

## Sibley, Sally

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**From:** Fidler, Richard  
**Sent:** 28 May 2015 11:14  
**To:** \_planningadvice  
**Subject:** FW: Application H16-0293-15 - Spalding Energy Expansion Ltd - Permission Renewal of H16-0135-10  
**Attachments:** SEE Gas Pipeline - Additional Ecology Information.pdf

Additional Supporting Information 6SUP

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**From:** Suzy Bates [<mailto:sb@dwdllp.com>] **On Behalf Of** Keith Dalton  
**Sent:** 20 May 2015 16:19  
**To:** Fidler, Richard  
**Cc:** Van Looy, Morris; [KBarker@INTERGEN.com](mailto:KBarker@INTERGEN.com); Emily Agus  
**Subject:** Application H16-0293-15 - Spalding Energy Expansion Ltd - Permission Renewal of H16-0135-10

Dear Richard,

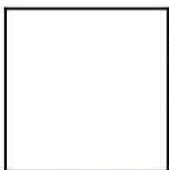
Further to the above, I am now enclosing a report titled SEE Underground Gas Pipeline and Associated AGI - Additional Ecology Information dated 20<sup>th</sup> May 2015.

Please can we discuss the incorporation of this document in the above application and its determination by delegated authority.

Regards,

Keith

Keith Dalton FRICS



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Intended for  
**InterGen**

Document Type  
**Report**

Date  
**20 May 2015**

# **SEE UNDERGROUND GAS PIPELINE AND ASSOCIATED AGI ADDITIONAL ECOLOGICAL INFORMATION**

### Revision History

| <b><i>Revision</i></b> | <b><i>Date</i></b> | <b><i>Purpose / Status</i></b> | <b><i>Document Ref.</i></b>  | <b><i>Comments</i></b> |
|------------------------|--------------------|--------------------------------|------------------------------|------------------------|
| 1                      | 19/05/2015         | Draft for Client Comment       | 61033586/ECO/R01<br>519574-1 |                        |
| 2                      | 20/05/2015         | FINAL                          | 61033586/ECO/R01<br>519574-1 |                        |

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Reviewed By

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## **1 INTRODUCTION**

### **1.1 Overview**

- 1.1.1 In February 2010, Spalding Energy Expansion Limited (SEEL) submitted an application for planning permission under the Town and Country Planning Act 1990 (the Original Permission Application) to South Holland District Council (SHDC) to construct an underground gas pipeline and associated Above Ground Installation (AGI) required in connection with the Spalding Energy Expansion (SEE).
- 1.1.2 Amongst other documents / studies, the Original Permission Application was accompanied by an Environmental Statement (ES) (the February 2010 ES).
- 1.1.3 On 8 June 2010, planning permission (Reference: H16-0135-10) for the underground gas pipeline and associated AGI was granted (the Original Permission).
- 1.1.4 In March 2015, SEEL submitted a replacement application for planning permission under the Town and Country Planning Act 1990 (the Replacement Application). The effect of the Replacement Application, if granted, would be to extend the time during which the Proposed Development (i.e. the underground gas pipeline and associated AGI) covered by the Original Permission can be commenced.
- 1.1.5 The Replacement Application was accompanied by the Replacement Application Environmental Statement Further Information Document (the Replacement Application ES FID)

### **1.2 The Purpose of this Document**

- 1.2.1 To inform the Replacement Application ES FID, an Ecological Walkover Survey was undertaken by Chris Hodsman (MCIEEM, Ramboll Senior Ecologist) and Jon Byrd (MCIEEM, Ramboll Senior Ecologist) on 4 and 5 February 2015.
- 1.2.2 The Ecological Walkover Survey covered the ecological study area as defined in the February 2010 ES which comprised land 500 m either side of the proposed underground gas pipeline route. The Ecological Walkover Survey was designed to verify the baseline conditions relating to habitats identified within the February 2010 ES and highlight the need for any additional survey effort required.
- 1.2.3 The Ecological Walkover Survey was undertaken in February 2015 which is outside the accepted window for Phase 1 Habitat Surveys and likewise the window in which many protected species surveys should be undertaken. As such, the Replacement Application ES FID noted that a further Verification Phase 1 Habitat Survey should be undertaken within the appropriate season (i.e. late March to mid-October) to verify the findings of the Ecological Walkover Survey.
- 1.2.4 In addition, the Ecological Walkover Survey noted evidence of potential water vole (*Arvicola amphibius*) presence in additional locations (to those noted in the February 2010 ES) which are to be crossed by the proposed underground gas pipeline route. As such, the Replacement Application ES FID noted that further water vole surveys should be undertaken within the appropriate season (i.e. March to October) to verify whether there are material changes to the baseline conditions with respect to water vole.
- 1.2.5 Accordingly, the purpose of this Document is to:
  - Provide the results of:
    - The further Verification Phase 1 Habitat Survey; and,
    - The further water vole surveys.
  - Confirm the appropriate mitigation and monitoring.
- 1.2.6 This Document should be read in conjunction with the Replacement Application ES FID (Ramboll, March 2015 (468842-1)).

## 2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

### 2.1 Introduction

- 2.1.1 In addition to the further Verification Phase 1 Habitat Survey, water voles were the only ecological receptor identified as requiring additional survey work and an updated impact assessment in the Replacement Application ES FID.

