



Land south of Brick Lane, Mepal

Preliminary Ecological Appraisal & Bat Activity Report

Produced for The Havebury Housing Partnership

By Applied Ecology Ltd

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1 Introduction

Background

- 1.1 In January 2019 Applied Ecology Ltd (AEL) was commissioned by The Havebury Housing Partnership to carry out a Preliminary Ecological Appraisal (PEA) of land south of Brick Lane, Mepal, Cambridgeshire ("the Site"). A plan showing the location of the Site is provided in **Figure 1.1**.
- 1.2 The study was required in order to determine the likely ecological constraints associated with a proposal for the redevelopment of the Site ("the Development"), and to establish the potential scope of further, more detailed ecological surveys which may be needed to support any future planning application(s).
- 1.3 A follow-up bat activity survey of the field boundary habitats, and specifically a hedgerow along the northern boundary of the Site, was completed in August 2019 to establish the importance of the hedge as bat flyway/commuting route following confirmation that the hedgerow is to be crossed by new site access road and separate turning circle.

Legislation and Planning Policy

Legislation

- 1.4 The Wildlife and Countryside Act 1981 (as amended) provides the main legal framework for nature conservation and species protection in the UK. The Site of Special Scientific Interest (SSSI) is the main statutory nature conservation designation in the UK. Such sites are notable for their plants, or animals, or habitats, their geology or landforms, or a combination of these. Natural England is the key statutory agency in England for advising Government, and for acting as the Government's agent in the delivery of statutory nature conservation designations.
- 1.5 Designation of a SSSI is a legal process, by which sites are notified under the Wildlife and Countryside Act 1981. The 1981 Act makes provision for the protection of sites from the effects of changes in land management, and owners and occupiers receive formal notification specifying why the land is of special scientific interest, and listing any operations likely to damage the special interest.
- 1.6 The Countryside and Rights of Way Act 2000, and The Natural Environment and Rural Communities (NERC) Act 2006, provide supplementary protected species legislation. Specific protection for badgers *Meles meles* is provided by the Protection of Badgers Act 1992.

Habitats and Species of Principal Importance in England

- 1.7 The Natural Environment and Rural Communities (NERC) Act came into force on 1 October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in



England. The list has been drawn up in consultation with Natural England, as required by the Act.

- 1.8 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Habitats of Principal Importance

- 1.9 Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and sub-tidal sands and gravels.

Species of Principal Importance

- 1.10 There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the hen harrier *Circus cyaneus* has also been included on the list because without continued conservation action it is unlikely that the hen harrier population will increase from its current very low levels in England.
- 1.11 In accordance with Section 41(4) the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

National Planning Policy Framework

- 1.12 The National Planning Policy Framework (NPPF) was published in March 2012 and replaced previous planning policy guidance (PPS 9) on biodiversity. The NPPF was updated in July 2018 and again in February 2019 and states the following in relation to biodiversity and planning:

