

# **A585 Windy Harbour to Skippool Improvement Scheme**

**TR010035**

## **6.8.7 ES Appendix 8.7: Otter Technical Appendix**

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

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Infrastructure Planning

Planning Act 2008

The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009

**A585 Windy Harbour to Skippool  
Improvement Scheme**  
Development Consent Order 201[ ]

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**ES APPENDIX 8.7: OTTER TECHNICAL APPENDIX**

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## **1 INTRODUCTION**

### **1.1 Aims and Objectives**

- 1.1.1 This report provides the findings of the Eurasian otter *Lutra lutra* surveys undertaken in support of Highways England's proposed development of the A585 between Windy Harbour and Skippool (hereafter referred to as 'the Scheme').
- 1.1.2 The aims and objectives of this study were to:
- Identify the presence of otter using suitable habitats within the study area
  - Identify any otter resting sites
  - Evaluate the habitats present with regards to otter
- 1.1.3 The need for mitigation or compensation, and the identification of potential opportunities to enhance the existing ecological baseline, are not included within this report, but are discussed in full in Chapter 8: Biodiversity (document reference TR010035/APP/6.8).

### **1.2 Report Structure**

- 1.2.1 This report has been subdivided into the following sections:
- Section 1 and 2: provide the aims and objectives with an overview of the assessment methodologies
  - Section 3: presents the findings of the desk study and otter surveys
  - Section 4: summarises the results and provides a conclusion of the survey findings.
  - Section 5: references

## 2 METHODOLOGY

### 2.1 Introduction and Guidelines

- 2.1.1 The scope of the otter surveys was designed with reference to good practice guidance: Chanin (2003) Monitoring the Otter (*Lutra lutra*), survey methodology; and, Design Manual for Roads and Bridges (DMRB) Volume 10 Environmental Design and Management, Section 4 Nature Conservation, Part 4 HA 81/99, Nature Conservation Advice in Relation to Otters.
- 2.1.2 Otter range and distribution in the UK is undergoing a period of expansion (Mason & Macdonald 2004); therefore, it is important to identify aquatic, riparian and terrestrial habitats currently used by otter and those with suitability for future use by otter.
- 2.1.3 The study sought to identify locations of actual and potential holts (underground resting sites), couches (above-ground resting sites), foraging areas and linear routes that may be important for movement along and between watercourses.
- 2.1.4 The desk study area (the 'Desk Study Area') and field survey area, described herein, were determined during the options phase, at which time multiple Scheme options were under consideration. This report therefore, in some instances, contains information outside of the various study and survey areas discussed herein.

### 2.2 Desk Study

- 2.2.1 Table 2-1 summarises the sources of information utilised during the desk study and the information that was obtained.

Table 2-1: Desk Study Data Sources

Source	Information obtained
Ordnance Survey (OS) mapping and online aerial imagery	Habitats present and their context within, and connectivity to the wider area. Ecological features potentially not evident on the ground during field surveys. Potential barriers to animal movements (such as road networks, built development and major watercourses).
Lancashire Environmental Record Network (LERN)	Otter records within approximately 1km of the Draft Order Limits
National Biodiversity Network Atlas (NBN): <a href="https://nbnatlas.org/">https://nbnatlas.org/</a> (last accessed 16/02/2017)	Records of otter within approximately 1km of the Draft Order Limits. Data protected by a Creative Commons Zero (CC0) or Creative Commons with Attribution (CC BY) licence was used within this report.
Wyre Council online planning application search – <a href="http://publicaccess.wyre.gov.uk/online-applications/">publicaccess.wyre.gov.uk/online-applications/</a>	Habitat information and otter records, within approximately 1km of the Draft Order Limits, submitted in support of planning applications to Wyre Borough Council.
A585 Windy Harbour Junction Improvements: Extended Phase 1 Habitat Survey (Mouchel, 2013)	Habitat information and otter records for land within 500m of the Windy Harbour Junction at the eastern end of the Scheme.



## 2.3 Surveyor Experience

2.3.1 All survey work was undertaken by suitably experienced surveyors, who as a minimum could identify:

- Otter field signs
- Differences between signs of otter and other species with which it can be confused, including mink
- Otter behaviour and habitat requirements

2.3.2 No licence was required to conduct the otter surveys as care was taken to avoid disturbance of potential couches and holt locations. No survey that could result in disturbance of otter, or their places of rest was undertaken.

## 2.4 Defining the Survey Area

2.4.1 The results of the Extended Phase 1 Habitat survey (Appendix 8.1 Phase 1 Habitat Report (document reference TR010035/APP/6.8.1)), desk study data, OS mapping and aerial photography were used to identify all watercourses, water bodies and riparian habitat, such as reedbed, within an approximate 500m buffer of the Draft Order Limits (hereafter referred to as the 'Survey Area').