### 2.2 Assessment Methodology

#### *Verification Phase 1 Habitat Survey*

- 2.2.1 A Verification Phase 1 Habitat Survey was undertaken by Chris Hodsman (MCIEEM, Ramboll Senior Ecologist) assisted by Emily McVean (Ramboll Environmental Consultant) on 21 April 2015. The survey covered the ecological study area as defined in the February 2010 ES which comprised land 500 m either side of the proposed underground gas pipeline route. The survey was designed to verify the baseline conditions relating to habitats identified within the February 2010 ES and the Ecological Walkover Survey undertaken in February 2015.

#### *Water Vole Survey*

- 2.2.2 The water vole survey was undertaken by Chris Hodsman (MCIEEM, Ramboll Senior Ecologist) assisted by Emily McVean (Ramboll Environmental Consultant). The survey consisted of two survey visits, the first on 21 / 22 April 2015 and the second on 12 May 2015.
- 2.2.3 The survey visits were undertaken with reference to the methodology contained within the Water Vole Conservation Handbook<sup>1</sup>. Under this methodology, both banks of the watercourses were surveyed for signs of water vole such as: latrines; feeding stations / lawns; droppings; burrows; and prints. The surveys were undertaken in accordance with best practice. Whilst it is noted that the second survey was not undertaken in late summer, this is not considered to have constrained the survey results.
- 2.2.4 In addition, the survey visits made observations in relation to habitat suitability, value and likely sources of disturbance.

### 2.3 Significance Criteria

- 2.3.1 The criteria used for assigning ecological value and determining the significance of the potential impacts follows the Institute of Ecology and Environmental Management (IEEM) Best Practice Assessment Guidelines<sup>2</sup>. These criteria are the same as those used in the February 2010 ES.

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<sup>1</sup> Strachan, R., Moorhouse, T., and Gelling, M. Water Vole Conservation Handbook (Third Edition). WildCRU: Oxford. July 2011.

<sup>2</sup> Guidelines for Ecological Impact Assessment in the United Kingdom. Institute of Ecology and Environmental Management. Version 7, July 2006.

### 3 SUMMARY OF ECOLOGICAL SURVEYS

#### 3.1 Verification Phase 1 Habitat Survey

- 3.1.1 The Verification Phase 1 Habitat Survey identified the following dominant habitats (in descending order of size) within the ecological study area:
- Arable;
  - Hedgerows;
  - Broadleaved and coniferous woodland and scattered trees; and,
  - Dry and wet ditches.
- 3.1.2 Overall these habitats were largely consistent with those identified in the February 2010 ES. In addition, the Verification Phase 1 Habitat Survey was 'extended' to make note of the presence / potential for protected and notable species.
- 3.1.3 The findings of the Verification Phase 1 Habitat Survey are provided in Table 3.1. The Phase 1 Habitat Survey Map from the February 2010 ES is also provided for reference (Inserts 3.1A and 3.1B) which has been annotated with Target Notes to detail observations and findings of the survey. The Target Notes are included in Table 3.2.
- 3.1.4 Where it is noted that there is no material change in the baseline conditions (and therefore no associated need for an updated impact assessment) reference should be made to the impact assessment and associated recommended mitigation and monitoring in the February 2010 ES. Such mitigation is still necessary to avoid / reduce / compensate for identified ecological impacts of the Proposed Development.

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**TABLE 3.1: SUMMARY OF PREVIOUS BASELINE CONDITIONS AND FINDINGS FROM RAMBOLL 2015 SURVEYS**

| <i><b>Species of Ecological Interest</b></i> | <i><b>Baseline Conditions reported in the February 2010 ES</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <i><b>Ramboll 2015 Surveys</b></i>                                                                                                                                                                                                                                                                                                                                                 | <i><b>Summary of Changes in the Baseline Conditions</b></i>                                                                                           |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Amphibians                                   | <p>A Phase 2 Great Crested Newt (GCN) (<i>Triturus cristatus</i>) Survey was undertaken on the pond at Ornam House. No GCN were found.</p> <p>Other than the pond at Ornam House, opportunities for amphibians within the ecological study area are limited as the habitats were considered to be largely sub-optimal.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>The habitats within the ecological study area are largely similar to those reported in the February 2010 ES. Therefore, the findings of the Phase 2 GCN Survey are considered to remain valid and be representative of the ecological study area.</p>                                                                                                                           | <p>It is considered that there is no material change in the baseline conditions of the ecological study area with respect to amphibians.</p>          |
| Badger                                       | <p>The February 2010 ES reported that a single badger group was found to be using the ecological study area towards the northern part of the proposed underground gas pipeline route.</p> <p>At this location, an active main sett with 8 entrance holes was recorded in a dry drainage ditch with two smaller outlier setts located in two other dry drainage ditches. In addition, field signs were infrequent with occasional foraging at field margins and occasional latrines in the vicinity of sett locations. Footprints were recorded along poorly defined trails at the margins of the cereal fields and a single badger footprint was also recorded close to Wykeham Farm. No other badger signs were recorded within the ecological study area.</p> | <p>Four active badger setts were identified. These comprised:</p> <ul style="list-style-type: none"> <li>• A 12 to 13 active hole main sett with significant evidence of recent activity;</li> <li>• Two active 7 hole annex setts; and,</li> <li>• A single hole outlier sett.</li> </ul> <p>This is considered to represent the same group reported in the February 2010 ES.</p> | <p>It is considered that there is no material change in the baseline conditions of the ecological study area with respect to badgers<sup>3</sup>.</p> |

<sup>3</sup> It is noted that the proposed underground gas pipeline route has previously been realigned to allow an acceptable working width (approximately 30 m) to minimise effects on the setts recorded and enable works to be carried out in compliance with legislation. It is considered that this re-alignment is still appropriate. Whilst badgers are not considered further in this Document, a pre-construction check should be made to ensure that no setts are within the proposed working width because of the apparent increase in badger activity noted between 2010 and 2015.

