

EDF Energy

Sizewell C New Nuclear Power Station: Terrestrial and Freshwater Ecology, and Ornithology

Draft Water Vole Survey Report 2007-2009

June 2012

AMEC Environment & Infrastructure UK Limited



Report for

EDF Energy

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1. Introduction

1.1 Purpose of this Report

An area of land directly north of Sizewell B Nuclear Power Station, which is located near Leiston in Suffolk, has been identified as having the potential to accommodate the proposed development of one or more new nuclear reactors. This proposed development is known as Sizewell C. The site of the proposed development has an approximate central National Grid Reference (NGR) of TM473640.

AMEC Environment & Infrastructure UK Ltd ('AMEC') was commissioned in 2007 to provide terrestrial and freshwater ecological, and ornithological services in relation to Sizewell C. The purpose of this report, which outlines the findings of survey work undertaken for water vole (*Arvicola amphibius*) in the period 2007-2009, is to inform the design of Sizewell C and the Environmental Statement for the scheme.

1.2 Water Voles on the Sizewell Estate

The wetland habitats at Sizewell, and separately the Minsmere site, have been recognised as being of national importance to water voles, and the two sites have therefore been designated as National Key Sites for the species. The National Key Sites scheme recognises sites supporting water vole populations of national importance, and that are considered by the UKBAP Water Vole Steering Group (lead by the Environment Agency (EA)) as a priority for the conservation of resources at a national level. The selection of sites for this designation is based on the following criteria:

- The presence of a large water vole population, with habitat of optimal quality for the species, or where a minor adjustment in management would make it so;
- A site that provides a known and probably sustainable refuge from the introduced American mink (Mustela vison);
- A site that is most likely to be a major source of recolonist animals for a wider area; and
- A site where land tenure and habitat management is assured in the long term.

Landowners and managers of National Key Sites agree to adopt habitat management plans to ensure the importance of the site for water voles is maintained, and biannual monitoring is carried out following a standardised protocol to monitor the populations and allow comparisons to be made between sites (Bright & Carter, 2000, Strachan & Moorhouse 2006). British Energy (which became part of EDF Energy in 2009) developed a Species Action Plan (SAP) for water voles on land within their ownership, including the Sizewell estate (British Energy Group PLC 2007). This outlines the following actions:

 Maintain regular monitoring of the populations and diversity of the species on EDF Energy sites;



- Develop an information management system which records and manages data associated with the key performance indicators for water voles;
- Safeguard any existing populations on EDF Energy sites by appropriate and sympathetic management of bankside vegetation and riparian maintenance work. However, strike a balance between clearing ditches to promote water flow and providing adequate aquatic vegetation cover for small mammals such as water voles:
- Minimise the risk to water voles of any necessary pest control procedures;
- Safeguard water vole populations against mink predation by installing mink monitoring rafts and traps where necessary.

1.3 Survey Area and Scope

The survey areas and methodologies used have been adopted following consultation with statutory and non-statutory consultees and other stakeholders, taking into account best practice guidelines, and site-specific and project-specific characteristics. The survey area adopted is precautionary in that it allows for the iterative development of the scheme design by covering a larger area than is likely to be affected by the proposals. Based on the information available at the time the survey was undertaken, it was assessed that the relevant Zones of Influence of the proposed development would be likely not to extend further than the defined study area.



2. Methods

2.1 Desk Study

Existing information regarding water voles within the study area and surrounding land was obtained from the following sources:

- EDF Energy (and British Energy, which became part of EDF Energy in 2009)
 which has conducted a wide range of ecological surveys of its land holding and
 employs a conservation warden at Sizewell to help manage its land and undertake
 biological recording;
- Royal Holloway University (RHU) and RSPB, who conduct water vole monitoring
 as part of the National Key Sites scheme within the Sizewell Estate and at
 Minsmere respectively;
- Suffolk Biological Records Centre (SBRC);
- Suffolk Wildlife Trust (SWT); and
- The Environment Agency (EA).

The records included in this report were most recently requested in 2007.

2.2 Field Surveys

2.2.1 Ditch Surveys

An initial survey of 20 transects along ditches (see Figure 2.1 for locations) was carried out on 4 and 5 October 2007. Due to the extensive system of water bodies present across the survey area, and health and safety issues due to the heavily vegetated nature of some and the inaccessibility of others, it was not feasible to include every water body within the scope of the survey. A representative sample of the ditches within the survey area were therefore identified and surveyed to obtain basic presence/ absence data for water voles. The water bodies surveyed were chosen based on both ease of access in the field, and were widely distributed in order to sample all parts of the site. Once distinctive water vole signs were recorded in a ditch, presence had been established and no further searches of that water body were carried out.

On 28 and 29 July, and 15 October 2009, a sample of 16 sections of ditches (Figure 2.2) within the area of land directly north of the Sizewell B Power Station was surveyed in more detail to identify all evidence of water vole activity present (as far as safe access allowed). The aims of this further study were:

• To obtain a better understanding of how water voles use the habitats across the Sizewell Estate, not only in ditches and other clearly defined water bodies, but also in reedbeds (see Section 2.2.2); and



• To make more detailed assessments of a sample of ditches, in order to make population assessments that allow extrapolation for a generalised population assessment for the entire Estate.

The surveys were carried out based on methods recommended by Strachan & Moorhouse (2006). This involved searching bankside vegetation for:

- Latrines/ droppings water vole droppings are often concentrated in discrete latrine sites near the nest, at range boundaries and places where they regularly enter and exit the water. While most droppings will be deposited in latrines, some may be found scattered along runways in vegetation;
- Feeding stations feeding remains in the form of neat piles of chewed lengths of vegetation, are often found in runways and at haul-out platforms;
- Burrows these are typically found along the water's edge and on top of the bank up to 5m from the water's edge. Holes on top of the banks often have grazed 'lawns' surrounding them;
- Nests Where vegetation cover is dense and the water table is high (limiting
 opportunities for burrowing), water vole nests may be found woven into the base of
 rushes, sedges or grass tussocks; and
- Footprints these may be identified in soft mud or silt.

Also recorded at each ditch was the depth, speed of water flow (estimated visually), the waterway width, bank side vegetation type and abundance, and surrounding land use, all of these being factors that may determine the suitability of habitat for supporting water voles.

The surveys were undertaken at an appropriate time of year for detecting water vole presence, i.e. between late April and early October, when water voles actively mark their breeding territories with latrines

2.2.2 Reedbed Survey

Marshland areas, where there are no distinct banks on which to search for water vole field signs, were also surveyed during 2009 via five transects, each measuring approximately 500m in length, designed to zig-zag through the reedbeds. Figure 2.3 shows the locations of the transects. Sheets of plywood measuring approximately 20cm by 30cm were then placed at a density of around one every 10m to create artificial latrine sites and lightly tethered to adjacent reeds. The artificial latrine sites were left in place, undisturbed, for 2-3 weeks prior to the survey taking place to allow enough time for water voles to explore and begin using them. Each of the transects was surveyed twice, once between 20 and 21 August, and once between 13 and 14 October.

During each survey the following signs of water vole activity were recorded:

- Latrines/ droppings these may be found on the artificial latrine sites that have been specifically placed along the transect route, or in other suitable locations above the water level;
- Feeding signs evidence of feeding in reedbed habitat is likely to be most noticeable where new shoots of vegetation have had the tips eaten; and



• Nests – above water level woven into large tussocks of vegetation.

2.3 Population Assessment

The data collected from the ditches during the 2009 survey were used to make population estimates using recommended methodologies¹ (Woodroffe *et al.*, 1990; amended by Morris *et al.*, 1998). This involves using the mean number of latrines per 100m of ditch to calculate the approximate water vole population density per 100m during the breeding season. Where access restrictions prevented both banks from being surveyed, the bank length was halved for the purpose of this equation. In all cases where this was undertaken, habitats on both banks of the ditch were considered to be of similar quality.

Given the variation in habitat types surveyed, in addition to the overall mean population estimate, mean estimates were calculated for the most optimal habitat and the habitat with very low suitability for water vole. This was in order to provide an indication of the variation between habitat types.

It should be noted that these are crude estimates, being based on a small sample size. In addition, the population assessment is based on latrine counts within the breeding season and therefore indicates the size of the breeding population. As such, it includes adult males, adult females and many independent juveniles, but not dependent young in the nests.

2.4 Personnel

The teams of suitably experienced surveyors were led by Katheryn Leggat.

 $^{^{1}}$ y = 1.48+0.683x, where y = number of water voles and x = number of latrines.



Results

3.1 Desk Study

3.1.1 SWT and EA

A countywide water vole survey was undertaken in Suffolk in 1997 by SWT and the EA. This demonstrated that water voles were largely absent from the west and north of Suffolk, but present in central and eastern parts of the county. Overall, signs of water vole were found at a third of sites surveyed. During this survey, the River Deben was found to have water voles present in three quarters of the sections surveyed. Whilst a follow-up countywide survey has not yet been completed, a survey of the River Deben catchment in 2003 showed a reduction in sites with water vole signs present from 75% in 1997 to 46% in 2003 (Suffolk Biodiversity Partnership, 2003).

The Sizewell Land Management Annual Review has regularly referred to the importance of Sizewell for water vole conservation and the high populations supported since the 1997-98 report. The 2006-07 report suggests that Sizewell is one of the best sites for the species in Suffolk. Liaison with Penny Hemphill (Suffolk Wildlife Trust, 2008), indicated that the population present at Sizewell is important only as part of a wider population throughout coastal marsh habitat along the Suffolk coast. She also explained that whilst mink have been discovered in this part of the county, they have not yet become established. Mink control is in place at Sizewell, without which the water vole population may face the threat of serious decline.

3.1.2 **RHU and RSPB**

12 transects within the Sizewell Estate are monitored twice annually as part of the National Key Sites initiative. RHU provided data for these transects, for the period between September 2001 and May 2007. Figure 2.1 illustrates the location of each transect, and Table A1 (Appendix A) provides the presence/ absence data for each of these since September 2001. The transects are distributed across the majority of the survey area, although none are located in the northernmost part. There was no evidence of water vole activity on two of the 12 transects in May 2007, but both of these have had water vole signs recorded within the past two years.

24 transects on the Minsmere site are monitored twice a year as part of the National Key Sites initiative. RSPB have been able to provide the presence/ absence data for these transects for the period between autumn 2001 and autumn 2007. Figure 2.1 illustrates the location of each of these transects too, while Table A2 presents the outcome of these surveys since the beginning of the monitoring programme (2001). These transects are distributed across an area to the north of the current study site. Water vole presence was confirmed in 16 of the 23 surveyed transects in autumn 2007, although those transects in which water voles were not recorded during this survey have all supported water voles within the previous two years. Transects in which water vole presence was confirmed in autumn 2007 are widely distributed across the Minsmere site.



3.1.3 SBRC and Other Data

The SBRC provided a number of records of water vole activity throughout the Sizewell Marshes and the surrounding area up to a distance of 3km. These data are presented in Table A3, and clearly indicate that the species has been present in the survey area for at least the last 10 years.

The Environmental Statement (ES) produced in association with the decommissioning of the existing nuclear facility indicated four historical records of water vole activity in the ditches at Turf Pits, to the south of the study area. Surveys carried out to inform the ES also confirmed the presence of the species in a watercourse that runs to the west of the existing power station.