“When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*



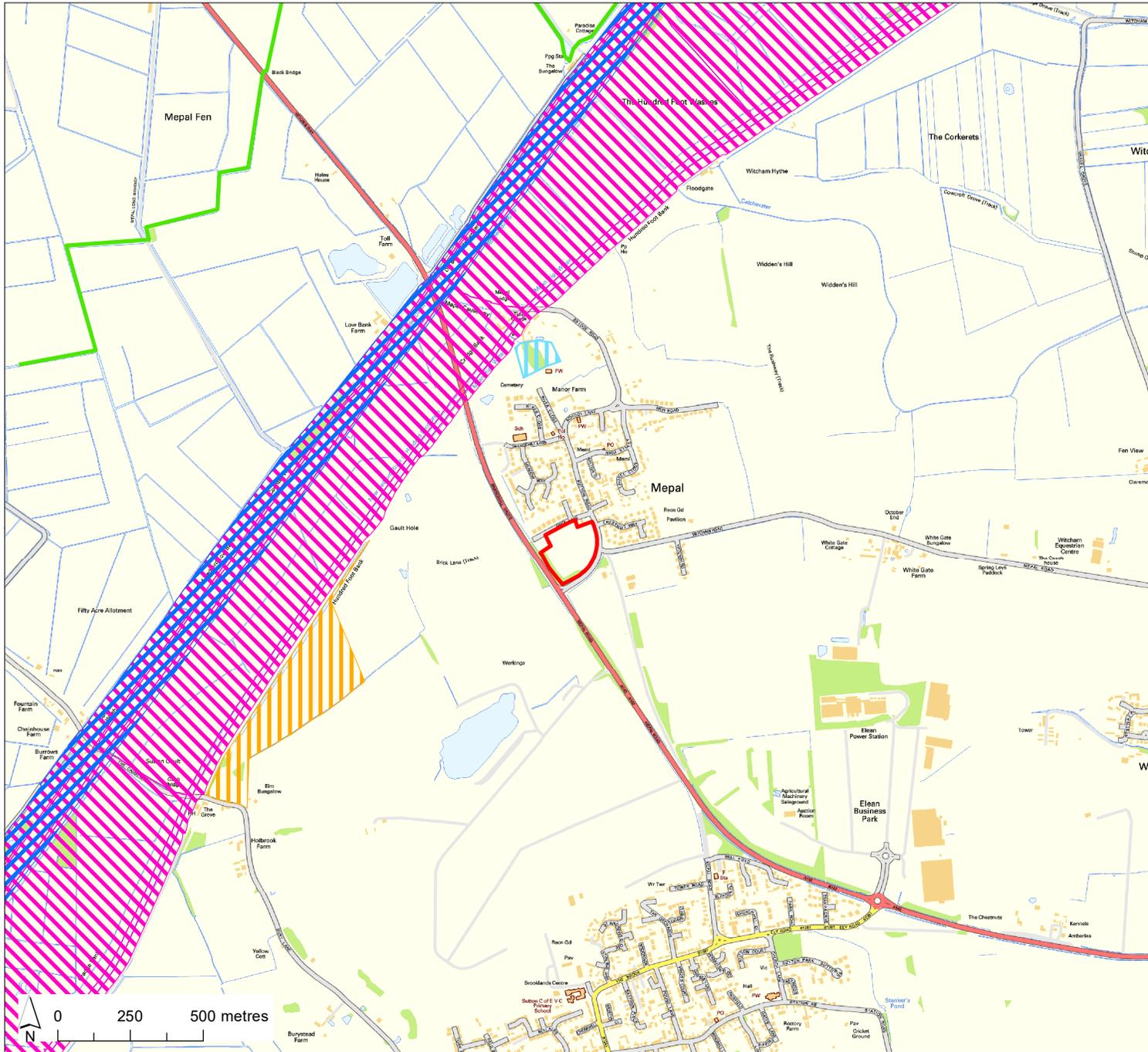
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

The following should be given the same protection as habitats sites:

- *potential Special Protection Areas and possible Special Areas of Conservation;*
- *listed or proposed Ramsar sites; and*
- *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”





Land off Brick Lane, Mepal

Site Location

-  Site boundary
-  Ouse Washes - Special Area of Conservation
-  Ouse Washes - Site of Special Scientific Interest, Special Protection Area
-  Hundred Foot Bank Swamp and Ditch - Local Wildlife Site
-  River Close Parkland - Local Wildlife Site
-  Sutton and Mepal Pumping Station Drains - Local Wildlife Site

Figure 1.1

Map Scale @ A4: 1:20,000

Surveyed by: N/A
Survey date: N/A
Drawn by: RE
Checked by: DP
Status: Final



2 Methodology

Pre-existing data records

- 2.1 The Cambridgeshire and Peterborough Environmental Records Centre (CPERC) was commissioned by AEL in January 2019 to complete a search of its database for existing biological records. This included a search for records of statutory and non-statutory wildlife sites, ancient woodland, and protected and notable species both on the Site and within 2 km of the Site's central point.

Habitats and Plants

- 2.2 An extended Phase 1 habitat survey was undertaken for the Site on 8 January 2019 by AEL ecologist Richard Dale MCIEEM, with assistance from AEL graduate ecologist Rob Evans, in dry and bright weather conditions. The methodology adopted followed the standard JNCC approach to Phase 1 habitat survey (JNCC, 1993¹) by which all habitats present within the site were classified and mapped according to standard categories. Target notes were used to describe areas of both typical and unique botanical character. Habitat patches were mapped as polygon features, and if sufficient space on the map linear features (such as walls and fences) as lines where this provided added value. Point features were recorded where there were notable isolated trees or scrub. Plant species abundance was noted using the DAFOR² system.
- 2.3 The habitat map was subsequently digitised using a Geographical Information System (ArcGIS).
- 2.4 The habitat mapping was completed outside of the recognised seasonal survey window for completing Phase 1 habitat survey. However, in this instance the habitats present and their characteristic plant species were readily identifiable and the late survey timing is not thought to have significantly compromised the validity of the survey.