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| <b>Species of Ecological Interest</b> | <b>Baseline Conditions reported in the February 2010 ES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Ramboll 2015 Surveys</b>                                                                                                                                                                                                                                                                                                                                                                            | <b>Summary of Changes in the Baseline Conditions</b>                                                                                   |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Bats                                  | <p>Three species of bat were recorded during the Phase 2 Bat Activity ('Transect') Surveys. Of these three species, common pipistrelle (<i>Pipistrellus pipistrellus</i>) was the most abundant with occasional records of single commuting bats made along features such as roads and drains. In addition, a small group of three common pipistrelles was recorded feeding in the vicinity of Bottom Farm. A single soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) was recorded feeding over the Lord's Drain.</p> <p>Anabat bat detectors left overnight also recorded two unidentified <i>Myotis</i> bats (presumed to be Daubenton's or whiskered bat).</p> | <p>There are no trees lying on the proposed underground gas pipeline route considered suitable for roosting bats. In addition, there are no buildings suitable for roosting bats that will be affected as a result of the Proposed Development.</p> <p>Therefore, the findings of the February 2010 ES for bats are considered to remain valid and be representative of the ecological study area.</p> | <p>It is considered that there is no material change in the baseline conditions of the ecological study area with respect to bats.</p> |

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| <b>Species of Ecological Interest</b> | <b>Baseline Conditions reported in the February 2010 ES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Ramboll 2015 Surveys</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Summary of Changes in the Baseline Conditions</b>                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Birds                                 | <p>Phase 2 Breeding Bird Surveys were undertaken in 2009. Four raptor species were recorded including: peregrine falcon (<i>Falco peregrinus</i>); Eurasian sparrowhawk (<i>Accipiter nisus</i>); common kestrel (<i>Falco tinnunculus</i>); and, common buzzard (<i>Buteo buteo</i>).</p> <p>No sightings of barn owl (<i>Tyto alba</i>) were made but they were known to inhabit farm buildings near the proposed underground gas pipeline route. Indeed, a pair was identified using an artificial nest box in a barn at Bottom Yard Farm with fresh pellets and feathers found. Other farm buildings beyond the ecological study area are likely to support further pairs.</p> <p>Excluding those detailed above, a total of 47 bird species were recorded in the ecological study area. Of these, 30 were recorded as confirmed breeding, 9 were recorded as probably breeding and 8 were recorded to show no signs of breeding. Of the 47 species, 9 species were of high conservation concern and 14 species were of medium conservation concern. Of these 23 species, 17 were either confirmed or probable breeders.</p> <p>13 species recorded are UK BAP priority species with all but herring gull (<i>Larus argentatus</i>), confirmed or probably breeding within the study area.</p> <p>Furthermore, Harrier Vantage Point Surveys were also undertaken in 2009 to identify potential nest sites and usage of the proposed underground gas pipeline route by marsh harrier (<i>Circus aeruginosus</i>). During the surveys, low levels of activity were recorded (6 sightings – equal male and female distribution). However, none of these sightings were indicative of nesting within the ecological study area and indeed it was considered that the sightings were of hunting birds.</p> | <p>The habitats within the ecological study area are largely similar to those reported in the February 2010 ES. Therefore, the findings of the Phase 2 Breeding Bird Survey and the Harrier Vantage Point Surveys are considered to remain valid and be representative of the ecological study area. Indeed, the species and composition of the bird community using the ecological study area is likely to remain the same.</p> <p>In addition, skylark (<i>Alauda arvensis</i>) were identified at several points along the proposed underground gas pipeline route. A maximum of 4 birds were seen at any location. Furthermore, a flock of lapwing (<i>Vanellus vanellus</i>), comprising approximately 10 birds, was encountered towards the north of the proposed underground gas pipeline route. Both skylark and lapwing are red listed bird species of principal importance in England (see Section 41 of the Natural Environment and Rural Communities Act 2006).</p> | <p>It is considered that there is no material change in the baseline conditions of the ecological study area with respect to birds.</p> |