3.2 Field Surveys

3.2.1 Habitat Assessment

Ditches Surveyed in 2007

All ditches surveyed in 2007 provided suitable aquatic habitat for water voles, comprising slow-flowing or still water over 1m deep with wide swathes of riparian vegetation and earth banks. Bordering land use is predominantly marshy grassland, which in many cases is grazed by cattle and/or sheep. Other land uses bordering survey transects included reedbeds and arable fields. Several of the transects had woodland dominating one bank and therefore were somewhat shaded by overhanging trees. Bank profiles ranged from shallow to steep, but all provided some suitable burrowing habitat for water voles, the only exception being Transect R, which had a very flat bank that merged with the adjacent wet grassland. This does not however preclude the possibility of water voles occupying the habitat, as the species will build nests in the base of sedge and reeds, particularly in wetlands with a high water table such as those found on the Sizewell Estate (Strachan & Moorhouse, 2006). At each transect the riparian vegetation required for foraging and sheltering water voles was abundant at varying levels. Some ditches provided a wide margin of reeds and sedges, whilst others were dominated by patches of scrub with only a narrow strip of reeds.



Table 3.1 **Description of the Ditches Surveyed in 2007**

Transect (Figure 2.1)	Bordering Land Uses		Depth (m)	Width (m)	Dominant Bankside Vegetation
A	Marshy grassland	Shallow- steep	1.5+	1-2	Reeds
В	Broad-leaved woodland, marshy grassland	Shallow- steep	1.5+	1-2	Trees
С	Marshy grassland, semi-improved grassland	Shallow	1-1.5	1	Trees/scrub
D	Marshy grassland, semi-improved grassland	Steep	0.5-1	1-2	Trees, scrub
E	Marshy grassland, mixed woodland	Steep	1.5+	2-5	Reeds, trees
F	Marshy grassland	Shallow	1.5+	1-2	Reeds
G	Conifer plantation, marshy grassland	Steep	1.5+	1-2	Trees, tall grass
Н	Reedbed, broad-leaved woodland	Shallow	1.5+	2-5	Reeds, trees
1	Reedbed, broad-leaved woodland	Shallow	1.5+	2-5	Reeds, trees
J	Reedbed, broad-leaved woodland	Shallow	1.5+	2-5	Reeds, trees
K	Reedbed, broad-leaved woodland	Flat	1.5+	2-5	Reeds, trees
L	Reedbed, broad-leaved woodland	Flat	1.5+	2-5	Reeds
M	Marshy grassland	Shallow	1.5+	1-2	Reeds
N	Marshy grassland	Shallow	1.5+	1-2	Submerged weed
0	Marshy grassland, broad-leaved woodland	Shallow	1.5+	2-5	Trees, submerged weed
Р	Marshy grassland, broad-leaved woodland	Shallow	1.5+	1-2	Trees, reeds
Q	Broad-leaved woodland, marshy grassland	Shallow	1.5+	1-2	Trees, submerged weed
R	Semi-improved grassland	Steep	1.5+	2-5	Scrub
S	Arable land	Steep	1.5+	1-2	Submerged weed, short grass
Т	Marshy grassland	Shallow	1.5+	1-2	Reeds

Ditches Surveyed in 2009

Of the ditches surveyed in 2009, six were considered to offer relatively poor habitat for water voles. This was predominantly due to two key main factors:

> Heavy over-shading by adjacent woodland limiting the growth of aquatic vegetation and resulting in a deep layer of decaying leaf litter dominating the channel (ditches 3b, 8, 9b, 12 and 13); and/or

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² Bank profile: flat <10°, shallow <45°, steep >45°, vertical/undercut.



• Very heavy poaching of the banks by cattle reducing bankside vegetation and restricting opportunities for burrowing water voles (ditches 9a, 12 and 13).

A further six of the ditches surveyed (ditches 3a, 4, 5, 6, 7 and 11) were considered to offer very good habitat for water voles, comprising water over 1m deep with wide swathes of riparian vegetation dominated by common reed (*Phragmites australis*), and earth banks. The other four ditches offer good habitat for water voles, although the value is limited to just one bank due to over-shading trees (ditch 2), and/or reduced by cattle poaching (ditches 1, 2, 10a and 10b).

Bordering land use is predominantly marshy grassland with cattle grazing, but also includes semi-natural broad-leaved woodland, mixed and conifer plantation, marshland (reedbed), and some semi-improved and improved grassland. Bank profiles are predominantly shallow, with only a few steep banks, limiting water vole burrowing opportunities; although most of the ditches do provide some burrowing habitat. The riparian vegetation required for foraging and sheltering water voles was present at varying levels with some ditches providing a dense reed bed, and others almost bare. Table 3.2 outlines the habitat variables recorded at each ditch.

Table 3.2 Description of the Ditches Surveyed in 2009

Ditch Reference (Figure 2.2)	Bordering Land Uses	Bank Profile ²	Depth (m)	Width (m)	Dominant Bankside Vegetation
1	Marshy grassland, mixed plantation woodland, cattle grazing	Shallow	0.5-1	1-5	Tall grass
2	Marshy grassland, mixed plantation woodland, semi-natural broad-leaved woodland, cattle grazing	Shallow	0.5-1	1-5	Bankside trees and short grass
3a	Semi-improved grassland, conifer plantation woodland	Shallow	1-2+	2-5	Reeds/sedges
3b	Semi-improved grassland, conifer plantation woodland, cattle grazing	Shallow	1-2+	1-5	Bankside trees and scrub
4	Marshy grassland, mixed plantation woodland	Shallow	1-2	2-5	Reeds/sedges
5	Marshy grassland, semi-natural broad- leaved woodland, cattle grazing	Shallow	1-2+	2-5	Reeds/sedges
6	Marshland, semi-natural broad-leaved woodland	Flat-shallow	1-2	2-5	Reeds/sedges
7	Marshland, semi-natural broad-leaved woodland	Flat- vertical/undercut	1-2	2-5	Reeds/sedges
8	Marshland, semi-natural broad-leaved woodland	Flat	0.5-2	2-5	Bankside trees
9a	Marshy grassland, semi-natural broad- leaved woodland, cattle grazing	Shallow	1-2	2-5	Bankside trees and short grass
9b	Improved grassland, semi-natural broad-leaved woodland	Shallow	0.5-1	1-2	Bankside trees



Table 3.2 (continued) **Description of the Ditches Surveyed in 2009**

Ditch Reference (Figure 2.2)	Bordering Land Uses	Bank Profile ²	Depth (m)	Width (m)	Dominant Bankside Vegetation	
10a	Marshy grassland, cattle grazing	Shallow	>2	1-2	Tall grass	
10b	Marshy grassland, semi-natural broad- leaved woodland, cattle grazing	Shallow-steep	1-2	1-2	Tall grass	
11	Marshy grassland, cattle grazing	Shallow	>2	2-5	Reeds/sedges	
12	Marshy grassland, semi-natural broad- leaved woodland, cattle grazing	Flat-shallow	0.5-2	1-2	Bankside trees	
13	Marshy grassland, semi-natural broad- leaved woodland, cattle grazing	Flat-shallow	0.5-1	1-2	Bankside trees and tall grass/rushes	

Reedbeds Surveyed in 2009

Reedbed habitat to the north of the Sizewell Estate is largely restricted to wide linear swathes that follow ditch lines, and therefore Transects 1 and 2 also followed these water bodies (Figure 2.3). The ditches have high water levels and predominantly flat banks that merge with adjacent marshy grassland.

Transects 3, 4 and 5 zig zag through dense reedbed habitat (Figure 2.3) which support several shallow and deep ditches. At the time of surveying water levels were low, with much of the reedbeds dry and the only water found in a few small wet patches of reedbed that occur close to the ditches, and within the ditches themselves. Parts of the reedbeds at all three transects were starting to be colonised by terrestrial species including common nettle (*Urtica dioica*), common cleavers (Galium aparine), bramble (Rubus fruticosus agg.) and lesser bindweed (Convolvulus arvensis).

The artificial latrine sites were not only sited through the reedbed occasionally crossing ditches, but sections of the transects also followed ditch lines where the extent of the reedbed was limited (transect 5) and passed through small sections of wet woodland (transect 3).

3.2.2 **Water Vole Activity Surveys**

Ditches Surveyed in 2007

A summary of the water vole field signs identified in 2007 is presented in Table 3.3, and the completed field survey forms are presented in Appendix B). Evidence of water vole activity, in the form of latrines and/or feeding remains, was found on the banks of all ditches surveyed with the exception of Transect T, and several water vole burrows were also identified.



Table 3.3 Water Vole Field Signs identified during the 2007 Survey

Transect (Figure 2.1)	Signs							
(Figure 2.1)	Latrine/ Droppings	Feeding Station	Burrow					
A	✓	✓						
В	✓	✓						
С	✓	✓	✓					
D	✓							
Е	✓	✓						
F	✓	✓						
G	✓		✓					
Н	✓							
1	✓	✓						
J	✓	✓						
K	✓	✓						
L	✓	✓						
M	✓	✓						
N	✓							
0		✓						
Р	✓	✓						
Q	✓	✓						
R	✓							
S	✓		✓					
Т								

Ditches Surveyed in 2009

The water vole field signs identified during the 2009 ditch survey are summarised in Table 3.4. Evidence of water vole activity in the form of latrines, feeding remains, and/or burrows was found on the banks of all surveyed ditches, with the exception of ditches 2 and 9b. The latter of these was considered to offer poor habitat for water voles. All of the other ditches considered to offer poor water vole habitat supported some, limited signs of activity (ditches 3b, 8, 9a, 12 and 13).

A high density of different field signs was recorded from four of the ditches (3a, 4, 7 and 11) considered to provide very good water vole habitat. Although ditch 5 also offers very good water vole habitat, access to this ditch was restricted by deep sediment and dense bankside vegetation. A high density of feeding remains found along the banks of ditch 6 indicated a significant level of water vole activity, although few other signs were recorded. This is likely to be due to the flat banks of this ditch, which limit the number of suitable locations for latrines, as well as reducing potential for burrowing.



Water Vole Field Signs identified during the 2009 Ditch Survey Table 3.4

Ditch Reference	Transect Length (m)	Signs					
(Figure 2.2)	Longin (iii)	Latrine/ Droppings	Feeding Station	Burrow	Other		
1	230	0	3	0			
2	190	0	0	0			
3a	50	26	25	9			
3b	100	0	2	0	1 dead water vole		
4	160	22	51	31			
5 ³	150	2	0	0			
6	100	1	34	1			
7	200	12	34	3			
8	100	3	1	0			
9a ⁴	100	1	2	1			
9b ⁴	80	0	0	0			
10a	120	5	8	2			
10b	90	9	15	4	Water vole nest in rushes		
11 ⁴	110	23	29	3			
12	160	4	0	0			
134	60	3	2	1			

Reedbeds Surveyed in 2009

Water vole field signs, including latrines, were recorded on all of the transect routes surveyed. Throughout the length of transects 1 and 2, where natural latrine sites are restricted by high water levels, the artificial latrine sites were widely used for territorial marking. Of the 50 artificial latrine sites set out at transect 1, more than half held latrines during the second survey visit; while 18 of those along transect 2 held latrines during the same survey visit.

Within transects 3, 4 and 5 however, use of the artificial latrine sites was limited to the few that were placed within or adjacent to ditches and nearby wet areas. A maximum of 4 artificial latrine sites were used at transect 3, this was during the first survey visit. No more than 1 artificial latrine site was used at each of transects 4 and 5. Similarly, all other water vole field signs identified were recorded along the banks of ditches and in wet pockets. No evidence of water vole activity was recorded throughout most of the length of the transects, where they passed through dry reedbed habitats.

