

# Vattenfall Wind Power Ltd Thanet Extension Offshore Wind Farm

## **Annex 5-10: Additional Phase 1 Habitat Survey Report**

June, 2018, Revision A

Document Reference: 6.5.5.10

Pursuant to: APFP Reg. 5(2)(a)



Additional Phase 1 Habitat Survey Report

Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Annex 5-10: Additional Phase 1 Habitat Survey Report

June, 2018

Drafted By:	SLR
Approved By:	Helen Jameson
Date of Approval	June 2018
Revision	А

Copyright © 2018 Vattenfall Wind Power Ltd

All pre-existing rights reserved

### THANET EXTENSION OFFSHORE WIND FARM

**Additional Phase 1 Habitat Survey Report** 

Prepared for: GoBe Consultants



#### **BASIS OF REPORT**

This document has been prepared by SLR Consulting Limited with reasonable skill, care and diligence, and taking account of the manpower, timescales and resources devoted to it by agreement with GoBe Consultants (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.



SLR Ref No: 414.05356.00003

May 2018

#### **CONTENTS**

1.0	INTRODUCTION	1
2.0	METHODOLOGY	2
2.1	Survey Area	2
2.2	Survey Methodology	2
2.3	Survey Dates, Times and Weather Conditions	2
2.4	Survey Personnel	2
2.5	Survey Limitations	3
3.0	RESULTS	4
3.1	Habitat Survey	4
3.1.1	Scrub/ ephemeral vegetation and hard standing	4
3.1.2	Bare ground and hardstanding	5
3.1.3	Buildings	5
3.1.4	Saltmarsh and intertidal mud/sand	6
3.1.5	Semi-improved neutral grassland	6
3.1.6	Amenity grassland	7
3.1.7	Scrub	7
3.1.8	Standing water	7
3.1.9	Swamp	8
3.1.10	Broadleaved woodland; semi–natural and scattered broad leaved trees	9
3.1.11	Coniferous scattered trees	9
3.2	Potential for Protected or Notable Fauna (Area 8 Only)	10
3.2.1	Invertebrates	10
3.2.2	Birds	10
3.2.3	Amphibians	10
3.2.4	Reptiles	11
3.2.5	Mammals	11



#### **DOCUMENT REFERENCES**

#### **TABLES**

Table 3-1 Preliminary Ground Level Roost Assessment for Trees Lying Adjacent to Area 8 ...... 11

#### **DRAWINGS**

Drawing 1: Phase 1 Survey Gaps

Drawing 2: Additional Phase 1 Habitat Map

Drawing 3: Trees or Groups of Trees with Bat Roost Potential – Tenant Relocation Area (Area 8)



#### 1.0 Introduction

A Phase 1 habitat survey along the route of the onshore grid connection for the proposed Thanet Extension Offshore Wind Farm (TEOW) was undertaken by Amec Foster Wheeler between March and July 2017<sup>1</sup>. The survey area covered the site boundaries under consideration at that time plus a buffer of at least 50m (the buffer was extended to 200m for areas located within statutorily designated sites).

The 2017 Phase 1 habitat survey contained a number of gaps in coverage, primarily due to a lack of access to certain areas. In addition, since the 2017 survey was completed the site boundary (henceforth referred to as the Red Line Boundary (RLB)) has been extended to include an additional area of land to the south of the original survey area.

SLR Consulting was therefore commissioned by GoBe Consultants (on behalf of Vattenfall Wind Power) in February 2018 to carry out a Phase 1 habitat survey of the areas within the RLB and relevant buffer zones that were not covered by the 2017 survey. The purpose of the survey was to fill any gaps in the baseline survey data to inform the Environmental Impact Assessment (EIA) for the proposed development. This report presents the results of the additional surveys.

<sup>&</sup>lt;sup>1</sup> Amec Foster Wheeler. 2017. Thanet Extension Offshore Wind Farm. Extended Phase I Habitat Survey Report.



#### SLR Ref No: 414.05356.00003 May 2018

#### 2.0 Methodology

#### 2.1 Survey Area

The survey area included all land within the RLB and relevant buffer zones (i.e. 200m for land within designated sites, 50m for all other areas) that was not covered by the 2017 survey, as shown in Drawing 1.

#### 2.2 Survey Methodology

The survey was undertaken using a combination of aerial photographs and field survey. All areas that were accessible were subject to field survey and review of aerial photographs, however it was not possible to access all areas and where access was not possible habitats were mapped from aerial photos only. In such cases other sources of relevant data, e.g. the 2012 Kent Habitat Survey, provided by the Kent and Medway Biological Records Centre (KMBRC) were also referred to. Drawing 1 illustrates the areas surveyed and the method applied in each area. Aerial imagery used was obtained from Google Earth [last accessed 18<sup>th</sup> April 2018].

