

# Scotland England Green Link 2 - English Onshore Scheme

Environmental Statement:  
Volume 3

Appendix 7C: Water Vole and Otter Survey  
Report

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For: National Grid Electricity Transmission

## Quality information

<b>Prepared by</b>	<b>Checked by</b>	<b>Verified by</b>	<b>Approved by</b>
Craig Sandham Senior Ecologist	Clare Mcilwraith Associate Ecologist	Tom Cramond Principal Environmental Consultant	Michael Williams ESIA Technical Director

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# Appendix 7C Riparian Mammals Survey Report

## 7C.1 Introduction

### 7C.1.1 The Scheme

AECOM was instructed by National Grid to conduct water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) surveys between Fraisthorpe, East Riding of Yorkshire (approximate OS grid reference TA 16835 63441) and Drax, North Yorkshire (approximate Ordnance Survey (OS) grid reference SE 66811 27434). The surveys were undertaken as part of the Phase 2 protected species surveys to inform the Ecological Impact Assessment (EclA) of the Scotland to England Green Link 2 (SEGL2) project (hereafter referred to as the 'EOS'). The EOS is described in detail in **Chapter 3: Description of the English Onshore Scheme** of the Environmental Statement (ES).

National Grid has proposed to construct a High Voltage Direct Current (HVDC) Link from Peterhead in Aberdeenshire, Scotland to Drax in North Yorkshire referred to as SEGL2.

SEGL2 is a major reinforcement of the electricity transmission system which will provide additional north-south transmission capacity across transmission network boundaries ensuring that green energy is transported from where it is produced to where it is needed. The English Onshore Scheme, i.e. the components of SEGL2 proposed terrestrially in England, will include an underground cable which transition from the subsea cable route at the landfall site at Fraisthorpe and travel for approximately 69 km underground to a new proposed converter site at Drax, North Yorkshire.

The cable route will be buried underground using a temporary working width of 40 m, in the centre of which will be a 1.5 m wide and 1.5 m deep trench into which a pair of cables will be laid. At many watercourse crossings Horizontal Directional Drilling (HDD) methods are proposed for the installation of the cables to avoid open-cutting key infrastructure routes (such as railways, A614, A1034, A1079 and A165 as well as several B roads and other minor roads) and watercourses, including the River Ouse, River Foulness and River Hull (as well as other streams and minor drains). As part of the English Onshore Scheme, a new permanent converter station is proposed to the east of the existing Drax Power Station. Suitable habitat for water vole was identified during the initial scoping exercise, Extended Phase 1 Habitat Survey and during subsequent ecology surveys conducted between May 2021 and September 2021. Based upon the findings of the desk study and habitat assessments, water vole and otter surveys were recommended to determine the status of these legally protected species within the planning application boundary. .

Water vole and otter surveys were undertaken during 2021 to determine the status of these legally protected species within the Survey Area (as defined below). The results of the 2021 surveys are provided in this report.

### 7C.1.2 Defining the Study and Survey Areas

Within this report the following terminology is used when referring to the geographic areas within which the water vole and otter surveys have been conducted:

- Study Area – the ecological desk study was undertaken based upon the planning application boundary plus a 1 km buffer to establish the presence of protected species records (including water vole and otter). This area has been termed as the 'Study Area'.
- Survey Area – the Survey Area is focussed on the extent of the EOS; namely the planning application boundary. The survey area includes all watercourses which are located entirely or partially within the planning application boundary. The survey area has evolved over the design stage and has been informed by ongoing Extended Phase 1 habitat surveys undertaken throughout 2021. The scope and extent of these surveys supplemented by the desk study information and focussed habitat assessments has defined the survey area for water vole and otter. The survey area includes the planning application boundary up to 250 m each side of where a watercourse is crossed by the EOS (500 m stretch of each watercourse).

- For the purpose of consultation and presenting results, the EOS follows the sub-divisions applied to the EIA, and as such is split into four geographic sections as detailed in Table 1 below.