Fauna

- 2.5 The standard Phase 1 habitat survey was "extended" to include a search for evidence of or potential for the presence of protected species or species of nature conservation interest within and close to the site. This was not a detailed survey for such species, but included noting the presence of habitats suitable to support specific protected species, and where seen, any evidence of presence such as droppings, mammal tracks and footprints, shelters (or nests/roosts), hair caught on fence-wire, foraging signs, and so on.
- 2.6 In advance of the survey the 1: 25,000 scale Ordnance Survey map was checked and online aerial photos inspected to identify any ponds within 250 m of the Site that could

¹ **JNCC (1993)** *Handbook for Phase 1 Habitat Survey – A technique for Environmental Audit*. JNCC, Peterborough.

² DAFOR: whereby species occurrence may be classified as being **d**ominant, **a**bundant, **f**requent, **o**ccasional or **r**are. Rare in the context of a DAFOR score should not be confused with species rarity in the more widely accepted meaning of general scarcity.



potentially support breeding populations of the legally protected amphibian great crested newt *Triturus cristatus* (GCN).

Bats

- 2.7 The hedgerow located along the northern boundary of the Site was subject to a bat activity survey in August 2019 to assess its use and importance to bats by completion of a five-night automated bat detector survey (7-12 August) and a two-person bat activity survey on the evening of 12 August.

Automated Bat Detector Survey

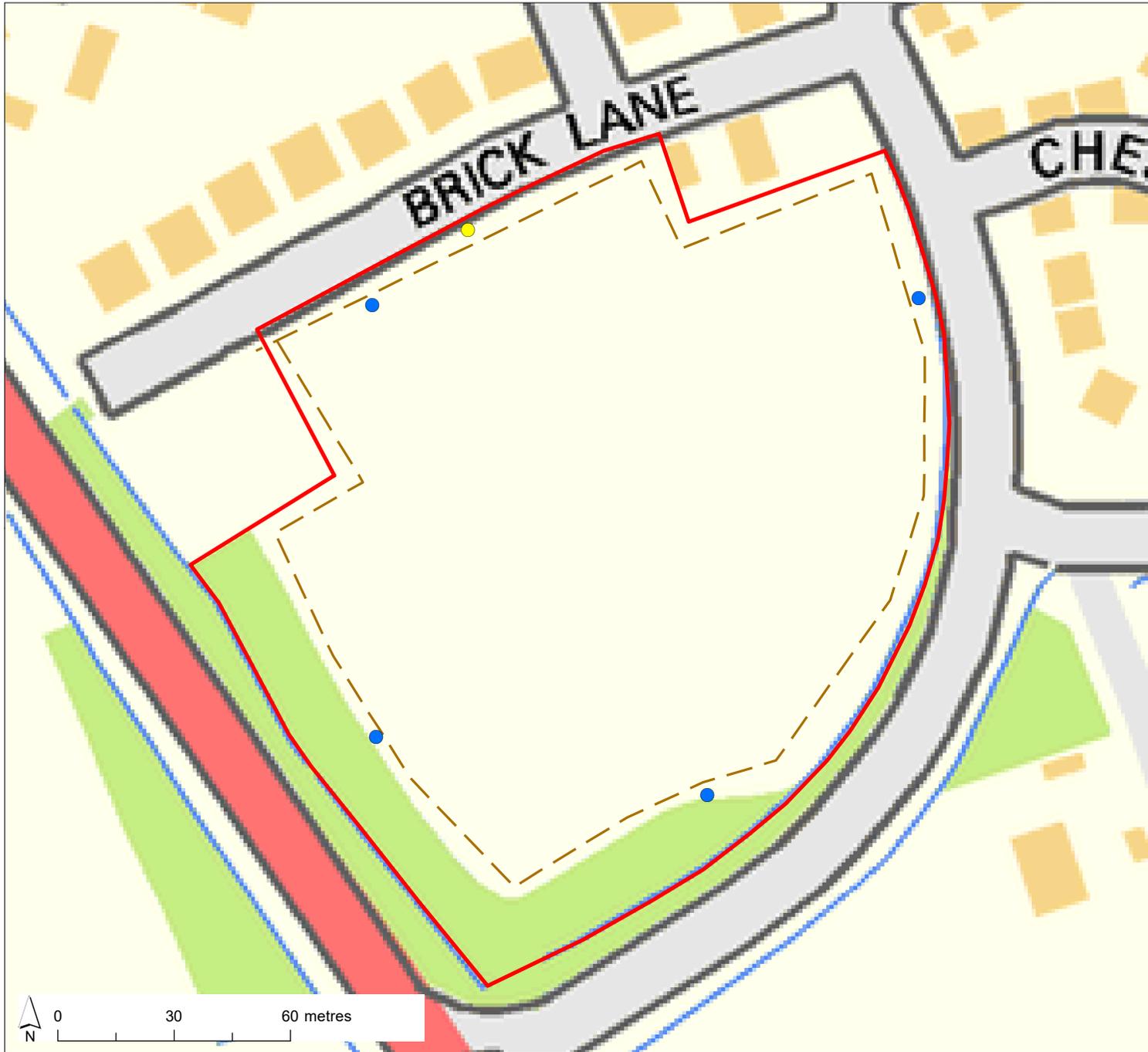
- 2.8 A Wildlife Acoustics SM4 (Full Spectrum) electronic bat detector was set up in the centre of the northern boundary hedge with its microphone facing south into the Site on 7 August 2019. The detector was set up to record automatically from sunset until sunrise and was retrieved on 12 August after five nights consecutive bat call recording (see **Figure 2.1** for detector location).
- 2.9 Bat calls were analysed using a PC and Wildlife Acoustics Kaleidoscope software in accordance with Russ 2012³.

