



Technical Appendix 2: Results of Water Vole Surveys

Burringham Road, Scunthorpe Ecological Impact Assessment

Gleeson Developments Limited

3 Europa Court, Sheffield Business Park
Sheffield, S9 1XE

Prepared by:

SLR Consulting Limited

Unit 2, Newton Business Centre, Thorncliffe Park
Estate, Newton Chambers Road, Chapeltown,
Sheffield, S35 2PH

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1	22 September 2023	Aaron Bailey	Julia Kozłowska	Julia Kozłowska

Basis of Report

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1.0 Introduction

SLR Consulting was commissioned by Gleeson Developments Ltd. to carry out water vole (*Arvicola amphibious*) surveys of a ditch which runs north of the site, at land off Burringham Road, Scunthorpe, DN17 2AA. The site (approximate central OS grid reference: SE 8664 0860) is located on the western fringe of the town of Scunthorpe, Lincolnshire.

This report presents the findings of water vole surveys undertaken in 2022 and 2023. The aim of the surveys was to determine the presence, or likely absence of water vole within the ditch running through the site, and, if present, to characterise the size and extent of the population.

The assessment of impacts resulting from the proposed development and the development of mitigation measures, if required, are covered in the separate EclA report.

2.0 Methodology

2.1 Water Vole Transect Surveys

In order to determine the presence, or likely absence, of water voles within the site, and, if present, to characterise the approximate size and extent of the population, water vole transect surveys of the northern ditch (r1 in Figure 1) on 4th November 2022 and 5th May 2023.

Following current best practice guidelines^{1,2}, a team of two ecologists walked within and alongside the watercourse carrying out a detailed search of the area within two metres of the water's edge. The full length of the watercourse, where it lies within the survey area (see Drawing 1 in EclA) plus 200m upstream and downstream, where accessible, was walked in this way on both dates. The surveyors looked for signs characteristic of water voles which include:

- Series of burrows dug into the bankside both above and below the water line;
- Above ground nest sites – balls of vegetation;
- Runs, tracks or passageways through vegetation on the bankside;
- Droppings and latrines (consisting of a collection of droppings) – faeces left by water vole typically at the located in or close to feeding areas or left to mark territories;
- Feeding signs, including cut lengths of grasses, reeds and sedges left in piles and also 'grazed' lawn areas around burrow entrances; and
- Footprints – often left in soft mud by the water's edge.

A note of any incidental evidence or observations of other notable wildlife was also made, as well as of introduced species such as American mink (*Neovison vison*).

2.2 Camera Traps

The walked transects were supplemented by a period of camera trap deployment.

¹ Dean *et al.* (2016). *The Water Vole Mitigation Handbook (the Mammal Society Mitigation Guidance Series)*. The Mammal Society: London.

² Strachan, R., Moorhouse, T., Gelling, M. (2011). *Water Vole Conservation Handbook*. 3rd Ed. Wildlife Conservation Research Crew (WILD CRU): Abingdon.



Three camera traps were deployed at potential burrow locations with a water vole favoured food bait (sweet apple), to confirm their use by water vole or brown rat (*Rattus norvegicus*), as both species have similar burrow sizes and characteristics.

Camera traps were deployed between the 14th-29th of November and recordings analysed.

2.3 Evidence of Technical Competence and Experience

Water Vole surveys were undertaken by SLR Senior Ecologist, Ms Julia Kozłowska and Ecologist Mr Aaron Bailey. All surveyors are suitably trained ecologists with experience in water vole surveys and follow the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct when undertaking ecological work.

All work is subject to internal review as part of SLR's Quality Assurance procedure. This report has been written by Ecologist Mr Aaron Bailey QCIEEM (Qualifying Member of CIEEM) and reviewed by Senior Ecologist Ms Julia Kozłowska QCIEEM.

2.4 Limitations

Surveys were conducted at a suitable time of day and during appropriate weather conditions. Due to extended warm and dry summer-like conditions present across summer and autumn of 2022, a November survey was considered suitable, given the character of the site and long-term weather conditions. It is not considered that results would have differed, should the first survey have been conducted in September. The survey was therefore robust, and no specific limitations applied.



3.0 Results

The results of the two-water vole transect surveys are detailed within Table 3-1.

The section of ditch immediately north of the site is contained within a mature woodland and contains between 10-30cm depth of water. The ditch banks here were vegetated with mostly bramble scrub (*Rubus fruticosus* agg.), with occasional ferns and short grasses growing up to 2-3 metres away from the water's edge (Plate 1). Little aquatic vegetation was recorded, and no reeds or tall tussocky grasses favoured by water vole were recorded. Further west, away from the development, the ditch flows between arable fields with closely mown bankside grass vegetation and little to no aquatic vegetation.

Due to low water levels, heavy shading of the ditch by the overhead woodland, infrequency of aquatic vegetation and a lack of tall tussocky grasses and reeds favoured by water vole, the section of ditch present to the north of the development has been assessed as having low suitability for water vole.

No field evidence of water vole (such as latrines, footprints or feeding remains) was recorded during any of the surveys.

A number of small burrows (Plate 2) were identified along the watercourse, however due to a lack of characteristic features of water voles such as droppings, feeding piles or latrines, the small number of burrows were concluded to originate likely from brown rat. The presence of brown rat in the vicinity of these burrows was confirmed through camera trap footage captured at these locations. No water voles were recorded on the camera trap footage.

Table 3-1: Results of water vole surveys

Date	Water vole field signs	Field signs of other species
04/11/2023	-	Rat burrows (Plate 2) and rabbit burrows
05/05/2023	-	Rat burrows (Plate 2) and rabbit burrows





Plate 1: The ditch running through the woodland north of site, showing its heavily shaded character and scrub covered banks.



Plate 2: One of a number of small burrows, likely of brown rat, within the banks of the ditch.