**Table 1 Section Numbers and areas covered of the EOS**

Section Number	Area covered by Section	Watercourses located within the Section
1	Landfall at Wilsthorpe to east of B1248 near Bainton	WC1 – WC40; WC99 – WC117; WC126 – WC132 <sup>1</sup>
2	East of B1248 to Cliffe Road south of Market Weighton	WC41 – WC45; WC118; WC133
3	Cliffe Road to the River Ouse at Long Drax	WC46 – WC87, WC119 – 122; WC134 – WC140
4	Long Drax to Drax Power Station (Including proposed converter station site).	WC88 - WC98

### 7C.1.3 Survey Aims and Objectives

The aim and objectives of the survey work and the subsequent report presented here were to:

- Review existing ecological data to identify any records of water voles and otter within the Study Area;
- Assess watercourses<sup>2</sup> within the Survey Area for their suitability for water vole and otter;
- Evaluate the survey results to determine the nature conservation value of any water voles identified within the survey area; and incidentally record the presence of other riparian mammals through their field signs, where present (notably otter, mink (*Neovison vison*) and brown rat (*Rattus norvegicus*)).
- Determine the status (presence/likely absence) of water vole and otter within the Survey Area in order to inform the (EclA) for the EOS.

Relevant legislation and planning policy relating to otter and water vole is detailed in Annex 1.

## 7C.2 Methodology

### 7C.2.1 Desk Study

An initial data search was conducted in 2021 to support the initial Scoping stage of the EOS. This search requested records of water voles and other riparian mammals (e.g. otter and mink) within the Study Area from the North and East Yorkshire Ecological Data Centre (NEYEDC).

The desk study was restricted to data within the last 10 years (post 2011), so that the data collated would be more likely to reflect the current (rather than historic) baseline conditions associated with the Study Area.

### 7C.2.2 Field Survey

A total of 141 watercourses (including rivers, drains, becks and canals) and 1 pond were initially classified as requiring assessment for their suitability for water vole and/or otter from consultation of online aerial photography and mapping resources in tandem with Extended Phase 1 Habitat Surveys for the EOS. These watercourses were mapped in an ESRI ArcGIS layer in the Field Maps data collection app, based on Ordnance Survey Mastermap products.

Surveys were undertaken between June – October 2021 which encompasses the part of the optimal window for water vole survey (April to September) enabling the identification of breeding territories as

<sup>1</sup> Note that there is no WC127.

<sup>2</sup> The term 'watercourse/watercourses' is used in this report is being applied as a generic term to include both naturalise running water e.g. rivers, streams, becks and modified/man-made linear water features e.g. canals, drains, drainage ditches.

well as being suitable time for surveying for otter. Although surveys for otter can be undertaken all year round, they are usually limited by vegetation cover or prevailing conditions. Surveys for water vole continued beyond the period considered optimal as weather conditions were deemed to still be suitable for identification of field signs.

Surveys were conducted in weather conditions suitable for undertaking water vole surveys i.e. dry, mild, with no recent heavy rain. Occasionally surveys were undertaken in light rain, or recent light rainfall and it was considered that field signs of water vole or otter would not be unduly affected.

All wet watercourses were included in the surveys, any watercourse that was considered unsuitable at the time of the survey (e.g. lacking suitable vegetation, water depth, vegetation structure) was scoped out from further assessment.

Surveys involved searching both banks of watercourses within the Survey Area for signs of water vole and otter presence. The search focussed on stretches of up to 500 m (up to 250 m in either direction from the point where the EOS crosses the watercourse), with searches taking place up to 2 m from the water's edge including in-channel survey where safe for the surveyor to do so.

Water vole and otter signs were recorded using pre-loaded forms (developed from Ref 6) on a mobile tablet device using ESRI ArcGIS Field Maps mobile GIS platform. Records included vegetation present, bank type, water depth and any other characteristic suitable for water vole and/or otter presence.

Incidental records of water vole and otter were also recorded from landowners and members of the public.

