Ecological Report

Extended Phase 1 Habitat Assessment
Bat scoping Survey

Land East of Holt Road
Horsford
Norfolk
NR10 3ED

April 2016

230311-ED-02a
Limitations and Copyright

TMA has prepared this Report for the sole use of the above named Client or his Agents in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us. This Report may not be relied upon by any other party without the prior and express written agreement of TMA. The assessments made assume that the sites and facilities will continue to be used for their current purpose without significant change.

The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from third parties has not been independently verified by TMA.

Tim Moya Associates standard Limitations of Service apply to this report and all associated work relating to this site. A copy has been supplied with our original quotation and further copies are available on request.

<table>
<thead>
<tr>
<th>Project</th>
<th>Land East of Holt Road, Horsford</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Type</td>
<td>Ecological Report</td>
</tr>
<tr>
<td>Report Date</td>
<td>07.04.16</td>
</tr>
<tr>
<td>Author</td>
<td>Emma Reid, Senior Ecologist</td>
</tr>
<tr>
<td>Reviewed by</td>
<td>Simon Thomas, Principal Ecologist</td>
</tr>
<tr>
<td>Updates</td>
<td>Revision of client and site name 13/10/2016</td>
</tr>
</tbody>
</table>
CONTENTS PAGE

NON-TECHNICAL SUMMARY .............................................................................. 4

1 INTRODUCTION .............................................................................................. 6
   BACKGROUND ............................................................................................... 6
   PURPOSE OF THE REPORT ............................................................................ 6
   LIMITATIONS ............................................................................................... 6
   INFORMATION SUPPLIED ............................................................................. 7
   SITE LOCATION ............................................................................................. 7

2 SURVEY METHODOLOGY ............................................................................... 8
   DATA SEARCHES ............................................................................................ 8
   PHASE 1 SITE SURVEY .................................................................................. 8
   BAT SCOPING SURVEY .................................................................................. 9

3 DESK STUDY RESULTS ................................................................................ 10
   DESIGNATED SITES ..................................................................................... 10
   PROTECTED SPECIES RECORDS ................................................................ 11

4 RESULTS OF PHASE 1 HABITAT SURVEY ................................................... 14
   HABITATS AND VEGETATION ..................................................................... 14
   PROTECTED SPECIES POTENTIAL ............................................................... 17

5 RESULTS OF BAT SCOPING ASSESSMENT ................................................. 19
   BUILDINGS ..................................................................................................... 19
   TREES .......................................................................................................... 20
   FORAGING AND COMMUTING HABITAT .................................................... 21

6 CONCLUSIONS AND RECOMMENDATIONS ................................................. 22
   DESIGNATED SITES .................................................................................... 22
   HABITATS AND VEGETATION .................................................................... 23
   PROTECTED AND NOTABLE SPECIES ....................................................... 23

7 OPPORTUNITIES FOR BIODIVERSITY ENHANCEMENT ................................... 29

8 REFERENCES .................................................................................................. 31
   APPENDIX 1 ................................................................................................. 32
   PHASE 1 HABITAT PLAN .............................................................................. 32
   APPENDIX 2 ................................................................................................. 33
   PHOTOGRAPHS ........................................................................................... 33
   APPENDIX 3 ................................................................................................. 36
   WILDLIFE LAW AND PLANNING POLICY .................................................. 36

STATUTES AND ENGLISH LAW ........................................................................... 37

PLANNING POLICY ............................................................................................ 38
NON-TECHNICAL SUMMARY

This report assesses the ecological value of the proposed development site on land East of Holt Road, Horsford, Norfolk. A planning application is to be submitted for the erection of 259 dwellings, together with associated public open space, landscaping, highways and drainage infrastructure works.

The site survey included an assessment of the habitats found within the site and the likely impact of the proposed development on habitats of ecological value and protected and notable species. The site survey also included a bat scoping assessment of all buildings and trees on site.

Recommendations:

- Horsford Woods lies approximately 15 m north of the proposed development. Protection measures recommended.

- Hedgerows are habitats of principal importance in England and a local BAP in Norfolk. All hedgerows on site should be, if possible, retained, enhanced and protected in line with recommendations prescribed by the tree survey report.

- Features suitable for bats are present within building, B3, on site. To confirm whether bat roosts are present, a single dusk emergence and separate pre-dawn re-entry survey is recommended between May and September.

- No trees within the site boundary were identified as having bat roosting potential. No further surveys are required.

- In order to avoid an impact on commuting and foraging bats, it is recommended that lighting is restricted to minimise illumination of suitable habitats.

- Two mammal entrances, potentially inactive badger sett, were identified on the southern boundary of the north-western field. It is recommended that an update badger survey is undertaken a month prior to commencement of works, to confirm whether the setts are in use by badgers.

- Habitats suitable to support reptiles have been recorded on site. Precautionary measures recommended.
• To avoid destroying active bird nests, vegetation should be removed and arable land disturbed outside the nesting bird season or checked by an ecologist.
1 INTRODUCTION

Background

1.1 This report has been instructed by David Wilson Homes.

A full planning application is being submitted for a development on land currently occupied as farmland, east of Holt Road, Horsford, Norwich. The proposed development involves the erection of 259 dwellings, together with associated public open space, landscaping, highways and drainage infrastructure works.

Purpose of the report

1.2 This report assesses the ecological interest of the site and the potential impacts of the proposed development on biodiversity.

1.3 TMA have been instructed to undertake an Extended Phase 1 Habitat Survey - a method of ecological assessment outlined in the JNCC Handbook for Phase 1 Habitat Survey a technique for environmental audit (2010). These guidelines state that the aim of the Phase 1 Survey is to observe, map and catalogue “the potential value of the habitat.” Since its publication the ecological consultancy industry has adapted the survey to make recommendations for further survey work as appropriate.

