

Heckington Fen Solar Park

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Appendix 8.3: Phase 1 Habitat Survey Report – Energy Park

Applicant: Ecotricity (Heck Fen Solar) Limited

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APPENDIX 8.3 - PHASE 1 HABITAT SURVEY REPORT – ENERGY PARK

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**REPORT ON A PHASE 1 HABITAT SURVEY
CONDUCTED IN CONNECTION WITH THE
SITE OF THE PROPOSED ENERGY PARK AT
HECKINGTON FEN, WEST OF BOSTON,
LINCOLNSHIRE.**

31st August, 2021

This copy includes two annexes in the form of a figure and a table.

I the undersigned, hereby declare that the work was performed according to the procedures herein described and that this Report is an accurate and faithful record of the results obtained.

SIGNATURE REMOVED

NEIL BOSTOCK BSc Hons

This document is an account of work carried out by **NEIL BOSTOCK** on behalf of Ecotricity (Heck Fen Solar) Ltd.

NEIL BOSTOCK cannot accept responsibility for decisions made or actions taken on the basis of this Report.

8.1 SUMMARY

8.1.1 Ecotricity (Heck Fen Solar) Limited commissioned a Phase 1 habitat survey be undertaken in order to assess the ecological value of land at Heckington Fen for a proposed ground mounted solar photovoltaic (PV) electricity generation, energy storage and associated infrastructure (Energy Park Site). The assessment was also to identify areas where ecological mitigation may be required during the construction stage. The survey was conducted adopting the methods outlined in the Handbook for Phase 1 habitat survey published by the Nature Conservancy Council (1990) (reference 1). The area which was examined was that which was nominated on a map which encompassed the land ownership and the development footprint. Aspects which were considered on the Phase 1 Survey map were wooded shelter belts, deciduous plantations, significant standard trees, hedgerows, drains and ditches together with a categorisation of the land use. **Figure 1 at Annex 1** shows the Survey Area.

8.1.2 In addition, specific aspects of ecological importance such as trees with holes or cracks which had bat roost potential, main drainages or ditches which may hold a Great Crested Newt population, Badger setts, or evidence of populations of Otter, Water Vole or reptiles were target noted. Each target note was identified with a specific number. Generally, these target-noted features were also photographed.

8.1.3 The survey was carried out on behalf of Ecotricity by Ecologist Neil Bostock MIEEM. The survey was conducted on four dates between 18th and 23rd August, 2021. The survey also incorporated ecological assessment of the site for Great Crested Newt (*Triturus cristatus*), Otter (*Lutra lutra*), Badger (*Meles meles*), Water Vole (*Arvicola terrestris*) and reptiles. In addition, an evaluation of the buildings on the site for Bat Roosting Potential was carried out; however, this assessment did not examine the buildings internally, or examine any fissures or cracks within the buildings with an endoscope for the presence of roosting bats. The details of the Badger Survey are provided in a separate confidential report **Appendix 8.7** (document reference 6.3.8.7).

8.1.4 The Phase 1 habitat survey showed the Energy Park Site to consist of intensively farmed arable fields, a few of which were bordered on headlands by rough grassland. The arable fields were generally cultivated right up to the field margins resulting in very few areas of botanical or ecological importance. The most valuable aspects of the site were the main drainages and ditches which bordered most of the fields and which formed a network of drainage channels which lowered the water table across the site. There were a few small plantation woodlands comprising young trees; however just south of Six Hundreds Farm a mature plantation woodland held some standard Oak and Ash trees which contained holes and cracks which may provide potential roosting sites for bats. However, in general, these plantations were of low ecological significance. To the south of Six Hundreds Farm is a small section of defunct, species-poor hedgerow comprising mainly of Hawthorn with sporadic Blackthorn, Ash and Dog Rose which provides shelter for foraging bats in windy conditions. The potential of causing botanical damage to the site due to the construction and operation of the Energy Park is likely to be minimal.

8.1.5 The survey results show that the Energy Park Site has suitable habitat for Water Voles, although no evidence of Water Voles was found during the survey.

8.1.6 No evidence of Otter was observed at the site; however, some of the main drainages and ditches on the site appeared potentially suitable for Otters.

8.1.7 Although no evidence of Great Crested Newt was found during the survey as the time of year was unsuitable to conduct bottle-trapping or torch surveys; the Phase 1 survey results show that the Energy Park Site has some main drainages and ditches which may provide suitable habitat for breeding Great Crested Newts (*Triturus cristatus*).

Any ditches with suitable habitat are only likely to be impacted during the construction phase if a 'crossing point' has to be constructed in order to enable construction. Prior to the construction of any 'crossing points' a 50m length of ditch either side of each 'crossing point' should be bottle-trapped and torch-surveyed during late February to June to confirm the absence or presence of Great Crested Newt. As the only effect of the Energy Park on the site would be the minimal affect of any alterations to the ditch structure at the 'crossing points' and minimal habitat loss (of an area of intensive arable farmland) caused by the 'footprint' of the solar panels; it was considered that any affect on any Great Crested Newt population potentially occurring within or beyond the land boundary (where no search was conducted) would be negligible.

8.1.8 Although no specific survey for Hazel Dormouse (*Muscicardus avellanarius*) was conducted there appears to be no suitable habitat within the site and no historic evidence of the presence of Hazel Dormouse in the area.

8.1.9 Whilst the presence or absence of viable reptile populations is not confirmed, the development area appeared generally unsuitable to sustain reptile populations and the construction of the Energy Park is likely to have a minimal affect on any relict populations of reptiles which may occur at the Heckington Fen site. Any reptile populations could be protected by minimising the removal of hedgerows or woodland during the construction phase.

8.1.10 The construction of the Energy Park at the Heckington Fen site would be very unlikely to affect any populations of protected species such as Otter, Water Vole, Great Crested Newts or Badger. Similarly, Hazel Dormouse or any populations of reptiles are unlikely to be affected by the development proposal.

8.1.11 The season at which the Phase 1 Habitat Survey was conducted limits the results obtained from the survey work. The effectiveness of the survey to confirm the presence of Great Crested Newt or to determine the diversity of flowering plants at the site was reduced because the survey work was conducted during mid-August. However, Water Vole, Otter and Badger activity is perhaps easier to monitor at this season.

Proposed Mitigation

8.1.12 Wherever possible any hedgerows currently found on the development site should be retained; any sections of hedgerow which have to be removed during the construction process should be replaced by a section of at least an equivalent length and quality.

8.1.13 Planting of areas of native tree species on areas away from the Energy Park development and incorporating 'Beetle Banks' in suitable areas would benefit wildlife across the farm, particularly insects and birds.

8.1.14 Wherever possible the standard trees which are present on the site should be retained as they may provide a wide range of nesting habitat for hole-nesting birds, for roosting bats and other wildlife such as beetles and moths.

8.1.15 Although no evidence of Otter was observed at the site, the main drainages and ditches on the site appeared potentially suitable for Otters; it is suggested that wherever possible the construction or access roadways should avoid crossing main drainages or ditches. Similarly, care should be taken to avoid pollution of any watercourses during the construction phase as this would impact strongly on any Otter population present.

