

Appendix 10.3 Otter and Water Vole Survey 2004 to 2006



M74 JUNCTION 5, RAITH

OTTERS AND WATER VOLES

FINAL REPORT

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1 INTRODUCTION

This report presents the findings of field surveys focussing on otter and water vole activity and evaluating habitats within the ecological 'footprint' of the proposed improvements to Raith junction (M74 / A725) in accordance with the requirements of Stage 3 DMRB assessment. The aim of this survey report is to produce an up-to-date baseline ecological understanding of otter and water vole activity in the vicinity of the road scheme, allowing mitigation plans to be carefully considered

The otter is protected in the UK by Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) (WCA). This means that it is illegal to intentionally kill, take or injure an otter, intentionally disturb an otter in its place of shelter and intentionally damage, destroy or obstruct access to a place of shelter. In addition, the Nature Conservation (Scotland) Act 2004 also introduces 'reckless' acts into the WCA as an offence in Scotland.

In addition, the otter is a European protected species, protected by the EC Habitats Directive and the Conservation (Natural Habitats &c) Regulations 1994. This means it is illegal to damage or destroy an otter shelter, whether intentionally or not, and to deliberately disturb an otter. A European species licence (under Regulation 44 of the Conservation (Natural Habitats, &c.) Regulations 1994), issued by the Scottish Executive, is therefore required for any development works considered likely to damage/disturb this species.

The otter is included within the UK Biodiversity Action Plan (BAP) and is listed as a species most urgently in need of action. A UK Species Action Plan (SAP) has therefore been written for the otter in order to prevent further decline in their numbers. This SAP explains the current status of the species and identifies future objectives, research requirements and policy/legal requirements. The North Lanarkshire Council BAP also includes a Species Action Plan for otter.

Water voles are provided protection under Section 9(4) only of the Wildlife and Countryside Act 1981, as amended. This makes it an offence to intentionally damage or destroy, or obstruct access to, any structure or place which the water vole uses for shelter or protection; or disturb any such animal while it is occupying a structure or place which it uses for that purpose.

2 METHODOLOGY

A detailed otter and water vole survey and habitat evaluation for both species was carried out combining detailed river survey using:

- The otter survey methodology as set out in the 'New Rivers and Wildlife Handbook' (NRA/RSPB/RSNC, 1994) and 'Otters and Development' (SNH); and
- The water vole survey methodology as set out in the Water Vole Conservation Handbook (Strachan, 1998).

Otters are solitary animals generally living close to watercourses, which provide suitable foraging habitat, i.e. contain suitable populations of prey. Otters may reside in tunnels or recesses set into the ground, often under tree roots, which are conventionally known as "holts" (a hunting term for den). Holts represent a place of shelter in terms of the WCA. Otters may also rest up in more open day nests (known as couches) set in vegetation on the banks of suitable water bodies. Otters are largely nocturnal and avoid humans, so sightings are rare, but they do leave behind a number of characteristic field signs, and surveys focus on searching for these.

Otter signs include spraints (droppings), which can be found on boulders in burns, along riverbanks and under bridges; footprints; pathways; slides; holts (dens); couches (daytime resting places) and feeding remains. Boulders within the watercourses and exposed areas of bank, particularly beneath bridges were searched for otter spraints. The banks and nearby trees and scrub were searched for holts, couches, pathways and slides and river deposits of mud, silt or sand were checked for prints.

Weather conditions during the surveys were appropriate, being carried out during dry and bright conditions, with normal water levels in the rivers and wetlands of the area. Moreover, to allow for detailed survey work a hand-held GPS was used to ensure that data were recorded as accurately as possible.

The survey covered the River Clyde and the network of its minor ditches and un-named burns that pass through the Raith junction area before discharging into the Clyde at the Hamilton Low Parks SSSI. The survey area also comprises wetlands that lie to the north, west and south of Raith junction (see Figure 10.1). Detailed descriptions of the habitats of the survey area are provided in Appendix 10.1 (Phase 1 Habitat Survey).

The survey area is divided by the M74 and A725 into four sections. They are:

- **Laignland** is situated north of the A725 and west of the M74. The area is located at the eastern fringe of suburban Bothwell;
- **Bothwell Park** lies to the north of the A725 and to the east of the M74;
- **Strathclyde Country Park** is situated to the south of the A725 and to the east of the M74; and
- **Hamilton Low Parks SSSI** is located to the west of the M74 and to the south of the A725. The area is split by the River Clyde and the north bank defines the southern margin of the survey area. This specific area is called Raith Haugh, but the name Hamilton Low Parks SSSI is preferred as the former name is less

commonly used. In addition, adjoining the SSSI to the west there is a subordinate part of the survey area that lies close to Bothwell Bridge and where the A725 crosses over the River Clyde. This area is constrained by the A725, the B7071 link road to Raith junction and the River Clyde.

2.1 Otter Survey Methodology

A detailed search for otters was carried out on the 21st March 2006. Previous to this, searches for signs of otter activity had also been conducted in April 2004 and March 2005. The survey area comprised the sections of all watercourses (and waterbodies) potentially affected by the proposed development and also a distance of approximately 250m both upstream and downstream. Searches were completed along watercourses covering a corridor of 10m width each side of the central line of the watercourses. Examination of any obvious features such as tree roots and dense vegetation was carried out, along with careful searches of any overhanging bank vegetation. At some locations it was necessary to carefully examine the banks and tree roots. However, much of the River Clyde in the area is potentially too dangerous (e.g. deep pools and very steep banks) to allow complete access. The presence / absence of otters was determined using field signs of otter activity including otter spraints, footprints, tracks, slides, couches and holts or potential holts (e.g. Bang and Dahlstrom, 2001; MacDonald and Barrett, 1993). All field signs were recorded and mapped.