Bat Activity Survey

- 2.10 The bat activity survey was completed on the evening of 12 August 2019 in weather conditions that were suitable for bats to be active: air temperature 14.5°C at the start of the survey falling to 12.2°C by the end, 10% cloud cover, wind speed Beaufort 2, and no rainfall.
- 2.11 Two experienced ecologists and bat surveyors from AEL (Richard Dale MCIEEM, and Dr Imogen Webster) commenced the survey 15 minutes before sunset (sunset was at 20.20). The surveyors were stationed on opposite sides of the centre of the northern boundary hedgerow for a total of 30 minutes past sunset in order to record bat activity along the hedgerow. Thereafter the two surveyors slowly walked a repeat circular transect route in opposite directions around the periphery of the site to record bat activity. Each surveyor was equipped with a hand-held Anabat Scout (full spectrum) electronic bat detector with earphones – see **Figure 2.1**.
- 2.12 Four tripod mounted Anabat Express electronic bat detectors were set up before the start of the survey around the perimeter of the Site to record bat calls.
- 2.13 The survey was ended at 21.50 (90 minutes after sunset).
- 2.14 All bat calls recorded by the Anabat Scout and Express detectors were analysed on a PC in accordance with Russ 2012.

³ Russ, J. (2012) *Bat Calls: A Guide to Species Identification*. Pelagic Publishing





Land off Brick Lane, Mepal

Bat activity survey setup

- Site boundary
- static detector
- long-term static detector
- transect route

Figure 2.1

Map Scale @ A4: 1:1,500

Surveyed by: IW/RD
Survey date: 12/08/2019
Drawn by: IW
Checked by: DP
Status: Final



3 Results

Pre-existing data records

Protected Sites

- 3.1 The Site is not covered by any statutory or non-statutory wildlife site designation and does not support any ancient woodland.
- 3.2 The closest statutory designated site is **Ouse Washes Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and Ramsar Site**, located 550 m to the north-west of the Site. Part of this area is also designated as **Ouse Washes Special Area of Conservation (SAC)**.
- 3.3 The Ouse Washes is an area of floodplain washland subject to regular winter flooding between The Hundred Foot/New Bedford River to the south-east and the Old Bedford River/Counter Drain to the north-west. It is one of the country's few remaining areas of extensive washland habitat, of particular note for the internationally important numbers of wildfowl and waders it supports.
- 3.4 There were three non-statutory designated sites in relative proximity to the Site, as follows:
 - River Close Parkland County Wildlife Site (CWS) – 600 m to the north of the Site, a 1.26 ha area of pasture woodland with an average of more than 5 mature or over mature trees per hectare.
 - Hundred Foot Bank, Swamp and Ditch CWS – 760 m to the west of the Site, contains a ditch with at least ten submerged and emergent plant species per 20 m stretch.
 - Sutton & Mepal Pumping Station Drains CWS – 1.63 km to the north of the Site, designated for supporting a number of submerged and emergent vascular plant species, with at least three species of *Potamogeton*; there are also groups of at least 20 mature pollard willows.
- 3.5 The location of these protected sites in relation to the Site is shown by **Figure 1.1**.