### 7C.2.2.1 Water Vole Field Signs

Water vole surveys were undertaken following guidance provided in the Water Vole Conservation Handbook (Ref 6) and The Water Vole Mitigation Handbook (Ref 7). Depending on access, watercourses were searched for signs up to 250 m up and downstream of the centreline of the route. Water vole field signs that were searched for during the survey include:

- Faeces – these are 8-12 mm long and 4-5 mm wide, varying in colour from green to black, and odourless with a putty-like texture;
- Latrines – found throughout the territory, often comprising a pile of flattened droppings, with fresh droppings on top;
- Feeding stations – comprise a neat pile of chewed feeding remains;
- Burrows – these are typically wider than they are high, with a diameter of 4–8cm, and are usually located along the water's edge;
- Lawns – around burrows there is often an area of grazed vegetation, surrounded by taller vegetation, these are most often produced when the female is nursing young;
- Nests – these comprise a large ball of shredded material, often woven into the bases of rushes and reeds, and are normally found in areas where the water table is high, such as wetlands;
- Footprints – as with other rodents, the footprints of the fore foot, show four toes in a star arrangement, with the hind foot showing five toes. The size of footprints for the hind foot is 26-34 mm;
- Runways – these are low tunnels within the vegetation; and
- The presence of water vole can also be confirmed by sightings and from the characteristic 'plop' of the water vole entering the water, which acts as a warning to other voles.

Water vole watercourses were categorised using the information provided in Table 3 below.

**Table 2 Summary of categories for water vole presence, potential presence and absence**

Water vole results category	Data collected to delineate category
<b>Present</b>	Confirmed identification of evidence of a combination of field signs (e.g. latrines and feeding stations) and/or recent confirmed desk study record.

Water vole results category	Data collected to delineate category
<b>Potentially present</b>	Evidence of singular field sign during survey (e.g. burrow, feeding remains) or a watercourse which is directly connected to one where water voles have been confirmed.
<b>Likely absent</b>	No field signs or data from local reliable sources. Local habitat conditions suggest water voles are absent (e.g. no suitable habitat or connectivity to known water vole watercourses).
<b>Scoped out</b>	Lack of suitable habitat (e.g. dry and poorly vegetated ditch) to support water vole.
<b>Assessed as suitable, but not surveyed</b>	Initial field appraisal has identified suitable habitat, but further survey has not been undertaken.
<b>Not accessed</b>	Land access not available to conduct habitat appraisal or detailed survey.

### 7C.2.2.2 Otter Field Signs

Otter surveys were undertaken following guidance provided in the Environment Agency's Fifth Otter Survey of England 2009-2010 (Ref 2) and Monitoring the Otter (Ref 3 and Ref 4). Watercourses were searched for signs 250 m up and downstream of the centreline subject to access constraints. Otter field signs that were searched for during the survey include:

- Spraints – These are usually black in colour and smell of fresh cut hay. The otter uses spraints to define its home range, and are located at prominent points such as on boulders and ledges;
- Anal jelly;
- Footprints – The otter has five toes that are webbed. The footprints are very characteristic and easy to recognise. Each print is around 50-60 mm wide;
- Paths found along river banks;
- Flattened vegetation;
- Holts and 'couches' - Holes in the riverbank, hollow trees, cavities amongst tree roots, piles of rocks, wood or debris may all be used as holts or couches; and
- Feeding remains.

The presence and distribution of these signs can be used to assess the likely importance of the watercourse for the local otter population.

Otter watercourses were assigned a category according to the criteria set out in **Error! Reference source not found.**4 below.

**Table 3 Summary of categories for otter presence, potential presence and absence**

Otter results category	Data collected to delineate category
<b>Present</b>	Evidence of otter field signs recorded including spraints, footprints, holts and couches (resting place).
<b>Potentially present</b>	Watercourse is directly connected to a watercourse where otter signs have been found. Evidence from data search combined with an assessment of the watercourse and surrounding habitat suggest otter may be present.
<b>Likely absent</b>	No field signs or data from local reliable sources. Local conditions suggest otter are absent (e.g. no suitable habitat or connectivity to known otter watercourses).
<b>Scoped out</b>	Lack of suitable habitat (e.g. dry and poorly vegetated ditch).
<b>Assessed as suitable, but not surveyed</b>	Initial field appraisal has identified suitable habitat, but further survey has not been undertaken.
<b>Not accessed/ surveyed</b>	Landowner permission not forthcoming for survey work.

## 7C.2.3 Evaluation Methodology

The method of evaluation used has been developed using guidance from the Guidelines for Ecological Impact and Assessment in the UK and Ireland (Ref 1). The publication gives advice on scoping and carrying out ecological assessment and to place the appraisal in the context of relevant policies. Data received through consultation, desk-based studies and field-based surveys are used to allow relevant ecological features (i.e. designated sites, ecosystems, habitat and species) of importance (or potential value) to be identified, and the main factors contributing to their value described and related to available guidance.