8.1.16 As the construction phase of the Energy Park may occur perhaps a few years into the future when the water table level is different, prior to the construction of any

new 'crossing points', surveys should be conducted for 50m either side of the proposed 'crossing points' in order to re-affirm the absence of Water Vole. If Water Voles are found to be present then appropriate mitigation should be put in place to protect the Water Vole population during the construction and post construction phases of the development. This may include restoration of the ditch habitat and prevention of pollution by preventing water run off from the development into the watercourses on the site.

8.1.17 Although no evidence of Great Crested Newt was found during the survey as the time of year was unsuitable to conduct bottle-trapping or torch surveys; the Phase 1 survey results show that the development site has some main drainages and ditches with suitable habitat for breeding Great Crested Newts (*Triturus cristatus*). Prior to the construction of any new 'crossing points' a 50m length of ditch either side each 'crossing point' should be bottle-trapped and torch-surveyed during late February to June to confirm the absence or presence of Great Crested Newt. If GCN are found to be present then appropriate mitigation should be put in place to protect the population during the construction and post construction phases of the development. This may include restoration of the ditch habitat and prevention of pollution by preventing water run off from the development into the watercourses on the site.

8.2 INTRODUCTION

8.2.1 Ecotricity (Heck Fen Solar) Limited commissioned a Phase 1 habitat survey be undertaken in order to assess the ecological value of land at Heckington Fen for a proposed ground mounted solar photovoltaic (PV) electricity generation and energy storage facility. The assessment was also to identify areas where ecological mitigation may be required during the construction stage. As part of the ecological assessment of the site Natural England has requested that a pre-construction Phase 1 habitat survey be undertaken in order to assess the ecological value of the area and to identify areas where ecological mitigation may be required during the construction stage.

8.2.2 The survey was carried out on behalf of Ecotricity by Ecologist Neil Bostock MIEEM. The survey was conducted on four dates between 18th and 23rd August, 2021. The survey also incorporated ecological assessment of the site for Great Crested Newt (*Triturus cristatus*), Otter (*Lutra lutra*), Badger (*Meles meles*), Water Vole (*Arvicola terrestris*) and reptiles. In addition, an evaluation of the buildings on the site for Bat Roosting Potential was carried out; however, this assessment did not examine the buildings internally, or examine any fissures or cracks within the buildings with an endoscope for the presence of roosting bats.

8.2.3 This report describes the area surveyed, the survey methods, the results and the conclusions drawn. The habitat types were marked onto survey maps using standard methodology outlined in the Handbook for Phase 1 habitat survey published by the Nature Conservancy Council (1990); in addition, target notes were used to identify areas of ecological significance.

8.3 SITE DESCRIPTION

8.3.1 The site is located some 11km west of Boston at Heckington Fen, in Lincolnshire. The survey area is diamond shaped being approximately 3.8km by 2.8km centred on grid reference TF 208 457. The area comprises arable farmland with large open fields which were growing winter wheat during the survey period, known as Six Hundreds Farm in the east of the site, and Rectory Farm in the west. The majority of the fields are separated by drainage ditches; many of these are less than 1m in depth and 1.5m in width and were dry during the survey period. These dry ditches were often choked with vegetation including *Typha*, sedges, rank grasses and some bramble and offer no habitat for Water Voles and very limited foraging for bats; the large windswept

open arable fields are also poor foraging habitat for bats. However, some major drains were also present being more than 2m in depth and up to 3.5m in width which permanently held water and contained plants such as Frogbit *Hydrocharis morsus-ranae* and Broad-leaved Pondweed *Potamogeton natans* as well as *Phragmites* and other riparian vegetation. These may provide habitat for Water Voles (*Arvicola terrestris*), potential habitat for Otter (*Lutra lutra*), potential sites for Great Crested Newt (*Triturus cristatus*) and foraging opportunities for bats and reptiles such as Grass Snake (*Natrix natrix*).

8.3.2 A major drain called the Skerth Drain runs along the northern edge of Six Hundreds Farm before passing in a north-west to south-eastern direction. On the Skerth Drain are two Pumping Stations which allow the water level of the drains across the site to be regulated by moving water into the Skerth Drain. This major drain is canalised and runs between two built-up earth banks which are grassed and used for grazing sheep and cattle. At the outer base of the earth banks is a further deep drain formed from the removal of earth to build up the banks. As with the larger drainage ditches on the site the Skerth Drain provides potential habitat for Water Vole, Otter and Grass Snake as well as sheltered foraging opportunities for bats and offer potential corridors for bats to commute onto the site. The grassed banks which canalise the Skerth Drain could also potentially provide habitat for reptiles such as Slow-worm (*Anguis fragilis*) or Common Lizard (*Lacerta vivipara*). However, the Skerth drain will not be affected by the Energy Park development. There are a few young plantations of mainly small deciduous trees scattered around Six Hundreds Farm largely to provide Pheasant cover, these do not provide roosting opportunities for bats but may provide sheltered foraging in windy conditions. The plantation south of Six Hundreds Farm is more mature and contains some standard Ash and Oak trees which could offer roosting sites for bats. In particular an Ash tree (T6) has splits, cracks and holes offering low to moderate bat roosting potential (BRP 2-3); whilst an Oak tree (T7) has some splits and flaking bark and may offer low bat roosting potential (BRP 3). Within the open field landscape just east of the Gas Valve Compound there was also an isolated Ash (T10) with holes at its base offering low bat roost potential (BRP 3); whilst (T36) comprised 2 heavily ivy-covered Ash trees with cracks offering low to moderate bat roost potential (BRP 2- 3).

8.3.3 To the south of Six Hundreds Farm is a small section of defunct species-poor hedgerow comprising mainly of Hawthorn with sporadic Blackthorn, Ash and Dog Rose which provides shelter for foraging bats in windy conditions.

8.3.4 Throughout the site were several buildings (particularly at Six Hundreds Farm, Rectory Farm and near Elm Grange) which could provide suitable roost sites for bats; these buildings were assessed using features of age, method of construction and location to identify which had the greatest potential for bats. At Six Hundreds Farm buildings with bat roost potential included: (T8) a single storey cowshed with low to medium bat roosting potential (BRP 3-2); being linked to the cowshed (T8) a two storey barn with medium to high bat roosting potential (BRP 2-1); (T9) two semi-detached disused two storey houses with medium to high bat roosting potential (BRP 2-1). Other buildings identified as (T27 and T28) which were modern barns were considered to have limited or no bat roosting potential. The pumping station (T1) and the Trinity College Pumping Station (T5) were largely sealed single storey buildings but may offer low to medium bat roosting potential (BRP 3-2) if gaps exist under the pump-house buildings.

8.3.5 The houses (T9) had an overgrown mature garden with fruit trees, surrounded by tall hedges offering good potential for insects and foraging bats.

8.3.6 At Rectory Farm there are two buildings. One a modern asbestos and steel barn (T13) with 2 brick buildings attached on the north and south sides. These attached buildings attachments with fissures in the bricks or gaps below the roof giving low (BRP

2-3). Adjacent to the barn is a brick/tile building (T14) with an extensive ivy-covering and fissures offering moderate to high (BRP 1-2).

