



**MAPLE ROAD, TANKERSLEY
ECOLOGICAL APPRAISAL**

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1 INTRODUCTION

Surface Property (Surface) was commissioned by Company Shop and Rula Developments Ltd to undertake an ecological appraisal of a plot of land, located off Maple Road, Tankersley (henceforth referred to as the Site).

This report is submitted in support of a planning application for a Distribution Centre with 2-storey offices, a service yard and car parking (henceforth referred to as the Development).

This report details ecological baseline conditions and potential ecological impacts from the Development, taking into account relevant planning policy and legislation (see the Annotated Site Plan in Appendix A).

Further surveys and mitigation have been described, where applicable, in order to provide additional information for assessing impacts and to inform recommendations to avoid or reduce potential impacts.

2 METHODS

2.1 Desk Study

A desk study was undertaken to provide baseline information about the Development. A search for designated sites within 2 km of the Site (the Study Area) was undertaken using publicly available data. Records of Local Wildlife Sites (LWS) and notable and protected species were requested from Barnsley Biological Records Centre. In addition, the ecological appraisal completed by Wildscapes as part of a high-level habitat assessment by Barnsley Metropolitan Borough Council was reviewed.

2.2 Site Survey

An ecological walkover of the Site was conducted on 28th March 2017 by a suitably experienced ecologist. The aim of this survey was to identify potential ecological constraints to inform the planning process. The survey focussed on habitats and protected species that may be affected by the Development.

2.3 Bat Assessment

During the survey, a preliminary assessment of the potential of on-site features to support bat roosts and/or provide suitable commuting or foraging habitat was conducted by a Natural England bat licenced ecologist. All Bat Assessment survey work and recommendations were carried out following the guidelines produced by the Bat Conservation Trust (BCT)¹. This initial bat assessment would inform whether or not further surveys would be required to assess the potential effects of the Development on bats. Features subject to assessment included the deciduous woodland, the grassland and the individual trees. The individual trees were classified according to their 'Roost Suitability'. Should evidence of bats be recorded or the features assessed to provide potential for bats, further surveys may be required.

¹ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd ed.). The Bat Conservation Trust, London.

2.4 Great Crested Newts

2.4.1 Terrestrial Assessment

Habitats within the Site were assessed to determine their suitability for amphibians. In addition, natural/artificial refugia on the site were checked for sheltering animals or evidence of animals. Surveys were undertaken by a Natural England licenced surveyor.

2.4.2 Habitat Suitability Index (HSI)

A Habitat Suitability Index (HSI)² of surrounding ponds was not undertaken because the desk study returned up-to-date records of great crested newts in them, thus negating the need for an assessment of their potential to support the species.

3 RESULTS

3.1 Desk Study

3.1.1 Designated Sites

The desk study identified no statutory designated sites within the Site; however, there was a single Local Nature Reserves (LNR) within the Study Area (Table 3.1). Additionally, seven LWS were located in the Study Area, the nearest of which, Sowell Pond, is located approximately 100 m to the east of the Site, beyond the existing Pilkington Glass Industrial Building (with associated parking areas). Furthermore, an area of deciduous woodland, a Priority Habitat under Section 41 of the NERC Act (2006), was present on the western boundary of the Site.

Table 3.1: Designated sites and their proximity to the Site.

Site Name	Distance and Direction from Site
Sowell Pond LWS	0.1 km to the east
West Wood LWS	0.2 km to the south-west
Westwood, Westwood Country Park and Thorncliffe Wood (combined) LWS	0.3 km to the south-east
Potter Holes LNR and LWS	0.7 km to the east
Rockley Woods LWS	1.7 km to the north

3.1.2 Protected Species

No records of protected species were recorded within the Site; however, great crested newts have been recorded within the ponds to the east and west of the Site (shown on the figure in Appendix A). The following protected species were also recorded within the Study Area:

- Daubenton's bat (*Myotis daubentonii*);
- Noctule bat (*Nyctalus noctula*);
- Leisler's bat (*Nyctalus leisleri*);
- Brown long-eared bat (*Plecotus auritus*);
- Common pipistrelle (*Pipistrellus pipistrellus*);
- Adder (*Vipera berus*); and

² Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143–155.

