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| 1 | 18/10/13 | Will Trewhella | Jon Davies | Draft | Reviewed by EDF Energy | J Linnane |
| **Rev.** | **Date** | **Prepared by** | **Checked by** | **Status** | **Reasons for revision** | **Approved by** |

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| **DIRECTION PRODUCTION INGENIERIE**<br>**Centre National d'Equipement Nucléaire** | 1ST PARTNER | 2ND PARTNER |

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| CONTRACTOR REF. No | CONTRACTOR WBS CODE |
| CONTRACTOR COMPANY NAME<br>**HYDER CRESSWELL** | CONTRACT NUMBER<br>**NNB GenCo Ref: 371** |
| | SAFETY related<br>**Yes ☐ No ☐** |

APPLICABILITY:

- 1: Document related to Unit 1

- 2: Document related to Unit 2

- 9: Document that applies to buildings/systems common to units 1 & 2

- 0: documents that relate exclusively to buildings or systems that are common to the whole site (e.g. OSC building, parkings, ancillary buildings...)

| NUCL/REP/EPR/UKEPR | | | | | | | |
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| HPC (doc: HK) | | | | SZC (doc: SZ) | | | |
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SYSTEM

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| SCALE | **DESCRIPTION:** |
| SIZE | |
| PAGE | Sizewell C Ecological Support<br>Otter Survey Report – October 2013 |

DOCUMENT REFERENCE No

| S | Z | C | - | N | N | B | P | E | A | - | X | X | - | 0 | 0 | 0 | - | R | E | P | - | 0 | 0 | 0 | 0 | 2 | 1 |
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| Project | | | Contract No. / Orig. Co | | | | Asset / Zone | | | System/ building | | | Doc. Type | | | Chrono No. | | | | | | | | | | | | |

| DOCUMENT SUB-TYPE | EDF CLASSIFICATION CODE |
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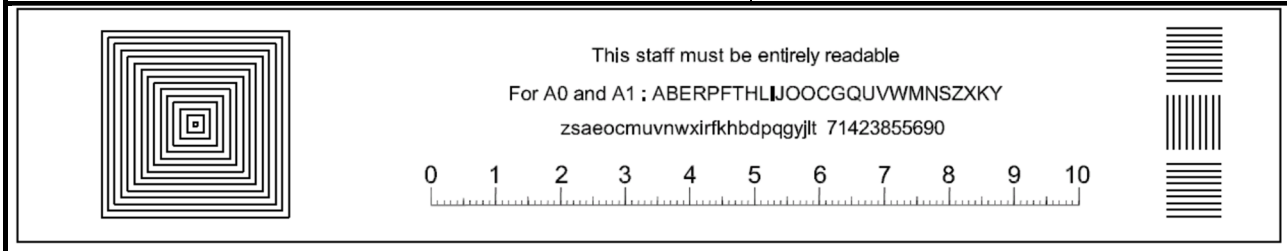
| **REPORT** | |
| SUBCONTRACTOR COMPANY NAME | SUBCONTRACTOR DOCUMENT REF. |




| **EDF MARKING:** | **Interne** X | **Restreint** ☐ | **Confidentiel** ☐ | **PIDU case 3** |
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# EDF Energy/NNB GenCo

# Sizewell C Nuclear Project

## Otter Survey Report – October 2013

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# EDF Energy/NNB GenCo

# Sizewell C Nuclear Project

## Otter Survey Report – October 2013

| | |
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| **Author** | Will Trewhella and Jon Davies |
| **Checker** | Patrick James |
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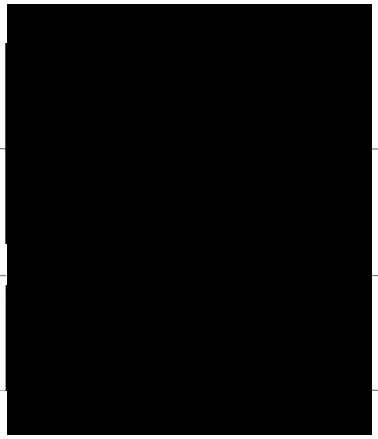

**Hyder Ref No** 003 - UA004506-S-EX039

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|---|---|---|---|
| 18.10.13 | 0 | Live | N/A |
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This report has been prepared for NNB GenCo in accordance with the terms and conditions of appointment and Task Instruction 08, dated September 2013. Hyder Cresswell cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

# CONTENTS

# 1 Introduction

EDF Energy/NNB GenCo (hereafter referred to as NNB) is to submit an application for a Development Consent Order (DCO) to construct and operate a new nuclear power station, Sizewell C, near the town of Leiston in Suffolk. The proposal site lies within an area of high landscape and ecological sensitivity, within an Area of Outstanding Natural Beauty (AONB) and adjacent to the Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC), the Sandlings Special Protection Area (SPA) and the Outer Thames Estuary SPA. A small part of the site also lies within the Sizewell Marshes Site of Special Scientific Interest (SSSI).

