



BAT SURVEY REPORT

WARBURTON LANE, TRAFFORD

REC REFERENCE: 1CO105698EC12R1

REPORT PREPARED FOR: REDROW HOMES (NW)

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EXECUTIVE SUMMARY

Site Address	Warburton Lane, Trafford, WA13 9NZ
Grid Reference	Land east of Warburton Lane (Site 1): SJ 71560 90442 Land west of Warburton Lane (Site 2): SJ 71098 90317
Site Area	Land east of Warburton Lane (Site 1): Approximately 12.3 ha Land west of Warburton Lane (Site 2): Approximately 12.5 ha
Current Site Use	The site comprises of agricultural fields.
Adjacent Site Use	The site is situated within an agricultural area to the south of Partington. The Red Brook watercourse and broadleaved woodland borders the site to the north.
Results	Six activity surveys were undertaken between May and October 2018. Low levels of bat activity were recorded across all site visits with most records along the eastern boundary of the site.
Conclusions and Recommendations	Given the low level of bat activity recorded across all surveys, it is concluded that the development is unlikely to have an adverse impact on bats and is likely to improve foraging and roosting opportunities. However, a sensitive lighting strategy, the creation of a wildflower meadow and a bat box scheme have been recommended.

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1. INTRODUCTION

1.1 Background

Resource and Environmental Consultants Ltd (REC) has been commissioned by Redrow Homes (NW) to undertake a Bat Activity Survey of Warburton Lane, Trafford; hereafter referred to as the 'site'. It is proposed that the site is developed to accommodate a residential development of up to 400 properties, with associated road infrastructure, attenuation ponds and landscaping.

The Environmental Partnership (TEP) had previously carried out an Ecology Overview of the land at Warburton Lane in 2016 (see TEP report 6138.001). Consultation with the Greater Manchester Local Record Centre and RECORD found records of common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), *Myotis* sp., and noctule bats (*Nyctalus noctula*) within 1 km of the site, but no records within the site boundary. They suggested that a number of trees had the potential to provide roosting opportunities, and the bordering hedgerows, woodland and Red Brook could provide foraging and commuting habitat. TEP did not conduct detailed bat scoping or activity surveys.

1.2 Site Description

At the time of survey, the site comprised seven agricultural fields located to the east and of Warburton Lane. Red brook defines the site boundary to the north. The Manchester Ship Canal is located approximately 800 m to the west of the western parcel.

The surrounding area is dominated by large arable field parcels and residential properties. The site is bordered to south by Moss Lane. The A6144 runs through the centre of the site and a watercourse (Red Brook), forms the northern boundary along with arable fields and the eastern boundary is formed by more arable land.

For the purpose of this report the site has been divided into an two areas, Site 1 and Site 2, comprising the eastern and western portions of the site, respectively. The Site Location Plan and site proposals can be seen in **Appendix 1**.

1.3 Objectives

The purpose of the Bat Survey was to identify:

- ▶ Any features on site with the potential to support bats;
- ▶ Existing bat roosts or evidence of usage of the site by bats;
- ▶ Potential impacts of the proposed development on bats; and,
- ▶ Recommendations for mitigation and enhancement.

The survey findings are presented in this report. The aim this report is to provide an assessment of the likely importance of the site for bats and bat conservation and to advise on any necessary mitigation

and enhancement proposals which will enable the development to proceed in compliance with relevant wildlife and nature conservation legislation.

1.4 Legislative Framework

All bat species are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act (2000) and the Conservation of Habitats and Species Regulations 2017. Together, this legislation makes it illegal to:

- ▶ Intentionally or deliberately take, kill or injure a bat;
- ▶ Cause damage to, destruction of, and obstruction of access to, a bat roost; and,
- ▶ Disturb a bat occupying a roost.

A bat roost is defined in the legislation as *“any structure or place which a bat uses for shelter or protection”*.

