Bat Survey Report

Bat Emergence/Re-entry Surveys

Land East of Holt Road
Horsford
Norwich
NR10 3ED

June 2016

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<td>Report Type</td>
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<tr>
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NON-TECHNICAL SUMMARY

This report assesses the use by bats of the proposed development site on land East of Holt Road, Horsford, Norwich. 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 initial bat scoping survey (TMA 2016) of the buildings assessed Building B3 as having Moderate potential for roosting bats. Further nocturnal bat emergence/re-entry surveys were therefore recommended. The remaining buildings on site were assessed as having Negligible potential to support roosting bats.

Bat emergence and re-entry surveys were undertaken on two occasions during May 2016.

Findings and recommendations:

During the emergence/re-entry bat surveys, no bats were recorded emerging from or returning to building B3.

These results provide reasonable confidence that the proposed development works will not impact roosting bats. No further bat surveys or constraints are recommended.

In order to avoid a detrimental impact on bats using peripheral habitats - the line of trees along the site’s northern boundary, woodland habitat parallel to the site’s northern boundary, hedgerow and scrub habitats - it is recommended that no increased light spillage on to these habitats is created.

The inclusion of bat boxes on existing mature trees along the peripheries of the development site will provide new roost sites for bats within the local area.
1 INTRODUCTION

Background

1.1 This report has been commissioned by David Wilson Homes (East).

1.2 A full planning application is being submitted for a development on farmland land 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.

Site Description

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

1.4 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.

1.5 The central grid reference for the site is TG189172. The proposed development site covers approximately 11.3 hectares.

Aims of Survey

1.6 The further bat emergence/re-entry survey aims to collect sufficient data to draw conclusions about the use of building B3 by roosting bats, primarily by observation of bats leaving or returning to the building at dawn and dusk. This report contains the details of the survey methodologies, results and recommendations required to minimise the risk of an offence under section 9 of the Wildlife and Countryside Act 1981 (as amended) and Regulation 41 of The Conservation of Habitats and Species Regulations 2010 (the ‘Habitats Regs’), relating to the protection of bats (see Appendix 2 for legislation details).

Information supplied

1.7 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_Sept2016_ASD Architecture Ltd.
2 METHODS

Bat Emergence/re-entry Survey

2.1 Bat emergence/re-entry surveys were undertaken on 11\textsuperscript{th} May 2016 and 27\textsuperscript{th} May 2016 by experienced bat surveyors. Details of bat surveyors are included in Appendix 1 of this report. Two bat surveyors were present during each survey, giving good coverage of potential roost features, as well as broad patterns of bat foraging and commuting within the site. Two different surveyor locations were used to cover potential bat roost features identified on building B3 due to be impacted by the proposed development.

2.1 Surveys were undertaken in accordance with the Bat Conservation Trust Guidelines (Collins, 2016). The initial scoping assessment of the buildings on site categorised building B3 as having Moderate potential to support roosting bats. As such two survey visits were undertaken (TMA, 2016). Surveys comprised one dusk emergence survey and a separate dawn re-entry survey.

2.2 The dates, times and weather conditions of each survey are given within table 2 of this report. The bat detectors used were Batbox Duets linked to MP3 recorders. An Anabat Express bat detector was also used to record bat calls close to the building.

2.3 Dusk surveys were commenced at least 15 minutes before sunset and continued for 90 minutes after sunset. Dawn surveys were commenced 90 minutes before sunrise and continued until 15 minutes after sunrise.

<table>
<thead>
<tr>
<th>Date</th>
<th>Survey type</th>
<th>Sunset/sunrise time</th>
<th>Survey start</th>
<th>Survey end</th>
<th>Cloud cover (%)</th>
<th>Precipitation</th>
<th>Wind (Beaufort)</th>
<th>Minimum temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/05/2016</td>
<td>Dusk</td>
<td>20:40</td>
<td>20:25</td>
<td>22:10</td>
<td>0</td>
<td>None</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>27/05/2016</td>
<td>Dawn</td>
<td>04:42</td>
<td>03:12</td>
<td>04:57</td>
<td>100</td>
<td>None</td>
<td>2</td>
<td>7</td>
</tr>
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</table>
Limitations

2.4 All bat emergence/re-entry surveys were undertaken in May 2016, which is within the optimal survey period stated in published guidance from the Bat Conservation Trust (Collins, 2016). All surveys were undertaken when sunset temperatures were $10^\circ\text{C}$ or above, which is the recommended survey temperature stated within guidance from the Bat Conservation Trust (Collins, 2016). As such there are no limitations associated with the timing and weather conditions of the surveys.