Following on from NNB's Stage 1 Pre-Application Consultation on its initial proposals and options for Sizewell C, which ended on 6th February 2013, NNB's priorities for 2013 have been to progress the conceptual engineering design and technical studies relating to the development, as well as to undertake essential environmental studies in order to inform this conceptual work and support the Stage 2 Consultation and ultimately to help underpin a robust DCO application in due course.

This report presents the results of an otter and water vole survey of the 'SSSI triangle' and Aldhurst Farm area of the proposal site (see Figures 1 and 2 in Appendix A), carried out in October 2013 to gain further information on the distribution of otters and water voles within these areas. Particular emphasis was placed on identifying the location of any actual or potential otter holts.

The main aim of the work was to inform both the impact assessment and the development of a mitigation strategy for otters, with incidental records of water vole activity also being recorded, given that the habitats being surveyed are suitable for both species.

# 2 Methodology

The survey work comprised the following activities:

1. Transect survey of the reed bed within the SSSI triangle and a 200m radius to identify potential otter holts and lying-up sites, and to record any incidental observations of signs of water voles.

2. Survey of the ditches within the SSSI triangle and a 200m radius to identify potential otter holts and lying-up sites, and to record any incidental observations of signs of water voles.

3. Survey of the ditches and other wetland habitats at Aldhurst Farm to identify potential otter holts and lying-up sites, and to record any incidental observations of signs of water voles.

The SSSI area was surveyed between 9th and 11th October 2013, and the Aldhurst Farm area on 10th October, by three qualified ecologists from Hyder Cresswell.

## 2.1 Aldhurst Farm

For the Aldhurst Farm area (see Figure 1), all drains, ditches and streams between Abbey Road and Lovers Lane were surveyed on both sides, where access was possible. The banks and area around the pond in the centre of the site was also surveyed. In addition, field boundaries were also surveyed in case they were being used by otters as lying-up sites. Two small areas of drain contained vegetation that was too dense to survey (see Figure 1). The arable fields

around the ditches and streams within a 200m radius, were not intensively surveyed, but were assessed for their suitability, or otherwise, for otters and water voles.

## 2.2 SSSI Triangle

The drains, ditches and streams within both the SSSI triangle and a small strip of land approximately 300m x 50m running south of it (see Figure 2), were also surveyed on both sides, where access was possible. Any signs or evidence of otter holts or lying-up sites identified were recorded on a hand-held GPS device.

Where accessible, potentially suitable features within a 200m strip of land to the north and east of the SSSI triangle were also surveyed. Where access was not possible (primarily due to dense reed beds or flooded land), and/or where the land was considered unsuitable, the area was not intensively surveyed, but was instead assessed for its suitability or otherwise for otters and water voles.

The large areas of reed bed within the SSSI triangle were surveyed by walking transects through the area. Owing to the height and density of the reed vegetation, a large bamboo pole with high visibility marker tape attached was used to mark the edge at the start of each transect; the three surveyors then walked in a line three-abreast (each 5m apart) across the reed bed. On reaching the other side of the reed bed, another bamboo pole was then used to mark the end of the transect. On each subsequent transect the bamboo poles were moved and used to mark the start and end of the next transect. This process was repeated until all of the reed bed had been surveyed.

# 3 Results

## 3.1 Aldhurst Farm

The Aldhurst Farm survey area consisted of a branching drain on the east side (Target Note 1, Figure 1), a dry ditch leading into a drain on the west side (Target Notes 2 and 3), a pond (Target Note 4), several tree- and hedge- lines, and surrounding arable fields (see Photograph 1, below). The drain was approximately 3m wide, with flowing water and dense vegetation on its banks. The dry ditch and drain were lined by trees and hedges.

**Photograph 1**: Drain and surrounding arable fields in Aldhurst Farm survey area
*(see Figure 1 for location of photograph)*

The branching drain, dry ditch and the drain it fed into, and the area around the pond, were all considered as areas potentially suitable for water voles and otters; however, no potential or actual otter holts, and no signs of water voles, were recorded. Similarly, no field signs were identified in the field boundaries also searched for potential otter holts/lying up sites (see Figure 1).