³ Access for survey limited due to very deep water and dense vegetation, as well as the presence of nesting reed warblers, therefore this ditch has not been included in the population estimate calculation.

⁴ Only one bank surveyed due to access difficulties. The bank length used for the population assessment was therefore taken to be half this distance.

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Table 3.5 Water Vole Field Signs identified during the 2009 Reedbed Survey

_			O Walto			
Transect (Figure 2.3)	Survey Visit 1		Survey Visit 2			
	Signs	Details (e.g. Habitat Type/ Location of Record)	Signs	Details (e.g. Habitat Type/ Location of Record)		
1	19 latrines	On artificial latrine sites	26 latrines	On artificial latrine sites		
	1 feeding station	On an artificial latrine site	1 feeding station	On the banks of a ditch		
			1 burrow	In the bank of a ditch		
2	17 latrines	On artificial latrine sites	18 latrines	On artificial latrine sites		
	2 feeding stations	On artificial latrine sites				
3	30 feeding stations	On the banks of ditches	13 feeding stations	On the banks of ditches		
	1 feeding station	Within a wet area of the reedbed	2 latrines	On the banks of ditches		
	1 patch of reeds with tops eaten	Within a wet area of the reedbed	1 latrine	On an artificial latrine site adjacent to a ditch		
	19 latrines	On artificial latrine sites	26 latrines	On artificial latrine sites		
	1 feeding station	On an artificial latrine site	1 feeding station	On the banks of a ditch		
			1 burrow	In the bank of a ditch		
	17 latrines	On artificial latrine sites	18 latrines	On artificial latrine sites		
4	2 feeding stations	On artificial latrine sites				
	30 feeding stations	On the banks of ditches	13 feeding stations	On the banks of ditches		
	1 feeding station	Within a wet area of the reedbed	2 latrines	On the banks of ditches		
	1 patch of reeds with tops eaten	Within a wet area of the reedbed	1 latrine	On an artificial latrine site adjacent to a ditch		
5	19 latrines	On artificial latrine sites	26 latrines	On artificial latrine sites		
	1 feeding station	On an artificial latrine site	1 feeding station	On the banks of a ditch		
			1 burrow	In the bank of a ditch		

3.3 **Population Assessment**

The results of the population assessment based on the 2009 ditch survey data are shown in Table 3.6. The average population size for all the ditches surveyed is estimated at 8.14 water voles per 100m. Assessments made based on habitat suitability, however, indicate the wide variation between ditches, with the most optimal habitats supporting an average of 17.13 water voles per 100m, and the poorest habitats supporting as few as 3.47 individuals per 100m.



Table 3.6 **Water Vole Population Assessment 2009**

Ditch Reference	Bank Length (m) ⁵	Latrine Count	No. of Latrines per 100m				
1	230	0	0				
2	190	0	0				
3a*	50	26	52				
3b†	100	0	0				
4*	160	22	13.75				
6*	100	1	1				
7*	200	12	6				
8†	100	3	3				
9a†	50	1	2				
9b†	40	0	0				
10a	120	5	4.17				
10b	90	9	10				
11*	55	23	41.82				
12†	160	4	2.5				
13†	30	3	10				
No. of water voles per sample:	8.14						
No. of water voles per optimal habitat only *):	100m (from mean of 22.91 late	ines per 100m) ¹ - most	17.13				
No. of water voles per suitable habitat only (†	No. of water voles per 100m (from mean of 2.92 latrines per 100m) ¹ - least						

 $^{^{5}}$ As noted in Section 2.3, where access restrictions prevented both banks from being surveyed, the bank length was halved for the purpose of this equation.



4. Summary

Surveys at Sizewell during 2007 and 2009 demonstrated that water voles occur throughout the ditch network within the survey area, with most of the Sizewell Estate providing areas of optimal habitat for water voles. Water vole activity was found to be limited in the less frequent areas of poorer habitat quality such as dry reedbeds.

A population assessment has been made based on the number of latrines recorded per 100m of ditch surveyed in 2009; however, these provide only a crude estimate and are based on a small sample size. The population assessment is based on latrine counts within the breeding season and therefore indicates the size of the breeding population, and does not allow for seasonal fluctuations. In addition, it includes adult males, adult females and many independent juveniles, but not dependent young in the nests. The population estimate for the study area was 8.14 water voles per 100mof ditch.

There is high variation in habitat quality within the study sample, therefore population assessments of the most optimal habitats, and separately of the poorest quality habitats, have also been made. These are based on a very small sample size and are used only to indicate the likely variation in water vole numbers between habitat types. The results equate to an average of 17.13 adult water voles per 100m in optimal water vole habitat, compared to an average of just 3.47 adult water voles per 100m in poor quality habitat.

The results of transect surveys through the reedbeds indicate that water voles are rarely active within the reedbed habitats at any distance from the ditches, with no evidence of such found. Ditches and nearby wet areas within the reedbeds are readily used, with clear evidence of water vole occupation present at all those surveyed.



5. References

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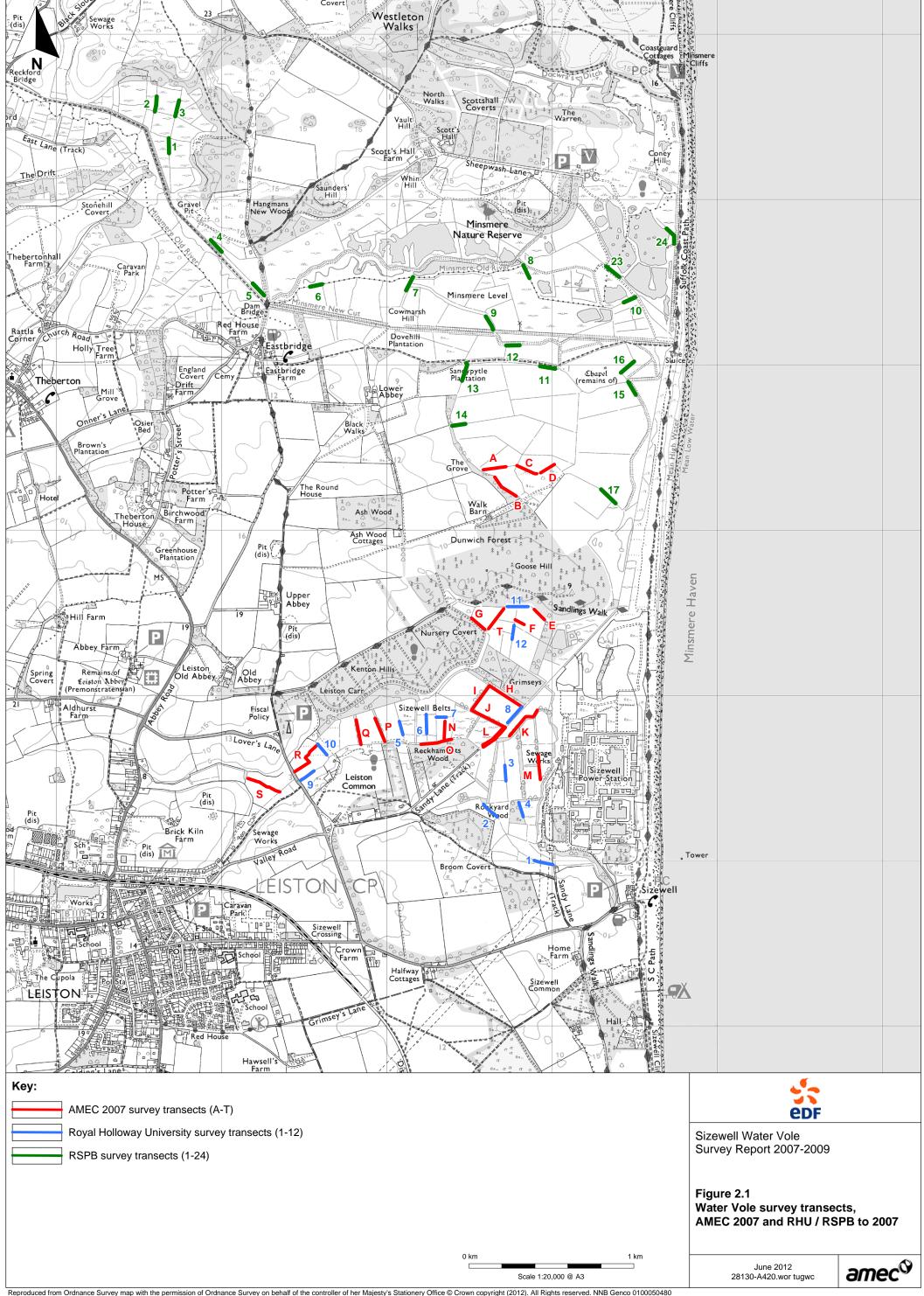
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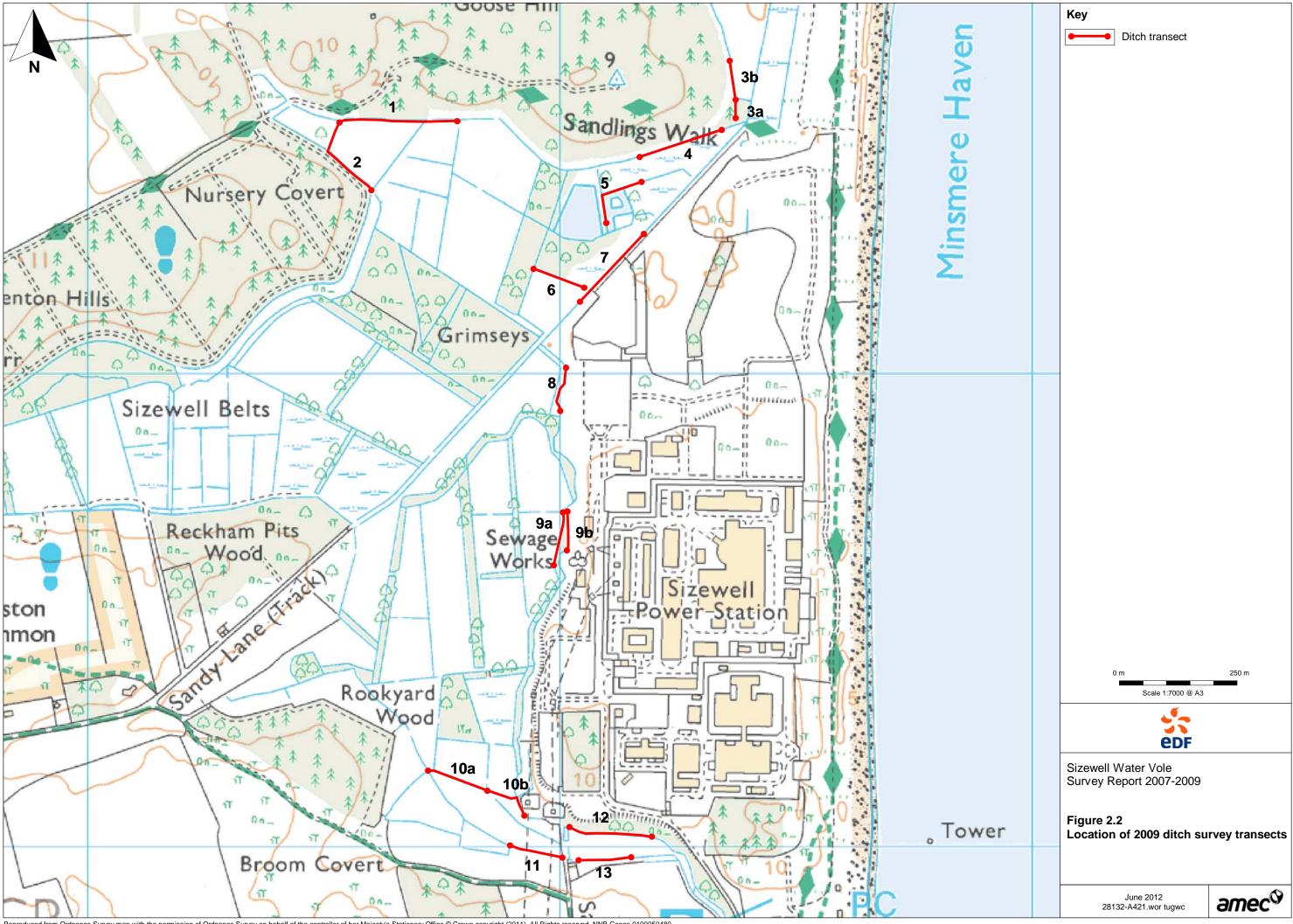
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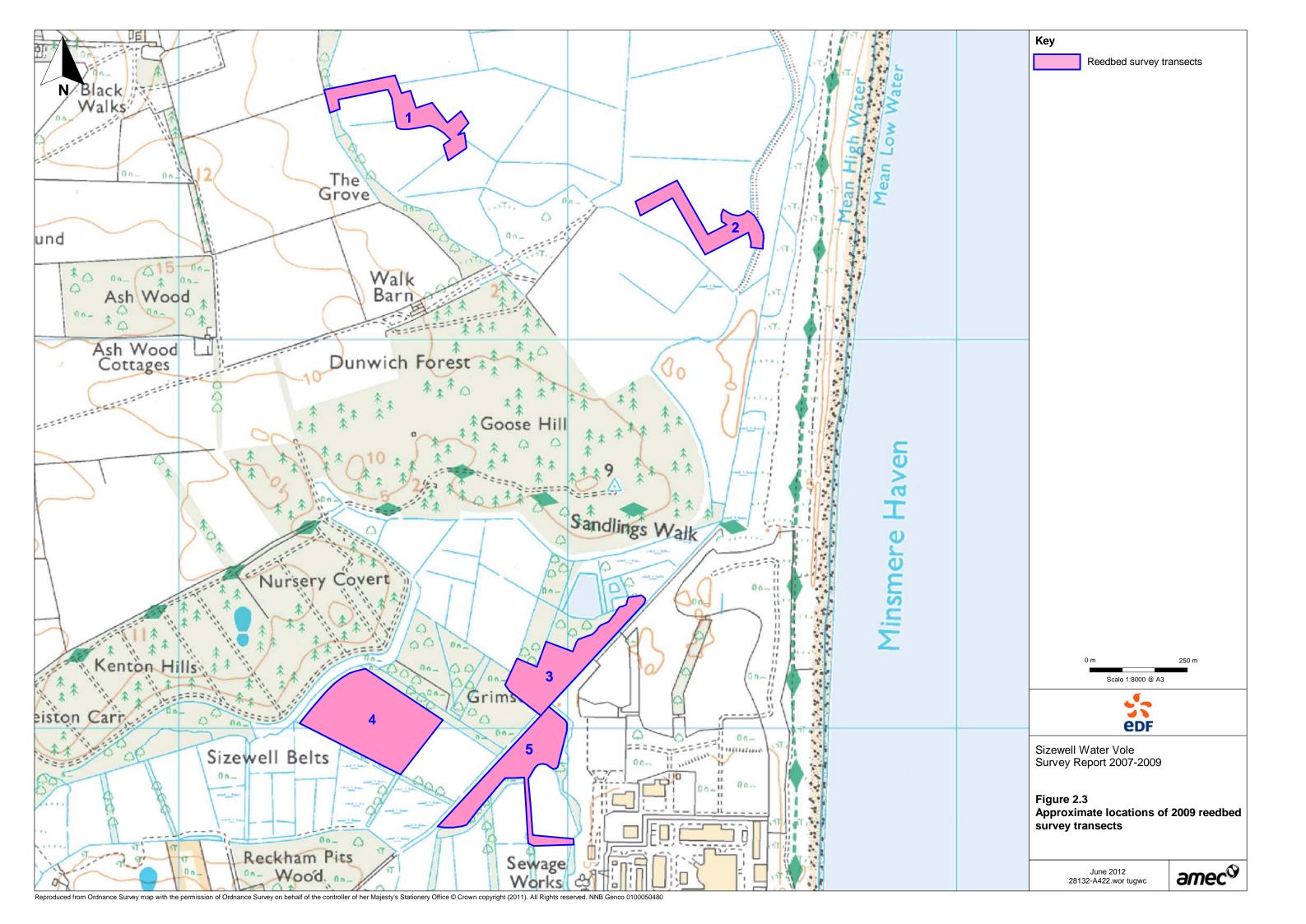
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Figures