1.4 This report aims to satisfy the requirements of the National Planning Policy Framework (NCLG, 2012), identifying ecological features or protected species within or near the site that could potentially be impacted by the proposed development and opportunities for incorporating biodiversity enhancements into the development proposals.

1.5 This report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM, 2013) and with Biodiversity - Code of Practice for Planning and Development (BSI, 2013).

1.6 To provide information to support the ecological assessment, a bat scoping survey has also been undertaken.

Limitations

1.7 The site was accessed during March, a time when plant species, including invasive non-native species, may not be evident. However, extensive stands of species such as Japanese knotweed (*Fallopia japonica*) or giant hogweed (*Heracleum*
mantegazzianum) would be expected to be evident. Where further botanical or invasive species surveys are considered necessary, these have been recommended within this report.

1.8 During the surveys, access was provided to the loft spaces of all buildings within the site and they were inspected fully for evidence of roosting bats.

Information supplied

1.9 This report has been prepared with reference to the following supplied plans, showing extent of the site boundary and the proposed development:

- Proposed Site Layout_ SL01K_Sept 2016 ASD Architecture Ltd.

Site location

1.10 The site is situated within a rural environment dominated by arable farmland and coniferous woodland interspersed with small villages and B roads.

1.11 Green Lane delineates the site's northern boundary with arable land to the east, residential development to the south and residential housing to the west.

1.12 The central grid reference for the site is TG189172. The surveyed site covers approximately 11.3 hectares.
2 SURVEY METHODOLOGY

Data Searches

2.1 A search of the National Biodiversity Network (NBN) Gateway was undertaken for records of bat species, dormouse (*Muscardinus avellanarius*), reptile species and badger (*Meles meles*) as these species groups were considered to be most at risk of impact from this development.

2.2 The government’s MAGIC search tool was searched for statutory sites designated for nature conservation interest.

2.3 Norfolk Biodiversity Information Service was consulted for records of non-statutory sites designated for nature conservation interest and for records of protected species within 2 km of the site.

Phase 1 Site Survey

2.4 The survey was undertaken on 23rd March by Emma Reid of Tim Moya Associates, an experienced ecological consultant and Associate Member of the Chartered Institute for Ecology and Environmental Management (CIEEM). During the survey the weather conditions were not considered to pose any limitations to the survey.

2.5 The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). Dominant plant species were recorded for each habitat present.

2.6 The site was inspected for evidence of and its potential to support protected or notable species, especially those listed under the *Conservation of Habitats and Species (Amendment) Regulations 2012*, the *Wildlife & countryside Act 1981* (as amended), including those given extra protection under the *Natural Environment and Rural Communities (NERC) Act 2006* and *Countryside & Rights of Way (CRoW) Act 2000*, and listed on the UK and local Biodiversity Action Plans. Such species include amphibians, reptiles, bats, badgers, birds, dormice and water voles. Evidence of badgers was searched for throughout the site, including setts, footprints, feeding signs, hairs and droppings.

2.7 The site was searched for evidence of invasive plant species, such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), giant
hogweed (*Heracleum mantegazzianum*), horizontal/wall cotoneaster (*Cotoneaster horizontalis*) and floating pennywort (*Hydrocotyle ranunculoides*).

2.8 As the attributes of the site and its potential for protected, notable and invasive species may change over time, this report is broadly considered valid for a duration of two years, after which time it is recommended that an update site assessment is undertaken. In some cases, protected or invasive species’ use of a site may change over a shorter timescale, for instance the use of a badger sett by badgers, which may change month to month. In such cases, appropriate precautionary advice or recommendations for update surveys are given within this report.

**Bat Scoping Survey**

2.9 The survey was undertaken in accordance with the Bat Conservation Trust’s *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016). Buildings were inspected externally from all angles using binoculars and then internally using a high-powered torch to inspect loft spaces (where present). Trees were inspected from ground level, using binoculars where needed and a high-powered torch to inspect potential bat roost features. Where possible, a ladder was used to inspect features within 3 m of ground level. All aspects of each tree were viewed, and wherever visibility was restricted (e.g. due to ivy or foliage), this is stated in the report.

2.10 Evidence searched for included bat droppings, feeding remains, staining from urine or grease marks and potential access points into roosting cavities. Features indicating potential for bat roosts included missing roof tiles, weatherboarding and/or hanging tiles with gaps, poorly maintained roof structures, holes in tree trunks, cracks in major limbs, loose bark and dense ivy growth.
3 DESK STUDY RESULTS

Designated Sites

3.1 The site itself is not covered by any statutory or non-statutory nature conservation designations.

3.2 There are no statutory and 8 non-statutory designated sites within 2 km of the site, as follows:

Table 1. Designated sites of nature conservation interest

<table>
<thead>
<tr>
<th>Site name</th>
<th>Designation</th>
<th>Statutory/non-statutory</th>
<th>Proximity to proposed works (km)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horsford Woods</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>0.015 N</td>
<td>Mature pine plantation, with relict heathland vegetation.</td>
</tr>
<tr>
<td>Whinney Hills &amp; Common</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>0.2 W</td>
<td>Mature acid woodland.</td>
</tr>
<tr>
<td>Horsford Rifle Range</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>0.4 NE</td>
<td>Mosaic of dry dwarf-shrub heath and acidic grassland adjacent to Horsford Woods.</td>
</tr>
<tr>
<td>Pyehurn Lane Woodland</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>0.4 SW</td>
<td>Broad-leaved semi-natural woodland. Silver birch (<em>Betula pendula</em>) dominates with a few oaks (<em>Quercus robur</em>).</td>
</tr>
<tr>
<td>Botany Bay Farm</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>0.5 N</td>
<td>Mosaic of marshy grassland and remnant heath-acidic grassland with scrub and scattered trees on former glebe land, comprising what was historically part of Horsford Heath.</td>
</tr>
<tr>
<td>Drayton Drewray</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>1.2 SW</td>
<td>Diverse, with extensive broadleaved woodland, both wet</td>
</tr>
</tbody>
</table>
and dry, some coniferous and mixed wood and a central open area of acid grassland, with some marshy grassland, fen meadow and relict heath.

