EDF Energy

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

Draft Otter Survey Report 2007-2010

June 2012

AMEC Environment & Infrastructure UK Limited

Report for

EDF Energy

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Document Revisions

No.	Details	Date
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Contents

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 otter (Lutra lutra) in the period 2007-2010, is to inform the design of Sizewell C and the Environmental Statement for the scheme.

1.2 Survey Area and Scope

The survey area 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

A considerable amount of baseline ecological survey work has been conducted on the BE Estate at Sizewell during the past 25 years. This has been undertaken by a range of organisations including Suffolk Wildlife Trust (SWT), ecological consultants (commissioned by Nuclear Electric and latterly by BE), the Environment Agency, universities and colleges, special interest groups and individuals. This information was made available to AMEC by British Energy to assist the design of the ecological survey programme. Additional data from survey work commissioned by Magnox in association with the decommissioning of Sizewell 'A,' and species records held by the Suffolk Biological Records Centre (SBRC) were also used to inform the work. Royal Holloway University (RHU) and RSPB have conducted biannual water vole (*Arvicola terrestris*) monitoring as part of the Water Vole National Key Sites scheme since 2001 within the BE Estate and at Minsmere respectively. They were therefore also approached for information relating to otters that they may have recorded during the course of these surveys.

2.2 Field Surveys

2.2.1 2007 Survey

On the 4 and 5 October 2007, the Sizewell Estate was visited by two ecologists with the aim of surveying and assessing suitable habitat within the then current preliminary works area and a perimeter zone of 500m around it, for its potential to support otter.

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 for signs of otter presence. The water bodies surveyed were chosen based on ease of access, and were evenly and widely distributed in order that all parts of the study area were sampled. During the survey the following signs, indicating the presence of otter, were searched for in the vicinity of the watercourses:

- Spraints (faeces) – which are often located on prominent features within the channel or on the bank (including weirs, bridges, rocks, tree roots, confluences of streams etc); and
- Footprints – located in soft mud, silt, or sand banks.

Additional evidence of otter presence was also searched for, such as the remains of dead fish/ fish remains, potential holt sites, pathways from the water into dense cover or around bank-side trees, 'slides' down banks, or resting up places (often characterised by areas of flattened vegetation). These signs, when interpreted in conjunction with spraints and footprints, can provide data to support an assessment of otter activity on a site. They cannot however be used in isolation to definitively indicate otter presence/ absence.

Figure 2.1 indicates the location of the 20 transects surveyed.

2.2.2 2009/ 2010 Survey

Following an initial reconnaissance survey, which covered a high percentage of all drainage channels and other water bodies within the survey area, a total of 33 potential spraint locations were identified (see Figure 2.2). These points were surveyed monthly between December 2009 and November 2010 in order to provide information regarding the extent and seasonality of otter presence and habitat utilisation across the survey area.

In combination with the monthly spraint point surveys, all other signs of the presence of otter were recorded, such as those stated for the 2007 survey.

2.3 Personnel

The survey teams were led by Katheryn Leggat in 2007 and Emma Toovey in 2009-2010; all members of the teams were suitably experienced surveyors.

3. Results

3.1 Desk Study

Detailed desk study data are provided in Appendix A: these include records collected up to 2007.

3.1.1 Suffolk Wildlife Trust

The Sizewell Land Management Annual Reviews since 1996 have referred to regular signs of otter activity across the site, including a number of sightings of adult male and female otters, and of cubs. Two of the reports (1996-97, and 1997-98) refer to the Lower Abbey Marshes[1] as a regular crossing point with fresh otter signs found almost daily.

3.1.2 Royal Holloway University

12 transects within the BE Estate at Sizewell are monitored by RHU twice annually for water voles as part of the National Key Sites initiative. During the course of these surveys, field signs of otter and mink (*Mustela vison*) are also recorded. 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) summarises the otter data collected.

The RHU transects are all situated within the Sizewell Marshes. Otter field signs were recorded from three of the transects, indicating otter activity focussed in the south of the survey area (Transects 3 and 4) from May 2004 to September 2006. Otter activity was also identified in a more central location in the Sizewell Belts (Transect 7); however this record was made in September 2003, with no further activity noted since.

3.1.3 RSPB

24 transects on the Minsmere site are monitored on a twice annual basis for water voles as part of the National Key Sites initiative. The location of the transects is shown in Figure 2.1. Evidence of otter activity is not generally recorded during these surveys, but anecdotal evidence suggests that the species is common on the reserve as there are numerous signs of otter and regular sightings (R. Harvey [RSPB], pers comm.).