2. SURVEY METHODOLOGY

Six transect activity surveys were undertaken between May and October 2018. All surveyors present during the surveys had experience of conducting bat surveys. The survey site was considered to contain 'moderate' habitat suitability in accordance with Collins (2016). Therefore, one survey visit was undertaken per month (May – October) in appropriate weather conditions for bats. At least one survey comprised of a pre-dawn survey. All surveys were conducted with Batbox Duet heterodyne detectors with the assistance of Zoom recorders for analysis of echolocation calls on BatScan 9.

During the transect activity surveys, two sets of surveyors walked at a constant speed along their planned route (transect) and recorded any bat calls for subsequent analysis. The transect route followed the site boundary as the features here were more attractive to bats consisting of hedgerows, rather than the interior of the site which consists of arable field. The dusk surveys commenced at sunset and continued for two hours afterwards, whilst the dawn survey started two hours before and finished at sunrise. Seven listening points were used where surveyors stopped for five minutes to record bat activity in that area. The transect route followed during the survey is indicated in **Appendix 2**.

Transect activity surveys at both aspects were undertaken simultaneously on the following dates:

- ▶ 31st May 2018 – started at 21:10 pm and finished at 23:10 pm. The weather conditions were clear, with no breeze or precipitation. The temperature was 20 °C and sunset was recorded at 21:25 pm;
- ▶ 28th June 2018 - started at 21:15 pm and finished at 23:15 pm. The weather conditions were clear, with no breeze and no precipitation. The temperature was 18°C and sunset was recorded at 21:15 pm;
- ▶ 19th July 2018 - started at 20:55 pm and finished at 22:55 pm. The weather conditions were clear sky, no breeze and no precipitation. The temperature was 15°C and sunset was recorded at 22:55 pm;
- ▶ 13th August 2018 - started at 19:00 pm and finished at 21:00 pm. The weather conditions were clear sky, no breeze and no precipitation. The temperature was 16°C and sunset was recorded at 19:30 pm;
- ▶ 11th September 2018 – a dawn survey commenced at 04.49 am and finished at 06.49 am. The weather conditions were clear sky, no breeze and no precipitation. The temperature was 11°C and sunrise was recorded at 06.49 am; and,
- ▶ 9th October 2018 – started at 18.30 pm and finished at 20.30 pm. The weather conditions were clear sky, no breeze and no precipitation. The temperature was 14°C and sunset was recorded at 18.30 pm.

3. RESULTS

3.1 Habitat Description

The majority of the habitats within the site were suboptimal in terms of foraging as they included extensive areas of arable land lacking complex features such as varied grass swards and wetland areas. The boundary of the site consists of a tree line to the west, Red Brook to the north, and hedgerows to the south and east.

3.2 Activity surveys

3.2.1 Site 1 Surveys

Appendix 2 illustrates the recorded flight paths taken by bats during the dusk and dawn transect activity surveys.

Dusk Activity Surveys

Low levels of activity were recorded across all five of the dusk surveys, these consisted of foraging and commuting common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared (*Plecotus auritus*) bats. The observed activity was restricted to site boundaries.

Dawn Activity Survey

Very low levels of activity were recorded during the dawn activity survey. The species recorded were both common pipistrelle and soprano pipistrelle; these species were recorded along Red Brook.

3.2.2 Site 2 Surveys

Appendix 2 illustrates the recorded flight paths taken by bats during the dusk and dawn transect activity surveys.

Dusk Activity Surveys

Low levels of activity were recorded across all five of the dusk surveys; these consisted of foraging and commuting common pipistrelle, soprano pipistrelle and brown long-eared bats. The observed activity was restricted to site boundaries, particularly the southern boundary.