Protected Species

- 3.6 A total of 7,544 records, mostly of birds, were returned by the data search, the vast majority of which were associated with the Ouse Washes. The records are summarised as follows:
 - Birds – 7,152 records of 101 species, of which 6,118 were from the Ouse Washes, with many of the remainder from other associated wetland habitats such as Sutton Gault (316 records). The most frequently recorded species were wetland species such as ruff *Philomachus pugnax* (403 records) and marsh harrier *Circus aeruginosus* (349) but a range of farmland species of elevated conservation concern were also present in the data, including yellowhammer *Emberiza citrinella* (73 records) and linnet *Carduelis cannabina* (74 records);
 - Bats – 43 records of seven species, most of which were either common pipistrelle *Pipistrellus pipistrellus* or soprano pipistrelle *Pipistrellus pygmaeus*, although there



were fewer records of less common bat species such as Daubenton's bat *Myotis daubentonii* and whiskered bat *Myotis mystacinus*;

- Other mammals – 37 records, of which 10 were for badger, 12 records of otter *Lutra lutra* mostly from the New Bedford River, eight for water vole *Arvicola amphibious* mostly from the Ouse Washes and drains to the west of Sutton, four of brown hare *Lepus europaeus* and two of west European hedgehog *Erinaceus europaeus*;
- Amphibians – 12 records, of which eight related to the legally protected great crested newt *Triturus cristatus*, the closest of these being a small breeding population in a back-garden pond 1.7 km to the south of the Site;
- Invertebrates – 153 records, including ten of white-letter hairstreak *Satyrrium w-album* and eight of great green bush cricket *Tettigonia viridissima*, 43 records of moth species from Witcham from trapping surveys in 2002 and 2004;
- Plants – 135 records, mostly aquatic species designated at Cambridgeshire and Peterborough Additional Species of Interest, but also including a handful of records of Nationally Scarce species, such as fringed water lily *Nymphoides peitata* and greater water parsnip *Sium latifolium*;
- Stoneworts – seven records of two species, including five of tassel stonewort *Tolypella intricata* and two of great tassel stonewort *Tolypella prolifera* both UK Biodiversity Action Plan (UKBAP) species.

Habitats

- 3.7 The Phase 1 habitat map is shown in **Figure 3.1**. Full plant species lists can be found in **Appendix A**. A selection of habitat survey photographs can be found in **Figure 3.2**.
- 3.8 In summary, the Site comprised a recently fallow arable field with an area of broadleaved plantation woodland in the southwest corner of the Site. The Site was bounded by a species-poor intact hedgerow along the eastern boundary and a wych elm *Ulmus glabra* tree corridor along a dry ditch on the northern boundary of the Site.

Arable

- 3.9 The majority of the Site consisted of a fallow arable field which had recently been colonised by early successional plant species, the dominant species in the sward was charlock *Sinapis arvensis*, other less frequent accompanying species included perennial rye-grass *Lolium perenne* field speedwell *Veronica persica*, ribwort plantain *Plantago lanceolata*, cow parsley *Anthriscus sylvestris* cock's-foot *Dactylis glomerata* and cut-leaved crane's-bill *Geranium dissectum*.

Broadleaved plantation woodland

- 3.10 The southwest corner and western extent of the Site consisted of broadleaved plantation woodland, which historic aerial imagery shows was planted in 2006. The dominant tree species was ash *Fraxinus excelsior*, with a mix of other species including oak *Quercus robur*, apple *Malus domestica*, sycamore *Acer pseudoplatanus*, holly *Ilex aquifolium*, hawthorn *Crataegus monogyna*, field maple *Acer campestre* and Italian alder *Alnus cordata*. The ground layer was very sparse, with occasional common nettle *Urtica dioica* and ivy *Hedera helix*.



Species-poor hedgerow

- 3.11 The hedgerow on the eastern and southern boundary was situated along the length of a partially wet drainage ditch and was dominated by hawthorn, other species included sycamore, field maple, willow *Salix sp.*, with abundant bramble *Rubus fruticosus* throughout.
- 3.12 The hedgerow on the north-western corner was dominated by hawthorn with occasional dog rose *Rosa canina*.
- 3.13 The northern extent of the Site was bounded by a line of semi-mature wych elm trees, along a dry ditch. Ground layer species included cock's-foot, cow parsley and cleavers *Galium aparine*.