Appendix A Data Responses

3 Pages



Table A1 **RHU Survey Transects at Sizewell**

Transect (Figure 2.1)	May 07	Sept 06	May 06	Sept 05	May 05	Sept 04	May 04	Sept 03	May 03	Sept 02	May 02	Sept 01
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	√	✓	×
2	✓	×	✓	✓	✓	✓	×	×	✓	✓	✓	✓
3	✓	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	×
4	✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	×
5	×	×	×	✓	✓	×	✓	×	×	✓	✓	✓
6	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	✓
7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	×	✓	✓	✓	✓	×	✓	✓	×	✓	✓	✓
9	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓
10	✓	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	✓	×	✓	✓	✓	×	✓	✓	✓	✓	✓	×

[✓] indicates water vole signs recorded, **x** indicates no water vole signs recorded.



Table A2 **RSPB Survey Transects at Minsmere**

Transect (Figure 2.1)	Aut 07	Spr 07	Aut 06	Spr 06	Aut 05	Spr 05	Aut 04	Spr 04	Aut 03	Spr 03	Aut 02	Spr 02	Aut 01
1	✓	×	×	✓	✓	✓	•	✓	✓	•	×	✓	✓
2	×	×	✓	×	✓	✓	•	✓	✓	•	✓	✓	✓
3	✓	✓	✓	✓	✓	✓	•	✓	✓	•	✓	✓	✓
4	×	✓	×		×	✓	•	✓	✓		×	×	×
5	✓	✓	✓	•	✓	✓	•	✓	✓	•	×	×	×
6	✓	•	✓	•	✓	✓	•	•	✓	•	✓	•	✓
7	×	•	×	•	✓	•		•	✓	•	✓	•	✓
8	×	•	✓	•	✓	•	•	•	✓	•	✓	•	✓
9	✓	•	✓	•	✓	•			✓	•	✓	•	×
10	✓	✓	✓	✓	✓		•	•	✓		✓	✓	✓
11	✓	✓	✓	✓	✓	✓		✓	✓	•	✓	✓	✓
12	×	✓	✓	✓	✓	✓	•	✓	✓	•	✓	✓	✓
13	✓	×	×	✓	✓	✓	•	✓	✓	•	✓	✓	✓
14	•	✓	✓	✓	✓	✓	•	✓	✓	•	✓	✓	✓
15	✓	✓	✓	✓	✓	✓	•	✓	×	•	×	×	×
16	✓	✓	✓	N	✓	✓	٠	✓	✓	٠	✓	✓	✓
17	✓	✓	✓	Υ	✓	✓	•	✓	✓	•	✓	✓	✓
18	✓	•	✓	•	✓	•	•	•	✓	•	✓	•	✓
19	✓	•	✓	•	✓	•	•	٠	✓	•	✓	•	✓
20	×	•	✓	•	✓	•	•	•	✓	•	✓	•	✓
21	×	•	✓	•	✓	•	•	•	✓	•	✓	•	✓
23	✓	•	✓		✓		•	•	✓		✓		✓
24	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓

[✓] indicates water vole signs recorded, × indicates no water vole signs recorded, · indicates surveys not completed.



Table A3 Water Vole Records from SBRC

Location	Grid Reference	Date
Eastbridge	TM4466	1991
Minsmere Valley: Reckford Bridge to Beveriche Manor Farm	TM453664	1997
Sizewell Belts	TM4547063493	2005
Sizewell Belts	TM4629963877	2005
Sizewell Belts	TM4630563880	2005
Sizewell Belts	TM465635	1997
Goose Hill marshes, Leiston	TM465645	1996
Sizewell Belts	TM4664763500	2005
Sizewell Belts	TM4667663258	2005
Sizewell Belts	TM4673263822	2005
Sizewell	TM467644	1993
Sizewell Belts	TM4683364408	2005
Sizewell Belts	TM4684963157	2005
Sizewell Belts	TM4686264560	2005
Sizewell Belts	TM4697462983	2005
Leiston ditch, Sizewell Belts	TM474645	1996
Minsmere B. R.	TM474665	1998
Minsmere B. R.	TM475671	1992
Sizewell Belts	TM455635	2000
Sizewell Belts	TM4563063648	2005
btw. Eastbridge and Hangmans	TM4566	1982
Two Penny Bridge, Minsmere New Cut	TM460663	1996
Minsmere B. R.	TM460672	2003
Sizewell Belts	TM4612163729	2005



Appendix B Field Survey Forms

36 Pages

WATER VOLE SURVEY FORM

BACKGROUND INFORMATION						
Site name/river SIZEWELL						
Site number A 10km square Grid ref Tm 466 653						
County SUFFOUK Water Authority						
Recorder Date 04 10 2007						
HABITAT INFORMATION (mark features on map)						
Survey distance 200 km	Vegetation (DAFORN) Bankside trees Bushes Herbs Submerged weed Reeds/sedges Tall grass Short grass Disturbance:					
Bank profile	1-2m					
Steep > 45° 150 1-2m Current Rapid Slow Sluggist	Fast Static					
WILDLIFE INFORMATION Rat Otter Mink Sightings Sightings Sightings						
Sightings (count) Latrines (count) Droppings Footprints/runs Footprints/runs	Droppings					
Footprints Pathway in vegetation Kingfisher Heron W	oot Moorhen daterfowl Dipper					
Feeding remains Cropped grass around tunnel entrance Identified plants from feeding remains	is:					

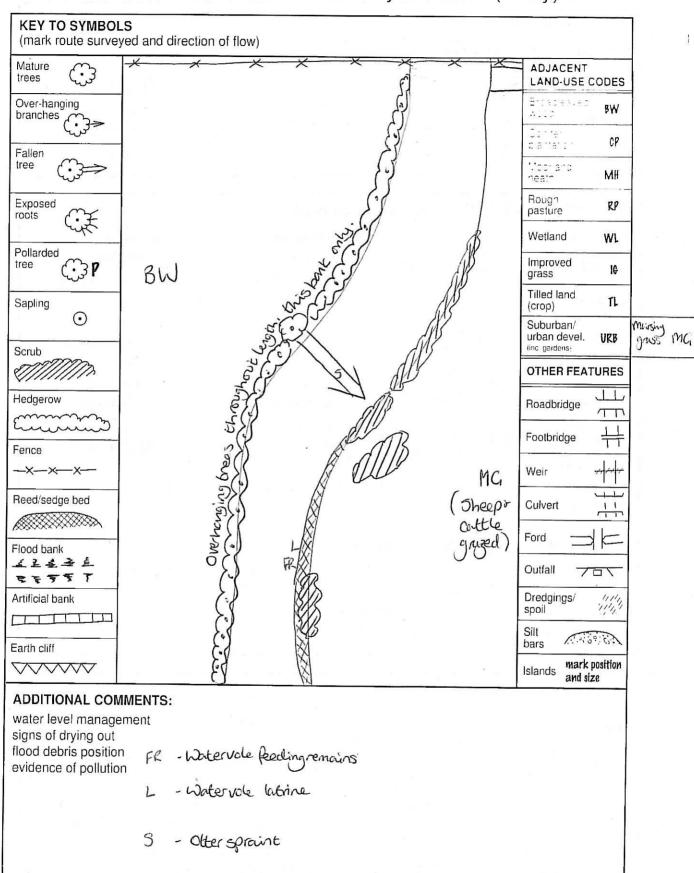
SKETCH OF SITE - vole activity indicated (if any)

