woodland within the site boundary will be retained, and some parts

of the site have been identified as possible ecological mitigation/enhancement areas. Otherwise, it is assumed that most of the areas will have solar panels installed on them.

While it is anticipated that the majority of existing boundary habitats will be retained post-development with suitable buffers from the development, small sections of hedgerow and field margin may be affected during construction, particularly for facilitating access and cable routes. The locations of access tracks and cable routes is not yet known at the time of writing, though some estimations have been made on likely impacts.

RSK Biocensus undertook a Preliminary Ecological Appraisal (PEA) of the site between June and September 2023[1]. The PEA report states the background data search returned two records of badgers, one within 100 m of the site. However, despite some areas of woodland and banks the majority of the site is unfavourable habitat for badgers due to the open, flat arable farmland. One outlier badger sett was recorded during the PEA.

As the PEA survey was completed during the summer, the tall vegetation posed a significant constraint to identifying badger field signs. Therefore, the PEA recommended a targeted badger survey of the site once the vegetation had died back during late autumn/winter. This report provides the results of the targeted badger survey.

Methodology

The survey was undertaken between the 13th and 17th November 2023 by RSK Biocensus on behalf of JBM Solar Projects (UK) Ltd.

The proposed development area (shown in Figure 1: not provided due to confidentiality) was surveyed between the 13th and 17th November 2023 by a RSK Biocensus principal ecological consultant. The survey area was searched for field signs of badger and was conducted in line with best practice guidance; Harris *et al*. (1989[2]), and English Nature (2002[3]). The survey area covered all land within the red line boundary shown within Figure 1 (nor provided due to confidentiality).

Badger activity and sett entrances are shown in Figure 1(not provided due to confidentiality) with target notes taken to describe features and photographs presented in Appendix 1 and 2 (not provided due to confidentiality).

Individual holes or setts were described using terminology set out below, which is consistent with that defined by Harris *et al*. (1989) with some additional terms:

- *Well-used holes* – these are clear of any debris and vegetation, are obviously in regular use, and may or may not have been excavated recently.
- *Partially-used holes* – these are not in regular use and have debris such as leaves or twigs in the entrance or have moss or other plants growing in or around the entrance. Partially used holes could be in regular use after a minimal amount of clearance.
- *Disused holes* – these have not been in use for some time, are partially or completely blocked, and cannot be used without a considerable amount of clearance. If the hole has been disused for some time, all that may be visible is a depression in the ground

[1] RSK Biocensus. (2023) 2485116 Peartree Hill Solar PEA
[2] Harris, S., Cresswell, P. & Jefferies, D. (1989), *Surveying Badgers*. Mammal Society, Occasional Publications **9**, London.
[3] English Nature (2002) *Badgers and Development*. English Nature, Peterborough

where the hole used to be, and the remains of a spoil heap, which may be covered in moss or other plants.

- *Active setts* – a sett showing evidence of current use is considered to be active. Any sett entrance that is well-used or partially-used can fall within the category of current use as interpreted by English Nature (1995 and 2002).
- *Disused setts* – if all the entrances of a sett are disused and it shows no evidence of current use, then even though it was originally dug by a badger, it is no longer a badger sett as defined under The Protection of Badgers Act 1992.
- *Vertical collapse* – holes that have been created where the roof of an underground tunnel has collapsed and created an entrance that drops directly into a tunnel.
- *Cohabitation* – both fox and rabbit are sometimes known to occupy badger setts at the same time as badgers are resident. The presence of fox hair and rabbit signs at a sett complex does not necessarily indicate that the sett is being used exclusively by these animals. These findings should be considered in conjunction with other findings or observation in and around the sett.
- *Main sett* – a badger sett forming the main home of a social group of badgers. Main setts are occupied continually throughout the year and are generally used by at least one sow to rear young. In a national survey of setts, the average number of entrances for a main sett was 12, although there may any number of holes from one to more than 40.
- *Annex sett* – setts situated in the immediate vicinity of a main sett; usually within 50 to 150 m and connected by a well-worn path. Although such setts are often occupied throughout the year, they will generally only be used for breeding when the main sett is used by another breeding sow. These setts can have any number of holes although it is usually fewer than the main sett. The distinguishing feature of these setts is the obvious, well-used path running to the main sett.
- *Subsidiary sett* – setts situated away from the main sett that may represent an area of particularly good foraging. Such setts are used occasionally throughout the year and occasionally for breeding but are more likely to be used only to exploit a seasonal food source. These setts can have any number of entrances, but typically around four to eight holes and usually fewer than the main sett.
- *Outlying sett* – these setts are away from the main sett. They have a small number of holes, often only one or two. Outlying setts are rarely in continuous occupation and are most often used either to exploit a seasonal food source or as a refuge when visiting certain parts of the territory.