- Grass snake (*Natrix natrix*).

Due to copyright, the report produced by Barnsley Biological Record Centre containing full details of the above records cannot be reproduced, but the Local Planning Authority can request the information.

3.1.3 Previous Ecological Assessment

The ecological assessment undertaken by Wildscapes identified no protected species on the Site; however, the report concluded that some of the habitats on site had ecological value and that the Site was suitable for terrestrial stages of great crested newts.

3.2 Site Description

The Site is located within an Industrial Park and, as such, is bounded by a commercial unit to the east, by Maple Road and further commercial units to the south, a car parking area for a unit to the north, and an area of grassland to the west.

The Site was dominated by periodically managed semi-improved grassland (Plate 1 in Appendix B), with deciduous woodland to the west of the Site and areas of scattered and dense scrub. Plant species³ recorded within the grassland included cock's-foot, false oat-grass, Yorkshire-fog, brome, meadow foxtail and crested dog's-tail, with herbs present including yarrow, cow parsley, daisy, ribwort and greater plantain, meadow vetchling, creeping thistle, meadow and creeping buttercup, sorrel, ragwort and dandelion. Within the grassland, scrub species included hawthorn, dog rose and bramble.

The woodland to the west of the Site was a mixture of slender silver birch and large oaks to the north of the woodland belt (Plate 2 in Appendix B). Other tree species present included sycamore and cherry. The shrub layer consisted of hawthorn, elder, bramble and dog-rose, with the ground flora including wood avens, bluebells, dog's mercury, common nettle, dock, lesser celandine and cleavers.

Spoil heaps towards the eastern boundary, and those used as bunds at the south of the Site, had been colonised by tall ruderal vegetation (Plate 3 in Appendix B). Common nettle dominated these areas, with great willowherb, broad-leaved dock and cock's-foot abundant.

3.3 Protected Species

The following sections describe the Site's potential to support protected species. Protected species not detailed below were considered highly unlikely to be present within the Site, based on habitat type, surroundings and desk study records. However, a comprehensive watching brief for all protected species was undertaken throughout the site visit.

3.3.1 Badger

No evidence of badger (*Meles meles*) was recorded. The Site provided suitable foraging habitat for badgers, but despite a thorough search no evidence of badger was recorded. The proximity of the Site to a busy industrial park, when large amounts of suitable habitat are available to the west, may deter badgers from using the Site.

³ Nomenclature is restricted to common names for the purposes of this report.

3.3.2 Bats

No evidence of bats was recorded; however, eight mature oak trees (T18, G19 and G20 on Drawing Number 50104-DR-ARB-101 submitted with the Arboricultural Impact Assessment) were considered to provide moderate roosting potential for small numbers of roosting bats, with potential roost features (PRFs) such as knotholes, signs of decay and cavities present (shown on the Figure in Appendix A and Plate 4 in Appendix B). The majority of the other trees were semi-mature and in good condition with no evident cracks or rot holes that could provide potential roosting features for bats.

The trees and vegetation within the Site provided features with the potential to support foraging and commuting bats and had connectivity to suitable habitats in the wider area. In relation to the surrounding area, where foraging and commuting habitat is abundant, and as some of the woodland belt is to be retained, the Site has been classed as 'moderate' suitability for bats.

3.3.3 Herptiles (Amphibians and Reptiles)

No waterbodies were present on Site and therefore there were no breeding opportunities for great crested newt or other species of amphibian. The desk study results show that great crested newts are present in the ponds to the west and east of the Site (shown on the figure in Appendix A). The Site (comprising only terrestrial habitats) was assessed to provide low to moderate suitability for great crested newts owing largely to the high level of disturbance, as shown by well-worn tracks through the Site, high levels of littering and fly-tipping.