8.3.7 North of Elm Grange there are five buildings. (T31) consists of a modern double barn constructed from steel/wood/breeze block/asbestos barn with an attached brick/asbestos outbuilding offering low Bat Roost Potential (BRP 3). The attached outbuilding has cracks in the bricks and gaps near the roof offering moderate to low bat roost Potential (BRP 2-3). (T32) wood/breeze block/asbestos barn offering low Bat Roost Potential (BRP 3). (T33) a long open barn breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3); (T34) a long open barn with windows breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3). (T34) long open barn with windows breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3) and finally (T35) a long open barn brick /breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3).

8.3.8 In several of the buildings raptor nest boxes for Barn Owl (*Tyto alba*) and Common Kestrel (*Falco tinnunculus*) had been erected; together with other Barn Owl and Common Kestrel nest boxes positioned on posts or on trees within the site. Several of these were being used successfully by these species to rear their young. The areas of grassland on the headlands of some fields together with the often grassy field edges adjacent to the ditches provide ideal hunting areas for these birds which feed on mice and voles.

8.4 METHODS

Survey Conduct

Phase 1 Habitat Survey

8.4.1 An examination of the site was carried out in order to identify habitat areas with the greatest ecological importance adopting the methods outlined in the Handbook for Phase 1 habitat survey published by the Nature Conservancy Council (1990). The area which was examined was that which was nominated on a map which encompassed the land ownership and the development footprint. Aspects which were considered on the Phase 1 Survey map were wooded shelter belts, deciduous plantations, significant standard trees, hedgerows, drains and ditches together with a categorisation of the land use.

8.4.2 The survey was conducted on four dates between 18th and 23rd August, 2021. The survey also incorporated ecological assessment of the site for Great Crested Newt (*Triturus cristatus*), Otter (*Lutra lutra*), Badger (*Meles meles*), Water Vole (*Arvicola terrestris*) and reptiles. In addition, an evaluation of the buildings on the site for Bat Roosting Potential was carried out; however, this assessment did not examine the buildings internally, or examine any fissures or cracks within the buildings with an endoscope for the presence of roosting bats.

Otter Survey

8.4.3 All the watercourses on the site were searched for evidence of Otter (*Lutra lutra*). Signs used to establish the presence of Otters included actual observations of animals, 'spraint' latrines deposited on prominent rocks, stones or logs or branches within watercourses (these spraints often contain fish bones and scales and have a sweet odour similar to jasmine tea) and Otter tracks in soft mud adjacent to the watercourses. No evidence of Otter was observed at the site; however, the Skerth Drain as well as some of the deeper ditches which permanently hold water present on the Energy Park Site appeared suitable for Otters.

Badger Survey

8.4.4 See Confidential Badger survey report – **Appendix 8.7** (document reference 6.3.8.7).

Water Vole

8.4.5 The ditches and watercourses which permanently held water found on the site were searched for evidence of Water Voles. Signs used to establish the presence of Water Voles included actual observations of animals, sounds of voles entering the water, latrines showing discrete piles of droppings, tunnel entrances (above and below the water), cropped 'lawn' around tunnel entrances and feeding stations of chopped vegetation. No evidence of Water Vole was observed at the site; however, several main drainages and ditches found on site appeared suitable for Water Voles.

Great Crested Newt

8.4.6 No bottle-trapping surveys or torch-surveys were conducted at the site as the time of year was unsuitable to determine if a breeding population of Great Crested Newt (*Triturus cristatus*) was present. However, the Phase 1 survey results show that several of the main drainages and ditches on the site, which permanently hold water, may provide suitable habitat for breeding Great Crested Newts.

Hazel Dormouse

8.4.7 Although no specific survey for Hazel Dormouse (*Muscardus avellanarius*) was conducted there appears to be no suitable habitat within the site for this species. The site is in an area of England where Hazel Dormouse has been extinct (or never present) since at least 1885.

Reptile Survey

8.4.8 The Phase 1 survey was conducted at a suitable time of year to produce casual observations of basking Common Lizard (*Lacerta vivipara*), Slow-worm (*Anguis fragilis*), Adder (*Vipera berus*) or Grass snake (*Natrix natrix*); and no specific surveys were undertaken at the site to determine reptile populations. The site appeared largely unsuitable to sustain reptile populations apart from perhaps Grass Snake due to the paucity of suitable areas for foraging or breeding. This is to be expected as the area consists largely of intensively farmed arable fields (albeit some edged or with headlands planted with rough grassland) which are generally cultivated right up to the field margins resulting in very few areas suitable for reptiles to forage. However, the grassy banks which contain the canalised Skerth Drain may possibly support a relict population of Slow Worm or Common Lizard. However, this area is beyond the development footprint and will not be affected by the Energy Park construction. The potential for significant reptile populations at the Energy Park Site is minimal.

Area Encompassed by the Survey

8.4.9 The area surveyed for Phase 1 Habitat Survey was an area encompassing the land ownership boundary which encompassed the development footprint of the Energy Park Site situated at Heckington Fen, west of Boston, Lincolnshire. Suitable ditches for Great Crested Newts were noted within the land ownership boundary. Areas of ditches with permanent water which provide suitable habitat for Otters and Water Voles were also examined within the land ownership boundary; whilst the whole area within the land ownership boundary was examined for Badger setts and other signs of Badger activity. Any buildings and suitable trees within the land ownership boundary were detailed with respect for Bat Roosting Potential.

Survey Visit Timings and Weather Conditions

8.4.10 Details of survey visit dates; start and finish times and weather conditions during the survey are presented in **Table 1**.

Table 1 - Visit Schedule and Weather Conditions during Survey.

Visit	Visit date	Start Time	Weather conditions (at start)	Finish Time	Weather conditions (at finish)
A	18 Aug 21	08:30 am	100% cloud cover Wind SW 1-2. Dry, overcast, dull. Air Temp 15.5° C	19:15 pm	60% cloud cover Wind SW 1-2. Dry, sunny, warm. Air Temp 17.5° C
B	19 Aug 21	08:30 am	100% cloud cover Wind NE 2-3 drizzle, high humidity, Air Temp 19.0° C	18:30 pm	70% cloud cover Wind NE 2-3 Dry, high humidity, Air Temp 21.0° C
C	20 Aug 21	08:30 am	90% cloud cover Wind NE2. Dry, sunny warm, Air Temp 17.0° C	15:30 pm	50% cloud cover Wind NE 2. Dry, warm, sunny Air Temp 21.0° C
D	23 Aug 21	08:30 am	90% cloud cover Wind NE 4. Dry, dull, overcast Air Temp 17.0° C	18:30 pm	70% cloud cover NE 3. Dry, warm, sunny periods Air Temp 21.0° C

