

Appendix 10.3b

Update Otter Survey



**OTTER SURVEY
M8 BAILLIESTON TO NEWHOUSE
UPDATED 2007
NORTH CALDER WATER AT SHAWHEAD JUNCTION
REPORT**

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1. INTRODUCTION

Background

- 1.1 Young Associates (Environmental Consultants) Ltd (YA) undertook a survey for otters (*Lutra lutra*) along a section of the North Calder Water in the Shawhead junction area (between the A8 and the A725). The survey was prompted by the need to provide ongoing baseline information to inform the design and possible implementation of the proposed scheme and to update previous surveys of the North Calder Water (and tributaries) carried out by YA from 2004 to 2006 (MFJV 2006).
- 1.2 This report presents the results of an otter survey completed in January 2007. The report also provides outline advice on appropriate protection and mitigation action.

Legal Status of the Otter

- 1.3 The otter is protected in the UK by Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) (WCA). The Nature Conservation (Scotland) Act 2004 also introduces 'reckless' acts into the WCA as an offence in Scotland.
- 1.4 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.
- 1.5 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, within which the survey area is situated, includes an otter SAP.

2. METHODOLOGY

Otter Survey

- 2.1 A full otter survey was carried out on the 31st January 2007 following the methodology as set out in the 'New Rivers and Wildlife Handbook' (NRA/RSPB/RSNC, 1994) and 'Otters and Development' (SNH Publication).
- 2.2 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". 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.
- 2.3 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.
- 2.4 Searches for otters were carried out along the reach of the North Calder Water between the A8 (where it emerges from a tunnel under the road) and just downstream of the tunnel that carries the river under the A725. The North Calder Water's confluence with the Shirrel Burn (just upstream of the B7070) was also searched for otter signs. Searches were completed along the watercourse and along each river bank, covering a corridor of 10m width each side of the central line of the river and further where the habitat was considered particularly suitable. 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 localities the depth and flow of the river meant that it was unsafe to enter the watercourse, however all potential otter bankside habitats were checked and evidence of otter presence recorded.
- 2.5 The presence/absence of otters was determined using field signs of otter activity including otter spraints, footprints, tracks, slides, couches and holts/potential holts. A hand held GPS (Global Positioning System) unit was used to record the grid reference of any otter evidence (accurate to approximately ± 5 metres), although the steepness of the river valley and the prevalence of woodland made GPS usage problematic. All field signs were recorded and mapped and standard key parameters including weather conditions, water levels and habitat suitability were recorded.

Other Riparian Mammals

- 2.6 In addition to the above, the presence or absence of evidence of brown rat (*Rattus norvegicus*) and American mink activity was recorded to provide a wider understanding of the use of the survey area by riparian mammals. Previous surveys indicate that there is a paucity of suitable habitat for water vole (*Arvicola terrestris*) and no signs of its presence along this section of the North calder water have been recorded (MFJV 2006). This species is therefore not considered further in this report.

Limitations

- 2.7 The survey conditions were relatively good for otter with a period of reasonably dry weather of about two weeks preceding the survey. In the experience of the surveyor, the water level of the river was moderately low for the time of year. However, a period of almost continuous wet weather had occurred in December to early January. Therefore, the survey most likely recorded only recent signs of otter activity (and other species activity) and that older signs were lost during high water flow events.