3.1.4 SBRC and Other Data

SBRC provided a number of records of otter from the Sizewell Marshes SSSI and the surrounding area for a 10km radius. These records are presented in **Table A2,** and indicate that the species has occurred in the area for more than 10 years. No recent (since 2005) records of otter activity were returned from SBRC, but this is unlikely to indicate any changes in local distribution or abundance.

[1] These marshes are approximately 1km to the north of the indicative construction compounds, being adjacent to the northern edge of Sandypytle Plantation.

The Environmental Statement (ES) produced in association with the decommissioning of Sizewell A included two historical records of otter activity. One of these was from outside the survey area, to the south of Reckham Pits Wood, whilst the other was located at the point where the proposed access road route crosses two water courses at its eastern extent (British Nuclear Group, 2005).

3.2 2007 Field Survey

3.2.1 Habitats

The ditches surveyed all generally comprised slow-flowing or still water over 1m deep with wide swathes of riparian vegetation and earth banks (see Table 3.1). Bordering land use was predominantly marshy grassland, which in many cases was 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. Riparian vegetation was abundant at varying levels with some ditches providing a wide margin of reeds and sedges, and others dominated by patches of scrub with only a narrow strip of reeds.

Table 3.1 Descriptions of the ditches surveyed

Transect	Bordering Land Uses	Bank Profile[2]	Depth (m)	Width (m)	Dominant Bankside Vegetation
A	Marshy grassland	Shallow-steep	1.5+	1-2	Reeds
A	Marshy grassland	Shallow-steep	1.5+	1-2	Reeds
B	Broad-leaved woodland, marshy grassland	Shallow-steep	1.5+	1-2	Trees
C	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
A	Marshy grassland	Shallow-steep	1.5+	1-2	Reeds
H	Reedbed, broad-leaved woodland	Shallow	1.5+	2-5	Reeds, trees
I	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

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

Table 3.1 (continued) Descriptions of the ditches surveyed

Transect	Bordering Land Uses	Bank Profile[3]	Depth (m)	Width (m)	Dominant Bankside Vegetation
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
O	Marshy grassland, broad-leaved woodland	Shallow	1.5+	2-5	Trees, submerged weed
P	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
T	Marshy grassland	Shallow	1.5+	1-2	Reeds

3.2.2 Otter Signs

The otter field signs identified by the 2007 survey are summarised in Table 3.2.

Table 3.2 Otter field signs identified (× indicates no signs found)

Transect	Otter Signs Found		
	Spraint	Footprints	Other Notes
A	×	×	
B	On dead tree fallen across watercourse	×	
C	×	×	Evidence of large runs through, and areas of flattened vegetation, no other evidence to indicate this was caused by otters.
D	×	×	Large hole adjacent to watercourse, close to mature tree roots, no evidence in the vicinity to indicate the species that created this

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

Table 3.2 (continued) Otter Field signs identified (× indicates no signs found)

Transect	Otter Signs Found		
	Spraint	Footprints	Other Notes
E	×	×	
F	×	×	
G	×	×	
H	×	×	Woodland appears to offer numerous opportunities for potential holt sites, but no otter signs found.
I	×	×	
J	×	×	
K	On land bridge through watercourse	×	Dead fish found on tree stump, no other otter signs found in the vicinity.
L	On tree stump adjacent to watercourse	×	
M	×	×	
N	×	×	
O	×	In soft mud adjacent to watercourse	
P	×	×	
Q	×	×	
R	×	×	
S	×	×	
T	×	×	

Evidence of fresh otter activity, including three characteristic spraints and one clear footprint, was identified during the field survey. These field signs were widely distributed across the survey area, and indicate that otter occurs across suitable habitat on the BE Estate. A number of other signs indicative of otter activity were recorded, but in the absence of spraints or clear footprints in proximity to these, it was not possible to confirm that these were not made by other mammals.