8.5 RESULTS

Phase 1 Habitat Survey

8.5.1 The results of the Phase 1 Habitat Survey were expressed pictorially on a map (see **Annex 1**).

8.5.2 From the survey the key habitat features present at the site were a network of ditches which bounded the majority of the large arable fields on the site. Many of these ditches were less than 1m in depth and 1.5m in width and were dry during the survey period. These dry ditches were often choked with vegetation including Typha, sedges, rank grasses and some bramble and offer no habitat for Water Voles and very limited foraging for bats; the large windswept open arable fields are also poor foraging habitat for bats. However, some major drains were also present being 2m in depth and up to 3.5m in width which permanently held water and contained plants such as Frogbit *Hydrocharis morsus-ranae* and Broad-leaved Pondweed *Potamogeton natans* as well as Phragmites and other riparian vegetation. These ditches may provide habitat for Water Voles (*Arvicola terrestris*), potential habitat for Otter (*Lutra lutra*), potential breeding sites for Great Crested Newt (*Triturus cristatus*) and foraging opportunities for bats and reptiles such as Grass Snake (*Natrix natrix*). A major drain called the Skerth Drain runs along the northern edge of Six Hundreds Farm before passing in a north-west to south-eastern direction to the eastern edge of the site. On the Skerth Drain are two Pumping Stations which allow the water level of the drains across the site to be regulated by moving water into the Skerth Drain. This major drainage is canalised and runs between two built-up earth banks which are grassed and used for grazing sheep and cattle. At the outer base of the earth banks is a further deep drain formed from the removal of earth to build up the banks. As with the larger drainage ditches on the site the Skerth Drain provides potential habitat for Water Vole, Otter and Grass Snake as well as sheltered foraging opportunities for bats and offer potential corridors for bats to commute onto the site. The grassed banks which canalise the Skerth Drain could also potentially provide

habitat for reptiles such as Slow-worm (*Anguis fragilis*) or Common Lizard (*Lacerta vivipara*); however, these banks are unlikely to be affected during the construction of the Energy Park. A few of the arable fields had planted rough grassland headlands or edges; otherwise, they were cultivated right up to the field margins, leaving little room for wildlife.

8.5.3 There are a few young plantations of mainly small deciduous trees scattered around Six Hundreds Farm largely to provide Pheasant cover, these do not provide roosting opportunities for bats but may provide sheltered foraging in windy conditions. The plantation south of Six Hundreds Farm is more mature and contains some standard Ash and Oak trees which could offer roosting sites for bats. In particular an Ash tree (T6) has splits, cracks and holes offering low to moderate bat roosting potential (BRP 2-3); whilst an Oak tree (T7) has some splits and flaking bark and may offer low bat roosting potential (BRP 3). Within the open field landscape just east of the Gas Valve Compound there was also an isolated Ash (T10) with holes at its base offering low bat roost potential (BRP 3). To the south of Six hundreds Farm is a small section of defunct, species-poor hedgerow, comprising mainly of Hawthorn with sporadic Blackthorn, Ash and Dog Rose which provides shelter for foraging bats in windy conditions. The potential of causing botanical damage to the site due to the construction and operation of the Energy Park Site is likely to be minimal.

8.5.4 Throughout the site were several buildings (particularly at Six Hundreds Farm, Rectory Farm and near Elm Grange) which could provide suitable roost sites for bats; these buildings were assessed using features of age, method of construction and location to identify which had the greatest potential for bats. At Six Hundreds Farm buildings with bat roost potential included: (T8) a single storey cowshed with low to medium bat roosting potential (BRP 3-2); being linked to the cowshed (T8) a two storey barn with medium to high bat roosting potential (BRP 2-1); (T9) two semi-detached disused two storey houses with medium to high bat roosting potential (BRP 2-1). Other buildings identified as (T27 and T28) which were modern barns were considered to have limited or no bat roosting potential. The pumping station (T1) and the Trinity College Pumping Station (T5) were largely sealed single storey buildings but may offer low to medium bat roosting potential (BRP 3-2) if gaps exist under the pump-house buildings.

8.5.5 At Rectory Farm there are two buildings. One a modern asbestos and steel barn (T13) with 2 brick buildings attached on the north and south sides. These attached buildings attachments with fissures in the bricks or gaps below the roof giving low (BRP 2-3). Adjacent to the barn is a brick/tile building (T14) with an extensive ivy-covering and fissures offering moderate to high (BRP 1-2).

8.5.6 North of Elm Grange there are five buildings. (T31) consists of a modern double barn constructed from steel/wood/breeze block/asbestos barn with an attached brick/asbestos outbuilding offering low Bat Roost Potential (BRP 3). The attached outbuilding has cracks in the bricks and gaps near the roof offering moderate to low bat roost Potential (BRP 2-3). (T32) wood/breeze block/asbestos barn offering low Bat Roost Potential (BRP 3). (T33) a long open barn breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3); (T34) a long open barn with windows breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3). (T34) long open barn with windows breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3) and finally (T35) a long open barn brick/breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3).

8.5.7 The houses (T18) had an overgrown mature garden with fruit trees, surrounded by tall hedges offering good potential for insects and foraging bats.





8.5.8 In several of the buildings raptor nest boxes for Barn Owl (*Tyto alba*) and Common Kestrel (*Falco tinnunculus*) had been erected; together with other Barn Owl and

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Common Kestrel nest boxes positioned on posts or on trees within the site. Several of these were being used successfully by these species to rear their young. The areas of grassland on the headlands of some fields together with the often grassy field edges adjacent to the ditches provide ideal hunting areas for these birds which feed on mice and voles.

Target Notes

8.5.9 The following target notes of ecological interest were specified during the Phase 1 Habitat Survey (Target Notes relating to badgers are removed).

Target Notes	
<p>T1 – Pumping Station; a sealed building offering little Bat Roost Potential apart from any potential holes or crevices beneath the building. Barn Owl nest-box occupied by Jackdaw.</p>	<p>T2 – Skerth Drain looking west from pumping station T1</p>
	
<p>T3 – Barn Owl nest box on post and brick built bridge over drain at southern edge of Skerth Drain bank.</p>	<p>T4 – Holland Dyke looking south from Skerth Drain. A seasonally dry ditch, with Phragmites and riparian plants</p>
	

T5 – Trinity College Pumping Station; a sealed building offering little Bat Roost Potential apart from any potential holes or crevices beneath the building.



T6 – Ash tree with splits, cracks and holes offering, low to moderate bat roost potential. (BRP 2-3)



T6b – Close up of section of the trunk



T7 – Oak tree with splits, flaking bark offering, low bat roost potential. (BRP 3)



T8 – double storey barn offering medium to high bat roosting potential (BRP 2-1) and single storey cowshed offering low to medium bat roosting potential (BRP 3-2)



T9 – double storey disused houses offering medium to high bat roosting potential (BRP 2-1) STILL PRESENT but Boarded Up.



T8a – showing cracks in double storey barn offering medium to high bat roosting potential (BRP 2-1)



T8b – showing cracks in single storey cowshed from south offering low to medium bat roosting potential (BRP 3-2)



T10 – Isolated Ash tree with splits at its base offering low bat roost potential (BRP 3)



T10b – Isolated Ash tree showing close up of base



T13 – Asbestos Barn with 2 Brick attachments with fissures giving low (BRP 2-3) South side.



