Net Zero Teesside – Environmental Statement

Planning Inspectorate Reference: EN010103

Volume III – Appendices

Appendix 12G: Water Vole and Otter Survey Report

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)

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OGCI Clean Gas Project

Redcar

Water Vole and Otter Survey Report

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Contents

1 Introduction

1.1.1.1 This report presents the results of a water vole and otter survey undertaken on land at Redcar Steel Works, Redcar, North Yorkshire, TS10 5BE. The surveys have been completed to provide supporting information for a planning application for the proposed development of clean gas facility and ancillary infrastructure at the site. The Local Authority for the application site is Redcar and Cleveland Borough Council.

1.1.1.2 The survey area represents a specific portion, within which habitats potentially suitable for water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) are present, of a larger application site. The area surveyed is centred on OS grid reference NZ5750 2400 at an altitude of approximately 7 m above sea level and is positioned on the northern edge of the town of Redcar. The survey area is located 3.8 km to the north-east of Middlesbrough and 8.3 km to the north of Guisborough. The North Sea coast is approximately 1.65 km to the north-east of the site with the River Tees situated approximately 2.13 km to the west. The A1085 is approximately 130 m south of the site and runs from Redcar to Middlesbrough.

1.1.1.3 The aim of the surveys was to determine the ecological baseline with respect to water voles and otters, such that the potential for the proposed development to affect protected/notable species (see Appendix A for legislative context) and habitats can be determined.

2 Methodology

2.1 Survey Area

2.1.1.1 The water vole and otter surveys covered five waterbodies (Referred to herein as survey sections A - E) as shown in Figure 1. Photographs of these water bodies are provided within Appendix B. All five water bodies are within or immediately adjacent to an area of undeveloped land (referred to as "Teardrop") containing suitable habitats for a range of protected flora, immediately adjacent to the now disused Sahaviriya Steel Industries (SSI) Steel Works Site within which key elements of the proposed development will be located. One of the water bodies is within the boundary of the SSI.

2.2 Personnel

2.2.1.1 The water vole and otter surveys were led by Andrew Westgarth MCIEEM CEnv accompanied by a member of the British Gas Security Team with extensive local site knowledge and supported by David Bradley (South Tees Site Company [STSC] Redcar Environmental Manager).

2.3 Water Vole Survey

2.3.1.1 A detailed survey was undertaken on 21st September 2018, within the second half of the breeding season (end of June - October). Water levels during the survey were low and there had been no recent heavy rain or rises in water levels. The weather conditions at the time of the survey are shown in Table 1. The timing of and conditions during the survey can be regarded as optimal.

2.3.1.2 The survey was carried out in accordance with the standard survey methodology[1]. This involved searching for evidence of water voles including latrines, droppings, feeding remains, burrows, lawns, runs, footprints and dead/live animals.

2.4 Otter Survey

2.4.1.1 The otter survey was undertaken concurrently with the water vole survey on 21st September 2018. Water levels during the survey were low and there had been no recent heavy rain or rises in water levels, such that any evidence of otters would not have been washed away by recent flood waters. The survey was undertaken within a sub-optimal time of year for otter surveys (the optimum time being spring when riparian vegetation has not become sufficiently established to present a significant hindrance to visual survey of the banks and water body), however water levels and weather conditions (see Table 1) were favourable.

2.4.1.2 The survey involved searching the 5 waterbodies as shown in Figure 1 for evidence of otter in accordance with current best practice guidance[2]. Evidence of otters can include holts, spraints, feeding remains, otter slides, couches, footprints and dead/live animals.

Table 1. Water Vole and Otter Survey Conditions

Date	21st September 2018
Survey duration	09:00 – 14:00 hrs
Weather conditions	13.5°C – 15.5 °C, dry, overcast, wind Beaufort 1, humidity 62 %.

2.5 Limitations

[1] Strachan, R., Moorhouse, T. and Gelling, M. (2001). Water Vole Conservation Handbook. Edition 3.ISBN-13: 9780954637651.

[2] Natural England and Department for Environment, Food and Rural Affairs (2014) Otters: surveys and mitigation for development projects.

2.5.1.1 In accordance with the site – specific Health and Safety rules established by the site owners, no direct access was available to any of the water bodies. Observations were therefore made from vantage points on the banks of each water body. Visual inspection of the lower banks / shorelines was limited by well – established riparian vegetation in places. This is considered to be a significant limitation to the surveys.

2.5.1.2 However this limitation was less significant with respect to otter surveys as the search methods and bank access available to the surveyors were sufficient to detect otter slides with a high degree of success. Consequently there was a particular focus on searching for these signs of otter activity.