2.2 Water Vole Survey Methodology

The breeding season for water voles occurs between March and October and this is the time of year when voles are most active. The survey work was completed during this period (on the 23rd May 2006).

Prime water vole sites are generally found along densely vegetated banks of slow flowing watercourses and wetlands where water is present throughout the year. The survey entailed a thorough search of a strip approximately 5m wide on each side of the watercourses and across the wetlands (i.e. ponds, swamps and fens) of the survey area. These areas were checked for signs of water vole activity in accordance with the standard survey methodology (Water Vole Conservation Handbook, Strachan, 1998). Wider strips of riverbank were searched where suitable habitat occurs. However, health and safety issues meant that, as a rule, only the margins of ponds, swamps and fens could be studied. Evidence such as sightings, tracks, droppings and latrines, burrows, lawns and feeding signs were recorded.

2.3 Other Riparian Mammals

In addition to otter and water vole, the presence or absence of brown rat (*Rattus norvegicus*) and American mink (*Mustela vison*) activity was recorded to provide a wider understanding of the use of the survey area by riparian mammals.

3 RESULTS

3.1 Otters

The 2006 survey, and previous searches in 2004 and 2005, recorded no evidence of otter activity on the minor watercourses that pass through the Raith junction area. There was evidence that a number of these small watercourses within the SSSI and Laighlands area had been dredged and widened in recent times. The watercourses and wetlands of the Bothwell Park area show signs of an appreciably high level of siltation. The culverts that carry watercourses under the A725 and M74 are generally impassable to riparian mammals; being silted up, too constricted and long with very high water levels and water flow. The watercourses considered unlikely to be suitable to support fish, and hence are less likely to attract otters searching for feeding habitat.

Consultations with an independent otter specialist, R.Green, reveal that there has probably always been otter territory in the stretch of the River Clyde that lies within the survey area. She noted that in general the 1970s were the low point for otter due to water pollution and, since then, improved water quality management has benefited the species. Otter road casualties have been recorded since 1985 on the M74 south of the Raith junction area, but no exact details were available. Writing from quite recent experience (2000 to 2001) the author of this report has noted several first-hand sightings of otter on the ca. 5 km long stretch of the Clyde that lies downstream of the Raith junction area. It is also pertinent to note that an active otter holt was recorded on the River Clyde approximately 5 km upstream of the Raith junction area by the RSPB Baronshaugh reserve in 2000 (<http://freespace.virgin.net/jimmy.maxwell>).

Fresh otter signs (Figure 10.4 Volume 1) were found during the 2006 survey on the north bank of the River Clyde in the area of Hamilton Low Parks SSSI. A holt with recent diggings and otter footprints was found at the top of the riverbank (NS.71657.57777) partially hidden by a young hawthorn bush. Just downstream of the holt, otter prints were found on a side bar composed of soft silty mud, and otter prints were also recorded on a minor ditch, 200m downstream of the holt (NS.71428.57756). This evidence ties in with otter print evidence that was recorded during previous ecological survey of the Raith junction area in May 2004 (DMRB Stage 2 Environmental Impact Assessment Report, MFJV 2005). The otter print was recorded where the main pond within the SSSI discharges into the Clyde (NS.715.577).

3.2 Water Vole

Consultations with, R.Green, reveal that there are no recent records of water vole from the Raith area, although there are records of the species in five sites that lie at least 5 km from the survey area.

Intensive searches for signs of water voles along watercourses and wetlands of the survey area did not find any evidence of their presence. As noted in the section on otters above, the dredging and widening of many of the area's watercourses and the process of siltation together with the difficulty of mammal movements through the culverts, may help to explain why the survey area has not supported water voles in recent times. Moreover, the presence of American mink and brown rat on the banks of the Clyde is highly deleterious to water voles, as both species predate heavily on them.



4 CONCLUSIONS

Evidence of otter activity has been recorded along the bank of the River Clyde where it passes through the survey area within Hamilton Low Parks SSSI (Figure 10.4). No signs of otter or water vole were found along the minor watercourse, ditches or wetlands across the remainder of the survey area.

It is considered that the Raith junction area does not currently support water vole, even though there are suitable habitats present, including minor watercourses and wetland ponds. It is likely that siltation of culverts, dredging, and an abundance of mink and brown rat continues to create conditions that are inhospitable to water vole.

No evidence of the presence of otters has been recorded over several survey visits between 2004 and 2006. This however does not rule out the possibility that this highly mobile may be intermittently present. The lack of any evidence of couches, holts, spraints etc. does strongly indicate that the survey area is not at present used on a regular basis or for breeding by otter.

The proposed improvements to the junction will not adversely impact on either of these species based on current evidence. Construction activity for the junction improvements will not encroach upon the River Clyde or on the riparian habitat where otter activity has been recorded, with one exception. A road drainage outfall to the River will require to be constructed, the location of which has yet to be determined. Suitable avoidance and river protection measures will be required for this activity, including measures to ensure that disturbance to otters is avoided. Appropriate mitigation for river-related work will need to be agreed with SEPA and SNH in advance of works commencing, including a determination of whether or not a European Protected Species licence is required.

As a precautionary measure, it is recommended that pre-construction surveys for otter and water vole are required to be carried out by the Contractor to ensure that construction activity only progresses on the basis of up-to-date evidence of the presence or absence of these species.



5 REFERENCES

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