3. RESULTS AND DISCUSSION

- 3.1 Surveying was carried out on the 31st January 2007. Surveying conditions were good with dry and mild weather conditions during the survey. The water level of the nearest gauging station (the River Clyde at Daldowie, where the North Calder Water confluences with the Clyde) was checked prior to survey using the SEPA Internet site and was recorded at normal flow conditions for several days prior to the survey. Therefore, the conditions were deemed to be suitable for otter survey as there was likelihood that otter signs on the riverbank and emergent features in the river channel would be well preserved and readily identifiable.
- 3.2 Signs of otter activity (and brown rat and American mink) recorded during the survey, along with habitat information, are presented as Target Notes (Appendix 1), photographs (Plates 1 to 6) and are illustrated on Figure 1.
- 3.3 The overall length of the North Calder Water that was surveyed was approximately 1.5 km. The stretch of the river surveyed is predominately a naturally meandering watercourse that flows through a narrow, steep-sided river valley, and the section closest to the A8 (approximately 0.5 km in length) is almost gorge-like. In general the riverbanks are very steep (>45° angle) and generally stable with no undercutting. The land that borders the site is pasture farmland with minor areas of woodland. The Shawhead junction on the A8 is located to the west of the survey area. The river has not been subject to engineering except where tunnel-like culverts carry the river under the A8, B7070 and the A725. In historical times extensive industrial activity occurred on the western side of the riverbank, occasionally extending onto the eastern bank in places. The average river width across the survey area was approximately 8m. Due to the turbid nature of the river water, water depth could not be estimated where it exceeded about 0.5m, but water depth >0.5m is uncommon in the section. The river has a high discharge and is classified as “moderate” in terms of water quality (classified by SEPA as B).
- 3.4 The Shirrel Burn is a minor tributary of the North Calder Water classified by SEPA as poor quality (C) and therefore unlikely to contain suitable otter habitat. The Shirrel Burn was not surveyed for otter, except for its confluence with the North Calder Water.
- 3.5 In general, the upstream section of the North Calder Water that was surveyed (Appendix 1) was determined to have high otter potential on the basis of otter habitat assessment, namely; it contains fisheries habitat and the section is secluded and not subject to human disturbance.
- 3.6 During the survey in the section of the North Calder Water up to approximately 0.5 km downstream of the A8, three holts (H1 to H3, Plate 1, 2, 4, 5 and 6), an otter resting place (Plate 3), three sprinting localities (S1 to S3) and three localities with fresh otter footprints (T1 to T3) were present. Apart from holt H2, the holts and otter resting place found during the survey are located several metres above the water level of the river which, in the experience of the surveyor, often contains high water conditions. Hence, otters on the North Calder Water tend to establish holts and refuges well above the normal water level of the river to avoid flooding.
- 3.7 No evidence of otter activity was found in the downstream section of the North Calder Water (Appendix 2). This may be, at least in part, due to a much higher level of human activity in this section compared to the upstream section of the survey area (Appendix 1).

Other notable records

- 3.8 American mink activity (M1 to M3, Figure 1, Appendix 1), including den sites, was detected on the North Calder Water, particularly on the north bank of the river. Mink activity was concentrated within the reach of the river located approximately 300m downstream of the A8, although there were indications of mink activity about 1 km downstream of the A8 (M4, Figure 1, Appendix 2). In general it is likely that otters and mink co-exist within the North Calder Water, with the species having their own niches, i.e. otters feeding on fish and mink depending on a wider range of including water birds, small mammals as well as fish.

4. POTENTIAL IMPACTS

- 4.1 This survey confirms the continued presence of active otter holts within the route corridor, particularly (H2 and H3, Appendix 1) which have been previously identified during earlier survey (MFJV 2006).
- 4.2 The proposed scheme has the potential to disturb otter, and there is therefore a need for a licence under Regulation 44 of the Conservation (Natural Habitats, &c.) Regulations 1994 for European Protected Species. In order to address this issue it will be necessary to consult with the statutory nature conservation organisation, which in this case is SNH, to agree licensing requirements and appropriate mitigation/protection measures prior to the undertaking of any site activities.

5. CONCLUSIONS

- 5.1 The survey recorded signs of fresh otter activity along much of the surveyed section of river, particularly the section of the North Calder Water approximately 500m downstream of the A8, adjacent to the proposed bridge crossing. However, surveys of the North Calder Water carried out in 2004 and 2005 (MFJV 2006) indicate that otter activity extends along the entire length of the North Calder Water in the vicinity of the M8/A8 corridor.
- 5.2 The presence of otter requires appropriate mitigation to be set in place as part of the scheme to address potential habitat loss and disturbance during the construction and operational stages.
- 5.3 Under Regulation 44 of the Conservation (Natural Habitats, &c.) Regulations 1994, a licence to disturb a European Protected Species will be required and appropriate mitigation agreed before the proposed development works can proceed. It will be necessary to consult with SNH and the Scottish Executive in order to initiate the licence application process.

6. REFERENCES

Macdonald, D.W. & Barrett, P. 1993, Collins Field Guide – Mammals of Britain and Europe, HarperCollins.

RSPB, NRA & RSNC, 1994, The New Rivers and Wildlife Handbook.

SNH 2000 Otters and Development. Scottish Natural Heritage, Perth, Scotland, Out of Print.

MFJV 2006, M8 Baillieston to Newhouse Environmental Statement (ecological survey Appendices).

Websites:

M8 Completion Project (Mouchel Fairhurst JV); www.m8completion.com

Scottish Environmental Protection Agency (SEPA); www.sepa.org.uk

Joint Nature Conservation Committee (JNCC); www.jncc.gov.uk

FIGURE 1

PHOTOGRAPHS

PLATES 1 TO 6

APPENDICES
(SURVEY FORMS)