Despite the disturbance, some of the habitats on site (namely grassland and scrub) provide suitable habitat for amphibians and reptiles, with the adjacent terrestrial habitats to the west providing more suitable habitat. A large number of artificial refugia were present on site, including corrugated sheets and bitumen felt, which are frequently used as survey equipment for both reptiles and newts. Despite a careful search of the Site, including lifting all refugia present, during optimal survey weather, no species of herptile was recorded. The desk study revealed that grass snakes and adder are present in the Study Area; however, these are shown to be south of the A616 and A61.

3.3.4 Other Protected/Notable Species

The Site was primarily assessed for its potential to support the species detailed above. The watching brief undertaken throughout recorded no evidence of other protected species. A number of birds' nests were recorded in the trees on site and the grassland provides suitable habitat for ground-nesting birds.

3.4 Limitations and Assumptions

The survey was undertaken in suitable weather (dry and sunny) by a suitably qualified ecologist who is a member of the Chartered Institute of Ecology and Environmental Management and holds Natural England Licences for bats and great crested newts. Therefore, there were no limitations to the survey.

4 FURTHER SURVEY REQUIREMENTS

The Site has suitable habitats for a number of protected species, and these habitats have the potential to be directly and indirectly impacted by the Development. The additional ecology surveys are currently underway and will be completed this survey season. The aim

of these surveys is to provide further information to help assess the potential ecological effects of the Development and to inform mitigation.

4.1 Bats

4.1.1 Roosts

The low number of individual trees identified with PRFs within the woodland are considered to be of low importance to local bat populations as there is another large belt of woodland to the north and south of the A616, which is likely to have multiple trees suitable for roosting. Tree T18 and the five mature oaks making up G19 are scheduled to be retained (shown on Drawing Number 50104-DR-ARB-101 submitted with the Arboricultural Impact Assessment), no further survey work is required. Should pruning or removal works be required to the two mature oak trees within G20, then further survey work, including a detailed PRF inspection survey, will be required.

4.1.2 Activity

The Site has been classed as 'moderate' suitability for bats. The scope of surveys generally recommended (and which are currently being undertaken) for this level of suitability and to inform the assessment of a development of this type includes:

- One walked transect survey per month (April to October), at least one of which should comprise dusk and pre-dawn (or dusk to dawn) within one 24-hour period.
- Automated bat detectors deployed for five consecutive nights per month (April to October).

The results of the surveys will be assessed on an ongoing basis to inform design and mitigation requirements of the scheme. Further reports will be submitted when sufficient information has been gathered to inform the assessment.

4.2 Herptiles

4.3 Great crested newts

No waterbodies are present on site and therefore there are no breeding opportunities for any species of amphibian; however, suitable terrestrial habitat is present. Furthermore, great crested newts have previously been recorded in ponds to the east and west of the Site (shown on the figure in Appendix A). In order to determine the mitigation required and in accordance with a precautionary approach, surveys to determine presence/absence have been scheduled for mid-April to mid-June 2017.

Suitably qualified and experienced ecologists, licenced to survey great crested newts, will complete four surveys, following good practice⁴, between mid-April and mid-June with at least two of the surveys completed during mid-April to mid-May. This would determine whether or not great crested newts are still present. Should they be present, a population size estimate will be calculated which would require an additional two surveys.

⁴ English Nature (2001) Great crested newt mitigation guidelines. English Nature

4.4 Reptiles

Suitable reptile habitat was recorded on the Site. Therefore, further surveys at the appropriate time of year and following standard methodology⁵ should be carried out to confirm the presence/absence of reptiles. These surveys are necessary to assess the impacts of the Development. The results of any further surveys would determine whether mitigation/enhancement measures are necessary.