Dawn Activity Survey

Very low levels of activity were recorded during the dawn activity survey. The species recorded were both common pipistrelle and soprano pipistrelle; these were recorded along the southern boundary.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 General Conclusions

Low levels of bat activity were recorded on site during all surveys. The mature trees and boundary vegetation provide some foraging and commuting resources for the common and widespread species recorded. Overall, as the bordering features are being retained with appropriate buffers, it is considered that the proposed development is unlikely to have any negative impacts upon foraging or roosting bats; however, there is potential for them to be disturbed by lights added during the development, thus appropriate recommendations have been provided below. The Proposed Development includes areas of green infrastructure, including Sustainable Urban Drainage Systems (SUDS), and the creation of grasslands and amenity features that will enhance conditions for foraging and roosting bats.

4.2 Mitigation

No further surveys or a Natural England European Protected Species Mitigation licence is deemed necessary for the development to proceed.

Current development proposals indicate the retention of the majority of the boundary features and the implementation of a buffer zone between Red Brook, to the north, and the proposed development (**Appendix 1**). It is anticipated that the retention of these features will retain the site's value for foraging and commuting bats, and the proposed development provides the opportunity to enhance these features.

In line with new lighting recommendations from the Bat Conservation Trust (2018) and the Institute of Lighting Professionals, it is recommended that:

- ▶ Exterior lighting is not facing toward boundary features (i.e. hedgerows);
- ▶ Lights should always be mounted on the horizontal, i.e. no upward tilt;
- ▶ Any external security lighting should be set on motion-sensors and short (1 minute) timers; and,
- ▶ Accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

4.3 Enhancements

The proposed development includes a number of landscaping features. A number of habitat enhancements are proposed in accordance with the National Planning Policy Framework (2018) which states that development should: *"contribute to conserving and enhancing the natural environment"*. The following ecological enhancements are proposed in order to provide a net-gain to biodiversity on the site.

4.3.1 Wildflower meadow

It is recommended that a proportion of the buffer zone between Red Brook and Site 1 and 2, of the development should be planted with a native wildflower species mix such as an Emorsgate EM2 (standard general-purpose meadow mixture). Such a composition of species will increase the value of the site for pollinators and other invertebrates, which will benefit foraging bats in the area. Wildflower meadows have suffered severe declines in the UK, therefore an area where wildflower species can be grown would be a valuable addition to the local landscape.

The proportion of area dedicated to a native wildflower seed mix should be a continuous block, at least one in Site 1, and one in Site 2; the meadow should be at least 100 x 50 m, in a suitable area, adjacent to the tree line associated with Red Brook.

4.3.2 Bat boxes

In order to enhance the site's value for roosting bats, it is recommended that a total of 10 bat boxes are installed on the retained trees, five in Site 1 and five in Site 2. Please refer to Table 4.1 for the suggested bat box specifications.

Table 4.1 Suggested Bat Boxes

Bat Box Specifications	Photograph
<p><u>1FF Schwegler Bat Boxes With Built-in Wooden Rear Panel</u></p> <ul style="list-style-type: none"> ▶ Height: 43.0 cm ▶ Width: 27.0 cm ▶ Depth: 14.0 cm ▶ Entrance hole: 12.0 cm x 24.0 cm ▶ Weight 9.5 kg <p>The Schwegler 1FF bat box is spacious enough for bats to use as a summer roost or nursery sites and is open at the bottom, allowing droppings to fall out so it does not need cleaning. The 1FF is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years.</p> <p>Source: http://www.nhbs.com/title/158636/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel</p>	

5. REFERENCES

- ▶ Bat Conservation Trust (2018). Guidance Note 08/18; Bats and artificial lighting in the UK.
- ▶ Collins (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition. Bat Conservation Trust.
- ▶ JNCC (2004). The Bat Workers Manual. 3rd Edition.
- ▶ Institute of Lighting Engineers (2005). Guidance Notes for the Reduction of Obtrusive Light.
- ▶ Mitchell-Jones A, J, (2004). Bat Mitigation Guidelines, English Nature, Peterborough

APPENDIX 1 – Site Location Plan and Parameter Plan



APPENDIX 2 – Transect Route and Bat Activity