3.3 2009-2010 Field Survey

Otter spraint was recorded at all but one of the 33 monthly monitored potential spraint locations across the survey area (see Appendix B). Data from both the 33 monitored spraint locations and other locations are presented in Table 3.3. These data indicate seasonality in the level of sprainting recorded across the survey area, with peak sprainting levels during the winter months (December 2009 and November 2010) and lowest during the summer (June–August 2010). This pattern of seasonal variation is typical of European otters and should not be taken as an indication of seasonal variation in intensity of use of the survey area (see Kruuk, 2006, for a

discussion of the factors underlying this seasonal variation in sprainting behaviour). Whatever the reasons, the extensive distribution of sprainting activity over much of the year and across the whole site indicate communication between several individual otters that are likely to be present during the year.

Table 3.3 Recorded spraint activity between december 2009 and november 2010

	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Formal spraint monitoring points	18	11	15	17	22	16	4	6	8	15	9	17
Additional spraints	9	11	9	8	6	6	3	3	4	7	9	18
Total spraints	**27**	**22**	**24**	**25**	**28**	**22**	**7**	**9**	**12**	**22**	**18**	**35**

All recorded otter activity within the survey area (including sightings, spraint locations, couches, potential couches, prints and carcasses etc.) is presented in Table 3.4 and Figure 3.1.

Table 3.4 Otter activity recorded within the survey area

Features of Importance	OS Grid Ref.	Description
Sightings		
S1: Two otters	TM 47028 64433	Two otters (likely to be an adult female and a 1 year old youngster) were seen by an AMEC ecologist on 25/05/10 (c.22:30) in a wide drainage ditch running along the southern extent of Goose Hill
S2: Two otters	TM 46719 63536	Two otters (likely to be an adult female and a 1 year old youngster) were recorded along the ditch network within the vicinity of Rookyard Wood earlier in 2010 by an SWT worker (pers. comm. Carl Powell).
S3: Single otter	TM 47313 64445	Single large dog otter (assumed to be male based on size) recorded on 09/03/11 (c. 10.20am) by AMEC ecologist Lynn Whitfield and Carl Powell (SWT) in a watercourse. Once disturbed, it left the ditch and headed west into the woods.
Dwelling places		
Couch	TM 47395 64572	The couch/covered den is situated on what amounts to an island, bordered on either side by drainage channels, and appears to be a well used above ground temporary dwelling place, with several potential laying-up areas. The den is situated within willow carr and beneath dense bracken, with a well worn run leading from the bank edge (with intact spraints) into the den area and several compacted earth runs and flattened bracken.
Couch	TM 46547 63893	The couch is situated along the edge of a woodland strip, adjacent to a drainage channel. The structure comprises a large fallen bough and branches, with flattened earth beneath. An intact spraint was recorded on dead wood near the entrance. Two small runs indicate movement between the drainage channel and the couch.

Table 3.4 (continued) Otter activity recorded within the survey area

Features of Importance	OS Grid Ref.	Description
Couch	TM 46158 63865	Similar to Sizewell Belts couch A, the couch is situated along the edge of a woodland strip, adjacent to a drainage channel. The structure comprises a large fallen bough with flattened earth beneath. An intact spraint was recorded on a log near the entrance. A single run indicates movement between the drainage channel and the couch.
Potential couch	TM 45936 63919	Lay-up space in the bowl of a tree with fallen branches and flattened leaves, adjacent to a watercourse. No definitive evidence of otter usage other than flattened vegetation.
Other activity		
Multiple spraint stations	TM 47703 66129	Regularly recorded multiple spraints deposited at strategic or prominent positions e.g. close to a foraging resource or crossroads location, where other otters are likely to visit.
	TM 47443 65128	
	TM 47375 64523	
Feeding remains	TM 46707 64331	Frog carcass
	TM 47043 64164	Fish carcass
	TM 46801 63014	Frog carcass
	TM 46788 63041	Fish carcass
	TM 46771 64479	Frog carcass
	TM 46761 64280	Frog carcass
Slide	TM 47721 66110	Well used slide down banking close to the sluice at Minsmere.

4. Summary

This report outlines the findings of survey work undertaken for otters in the period 2007-2010.