Fauna

Great Crested Newt

- 3.14 A potential waterbody just off-Site to the northwest was investigated but found to be a dry depression dominated by common reedmace *Typha latifolia*.
- 3.15 There were no other waterbodies suitable for breeding great crested newt (GCN) obviously present within 250 m of the Site. Given this, it can be considered highly likely that this species is absent from the Site.

Reptiles

- 3.16 There were no habitats potentially suitable for reptiles within the Site, however if left unmanaged for an extended period of time the arable field could develop into a grassland and become attractive to reptile species.

Bats

- 3.17 No trees of sufficient size to support features usable by tree-roosting bats were present within the Site.
- 3.18 The bat activity survey confirmed the use of the northern hedgerow by two individual common pipistrelle bats that commuted along the southern side of the hedge from east to west at 21.10 (50 minutes after sunset) and at 21.19 during the walked transect survey.
- 3.19 The long-term automated bat detector located within the northern hedge recorded a total of 475 sets of bat calls over the five nights. A total of three bat species were recorded: common pipistrelle (92% of all recorded calls), soprano pipistrelle (5%) and noctule (3%). It is considered most likely, on the basis of the bat activity survey and the known behaviour of this species, that the recorded noctule bat calls were those of bats flying high over the Site and not associating directly with it.
- 3.20 The same three bat species recorded during the five-night automated survey were also recorded during the bat activity survey on the hand-held Anabat Scout detectors and the tripod mounted Anabat Express detectors. A single noctule bat was recorded and seen commuting high over the site from east to west during the survey (and was recorded by all detectors) and individual soprano and common pipistrelle bats were seen foraging along



the broadleaved plantation woodland along the southwest corner of the Site. No other bat species were recorded during the survey. See **Figure 3.3** for bat activity survey results.

Birds

- 3.21 A small number of common garden and hedgerow bird species were recorded during the survey. These included long-tailed tit *Aegithalos caudatus*, blackbird *Turdus merula*, woodpigeon *Columba palumbus*, robin *Erithacus rubecula* and redwing *Turdus iliacus*.
- 3.22 The Site had the potential to support a small number of common hedgerow-nesting species, but was unlikely to support a significant farmland bird assemblage given its small overall size.

Other Species

- 3.23 No evidence of badger was found during the survey, and no suitable habitats were present for otter. The ditches bounding the Site were unsuitable for water vole as they did not hold permanent standing or flowing water.





Land off Brick Lane, Mepal

Phase 1 Habitat Map

- Site boundary
- arable
- broadleaved plantation woodland
- species-poor intact hedge
- line of trees

Figure 3.1

Map Scale @ A4: 1:2,000

Surveyed by: RE/RD
Survey date: 08/01/2019
Drawn by: RE
Checked by: DP
Status: Final



Figure 3.1: Selection of habitat survey photographs.