The survey aimed to map habitats in accordance with the standard JNCC Phase 1 methodology<sup>2</sup>. Due to the time of year at which the survey was undertaken detailed botanical species lists were not compiled, although brief descriptions were taken of the habitats present.

Faunal surveys covering a range of taxa were carried out within the RLB and appropriate buffer zones in 2017, the results of which are reported separately. As such, detailed consideration of the potential for the areas surveyed to support protected or notable faunal species was not necessary and was therefore not undertaken. The one exception to this concerns the proposed tenant relocation area, which forms the southern part of Area 8 (see Drawing 1), which was added to the area within the RLB following completion of the 2017 faunal surveys. For this area, in addition to the habitat mapping, the potential of this area to support protected or notable faunal species was also assessed.

#### 2.3 Survey Dates, Times and Weather Conditions

Field surveys were undertaken on the 27th October 2017; and on the 8<sup>th</sup> and 9<sup>th</sup> March 2018 during periods of dry and mild weather. The survey undertaken in October 2017 was concerned with the Richborough Port area only, i.e. the southern part of Area 8 (Drawing 1). That survey included an assessment of reptile potential; a search for signs of badger activity; and an assessment of trees for features with potential to support bats. The potential for this area to support terrestrial invertebrates of conservation value was also assessed, both in October 2017 and in March 2018.

#### 2.4 Survey Personnel

The survey of Richborough Port in October 2017 was led by Eleanor Davis MCIEEM, a Senior Field Ecologist with SLR with over seven years professional experience. Eleanor was accompanied by an assistant field ecologist with some experience of ecology surveys.

The surveys on 8<sup>th</sup>-9<sup>th</sup> March 2018 were conducted by Duncan Watson CEnv MCIEEM and Natasha Nixon CEnv MCIEEM, who are both experienced ecologists with over 20 years' and 10 years' professional experience respectively.



<sup>&</sup>lt;sup>2</sup> Joint Nature Conservation Committee. 2010. *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit*. Revised Reprint.

#### 2.5 Survey Limitations

Surveys were undertaken outside the optimal period for botanical surveys, which is generally regarded as running from May until September. However, given the nature of the habitats present the timing of the survey is not considered to have affected the accurate identification of the relevant Phase 1 habitat types.

Access to Areas 1 to 4 (Drawing 1) was not possible. However, it was possible to view Area 2 through a fence; and Area 3, in part, from a layby next to the A256. Area 4 included private gardens. These areas have therefore been mapped using aerial photographs only and mapping may therefore be subject to a degree of error.



#### 3.0 Results

#### 3.1 Habitat Survey

A Phase 1 habitat map covering all areas surveyed is shown in Drawing 2. The habitats identified within each area surveyed are briefly described in the sections below.

The following Phase 1 habitat types and were identified:

- Scrub/ ephemeral vegetation and hard standing mosaic
- Bare ground
- Hard standing
- Buildings
- Intertidal mud/sand
- Saltmarsh; dense continuous
- Broad-leaved woodland semi –natural
- Scattered trees broad-leaved
- Scattered trees coniferous
- Scrub; dense/ continuous and scattered
- Neutral semi-improved grassland
- Amenity grassland
- Standing water
- Swamp

A brief description of the habitats is provided below.

#### 3.1.1 Scrub/ ephemeral vegetation and hard standing

A mosaic of ephemeral and scattered scrub vegetation and hard standing components was the dominant habitat type in Area 8 (see Photograph 1 below). Bands of ephemeral and scattered scrub were present between areas of hard standing with both the areas of hard standing and some of the areas of ephemeral vegetation used for vehicle storage.

The habitat was free-draining and the vegetation lacked structural complexity, with only self-sown willow (*Salix* sp.) or clumps of bramble (*Rubus fruticosus*) growing through. Similar habitat is present between the Richborough Port site and the coastal salt marsh that fringes the River Stour, although the scale and linearity prevents it from being recorded on the Phase 1 mapping.



Photograph 1

Typical view of the matrix of hard standing, ephemeral and scattered scrub vegetation in Area 8



#### 3.1.2 Bare ground and hardstanding

The dominant habitats within the Richborough Energy Park (REP) and the Richborough Port areas (Areas 9 and 8 respectively) were bare ground and hardstanding, as shown in Photograph 2 below. These provided areas for the storage of materials and construction activities. These areas were of no ecological interest.

Photograph 2
Typical view of area of bare ground and hard standing



#### 3.1.3 Buildings

Within the survey area, particularly in Areas 8 and 9 a number of large metal storage units were present, as well as porta-cabins and other similar structures. It is noted that a number of structures are relatively new and therefore not shown on base mapping or aerial photographs. As such some of the locations shown in Drawing 2 should be regarded as approximate. Examples of buildings observed are provided below in Photograph 3.