<table>
<thead>
<tr>
<th>Black Park &amp; The Thicket</th>
<th>CWS</th>
<th>Non-statutory</th>
<th>1.3 SE</th>
<th>Large area of oak dominated acid woodland. The ground flora is moderately poor over most of the woodland being dominated by bracken (<em>Pteridium aquilinum</em>) with some richer areas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horsford Heath</td>
<td>CWS</td>
<td>Non-statutory</td>
<td>1.7 NE</td>
<td>Mixture of moderately diverse, neutral or slightly acid grassland on sandy soils and thick tall scrub of Scot’s pine (<em>Pinus sylvestris</em>) and oak.</td>
</tr>
</tbody>
</table>

**Key**

**Non-statutory sites**

CWS – County Wildlife Site

**Protected Species Records**

3.3 The records detailed below are those species considered to be most sensitive to impact from the proposed development. Numerous records were returned from the local area, particularly of bird and invertebrate species, the majority of which are considered unlikely to be impacted by the proposed development.
Table 2. Existing protected species records

<table>
<thead>
<tr>
<th>Species</th>
<th>Local Ecological Records Centre</th>
<th>NBN Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Number of records within 2 km</td>
<td>Closest record to site (km) and orientation</td>
</tr>
<tr>
<td>Common lizard (Zootoca vivipara)</td>
<td>2</td>
<td>1.17 NE</td>
</tr>
<tr>
<td>Slow—worm (Anguis fragilis)</td>
<td>2</td>
<td>0.2 S</td>
</tr>
<tr>
<td>Grass snake (Natrix natrix)</td>
<td>5</td>
<td>1.0 W</td>
</tr>
<tr>
<td>Adder (Vipera berus)</td>
<td>6</td>
<td>0.71 NW</td>
</tr>
<tr>
<td>Great Crested Newt (Triturus cristatus)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bat species</td>
<td>Myotis species (Myotis sp.) 2</td>
<td>Myotis species 1km W</td>
</tr>
<tr>
<td></td>
<td>Pipistrelle species, (Pipistrellus sp.) 1</td>
<td>Pipistrelle species 1 km W</td>
</tr>
<tr>
<td></td>
<td>Common pipistrelle (Pipistrellus pipistrellus) 3</td>
<td>Common pipistrelle 1 km W</td>
</tr>
<tr>
<td></td>
<td>Soprano pipistrelle (Pipistrellus pygmaeus) 3</td>
<td>Soprano pipistrelle 1 km W</td>
</tr>
<tr>
<td></td>
<td>Brown Long-eared (Plecotus auritus) 2</td>
<td>Brown Long-eared 1 km W</td>
</tr>
<tr>
<td></td>
<td>Roosts Brown Long-eared 8</td>
<td>Brown Long-eared roost 1.2 S</td>
</tr>
<tr>
<td></td>
<td>Bat species 3</td>
<td>2014 Brown Long-eared</td>
</tr>
<tr>
<td></td>
<td>Common pipistrelle 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natterer’s (Myotis nattereri) 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pipistrelle species (Pipistrellus sp.) 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dormouse (Muscardinus avellanarius)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Badger (Meles meles)</td>
<td>2</td>
<td>0.99 NW</td>
</tr>
<tr>
<td>Nesting birds</td>
<td>Multiple records, some species that</td>
<td>Song thrush 0.2</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td></td>
</tr>
</tbody>
</table>
may use the site; skylark (*Alauda arvensis*) 2, grey wagtail (*Motacilla cinerea*), song thrush (*Turdus philomelos*) 4 | S |
4 RESULTS OF PHASE 1 HABITAT SURVEY

Habitats and Vegetation

4.1 A Phase 1 Habitat Plan can be found in Appendix 1 illustrating the habitats present. Photographs of the site are contained in Appendix 2.