(a) line of Elm on the northern boundary



(b) fallow arable field

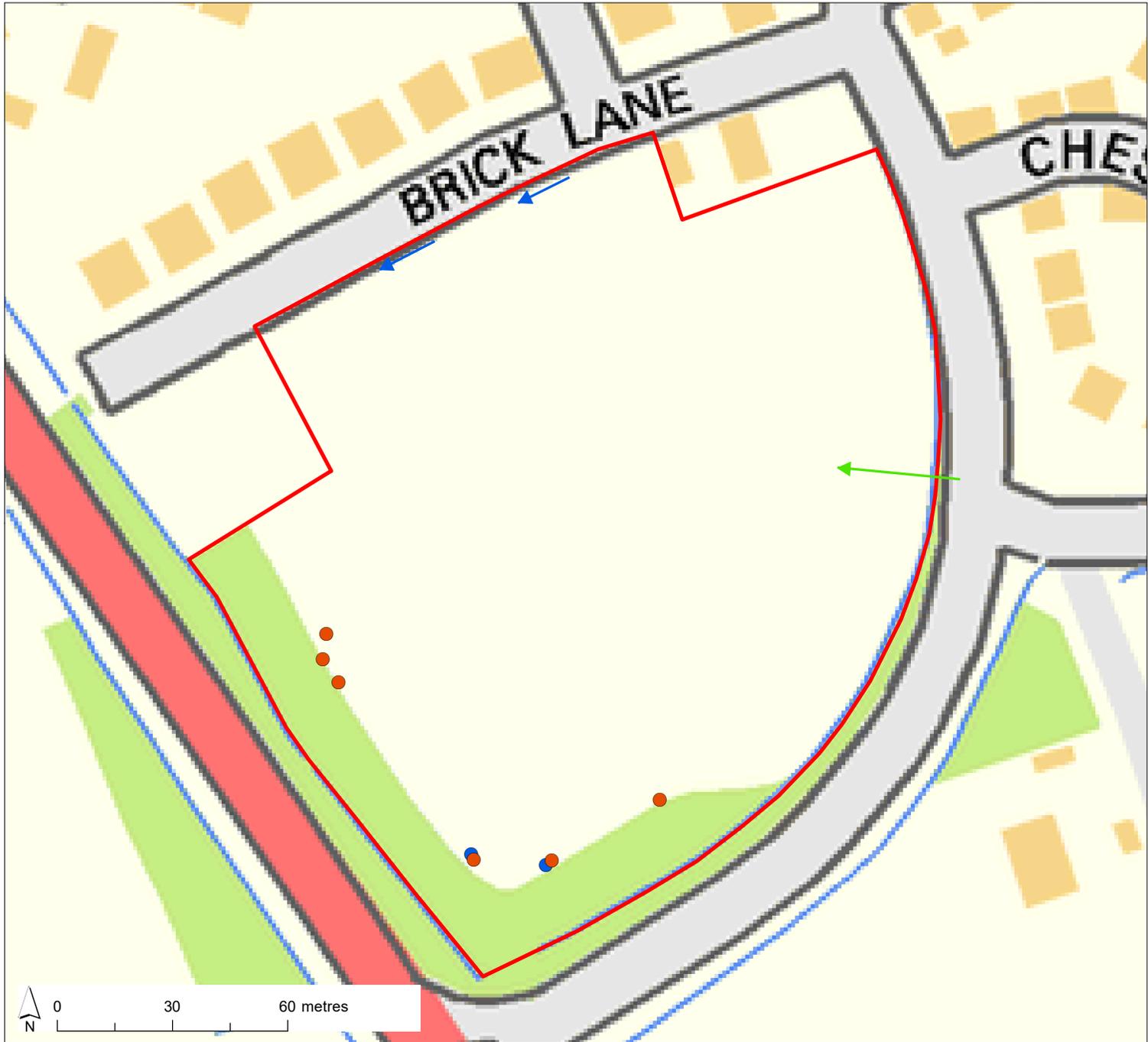


(c) eastern boundary hedge



(d) broadleaved plantation woodland





Land off Brick Lane, Mepal

Bat activity survey results

- Site boundary
- Commuting bats**
- *Nyctalus* species
- common pipistrelle
- Foraging bats**
- common pipistrelle
- soprano pipistrelle

Figure X.x

Map Scale @ A4: 1:1,500

Surveyed by: IW/RD
Survey date: 12/08/2019
Drawn by: IW
Checked by: DP
Status: Final



4 Conclusions and Recommendations

Conclusions

Protected Sites

- 4.1 The Site is not covered by any statutory or non-statutory wildlife site designation, and does not occur particularly close to any statutory designated site.
- 4.2 The nearest statutory designated site is **Ouse Washes SSSI, SPA and SAC**. The majority of this site has limited or no public access, and this, combined with the distance from the Site and the likely small-scale nature of the proposed Development, means that negative impacts on this, or non-statutory sites, are considered highly unlikely to occur.

Habitats

- 4.3 The Site was dominated by a recently fallow arable field of very low ecological value. The habitats that bounded the field included a line of trees, hedgerows and a relatively young broadleaved plantation woodland that together may provide a wildlife corridor around the edge of the arable field. None of the boundary habitats were of particularly high nature conservation or biodiversity value and their ecological function could be replicated by new hedgerow and woodland planting as necessary in the context of development planning.

Fauna

Bats

- 4.4 An approach for valuing a site/feature for commuting bats has been proposed by Wray *et al* (2010)⁴, and has been used in the current evaluation. It involves calculating a score based on a number of parameters including bat species, number of bats, number of roosts/potential roosts and the characteristics and value of associated habitats.
- 4.5 The categories for classifying the relative value of a site for commuting bats are summarised by Wray as follows:
 - International importance – score >50
 - National – 41–50
 - Regional – 31–40
 - County – 21–30
 - District, local and parish – 11–20
 - Not important – 1–10
- 4.6 The bat survey (automated bat detector and manual bat activity survey) confirmed that the northern hedgerow was used by individual common pipistrelle bats for commuting and common and soprano pipistrelle bats for foraging.

