

Denny to Wishaw Network Upgrade

Environmental Impact Assessment Report

Volume 3 Appendices

Appendix 8.3 WB, CB, AA Otter and Water Vole Results

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Volume 3 Appendix 8.3: WB, CB, AA Otter and
Water Vole Results



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Appendix 8.3

1.1 Introduction

This appendix accompanies Volume 1, Chapter 8 Biodiversity of the EIA Report. It describes in detail the methodology and results of desk study and field survey carried out to establish baseline conditions in the Zone of Influence (Zoi) of the New Build Overhead Line, along with the CB Route Removal and AA Route Undergrounding, with respect to otter *Lutra lutra* and water vole *Arvicola amphibius*¹.

This appendix is supported by Volume 2, Figure 8.7: Otter and Water Vole Survey Results.

Within this appendix, any activities relating to the New Build Overhead Line, CB Route Removal and AA Route Undergrounding are referred to as the “Works”, and the “Site” is the precise area in which the Works are located.

Relevant legislation and national planning policy pertaining to the protected or notable mammal species are discussed in Chapter 8 Biodiversity.

1.2 Methodology

Desk study methods and Zoi used are described in Chapter 8 Biodiversity.

Field Study

All otter and water vole surveys relating to this appendix were conducted between 15 May 2025 and 26 November 2025.

Surveys for otter and water vole were carried out in all suitable habitat (limited to linear waterbodies), where access was possible and safe, within the relevant Zoi from Works which was 200m for otter and 50m for water vole. Where fossorial water voles were of concern, particularly in grasslands east of Glasgow, surveys for water vole were conducted concurrently with other protected mammal and habitat surveys. The survey areas for otter and water vole are shown on Volume 2, Figure 8.7.

Surveys followed guidance in published literature^{2, 3, 4, 5, 6, 7}. Evidence found during surveys was mapped along with any relevant field notes. Surveyors walked in the channel of watercourses where possible and visually inspected all parts of the banks. Where dense vegetation (especially scrub) or soft substrate prevented this, searches for field signs were made as far as access allowed from the top of the bank.

¹ The otter and water vole methods and results for other components of the project are detailed separately in Volume 3, Appendix 8.10 for the Uprated Overhead Lines, within Volume 3, Appendix 8.13 for Cumbernauld Substation Extension, and within Volume 1, Chapter 8 for the other components.

² Campbell, R.D., Harrington, A., Ross, A. and Harrington, L. (2012). Distribution, population assessment and activities of beavers in Tayside. Scottish Natural Heritage Commissioned Report No. 540.

³ Chanin, P. (2003). Monitoring the Otter *Lutra lutra*, Conserving Natura 2000 Rivers Monitoring Series No. 10. English Nature, Peterborough.

⁴ Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). The Water Vole Mitigation Handbook. The Mammal Society, London.

⁵ Liles, G. (2003). Otter Breeding Sites. Conservation and Management, Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough.

⁶ Strachan, R. (2007). National survey of otter *Lutra lutra* distribution in Scotland 2003-04. Scottish Natural Heritage Commissioned Report No. 211 (ROAME No. F03AC309).

⁷ Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook (3rd Edition). Wildlife Conservation Research Unit, University of Oxford.

Evidence of otter search included resting sites (holts and layups), spraints (faeces), footprints, trails, and foraging signs. Where found, spraints were recorded as fresh, recent, or old according to their physical attributes.

For water vole, field evidence included latrines, footprints, dropping, burrows, trails and foraging evidence.

Limitations

Only one water vole survey was conducted during one period (mainly in summer), whereas *The Water Vole Mitigation Handbook*⁴ recommends two surveys, conducted in spring and summer to account for seasonal changes in distribution. As a result, there could be undetected presence of water voles, as early-season territorial signs may have been missed or obscured by dense summer vegetation. However, this is unlikely given that evidence of the species was able to be identified, and that the surveys took place mainly during the optimum period for survey, during the water vole breeding season. Where surveys took place immediately prior to the optimum period for survey (in Scotland), abundant evidence of the species was still identified at Shank Burn. A precautionary approach was taken within the impact assessment and embedded mitigation measures, setting a requirement for pre-construction surveys, which will in effect provide a second survey, and any required mitigation and licensing will be determined through these surveys.