Table 3. Habitats present within the site

<table>
<thead>
<tr>
<th>Habitat type</th>
<th>Description</th>
<th>Dominant plant species</th>
<th>Overall biodiversity value*</th>
<th>Listed on Local or National BAP?</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings and hard standing</td>
<td>Five buildings were recorded within the north-western section of the site. Buildings consisted of; a residential property (B1), a garage (B2), a farm building (B3) and stables (B4 and B5). Hard-standing in the form of a gravel driveway was recorded within the site's western boundary leading to building B1 (Appendix 2, Photographs 1 – 7).</td>
<td>None</td>
<td>Negligible, other than for roosting bats and nesting birds</td>
<td>No</td>
<td>Bat roost and nesting bird potential are assessed in Table 4, below.</td>
</tr>
<tr>
<td>Habitat type</td>
<td>Description</td>
<td>Dominant plant species</td>
<td>Overall biodiversity value*</td>
<td>Listed on Local or National BAP?</td>
<td>Additional Notes</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>-----------------------------</td>
<td>---------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cultivated/disturbed land</td>
<td>The site was dominated by cultivated arable land surrounded by hedgerows and scrub (Appendix 2, Photograph 7).</td>
<td>None (recently ploughed).</td>
<td>Negligible</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Amenity grassland</td>
<td>A small area of amenity grassland was present within the site’s north western boundary surrounding the buildings on site. The amenity grassland was approximately 10 cm in height and supported a low diversity of grass and forb species (Appendix 2, Photograph 1).</td>
<td>Cocksfoot (<em>Dactylis glomerata</em>), Yorkshire fog (<em>Holcus lanatus</em>), creeping buttercup (<em>Ranunculus repens</em>), ribwort plantain (<em>Plantago lanceolata</em>).</td>
<td>Low</td>
<td>No</td>
<td>Potential reptile basking, hibernating and foraging habitat. Two rubble piles were also noted within this habitat east of building B5.</td>
</tr>
<tr>
<td>Improved grassland</td>
<td>In the north-western corner of the site is a field of improved grassland which is heavily grazed by horses. This grassland was short and supported a low diversity of forb species (Appendix 2, Photograph 9).</td>
<td>Annual meadow grass (<em>Poa annua</em>), Yorkshire fog (<em>Holcus lanatus</em>), creeping buttercup (<em>Ranunculus repens</em>).</td>
<td>Low</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Habitat type</td>
<td>Description</td>
<td>Dominant plant species</td>
<td>Overall biodiversity value*</td>
<td>Listed on Local or National BAP?</td>
<td>Additional Notes</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Scattered Trees</td>
<td>The site contains a high number of trees of various species and sizes. Trees were mainly located along field boundaries.</td>
<td>Poplar species (<em>Populus sp.</em>), Leyland cypress (<em>Cupressus × leylandii</em>), silver birch (<em>Fagus sylvatica</em>), sessile oak (<em>Quercus petraea</em>), sycamore (<em>Acer pseudoplatanus</em>).</td>
<td>High</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Hedges</td>
<td>Four intact species poor hedgerows (H1 -H4) were recorded on site. The majority of which were poorly managed and lacked an understorey. Hedgerow H4 was a privet hedge which was heavily managed.</td>
<td>Holly (<em>Ilex aquifolium</em>), hawthorn (<em>Crataegus monogyna</em>), blackthorn (<em>Prunus spinosa</em>) and English oak (<em>Quercus robur</em>), privet (<em>Ligustrum ovalifolium</em>), gorse, broom (<em>Cytisus scoparius</em>),</td>
<td>Moderate</td>
<td>Yes</td>
<td>Several birds recorded during the survey within hedge H1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hedgerow base provides suitable reptile habitat.</td>
</tr>
<tr>
<td>Dense scrub</td>
<td>Pockets of dense scrub were recorded throughout the site, mainly along field boundaries and surrounding the buildings within the north-western part of the site.</td>
<td>Holly, elder (<em>Sambucus nigra</em>), bramble (<em>Rubus fruticosus</em>), gorse (<em>Ulex europaeus</em>)</td>
<td>Moderate</td>
<td>No</td>
<td>Suitable bird nesting habitat.</td>
</tr>
</tbody>
</table>
*Overall biodiversity value of a habitat is guided by the criteria listed in section 3.20 of the Guidelines for Ecological Impact Assessment (IEEM, 2006), which include habitats required by rare or uncommon animal or plant species, habitat connectivity and species-rich assemblages of plants.

Protected species potential

4.2 Table 4, below, details the suitability of habitats within the site for key protected species.

4.3 Species not detailed below are considered unlikely to be significantly impacted by the proposed works.

Table 4. Protected species potential

<table>
<thead>
<tr>
<th>Species group</th>
<th>General requirements</th>
<th>Suitable habitat within site</th>
<th>Additional notes (e.g. evidence of species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reptiles</td>
<td>Long grass, scattered scrub, hedgerows.</td>
<td>Scrub and hedgerows around field boundaries. Amenity grassland surrounding the buildings within the western section of the site. Rubble piles east of building B5 offer good refuge and hibernation habitat (Appendix 2, Photograph 10, Appendix 1 TN1).</td>
<td></td>
</tr>
<tr>
<td>Great Crested Newt</td>
<td>Breed in ponds and other waterbodies. Terrestrial habitat includes woodland and grassland.</td>
<td>Short semi-improved grassland within western boundary of the site provides sub-optimal habitat. Scrub and hedgerow bases provide potential refuge. Rubble piles provide potential hibernacula.</td>
<td></td>
</tr>
<tr>
<td>Dormouse</td>
<td>Hedgerows, dense scrub, deciduous woodland with connected canopy and good ground flora.</td>
<td>Hedgerows surrounding field boundaries.</td>
<td>Sub-optimal due to the lack of good connections with other areas of good habitat in the local landscape.</td>
</tr>
<tr>
<td>Species group</td>
<td>General habitat requirements</td>
<td>Suitable habitat within site</td>
<td>Additional notes (e.g. evidence of species)</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------</td>
<td>-----------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Invertebrates</td>
<td>Species-dependent. High invertebrate diversity is favoured in sites with a mosaic of habitats and diverse plant assemblage.</td>
<td>Hedgerows and scrub surrounding field boundaries.</td>
<td></td>
</tr>
<tr>
<td>Nesting birds</td>
<td>Trees, shrubs, scrub, hedgerows, cavities within buildings, waterbodies, arable fields, bare/stony ground.</td>
<td>Scrub, trees, arable fields and hedgerows.</td>
<td>A variety of birds were recorded during the survey, including goldcrest, grey wagtail, goldfinch, blackbird and chaffinch. These birds were recorded within hedgerow H1 on the site’s northern boundary adjacent to the Horsford wood immediately north of the site.</td>
</tr>
<tr>
<td>Badger</td>
<td>Woodland, dense scrub, meadows, field edges.</td>
<td>Two mammal entrances, potentially disused badger, were recorded on the southern boundary of the western arable field. Rabbit hairs and droppings were found within the spoil of one entrance. The second entrance was partially blocked with leaves (Appendix 2, Photographs 11 and 12, Appendix 2 TN2 and 3).</td>
<td>No confirmed evidence of badger was recorded during the survey.</td>
</tr>
<tr>
<td>Bat</td>
<td>Roost in buildings, tree cavities and caves.</td>
<td>Five buildings were recorded within the sites eastern boundary. Building B3 supported potential bat roosting features. Refer to Section 5 of this report.</td>
<td></td>
</tr>
</tbody>
</table>
5 RESULTS OF BAT SCOPING ASSESSMENT

Buildings

Building reference numbers and target notes are shown on the Phase 1 Habitats Plan (Appendix 1). Photographs of each building can be found in Appendix 2. Target Notes have been used to identify features such as potential bat access points.

