# OAKLANDS FARM SOLAR PARK

## Applicant: Oaklands Farm Solar Ltd

Response by the Applicant on Ecology Matters
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# Oaklands Issue Specific Hearing 1. Item 5 - Biodiversity: Additional Information. 31.10.2024.

This note has been prepared following Issue Specific Hearing 1 (ISH1), Item 5 – Biodiversity. It sets out further supporting evidence on key matters discussed at ISH1 and provides a basis for further discussion with the aim of reaching consensus as part of the Statement of Common Ground between the Applicant and South Derbyshire District Council (SDDC).

## Sensitive Design of Construction Road

Sensitive design has been a key consideration from the project inception and construction access, which was specifically discussed at ISH1, has been designed to minimise ecological impacts by adopting the following measures:

- Retention and protection of features of greatest ecological importance, including the avoidance of the loss of:
  - Designated wildlife sites.
  - Ancient woodlands.
  - Ponds.
  - Bat roosts.
  - Trees with potential to support important bat roosts.
  - Trees suitable for supporting roosting or nesting barn owl.
  - Badger setts.
  - Otter shelters.
- River corridor crossing locations have been selected where the extent of semi-natural habitat is narrowest and have been aligned perpendicular to the watercourse or linear habitat feature to reduce the habitat loss footprint and to focus impacts to specific locations. The exception is the crossing point at Rosliston Road where a slightly wider (c.20m) area of scrub will be affected. This alignment was necessary to accommodate other key considerations such as road traffic safety. Impacts relating to this have been assessed as part of the ES chapter in relation to direct habitat loss, which concluded a significant adverse effect at the Site level prior to mitigation. This will be mitigated for through the provision of scrub planting as outlined in Section 6.84 of the ES Chapter, which will reduce the impacts arising from construction to not significant. Further to this, the provision of this additional mitigation alongside other habitat enhancements and creation that are provided as part of the Proposed Development will result in a positive residual effect at the operational phase.
- Road alignment has been focused within fields characterised by ploughed arable crop or improved species-poor heavily grazed pastures of low ecological value. Grasslands of higher value (e.g. marshy grasslands to the east of the watercourse and north of Rosliston Road) have been deliberately avoided.
- Specific alignment to retain and avoid trees of increased ecological and arboricultural value, and the use of tree root protection zones and appropriate buffers to watercourses, waterbodies and woodlands.

## Barn owl

As detailed by the Applicant in ISH1, the proposals are predicted to benefit barn owl (BO) as suitable foraging habitats located at the edges of fields will be retained and protected during construction, and the operational scheme will see a significant increase in the extent of suitable foraging habitat through the provision of ecologically valuable grasslands.

As detailed during the ISH1, the Barn Owl Conservation Trust (BOCT) states[1] that:

- "*Solar PV 'farms' have the potential to be of great benefit to Barn Owl as the array frameworks are typically at a height from which Barn Owls can perch-hunt.*'
- '*solar farms can not only successfully mitigate lost Barn Owl foraging habitat, but they can enhance the foraging opportunities for owls, and even given rise to a net gain in biodiversity*'.

A primary limiting factor for BO populations and breeding success is the availability of rough grasslands which support their primary food source, field voles[2]. This habitat is scarce and highly localised within the Site, being primarily associated with narrow margins at field edges. The arable and grazed pasture which characterises the majority of the Site is largely unsuitable for hunting BO[3].

Construction works will not see a reduction in suitable foraging habitat as the narrow field margins will be retained and protected as part of habitat protection buffers. At night when the Site is dark and silent, we would not expect BO to vacate the area or adopt displacement behaviour. Indeed, it is likely that BO will utilise site fencing (e.g. habitat protection fencing) to benefit hunting at field margins.

BO are likely to be nesting in agricultural buildings and/or large hollow trees within or close to the Site. They are likely to be travelling far and wide to exploit optimal hunting grounds. The primary risk to BO therefore relates to disturbance at nesting sites during construction, which can be successfully avoided and mitigated through the proposed approach set out below.