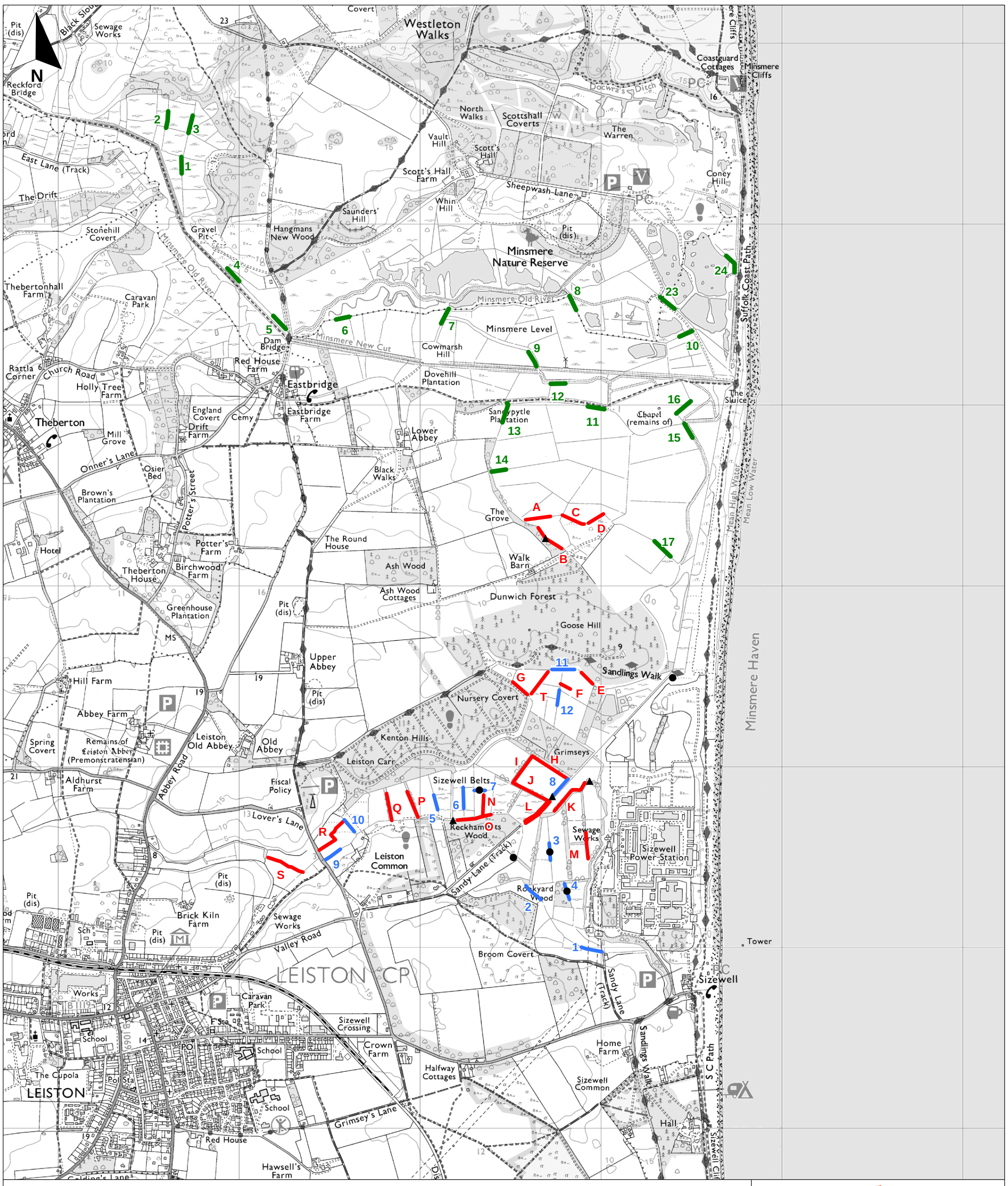
Evidence of fresh otter activity, including three characteristic spraints and one clear footprint, was identified during the 2007 field survey. These field signs were widely distributed across the survey area. A number of other signs indicative of otter activity were recorded, but in the absence of spraints or clear footprints in proximity to these, it was not possible to confirm that these were not made by other mammals.

During 2009/10 otter spraint was recorded at all but one of the 33 monthly monitored potential spraint locations across the survey area. A wide variety of other otter signs were also recorded across the survey area. These results indicate that the survey area is a well-used resource throughout the year. In addition, the evidence suggests that the site is also likely to be of significance with regard to breeding otters.

5. References

Kruuk, H. (2006). *Otters – Ecology, behaviour and conservation*. Oxford University Press. Oxford.