**Building B1**

5.1 Building B1 was a two-storey brick-built structure with pebble cladding and a clay-tiled hipped roof. A small pitched extension, of the same construction, was present on the building’s northern aspect.

5.2 The building was structurally sound and no potential access points suitable for bats were noted.

5.3 The roof space of this building was accessed internally and inspected for evidence of bats.

5.4 The roof space supported a trussed beam structure with insulation and roofing membrane. The internal roof space was in good condition.

5.5 No potential bat roosting features or evidence of roosting bats were recorded.

5.6 This building has **negligible** potential to support roosting bats.

**Building B2**

5.7 Building B2 was a small, single storey, open, disused garage constructed with wooden boards with a slightly pitched corrugated iron roof.

5.8 This building was open to the elements, and no potential access points suitable for roosting bats were noted.

5.9 No evidence of roosting bats was found inside this building.

5.10 This building has **negligible** potential to support roosting bats.

**Building B3**

5.11 Building B3 was a single-storey part brick, part breeze block structure with a clay-tiled pitched roof and wooden fascia boards. Half of this building was used for storage and the other half as stables.
5.12 The following potential access points for bats were noted (See Appendix 1 for Target Note locations):

- Missing, broken and lifted tiles on the northern and southern roof aspects, potentially allowing access between roofing tiles and roof membrane (TN4 and TN5).
- Access behind fascia boards on southern aspect, potentially allowing access between roofing tiles and roof membrane (TN6).
- Gap at ridge on gable end on eastern aspect, potentially allowing access into cavity (TN7).

5.13 No evidence of roosting bats was found within this Building.

5.14 This building has **moderate** potential to support roosting bats.

**Building B4**

5.15 Building B4 was a single-storey block of stables constructed of corrugated iron with a slightly pitched corrugated iron roof.

5.16 This building was open to the elements and no potential access points suitable for roosting bats were noted.

5.17 No evidence of roosting bats was found within this building.

5.18 This building has **negligible** potential to support roosting bats.

**Building 5**

5.19 Building B5 was a part breeze block part wood, single-storey stable with a flat corrugated asbestos roof.

5.20 This building was open to the elements and no potential access points suitable for roosting bats were noted.

5.21 No evidence of roosting bats was found within this building.

5.22 This building has **negligible** potential to support roosting bats.

**Trees**

5.23 There are a high number of trees within the site boundary. Due to the lack of suitable roosting features such as holes in tree trunks, cracks in major limbs, and loose bark all trees within the site boundary had **negligible** potential for roosting bats.
Foraging and commuting habitat

5.24 The location of the site and the surrounding area is considered to be of moderate value for commuting and foraging bats. The wider landscape contains a variety of habitats including woodland, arable fields and hedgerows. It is expected that a variety of bat species may be found in the local area. It is likely that foraging or commuting bats use the site itself to a certain extent.
6 CONCLUSIONS AND RECOMMENDATIONS

6.1 With reference to protected species surveys, government advice (ODPM, 2005) states that the presence or absence of protected species, and the extent to which they could be affected by the proposed development, should be established before planning permission is granted, since otherwise all material considerations may not have been considered in making the decision. Therefore any further surveys recommended below should be undertaken before any planning application is submitted.

6.2 For any constraints identified, mitigation options should follow the Mitigation Hierarchy as set out in British Standard BS42020 (BSI, 2013). This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures.

Designated sites

6.3 No statutory sites of nature conservation interest are located within 2km of the proposed development site.

6.4 Horsford Woods County Wildlife Site (CWS) lies approximately 0.015 km north of the site’s northern boundary. Four further CWS lie between 0.2 km and 0.5 km of the proposed development.

6.5 Proposals are for the erection of 259 dwellings, together with associated public open space, landscaping, highways and drainage infrastructure works.

6.6 The proposed development may lead to increased recreational pressures on the nearby CWS sites. Development proposals will however include the provision of public open space thus reducing the recreational pressure on the nearby non-statutory sites.

6.7 Short-term, temporary, reversible indirect impacts may arise from the development to the Horsford Woods CWS. Indirect disturbance to the site may arise from noise, light and dust pollution throughout construction.

6.8 It is recommended that the site’s northern boundary is delineated with hoarding during construction. This will act as a buffer against indirect impacts to the CWS from light, noise and dust. There should be no night time working or lighting at night that falls on to the adjacent CWS.
6.9 It is recommended that lighting within the proposed scheme is directed away from the nearby CWS. See paragraph 6.29 for lighting restriction specifications.

6.10 Additionally, it is recommended that the proposed works incorporate methods to avoid significant air pollution (in accordance with Pollution Prevention Guidelines by the Environment Agency, particularly PPG5).

6.11 A further three non-statutory sites are located within 2km of the site boundary. The proposed development site lies at a sufficient distance from the remaining non-statutory sites to avoid any adverse impacts on the integrity of habitats within them.

Habitats and Vegetation

6.12 Four species-poor intact hedgerows were present on site. Hedgerows H1 – H3 qualify as an EBP habitat and a Norfolk BAP habitat.

6.13 These habitats are considered to be of importance in the county and should be retained within the development and enhanced wherever possible.