## 2.5 Survey Methods

2.5.1 Watercourses and waterbodies (hereafter collectively referred to as 'watercourses') (Figure 8.7.1 at Annex B) were subject to: an otter habitat assessment – to determine their suitability to support otter; and, otter survey – to identify evidence of otter presence.

## 2.6 Habitat Assessment

2.6.1 Habitat assessments comprised a walkover of each watercourse to record the following information:

- Sketch map of the application site
- Proximity to the Draft Order Limits
- Presence of significant barriers to dispersal and movement through the territory, which may not have been identified during the determination of the Survey Area
- Adjoining land use
- Signs of recent habitat damage
- Level of disturbance
- Availability of food sources
- Features of watercourse or waterbody (bank profile, depth, water flow rate, channel width)
- Connectivity with other areas of suitable or sub-optimal habitat
- Pollution

## 2.8 **Otter Survey**

2.8.1 The otter survey comprised a survey of watercourses to record otter field signs, including:

- Holts and potential holt sites
- Couches
- Spraints (droppings), which fall into three categories of dried fragmented; dried intact; and, not-fully-dry (Chanin, 2003)
- Tracks/footprints
- Silt or sand heaps
- Slides

2.8.2 Evidence of mink was also searched for during the otter survey.

2.8.3 Where possible, the survey was undertaken from within the watercourse or waterbody to allow for a close search for signs of otter.

2.8.4 All field signs were geotagged with GPS-derived grid coordinates accurate to less than 5m. Where topography and vegetation structure may have reduced the accuracy of records below this level, this potential constraint was noted.

## 2.9 **Remote Monitoring**

2.9.1 A Spy Point BF10hd remote, motion-activated camera trap was installed at an entrance of a suspected holt on the Main Dyke (Grid Reference: SD 35662 40298; (Figure 8.7.1 at Annex B). The camera was positioned on the east bank facing the potential holt. The camera was left in place from 4 October 2017–16 October 2017.

## 2.10 **Survey Programme and Effort**

2.10.1 Two otter surveys were conducted on each watercourse; the first was undertaken during the period 3–6 April 2017 and the second was undertaken during the period 21–25 August 2017. Surveys were not undertaken during or following periods of heavy rainfall, as field signs can be washed away.

## 2.11 **Survey Limitations**

2.11.1 Land access to the north west of the Survey Area was not available. Therefore, Ditches 1, 2, 3, 5 and 6 could not be surveyed (Figure 8.7.1 at Annex B). These ditches are used for agricultural drainage and are not connected to any major watercourses such as the River Wyre. Therefore, they are unlikely to provide suitable habitat for otter and their exclusion from the survey is unlikely to affect conclusions drawn within this report.

### 3 RESULTS

#### 3.1 Desk Study

- 3.1.1 No designated sites notified for otter and no records of otter were identified.

#### 3.2 Habitat Assessment

- 3.2.1 Otter signs were present along the Main Dyke and Drain 29 (see Figure 8.7.1 at Annex B). Detailed habitat assessment results for these 2 watercourses are presented in Annex B.

#### 3.3 Otter Survey

- 3.3.1 No evidence of mink was recorded on any watercourse within the Survey Area.

##### Main Dyke

- 3.3.2 An otter print with claw marks was recorded at the foot of the headwall steps by the tidal gates on the west bank of the north side of Mains Lane Bridge. In addition, a not-fully-dry otter spraint was found on the opposite side of the Mains Lane Bridge to the south, located on woody debris at water level on the west bank. These field signs are both within the Scheme footprint.
- 3.3.3 A second otter print was recorded 230m south of the Scheme, in a muddy-clearing underneath a hawthorn *Crataegus monogyna* midway up the east bank, opposite the last house on the housing estate.
- 3.3.4 A potential otter holt was located 30m south of the second otter print. Nonetheless, this location was observed to completely flood due to fluctuating water levels, which means that this location is very unlikely to be used as a holt. A camera trap installed to monitor the potential holt recorded no signs of otter activity; therefore, the potential holt was discounted from further assessment.
- 3.3.5 An otter print was located within the Scheme footprint under the bridge at the junction of Garstang Road and Garstang Road East.

##### Drain 29

- 3.3.6 A potential otter run was recorded on both sides of the banks at the culvert head to the south and a dried intact otter spraint was located on the west bank.
- 3.3.7 A second not-fully-dry otter spraint was found on woody debris, angled in to the channel, to the north of a land-bridge culvert, approximately 130m north of the A585.
- 3.3.8 Due to the separation distance between the otter signs on Drain 29 and the limited potential for disturbance in these areas as a result of the Scheme, further surveys were not undertaken.