Figures



Key:

- AMEC 2007 survey transects (A-T)
- Royal Holloway University survey transects (1-12)
- RSPB survey transects (1-24)
- Otter signs recorded during AMEC 2007 survey
- Otter signs recorded historically

0 km 1 km

Scale 1:20,000 @ A3

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Sizewell 2007-2010 Otter Survey Report

Figure 2.1
Otter survey transects,
AMEC 2007 and RHU / RSPB to 2007

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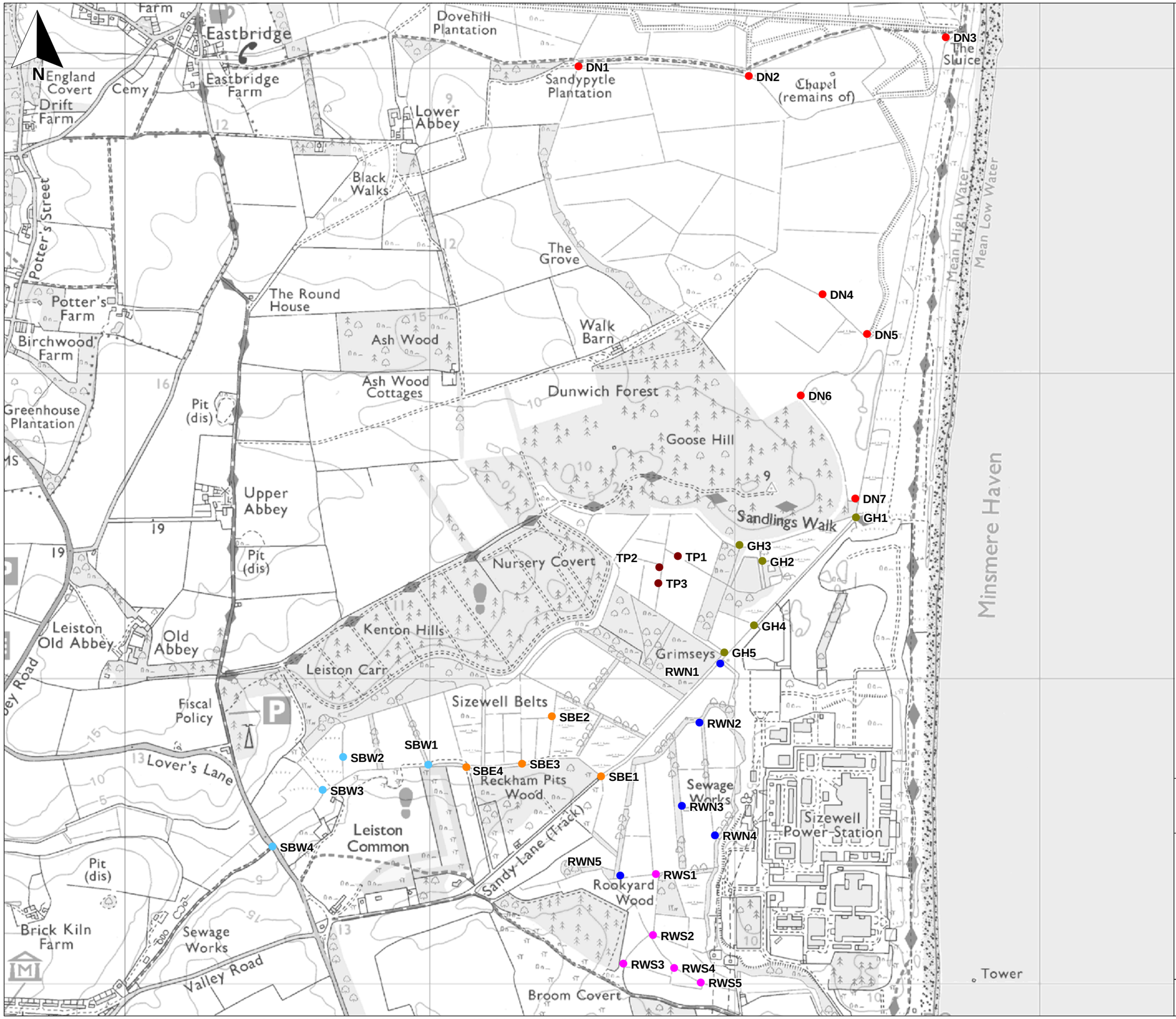
28130-A423.wor tugwc

amec



Key

- Dunwich: DN (1-7)
- Goose Hill South: GH (1-5)
- Rookyard Wood North: RWN (1-5)
- Rookyard South: RWS (1-5)
- Sizewell Belts East: SBE (1-4)
- Sizewell Belts West: SBW (1-4)
- Turf Pits: TP (1-3)