This evaluation methodology is not specific to determining the value/importance of water vole populations; however, it has been developed by CIEEM to use as a framework to evaluate all ecological features (habitats, species and ecosystems) within EclA and which may be influenced by a Proposed Project. In the absence of water vole specific guidance, the CIEEM methodology is applied.

Ecological features; in this case legally protected species i.e. water vole, may be important for multiple different reasons e.g. rarity in a particular geographic context; role in habitat connectivity; or a species on the edge of their range. Relevant reasons for which an ecological feature is important are described and considered in order to assign each relevant ecological feature an overall value in accordance with geographical frames of reference shown below in Table 5.

**Table 4 Geographical frame of reference for evaluation with examples of criteria.**

Level of value	Examples of criteria
<b>International (European)</b>	<p>Very High importance and rarity, international scale and limited potential for substitution:</p> <ul style="list-style-type: none"> <li>• An internationally designated site or candidate site (Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar Site, Biogenetic reserve).</li> <li>• Internationally significant and viable areas of a habitat type listed in Annex 1 of the Habitats Directive.</li> <li>• Regularly occurring globally threatened species.</li> <li>• Any regularly occurring populations of internationally important species that are rare or threatened in the UK or of uncertain conservation status.</li> <li>• A regularly occurring significant population/number of any internationally important species.</li> </ul>
<b>National (UK or England)</b>	<p>High importance and rarity, national scale and limited potential for substitution:</p> <ul style="list-style-type: none"> <li>• A nationally designated Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) or a discrete area which meets the published selection criteria for national designation irrespective of whether it has yet to be notified.</li> <li>• A viable area of a UK priority habitat or smaller areas of such habitat that is essential to maintain the viability of a larger whole.</li> <li>• A regularly occurring significant population/number of any nationally important species i.e. listed on the Wildlife and Countryside Act 1981 (as amended).</li> <li>• Any regularly occurring population of a nationally important species that is threatened or rare in the county or region.</li> <li>• A priority habitat or species featured on the UK Post-2010 Biodiversity Framework.</li> </ul>
<b>Regional (Yorkshire and the Humber)</b>	<p>Habitat which are essential to maintain the viability of the larger whole.</p> <ul style="list-style-type: none"> <li>• Regional/County significant and viable areas of habitat identified as being of regional value in the appropriate Natural England Natural Area.</li> <li>• Any regularly occurring significant population of a species listed as being nationally scarce, or on the North, East or South Yorkshire Priority List or the Local BAP or relevant Natural Area on account of its regional rarity or localisation.</li> <li>• Significant populations of a regionally/county important species (those listed on the North, East or South Yorkshire Priority List).</li> </ul>



Level of value	Examples of criteria
	<ul style="list-style-type: none"> <li>Sites such as County Wildlife Sites (CWS) or Sites of Importance for Nature Conservation (SINC's) selected on Regional/County criteria.</li> <li>Any regularly occurring significant population that is listed in a Local BAP on account of its rarity or localisation.</li> </ul>
<b>County (East Riding of Yorkshire/Selby)</b>	<p>Low or medium importance and rarity, borough scale:</p> <ul style="list-style-type: none"> <li>Areas identified in a Local BAP or in the relevant natural area profile.</li> <li>Sites/features that are scarce within the locality or which appreciably enrich the local area's habitat resource.</li> <li>A diverse and/or ecologically important valuable hedgerow network.</li> <li>A significant population of a locally important species i.e. listed in the Local BAP.</li> <li>Species populations of local importance.</li> </ul>
<b>Local (Study Area and 2km buffer)</b>	<p>Very low importance and rarity, local scale:</p> <ul style="list-style-type: none"> <li>Areas of habitat considered to appreciably enrich the habitat resource within the study area itself.</li> <li>A small population of a species of conservation concern i.e. listed in the Local BAP.</li> </ul>
<b>Negligible</b>	<p>Negligible importance and rarity, local scale:</p> <ul style="list-style-type: none"> <li>A degraded/impooverished example of a common or widespread habitat in the local area.</li> <li>Populations of common and widespread species.</li> </ul>

## 7C.2.4 Survey Limitations

Ecological surveys are limited by several factors including weather conditions, the time of year and animal behaviour.