Protected and Notable Species

Reptiles

6.14 As well as their legal protection (see Appendix 5), reptiles and amphibians are listed as Priority Species on the Harrow Biodiversity Action Plan (BAP) and are considered to be of importance in the borough.

6.15 Slow-worm, common lizard, adder and grass snake have all been previously recorded within 2 km of the site.

6.16 The habitats found towards the edges of the site – scrub and hedgerow – provide suitable habitat for reptiles, such as slow-worm, which have been recorded in the local area. The amenity grassland within the north-western section of the site offers good foraging and basking opportunities. Rubble piles within the amenity grassland offer good refuge and hibernation habitat.

6.17 It is normally recommended that a Reptile Survey be undertaken to determine the presence or likely absence of reptile species. In this instance, however, due to the small extent of suitable habitat likely to support these species, the abundance of suitable habitat in the wider area, and the small number of reptiles that could be expected; it is recommended that, if required, any suitable reptile habitat clearance, is carried out in an ecologically sensitive manner. This should be undertaken by an ecological contractor or under the direct supervision of a qualified ecologist.
Specifically, habitats should be strimmed carefully using hand tools in two passes (first to a height of no less than 300 millimetres, the second to ground level) from the centre of the suitable habitat out to its edges, to flush any reptile species into adjacent habitats of the site. Rubble piles should also be carefully dismantled by hand. This approach can only be undertaken between April and November (when temperatures are not below 10°C) when reptiles are active. It is not appropriate for use between December and March, when reptiles are in hibernation.

**Dormice**

6.18 The hedgerows on site lacked a variety of fruiting and nut species as a food source and were isolated from surrounding suitable habitats in the local area. No records of dormice were returned from the desk study within 2 km of the site. The proposed development is thus considered unlikely to impact dormice and no further surveys are recommended.

**Invertebrates**

6.19 Due to the common habitats present within the site, it is considered unlikely that the proposed works will significantly impact important populations of invertebrates.

The proposed development offers good potential for enhancements which will benefit invertebrates in the local area. **Nesting birds**

6.20 The site includes trees, scrub and hedgerows, all of which are suitable for nesting birds during the nesting season (March to August inclusive). The arable fields on site have potential for ground nesting birds such as skylark. Several bird species were recorded during the Preliminary Ecological Survey along with several returned from the desk study.

6.21 It is recommended that vegetation removal and disturbance to the arable fields on site is only undertaken outside the nesting season to avoid destruction of active nests. Vegetation removal and disturbance to the arable fields may only be undertaken during the nesting season if a careful check by a suitably experienced ecologist can confirm that no active nests are present. If bird nests are present within vegetation to be removed or the arable land to be disturbed, they must be left in situ and not disturbed until all the young have fledged and cease to return to the nest.

6.22 The nesting season for nesting birds (March to August) coincides with the majority of the active season for reptiles (March to September, weather dependent). When removing habitats where both may be present i.e. dense scrub and hedgerow
bases, careful timing is required to avoid impacting active bird nests whilst also protecting reptiles from killing or injury. Ideally, dense vegetation should be removed in September, when birds have largely finished nesting, but reptiles are still active and are therefore at lower risk of harm. Ground clearance should be undertaken under the supervision of a suitably experienced ecologist to minimise the risk of harm to reptiles. Alternatively, vegetation should be removed down to 15 cm height during the winter (October to February) to remove bird nesting habitat, and then cleared completely to ground level or below during the summer (March to September), when reptiles are active. This phased timing minimises the risk to both reptiles and nesting birds.

Roosting bats - buildings

6.23 Bats are listed as Priority Species on the Norfolk Biodiversity Action Plan (BAP) and are considered to be of importance in the borough.

6.24 Building B3 supports various potential access points for roosting bats as detailed in section 5. This building has moderate potential to support roosting bats.

6.25 In order to ascertain whether the building is used by roosting bats, in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), it is recommended that building B1 is subject to nocturnal emergence/return (also known as dusk/dawn or presence/absence) surveys. The building should be surveyed on two separate occasions, at least two weeks apart, to include one dawn and one dusk survey. Two surveyors in total will be required to cover the potential access points identified on the building. The surveys should be undertaken between May and September, inclusive.

6.26 If bats are found to be roosting within the building, any works likely to disturb bats or bat roosts may only be undertaken once a Natural England Mitigation Licence has been obtained. This may require the provision of alternative roosting features within the development site.

Roosting bats - trees

6.27 All trees within the site boundary have all been assessed for their potential for roosting bats.

6.28 All trees assessed were classified as Category 3 trees, deemed to have negligible potential to support bats, due to the absence of features such as cracks, crevices or dense ivy growth. These trees can be removed if needed without risk to roosting bats.
**Foraging and commuting bats**

6.29 Due to the habitats present within the site and the local landscape, it is considered likely that foraging or commuting bats use the site to a certain extent.

6.30 In order to avoid a detrimental impact on bats using the site, it is recommended that there should be no increased light spillage on to the hedgerows that delineate field boundaries on site, where bats are most likely to forage and commute. Lighting should be restricted to the interior of the site and should be kept to a low level. The following measures should be implemented within the lighting scheme:

- Minimise light spill, through use of lighting hoods, and setting the height and angle appropriately;
- Reduce the light intensity to the minimum required for safety and security;
- Set lighting curfews, e.g. lights off at night
- Where security lamps are used these should use a trigger to illuminate them (e.g. infra-red detector), and switch off after a short period, rather than remaining on all night.

**Great crested newts**

6.31 No records of GCN were returned from the desk study from within 2 km of the development footprint.

6.32 Great crested newts breed within ponds but spend the majority of the year on land in habitats such as woodland, scrub and rough grassland. Newts may typically disperse up to 500 m from their breeding ponds. During the winter months, newts hibernate amongst habitats such as log piles, rubble and tree roots.