0 m 500 m

Scale 1:12000 @ A3

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Figure 2.2
Otter spraint point location map

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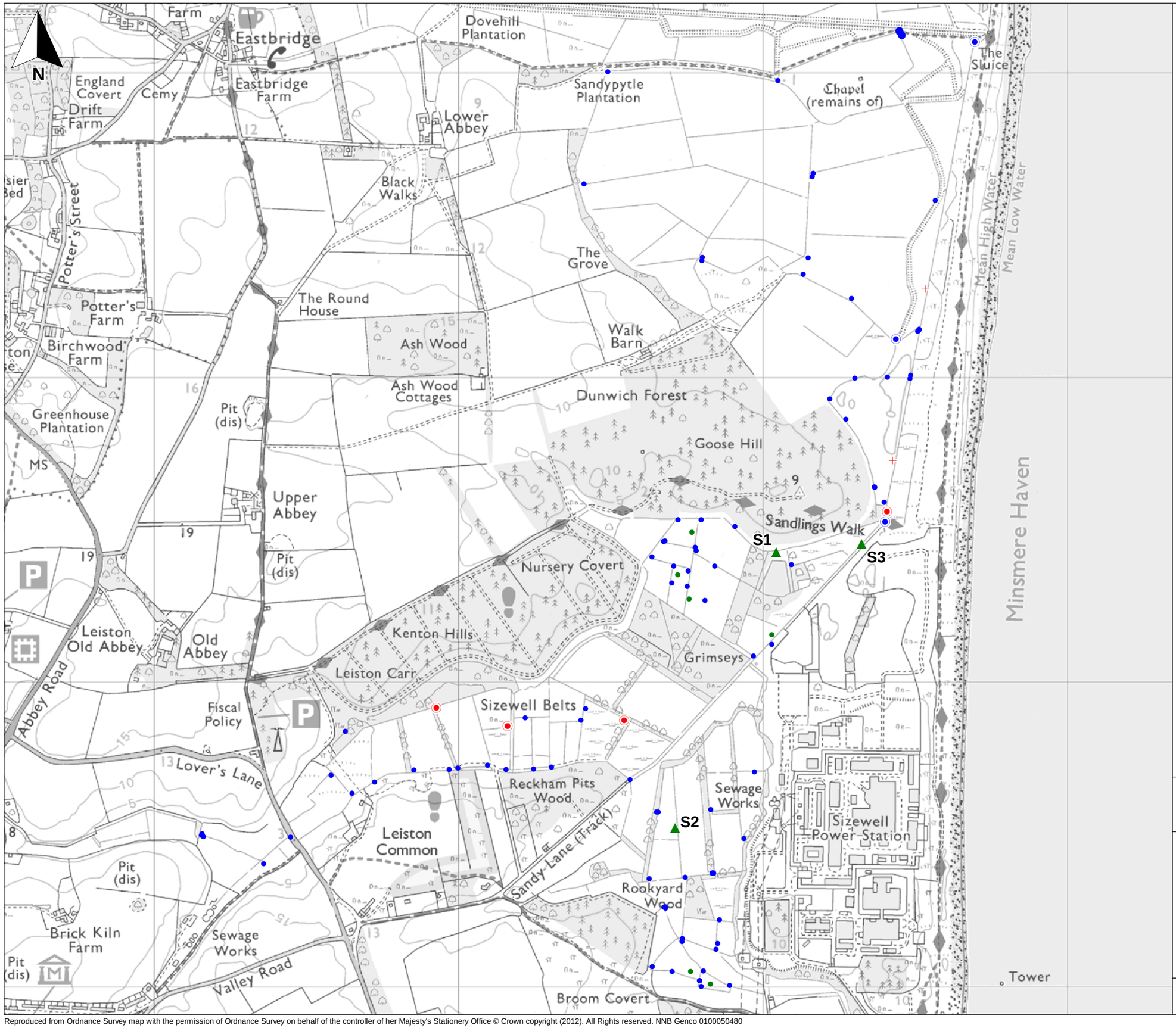
28132-A424.wor tugwc



Key

- Otter sighting (S1, S2, S3)
- Spraint locations
- Couch/den
- Spraint stations (regular multiple spraints)
- Carcasses (fish or amphibian)
- Mink scat

0 m 500 m

Scale 1:12,000 @ A3

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Figure 3.1
Otter survey 2009/2010:
Otter activity map