Land access has been restricted in some areas of the route which has limited the completion of surveys at the optimal times of the year for water vole surveys, and in some cases has only allowed for the completion of a habitat assessment. Similarly, it was not always possible to survey 250 m up and downstream of the crossing point of a particular watercourse, meaning that the maximum length which could be surveyed was reduced. In these cases, surveyors used their professional judgement as to the likely presence of otter and/or water vole through consideration of habitat quality and quantity. This included the presence or absence of certain features favoured by water vole and otter, the availability of food/prey, connectivity with wider watercourse network and data search records.

Larger rivers and drains with very steep banks and deep water made surveying the water's edge from within the channel too dangerous for the surveyors. In these areas, if safe to do so, surveyors walked along the top of the bank and conducted searches with binoculars, with spot checks carried out at favourable and safe areas enabling more detailed searches for field signs.

Whilst, due to land access, a proportion of water vole surveys were undertaken outside the optimal survey window the surveys and desk-based assessments have taken the precautionary approach. Watercourses which could not be surveyed but are linked to or assessed as being suitable have been categorised accordingly as potentially presence and should be assessed as supporting water vole/otter. Where 'likely absence' was recorded in otherwise suitable habitat and which may be linked to sites where presence has been confirmed, pre-construction surveys will be undertaken as set out in the EclA (**Chapter 7: Ecology and Nature Conservation**).

## 7C.2.5 Quality Assurance

All water vole and otter surveys were undertaken by suitably qualified and trained ecologists, all of whom have previous documented riparian mammal survey experience and are competent in identifying otter and water vole field signs. The report has been written, reviewed and approved by members of the Chartered Institute of Ecology and Environmental Management (CIEEM) at the appropriate level.

## 7C.3 Results

### 7C.3.1 Desk Study

A total of nine records were received for water vole with the closest of these 110 m from the planning application boundary. One record was received for otter, approximately 80 m from the planning application boundary within the Study Area (see summary in Table 6 below with full data shown in Annex 2).

**Table 5 Summary of riparian mammal records received from NEYEDC**

Species	Number of Records	Distance from Study Area/ Location	Grid Reference of Closest Record to EOS
Water Vole	9	110 m River Hull, Wansford Area (Section 1)	TA0591356337
Otter	1	85 m Fraisthorpe Area (Section 1)	TA1508560511

#### 7C.3.1.1 Water vole

NEYEDC provided 9 records for water vole within the last 10 years within the Study Area, with the closest of these within the Study Area at Wansford.

#### 7C.3.1.2 Otter

NEYEDC provided one record for otter within the last 10 years within the Study Area, in the Fraisthorpe area. The River Hull and Kelk Beck associated tributaries and watercourses, are widely known to support otter on the River Hull and wider area (sources include Yorkshire Wildlife Trust website and online news articles, BBC news, Yorkshire Rivers Trust). The scheme also crosses the River Ouse, into which the River Derwent SSSI and Special Area of Conservation (SAC) discharges approximately 1.2 km to the north of the planning application boundary. Formal desk study records were provided for the River Hull for otter but all were older than 10 years so are not specifically detailed in Table 6. Otter is listed as an Annex II qualifying feature on the River Derwent SAC, but it is not the primary reason for its selection. It is for this reason that otter is considered highly likely to be present on the River Ouse, which is located downstream of the River Derwent.

### 7C.3.2 Field Survey

Full survey data for all four sections of the scheme are listed in full in Annex 3, with a succinct data summary shown below in Table 7 for the results of the water vole survey fieldwork, and Table 8 for the otter surveys. The status of each watercourse is shown on **Figure 1 (Water Vole)** and **Figure 2 (Otter)**.