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| <b>Species of Ecological Interest</b> | <b>Baseline Conditions reported in the February 2010 ES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Ramboll 2015 Surveys</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Summary of Changes in the Baseline Conditions</b>                                                                                                            |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Invasive Plant Species                | Japanese knotweed ( <i>Fallopia japonica</i> ) was identified on the banks of the River Welland within the Spalding Energy Expansion Environmental Statement (March 2009).                                                                                                                                                                                                                                                                                                                                                               | Japanese knotweed was confirmed on the banks of the River Welland in close proximity to the proposed underground gas pipeline route.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | It is considered that there is no material change in the baseline conditions of the ecological study area with respect to invasive plant species <sup>4</sup> . |
| Otter                                 | A sighting of an otter was made on the east bank of the River Welland. In addition, evidence of European otter was noted along both the River Welland and Vernatt's Drain with a footprint recorded in the common reed on the west bank of the River Welland and two spraints and a footprint found on Vernatt's Drain.<br><br>Whist habitat was noted to be suitable in other parts of the ecological survey area, no holts or couches, the (often) below ground and above ground resting places of otters respectively, were recorded. | The habitat on the River Welland and Vernatt's Drain remains suitable for otter, although no evidence of the species was recorded. Their continued presence within the two waterways should be assumed.<br><br>At the time of the surveys, pipes linking field drains with the larger main drains provided the only locations suitable for otter to lay up in / use as a holt.<br><br>However, whilst the marginal vegetation to most of the watercourses had been subject to recent management and was in most cases cropped quite short. As this grows up the possibility of the use of these areas as holts / couches by otter is likely to increase. | It is considered that there is no material change in the baseline conditions of the ecological study area with respect to otters.                               |
| Reptiles                              | A Phase 2 Reptile Survey was not undertaken.<br>Two grass snake ( <i>Natrix natrix</i> ) were identified in the wider study area.                                                                                                                                                                                                                                                                                                                                                                                                        | There remains potential for grass snake to be present within the wider study area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | It is considered that there is no material change in the baseline conditions of the ecological study area with respect to reptiles <sup>5</sup> .               |

<sup>4</sup> The CEMP should include reference to invasive plant species and detail how the mitigation will be implemented. The CEMP should also contain an 'Unexpected Species Plan' including invasive plant species.

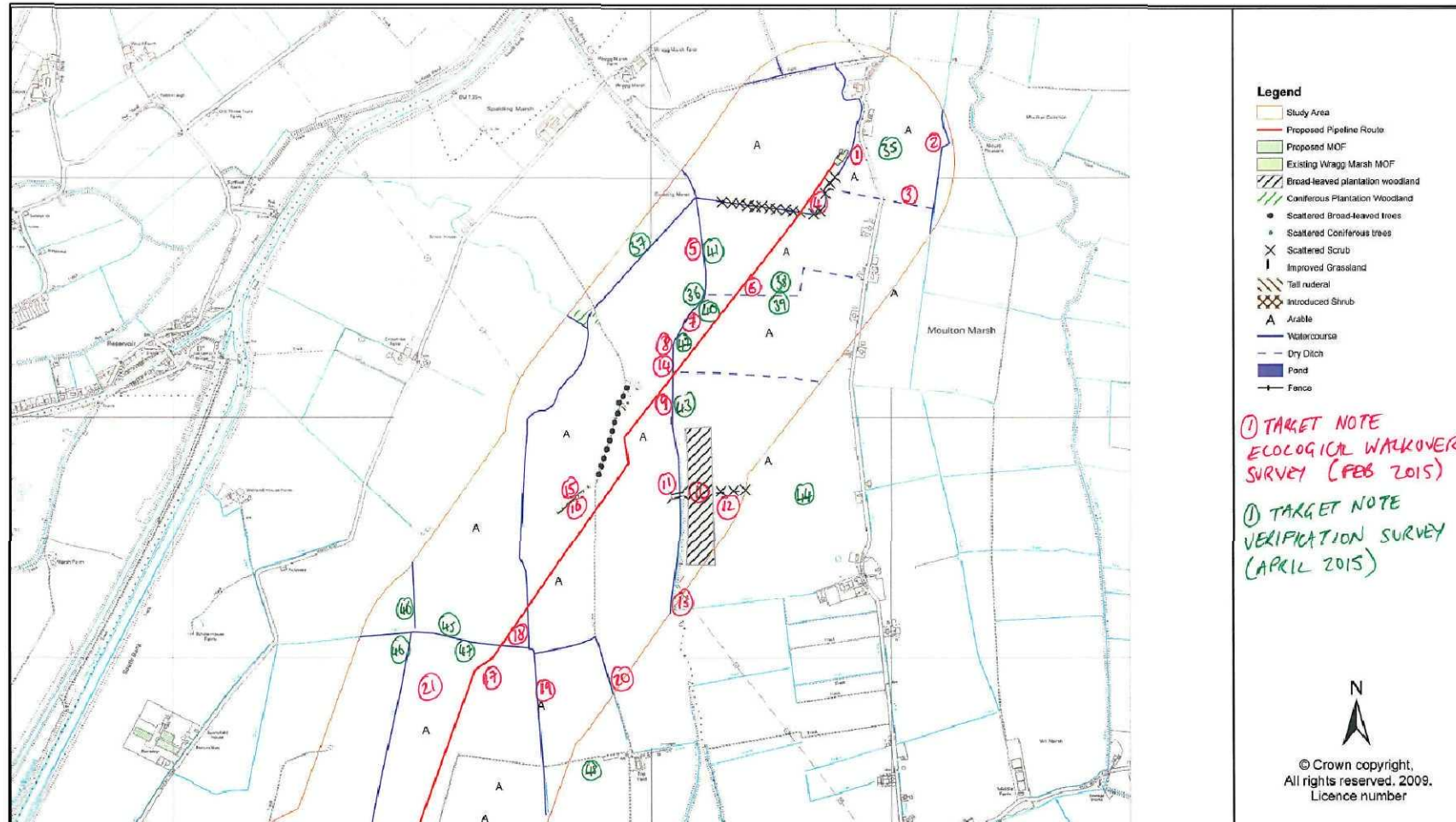
<sup>5</sup> A precautionary method is required during vegetation clearance in areas identified as being suitable for reptiles. This is considered appropriate due to the highly mobile nature of grass snake. In addition, the vegetation clearance in areas identified as being suitable for reptiles should be undertaken when these species are active (i.e. between April to September).