T13a – Asbestos/Steel Barn with 2 Brick attachments with fissures giving low (BRP 2-3) North side.



T13b – Northern Brick attachments with gap near roof with possible (BRP 2-3)



T13c – Southern Brick attachment with crack near base offering low (BRP 3)



T14 – Brick/tile building with ivy-covering and fissures offering moderate to high (BRP 1-2)



T14b – Southern corner of Brick/tile building with ivy-covering showing fissures beneath tiles offering moderate to high (BRP 1-2)



T18 – Pond, unshaded without fish, waterfowl but with an HSI score of 0.00378 = POOR



T19 – Habitat around pond showing tall ruderal vegetation and plantation woodland



T20 and **T21** – isolated plantations of small trees planted for pheasant cover; shelter for foraging bats.



T22 – Typical seasonally dry ditch unsuitable for Water Vole



T24 – Main deep ditch with permanent water, many water plants suitable for Water Vole and Otter



T25 – Asbestos/Steel Barn offering no or very low (BRP 3 or less)



T25a – Barn Owl nest-box inside Asbestos/Steel Barn occupied by Stock Dove



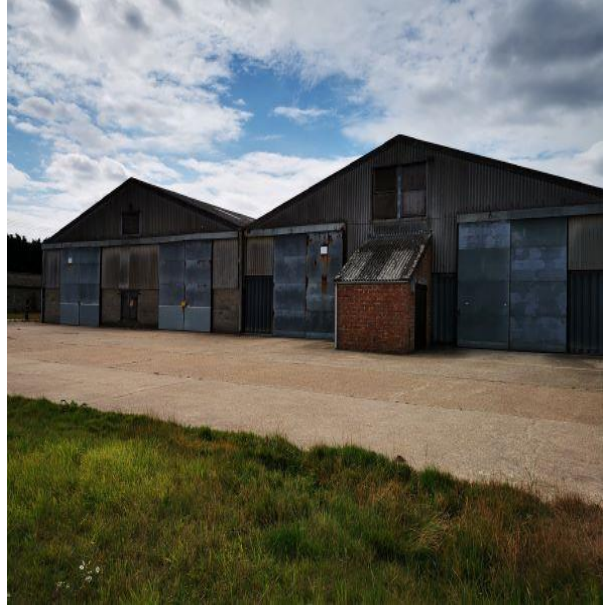
T27 – Open Asbestos Barn offering no bat roost Potential but with Barn Owl nest-box occupied by Stock Dove



T28 – 3 Asbestos/Steel Barns offering limited Bat Roost Potential (BRP 0-3)



T31 – double wood/breeze block/asbestos barn with brick outbuilding offering low Bat Roost Potential (BRP 3)



T31a – double brick/asbestos out-building with brick outbuilding with cracks offering low Bat Roost Potential (BRP 3)



T31a – double brick/asbestos out-building with brick outbuilding with gaps near roof offering low-moderate Bat Roost Potential (BRP2-3)



<p>T32–wood/breeze block/asbestos barn offering low Bat Roost Potential (BRP 3)</p>	<p>T33– long open barn breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3)</p>
	
<p>T34– long open barn with windows breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3)</p>	<p>T35– long open barn brick /breeze block/asbestos construction offering none or very low Bat Roost Potential (BRP 0-3)</p>
	
<p>T36 – 2 ivy-covered Ash trees with cracks offering low to moderate bat roost potential (BRP 2- 3)</p>	
	

8.5.10 In addition to these photographed Target Notes there was T42 which was an active wasp nest which had been dug up and broken apart by a feeding Badger.

Unfortunately, the surveyor did not secure a photograph as they were stung by several of the wasps and forced to retreat.

8.5.11 Since the original Phase 1 was conducted in 2009 there have been two buildings at Six Hundred Farm demolished.

8.5.12 These were termed B8 – a small single storey open-fronted brick barn with a chimney which offered limited Bat Roosting Potential (See 2009 Phase 1 Buildings Survey).

8.5.13 The other building termed B9 – comprised a single storey electrical shed also offering low potential for roosting bats (See 2009 Phase 1 Buildings Survey).

8.5.14 During dawn/dusk surveys for roosting bats neither of these buildings recorded any roosting bats

8.5.15 Photographs of these now demolished buildings are found below from the 2009 Phase 1 Buildings Survey.

<p>A small single storey open-fronted brick barn with a chimney B8 offering limited bat roosting potential.</p>	<p>A single storey electrical shed B9 offering low Bat Roost Potential (BRP 3)</p>
	

Otter Survey

8.5.16 The course of the main drainages and ditches across the site were searched for evidence of Otter (*Lutra lutra*). Signs used to establish the presence of Otters included actual observations of animals, Otter spraint on rocks or other prominent places close to water courses, droppings which contained fish bones and scales and had a pleasant odour similar to jasmine tea.

8.5.17 No evidence of Otter was observed at the site; however, some of the main drains and ditches on the site appeared potentially suitable for Otters. The introduced alien species American Mink (*Neovison vison*) have previously been observed on three occasions in daylight during wintering and breeding bird surveys in the main Skerth Drain, the Holland Dyke and the main drain which leads north from Rectory Farm. There was also a scat of Mink found (containing fish bones within it) during the Phase 1 survey, indicating that Mink are likely to be still present. Otter are known to be highly antagonistic towards American Mink and this is further evidence that Otter use or visit the site only very rarely. However, it is suggested that *wherever possible* the construction or access roadways should avoid crossing or being constructed within 10m of suitable main drains or ditches. Similarly, care should be taken to avoid pollution of any watercourses during the construction phase as this would impact strongly on any Otter population present.

Badger Survey

8.5.18 See Confidential Badger survey report - **Appendix 8.7** (document reference 6.3.8.7).

Water Vole Survey

8.5.19 The course of the main drains (apart from the Skerth Drain which will not be affected by the Energy Park construction) and all other ditches which permanently contain water on site were searched for evidence of Water Voles (*Arvicola terrestris*). Signs used to establish the presence of water voles included actual observations of animals, sounds of voles entering the water, latrines showing discrete piles of droppings, tunnel entrances (above only looked for above water during this survey), cropped 'lawn' around tunnel entrances and feeding stations of chopped vegetation.

8.5.20 No evidence of Water Vole was observed at the site; however, some of the ditches on the site which permanently hold water appeared to provide potentially suitable habitat for Water Voles. As the Energy Park construction may occur at a period further in the future, when the water table may be higher, it is suggested that in areas where the construction or access roadways cross potentially suitable habitat that the absence of Water Voles is re-affirmed prior to the construction of the 'crossing points'. This can be achieved by physical examination of the habitat or by placing floating platforms baited with apple within the watercourse; the droppings of any animals visiting the apple bait can then be examined to determine whether Water Voles are present.

8.5.21 The introduced alien species American Mink (*Neovison vison*) were observed on three occasions in daylight during wintering and breeding bird surveys in the main Skerth Drain, the Holland Dyke and the main drain which leads north from Rectory Farm. Mink are known to be highly predatory and antagonistic towards Water Voles and this is further evidence that there are no Water Vole populations on the site or that the populations are likely to be very small.