#### 7C.3.2.1 Water vole

Water vole were found to be present on seven watercourses, and potentially present on a further 11. 53 watercourses were scoped out from further assessment either because of habitat suitability requirements, or their location to the scheme. For example, the River Ouse (WC88) is a strong tidal river at the crossing point and the habitat is considered unsuitable for water vole which are poor swimmers. Following assessment, water vole were deemed to be likely absent from 13 watercourses. 44 watercourses were not surveyed due to access limitations, and a further 13 and one elongated pond (P99) were assessed as being suitable but were not subject to further survey due to seasonal or safety constraints. For example, Kelk Beck (WC13) is a substantial watercourse which could not be surveyed safely.

**Table 6 Summary of water vole survey results**

Water vole results category	Section and Watercourse
<b>Present</b>	<b>Section 1:</b> WC1, WC11, WC16, WC35. <b>Section 2:</b> Nil. <b>Section 3:</b> WC59, WC81, WC86. <b>Section 4:</b> Nil.
<b>Potentially present</b>	<b>Section 1:</b> WC10, WC22, WC33 <b>Section 2:</b> Nil. <b>Section 3:</b> WC51, WC63, WC67, WC80, WC82, WC85, WC87. <b>Section 4:</b> Nil.
<b>Assessed as suitable, but not surveyed</b>	<b>Section 1:</b> WC4, WC105, WC13, WC109, WC14, WC15, WC30, WC117. <b>Section 2:</b> Nil. <b>Section 3:</b> P99, WC52, WC66. <b>Section 4:</b> WC91, WC94.
<b>Likely absent</b>	<b>Section 1:</b> WC3, WC5, WC6, WC7, WC8, WC17, WC20, WC23, WC39. <b>Section 2:</b> Nil. <b>Section 3:</b> WC49, WC65, WC78, WC79. <b>Section 4:</b> Nil.
<b>Assessed as unsuitable/ scoped out</b>	<b>Section 1:</b> WC2, WC9, WC99, WC100, WC101, WC102, WC12, WC104, WC107, WC108, WC110, WC111, WC18, WC19, WC21, WC24, WC113, WC29, WC31, WC116, WC32, WC34, WC38, WC40. <b>Section 2:</b> Nil. <b>Section 3:</b> WC50, WC53, WC54, WC55, WC56, WC58, WC61, WC62, WC64, WC68, WC139, WC71, WC140, WC72, WC73, WC74, WC119, WC120, WC76, WC77, WC83, WC122, WC84. <b>Section 4:</b> WC88, WC89, WC90, WC95, WC97, WC98.
<b>Not assessed/ surveyed</b>	<b>Section 1:</b> WC126, WC123, WC103, WC128, WC106, WC112, WC25, WC26, WC27, WC28, WC129, WC130, WC131, WC132, WC114, WC115, WC36, WC37. <b>Section 2:</b> WC118, WC41, WC133, WC42, WC43, WC44, WC45. <b>Section 3:</b> WC46, WC47, WC48, WC134, WC135, WC57, WC60, WC136, WC137, WC138, WC124, WC125, WC69, WC70, WC75, WC141, WC121. <b>Section 4:</b> WC92, WC93, WC96

### 7C.3.2.2 Otter

Otter were found to be present on five watercourses, and potentially present on a further 15 and one elongated pond (Pond 99) due to proximity of confirmed records or overall suitability of habitat. 47 watercourses were scoped out from further assessment either because of habitat suitability requirements, their location to the scheme or connectivity to other suitable habitat. Following assessment, otter were ascertained to be likely absent from 23 watercourses. 45 watercourses were not surveyed due to access limitations. A further seven were assessed as being suitable but were not subject to further survey due to access or safety constraints, for example Kelk Beck (WC13) is a substantial watercourse which could not be surveyed safely.

**Table 7 Summary of otter survey results**

Otter results category	Section and Watercourse
<b>Present</b>	<b>Section 1:</b> WC11, WC35. <b>Section 2:</b> Nil. <b>Section 3:</b> WC51, WC65, WC66 <b>Section 4:</b> Nil.
<b>Potentially present</b>	<b>Section 1:</b> WC6, WC13, WC16, WC19, WC22, WC113, WC117, WC33. <b>Section 2:</b> Nil.