The arable fields (maize, cabbages and bare ground) were not considered to support suitable habitat for either species.

## 3.2 SSSI Triangle

The SSSI triangle was dominated by a large triangle of reed bed (see Photograph 2, below and Target Note 1 on Figure 2), bordered by ditches. Within the triangle there were also additional ditches and areas of open water along with isolated areas of tree-lines, providing a network of suitable wetland habitat for both otters and water voles.

**Photograph 2**: Reed beds in the SSSI area
*(see Figure 2 for location of photograph)*.

The small strip of land to the south of the SSSI area (Target Note 2 on Figure 2) consisted of a ditch with low-lying wet pasture to the west and an area of woodland on a bank to the east, leading up the Sizewell B site. The pasture land to the west and south-west of the SSSI area were not intensively surveyed, but these areas were considered unsuitable for otter holts because of the high water table in these areas.

The SSSI area and the wooded ditch to the south were considered as areas potentially suitable for water voles and otters. One hole in a tree root plate in the SSSI area (Photograph 3, Target Note 3, at TM 47179 64459) was investigated but showed no evidence of use by otters. No other potential or actual holts were observed, and no signs of water voles were recorded.

**Photograph 3**: Hole in tree root plate that showed no signs of use by otters
*(see Figure 2 for location of photograph)*

To the north east of the SSSI area, an area of pasture (between two drains) and an area of reed bed to the east of this, were considered as areas potentially suitable for water voles and otters (Target Note 4); however, no potential or actual otter holts, and no signs of water voles, were recorded.

To the north of the SSSI area there was a ride, with a thick belt of bracken (Target Note 5, see Photograph 4, below) leading into coniferous plantation. This area was not considered to be suitable habitat for otters or water voles.

**Photograph 4**: Bracken and coniferous woodland to the north of the SSSI area
*(see Figure 2 for location of photograph)*

To the west of the SSSI triangle there was a large area of carr woodland (Target Note 6 on Figure 2; Photograph 5) with a high water table and areas of flooding. Because of the high water table, this area was not considered potentially suitable for otter holts.

To the south-west of the SSSI triangle, there were areas of reed bed and flooded land that were inaccessible. However, again the high water table in this area indicated that it was not suitable for otter holts.

**Photograph 5**: Flooded carr woodland south-west of the SSSI triangle

# 4 Conclusions

No potential or actual otter holts were found during the surveys of the Aldhurst Farm and SSSI areas, and as such there is currently no otter licensing constraint to the proposed works within the SSSI triangle nor the proposed wetland habitat creation at Aldhurst Farm.

Similarly, no incidental observations of water vole signs were recorded during the surveys in either location. It should be noted, however, that the primary aim of the survey was to search for otter resting places with a view to informing any subsequent licence application, if required. A more comprehensive survey for water voles will be required in the future, both to inform the licence application for mitigation works within the SSSI and to inform the proposed habitat creation work at Aldhurst Farm.

Although previous surveys by Amec (2012a, 2012b), and ongoing monitoring by Suffolk Wildlife Trust, have identified signs of both otters and water voles in these areas, no holts have been recorded previously in the areas that would be the subject of the proposed works. An otter ‘couch/den’ was, however, recorded during the 2009-2010 Amec surveys on a small ‘island’ outside of the proposed working area (TM 47395 64572 and identified by Target Note 7 on Figure 2). This area was inaccessible during the current survey, so the structure may need to be re-inspected at a time of year when the vegetation is lower. However, whilst there is the potential for disturbance effects, this habitat will not directly be affected by the proposed works so the holt would not need to be removed.