6.33 No ponds were identified within 500m of the site boundary.

6.34 The habitats within the site were sub-optimal due to their isolation from suitable habitat within the wider environment and little opportunities for hibernating or sheltering GCN.

6.35 Due to the absence of ponds within 500m of the site boundary and sub-optimal habitats on site it is considered very unlikely that the proposed development will impact upon GCN. No further surveys are required.

**Badger**

6.36 The habitats on the edges of the site offer suitable areas for foraging and shelter for badgers. Two badger records were returned from the desk study, both 1.0 km north-
west of the site boundary. Two mammal entrances, potentially a badger sett currently not in use, were recorded on the southern boundary of the western arable field. Rabbit hairs and droppings were found within the spoil of one entrance, the second entrance was partially blocked with leaves. No further evidence of badgers was recorded within the site.

6.37 Badger setts are protected if they are in current use by badgers.

6.38 According to published guidelines (CCW, 2011), the following activities should be avoided:

- Any excavation or machinery within 10 m of the sett (including using hand tools)
- Light or heavy machinery (particularly for excavation) within 20 m of the sett
- Using heavy machinery within 30 m of the sett

6.39 It is recommended that a detailed badger survey is undertaken a month prior to commencement of works, to confirm whether the mammal entrances are in use by badgers. This survey will comprise surveying all areas of suitable habitat within the site and surrounding 30 m of the site boundary for evidence of badger activity. Evidence of badger activity may comprise;

- Setts: several sett types may be present within a social group territory, ranging from a single hole to numerous interconnecting tunnels.
- Dung pits and latrine sites: badgers characteristically deposit dung in pits, which may be located along the boundaries and within the social group territory. These sites serve as means of inter- and intra-group communication. Several dung pits create a latrine.
- Paths and runs: well used routes between setts and/or foraging areas. Often used by generations of badgers;
- Snuffle holes and foraging signs: areas of disturbed vegetation often formed by badgers foraging for ground dwelling invertebrates such as earthworms and larvae and subterranean roots and tubers. Snuffle holes are sometimes re-used as dung pits on territorial boundaries;
- Hair: often found among spoil and bedding outside sett entrances or snagged on fences, etc., alongside well-used runs; and,
• Footprints: easily distinguishable from other large mammal species, such as the fox (Vulpes vulpes) and domestic dog (Canis familiaris). Often found along paths and runs or in spoil outside sett entrances.

6.40 Should the survey find the setts still to be inactive, the works may proceed without constraint.

6.41 If the survey reveals that the sett has become active, in order to avoid the need for further surveys and potential delays to the works, it is recommended that no building works or excavations should take place within 30 m of the setts. Protective fencing may be used during construction to prevent accidental disturbance or damage to badger setts e.g. by storage of materials, vehicle movements etc.

6.42 Should the setts be in current use by badgers and disturbing works are necessary and unavoidable within 30 m of the setts, a Natural England licence may be required for temporary disturbance or closure of the sett(s). A licence is only likely to permit activities between July and November (inclusive) to avoid the badger breeding season.
7 OPPORTUNITIES FOR BIODIVERSITY ENHANCEMENT

7.1 In accordance with NPPF, opportunities for biodiversity enhancement (above and beyond those required to mitigate for the identified impacts) are set out below. Any additional measures pending the results of the recommended bat surveys should be incorporated as necessary. The below recommendations may or may not be feasible within the final development and alternative enhancements should also be considered.

7.2 Additional planting is recommended throughout the site which will increase connectivity for commuting bat species. Native species should be used within planting schemes. Species such as blackthorn, crab apple (*Malus sylvestris sens.str*), elder, field maple (*Acer campestre*), guelder rose (*Viburnum opulus*), hawthorn, honeysuckle (*Lonicera periclymenum*), holly (*Ilex aquifolium*) and English oak could be used to provide known benefit to wildlife.

7.3 Areas of grassland should be seeded with a species-rich grassland mix to provide an improved foraging opportunity for many species such as invertebrates, birds and bats.

7.4 Further enhancement for breeding birds could include the installation of bird boxes; this would increase nesting opportunities bird species. Bird boxes with 25mm holes should be installed upon suitable trees surrounding the site. Bird boxes should installed facing north and east, thus avoiding strong sunlight and wet winds.

7.5 Enhancements for ground nesting skylark could be incorporated through the creation of nest plots on arable land within the ownership boundary. Skylark plots are created by switching off the drill (or lifting it up) to create undrilled patches at least 3 metres wide. In accordance with the RSPB, the ideal number of plots in a field is two per hectare. These should not be connected to the tramlines and should be sited away from field boundaries and telegraph poles. They should be at least 24 metres from the edge of the field. Typical plots of 4 x 5 metres will take up less than half of 1% of the field area.

7.6 The inclusion of Schwegler 2F bat boxes around the development will provide new roost sites for bats within the local area. Bat boxes should be located in sheltered spots and at placed at a height of at least 3 metres from the ground. Boxes should be arranged around the site so that a number of different aspects are covered.
7.7 The inclusion of dead-wood/log piles will provide habitat for various invertebrates, such as stag beetle (which is priority species on both the Norfolk and UK BAP), small mammals and amphibians. Log piles should be 1 m in width, 1 m in length and 0.5 m in height with the lower half buried into the ground located in shaded locations.