### Mitigation

#### Construction

BO specific avoidance and mitigation will be set out as part of a species protection plan, which will provided as part of the detailed CEMP secured by Requirement 9(1)(k) of the dDCO. The approach to mitigation and avoidance will be in alignment with the recommendations set out in guidance by the Barn Owl Trust[2] and pre-construction checks will be completed in accordance with current best practice survey methods[4][5].

The BO protection plan would include the following specific measures:

- Pre-construction checks to identify trees and buildings with the potential to support nesting or roosting BO and which are vulnerable to disturbance during construction operations.
- Nesting inspections of trees and buildings suitable for supporting nesting or roosting BO which may be disturbed during construction operations. Checks undertaken during the nesting period would need to be completed by a suitably qualified person holding the relevant Natural England licence.
- Prior erection of alternative nesting and roosting boxes in suitable locations within the Site which are situated away from potentially disturbing locations.
- Sensitive timing of works to avoid potentially disturbing activities during the sensitive nesting period in the vicinity of nests.
- In the event of BO being located nesting in locations where there is a risk of disturbance, establishing appropriate working buffers and protection fencing to prevent encroachment or disturbance.

[1] https://www.barnowltrust.org.uk/barn-owls-ground-mounted-solar-panels/
[2] English Nature and The Barn Owl Trust (2002), *Barn owls on site – a guide for developers and planners*.
[3] Taylor I. R. (1998), *The Barn Owl*.
[4] Gilbert et al, (1998), *Bird Monitoring Methods – a manual of techniques for key UK species*, Royal Society for the Protection of Birds.
[5] Hardey et al (2006), *Raptors – a field guide to survey and monitoring*, Scottish Natural Heritage

- Use of an Ecological Clerk or Works (ECoW) to ensure compliance with the BO protection plan.

#### Operation

In order to ensure that grasslands within the Site are suitable for hunting BO during the operation phase, appropriate grassland management (including appropriate livestock grazing densities) will be required. This is outlined in the OLEMP (Section 5.11) and will be further developed through the preparation of the detailed LEMP.

## Great Crested Newt

As detailed at the ISH1, GCN are considered to be absent from the Site. A total of nine suitable waterbodies within or close to the Site were subjected to eDNA surveys. None of the surveys detected the presence of GCN.

Furthermore, there are no records of GCN close to the Site and of the three ponds located within 100m of the Site, none are suitable for supporting GCN. Indeed, these waterbodies were subjected to an updated site visit and Habitat Suitability Index (HSI) assessment on 10th October 2024 and are either no longer present (two ponds immediately south of Catton Road), or are considered unsuitable for supporting GCN.

GCN occur in 'metapopulations', typically with much dispersal and movement of individuals between ponds. Indeed, Beebee and Griffiths[6] describe how "*young newts disperse widely from their 'home' pond and new sites are rapidly colonised*". Therefore if GCN were present in offsite ponds close to the Site and with ecological connectivity to the Site, they would have been recorded in the optimal waterbodies surveyed.

No waterbodies will be impacted as a result of the Proposed Development. The intensively farmed arable and pasture present within much of the Site is not suitable for sheltering terrestrial GCN, therefore any theoretical risk would relate to far roaming individuals. Any such roaming individual would be expected to follow retained linear habitats rather than open areas of unsuitable habitat.

#### Mitigation

In light of the reasoning provided above, the risk to GCN is considered negligible and therefore no specific mitigation measures are considered necessary. Nevertheless, in accordance with a highly precautionary approach, construction works would apply best practice methods, including:

- Storage of soils away from habitats of high suitability for reptiles and amphibians.
- The use of reptile and amphibian fencing to prevent animals from sheltering within temporary soil piles during the construction period.
- Best practice working measures to protect waterbodies (e.g. safe storage of chemicals and pollution prevention measures).
- Supervision of works by an ECoW and preparation of emergency protocol in the event of encountering a reptile or amphibian.