Mature trees		1//			ADJACENT LAND-USE CODES	;
Over-hanging branches	1.77		$ \hat{X} $		Endagented BW	
(1)					Content CP	
Fallen tree		QLD X			'.'ochand neath MH	
Exposed roots					Rough RP pasture	
- Cift	100	X			Wetland WL	
Pollarded tree () P					Improved grass I6	
Sapling	MG			Aâ C	Tilled land (crop)	
Scrub				MG	Suburban/ urban devel. URB	mai Gre
7//////			$\langle \rangle$		OTHER FEATURES	;
ledgerow		X	X		Roadbridge	,
Comment.		X	X		Footbridge 11	
ence	20	\bigotimes	X		T ootbridge TT	a III
_x_x_		X			Weir +	
Reed/sedge bed		$\langle \rangle$	18		Culvert 11	
	14	$\langle X \rangle$	$ \langle\rangle $		Ford -	1
lood bank 도로호크 트					Cutfall	
\$ \$ \$ 7					Outfall 70	
artificial bank		XL			Dredgings/ /////spoil	
		ı 🔉			Silt bars	
Earth cliff		*			Islands mark position and size	
ADDITIONAL COM	MENTS:					
vater level manage igns of drying out	ement					
ood debris positio	n F. Water	rvole feeding n	emotins			
vidence of pollutio	in () to	rvole feeding n -vole latrine				-
	L - Water	vous lung"				
						1

WATER VOLE SURVEY FORM

BACKGROUND INFORMATION							
Site name/river 526well							
Site number B 10km square Grid ref TW 466 652							
County SUFFOLK	County SUFFOLK Water Authority						
Recorder Date 0410107							
HABITAT INFORMATION (ma	ark features on map)						
Survey distance 200 fim Shore/b Bould Stone Grave Gravel pit Pond Lowland lake Upland loch Reservoir Running water Marsh/bog Shore/b Bould Stone Sand Grave Sand Earth Rearth Rock Anal Reservoir Running water Marsh/bog Reinfo	Bordering land use Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Control of the following services Description (DAFORN) A Bankside trees D Bushes D Herbs D Submerged weed F Reeds/sedges D Tall grass D Short grass Disturbance:						
Bank profile Flat < 10° Shallow < 45° mit Steep > 45° mit Vertical/undercut Depth <pre></pre>	m						
WILDLIFE INFORMATION Water voles Sightings (count) Latrines (count) Burrows (count) Footprints Pathway in vegetation Feeding remains	Rat Sightings Droppings Footprints/runs Droppings Footprints/runs Coot Kingfisher Otter Sightings Droppings Footprints/runs Mink Sightings Droppings Footprints/runs Droppings Morhen Waterfowl Dipper						
Cropped grass around tunnel entrance Identified plants from feeding remains:							

SKETCH OF SITE - vole activity indicated (if any)

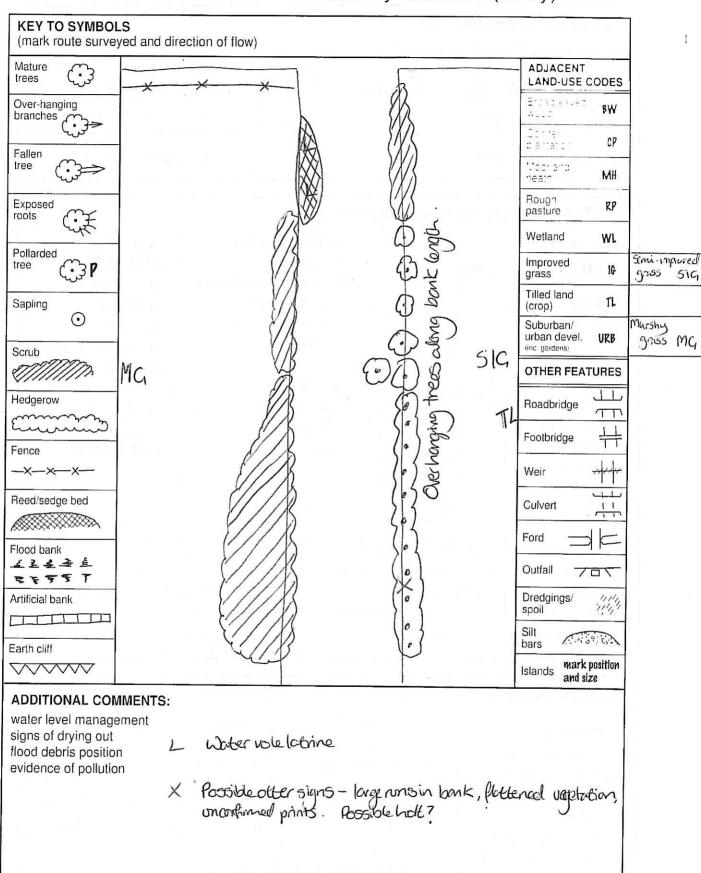


WATER VOLE SURVEY FORM

BACKGROUND INFORMATION						
Site name/river 512EWELL						
Site number C 10km square Grid ref TM 468 653						
County OUFFOLK Water Authority						
Recorder Date 04 10 107						
HABITAT INFORMATION (mark features on map)						
Survey distance Note						
Bank profile Depth Width 1 - 2m 2 - 5m Flat < 10°						
Wildlife Information Water voles Sightings Droppings Droppings Pootprints/runs Otter Sightings Droppings Prootprints/runs Otter Sightings Droppings Prootprints/runs Otter Sightings Droppings Prootprints/runs Other wildlife Coot Moorhen Kingfisher Heron Waterfowl Dipper						
Pathway in vegetation Feeding remains Cropped grass around tunnel entrance Identified plants from feeding remains:						

(mark route surveye	a and direct	Jon of flow)					
Mature trees			\$3	7		ADJACENT LAND-USE CODES	
Over-hanging branches						E-112 e 3 . + 2 BW	
Fallen		@ {!}	XXX			Cara CP	
tree C			X (.)	ja,		Meath MH	
Exposed roots		Y/ [8]	(:)	3		Rough RP pasture	
Pollarded		8 13	X)(:\	in the second		Wetland WL	
tree P			× (, {	thoughout length		Improved grass I&	Sent informed Grass SIG
Sapling			× (;			Tilled land (crop)	
Scrub				Overhanging trees loth banks.		Suburban/ urban devel. URB tinc gardens:	Mersing MG 9765 MG
111111m		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(,)	rgi.		OTHER FEATURES	
Hedgerow			⊗ {•)	Overhanging both banks		Roadbridge TT	2
السسسة		A7111/8	() V	S S		Footbridge 11	
Fence —X—X—X—						Weir 4/4/	
Reed/sedge bed						Culvert 1 1	
	Mc		\mathcal{M}		519	Ford	
Flood bank	MG		1///			Outfall 70	
Artificial bank			V//X			Dredgings/ spoil	
			W//XX			Silt hars	
Earth cliff					•	Islands mark position and size	
ADDITIONAL COMM	IENTS:	"/\					
water level managem signs of drying out		, A a	22. 25. A				
flood debris position evidence of pollution	F - 1	water vole feedling water vole labine water vole borro	remains			51	
	B -	water who burrow	ఎ				
* Area with	apod otte	er potential, various	MONLisago	1 Lords	ans Oresent	4 - 1	

BACKGROUND INFORMATION	
Site name/river SIZEWELL	
Site number D 10km square	Grid ref TM 469 653
County SUFFOLK Water	er Authority
Recorder	Date 04 11012007
HARITAT INCORMATION (month for this or or	
HABITAT INFORMATION (mark features on	
	ering land use Vegetation pland grass (DAFORN)
Snore/bank	rmanent/temporary grass
Habitat Stones Mi	xed broadleaf woodland
│ ├── │ │ │ Gravel │ │ ├──	nifer wood Rerbs
	at bog able crop Submerged weed Beeds/sedges
Pond	able crop It marsh Reeds/sedges Rall grass
Earth	pan/industrial N Short grass
	rk/garden
Reservoir Canalized He	ath Disturbance:
Running water Poached Fe	
	ttle/grazing nk fenced?
Bank profile Depth Width	1m 1-2m 2-5m
Flat < 10°	10-20m 20-40m > 40m
Steep > 45° 1-2m Current	Rapid Fast
Vertical/undercut > 2m Slow	Sluggish
Control	
WILDLIFE INFORMATION Rat	Otter Mink
Sightings	Otter Mink Sightings
Proprings	Droppings Droppings
Sightings (count) Latrines (count) Footprints/runs	
Burrows (count)	
Other wildlife	Coot Moorhen
Pathway in vegetation Kingfisher	Heron Waterfowl Dipper
Feeding remains Identified plants	from feeding remains:
Cropped grass around tunnel entrance	



BACKGROUND INFORMATION
Site name/river 5126well
Site number E 10km square Grid ref Tm 468 645
County SUFFOLK Water Authority
Recorder Date OS/10/07.
HABITAT INFORMATION (mark features on map)
Survey distance Consider wood Consider wo
Bank profile Depth Width 1m 1-2m 2-5m Flat < 10°
Steep > 45° Vertical/undercut Steep > 45° Slow Sluggish Fast Static
WILDLIFE INFORMATION Rat Sightings Otter Sightings Sightings Sightings
Sightings (count) Latrines (count) Droppings Footprints/runs Droppings Footprints/runs Footprints/runs
Burrows (count) Footprints Pathway in vegetation Other wildlife Kingfisher Heron Waterfowl Dipper
✓ Feeding remains Cropped grass around tunnel entrance Identified plants from feeding remains:

		7.71	The second second	
Mature trees	\s\\	$ \lambda $	ADJACENT LAND-USE CODES	
Over-hanging branches	\[\]	X	Broad eased BW	
Fallen	\.\	X	Comment CP	
tree ())	N)	neath MH	
Exposed roots) _a		Rough RP pasture	
Pollarded	\[\]	mg	Wetland WL	
tree P			Improved grass I&	
Sapling 6W	(c	XV	Tilled land (crop)	
Sapling Scrub)	X X X X X X X X X X X X X X X X X X X	Suburban/ urban devel. URB	Marshy Jones Mc
		XX	OTHER FEATURES	
Hedgerow			Roadbridge TD	
Emmin 2)		Footbridge 11	
Fence —X—X—			Weir -	
Reed/sedge bed	(6	X	Culvert 1 1	
	/ \	MG	Ford —	
Flood bank	\			
S F F F T			Outfall 7 - \	
Artificial bank	P	X	Dredgings/ 1994 spoil 1994	
Earth cliff		$ \mathcal{L} $	Silt bars	
			Islands mark position and size	
ADDITIONAL COMMENTS:				
water level management signs of drying out			-	
flood debris position evidence of pollution	Watervole latine			
F	Wester vole feeding ren	iains		
II = = -1 -1 -1 -1	Watervole latine Water vole feeding ren	rains		

