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Supplementary Environmental Information

Water Vole Survey

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ABLE HUMBER PORTS FACILITY, KILLINGHOLME:

Water vole survey

Strictly Confidential

Report prepared to Able UK Ltd

by

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Notice to Readers

The advice contained in this report is based on the information available and/or collected during the period of study and within the resources available for the project. We cannot completely eliminate the possibility of important ecological features being found through further investigation and/or by survey at different times of the year or in different years. Reference to sections or particular paragraphs of this document taken out of context may lead to misrepresentation. JUST ECOLOGY takes care to ensure that balanced advice is provided, based on the information available at the time.

Contents

1. Executive Summary	1
2. Introduction	1
3. Methods	2
3.1 Targeting & preliminary appraisal	2
3.2 Water vole survey	2
4. Results	3
5. Implications	3
6. References	5
7. Figures	6

1. Executive Summary

- 1.1 Twelve wetland ditches located within the application site for a ports-related development at Killingholme (Humber Estuary) were subject to appraisal for their suitability to support Water voles *Arvicola terrestris*.
- 1.2 One site could not be surveyed and three were dry and considered unsuitable. The remaining eight were surveyed for signs of voles, including the presence of burrows, latrines, footprints, feeding stations (*i.e.* chopped vegetation, lawns) *etc.*, as well as sightings of the animals themselves. The survey work was undertaken during 19-23rd June 2006 in suitable weather conditions.
- 1.3 Water voles were confirmed to be present at five of the eight sites surveyed. The population was widespread on the main drainage ditches from the north to south of the site, but was fragmented.
- 1.4 The implications of the results are discussed in the context of the proposed development.

2. Introduction

- 2.1 JUST ECOLOGY has been commissioned by Able UK Limited to carry out ecological surveys and assessments that will inform the preparation of an Environmental Statement for a proposed ports facility at Killingholme, Humber Estuary, North Lincolnshire. The application site is shown in Figure 2.1.
- 2.2 Important ecological receptors have been identified on the basis of desk research and Extended Phase 1 field survey (Kirby *et al.* 2006), including the known and suspected presence, in some areas, of Water vole *Arvicola terrestris*. Areas for further investigation were identified and Water vole survey recommended.
- 2.3 Surveys for Water voles are important because this is a declining species with a fragmented population, and because Water voles are afforded legal protection under Schedule 5 of the Wildlife & Countryside Act (1981) (and updated by the Countryside and Rights of Way Act 2000). The Water vole is also listed as a priority species within the UK Biodiversity Action Plan and national and local Species Action Plans are being implemented in order to protect and secure the future for this species.

- 2.4 Here we present the results of the Water vole survey within the application site and outline the implications of our findings.

3. Methods

3.1 Targeting & preliminary appraisal

- 3.1.1 Five areas of the site were identified for their potential to support Water voles during the 2006 Extended Phase 1 survey (see Figure 7.4 in Kirby *et al.* 2006). A further area was added to this that had previously been identified from an earlier Phase 1 survey (RPS 2005). These areas, some of which were very large, included extensive lengths of wet ditches and some standing water bodies.
- 3.1.2 The three lagoons/lakes identified (Rosper Road Pools, the Humber Sea Terminal Pool, and the Halton Marshes Pools) were excluded on the basis that they were outside of the application areas and not likely to be impacted upon.
- 3.1.3 The remaining ditches were mapped and coded for further appraisal in the field with a view to checking again on their suitability to support Water voles. This resulted in 12 areas of ditch to be surveyed; some short but others hundreds of metres long (Figure 3.1).
- 3.1.4 These were visited in turn but three were found to be dry and unsuitable for Water voles (W6 – all sections, W9 and W10), whilst W1 could not be accessed at all for safety reasons. The remainder were comprehensively surveyed for Water voles, as follows.