8.5.22 If the presence of Water Voles is confirmed then appropriate mitigation should be put in place to protect the Water Vole population during the construction and post construction phases of the development. This may include restoration of the streamside habitat and prevention of pollution by preventing water run-off from the development into the watercourses on the site.

Great Crested Newt Survey

8.5.23 Some of the ditches on site appeared suitable for breeding Great Crested Newts (*Triturus cristatus*); however, these are unlikely to be impacted during the construction phase or operational phase of the Energy Park except by the construction of 'crossing points' in which the water level and flow of the ditch is maintained by a piped conduit. No evidence of Great Crested Newt was found during the extended Phase 1 survey as the time of year was unsuitable to conduct bottle-trapping or torch surveys. Although areas beyond the land ownership boundary of the site were not searched, the Great Crested Newt populations which occurred within any suitable ditches or ponds beyond the 500m radius of the development footprint would not be affected by the construction phase or operational phase of the Energy Park development.

8.5.24 As the only effect of the Energy Park would be the minimal effect of any small alterations to the ditch structure at new 'crossing points' established to enable construction and minimal habitat loss (of an area of intensively farmed arable farmland) caused by the development, it was considered that any effect on any Great Crested Newt population potentially occurring within or beyond the land boundary (where no search was conducted) would be negligible.

Hazel Dormouse Survey

8.5.25 Although no specific survey for Hazel Dormouse (*Muscicardus avellanarius*) was conducted there appears to be no suitable habitat within the site, and no historic evidence of the presence of Hazel Dormouse in the area.

Reptile Survey

8.5.26 No specific surveys were undertaken at the site to determine reptile populations; however, the site appeared largely unsuitable to sustain reptile populations due to the lack of suitable unimproved grassy areas for foraging or breeding. This may indicate that the site has very low or is lacking reptile populations. During the period that the Phase 1 survey was conducted no casual observations of basking Common Lizard (*Lacerta vivipara*), Slow-worm (*Anguis fragilis*), Adder (*Vipera berus*) or Grass snake (*Natrix natrix*) were made at the site during the visits.

8.5.27 The development area appeared generally unsuitable to sustain reptile populations as it consists of intensively farmed arable land with only small areas of rough grassland. The arable land is generally cultivated right up to the field edges leaving few areas for reptiles to forage or breed. The potential for significant reptile populations at the Energy Park Site is minimal and the presence of viable reptile populations is unlikely.

8.5.28 However, the 'Skerth Drain banks' which act as a watercourse for the major drainage on the site were grass covered and could possibly support relict reptile populations by providing reptiles with foraging and breeding sites. However, the Skerth Drain is unlikely to be impacted by the construction or operational phase of the Energy Park with subsequently no detrimental effects to any reptile populations.

8.6 ANALYSIS AND CONCLUSIONS

Conclusions

8.6.1 The Phase 1 habitat survey showed the development area to consist of intensively farmed arable fields, a few of which were bordered on headlands by rough grassland. The arable fields were generally cultivated right up to the field margins resulting in very few areas of botanical or ecological importance. The most valuable aspects of the site were the main drainages and ditches which bordered most of the fields and which formed a network of drainage channels which lowered the water table across the site. There were a few small plantation woodlands comprising young trees; however just south of Six Hundreds Farm a mature plantation woodland held some standard Oak and Ash trees which contained holes and cracks which may provide potential roosting sites for bats; however, in general these plantations were of low ecological significance. To the south of Six Hundreds Farm is a small section of defunct, species-poor hedgerow comprising mainly of Hawthorn with sporadic Blackthorn, Ash and Dog Rose which provides shelter for foraging bats in windy conditions. The potential of causing botanical damage to the site due to the construction and operation of the Energy Park is likely to be minimal.

8.6.2 The construction of the Energy Park at the Heckington Fen site would be very unlikely to affect any populations of protected species such as Otter, Water Vole or Great Crested Newt which are dependent on riparian habitats. During a thorough investigation of the ditches and main drains on the site no evidence of Otter or Water Vole was found. Whilst the period of the year precluded an accurate assessment for Great Crested Newts, several of the drains appeared to *possibly* provide suitable potential habitat for this species as well as Otter and Water Voles. For the construction of the Energy Park on the site it may be necessary to construct culverts across some of the ditches in order

assemble the solar panels. If crossings are required, proposed crossing points should be examined for a distance of 50m either side the 'crossing point' for the presence of Water Vole and Otter during future surveys. This should be conducted at a period when the water table is at capacity. This can be achieved by physical examination of the habitat or by placing floating platforms baited with apple within the watercourse; the droppings of any animals visiting the apple bait can then be examined to determine whether Water Voles are present. If the presence of Water Voles is confirmed then appropriate mitigation should be put in place to protect the Water Vole population during the construction and post construction phases of the development. This may include restoration of the streamside habitat and prevention of pollution by preventing water run-off from the development into the watercourses on the site. The prevention of pollution of any watercourses on site is imperative to protect populations of Water Vole or Otter or Great Crested Newt.

8.6.3 Although no evidence of Great Crested Newt (*Triturus cristatus*) was found during the survey as the time of year was unsuitable to conduct bottle-trapping or torch surveys; the Phase 1 survey results show that the development site has some main drainages and ditches with suitable habitat for breeding Great Crested Newts. Prior to the construction of any new 'crossing points' a 50 metre length of ditch either side each 'crossing point' should be bottle-trapped and torch-surveyed during late February to June to confirm the absence or presence of Great Crested Newt. If GCN are found to be present then appropriate mitigation should be put in place to protect the population during the construction and post construction phases of the development. This may include restoration of the ditch habitat and prevention of pollution by preventing water run-off from the development into the watercourses on the site. As the only effect of the Energy Park would be the minimal effect of any alterations to the ditch structure at the 'crossing points' and minimal habitat loss (of an area of intensive arable farmland) caused by the 'footprint' of the Energy Park; it was considered that any effect on any Great Crested Newt population potentially occurring within or beyond the land boundary (where no search was conducted) would be negligible.

8.6.4 Evidence of Badger (*Meles meles*) see confidential badger report – **Appendix 8.7** (document reference 6.3.8.7).

8.6.5 Although no specific survey for Hazel Dormouse (*Muscicardus avellanarius*) was conducted there appears to be no suitable habitat within the site, and no historic evidence of the presence of Hazel Dormouse in the area

8.6.6 Whilst the presence or absence of viable reptile populations is not confirmed, the development area appeared generally unsuitable to sustain reptile populations and the construction of the Energy Park is likely to have a minimal effect on any relict populations of reptiles which may occur at the Heckington Fen site. Any reptile populations could be protected by minimising the removal of hedgerows, woodland during the construction phase.

8.6.7 The season at which the Phase 1 Habitat Survey was conducted limits the results obtained from the survey work. The effectiveness of the survey to confirm the presence of Great Crested Newt or to determine the diversity of flowering plants at the site was reduced because the survey work was conducted from mid-August. However, Water Vole, Otter and Badger activity is perhaps easier to monitor at this season.