BACKGROUND INFORMATION
Site name/river SIZEWELL
Site number F 10km square Grid ref 7M 468 644
County SUFFOLK Water Authority
Recorder Date 05/10/07
HABITAT INFORMATION (mark features on map)
Survey distance Shore/bank Bordering land use Vegetation (DAFORN)
Habitat Ditch Dyke Gravel pit Pond Lowland lake Upland loch Reservoir Running water Marsh/bog Canal Boulders Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Disturbance: Cattle/grazing Bank fenced? Mixed broadleaf woodland Conifer wood Arable crop Submerged weed A Reeds/sedges C Tall grass Short grass Disturbance: Disturbance:
Bank profile Depth Width 1m 2-5m Flat < 10°
Steep > 45° Vertical/undercut Steep > 2m Current Rapid Fast Slow Sluggish Static
WILDLIFE INFORMATION Rat Otter Mink
Water voles Sightings (count) Latrines (count) Burrows (count) Footprints Pathway in vegetation Sightings Droppings Droppings Footprints/runs Sightings Droppings Footprints/runs Coot Moorhen Waterfowl Dipper
Feeding remains Cropped grass around tunnel entrance Identified plants from feeding remains:

Mature (1)		<i></i>			ADJACENT	
Pirees ()		abla	B		LAND-USE CODES	
pranches ()		R)	(X)		ALL PW	
Fallen ree		X			plantarin CP	
		14)	X		Nochand neath MH	_
exposed cots			X		Rough RP pasture	
Sept.		K	X	MA	Wetland WL	
Pollarded ree P		X	X	MG	Improved grass I&	
Sapling (79	X	X		Tilled land (crop)	
Gorub	, –,	X			Suburban/ urban devel. URB finc gardens;	Murshy
7/////					OTHER FEATURES	
edgerow		N N	8		Roadbridge TT	
Current .		M	Ŋ		Footbridge 11	
ence -xx		K	Ŋ		Weir +	
eed/sedge bed			\mathbb{X}			
eed/sedge bed		Ŵ	K		Culvert	1
ood bank		X			Ford —	
(主主主点)		X			Outfall / □ \	
rtificial bank		X	X		Dredgings/ /////spoil	182
		N	M		Silt	
arth cliff		M			Islands mark position and size	
DDITIONAL COMMEN						
rater level management igns of drying out					*	
ood debris position vidence of pollution	L Watervole lati F Watervole fee	ìne				
	f Water vole le	ds. a massa	C			

BACKGROUND INFORMATION	
Site name/river 512EWELL	
Site number Q 10km square Grid ref	TM 465 644
County SUFFOLK Water Authority	
	25/10/07
HABITAT INFORMATION (mark features on map)	
Survey distance 120 4m	Vegetation (DAFORN) A Bankside trees Bushes Herbs Submerged weed Reeds/sedges A Tall grass Short grass Disturbance:
Bank profile Depth Width 1m ✓ □ Flat < 10°	7-2m
WILDLIFE INFORMATION Water voles Sightings (count) Latrines (count) Burrows (count) Other wildlife Otter Sightings Droppings Footprints/runs Coo	Mink Sightings Droppings Footprints/runs Moorhen
Footprints	erfowl Dipper

Mature trees					ADJACENT LAND-USE CODES	
Over-hanging branches					Brissesses BW	
Fallen					Contents CP	
lree CS					Most and neath MH	
Exposed cots		2			Rough RP pasture	
Collected		5 60			Wetland WL	
Pollarded (**) P		along this bark			Improved grass I6	
Sapling		1878			Tilled land (crop) 11.	
Gcrub	CP	all a		MG	Suburban/ urban devel. URB tinc gardens:	Marsh.
					OTHER FEATURES	
ledgerow ~		g.			Roadbridge T	
السسس		saine.			Footbridge 11	
ence		Qerhanging breas			Weir +	
Reed/sedge bed		8			Culvert 1 1	
					Ford —	
lood bank 도로호章 트						-
artificial bank					Dredgings/ spoil	
		(i) =	>		Silt bars	
arth cliff	- 31 · · ·	B			Islands mark position and size	
ADDITIONAL COM		1.Ac				1
vater level managen ligns of drying out lood debris position	nent L	_ Water Vole	labine			
vidence of pollution	E	_ Water voles	2 burrow			
						i

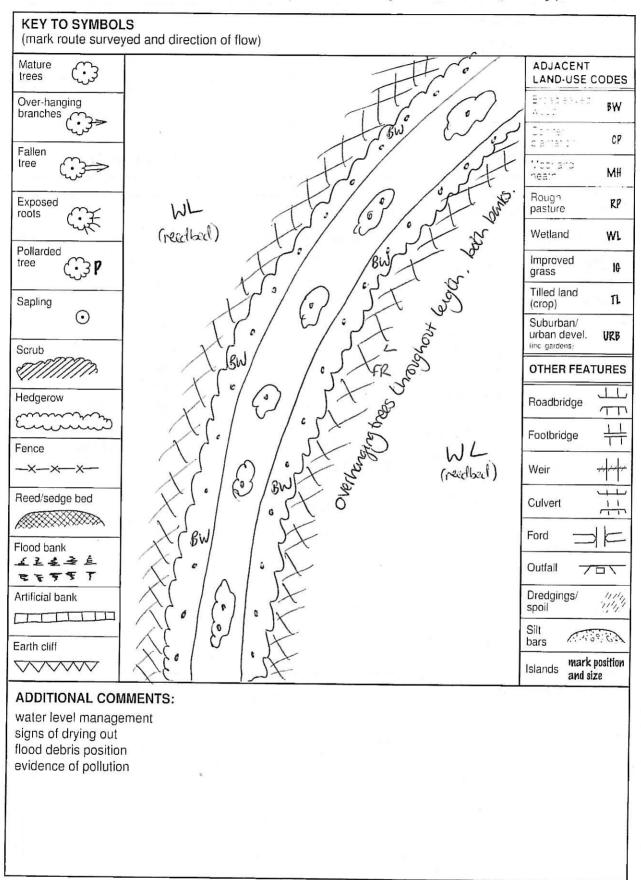
BACKGROUND INFORMATION	
Site name/river 512EWELL	
Site number H 10km square	Grid ref TM 467 639
County SUFFOLK W	ater Authority
Recorder	Date 05/10/09
HABITAT INFORMATION (mark features of	on map)
Survey distance 200 sm Shore/bank Boulders Stones Gravel Sand Gravel Sand Silt Pond Lowland lake Upland loch Reservoir Running water Marsh/bog Canal Shore/bank Boulders Stones Gravel Sand Silt Poached Rock cliffs Earth cliffs Canalized Poached Reinforced (man-made)	Vegetation (DAFORN) Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Fen Cattle/grazing Bank fenced? Vegetation (DAFORN) Bankside trees N Bushes Submerged weed N Tall grass N Short grass Disturbance:
Bank profile Flat < 10° Shallow < 45° Steep > 45° Vertical/undercut Depth O.5m 0.5–1m 1–2m Current Slow	
7. 1. 4. 2.000 A	
Wildlife Information Water voles Sightings (count) Latrines (count) Burrows (count) Footprints Pathway in vegetation Rat Sightings Droppings Footprints/	Otter Sightings Droppings Footprints/runs Coot Heron Mink Sightings Droppings Footprints/runs Moorhen Dipper
Feeding remains Cropped grass around tunnel entrance Identified plan	ts from feeding remains:

KEY TO SYMBOLS (mark route surveyed and	d direction of flow)		T - 12 (12 + 12 - 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 +
Mature trees	Turrection of now)	R	ADJACENT LAND-USE CODES
Over-hanging branches		£°)	E1133 43.43 BW
Fallen		(0)	Conter canalor CP
tree C			nea;n MH
Exposed roots		(6)	Rough RP pasture
Pollarded	\times	(0) & DIN	Wetland WL
~ ~	JL pulbich)	18 BM	Improved grass 16
Sapling	zelbach)	() () () () () () () () () ()	Tilled land (crop)
Scrub	X	The series	Suburban/ urban devel. URB
7/////////////////////////////////////		168	OTHER FEATURES
Hedgerow		overhanging	Roadbridge TT
Fence		٥٠) ع	Footbridge 11
_XX			Weir +
Reed/sedge bed		1.) \$	Culvert 11
		400	Ford —
Flood bank エミュニ エマママア		<u>}</u> ,	Outfall 70
Artificial bank		43	Dredgings/ 11/1/2
earth cliff		\(\rangle \(\rangle \)	Silt bars
WWW I		43.2	Islands mark position and size
ADDITIONAL COMMENT water level management signs of drying out flood debris position evidence of pollution	S: L - Wouter vole labines		Wind SIZE

BACKGROUND INFORMATION
Site name/river 512EWELL
Site number
County 50FFOLK Water Authority
Recorder Date OS /10/67
HABITAT INFORMATION (mark features on map)
Survey distance Shore/bank Bordering land use Vegetation (DAFORN)
Habitat Stones Ditch Dyke Gravel pit Pend Lowland lake Upland loch Reservoir Running water Marsh/bog Canal Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Park/garden Heath Disturbance: Disturbance:
Bank profile Depth Width 1m 1-2m 2-5m Flat < 10° < 0.5m 5-10m 10-20m 20-40m > 40m Shallow < 45° 0.5-1m T-2m Rapid Fast Vertical/undercut > 2m Slow Sluggish Sfatic
Wildlife Information Rat Sightings Droppings Droppings Droppings Footprints/runs Otter Sightings Sightings Droppings Footprints/runs Footprints/runs Footprints/runs
Burrows (count) Footprints Pathway in vegetation Feeding remains Other wildlife Kingfisher Heron Waterfowl Dipper
Cropped grass around tunnel entrance Identified plants from feeding remains:

Mature trees (3)			\times	ADJACENT LAND-USE CODES
Over-hanging oranches	- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-	0		Broadlessed BW
Fallen		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Contact CP
ree C) c		Moorand Mill
Exposed COX				Rough RP pasture
- Light	6.16	}*	X	Wetland WL
Pollarded ree () P	JE (*)		F	Improved grass 16
Sapling			4	Tilled land (crop) 1L
Scrub	BW	(0)		Suburban/ urban devel. URB finc gardens;
7//////		<i>(</i>)	XX WI	OTHER FEATURES
ledgerow		0	(Face	Roadbridge T
Children Contraction of the cont) # (Footbridge 11
ence -x-x-x-				Weir - 1/4
Reed/sedge bed				Culvert
			$\langle \chi \rangle$	Ford —
lood bank ٤፻基基 ≜			X	
\$ \$ \$ \$ 7				Outfall Dredgings/
rtificial bank			XX	spoil "////
arth cliff				Silt bars
\\\\\			\bigotimes	Islands mark position and size
ADDITIONAL COM	IMENTS:		^	
vater level manage igns of drying out ood debris positior	7	Water vole lakin	e_	
vidence of pollutio	n F	water vole feed	lingremains.	

