
PROTECTED / NOTABLE SPECIES SURVEYS

ROCKINGHAM

HARWORTH ESTATES



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Field Investigations and Data

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1.0 INTRODUCTION

- 1.1 Extended Phase 1 Habitat surveys undertaken in 2013 identified the presence of habitats located within the extended survey area situated adjacent to the site that could support protected / notable species including water vole (*Arvicola amphibius*), and badger (*Meles meles*). These habitats are described in detail in the Extended Phase Habitat survey report, in summary habitats present included standing water bodies, watercourses and ditches with associated riparian habitats and woodland and scrub. Applied Ecological Services Ltd., was commissioned to undertake a series of surveys in the extended survey area of the Rockingham site. The purpose of those surveys were to establish the presence or absence of a range of species including water vole and badger in and or near to the extended survey area and the site; other protected / notable species surveyed for in the extended survey area are reported upon separately.
- 1.2 A data search undertaken by AES – LTD in April 2013 with Barnsley Biological Records Centre did not reveal any records for the presence of water vole or badger within the extended survey area. However, records do exist for water vole elsewhere in the 2km search area and badger was recorded historically near Shortwood, 400m to the north of the centre of the extended survey area.

2.0 LEGISLATION

2.1 Water vole and badger are protected by various pieces of legislation within UK. A summary of the legislation relating to each species is presented below.

WATER VOLE (*Arvicola amphibius*)

2.2 In April 2008 the water vole was given full legal protection in Britain under Schedule 5 of the Wildlife and Countryside Act (1981) as amended. Under the Act it is an offence to:

- Deliberately capture, possess or kill a water vole;
- Damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; and
- Disturb water voles whilst they are using such a place.

NB: Natural England and Natural Resources Wales are currently reviewing the licensing requirements and Mitigation opportunities for this species and new guidance is expected to be published later in 2014.

BADGER (*Meles meles*)

2.3 Badgers are protected under the Protection of Badgers Act, 1992 (PBA), which consolidated and added to previous legislation. In Great Britain, legislation prohibits the taking, injuring, selling, possessing or killing of badgers and it is an offence to ill-treat any badger, damage, destroy, disturb or cause a dog to enter a badger sett. A person shall not be guilty of an offence if the badger is killed, taken or the badger sett interfered with, if they have a licence authorised by the appropriate authority. Badger foraging ground is not specifically protected under the legislation, although the removal and/or disruption through development may be classed as disturbance.

3.0 METHODS

SURVEY AREA AND TIMING

- 3.0 The survey area for water vole included five ponds and a series of ditches located in the extended survey area, see Figure 1 Pond Location Plan and Figure 2 the Phase 1 Habitat Survey Plan. Instead of surveying representative sections of ditch and pond embankments, embankments were surveyed in full and in the case of ditches on each side. Ditches within the extended survey area were mostly dry or supported shallow sections of polluted water throughout the 2014 survey seasons, these areas were surveyed but surveyor effort was concentrated around ponds. Ditch embankments were generally steep with some vertical sections. Riparian embankments were mainly dominated by tall ruderal vegetation, occasionally semi-improved neutral grassland and scattered scrub and occasional trees were present.
- 3.1 Surveys for water vole followed National standard survey criteria developed by Strachan & Moorhouse 2006¹. Standardised survey methods were adapted to suit those specific conditions found in the site and in adjacent suitable habitats. In all cases, waterbodies situated in the extended survey area were surveyed. Surveys included the comprehensive recording of water vole field signs including searches for individual animals and searching for latrines, burrows, footprints, paths, lawns and feeding / piles and remains within all aquatic, riparian and adjacent terrestrial habitats.
- 3.2 Surveys for water vole were undertaken on the 10th & 22nd of April, 12th, 16th & 20th of June and the 12th of July 2014.
- 3.3 In relation to badgers all land in the extended survey area (see Figure 2: Phase 1 Habitat Plan) was surveyed for the presence of characteristic field signs of this species. Badger surveys were undertaken on the 15th & 23rd of February, 12th & 17th of March and on the 12th of July 2014.

¹ Strachan, R. & Moorhouse, T. (2006) Water vole Conservation Handbook, Second Edition. WildCru, Oxford

3.4 The following criteria, as outlined by Neal, 1977² and Harris, 1990³, were used to assess badger land utilisation in the extended survey area and to determine presence / absence and status of setts.

- Presence / absence of active badger setts;
- Presence / absence of disused badger setts;
- Presence / absence of spoil heaps outside entrances;
- Presence / absence of bedding material on spoil heap or in sett entrance;
- Presence / absence of odour emanating from sett entrance;
- Presence / absence of spoors on spoil heap or paths;
- Presence / absence of badger paths;
- Presence / absence of dung pits / latrines;
- Presence / absence of snuffle holes / destroyed cow pats;
- Presence / absence of scratching posts; and,
- Presence / absence of badger hair on fencing or around entrance holes

3.5 Potential badger paths observed during this survey were walked to determine the location or points of access to the proposed site and to potential foraging grounds situated within the extended survey area. In areas where it was not possible to follow a path, fencing and other boundary structures were followed and observed for signs of badger hair, dung pits, footprints (spoors), and other characteristic foraging signs indicating badger activity.

3.6 Setts, earths and burrows found during this survey period were examined closely to determine both their level of use by badger and the number of entrances, this information was then used to classify the status of the structure, again using criteria outlined by Neal, 1977 and Harris, 1990.

Main setts: These are in continuous use; they are large, well established, and often very extensive. It is where cubs are born. There is only one main sett per social group of badgers.

Annex sett: These occur in close association with main setts, and are linked to the main sett by clear well-used paths.

² Neal, E. (1977). *Badgers*. Blandford Press, England.

³ Harris S. (1990). *The badger in Britain*. NCC, Peterborough

Subsidiary setts: These are setts with often more than five holes, but which are not often in continuous use.

Outlying setts: These consist of only one or two entrance holes. Usually they have relatively small spoil heaps indicating they are not very extensive underground.

- 3.7 All observations made in the field were noted directly onto a site plan and the position of that particular observation was recorded electronically using a Garmin 45XL geographical positioning system (GPS).

4.0 RESULTS

WATER VOLE SURVEYS

- 4.0 No characteristic field signs of water vole were recorded within the site or in habitats immediately adjacent to the site in the survey period during 2014. Habitat suitability for water vole was good within ponds, although ditches were generally poor. Ditch embankments were steep and quite unstable in some areas, vegetation cover along riparian habitats was dense and vegetation assemblages present along the ditches included grasses and herbs that would provide suitable food resources, but burrow establishment in unstable embankments would be difficult and this was possibly a limiting factor for the use of these watercourses by this species. Similarly the absence of water within the ditches will significantly reduce their use by this species. A series of burrows were observed at Pond 5, but it was not established if these were indeed water vole burrows. Pond 5 will not be affected by the proposals.

BADGER SURVEYS

- 4.1 The surveys undertaken for badgers also gave negative results in the site and its immediate setting. There were no characteristic signs indicating utilisation of the site or the extended survey area by badgers. There were no setts or any other structures that may be used by badgers found in the site. Due to the high mobility of badgers and the fact that this species has been recorded within two kilometres of the site previously then checking surveys are recommended prior to the commencement of any development. Large mammal holes were recorded in Shortwood located to north east of the site, but this area will not be effected by the proposal and there were no characteristic signs of foraging found in habitats in / or near to the site.