## **4 CONCLUSION**

- 4.1.1 The watercourses within the Survey Area did not provide good breeding or foraging habitat for otter. However, watercourses adjacent or connected to the River Wyre, such as Main Dyke and Drain 29 where presence was confirmed, were considered suitable commuting habitat for otter.
- 4.1.2 Opportunities for dens and resting sites on along watercourses were limited and neither of these features were identified during the surveys. The limited availability of suitable of den and resting sites likely restricts the usage of each watercourse by otter.
- 4.1.3 Aside from the Main Dyke, Drain 29 and directly adjoining watercourses, the watercourses within the Survey Area were sub-optimal for otter. This was primarily due to: their small size; a lack of potential sites for riverside holts; their low likelihood of supporting prey species; or, they did not provide connectivity to suitable habitats.

## 5 REFERENCES

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

Highways Agency (2008). *Design manual for roads and bridges: Vol. 11 Environmental assessment. Section 2 Environmental impact assessment. Part 5 Assessment and management of environmental effects. HA 205/08.*

Highways Agency (2010). *Interim Advice Note 130/10. Ecology and Nature Conservation Criteria for Impact Assessment. IAN 130/10.*

Mason CF. Macdonald SM (2004). *Growth in Otter (Lutra lutra) Populations in the UK as Shown by Long term Monitoring and M. AMBIO: A Journal of the Human Environment 33 (3), 148-152.*

## 6 ABBREVIATIONS

Term	Meaning/Definition
CC0	Creative Commons Zero
CC BY	Creative Commons with Attribution
DMRB	Design Manual for Roads and Bridges
GPS	Global Positioning System
LERN	Lancashire Environment Record Network
NBN	National Biodiversity Network
OS	Ordnance Survey