3.2 Water vole survey

- 3.2.1 Paired, experienced, Water vole surveyors entered the ditches wherever possible and walked the entire lengths of the target ditches except where these were very long or dangerous to survey. Where the ditch sections were long, we surveyed alternative sections of approximately 100m in length in order to provide adequate samples. In a few cases where the water/mud in ditches was too deep, observations were made from the ditch bank, accessing the ditch where possible or observing through binoculars.
- 3.2.2 The surveyors searched for all evidence of Water vole including the presence of burrows, latrines, footprints, feeding stations (*i.e.* chopped vegetation, lawns) *etc.*, as well as sightings of the animals themselves. Such evidence was mapped and counts made of the numbers of each field sign recorded.

3.2.3 The field survey took place during the period 19th to 23rd June 2006, and all survey work was carried out in good weather conditions.

4. Results

4.1 Water vole results for the ditch sections surveyed are summarised in Table 4.1.

4.2 No Water voles were sighted during the survey but signs of their presence were recorded on 5 of the 8 sections surveyed.

4.3 Their distribution was patchy and most of the field evidence came from small sections of the ditch; Figure 4.1 indicates where Water voles occurred.

4.4 Water voles were widespread along the main drainage ditches on site and occurred from the north to the south of the site.

Table 4.1: Survey results for Water Voles on ditches at Killingholme, 19th to 23rd June 2006

Section	No field signs observed	Presence confirmed	Field evidence Burrows	Latrines	Prints	Feeding stations
W2(a)		√	10	7	None	1
W2(b)	√		-	-	-	-
W3	√		-	-	-	-
W4	√		-	-	-	-
W5		√	1	9	None	1
W7(a)		√	0	13	None	10
W7(b)		√	0	4	None	0
W8		√	9	2	Scarce	0

5. Implications

5.1 Although supporting only small and fragmented populations, Water voles are widely dispersed at Killingholme and are protected by law. Their inclusion in Schedule 5 of the Wildlife & Countryside Act (1981) protects their places of shelter or protection, but not the voles themselves. However, legal protection makes it an offence to deliberately damage, destroy or obstruct access to any structure or place that water voles use for shelter or protection, or to disturb water voles while they are using such places.

- 5.2 Water voles are present in the proposed development Areas 2a, 4 and 5. Due attention should be paid to their presence and appropriate actions to safeguard them should be planned, through appropriate mitigation. This should involve detailed consideration of options including:
- Avoiding the impact by re-design;
 - Exclusion from development areas;
 - Trapping, removal and release;
 - Habitat enhancements to offset the impacts of adverse effects.
- 5.3 It should not be forgotten that water voles may also be indirectly influenced through changes in hydrology and water quality across the site, factors that will need careful consideration.
- 5.4 Water voles are also known to be present at North Killingholme Haven Pits SSSI (RPS 2005c) and may occur around other lakes/lagoons across the site. They may also occur on ditch W1 (some burrows were observed) and, in other seasons and years, may occur on ditches that we did not assess or that produced negative results during our survey.
- 5.5 Entec (2003) and RPS (2005) reported that water voles were found within the central Internal Drainage Board ditch within their 'Area E' (corresponding with the northern part of our W7a), and this was later confirmed by Lapwings Consultants (2006).
- 5.6 Entec (2003) found concentrations of Water voles in the wet ditches immediately adjacent and close to the power station (our area W6) but we recorded only dry ditches in these areas and no signs of Water voles.
- 5.7 Many of the ditches at Killingholme are in need of management and, in general, these habitats could be greatly improved for Water voles. Connectivity of the fragmented populations is important to ensure that they thrive on this site, as is protection from damage and disturbance and optimal management of the water course. Given the size of the area a landscape approach is recommended regarding the mitigation and enhancement of this vulnerable, but important, animal population.