Constraints

Sett category classifications were based on the field evidence collected at the time of survey. It is possible that sett classification could change depending on monitoring and if breeding appears.

A badger sett was classified as a separate sett based on the topography of the ground and distance from other sett entrances. However, as some badger tunnels have been known to extend for up to 30 m it is possible that badger sett entrances within 30 m proximity of one another are connected and are the same sett.

Results

Evidence of badger was recorded with 21 setts located within the survey area comprising four disused setts, three active main setts, three active annexe setts, three active subsidiary setts and eight active and partly active outlier setts, which are shown in Figure 1 (not provided due to confidentiality). More information, including gird references can be found in Appendix 1, and photographs of the setts recorded are in Appendix 2 (Appendices not provided due to confidentiality).

Badger Setts

Badger sett A: This sett was classified as an active but partially used outlier sett and consisted of one entrance hole.

Badger sett B: Sett B consisted of four active entrances with discarded bedding outside two of the entrances along the ditch-side and was therefore classified as a main sett.

Badger sett C: This sett consisted of two partially used holes and was classified as an outlier sett.

Badger sett D: Two active entrances and two disused entrances were recorded, therefore this sett was classified as an active but partially used outlier sett.

Badger sett E: Three active entrances and 1 disused entrance were recorded. This sett was classified as an active but partially used subsidiary sett.

Badger sett F: Two active entrances and four disused entrances were recorded within the woodland. This sett was classified as an active and well used subsidiary sett.

Badger sett G: This sett was classified as an inactive/disused sett and consisted of two disused entrances.

Badger sett H: This sett was classified as an inactive/disused sett and consisted of four disused entrances.

Badger sett I: This sett was classified as an inactive/disused sett and consisted of two disused entrances.

Badger sett J: This sett was classified as an inactive/disused sett and consisted of two disused entrances.

Badger sett K: One active badger entrance was recorded amongst an active rabbit warren. This sett was classified as an active, well used, outlier sett.

Badger sett L: One active entrance was recorded, along with fresh spoil and a badger hair. This sett was classified as an active, well used, outlier sett.

Badger sett M: One active entrance was recorded, along with fresh spoil. This sett was classified as an active, well used, outlier sett.

Badger sett N: Three active entrances were recorded, with the possibility of more that were not visible from the opposite bank of the watercourse. Large spoil heaps were also recorded. This sett was classified as an active and well used main sett.

Badger sett O: This sett was recorded to be closely linked at sett N, and had two active entrances and large spoil heaps visible. This sett was classified as an active and well used annex sett.

Badger sett P: Two active entrances along with nearby latrines were recorded. This sett was classified as an active, partially used, subsidiary sett.

Badger sett Q: Three active entrances were recorded and this sett was classified as an active, well used, annex sett.

Badger sett R: Three active entrances and a large spoil heap were recorded, with a further four active entrances and associated spoil recorded approximately 10m along the treeline. This sett was classified as an active and well used main sett.

Badger sett S: Two active entrances were recorded and this was classified as an active and well used annex sett.

Badger sett T: Two active entrances were recorded and this was classified as an active, well used, outlier sett.

Badger sett U: One active entrance was recorded and this was classified as an active, well used, outlier sett.