8.7 PROPOSED MITIGATION

8.7.1 Wherever possible any hedgerows currently found on the development site should be retained; any sections of hedgerow which have to be removed during the construction process should be replaced by a section of at least an equivalent length and quality.

8.7.2 Planting of areas of native tree species on areas away from the Energy Park development would benefit wildlife across the farm, particularly insects and birds.

8.7.3 Wherever possible the standard trees which are present on the site should be retained as they provide a wide range of nesting habitat for hole-nesting birds, for roosting bats and other wildlife such as beetles and moths.

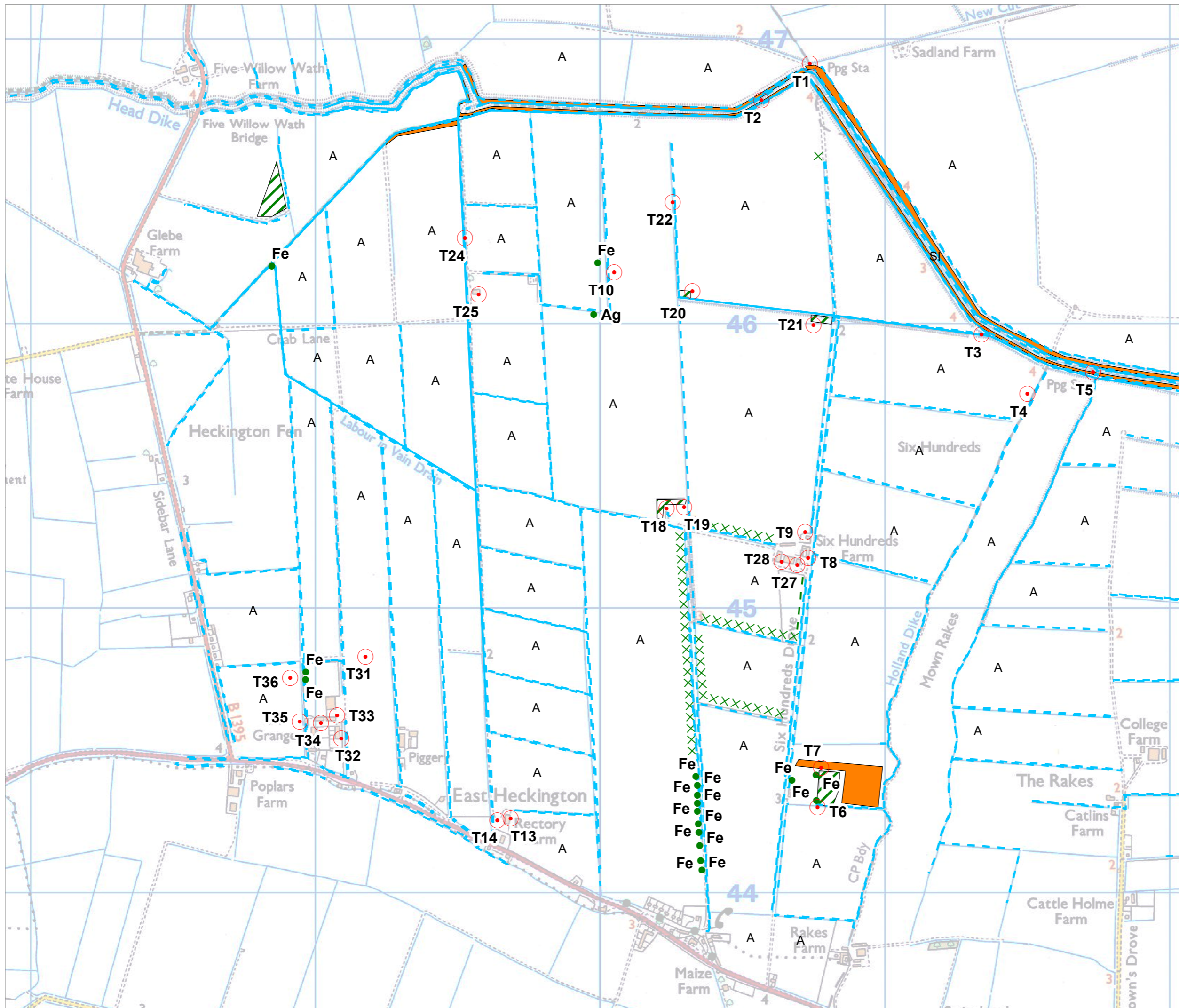
8.7.4 Although no evidence of Otter was observed at the site, the main drainages and ditches on the site appeared potentially suitable for Otters; it is suggested that *wherever possible* the construction or access roadways should avoid crossing main drainages or ditches. Similarly, care should be taken to avoid pollution of any watercourses during the construction phase as this would impact strongly on any Otter population present.

8.7.5 As the construction phase of the Energy Park may occur perhaps a few years into the future when the water table level is different, prior to the construction of any new 'crossing points', surveys should be conducted for 50m either side of the proposed 'crossing points' in order to re-affirm the absence of Water Vole. If Water Voles are found to be present then appropriate mitigation should be put in place to protect the Water Vole population during the construction and post construction phases of the development. This may include restoration of the streamside habitat and prevention of pollution by preventing water run-off from the development into the watercourses on the site.

8.7.6 Although no evidence of Great Crested Newt was found during the survey as the time of year was unsuitable to conduct bottle-trapping or torch surveys; the Phase 1 survey results show that the development site has some main drainages and ditches which *could* provide suitable habitat for breeding Great Crested Newts (*Triturus cristatus*). Prior to the construction of any 'crossing points' a 50m length of ditch either side each 'crossing point' should be bottle-trapped and torch-surveyed during late February to June to confirm the absence or presence of Great Crested Newt. If GCN are found to be present then appropriate mitigation should be put in place to protect the population during the construction and post construction phases of the development. This may include restoration of the ditch habitat and prevention of pollution by preventing water run-off from the development into the watercourses on the site.

8.8 REFERENCES

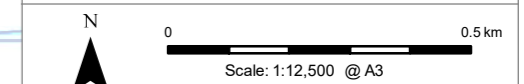
1. Handbook for Phase 1 habitat survey published by the Nature Conservancy Council (1990).