6. References

- Entec. 2003b. Port-related storage & distribution facility at North Killingholme. Water vole survey. Entec UK Limited.
- Kirby, J., Toogood, S., Plant, D. & Anthwal, V. 2006. Able Humber Ports Facility, Killingholme: Extended Phase 1 and Scoping Study. May 2006. Report to Able UK Limited. JUST ECOLOGY, Wotton-under-Edge
- Lapwings Consultants. 2006. Water vole mitigation plan: Able UK Area E. Report to Able UK Limited. Lapwings Consultants
- RPS. 2005. Report on Phase 1 habitat and scoping survey at Killingholme, Humberside. June 2005.
- Strachan, R. 1998. Water vole conservation handbook. Wildlife Conservation Research Unit, Oxford

7. Figures

Figure 2.1: Site location (courtesy of Able UK)

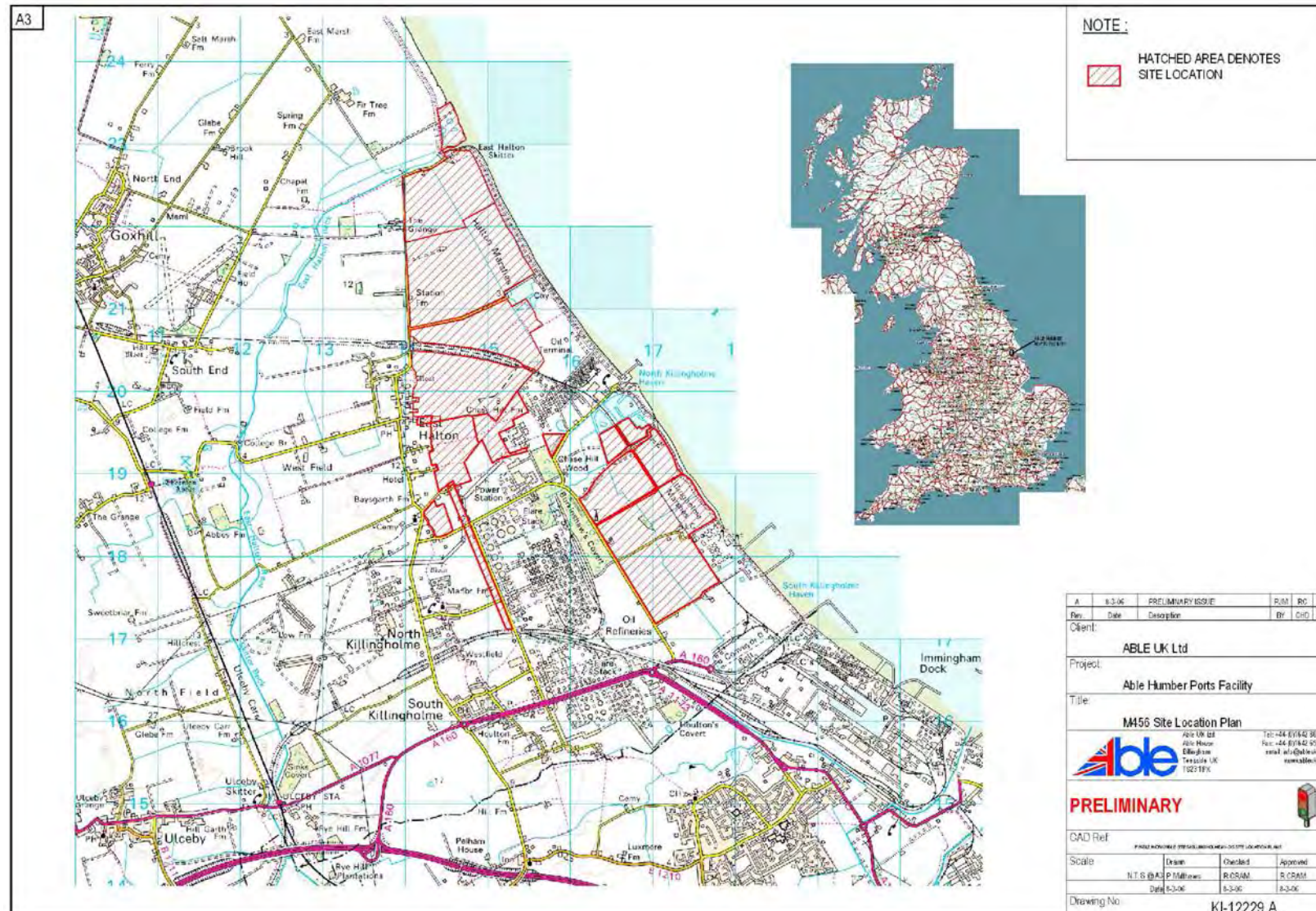


Figure 3.1: The areas of ditch surveyed for Water voles at Killingholme.