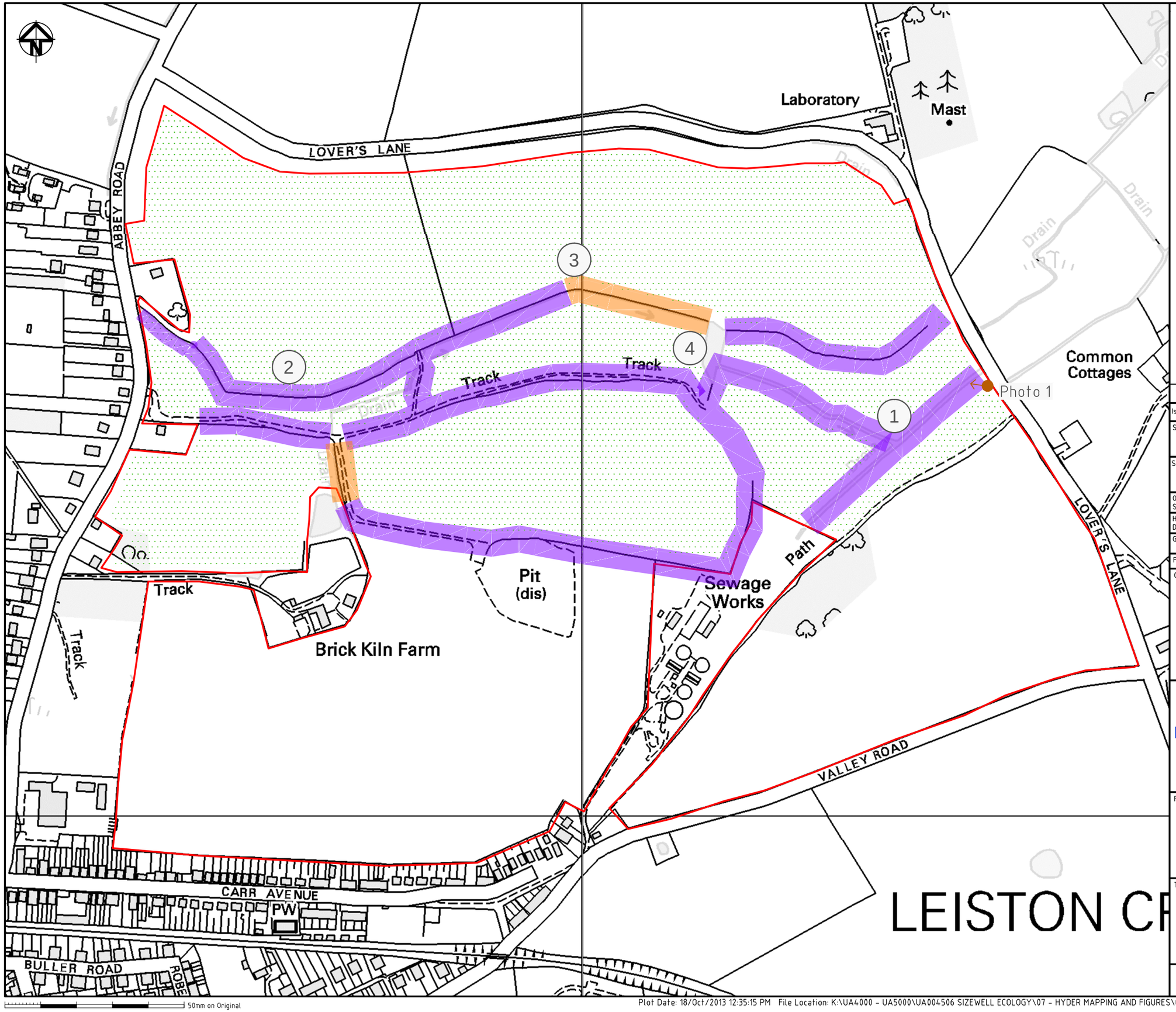
# 5 References

AMEC (2012a). EDF Energy. Sizewell C New Nuclear Power Station: Terrestrial and Freshwater Ecology, and Ornithology. Draft Water Vole Survey Report 2007-2009. Unpublished Report June 2012.

AMEC (2012b). EDF Energy. Sizewell C New Nuclear Power Station: Terrestrial and Freshwater Ecology, and Ornithology. Draft Otter Survey Report 2007-2010. Unpublished Report June 2012.

Cresswell (2013). *EDF Energy/NNB GenCo Sizewell C Ecological Support: Otters and Water Vole Surveys Methods statement and Risk Assessment*. Unpublished Report Sept 2013.

# Figure 1: Aldhurst Farm Survey Area




Key

- Site Boundary
- Drains, ditches, streams and boundaries intensively surveyed for otters and water voles
- Area of ditch too dense to survey
- Fields considered unsuitable for otters and water voles
- Location and direction of photograph
- (1) Target Note

| Issue | Description | Date |
|---|---|---|
| 01 | VERSION 1 | 18 OCT 13 |

Status: **PRELIMINARY**
NOT TO BE USED FOR CONSTRUCTION

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|---|---|---|---|
| Scales | 1:4000 | Current Issue Signatures | |
| | | Author J.WEAVER | |
| Original Size | A3 | Checker P.JAMES | |
| Height Datum | NEWLYN | Approver J.DAVIES | |
| Grid | O.S | © Copyright reserved | |