5 MITIGATION AND ENHANCEMENT

5.1 Bats

Mitigation for bats will depend on the results of the further survey work and the more detailed design of the Development. At this stage it is considered unlikely that any licences will be required for trees as the majority are scheduled to remain in place and no evidence of bats was recorded. Therefore mitigation is likely to include, but not be limited to:

- Ensuring that construction workforce are made aware of current legislation protecting bats via a Toolbox Talk;
- In the unlikely event that bats are encountered during construction then works will cease and Natural England contacted to agree appropriate measures;
- Development design should ensure that the northern and western boundaries are unlit by additional lighting (street lights are currently present outwith the Site); and
- Bat boxes could be installed on retained vegetation to provide enhanced roosting opportunities. Boxes would be installed in accordance with good practice.⁶

5.2 Great Crested Newts

Mitigation for great crested newts will depend on the results of the further survey work and consultation with Natural England and Barnsley Metropolitan Borough Council. At this stage it is considered likely that sensitive clearance, under direct supervision of a licenced ecologist will be required. Buffer planting to strengthen the retained woodland will enhance the terrestrial habitat and provide great landscape connectivity. Logs from management operations will be retained within the woodland to offer improved hibernation opportunities, as the Site is currently limited in this regard.

Should a development licence be required, determined by a site-specific risk assessment informed by the results of the survey, this would be agreed with Natural England and the licence application would be supported with a detailed Method Statement, which will include a series of appropriate mitigation measures, which would superseded those discussed above.

5.3 Reptiles

Mitigation for reptiles will depend on the results of the further survey work although it is considered likely that only limited numbers of reptiles may be present on the Site. Therefore, it is likely that Reasonable Avoidance Measures (RAMs) will be adopted during the works. In accordance with this precautionary approach, a supervised clearance exercise will be carried out within the grassland. The works will be completed during the appropriate

⁵ Froglife (1999) Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

⁶ http://www.bats.org.uk/pages/bat_boxes.html#Putting up your box

time of year when reptiles are fully active (although weather- and temperature-dependent, reptiles are usually active from April through to September) and supervised by an ecologist. This will be carried out in conjunction with the methods for great crested newts, if possible. A Method Statement for the works will be produced pre-commencement and informed by the further survey work.

5.4 Nesting Birds

Ground works or vegetation clearance within the bird nesting season (March–August inclusive) may disturb or harm nesting birds. To ensure that works are legally compliant, it is recommended that vegetation clearance during the bird nesting season is avoided or, if necessary, preceded by a nesting bird survey.

Bird boxes could be installed on retained vegetation to provide enhanced nesting opportunities. Boxes would be installed in accordance with good practice⁷.

6 CONCLUSIONS

Several protected species have the potential to be affected by the Development. Further survey work, as described Section 4, is required to inform the assessment of effects and mitigation. In order to increase the Development's biodiversity value, and to adhere to Government guidance set out in the National Planning Policy Framework 2012 (NPPF)⁸, a range of enhancement measures have also been provided (detailed in Section 5).

Specific details of the mitigation and enhancement measures could be included within an Ecological Mitigation and Enhancement Plan (EMEP) to be produced for the Development. This document would detail measures to be implemented in order to enhance the value of the Development and sympathetic management of these areas to maximise their ecological value in the long term. Buffer planting to strengthen the retained woodland should offset the loss of the restricted area of Priority Habitat. The production of an EMEP could be secured via an appropriately worded condition.

⁷ www.rspb.org.uk/advice/helpingbirds/nestboxes/index.asp

⁸ National Planning Policy Framework, [Online] Available:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Appendix A

Annotated Site Plan

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- Site Boundary
- Dry Pond
- Pond
- Trees with Potential Roost Features (Indicative Locations)



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Annotated Site Plan
Figure 1

Ecological Appraisal
Maple Road, Tankersley

Appendix B

Photographs



Plate 1: Site dominated by periodically managed semi-improved grassland.



Plate 2: Woodland to the west of the Site.



Plate 3: One of the colonised spoil heaps present on the Site.



Plate 4: Tree with potential roost features.