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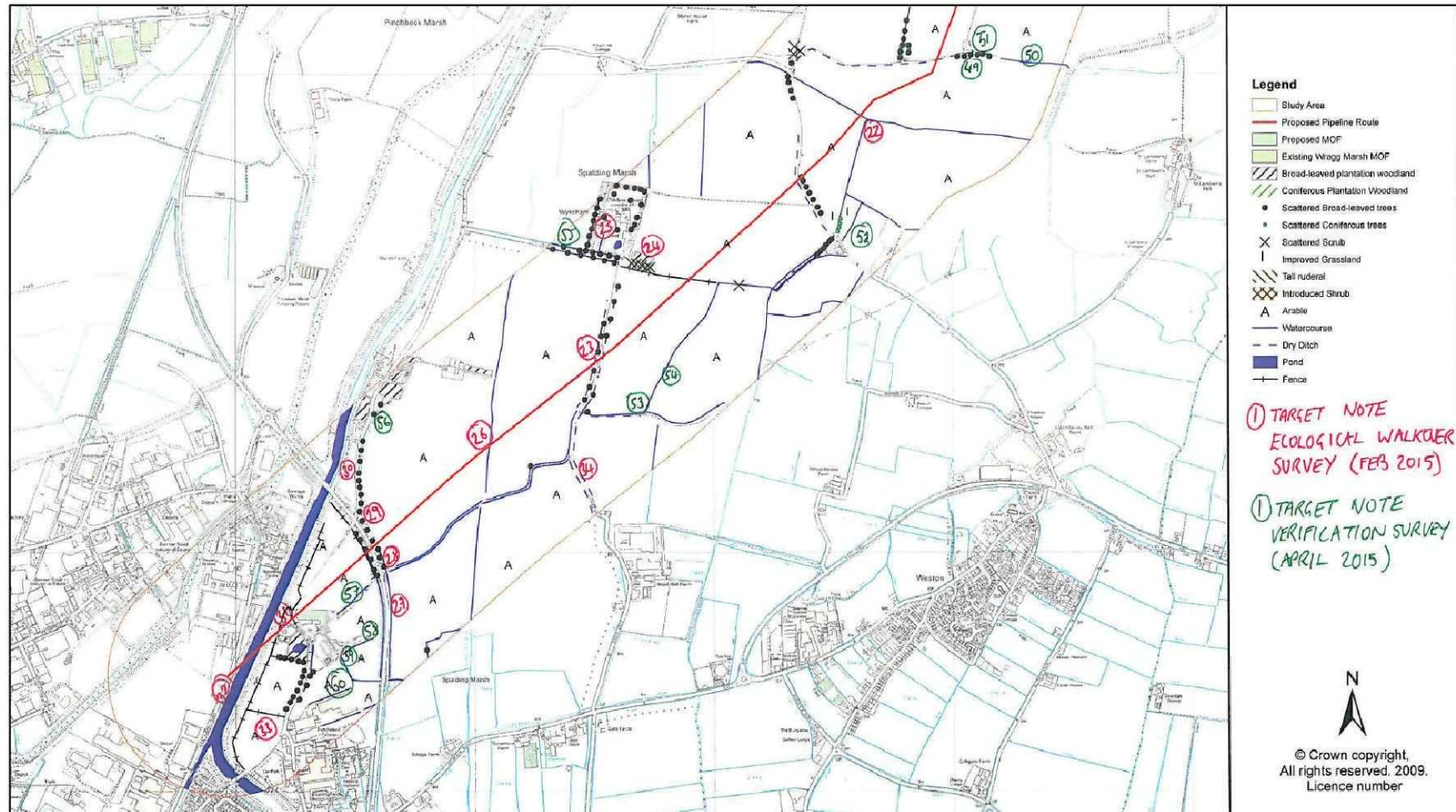
| <b><i>Species of Ecological Interest</i></b> | <b><i>Baseline Conditions reported in the February 2010 ES</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b><i>Ramboll 2015 Surveys</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b><i>Summary of Changes in the Baseline Conditions</i></b>                                                                                                                                                                                                                                |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water Voles                                  | <p>Evidence (footprints, latrines and feeding signs) of water vole was noted along the River Welland in the common reed marginal vegetation within the March 2009 ES.</p> <p>In addition, during the Phase 2 Water Vole Surveys, a number of water vole burrows and other field signs were recorded in the east bank of the Lord's Drain close to DX0/4. Furthermore, a possible water vole burrow was also recorded in Wykeham Drain close to DX1/1 near to the confluence with Lord's Drain (approximately 500 m north of Shepherd's Farm). However, no other conclusive field signs were recorded nearby.</p> | <p>The habitats in the three locations where evidence of water vole were identified remains suitable for this species. Their continued presence in these locations should be assumed.</p> <p>In addition, during the Ecological Survey Walkover in February 2015, evidence of potential water vole presence (burrows and 'runs') was identified in three additional locations which are to be crossed by the proposed underground gas pipeline route. Further evidence was observed in other locations. However, these <a href="#">away from the proposed underground gas pipeline route</a>.</p> | <p>Further surveys have been undertaken to update the baseline. Full details are provided in Section 3.3.</p> <p>Water vole evidence was more widespread and their presence has been confirmed in an additional location to be crossed by the proposed underground gas pipeline route.</p> |