Badger Latrines

Badger latrine 1: This latrine was recorded within the rough vegetation.

Badger latrine 2: This latrine was recorded within the rough vegetation.

Legislation

Badgers are protected in Britain under the Protection of Badgers Act 1992 and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). The legislation affords protection to badgers and badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess, or cruelly ill-treat a badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

Evaluation and Conclusion

Badgers are afforded protection as is described in the section above. Two records of badger within 100 m of the site were returned during the BDS. Numerous badger setts, latrines and paths were observed throughout the study area.

Badger setts recorded within the study area were mainly located within hedgerows, watercourse banks or woodland along the edges of fields.

Badgers regularly move territories, open old setts, or dig new ones. A badger survey should be undertaken in advance of construction to confirm that there are no setts that could be disturbed by the works (the timescale will depend of the season in which works start) and ensure compliance with relevant legislation. In the event a large animal burrow is found during works, all works within 30 m of the burrow must cease until further assessed by an ecologist.

Where possible, works should be avoided within 30 m of a sett unless the sett has been confirmed as disused. In order to assess whether a sett is disused including setts discussed within this report, a survey prior to works is required. If a sett cannot be confirmed as disused during the survey, appropriate monitoring using camera traps maybe required.

In the event any work, including pre-enabling works such as ground investigation is required within 30 m of an active sett, a review of whether the work will cause disturbance will need to be undertaken by an ecologist. If the work is assessed as potentially causing disturbance an appropriate Natural England licence will need to be granted prior to works.

If a sett requires removal and/or will be disturbed, a licence will be required from Natural England to exclude badgers before it can be removed; removal can only be undertaken between 1 July and 30 November inclusive.

Few badger latrines and other evidence of territorial marking were identified, which may indicate there are few badger clan territories across the site. However, conclusive evidence of badger territories will be required if a main sett or substantial number of non-main setts need to be closed under licence. This may include badger bait marking surveys to determine territories and determine potential impact to badger clans within the area.

All excavations must be covered overnight to prevent badgers (and other mammals such as hedgehogs) from becoming trapped. If it is not possible to cover excavations, an egress route such as a ramp should be provided to allow animals to climb out.

To ensure badgers continue to use the site, the lighting scheme for the pre-enabling works, main construction work and the site post construction must to take into account badger activity and the presence of setts. This may include but not be restricted to measures such as ensuring no lighting is directed to within 30 m of an active sett or across habitats likely to be used by badgers such as hedgerows and woodlands.

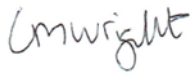
In order to safeguard any badgers that may be active in the area, security fencing used around panel areas should be permeable to badgers allowing continued movement across the area and access to foraging under panels and along field margins. Ensuring badger activity and movement across the site could be achieved through the installation of suitable mammal ledges alongside existing culverts, animal underpasses and gates.

Where possible, the landscape scheme should include retaining a suitable standoff from all existing hedgerows. This should be at least 30 m in areas containing badger setts and appropriate tree root protection zones around all trees. All existing woodlands and tree lines should remain undisturbed and appropriate stand-off areas should be incorporated to ensure all watercourse banks are not impacted.

Biodiversity enhancements required for the scheme should consider badgers and potential ways to maintain access to fields for foraging and potentially improve the foraging value of the site for the species. This may include but not be restricted to ensuring existing scrub habitat such as those areas

managed for game cover within areas F2 to F4 and F7 are retained and enhanced for wildlife; the planting of native flower-, berry- and fruit-bearing species across the site boundaries and existing woodlands and ensuring the long-term management of the site considers badgers. Proposals to increase the biodiversity net gain of the site will consider badgers .

Yours Sincerely,



Lewis Wright, principal ecologist

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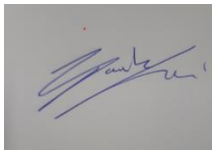

On behalf of RSK Biocensus

Mark Lang Technical Director FCIEEM, CEcol, CEnv