While most of the Site was accessible, certain areas could not be fully surveyed. These included areas with impenetrable vegetation, areas dominated by invasive non-native species, or areas of unsafe terrain. These data gaps are localized and are not considered to significantly undermine the overall assessment.

1.3 Baseline Conditions

Otter

Desk Study

The Wildlife Information Centre (TWIC) provided three recent records of otter within 1km of the Site with records provided as 10m grid references. All three records were within and in the vicinity of Bonnybridge as follows: one live otter on the Bonny Water behind Thornton Avenue, and two assumed road collisions on the M876 by Junction 1.

The National Biodiversity Network (NBN) Atlas returned no records for otter within the 1km of the Site.

Field Study

A total of eight otter resting sites were identified within the survey area, all of which had positive evidence of otter use, e.g. spraints, slides, odours. Two of these features were identified as holts, and six as layups. Table 1 provides full details of these features.

Additionally, spraints were identified at seven locations: two old spraints on a boulder within the Rowan Tree Burn ~50m west of tower compound WB057; a collection of three old spraints under a bridge on the Rowan Tree Burn, approximately 50m south of tower WB057; a single on the south side of the Forth and Clyde Canal ~100m south of tower compound CB037; another on the Walton Burn ~120m north of WB030 & CB014 Compound; and two along the

Glencryan Burn, one ~70m east of tower compound WB020 and the final ~160m southwest of tower compound WB021A.

Across the Site, there are several larger streams and burns likely to support fish populations, and/or alternative prey which may support otters. These watercourses include: the Forth and Clyde Canal; Rowan Tree Burn; Walton Burn; Shank Burn; Cameron Burn; and the Luggie Water. Of these SEPA⁸ classes the Glencryan Burn as of ‘moderate’ suitability for fish, and the Rowan Tree Burn, and Luggie Water as of ‘high’ suitability. Additionally, areas of deciduous woodland, young conifer plantation, and areas of scrub which are associated with a waterbody may be suitable breeding sites for otter, although no evidence of this was recorded⁹.

Table 1. Otter refuges recorded during field survey.

Reference	Feature	Description	Watercourse and OSGR	Distance to the Project
WB.O.01	Layup	A cavity at the base of a mature sycamore, with a partially used slide leading towards the water. A single old spraint observed.	Bonny Water NS8396481123	Located 35m north of the proposed access LoD, 37m north of the WB Overhead Line Wayleave Corridor, and 92m northeast of the tower compound WB059
WB.O.02	Layup	A mature sycamore with extensive butt rot which forms a cavity at the base of a tree. Sheltered and hidden among ferns. An old spraint seen inside and a well-used slide leading to the water.	Rowan Tree Burn NS8370980897	Located 96m west of the WB Overhead Line Wayleave Corridor
WB.O.03	Layup	A shallow lay-up under an overhang, not well sheltered. One old spraint beneath overhang behind tree roots.	Luggie Water NS7800572482	Located 38m west of the WB Overhead Line Wayleave Corridor
WB.O.04	Layup	A rock overhang with a couple of recent spraints present on rock with slight cover.	Luggie Water NS7802372471	Located 22m west of the limit of deviation

⁸ SEPA (2024). Water Classification Hub. Available at: <https://informatics.sepa.org.uk/WaterClassificationHub/>

⁹ Liles G (2003). Otter Breeding Sites. Conservation and Management. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough.

WB.O.05	Holt	Overhang with possible tunnel, extent unknown. One old spraint within holt. Slide down to river present and close to a burrow entrance, possibly connected.	Luggie Water NS7840672461	Not within 100m of the Site.
WB.O.06	Layup	Holt originally identified in 2022 during previous survey work, with an open-ended tunnel. 2025 survey found that the tunnel no longer extends. Some digging and very old mouldy spraints were identified.	Luggie Water NS7823072461	Located 97m east of the WB Overhead Line Wayleave Corridor
WB.O.07	Holt	Small burrow, just large enough for otter. Possibly extends back and downward, though unclear. No other evidence recorded.	Luggie Water NS7841072459	Not within 100m of the Site.
WB.O.08	Layup	Overhanging bank, very open. One old and one recent spraint found inside.	Luggie Water NS7844272428	Not within 100m of the Site.