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Appendix A
Data Responses

6 Pages

Table A1 Otter and mink presence recorded by RHU

Transect	Sep-01	May-02	Sep-02	May-03	Sep-03	May-04	Sep-04	May-05	Sep-05	May-06	Sep-06	May-07	Sep-07
1	×	×	×	×	×	×	×	×	×	×	×	×	×	
2	×	×	×	×	×	×	×	×	×	×	×	×	×	
3	×	×	×	×	×	otter	×	×	×	×	otter	×	×	
4	×	×	×	×	×	×	×	otter	×	×	×	×	×	
5	×	×	×	×	×	×	×	×	×	×	×	×	×	
6	×	×	×	×	×	×	×	×	×	×	×	×	×	
7	×	×	×	×	otter	×	×	×	×	×	×	×	×	
8	×	×	×	×	×	×	×	×	×	×	×	×	×	
9	×	×	×	×	×	×	×	×	×	×	×	×	×	
10	×	×	×	×	×	×	×	×	×	×	×	×	×	
11	×	×	×	×	×	×	×	×	×	×	×	×	×	
12	×	×	×	×	×	×	×	×	×	×	×	×	×	

Table A2 Otter records from SBRC

OS grid ref.	Location	Date
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM4684963157	Sizewell Marshes	2005
TM477719	Dingle Marshes	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005
TM460672	Minsmere B. R.	2005

Table A2 (continued) Otter records from SBRC

Grid Reference	Location	Date
TM39956890	Yoxford	2004
TM452663	Eastbridge	2004
TM436677	Middleton	2004
TM399689	Yoxford	2004
TM399690	Yoxford	2004
TM477661	Minsmere B. R.	2004
TM391576	Snape Maltings	2004
TM462596	Thorpeness Meare	2004
TM466581	North Warren	2004
TM443555	Sudbourne	2004
TM4749470770	Dunwich	2004
TM437677	Middleton	2004
TM460663	Minsmere B. R.	2004
TM400691	Yoxford	2004
TM477662	Minsmere B. R.	2004
TM453664	Eastbridge	2004
TM462596	Thorpeness Meare	2004
TM462596	North Warren	2004
TM465595	North Warren	2004
TM4559	North Warren	2004
TM471672	Minsmere B. R.	2004
TM4659	North Warren	2003
TM4659	North Warren	2003
TM4659	North Warren	2003
TM4659	North Warren	2003
TM4659	North Warren	2003
TM4659	North Warren	2003
TM467672	Minsmere B. R.	2003
TM4658	North Warren	2003
TM470727	Dingle Marshes	2003

TableA2 (continued) Otter records from SBRC

Grid Reference	Location	Date
TM470727	Dingle Marshes	2003
TM4658	North Warren	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM4658	North Warren	2003
TM4658	North Warren	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM467672	Minsmere B. R.	2003
TM4659	North Warren	2003
TM4659	North Warren	2003
TM4659	North Warren	2003
TM393577	Snape Maltings	2003
TM4659	North Warren	2003
TM484726	Dingle Marshes	2003
TM467672	Minsmere B. R.	2003
TM471672	Minsmere B. R.	2003
TM471672	Minsmere B. R.	2003
TM460672	Minsmere B. R.	2002
TM455587	North Warren	2002
TM383589	Gromford Meadow	2001

Table A2 (continued) Otter records from SBRC

Grid Reference	Location	Date
TM456633	Sizewell Levels and Associated Areas	2001
TM455587	North Warren	2001
TM382598	Snape	2001
TM448601	Aldringham Churchyard	2001
TM4365	Theberton	2001
TM420694	Darsham	2000
TM400691	Yoxford	2000
TM383599	Farnham	2000
TM386610	Sternfield	2000
TM462596	Thorpeness Meare	2000
TM436676	Middleton	2000
TM392576	Snape	2000
TM455587	North Warren	1998
TM455587	North Warren	1998
TM453664	Minsmere B. R.	1997
TM431679	Minsmere Valley : Westleton	1997
TM436678	Middleton	1997
TM462596	North Warren and Thorpeness Mere	1997
TM43696772	Westleton	1997
TM460663	Minsmere B. R.	1997
TM465635	Sizewell	1997
TM391695	Yoxford	1997
TM455587	North Warren	1997
TM432680	Middleton	1997
TM437678	Middleton	1997
TM453664	Eastbridge	1997
TM460663	Minsmere B. R.	1996
TM474645	Sizewell	1996
TM462596	North Warren	1996