BACKGROUND INFORMATION
Site name/river 512EWELL
Site number K 10km square Grid ref TM 46% 63%
County Suffolk Water Authority
Recorder Date
HABITAT INFORMATION (mark features on map)
Survey distance 250 km
Bank profile Depth Width 1m 1-2m 2-5m Flat < 10° < 0.5m 5-10m 10-20m 20-40m > 40m Shallow < 45° 0.5-1m Current Residence of the control of
Steep > 45° Vertical/undercut Steep > 45° Slow Sluggish Fast Static
Water voles Sightings (count) Latrines (count) Burrows (count) Footprints Otter Sightings Droppings Droppings Footprints/runs Otter Sightings Droppings Footprints/runs Footprints/runs Otter Sightings Droppings Footprints/runs Footprints/runs Other wildlife Footprints Heron Waterfowl Dipper
Pathway in vegetation Feeding remains Cropped grass around tunnel entrance Identified plants from feeding remains:



BACKGROUND INFORMATION
Site name/river 512EWELL
Site number L 10km square Grid ref Tm 466 637
County SUFFOLK Water Authority
Recorder 56 + KL Date 05/10/2007
HABITAT INFORMATION (mark features on map)
Survey distance 200 km Shore/bank Boulders Stones Gravel Dyke Gravel pit Pond Lowland lake Upland loch Reservoir Running water Marsh/bog Canal Marsh/bog Canal Canal Bordering land use Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial Park/garden Heath Poached Reservoir Reservoir
Bank profile Depth 1m 1-2m 2-5m Flat < 10° < 0.5m 5-10m 10-20m 20-40m > 40m Shallow < 45° 0.5-1m 1-2m Rapid Fast Vertical/undercut > 2m Slow Sluggish Static
WILDLIFE INFORMATION Water voles

Mature trees Over-hanging branches Fallen tree Exposed roots Pollarded tree Sapling Scrub Hedgerow Fence	ADJACENT LAND-USE CODE STATE OF STATE O
ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Water value lating	Tilled land (crop) Tilled land (crop) Suburban/ urban devel. URE fine gardens: OTHER FEATURE Roadbridge Footbridge Weir Culvert Ford Outfall Dredgings/ spoil Silt bars Islands Mark positio and size Perbs
flood debris position evidence of pollution L Watervole latine Cuter vole Reding renains S Otter spraint	

BACKGROUND INFO	RMATION			-4 1	
Site name/river 512					
Site number M	10km sq	uare	Grid re	of Tm 4	69 636
County SUFFOLK		Water A	uthority		
Recorder [Date	05/10)/07
HABITAT INFORMATI	ION (mark featu	res on ma	p)		
Survey distance 200 km Habitat Ditch Dyke Gravel pit Pond Lowland lake Upland loch Reservoir Running water Marsh/bog Canal	Shore/bank Boulders Stones Gravel Sand Silt Earth Rock cliffs Earth cliffs Canalized Poached Reinforced (man-made)	Upland Perma Mixed Conife Peat b Arable Salt m Urband Heath Fen Cattle	crop arsh findustrial	N Bus O Her O Sut D Rece O Tall N Sho	DRN) hkside trees shes
Bank profile Flat < 10° Shallow < 45° Steep > 45° Vertical/undercut	< 0.5m	dth 5-10m rrent Slow	1m v 10–20m Rapid Sluggis	1-2m 20-40m	2–5m > 40m Fast
Water voles Sightings (count) Latrines (count) Burrows (count)	Sight	lings pings prints/runs	Otter Sightings Droppings Footprints/run		nk Sightings Droppings Footprints/runs
Feeding remains Cropped grass around tunnel entrance	Other wild Kingfish	ner		oot /aterfowl	Moorhen Dipper

Mature trees				ADJACENT		
Over-hanging		\bigotimes		Englished BW		
branches		\bowtie		Content CP		
Fallen tree				troor and MH		
Exposed roots				Rough RP pasture		
Lift	BW ///	$\left[\times \right]$		Wetland WL		
Pollarded tree () P	[//.]		-,	Improved grass 16		
Sapling				Tilled land (crop)		
Scrub	{//}	K		Suburban/ urban devel. UKB	Mershy GASS	γY
7//////	{//	\mathcal{A}		OTHER FEATURES		
Hedgerow		X	MG-WL	Roadbridge TT		
وسيسي		[X]		Footbridge 1		
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2		M	TT a	Culvert II		
WL WL	-MG	X		7,11		
lood bank 丘主主主 生		\times		Ford — —		
c + 5 4 1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Outfall 70	i.	
Artificial bank		SE		Dredgings/ spoil		
Earth cliff				Silt bars	-	
				Islands mark position and size	0	
ADDITIONAL COMME water level managemer signs of drying out flood debris position evidence of pollution	nt	atine				
	L water vote 1 F - feeding rem	ains				
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			-	3		

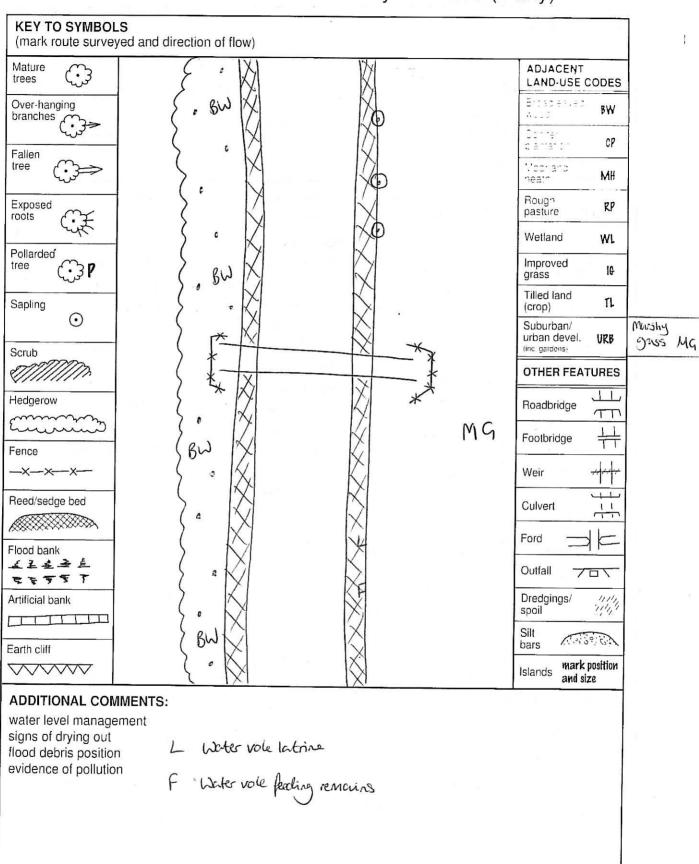
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BACKGROUND INFORMATION	
Site name/river 512EWELL	
Site number N v O 10km square Grid ref Tm 463 (637
County Suffork Water Authority	
Recorder Date OS/10/07	
HABITAT INFORMATION (mark features on map)	
Survey distance 250 km Shore/bank Boulders Stones Bordering land use Upland grass Permanent/temporary grass Mixed broadleaf woodland Vegetation (DAFORN) Bankside O Bushes)
Gravel	ass
Bank profile Depth Width 1m 1-2m Flat < 10°	2–5m > 40m
Steep > 45° Vertical/undercut Steep > 2m Current Rapid Slow Sluggish	Fast Static
WILDLIFE INFORMATION Rat Otter Mink	
Sightings (count) Latrines (count) Droppings Droppings Footprints/runs Footprints/runs Footprints/runs	htings ppings otprints/runs
Burrows (count) Footprints Pathway in vegetation Feeding remains	Moorhen Dipper
Feeding remains Cropped grass around tunnel entrance Identified plants from feeding remains:	

Mature contractions		{ c		7	ADJACENT LAND-USE CODE	S
Over-hanging pranches		60			Ercadeaved BW	
Fallen		}			Content of CP	
ree 💮			/		Noorland heath MH	
exposed cots		6			Rough pasture RP	
Collarded		\(\text{'} \)			Wetland WL	
ree P		0	[2]		Improved grass I&	
Sapling		}.		MG	Tilled land (crop)	100
Gcrub	BW	}	$ \lambda $	719	Suburban/ urban devel. URB	Mersing
7//////		\ c	KI		OTHER FEATURES	3
ledgerow		\ e \	X		Roadbridge TT	ر م
Curring		}	W.Z.Z	XXXXX	Footbridge 1	=
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leed/sedge bed) [Culvert 1.1	-
		()			Ford	
lood bank ミュュュ 生)	K		Outfall / □ \	-
rtificial bank		5	8		Dredgings/ /////spoil	- - -
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1		Silt bars	
arth cliff			[3]		Islands mark position and size	1
ADDITIONAL COM			-		***	
vater level managen igns of drying out		tervole latin	e			
ood debris position vidence of pollution	F. Wa	tervolelation tervole feed	ing remains			
		1				ľ

BACKGROUND INFORMATION		
Site name/river 5126WELL		
Site number P 10km squ	rare Grid ref	TM 459 638
County SUFFOLK	Water Authority	
Recorder		05/10/07
HABITAT INFORMATION (mark feature	res on map)	
Survey distance I 50 m m Shore/bank Boulders Stones Gravel Gravel Sand Silt Pond Lowland lake Shore/bank Boulders Stones Gravel Sand Sand Sand Solt Farth Rock cliffs	Bordering land use Upland grass Permanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop Salt marsh Urban/industrial	Vegetation (DAFORN) A Bankside trees Bushes Herbs Submerged weed A Reeds/sedges Tall grass O Short grass
Upland loch Reservoir Running water Marsh/bog Canal Canal Earth cliffs Canalized Poached Reinforced (man-made)	Park/garden Heath Fen Cattle/grazing Bank fenced?	Disturbance:
	Ith 1m 5-10m 10-20m	1–2m
	rent Rapid Slow Sluggish	Fast Static
Wildlife Information Water voles Sightings (count) Latrines (count) Burrows (count) Footprints Pathway in vegetation Rat Sightin Dropp Footprint Cherwild Kingfisher	ings Droppings Footprints/runs Coor	Mink Sightings Droppings Footprints/runs Moorhen erfowl Dipper
Feeding remains	plants from feeding remains	:

Nature CD X	Mm m M	W	ADJACENT	7+
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Over-hanging ranches	16 05	R	Erisdes,ed BW	
allen	M) . SM	M	CP CP	
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xposed oots	X		Rough RP pasture	
- with		13	Wetland WL	
ollarded ee P	M7 5-10		Improved grass 10	
apling	6 5	M	Tilled land (crop)	
crub X	BW X	MG	Suburban/ urban devel. URB (inc. gardens)	Mushy gass N
MG X		MA	OTHER FEATURES	
dgerow			Roadbridge (TD)	
			Footbridge 11	
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ed/sedge bed	o BW		Culvert 11	
od bank		K	Ford	1
243点 下文子了		X	Outfall / □	
tificial bank		X	Dredgings/	
irth cliff			Silt bars	
			Islands mark position and size	
DDITIONAL COMMENTS:		79 111 11 1	Email Made to	
ater level management gns of drying out			12.000	
ood debris position \(\bigcup\) vidence of pollution	Water vole latine		0 0 0 0 0 0	
F '	Water vole latine Water vole feeding rem	iains		
	'		Jr. 2017.	