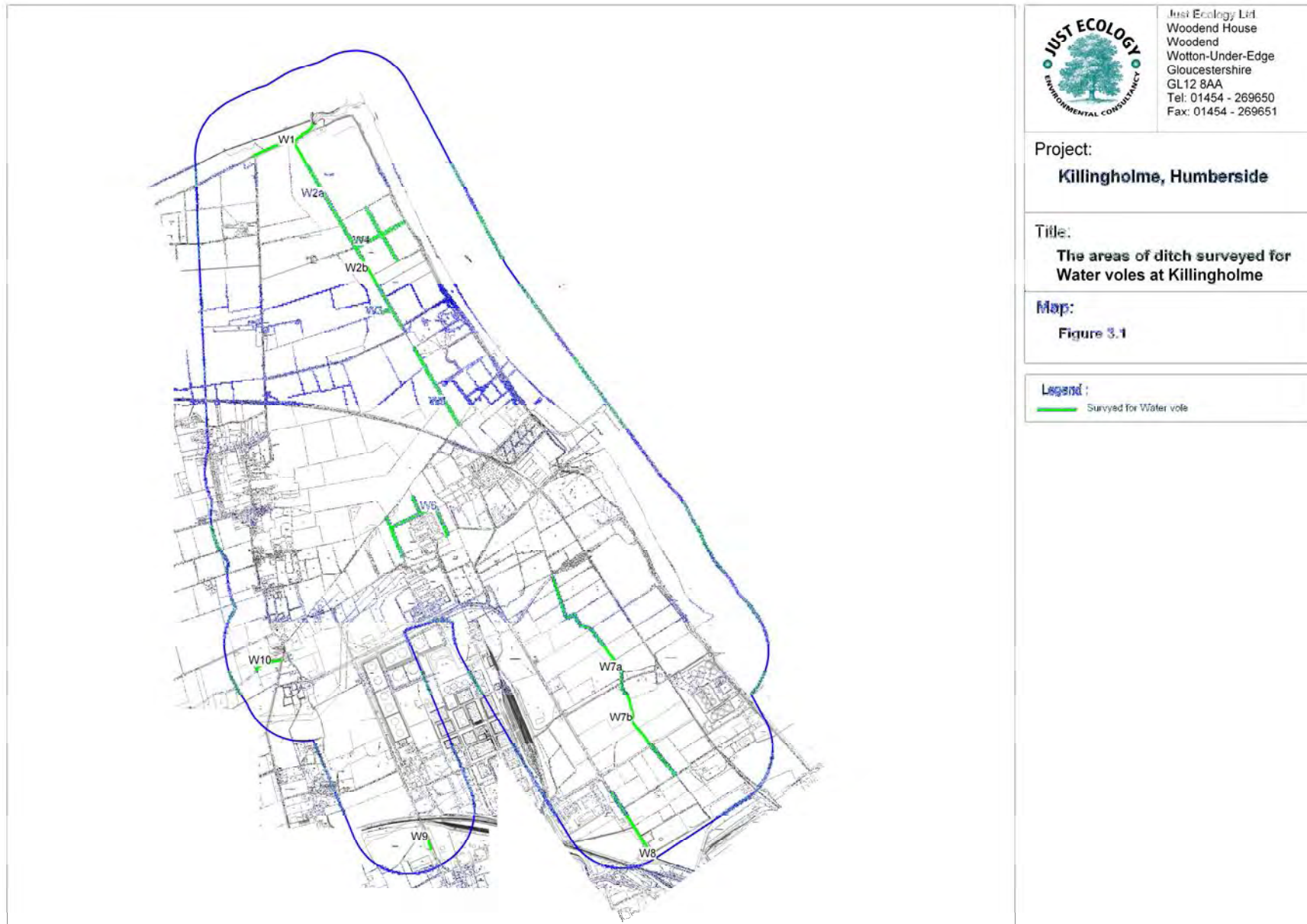


Figure 4.1: Confirmed presence of Water voles along ditches at Killingholme.