3 Results

3.1 Section A – The Fleet

3.1.1.1 The Fleet is a ditch with a central position at NZ5732 2448. It is a straight ditch approximately 380 m long and 2 m wide orientated southeast – northwest, bending towards the southwest at its western end with a slight curve at the west end where it meets the road.

3.1.1.2 The ditch was holding water at the time of survey with no notable flow noted. The ditch was highly vegetated with aquatic vegetation including marsh marigold *Caltha palustris* and common water starwort *Callitriche stagnalis*. Other aquatic vegetation within the ditch and along the water margin included common reed *Phragmites australis*, *Typha* sp., pendulous sedge *Carex pendula* and false fox sedge *Carex otrubae.*

3.1.1.3 The bank substrate is rocky and includes species such as rosebay *Chamerion angustifolium*, bramble *Rubus fruticosus* agg. and great willowherb *Epilobium hirsutum*.

3.1.1.4 The ditch is surrounded by ephemeral, tall herb grassland and scrub habitats. The presence of fish was considered likely. Fox scat and rat droppings were visible on the banks of the ditch.

3.1.1.5 The habitat within this water body was considered to be of low potential value for water voles and resting otters. No evidence of either species was found in or adjacent to this channel and there was only very limited evidence of the presence of brown rat and bank vole. The substrate throughout the site is “made ground” comprising extremely hard and interlocking industrial waste, ballast and refuse hardcore, making burrow excavation difficult and presenting a high risk of burrow collapse.

3.2 Section B – Power Station Pond

3.2.1.1 The Power Station Pond is a small waterbody located at central grid reference NZ5704 2449. It is an irregular shaped pond approximately 95 m long and 25 m wide at its widest point. There is a small island in the southern section of the pond at NZ5704 2445.

3.2.1.2 The pond was holding water at the time of survey with no notable flow noted.

3.2.1.3 Aquatic vegetation within the pond itself was limited due to wildfowl activity. Other aquatic vegetation along the water’s edge of the pond included large emergent macrophytes such as bulrush *Typha latifolia* and reed canary-grass *Phalaris arundinacea*.

3.2.1.4 The pond is surrounded by grassland and scrub habitat. The presence of fish was considered likely.

3.2.1.5 The habitat within this pond was considered to be of low potential value for water voles as the bank profile was gently sloping (5-15 degree slope) and the depth was less than 1m with extensive very shallow margins. This pond was also considered to be of low potential value for otters. No evidence of either species was found within or adjacent to this pond.

3.3 Section C – Steel House Pond

3.3.1.1 Steel House pond is a large waterbody with a central grid reference of NZ5757 2406. It is an irregular shaped pond approximately 150 m long and 85m wide at its southern end, curving and tapering to a much narrower profile (approximately 7 m wide) at its northern end. A small ditch runs southwards from the railway, passing beneath the road to Steel House before entering the pond at its northern end. Another small ditch runs south-east from Dormanstown, parallel with the A1085 and passing beneath a road, before entering the pond at its southern end. Neither of these sections of ditches were accessible during the survey.

3.3.1.2 The pond was holding water at the time of survey with no notable flow. Aquatic vegetation within the pond itself included *Potamogeton* spp. and yellow flag *Iris pseudacorus*. Other aquatic vegetation along the water's edge included willows *Salix* spp. and alder *Alnus glutinosa*.

3.3.1.3 There is a small island in the southern section of the pond at NZ5761 2402. The pond is surrounded by grassland and mature trees. Waterfowl were present on the pond and fish were observed to be feeding at the water's surface. Rat droppings were visible on the bridge to the south-east of the pond.

3.3.1.4 The Steel House Pond was considered to be of medium potential value for water voles with a greater sustained water depth (in excess of 1 m) than the other water bodies surveyed, and a steep bank profile in places. No evidence of water vole was found within or adjacent to the Steel House Pond.

3.3.1.5 The habitat within Steel House Pond was considered to be of medium potential value for otters due to the substantial areas of bankside vegetated cover in places, which would provide suitable habitat for resting up, and the presence of fish as a food source. No evidence of otters was found within or adjacent to the Steel House Pond.

3.4 Section D – The Mill Race

3.4.1.1 The Mill Race is a curvilinear ditch approximately 150 m long and 1.2 m wide with a central grid reference of NZ5703 2414. At its western end it joins with Railway Channel (Section E).

3.4.1.2 The ditch was holding water at the time of survey with no notable flow observed. The ditch was vegetated with aquatic vegetation dominated by marsh marigold.

3.4.1.3 The banking substrate is rocky and at the time of the survey was colonised by species such as rosebay, bramble and great willowherb.