## **ANNEX A – HABITAT ASSESSMENTS**

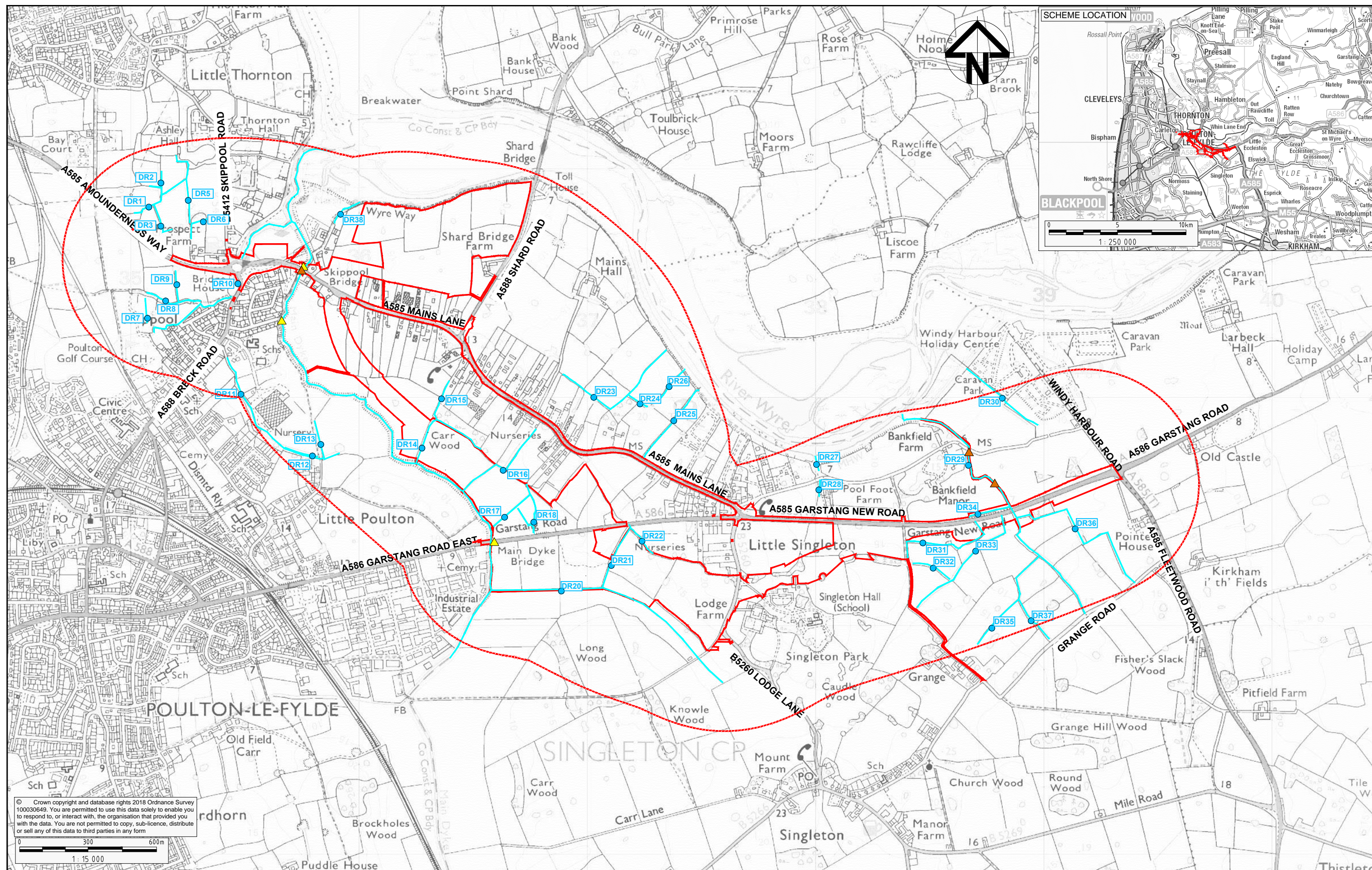
Waterbody	Comment
Main Dyke	<p>Main Dyke was an outflow water channel with tidal gates at the confluence with Skippool Creek and a second gate system at the bridge under Mains Lane regulating the water flow. In the most northern section between Skippool Creek and Mains Lane, the first 20m section comprised lower banks of man-made concrete reinforcement. This reinforcement became a muddy lower bank with ruderals and bramble on the west bank and muddy/rocky lower slopes on the east bank. The upper bank on both sides comprised willow species <i>Salix</i> sp. and riparian trees. At the bridge under Mains Lane the water channel was culverted through a tidal gate system to the north of the bridge. To the south of the bridge, the culvert emptied into a water channel running alongside a public footpath, a housing estate and a school. The bank was made up of hawthorn scrub, garden escapees and riparian vegetation. The east bank mirrored the west bank vegetation. The adjacent land zone to the east comprised a poor semi-improved grassland field used to grow silage. The west bank adjacent land zone becomes a poor semi-improved grassland field used to grow silage to the south of the school grounds. This habitat continued south for the remaining section of the channel, approximately 1.35km, to the A586 (Garstang Road East). The road bridge over the channel allowed the Main Dyke to continue running through grazing pasture to the east and Bracewell Avenue Industrial Estate to the west. At this section, the upper west bank was dominated by willow, the mid-bank was heavily dominated by bramble <i>Rubus fruticosus</i>, with scrub comprised of occasional hawthorn and dog rose <i>Rosa canina</i> with nettle <i>Urtica dioica</i> in abundance on the lower bank.</p>
29	<p>Drain 29 was a tidal creek running off the saltmarsh of the River Wyre to the north east of the Survey Area. Through this section, the water runs into a man-made channel. The water channel continued as a land drain alongside a residential property to the west and a former land fill site to the east. In this section, the water level was observed at a shallow depth of 20cm, the lower banks were of exposed mud and free of vegetation. The upper bank vegetation was dominated by common reed. A 25m stand of greater reedmace <i>Typha latifolia</i> L. was present towards the southern edge of the landfill. The water channel passed through a culvert and underneath the road out on to the second former landfill field to the south.</p>



## **ANNEX B – DRAWINGS**

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							<b>KEY:</b> <div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Draft Order Limits 5 Otter Survey Area Watercourses Otter Spraint Otter Print</div></div>			<div><div><div></div><div></div><div></div></div><div>highways england</div></div>			<div><div>Project</div><div>A585 WINDY HARBOUR TO SKIPPOOL IMPROVEMENT SCHEME</div></div> <div><div>Drawing Title</div><div>ENVIRONMENTAL STATEMENT REGULATION 5(2)(a) OTTER REPORT: OTTER SURVEY RESULTS</div></div>			<div><div>Status</div><div>S8 - DCO SUBMISSION</div></div> <div><div>Revision</div><div>0</div></div> <div><div>Scale</div><div>1:15 000 @ A3</div></div> <div><div>Date</div><div>OCT 2018</div></div> <div><div>Drawn By</div><div>J.NORMAN</div></div> <div><div>Checked By</div><div>K.BURROWS</div></div> <div><div>Approved By</div><div>N.HENDERSON</div></div> <div><div>PINS No.</div><div>TR010035</div><div>FIGURE A8.7.1</div></div> <div><div>Drawing number</div><div>HE PINS</div><div>Originator</div><div>Volume</div><div>Location</div><div>Type</div><div>Risk</div><div>Number</div><div>HE548643-A585-EAC-SZ_GN000-DR-L-3050</div></div>		
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