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INSERT 3.1A: EXTENDED PHASE 1 HABITAT SURVEY MAP (FROM THE FEBRUARY 2010 ES) ANNOTATED WITH TARGET NOTES  
FROM THE ECOLOGICAL WALKOVER SURVEY (FEBRUARY 2015) AND PHASE 1 VERIFICATION SURVEY (APRIL 2015)



**INSERT 3.1B: EXTENDED PHASE 1 HABITAT SURVEY MAP (FROM THE FEBRUARY 2010 ES) ANNOTATED WITH TARGET NOTES FROM THE ECOLOGICAL WALKOVER SURVEY (FEBRUARY 2015) AND PHASE 1 VERIFICATION SURVEY (APRIL 2015)**



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**TABLE 3.2: TARGET NOTES FROM THE ECOLOGICAL WALKOVER SURVEY (FEBRUARY 2015) AND PHASE 1 HABITAT VERIFICATION SURVEY (APRIL 2015)**

| <b>Target Note</b> | <b>Target Note Description</b>                                                                                                                                                                                                                                                      |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TN1                | Small manmade spoil heap.                                                                                                                                                                                                                                                           |
| TN2                | Formerly wet ditch, dry at the time of the Ecological Walkover Survey.                                                                                                                                                                                                              |
| TN3                | No ditch identified. It appears to have been filled in with planted daffodils growing.                                                                                                                                                                                              |
| TN4                | Wet ditch identified in February 2015 initially considered to offer habitat suitable for water vole. The ditch was dry in April 2015. No water vole potential.                                                                                                                      |
| TN5                | Water vole potential remains present. Small mammal burrows and 'runs' identified in the ditch. However, no evidence of water vole was recorded.                                                                                                                                     |
| TN6                | Dry ditch, remains dry.                                                                                                                                                                                                                                                             |
| TN7                | Badger footprints along the top of the bank.                                                                                                                                                                                                                                        |
| TN8                | Mammal 'runs' in both sides of the ditch.                                                                                                                                                                                                                                           |
| TN9                | Water vole potential. Small mammal burrows and 'runs' identified in the ditch. Water vole presence confirmed in April 2015 (e.g. water vole burrows, latrines and runs).                                                                                                            |
| TN10               | More recent plantation than previous mapping suggests.                                                                                                                                                                                                                              |
| TN11               | Footbridge. Pipe on watercourse with potential to be used as a holt by otter. Evidence of access being made to water by mammals. Whilst it is possible that this is otter, it is more likely that it is badger going to drink as there is a sett in close proximity.                |
| TN12               | Confidential                                                                                                                                                                                                                                                                        |
| TN13               | Confidential                                                                                                                                                                                                                                                                        |
| TN14               | Water vole potential. Likely mammal burrows identified. Water vole presence confirmed in April 2015 (e.g. water vole burrows, latrines and runs).                                                                                                                                   |
| TN15               | Species poor intact hedgerow, dominated by privet.                                                                                                                                                                                                                                  |
| TN16               | Badger hair found in suitable foraging area.                                                                                                                                                                                                                                        |
| TN17               | 2 skylarks observed flying and calling over field.                                                                                                                                                                                                                                  |
| TN18               | Wet ditch identified in February 2015 initially considered to offer habitat suitable for water vole. The ditch was dry in April 2015. No water vole potential.                                                                                                                      |
| TN19               | Formerly dry ditch, wet at the time of surveys.                                                                                                                                                                                                                                     |
| TN20               | Treeline comprising mature and semi-mature Ash.                                                                                                                                                                                                                                     |
| TN21               | 3 skylarks observed flying and calling over field.                                                                                                                                                                                                                                  |
| TN22               | Recent management of watercourse identified in February 2015. Water vole potential. Likely mammal burrows identified in ditch. Water vole presence confirmed in April 2015 (e.g. water vole burrows, latrines and runs).                                                            |
| TN23               | Fewer trees present than previously observed.                                                                                                                                                                                                                                       |
| TN24               | Now dense scrub.                                                                                                                                                                                                                                                                    |
| TN25               | No accessed gained.                                                                                                                                                                                                                                                                 |
| TN26               | Water vole potential. Likely mammal burrows identified. Water vole presence confirmed in April 2015 (e.g. water vole burrows, latrines, feeding signs and runs). This location demonstrated the highest amount of territorial marking (i.e. latrines) of the watercourses surveyed. |
| TN27               | Formerly dry ditch, wet in February 2015. The ditch was dry in April 2015. Trees now planted on the highway boundary.                                                                                                                                                               |
| TN28               | Culvert. Standing water forming a shallow pond. Good macrophyte cover. Engineered banks and poor connectivity with suitable water vole habitat.                                                                                                                                     |
| TN29               | Scrub margin encroaching. Dry ditch and highway planting beyond.                                                                                                                                                                                                                    |
| TN30               | Immature woodland plantation with semi improved grassland beneath. Bulb planting (daffodils) throughout. Habitat suitable for reptiles. However, no reptiles were noted during the survey.                                                                                          |
| TN31               | Environment Agency yard, part vegetated earth mound and chipping piles present. Various log piles scattered across site. Newly planted trees bounding adjacent arable field. Areas of semi improved grassland and tall ruderal vegetation.                                          |
| TN32               | Japanese Knotweed identified.                                                                                                                                                                                                                                                       |