3.4.1.4 The ditch is surrounded by grassland and scrub habitat. The presence of fish was considered likely.

3.4.1.5 Habitat within The Mill Race was considered to be of low potential value for water voles as the bank profile was gently sloping (5-15 degree slope) and the channel depth was less than 1m with extensive very shallow margins. This pond was also considered to be of low potential value for otters. No evidence of either species was found.

3.5 Section E – Railway Channel

3.5.1.1 The Railway Channel is a straight ditch approximately 560 m in length and 1.2 m wide, with a central grid reference of NZ5696 2411. It is parallel to an old dismantled railway line and is intersected by the Mill Race half way along its length.

3.5.1.2 The ditch was holding water at the time of survey with a slow flow from north to south. The ditch was vegetated with aquatic vegetation dominated by marsh marigold.

3.5.1.3 The banking substrate is rocky and is colonised by species such as rosebay, bramble and great willowherb.

3.5.1.4 The ditch is surrounded by ephemeral, tall herb grassland and scrub habitat. The presence of fish was considered likely.

3.5.1.5 The habitat within the Railway Channel was considered to be of low potential value for water voles and otters. The substrate throughout the site is "made ground" comprising extremely hard and interlocking industrial waste, ballast and refuse hardcore, making burrow excavation difficult and presenting a high risk of burrow collapse. No evidence of either species was found.

4 Conclusions

4.1 Water Vole

4.1.1.1 The habitats within Sections A, D and E (The Fleet, Mill Race and Railway Channel respectively) were considered to be of low potential value for water voles, primarily due to the bank substrate which comprised industrial ballasts and hardcore and was unsuitable for burrowing. Furthermore the local fox (*Vulpes vulpes*) population is likely to be elevated above expected levels due to extremely low levels of human – induced mortality (the site is closed to public access and vehicular traffic and there are no regular fox control measures in place) and the tendency for site staff to provide supplementary food sources specifically aimed at encouraging foxes. On every survey visit a minimum of 6 (and in some cases up to 12) individual foxes were observed in the vicinity of the survey area. It is therefore highly likely that any small mammal populations would be under increased risk of fox predation.

4.1.1.2 The habitat within Section B – Power Station Pond was considered to be of low potential value for water voles as the bank profile was gently sloping (5 - 15 degree slope) and the depth was less than 1m with extensive very shallow (<0.05 m) margins.

4.1.1.3 The habitat within Section C – Steel House Pond was considered to be of medium potential value for water voles with a greater sustained depth of water and more optimal bank profile in places.