⁴ Wray et al (2010) Valuing Bats in Ecological Impact Assessment. *In Practice*, December edition.



- 4.7 On the basis of the Wray parameters as bulleted below, the Site scores a total of 14 points and is therefore considered to be of *District, Local or Parish* importance for commuting bats.
- Species – common bat species (scores 2);
 - Number of bats – individual bats (scores 5);
 - Roosts / potential roosts nearby – not known (scores 4);
 - Type and connectivity of linear features – isolated well-grown hedgerows, and moderate sized fields (scores 3).
- 4.8 The same approach has been applied to assess the value of the Site for foraging bats as follows:
- Species – common bat species (scores 2);
 - Number of bats – individual bats (scores 5);
 - Roosts / potential roosts nearby – not known (scores 4);
 - Foraging habitat characteristics – suburban areas or intensive arable land (scores 2).
- 4.9 The site scores 14 points and is therefore considered to be of *District, Local or Parish* importance for foraging bats.
- 4.10 In summary, the bat survey has verified that the Site (and in particular the northern boundary hedge) is not of particular importance for commuting or foraging bats, and the proposal to remove and replace the hedge as part of the development construction with a new access road and turning head should not result significant adverse impacts on the local bat population. Both crossings are relatively narrow and do not represent a significant barrier to bat movement.
- 4.11 The site is located in a suburban situation and is of limited value to bats, with small numbers of common bat species making use of the existing broadleaved woodland in the southwest sector of the Site for foraging. The woodland in the southwest of the Site is to be retained and the development should not result in a significant adverse impact on foraging bats.

Breeding birds

- 4.12 The Site is likely to be of value to a small range of common hedgerow nesting bird species, but not an assemblage that would confer the Site with any particular ornithological significance.

Recommendations

- 4.13 Sufficient baseline survey work has been completed to enable an assessment of the ecological importance of the site and to enable a robust assessment of the development impact on key ecological receptors to be ascertained. Further baseline ecology survey and assessment is not considered necessary or reasonable in the circumstances.



Initial Development Guidance

- 4.14 Ecological mitigation and compensation requirements will be dependent on the scale and design detail of the proposed Development. However, the following high-level advice should be considered at this early stage in order to protect and enhance biodiversity interests in line with the NPPF:
- existing boundary hedgerows and plantation woodland should, where possible, be retained, protected, enhanced, and kept free of artificial lighting after dark.
 - landscaping of peripheral areas of the Site should seek to enhance biodiversity by native planting.
 - bat and/or bird boxes could be incorporated into new buildings – particularly those that face the retained woodland in the southwest sector of the Site.
- 4.15 The arable field should, ideally, continue to be managed for agriculture to minimise the risk of it becoming of greater value to wildlife in the long-term.
- 4.16 The clearance of any cover vegetation should take place outside the bird breeding season, in the period September–February, or immediately after a check by an experienced ornithologist that verifies nesting bird absence from the Site.



Appendix A

Plant Species List



Fallow Arable Field:

Charlock *Sinapis arvensis* – D
Perennial rye-grass *Lolium perenne* – F
Cut-leaved crane's-bill *Geranium dissectum* – O
Field speedwell *Veronica persica* – O
Cock's-foot *Dactylis glomerata* – O
Cow parsley *Anthriscus sylvestris* – O
Prickly lettuce *Lactuca serriola* – R
Ribwort plantain *Plantago lanceolata* – R

Broadleaved Plantation Woodland:

Ash *Fraxinus excelsior* – A
Sycamore *Acer pseudoplatanus* – F
Hawthorn *Crataegus monogyna* – F
Pedunculate oak *Quercus robur* – O
Apple *Malus domestica* – O
Holly *Ilex aquifolium* – O
Dog rose *Rosa canina* – O
Italian alder *Alnus cordata* – O

Ground layer:

Ivy *Hedera helix* – O
Common nettle *Urtica dioica* – O
Cow parsley *Anthriscus sylvestris* – O

Species-poor intact hedge

Hawthorn *Crataegus monogyna* – D
Sycamore *Acer pseudoplatanus* – A
Bramble *Rubus fruticosus* – F
Field maple *Acer campstre* – O
Willow *Salix sp.* – O