## Otter

As described in ISH1, otter are a highly mobile species. Individuals typically occupy large home ranges with female otter territories typically incorporating 20-30 km of watercourse, with male territories often being much larger[7][8][9]. As a result, the likelihood of an otter being present within the vicinity of construction works, or depending upon such habitat, is considered extremely low. Otters in freshwater river systems within the UK typically utilise a large number of shelters throughout their home range with no site fidelity or high levels of dependency[10] as is seen with other species, such as badger[11]. Indeed, radiotracking studies have shown that otters within freshwater systems in the UK spend the majority of their time sheltering above ground in dense vegetation such

[6] Beebee T.J.C, and Griffiths R.A, (2000), *The New Naturalist – Amphibians and Reptiles – A Natural History of the British Herpetofauna*
[7] Kruuk H, Carss DN, Conroy JWH and Durbin L (1993), *Otter (Lutra lutra L.) numbers and fish productivity in rivers in N.E. Scotland*. Symposia of the Zoological Society of London, 65, 171-191.
[8] Green R and Green J and Jefferies DJ (1984). *A radio-tracking survey of otters Lutra lutra on a Perthshire river system*. Lutra, 27, 85-145.
[9] Durbin LS (1998). *Habitat selection by five otters Lutra lutra in rivers of northern Scotland*. Journal of Zoology, 245, 85-92.
[10] Kruuk H (2006). *Otters – Ecology Behaviour and Conservation*. Oxford University Press.
[11] Kruuk H (1989) *The Social Badger*. Oxford University Press, Oxford, UK.

as reedbed or scrub[12]. This low dependency on particular sites, further reduces the likelihood of an otter being impacted by construction operations. An exception to this would be a female otter giving birth in a 'natal den' where she may typically spend several weeks in a single location, and which is likely to be highly susceptible to disturbance[13].

Otter surveys completed to date have identified no suitable natal dens within the Site, including in the vicinity of watercourse crossing points. Indeed, the crossing points are considered to be unsuitable for supporting natal dens for the following reasons:

- Narrowness and openness of the vegetation. Natal dens are typically located in larger expanses of densely vegetated, undisturbed habitat[14].
- Existing disturbance, both from the proximity of the Rosliston Road and the proximity of grazing cattle.

The potential for otter disturbance or obstruction during construction is therefore considered to be low, and can be mitigated successfully through the measures outlined below:

### Mitigation

Otter specific avoidance and mitigation will be set out as part of a species-specific protection plan, which will provided as part of the detailed CEMP secured by Requirement 9(1)(k) of the dDCO. The approach to mitigation and avoidance will be in accordance with the recommendations set out in best practice guidance[15] and pre-construction surveys will be completed in accordance with current best practice survey methods.

The otter protection plan would include the following specific measures:

- Pre-construction surveys to update the location of otter shelters, including for resting and breeding, and movement corridors.
- Sensitive timing of works to avoid potentially disturbing activities during sensitive periods (e.g. nighttime).
- In the unlikely event of an otter shelter being identified, the establishment of appropriate protection buffers, protection fencing and other best practice measures to prevent encroachment or disturbance.
- Best practice construction working methods, including the use of speed limits and protection fencing.
- The use of appropriate habitat buffers to avoid encroachment into otter habitat.
- Appropriate design of temporary culverts to ensure safe passage by otter during flood conditions. For example, a preference over square design with incorporation of elevated ramps or riverbank.
- Use of an ECoW to ensure compliance with the otter protection plan.

[12] Kruuk H(1995). Wild otters: predation and populations. Oxford University Press. Oxford, UK.
[13] Liles G (2003). *Otter Breeding Sites. Conservation and Management*. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough.
[14] Liles G (2003). *Otter Breeding Sites. Conservation and Management*. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough
[15] https://cieem.net/wp-content/uploads/2019/07/natural-information-otters-and-development-2011.pdf