Filename: 1014-UA004506-STD-01_OTTERS_WV.DWG

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Project: SIZEWELL

Title: FIGURE 1
ALDHURST FARM
SURVEY AREA

| Drawing No. | Project No. | Issue |
|---|---|---|
| 1015 | — UA004506— | 01 |

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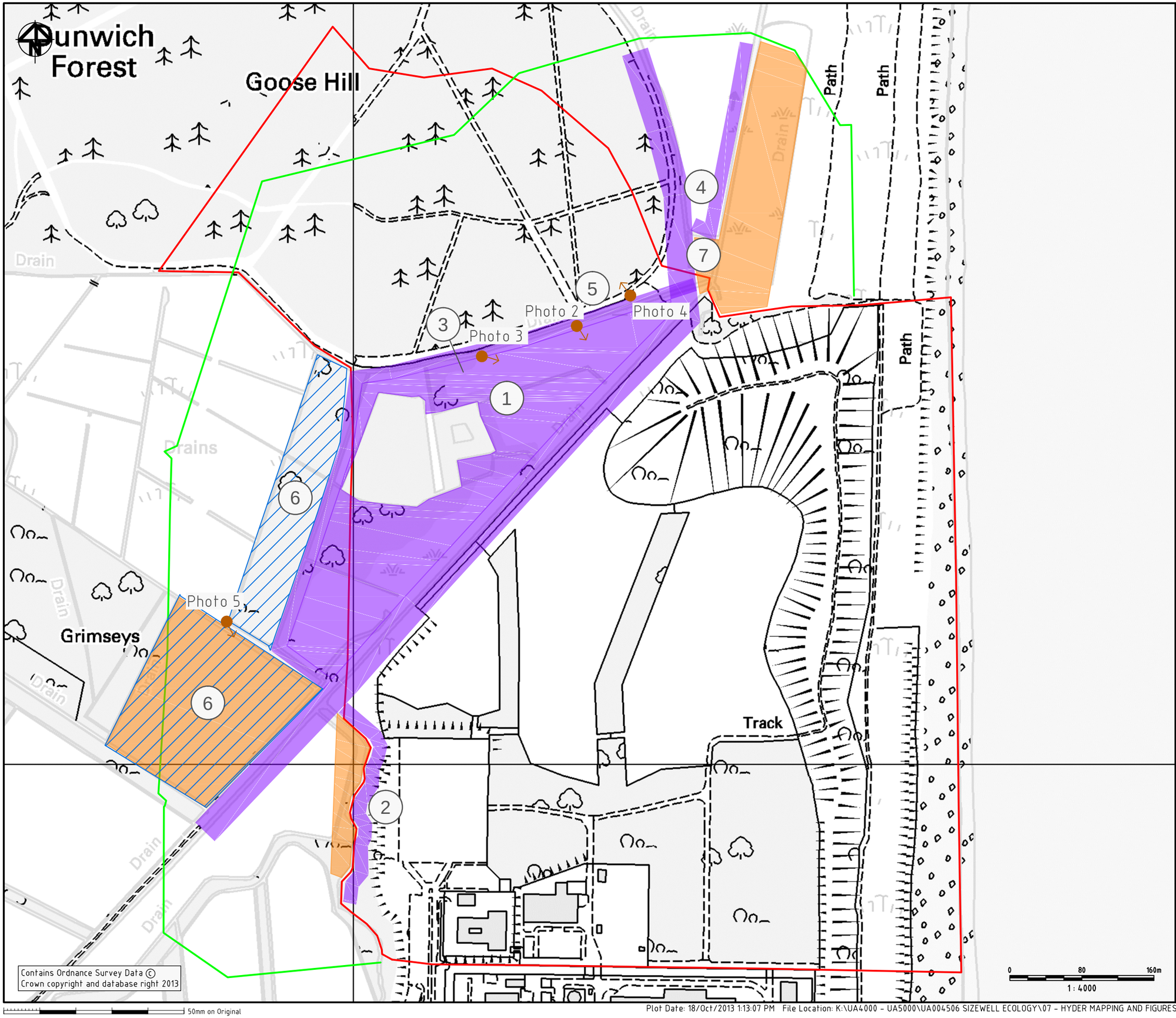
# Figure 2: SSSI Survey Area




Key

- Site Boundary
- Approximate 200m Survey Boundary
- Areas intensively surveyed for otters and water voles
- Inaccessible areas
- Flooded carr
- Location and direction of photograph
- (1) Target Note

| Issue | Description | Date |
|---|---|---|
| 01 | VERSION 1 | 18 OCT 13 |

Status
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Project
SIZEWELL

Title
FIGURE 2
SSSI
SURVEY AREA

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