BACKGROUND INFORMA	ATION
Site name/river 5126u	searcher a
Site number Q	10km square Grid ref TY11 458 637
County SUFFOLK	Water Authority
Recorder [Date 05/10/07
HABITAT INFORMATION	(mark features on map)
Survey distance 150 km	Bordering land use Upland grass Dermanent/temporary grass Mixed broadleaf woodland Conifer wood Peat bog Arable crop
Shallow < 45° 0.	Width 1m 2-5m 0.5m 5-10m 10-20m 20-40m > 40m 5-1m 2m Rapid Fast 2m Slow Sluggish Static
WILDLIFE INFORMATION	Rat Otter Mink
Water voles Sightings (count) Latrines (count) Burrows (count) Footprints Pathway in vegetation	Sightings Sightings Sightings Droppings Droppings Footprints/runs Coot Moorhen Kingfisher Heron Waterfowl Dipper
Feeding remains Cropped grass around tunnel entrance	Identified plants from feeding remains:



BACKGROUND INFORMATION
Site name/river 5126WELL
Site number 2 10km square Grid ref 7m 455 636
County SUFFOLK Water Authority
Recorder Date 04/10/67
HABITAT INFORMATION (mark features on map)
Survey distance 250 km
Bank profile Depth Width 1m 1-2m 2-5m Flat < 10°
Steep > 45° Vertical/undercut Steep > 2m Current Rapid Fast Sluggish Static
WILDLIFE INFORMATION Rat Sightings Sightings Sightings Sightings
Sightings (count) Latrines (count) Droppings Droppings Droppings Footprints/runs Footprints/runs
Burrows (count) Footprints Pathway in vegetation Other wildlife Kingfisher Heron Waterfowl Dipper
Cropped grass around tunnel entrance Identified plants from feeding remains:

Trees Over-hanging branches Fallen Itree Exposed roots Pollarded tree Sapling Scrub Hedgerow Fence Xery Footbridge	Mature 6	d and direction of flo	Mars.			ADJACENT	_
Fallen Irree Exposed roots Sapling Sapling Sapling OTHER FEATUR Foodbridge Foodbridge Food bridge Food bridge Food bridge Food bridge Food bridge Culvert Ford Sall bank Ford Sapling Outfall Ford Sall bank Sapling Outfall Ford Sapling Outfall Food bridge Food bridge Food bridge Food bridge Weir Culvert Sapling Outfall Ford Sapling Outfall Ford Sapling Outfall Ford Sapling Outfall Food bridge Sapling Outfall Dredgings Outfall Dredgings Sapling Outfall Dredgings	trees (••• 3	<i>[</i> 8]	XX //?		20	LAND-USE	CODES
Fallen tree Exposed roots Pollarded tree Pollarded tree Sapling Scrub Scrub OTHER FEATUR Roadbridge Footbridge Ford Ford Ford Sill bars Spoil Sill bars Spoil Sill bars Ford Sill bars Signs of drying out flood debris position Livatervole lacknice	Over-hanging branches	Q		•	KY		ВW
Exposed roots Pollarded free P Sapling Scrub Scrub Hedgerow Fence Artificial bank Ford Ford Ford Salling Artificial bank Ford Ford Sill Bars Baugn pasture Wetland Improved grass Tilled land (crop) urban devel. Unice gendence Culvert Footbridge Footbridge Toutien and the service service Artificial bank Ford Sill Bars						Contract Contract	СР
Pollarded tree Pollarded tree Pollarded tree Pollarded tree Pollarded tree Sapling OTHER FEATUR Roadbridge Footbridge Footbridge Foot Pord Por	tree 💮	X		m 000			МН
Improved grass Italiand (crop)	Exposed roots		, T.	225	50	Rough pasture	RP
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Scrub Scrub Hedgerow Hedgerow Fence Actificial bank Fartificial bank Barth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Live gendence Culvert Ford Subtraction Foodbridge Footbridge Footbridge Footbridge Ford Silt bars Silt bars Standays cloud free		٩	COULTUS DE	36 (A)		Improved grass	16
Scrub Hedgerow Hedgerow Fence X Reed/sedge bed Flood bank Flood bank Flood bank Flood bank Flood bank Flood bank Ford Weir Ford Weir Ford Silt bars Artificial bank Phebs Water vote labrice When the standard of the st			J	TO SERVE	\ \	(crop)	TL
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Fence Reed/sedge bed Culvert Ford Culvert Ford						OTHER FEA	TURES
Fence Reed/sedge bed Culvert Ford Culvert Ford	Hedgerow	RP			H	Roadbridge	T
Reed/sedge bed Culvert Ford Outfall Outfall Dredgings/ spoil Silt bars Silt bars Islands mark posi and size ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Weir Ford Outfall Outfall Outfall Outfall Silt bars Schools Stracting Clevel tree	وستسس				, ⊗	Footbridge	+
Flood bank Ford Outfall Dredgings/ spoil Silt bars Islands mark posi and size ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Ford Outfall Pherbs Standang Claud tree	- 1				40	Weir	
Flood bank Flood bank Artificial bank Earth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Ford Outfall Dredgings/ spoil Whark position Pherbs Standas Cloud tree					(3)	Culvert	11
Artificial bank Earth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Outfall Dredgings/ spoil Whark position Outfall Dredgings/ spoil Whark position Pherbs Standars Clevel taking Clevel taking	× × × × × × × × × × × × × × × × × × ×					Ford —	
Artificial bank Earth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Dredgings/ spoil Silt bars Islands mark position Pherbs Standars Cland tree	在主义主义			<i>\{\}</i>	gr	Outfall 7	
Silt bars Water level management signs of drying out flood debris position Silt bars Mark position Silt bars Mark position Silt bars Mark position Stands mark position Stands mark position Stands mark position Stands mark position Silt bars Mark position				M		Dredgings/ spoil	1111
ADDITIONAL COMMENTS: water level management signs of drying out flood debris position P herbs	ingth aliff			Ä	191		
ADDITIONAL COMMENTS: water level management signs of drying out flood debris position Watervole labrine P herbs otherwise dend tree				[9]	9	Islands mark	position ze
water level management signs of drying out flood debris position L Watervole labrine dend tree	ADDITIONAL COMM	ENTS:					
nood debris position	signs of drying out		labrine				
		1					

BACKGROUND INFORMATION							
Site name/river 5126WELL							
Site number 5 10km square Grid ref Tm 452 634							
County 50ffolk Water Authority							
Recorder Date 04 10 67							
HABITAT INFORMATION (mark features on map)							
Survey distance Ditch							
Bank profile Depth Width 1m 1-2m 2-5m Shallow < 45° 0.5-1m 10-20m 20-40m > 40m Steep > 45° 1-2m Current Rapid Fast Vertical/undercut > 2m Slow Sluggish Static							
Water voles Sightings (count) Latrines (count) Footprints Pathway in vegetation Feeding remains Rat Sightings Sightings Droppings Droppings Footprints/runs Droppings Footprints/runs Footprints/runs Otter Mink Sightings Droppings Footprints/runs Footprints/runs Droppings Footprints/runs Droppings Footprints/runs Footprints/runs							
Cropped grass around tunnel entrance Identified plants from feeding remains:							

Mature trees Over-hanging branches Fallen tree Exposed contribution free Sapling O Scrub Scrub Scrub Fence Reed/sedge bed Footbridge The contribution for the contributi	KEY TO SYMBOLS	S ed and direction of	flow)			1 2 3 1
Over-hanging branches	Mature (00/0		ADJACENT LAND-USE CODES
Fallen Iree Exposed Corols Sapling Pollarded tree Sapling Sorub Sorub Hedgerow Hedgerow Fence XXXX Reed/sedge bed Culvert Footbridge Ford Footbridge The Culvert The Control of the Control of the Control of the Control of the Corol of	Over-hanging branches			COCO P) //	Eriades.ed BW
Exposed roots Follarded tree Sapling Sapling TL Sarub Sarub Fence Tence Tence	Fallen		6	- 100/	/s/	
Pollarded tree Pollarded tree Sapling TL Scrub Scrub Hedgerow Hedgerow Fence Artificial bank Ford Ford Ford Ford Silit Sapling Outfall Ford Suburban' Weir Ford Ford Silit Sapling Outfall Ford Suburban' Weir Ford Ford Silit Sapling Outfall Ford Suburban' Weir Ford Silit Sapling Outfall Ford Silit Sapling Outfall Silit Sapling Outfall Silit Sapling Silit Sapling Postbridge Footbridge Footbridge Ford Silit Sapling Sapli	~~			<i>\text{\tin}}\text{\tin}\text{\te}\text{\ti}}}\\ \text{\text{\text{\text{\text{\texi}\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\text{\texi}\text{\texi}\text{\texi}\text{\texitit}\\ \ti}\text{\text{\text{\texit}</i>	(E)	
Improved grass Impr				<i>′</i> _/	0	Rough pasture RP
Sapling TL Scrub Scrub Nother Features Roadbridge Fronce Weir Footbridge The Culvert The Country Footbridge The Culvert The Country Footbridge The Country Footbridge The Country The	wift		197	1		Wetland WL
Scrub Scrub Scrub Hedgerow Hedgerow Fence Actificial bank Fert of the specific parameters of pollution Linear voice latrines	tran		//	- C?	<i>9</i>)	Improved grass 16
Scrub Control Control		~l	J. S.			
The production of the producti			$\left \varphi\right $	/ ₂	TL	urban devel. URB
Fence X—X—X Reed/sedge bed Culvert Ford Ford Ford Ford Dredgings/ spoil Sill bars bars of drying out flood debris position evidence of pollution Ford Weir Culvert In the product of pollution Ford Ford	17/1/17		17	{// _i }		OTHER FEATURES
Reed/sedge bed Culvert Flood bank Ford Outfall Dredgings/ spoil Silt bars Islands mark position and size ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution L watervole latrines	Hedgerow			// }		Roadbridge TI
Reed/sedge bed Culvert Flood bank L L L L L Ford Culvert Ford Dredgings/ spoil Silt bars Islands Mark position and size ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution L water vole latrines	Fence					Footbridge 11
Flood bank Ford Outfall Dredgings/ spoil Silt bars Farth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution L water vole latrines						Weir -
Flood bank Life for Countries Outfall Outfall Dredgings/ spoil Silt bars Islands mark position and size ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution Livetervole latrines	Reed/sedge bed		19	1/3		
Artificial bank Earth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution L water vole latrines Outfall Dredgings/ spoil Silt bars Mark position and size P herbs Standing Clearly tree			Q	8		
Earth cliff Silt bars Islands mark position and size ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution L water vole latrines	正主主主生					Outfall / _ \
Earth cliff ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution Water vole latrines	Artificial bank		တု	0		
ADDITIONAL COMMENTS: water level management signs of drying out flood debris position evidence of pollution Stands ize	Earth cliff			14		
water level management signs of drying out flood debris position evidence of pollution L. water vole latrines			MO	$ \varphi $		Islands mark position and size
signs of drying out flood debris position evidence of pollution L water vole latrines						9º herbs
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	evidence of pollution	20	tervole lathir	nes		
5 - water vole burrows						
		15 - Wa	ter vole burr	òws		

BACKGROUND INFORM	BACKGROUND INFORMATION								
Site name/river 5126									
County SUFFOUR Water Authority									
Recorder			Date	05/10/07					
HABITAT INFORMATIO	N (mark featu	res on map)							
Survey distance 150 km	ore/bank Boulders Stones Gravel Sand Silt Earth Rock cliffs Earth cliffs Canalized	Bordering I Upland gra Permanen	ass nt/temporary grass adleaf woodland pod	Vegetation (DAFORN) Bankside trees Bushes Herbs A Submerged weed A Reeds/sedges O Tall grass Short grass Disturbance:					
Marsh/bog	Poached Reinforced (man-made)	Cattle/graz							
	< 0.5m	dth 5–10m		1–2m					
Vertical/undercut	> 2m	Slow	Sluggish	Static					
WILDLIFE INFORMATIO Water voles Sightings (count) Latrines (count)	Sight		Otter Sightings Droppings Footprints/runs	Mink Sightings Droppings Footprints/runs					
Burrows (count) Footprints Pathway in vegetation Feeding remains Cropped grass around Other wildlife Kingfisher Heron Waterfowl Identified plants from feeding remains:				erfowl Dipper					
tunnel entrance									