Water Vole

Desk Study

No records of water vole within 1km of the Site were returned by the NBN Atlas, or in data requested from TWIC. However, data available from The National Water Vole Database Project¹⁰ indicates that the Site does overlap two 10km grid squares where water voles are present. This encompasses areas of the Site between the village of Glenmavis, and Cumbernauld Substation.

Additionally, TWIC provided a single 1km grid reference for American mink *Neogale vison*, an invasive species; this record was located near Bonnybridge primary school, approximately 1.2km southwest of Bonnybridge substation. Predation of water vole by American mink is considered one of the main reasons for water vole population decline and, although the presence of American mink does not preclude the presence of water vole, it is less likely that water voles would be able to maintain a population in the presence of the species.

Field Study

Water vole evidence was identified in three locations across the Site: WB.WV.01a and WB.WV.01b, both located on a tributary of the Luggie Water; and WB.WV.02, along an area of the Shank Burn supporting what is likely one population of water vole by an area shaded by trees.

A single latrine with at least 10 fresh droppings, evidence of feeding and footprints were identified in WB.WV.01b; and two burrows were identified in WB.WV.01a. A total of 97

¹⁰ The Wildlife Trusts (2024). *The National Water Vole Database Project*. Available at: <https://www.wildlifetrusts.org/national-water-vole-database-project>

burrows, eight latrines with fresh to recent droppings, a single old dropping, and two instances of feeding remains were identified across WB.WV.02. Table 2 provides a summary of these areas, and their relationship to the Site.

Table 2. Summary of water vole survey results.

Reference	Description of Area	Evidence of water vole identified	OSGR and watercourse	Distance to the Project
WB.WV.01a	An artificially straightened watercourse approximately 50cm wide, and 5cm deep with slow flow with a gravelly substrate. Receives run off from field. Banks are somewhat defined and heavily vegetated with soft rush, neutral grasses and wetland herbs. Areas covered by scrub.	Two burrows.	NS 78457 72129 and NS 77815 71457 respectively	Located 178m east of the scaffolding on Hulks Road.
WB.WV.01b		Footprints, a single latrine with fresh droppings and feeding remains.	Tributary of the Luggie Water	Located 96m northwest of the WB limit of deviation.
WB.WV.02	A small stream running through neutral grassland, intermittently shaded by trees. Well vegetated banks, with coarse neutral grasses, some rush <i>Juncus sp.</i> and other perennial vegetation.	77 burrows, eight latrines with fresh to recent droppings, a single old dropping, and two instances of feeding remains	NS 75995 69264 Shank Burn	Intersects site by tower compound WB002.

Though burrows were identified during field surveys, only latrines and droppings can be used to confirm current occupation by water voles. This is due to the ability for burrows to persist, potentially between years, and because the occupation of burrows by other species such as rat *Rattus norvegicus* cannot be ruled out. Despite only conducting one survey during the field season, see Limitations, evidence collected during surveys suggests that areas WB.WV.01b and WB.WV.02 are currently occupied by water voles.

1.4 Summary

The desk study indicated that otter are present in parts of the Site and Zol, and that suitable habitat for otter was present throughout, associated closely with watercourses and waterbodies. Field surveys confirmed otter presence with eight resting sites and five spraints

recorded, with all evidence identified along the Bonny Water, Rowan Tree Burn, and the Luggie Water.

The desk study indicated that the Site overlaps two 10km grid squares recognised by the National Water Vole Database Project to contain water vole, these covered areas in the south and middle of the Site. Suitable habitat for water vole was present throughout the Site and ZOI, again associated with minor watercourses. Field survey confirmed water vole presence at two locations - WV.WB.01b on a tributary of the Luggie Water, and WV.WB.02 on the Shank Burn, with one further possible territory on the Luggie Water (unconfirmed due to lack of droppings).