7.8 It is recommended that, gaps within the hedgerows on site are planted with native whips of local provenance.
REFERENCES

Appendix 1

Phase 1 Habitat Plan
Appendix 2

Photographs
<table>
<thead>
<tr>
<th>Photo 1 – Building B1. Note amenity grassland surrounding house.</th>
<th>Photo 2 – Building B2</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Building B1" /></td>
<td><img src="image2" alt="Building B2" /></td>
</tr>
<tr>
<td>Photo 3 – Building B3, broken tiles on southern aspect.</td>
<td>Photo 4 – Building B3, gap at ridge on gable end.</td>
</tr>
<tr>
<td><img src="image3" alt="Building B3" /></td>
<td><img src="image4" alt="Building B3" /></td>
</tr>
<tr>
<td>Photo 5 – Building B3, internal view.</td>
<td>Photo 6 – Building B4</td>
</tr>
<tr>
<td><img src="image5" alt="Building B3" /></td>
<td><img src="image6" alt="Building B4" /></td>
</tr>
<tr>
<td>Photo 7 – Building B5</td>
<td>Photo 8 – Cultivated land. Note hedgerow boundary.</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><img src="image6" alt="Photo 6" /></td>
<td><img src="image7" alt="Photo 7" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photo 9 – Improved horse grazed grassland field. Note hedgerow H1.</th>
<th>Photo 10 – Rubble piles east of building B5.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image8" alt="Photo 8" /></td>
<td><img src="image9" alt="Photo 9" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photo 11 – Mammal entrance. Note leaves partially blocking entrance.</th>
<th>Photo 12 – Mammal entrance</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image10" alt="Photo 10" /></td>
<td><img src="image11" alt="Photo 11" /></td>
</tr>
</tbody>
</table>
Appendix 3

Wildlife Law and Planning Policy
STATUTES AND ENGLISH LAW

Reptiles

All species of native reptiles are protected against killing or injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The sand lizard (Lacerta agilis) and smooth snake (Coronella austriaca) are further protected under Conservation of Habitats and Species (Amendment) Regulations 2012 against capture or disturbance and the places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed.

Great Crested Newts

The great crested newt and its habitat are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) Regulations 2012. This legislation makes it an offence to deliberately kill, injure or capture a great crested newt; deliberately disturb a great crested newt; damage, destroy or obstruct access to a structure used for shelter or protection by a great crested newt; or possess or transport a great crested newt.

Bats

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992 which makes it an offence to kill, injure or possess a badger; interfere with, damage or destroy a badger sett including obstructing access to a badger sett; cruelly treat or harm a badger; or disturb a badger in a sett.

Dormice

Hazel dormice are protected under both the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). Dormice and their breeding sites and resting places are fully protected. Without a licence it is an offence for anyone to deliberately disturb, capture, injure or kill them.
It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess, or sell a wild dormouse.

**Birds**

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to kill, injure or take wild birds; take, damage or destroy the nest of wild birds while it is in use or being built; or take or destroy the eggs of wild birds.

Certain bird species are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (as amended). Under this legislation they are afforded the same protection as all wild birds and are also protected against disturbance whilst building a nest, or on or near a nest containing eggs and or unfledged young.

**PLANNING POLICY**

In addition to the statutes described above, various planning policy imposes duties upon planning applicants to take account of protected species and habitats at sites of proposed development and in particular, protected species. The objective of this policy is to prevent a net loss of species and habitats diversity identified as priorities for the U.K. as a consequence of development activity.

**National Planning Policy Framework (NPPF)**

The NPPF (DCLG, 2012) aims to minimise impacts on biodiversity and provide net gains where possible. Planning policies should promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations. If significant harm 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.

**Natural Environment and Rural Communities Act (NERC Act)**

The NERC Act (2006) states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

**Priority Habitats and Species**

Priority habitats and species are defined (NPPF, 2012) as ‘Species and Habitats of Principle Importance included in the England Biodiversity List published by the
Secretary of State under Section 41 (S41) of the Natural Environment and Rural Communities Act 2006 (NERC Act). The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

These species and habitats were subject to conservation action under the UK Biodiversity Action Plan (UK BAP). The ‘UK Post-2010 Biodiversity Framework’, published in July 2012, has succeeded the UK Biodiversity Action Plan (UK BAP). However, the UK BAP lists of priority species remain important and valuable reference sources.

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 subtidal sands and gravels.

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 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.

ODPM Circular 06/2005

This Government Circular entitled ‘Biodiversity and Geological conservation – Statutory obligations and their impact within the planning system’ (ODPM, 2005) provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

The potential effects of a development, on habitats or species listed as priorities in the UK Biodiversity Action Plan (BAP), and by Local Biodiversity Partnerships, together with policies in the England Biodiversity Strategy, are capable of being a material consideration in the preparation of regional spatial strategies and local development documents and the making of planning decisions.

The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely
to result in harm to the species or its habitat. It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted.
• Habitat Surveys (Extended Phase 1/Walkover/Botanical)
• Protected Species Surveys
• Ecological Mitigation & Licencing
• BREEAM & CFSH
• Ecological Management Plans
• Hedgerow Surveys
• Landscape Analysis
• Arboricultural & Ecological Reports for Planning
• Feasibility Tree Surveys
• British Standard 5837 Tree Surveys
• Tree Constraints Reports & Drawings
• Appeal Statements & Proofs
• Expert Witness
• Evidence at Hearings & Public Inquiries
• Method Statements to Satisfy Planning Conditions
• Design Solutions
• Landscape Plans
• Tender Documents & Drawings
• Supervision & Inspection of Works
• Contract & Project Management
• Health & Safety Surveys
• GPS Surveys
• Computerised Tree Population Surveys
• CAD Plans & Consultancy
• Subsidence Risk Assessments
• Mortgage & Insurance Reports
• TPO Review
• Local Government Officer Contracts

The Barn, Feltimores Park, Chalk Lane, Harlow, Essex CM17 0PF
T: 0845 094 3268
F: 0845 094 3269
W: www.timmoyaassociates.co.uk