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| <b>Target Note</b> | <b>Target Note Description</b>                                                                                                                                                                                                                                                                                                                      |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TN33               | Formerly identified as an arable field, now identified as improved grassland.                                                                                                                                                                                                                                                                       |
| TN34               | Formerly dry ditch, wet at the time of surveys. Habitat potentially suitable for water vole but not to be crossed by the proposed underground gas pipeline route.                                                                                                                                                                                   |
| TN35               | 3 skylarks observed flying and calling over field.                                                                                                                                                                                                                                                                                                  |
| TN36               | Field drain pipe exits to main drain. Stone in entrance with water vole droppings evident.                                                                                                                                                                                                                                                          |
| TN37               | Formerly wet ditch, dry in April 2015.                                                                                                                                                                                                                                                                                                              |
| TN38               | Badger foraging signs.                                                                                                                                                                                                                                                                                                                              |
| TN39               | Confidential.                                                                                                                                                                                                                                                                                                                                       |
| TN40               | Skylark observed flying over field.                                                                                                                                                                                                                                                                                                                 |
| TN41               | Mammal track identified both side of drain.                                                                                                                                                                                                                                                                                                         |
| TN42               | Several badger dung pits identified on field margins.                                                                                                                                                                                                                                                                                               |
| TN43               | Mammal track identified both side of drain.                                                                                                                                                                                                                                                                                                         |
| TN44               | Skylark observed flying over field.                                                                                                                                                                                                                                                                                                                 |
| TN45               | Ditch virtually dry, approximately 2 to 3 cm deep and choked with vegetation.                                                                                                                                                                                                                                                                       |
| TN46               | Formerly wet ditch, dry in April 2015.                                                                                                                                                                                                                                                                                                              |
| TN47               | Badger latrines and foraging evidence.                                                                                                                                                                                                                                                                                                              |
| TN48               | Owl box.                                                                                                                                                                                                                                                                                                                                            |
| TN49               | Bramble scrub dominated dry ditch.                                                                                                                                                                                                                                                                                                                  |
| TN50               | Formerly wet ditch, dry in April 2015.                                                                                                                                                                                                                                                                                                              |
| TN51               | Low, approximately 2 m high vegetated bund.                                                                                                                                                                                                                                                                                                         |
| TN52               | Fenced close grazed improved grassland paddock. Conifer trees to boundary.                                                                                                                                                                                                                                                                          |
| TN53               | Skylark observed flying over field.                                                                                                                                                                                                                                                                                                                 |
| TN54               | Very shallow ditch, approximately 2 to 3 cm deep and choked with common reed.                                                                                                                                                                                                                                                                       |
| TN55               | Approximately 2.5 m high part grown out hedge dominated by hawthorn with trees beyond.                                                                                                                                                                                                                                                              |
| TN56               | Scattered trees and scrub in / adjacent to wet ditch dominated by hawthorn and elder.                                                                                                                                                                                                                                                               |
| TN57               | Ditch 95% dry along its length. Wet north of road where it has been over deepened adjacent to culvert. Here the water depth is approximately 5 cm. The ditch to the south of the road has been subject to recent earth works and the banks currently comprise bare earth. Spoil heaps resulting from earth works are stockpiled adjacent this area. |
| TN58               | Former arable, now disturbed improved grassland. Spoil heaps and earth works in evidence.                                                                                                                                                                                                                                                           |
| TN59               | Bund with outgrown hedge and woodland strip beyond. Limited access.                                                                                                                                                                                                                                                                                 |
| TN60               | Private land and machinery in operation. No access gained.                                                                                                                                                                                                                                                                                          |

**SEE UNDERGROUND GAS PIPELINE AND ASSOCIATED AGI**  
**ADDITIONAL ECOLOGICAL INFORMATION**

**3.3 Water Vole Survey**

- 3.3.1 Within the February 2010 ES, water voles were confirmed as present along the River Welland in the common reed marginal vegetation and a number of water vole burrows / other field signs were recorded in the east bank of the Lord's Drain close to DX0/4. Furthermore, a possible water vole burrow was also recorded in Wykeham Drain close to DX1/1 near to the confluence with Lord's Drain (approximately 500 m north of Shepherd's Farm) though conclusive proof of presence of water voles was not established.
- 3.3.2 During the Ecological Survey Walkover, the continued likely presence of water voles was noted:
- In Lord's Drain close to DX0/4 (see TN9 and TN14);
  - Wykeham Drain close to DX1/1 (see TN22); and,
  - Along the River Welland.
- 3.3.3 In addition, during the Ecological Survey Walkover, potential evidence of water vole (burrows and 'runs') was identified in three additional locations (at close to DX0/1 (see TN4), close to DX0/5 / DX0/6 (see TN18) and DX3/1 (see TN26)) along the proposed underground gas pipeline route.
- 3.3.4 Therefore it was considered necessary to survey these locations to confirm the likely presence / absence and ensure mitigation is applied as required. Accordingly, the water vole survey focused on: DX0/1; DX0/4; DX0/5; DX0/6; DX1/1; and, DX3/1. Table 3.3 summarises the findings of the survey at each location.
- 3.3.5 Based on the surveys, water voles were confirmed as present:
- In Lord's Drain close to DX0/4;
  - In Wykeham Drain close to DX1/1;
  - In Wykeham Drain close to DX3/1; and,
  - Along the River Welland.
- 3.3.6 Therefore, water voles are confirmed as present at one additional location to the February 2010 ES (in Wykeham Drain close to DX3/1).