4.1.1.4 No evidence of water voles was found within or adjacent to any of the water bodies surveyed.

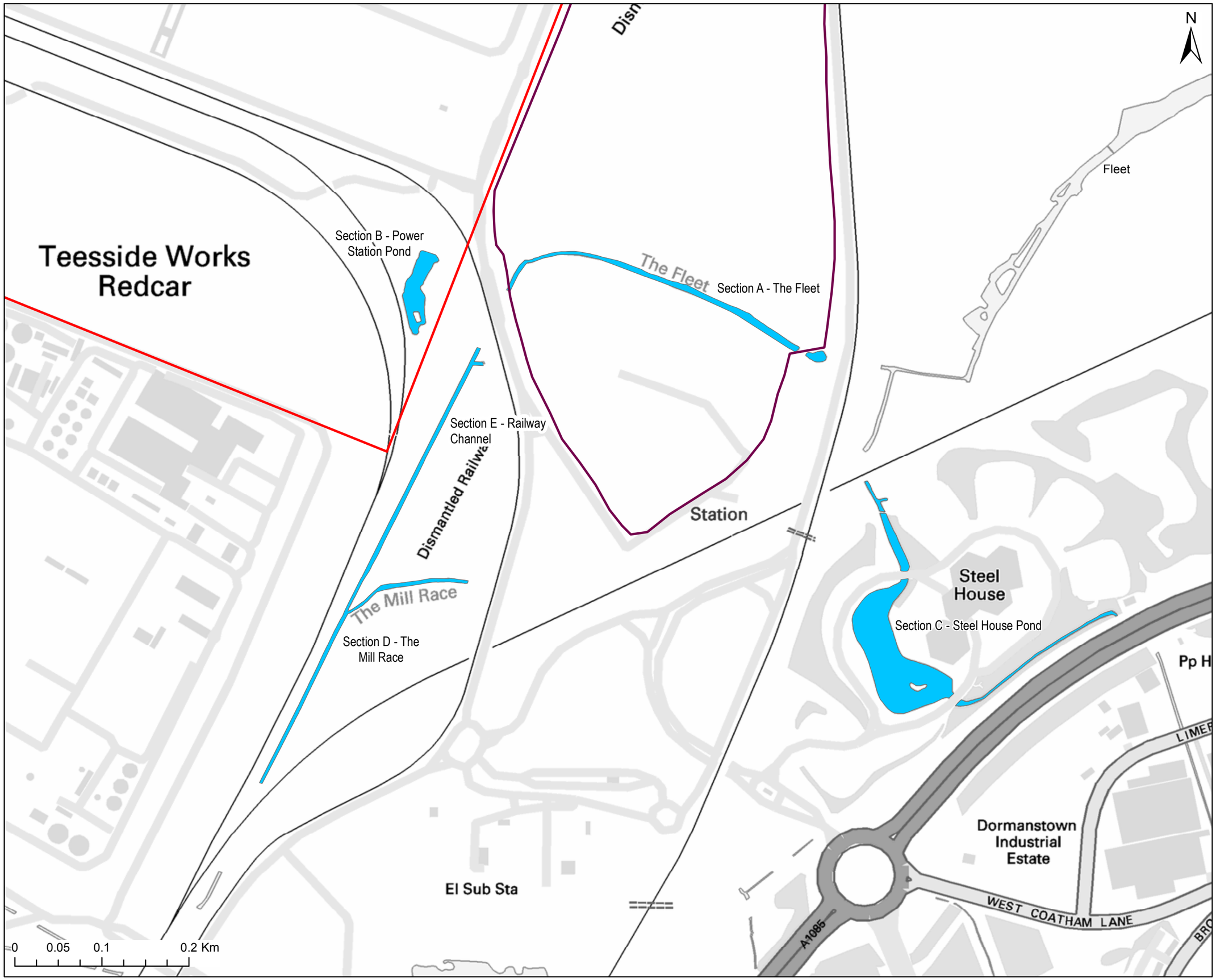
4.2 Otter

4.2.1.1 The habitats within Section A, B, D and E (The Fleet, Power Station Pond, Mill Race and Railway Channel respectively) were considered to be of low potential value for otters, primarily due to the bank substrate which comprised industrial ballasts and hardcore. The rank grass and tall herb bank – side communities observed in these locations are less favourable as lie up areas and for holt protection than banks featuring wooded habitats.

4.2.1.2 The habitat within Section C – Steel House Pond was considered to be of medium potential value for otters with substantial areas of bankside vegetation cover in places.

4.2.1.3 No evidence of otters was found within or adjacent to any of the water bodies surveyed.

Figures



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Project Title:

CLEAN GAS PROJECT

Client:

OGCI
CLIMATE INVESTMENTS

Location Inset:

LEGEND

- Waterbodies To Be Surveyed
- SSI Boundary
- Teardrop Boundary

Copyright:

AECOM Internal Project No:

60559231

Drawing Title:

SURVEY AREA

Scale at A3: 1:4,000

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FIGURE 1			01
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AG	RW	RW	12/11/18

Appendix A. Legislation and Conservation Context

Otter

Otter receives full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. This legislation, when taken together, results in a level of protection that prohibits the intentional, deliberate or reckless:

- killing, injuring, taking or disturbance of otters;
- damaging, destroying or obstructing any place used by otters for the purposes of breeding, sheltering or protection; and
- selling and/ or advertising for sale an otter or any part thereof.

Otter is a species of principal importance for nature conservation in England listed on Section 41 of the NERC Act 2006.

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Water Voles

Water vole is a fully protected species under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and is afforded protection under Section 9 parts 9(1)(2)(4) and (5) of the Act, making it an offence to:

- intentionally kill, injure or take these species;
- possess or control live or dead individuals of these species or their derivatives;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for their shelter or protection;
- intentionally or recklessly disturb these species whilst occupying a structure or place of shelter used for that purpose;
- sell these species or offer or expose for sale or transport for sale; and
- publish or cause to be published any advertisement which conveys the buying or selling of this species.

It is generally regarded that a place of shelter or protection includes a network of active burrows and/or any nests that have been constructed within the burrow system or above ground amongst dense vegetation.

A licence is required from Natural England to intentionally damage or destroy burrows or displace water voles from their burrows for lawful development. There is no provision for licencing development or other construction activities under the Wildlife and Countryside Act. Such works should therefore be undertaken under a conservation licence. This licence requires demonstration of a conservation benefit for water voles and this benefit can be achieved by delivering a net gain in the amount of habitat available to the water vole population.

Water vole is included as a Priority Species under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and is also included as a UK and Local Biodiversity Action Plan (LBAP) priority species.

Appendix B. Photographs

Photo 1. Section A – The Fleet culvert – facing east.

Photo 2. Section B – Power Station Pond – facing east.

Photo 3. Section C – Steel House Pond – facing north.

Photo 4. Section D – The Mill Race – facing north-east.

Photo 5. Section E – The Railway Channel.