Otter results category	Section and Watercourse
	<b>Section 3:</b> WC52, Pond P99, WC55, WC67, WC80. <b>Section 4:</b> WC88.
<b>Likely absent</b>	<b>Section 1:</b> WC1, WC3, WC5, WC7, WC8, WC17, WC20, WC23, WC39. <b>Section 2:</b> Nil. <b>Section 3:</b> WC49, WC58, WC59, WC61, WC62, WC63, WC78, WC79, WC81, WC82, WC121, WC85, WC86, WC87. <b>Section 4:</b> Nil.
<b>Scoped out</b>	<b>Section 1:</b> WC2, WC4, WC99, WC100, WC9, WC101, WC102, WC12, WC104, WC107, WC108, WC110, WC111, WC18, WC21, WC24, WC29, WC31, WC116, WC32, WC34, WC38, WC40. <b>Section 2:</b> Nil. <b>Section 3:</b> WC50, WC53, WC54, WC56, WC64, WC68, WC139, WC71, WC140, WC72, WC73, WC74, WC119, WC76, WC77, WC120, WC122, WC83, WC84. <b>Section 4:</b> WC89, WC90, WC95, WC97, WC98.
<b>Assessed as suitable, but not surveyed</b>	<b>Section 1:</b> WC13, WC14, WC15, WC30. <b>Section 2:</b> Nil. <b>Section 3:</b> P99. <b>Section 4:</b> WC91, WC94.
<b>Not assessed/ surveyed</b>	<b>Section 1:</b> WC126, WC123, WC103, WC128, WC106, WC112, WC25, WC26, WC27, WC28, WC129, WC130, WC131. WC132, WC114, WC115, WC36, WC37. <b>Section 2:</b> WC118, WC41, WC133, WC42, WC43, WC44, WC45. <b>Section 3:</b> WC46, WC47, WC48, WC134, WC135, WC57, WC60, WC124, WC125, WC136, WC137, WC138, WC69, WC70. WC75, WC141. <b>Section 4:</b> WC92, WC93, WC96

## 7C.4 Conclusions and Evaluation

### 7C.4.1 Water vole

The results of the field survey indicate that water vole are present in seven watercourses and potentially present in a further 11. 44 watercourses not assessed due to access restrictions, and another 13 and one pond were assessed as suitable but have not been subject to further survey. From the field surveys there are water vole records for watercourses within Section 1 and Section 3, but none for Section 2 and Section 4. It is considered that the relative absence of suitable habitat and ditch network within Section 2 may lead to a conclusion that water vole are absent from this section of the scheme. Section 4 does have relatively more ditches when compared to Section 2, and further survey effort is required in this area.

At this stage a precautionary approach is recommended in the absence of further survey information regarding the status of water vole at non-surveyed watercourses.

A Species Action Plan has been prepared for water vole as part of the Selby Local BAP and Selby Internal Drainage Board BAP; water vole is also identified on the Priority Species List within the East Riding of Yorkshire BAP Strategy. The Strategy states that the East Riding of Yorkshire appears to support regionally important populations of water vole in drainage ditches, especially those associated with the headwaters of the River Hull. In addition, it notes that drainage ditches not connected to main rivers may be particularly important to water vole as the risk of predation by American mink is reduced.

Based upon the abundance of watercourses, and overall presence of suitable habitat, combined with confirmed presence of water vole in each geographical area, the Survey Area is therefore considered as having **County** value for water voles.

## 7C.4.2 Otter

The results of the field survey indicate that otter are present in five watercourses and potentially present in a further 15 and one pond. 45 watercourses were not assessed due to access restrictions, and another seven were assessed as suitable, but have not been subject to further survey. From the field surveys there are otter records for watercourses within Section 1 and Section 3, and it is considered highly likely as a wide-ranging species they may be present in Sections 2 and 4, for example the River Derwent SSSI SAC discharges into the River Ouse (WC88) and it is known for its otter population, which are likely to utilise the River Ouse.

At this stage a precautionary approach is recommended in the absence of further survey information regarding the status of otter at non-surveyed watercourses.

A Species Action Plan has been prepared for otter as part of the Selby Local BAP and Selby Internal Drainage Board BAP; otter is also identified on the Priority Species List within the East Riding of Yorkshire BAP Strategy.

The results of otter presence, obtained from both field surveys and desk study, in addition to watercourse and habitat availability, indicate that the value of the Survey Area is considered as having **Local** value for otters.

## 7C.5 References

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