Legend

- Target Note
- Standard Trees
- Seasonally Wet Ditch
- Permanent Water
- XXXX Scattered Scrub
- Defunct Species Poor Hedge
- Unimproved Semi Neutral Grassland
- Deciduous Plantation

Figure: 1 ANNEX 1
Title: Phase 1 Habitat Survey
BADGER RECORDS REMOVED



Drawn by: MW	Checked by: SP	Approved by: NB
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Ref: 6945_T0034_01 **Date: June 2022**

Heckington Fen Solar Park

ANNEX 2 - TABLE SHOWING POTENTIAL OF BUILDINGS IDENTIFIED ON SITE FOR ROOSTING BATS

Target Note	Building age and height	Roof structure and construction						Wall material			Structural Features						Building activity				Potential bat access / roost features	Adjacent habitat	Evidence of bats and bat roost potential of building	
		Tile	Metal / Asbestos	Concrete / Other	Flat	Pitched	Hipped	Brick	Metal	Concrete	Gables	Barge Board	Fascia/soffit	Flashing	Roof Void	Underfelting sarking/other	Agricultural	Residential	Occupied	Unoccupied				
28	Modern Post 1950 2 storey		✓			✓			✓	✓	✓	✓						✓		✓		Gaps under ridge tiles; overhanging lip at gable ends; gaps under roof material; within small house on roof. Small concrete building to rear – limited potential	Large intensively managed arable fields	Low potential No evidence of bats. Potential for bats during active period only. Not suitable for maternity or hibernation.
28	Modern Post 1950 2 storey		✓			✓			✓		✓	✓						✓		✓		Gaps under overhanging lip at gable ends; gaps on east and west aspects where corrugated metal sheeting joins at 7ft. Small concrete building to rear – limited potential	Large intensively managed arable fields	Ltd - low potential. No evidence of bats. Potential for bats during active period only. Not suitable for maternity or hibernation.
28	Modern Post 1950 2 storey		✓			✓			✓	✓	✓	✓						✓		✓		Gaps under overhanging lip at gable ends; gaps at each corner behind metal support beam. Exposed from open fronted nature of building.	Large intensively managed arable fields	Ltd potential. No evidence of bats. Potential for bats during active period only. Not suitable for maternity or hibernation.
27	Modern Post 1950 2 storey		✓			✓			✓		✓	✓						✓		✓		Gaps under overhanging lip at gable ends. Exposed but likely offers some shelter from elements.	Large intensively managed arable fields.	Ltd potential. No evidence of bats. Not suitable for maternity or hibernation roosts.
8	Pre 1914 single storey	✓				✓	✓	✓					✓		✓						✓	Numerous gaps under roof and ridge tiles; raised flashing; gaps in brickwork on external west aspect associated with purlins; gaps in internal walls. Open doors.	Large intensively managed arable fields. Small stand of trees to immediate north.	Low -medium potential. No evidence of bats. Potential for bats during active season; sub-optimal for hibernating bats.
8	Pre 1914 2 storey	✓	✓			✓			✓		✓	✓	✓	✓	✓						✓	Numerous gaps on north and south aspects where mortar missing on wall plate under metal roof; gap under fascia on west aspect.	Large intensively managed arable fields. Small stand of trees to immediate north.	Medium -high potential. No evidence of bats. Potential for bats throughout the year although sub-optimal for hibernating bats.
9	Pre 1914 2 storey x 2 houses	✓				✓			✓		✓		✓	✓	✓					✓	✓	Mortar missing on chimneys and assoc. raised flashing on south aspect; broken windows; Intact underfelting but very cobwebby in roof voids.	Small stand of trees and shrubs surrounding the buildings. Large intensively managed arable fields beyond.	Medium -high potential. No evidence of bats. Potential for bats all year as no heating in houses; isolated but provides cover on emergence.
25	Post 1951 Single storey		✓			✓					✓										✓	Gaps under overhanging lip at gable ends. Exposed but likely offers some shelter from elements.	Large intensively managed arable fields.	Limited potential. No evidence of bats. Potential for bats during active season; sub-optimal for hibernating bats.
1	Poss 1950's? Single storey.	✓				✓			✓		✓	✓			?						✓	Pump house. Potential bat access beneath the pumping station if gaps exist as over water and adjacent ditch vegetation.	Large intensively managed arable fields. Limited connective habitat. Very exposed landscape.	Low – medium potential if gaps exist underneath as one of very few features in landscape suitable for roosting bats. Could be suitable for both maternity and hibernation.

8.3 – Phase 1 Habitat Survey Report – Energy Park

Target Note	Building age and height	Roof structure and construction						Wall material			Structural Features						Building activity				Potential bat access / roost features	Adjacent habitat	Evidence of bats and bat roost potential of building	
		Tile	Metal / Asbestos	Concrete / Other	Flat	Pitched	Hipped	Brick	Metal	Concrete	Gables	Barge Board	Fascia/soffit	Flashing	Roof Void	Underfelt/sarking/other	Agricultural	Residential	Occupied	Unoccupied				
5	Poss 1950's? Single storey		✓			✓					✓	✓	✓									Pump house. Potential bat access beneath the pumping station if gaps exist as over water and adjacent ditch vegetation.	Large intensively managed arable fields. Limited connective habitat. Very exposed landscape.	Low – medium potential if gaps exist underneath as one of very few features in landscape suitable for roosting bats. Could be suitable for both maternity and hibernation.
13	Modern Post 1950 2 storey		✓		✓	✓		✓	✓		✓	✓										Gaps under ridge tiles; overhanging lip at gable ends; gaps under roof material; cracks/gaps within small brick buildings attached on north and south sides perhaps offering low-moderate bat roosting potential	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south	Low -medium potential. No evidence of bats. Potential for bats during active season; sub-optimal for hibernating bats.
14	Poss 1950's? Single storey.	✓				✓	✓	✓			✓		✓		✓							Extensive ivy covering on roof. Small gaps at eaves at sides of building above guttering . fissures offering moderate to high (BRP 1-2)	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south.	High – medium potential.. Could be suitable for both maternity and hibernation.
31	Poss 1950's? Double storey.		✓	✓		✓		✓		✓		✓		✓								Cracks in walls of attached brick building and gaps where roof asbestos overhangs may offer low potential for roosting bats,	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south	Low potential. No evidence of bats and few features that might accommodate roosting bats.
32	Poss 1950's? Double storey.		✓	✓		✓			✓	✓	✓		✓									Gaps under overhanging lip at gable ends. Exposed but likely offers some shelter from elements.	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south	Ltd potential. No evidence of bats. Not suitable for maternity or hibernation roosts.
33	Poss 1950's? Single storey.		✓	✓		✓				✓	✓											Gaps under overhanging lip at gable ends. Exposed but likely offers some shelter from elements.	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south	Low potential. No evidence of bats and few features that might accommodate roosting bats.
34	Poss 1950's? Single storey.		✓	✓		✓				✓	✓											Gaps under overhanging lip at gable ends. Exposed but likely offers some shelter from elements.	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south	Low potential. No evidence of bats and few features that might accommodate roosting bats.

8.3 – Phase 1 Habitat Survey Report – Energy Park

Target Note	Building age and height	Roof structure and construction						Wall material			Structural Features						Building activity				Potential bat access / roost features	Adjacent habitat	Evidence of bats and bat roost potential of building
		Tile	Metal / Asbestos	Concrete / Other	Flat	Pitched	Hipped	Brick	Metal	Concrete	Gables	Barge Board	Fascia/soffit	Flashing	Roof Void	Underfelt/sarking/other	Agricultural	Residential	Occupied	Unoccupied			
35	Poss 1950's? Single storey.		✓	✓		✓										✓		✓		Gaps under overhanging lip at gable ends. Exposed but likely offers some shelter from elements.	Large intensively managed arable fields. Connectivity to gardens with trees immediately to the south	Low potential. No evidence of bats and few features that might accommodate roosting bats.	