TableA2 (continued) Otter records from SBRC

Grid Reference	Location	Date
TM437677	Middleton	1996
TM451730	Newdelight Walks	1996
TM436677	Middleton	1996
TM4458	Aldeburgh	1996
TM455587	North Warren	1996
TM4659	North Warren	1995
TM4656	Aldeburgh	1995
TM463669	Minsmere B. R.	1994
TM455587	North Warren	1994
TM455587	North Warren	1993
TM3762	Stratford St Andrew	1993
TM465635	Sizewell	1993
TM4659	North Warren	1992
TM465595	Thorpeness Meare	1992
TM438678	Minsmere Valley : Reckford Bridge to Beveriche Manor Farm	1992
TM462598	Thorpeness	1992
TM463666	Minsmere B. R.	1992
TM465635	Sizewell	1992
TM467668	Minsmere B. R.	1991
TM4666	Minsmere B. R.	1991
TM4666	Minsmere B. R.	1990
TM435558	Iken	1990
TM437678	Middleton	1990
TM4667	Minsmere B. R.	1989
TM424685	Darsham Marshes	1986

Appendix B
Spraint Point Activity, December 2009-November 2010

2 Pages

	Spraint Location (NGR)	Dec	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sep	Oct	Nov
DN1	TM 46490 66009	F/I	D/I	D/I	D/I	F/I	D/I	D/I	D/I	F/I	F/I	D/I	F/I
DN2	TM 47049 65978	F/I	F/I	F/I	D/I	D/I	D/I			F/I	F/I		F/I
DN3	TM 47696 66106	F/I	D/I	D/I	D/I	F/I			F/I		D/I	F/I	F/I
DN4	TM 47291 65262	F/I	F/I	F/I		D/I	D/I						
DN5	TM 47437 65131	F/I	F/I	F/I	F/I	F/I	D/I				F/I	F/I	F/I
DN6	TM 47220 64931	F/I	D/I	D/I		F/I	F/I			F/I			F/I
DN7	TM 47399 64592	F/I			D/I	F/I							
GHS1	TM 47401 64530	D/I	F/I	D/I	D/I	F/I	D/I	D/I	F/I	D/I	F/I	D/I	F/I
GHS2	TM 47094 64387					D/Fra	D/Fra						
GHS3	TM 46986 64313					F/I							
GHS4	TM 47029 64125					F/I	F/I				D/I	D/I	F/I
GHS5	TM 46969 64087					F/I	D/I						
TP1	TM 46781 64432			F/I	D/I	F/I	D/I	D/I	F/I	F/I	F/I	F/I	F/I
TP2	TM 46755 64366			D/I	F/I	F/I	D/I				D/I		
TP3	TM 46752 64315			F/I	F/I							F/I	F/I
SBW1	TM 45997 63719	F/I	D/I	D/I		F/I	F/I						
SBW2	TM 45853 63712	F/I	D/I		D/I				F/I		F/I		F/I
SBW3	TM 45650 63635	F/I			D/I						D/I		F/I
SBW4	TM 45448 63492					D/I							
SBE1	TM 46564 63680					F/I							
SBE2	TM 46395 63737										D/I		F/I
SBE3	TM 46402 63876					F/I	D/I						F/I

	Spraint Location (NGR)	Dec	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sep	Oct	Nov
SBE4	TM 46305 63722	F/I											
RW1	TM 46955 64050												
RW2	TM 46887 63856										D/I		
RW3	TM 46829 63583					F/I			D/I				
RW4	TM 46938 63487	F/I			F/I		D/I			F/I			
RW5	TM 46627 63355					F/I							
RW1	TM 46744 63359	F/I		D/I	D/I	F/I	F/I	F/I		F/I	F/I	D/I	F/I
RW2	TM 46735 63159	F/I	D/I		D/I	F/I				F/I	D/I	F/I	D/I
RW3	TM 46637 63065	F/I		F/I	D/I						F/I		
RW4	TM 46804 63052	F/I	D/I	F/I	D/I								F/I
RW5	TM 46891 63004	F/I		F/I	D/I		D/I						F/I

Presence **Absence** **Not surveyed**

Spraint condition **Fresh = F** **Intact = I** **Dry = D** **Fragmented = Fra**