**TABLE 3.3: WATER VOLE SURVEY RESULTS BY CROSSING**

| <b>Location</b>        | <b>Proposed Crossing Method</b> | <b>Water Vole Survey Results</b>                                                                                                                                                                                                                  |
|------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DX0/1<br>Unnamed Drain | Open Cut                        | Ditch had dried in the period between February 2015 (Ecological Walkover Survey) and April 2015 (Verification Phase 1 Habitat Survey).<br>No evidence of water vole detected.                                                                     |
| DX0/4<br>Lord's Drain  | Trenchless (Likely HDD)         | Water vole presence was confirmed.<br>The survey identified water vole burrows, latrines and runs.                                                                                                                                                |
| DX0/5<br>Unnamed Drain | Open Cut                        | Ditch had dried in the period between February 2015 (Ecological Walkover Survey) and April 2015 (Verification Phase 1 Habitat Survey).<br>No evidence of water vole detected.                                                                     |
| DX0/6<br>Unnamed Drain | Open Cut                        | Ditch had dried in the period between February 2015 (Ecological Walkover Survey) and April 2015 (Verification Phase 1 Habitat Survey).<br>No evidence of water vole detected.                                                                     |
| DX1/1<br>Wykeham Drain | Open Cut                        | Water vole presence was confirmed.<br>The survey identified water vole burrows, latrines and runs.                                                                                                                                                |
| DX3/1<br>Wykeham Drain | Open Cut                        | Water vole presence was confirmed.<br>The survey identified water vole burrows, latrines, feeding stations and runs.<br>This survey location demonstrated the highest amount of territorial marking (i.e. latrines) of the watercourses surveyed. |

### **3.4 Summary of the Need for an Updated Impact Assessment**

#### ***Construction / Decommissioning***

- 3.4.1 With the exception of water voles, the baseline conditions presented in the February 2010 ES remain valid and appropriate. In addition, the structures / processes associated with the Proposed Development do not significantly differ from those reported in the February 2010 ES (and more specifically the equipment, footprint and duration of works are comparable).
- 3.4.2 Therefore, with the exception of water voles, it is considered that the impact assessment and associated recommended mitigation and monitoring contained within the February 2010 ES remains valid and appropriate.

#### ***Operation***

- 3.4.3 With the exception of water voles, the baseline conditions presented in the February 2010 ES remain valid and appropriate. In addition, the structures / processes associated with the Proposed Development do not significantly differ from those reported in the February 2010 ES.
- 3.4.4 Therefore, with the exception of water voles, it is considered that the impact assessment and associated recommended mitigation and monitoring contained within the February 2010 ES remains valid and appropriate.

## 4 ASSESSMENT OF POTENTIAL IMPACTS

### 4.1 Construction / Decommissioning

4.1.1 Water voles were confirmed as present:

- In Lord's Drain close to DX0/4;
- In Wykeham Drain close to DX1/1;
- In Wykeham Drain close to DX3/1; and,
- Along the River Welland.

4.1.2 Therefore, water voles are confirmed as present at one additional location to the February 2010 ES (in Wykeham Drain close to DX3/1). Open cut trenching is proposed to be used in Wykeham Drain at DX1/1 and at DX3/1.

4.1.3 The confirmation of the presence of water voles in these locations reflects the impact assessment and mitigation measures proposed under 'Scenario B' in the Replacement Application ES FID.

4.1.4 Accordingly, in the absence of mitigation, the potential impacts of the construction / decommissioning of the Proposed Development are:

- Mortality and / or injury and / or disturbance; and / or,
- Destruction, damage or obstruction to habitat.

4.1.5 Unmitigated, this would represent a certain negative impact, significant at a local level. These potential impacts are the same as those identified in the February 2010 ES (for DX1/1).

### 4.2 Operation

4.2.1 There are no foreseen operational impacts of the Proposed Development on water voles. This is the same conclusion reached in the February 2010 ES.

## **5 DESCRIPTION OF MITIGATION AND MONITORING**

### **5.1 Construction / Decommissioning**

5.1.1 The mitigation measures relating to water vole contained within the February 2010 ES should be implemented at the watercourses where water voles are confirmed as present. Accordingly, the following mitigation measures should be implemented:

- Habitat manipulation (e.g. strimming of vegetation) along the watercourses in the year prior to construction to reduce the suitability of the area for water voles;
- Pre-construction surveys completed to confirm baseline; and,
- If the baseline remains the same (i.e. water voles remain present), water voles should be trapped out and excluded (e.g. through use of fencing) and either:
  - Released further along the watercourse; or,
  - Held in pens for the duration of works on the watercourse. This would be appropriate where the construction of the crossing is not expected to take longer than approximately 1 to 4 days. Then, following the completion of the works, the water voles would be released from the pens.

5.1.2 This mitigation has been secured through Condition 5 in the Original Permission.

5.1.3 No monitoring measures are considered to be required.

### **5.2 Operation**

5.2.1 No mitigation / monitoring is considered necessary for the operational phase.

## **6 ASSESSMENT OF RESIDUAL IMPACTS**

### **6.1 Construction / Decommissioning**

- 6.1.1 With the adoption of the recommended mitigation measures, no residual significant effects are predicted during construction / decommissioning.

### **6.2 Operation**

- 6.2.1 No residual significant effects are predicted during operation.