2.5 Any bat emergence/re-entry surveys can only give a snapshot of bat behaviour at the time of the survey. As the potential of the site for roosting bats may change over time, it is recommended that bat surveys are updated after two years, if development has not yet commenced.
3 SURVEY RESULTS

Bat Emergence/Re-entry Surveys

3.1 Surveyors recorded no bats emerging from or returning to the buildings during the emergence and re-entry surveys.

Foraging and Commuting Bats

3.2 Despite no bats being recorded emerging from or returning to the buildings themselves, bat activity was recorded within the surrounding areas during the dusk emergence survey. Both common pipistrelle (Pipistrellus pipistrellus) and soprano pipistrelle (Pipistrellus pygmaeus) were recorded occasionally commuting and foraging, largely commuting across the site from west to north and foraging along the tree–line parallel to the site’s northern boundary. During the re-entry survey, no bats were recorded foraging or commuting. The temperature during this survey was low, 7°C, and it may be that bats in the local area returned to their roosts earlier in the night, when temperatures were higher. This is always a consideration during dawn re-entry surveys.
4 RECOMMENDATIONS AND ENHANCEMENTS

Further Survey

4.1 The Emergence/re-entry survey did not record bat roosting activity within building B3. These results provide reasonable confidence that the proposed development works will not impact roosting bats.

4.2 No further bat surveys or constraints are recommended with regard to bats.

4.3 If development has not commenced within 2 years of May 2016, it is recommended that update inspections/surveys are undertaken, as the suitability of the buildings for roosting bats may have changed.

Lighting

4.4 The line of trees parallel to the site’s northern boundary and adjacent woodland provide a valuable foraging and commuting corridor for bats in the landscape. Trees, hedgerows and scrub located around the periphery of the site may also provide valuable commuting and foraging corridors.

4.5 In order to avoid a detrimental impact on bats using the aforementioned habitats, it is recommended that lighting is restricted to the interior of the site and should be kept to a low level both during construction and operation of the development site.

Enhancement Measures

4.6 In accordance with National Planning Policy Framework, suggested opportunities for biodiversity enhancement should be included where possible.

4.7 The proposed development may provide opportunities to enhance the site and local area for roosting bats by installing bat roosting boxes on existing mature trees around the peripheries of the site. A mixture of designs may be installed to offer a variety of roosting opportunities. Recommended designs include the Hardwood Bat Box, Double Chamber Bat Box and Schwegler Bat Box 45-2FDFP with Double Front. Boxes can be placed in a variety of orientations to avoid artificial lighting but the default direction should be southerly. Bat boxes should be placed as high as possible, at least 5 m from the ground. Bat boxes should be secured to trees using non-invasive methods (i.e. without nailing). Suggested methods are to use ratchet strapping.
5 REFERENCES

- Bat Conservation Trust and Institute of Lighting Engineers (2008). Bats and Lighting in the UK.
- Tim Moya Associates (2016). Extended Phase 1 Habitat Assessment and Bat Scoping Survey– Horsford 2.
Appendix 1

Bat surveyor details
<table>
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<tr>
<th>Surveyor</th>
<th>Bat Survey Licence Holder?</th>
<th>Experience levels</th>
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<tr>
<td>Simon Thomas</td>
<td>Yes</td>
<td>Over 8 years of experience undertaking bat surveys. Bat survey licensed, great crested newt survey licensed and barn owl survey licensed.</td>
</tr>
<tr>
<td>BSc, MSc, MCIEEM</td>
<td></td>
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<tr>
<td>Principal Ecologist</td>
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</tr>
<tr>
<td>Emma Reid</td>
<td>No</td>
<td>Over 6 years’ experience of undertaking bat surveys. An experienced ecologist working towards obtaining her bat survey licence and holds licences for dormouse and great crested newt surveying and mitigation.</td>
</tr>
<tr>
<td>BSc (Hons), MSc, ACIEEM</td>
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<tr>
<td>Senior Ecologist</td>
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Appendix 2

Bat Surveyor Locations
Target Number | Note
--- | ---
4 | Missing, broken and lifted tiles potentially allowing access between roofing tiles and roof membrane.
5 | Missing, broken and lifted tiles potentially allowing access between roofing tiles and roof membrane.
6 | Access behind fascia boards, potentially allowing access between roofing tiles and roof membrane
7 | Gap at ridge on gable end, potentially allowing access into cavity
Appendix 3

Wildlife Legislation
STATUTES AND ENGLISH LAW

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 roosting bats, 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.

Bats and their roosts may also be protected by site designations, for example if their roost site or feeding grounds are notified as a Special Area of Conservation (SAC). The European Habitats Directive (1992) requires that protected sites are designated to ensure that bat species populations of the following species are maintained at a favourable conservation status: greater horseshoe, lesser horseshoe, Bechstein’s, barbastelle, greater mouse-eared.

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.
● 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

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