### Photograph 3 Example buildings





#### 3.1.4 Saltmarsh and intertidal mud/sand

Saltmarsh and intertidal mud/sand were recorded in Areas 1 and 5. These habitats border the River Stour and Pegwell Bay, as shown in Photograph 4 below.

Photograph 4
Saltmarsh in Area 5



#### 3.1.5 Semi-improved neutral grassland

Neutral semi-improved grassland was recorded in Areas 2, 5 and 6. Grassland was relatively species-poor and largely rank and unmanaged in Areas 2 and 6 but in Area 5 (within the Sandwich Bay to Hacklinge Marshes SSSI, to the east of the River Stour) it appeared slightly more diverse and was largely managed as pasture with scattered hawthorn scrub present throughout. This area is mapped as semi-improved grazing marsh pasture in the 2012 Kent Habitat Survey. Small areas of semi-improved neutral grassland also occurred frequently around the periphery of Areas 4, 8 and 9 where it was subject to more intensive management and maintained as short grassland (see Photograph 5).







#### 3.1.6 Amenity grassland

There were numerous examples of amenity grassland habitat along the edge of the A256 in Areas 4, 7 and 9.

#### 3.1.7 Scrub

Scattered scrub, mostly comprising mature hawthorns (*Crataegus monogyna*), was present in Area 5, where it grew within an area of semi-improved neutral grassland. It appeared from the layby and from aerial imagery that dense scrub was the dominant habitat type in Area 3 (see Photograph 6). This appeared to mainly comprise bramble and hawthorn. A grassy track was apparent through the middle of the site, but was of a relatively minimal extent for the purpose of mapping.

Photograph 6
Dense scrub in Area 3 (taken from A256 Layby)



#### 3.1.8 Standing water

Standing water is present within the REP site (Area 9) in the form of a concrete lined interceptor (see Photograph 7).



Photograph 7
Interceptor within Area 9



Standing water was also identified along the edge of Baypoint Sports Centre (Area 7), to the east of the A256. This comprised a wide, steep-sided ditch overshadowed by broad-leaved trees (see Photograph 8). The water level is likely to drop over the course of the year and this is considered unlikely to be a permanent feature.

Photograph 8

Ditch to west of Baypoint Sports Centre



#### 3.1.9 Swamp

An area of dense reedbed comprising common reed (*Phragmites australis*) was observed to the north of the REP site within Area 3 (Photograph 9).



Photograph 9
Swamp in Area 3



#### 3.1.10 Broadleaved woodland; semi-natural and scattered broad leaved trees

These habitats were found frequently around the peripheral borders of land parcels within the RLB. The tree edge habitats were of limited diversity, often with minimal or no ground or shrub layers.

In Area 8 the habitat was mapped as broad-leaved woodland bordering the edge of the Richborough Port site to the west (Photograph 10) and mapped as a line of broadleaved trees along the outer edge of the site to the east. Tree lines were also present to the south of Area 9 and along the edge of Baypoint Sports Centre (Area 7).

Photograph 10
Woodland habitat along the western edge of the Richborough Port site (Area 8)



#### 3.1.11 Coniferous scattered trees

A line of leylandii (*Cupressus* × *leylandii*) is present between two areas of grassland at the south-eastern corner of Baypoint Sports Centre (Area 6), see Photograph 11. The leylandii connects to the line of scattered broadleaved trees around the periphery of the sports grounds.



#### Photograph 11 Line of leylandii in Area 6



#### 3.2 Potential for Protected or Notable Fauna (Area 8 Only)

#### 3.2.1 Invertebrates

The mosaic of ephemeral vegetation and scrub in Area 8 is likely to favour the presence of a mix of arboreal and field layer invertebrate assemblages, including bees, sawflies (*Symphyta*) and wasps (i.e. aerial nesters), butterflies and moths (*Lepidoptera*), true flies (*Diptera*) and beetles (*Coleoptera*). The mats of bryophyte-rich vegetation will also likely support a range of ground-based invertebrates such as ground bugs (*Lygaeidae*), hoppers (*Auchenorrhyncha*), a range of spiders (*Aranaea*), Myriapods (woodlice, centipedes and millipedes), land snails (*Mollusca Gastropoda*), ground beetles (*Carabidae*), ants (*Formicidae*) and grasshoppers and crickets (*Orthoptera*). Given the nature of the habitats present and the site's geographical location in southeast Kent the area might be expected to support a number of locally, regionally and nationally rare or scarce species. However, the lack of topographic diversity and high level of exposure is likely to limit the number of species present. The invertebrate assemblage is therefore considered unlikely to be exceptional.

#### 3.2.2 **Birds**

Area 8 was included within the ornithological survey area described by Amec Foster Wheeler (2017)<sup>3</sup> and the potential of this area to support protected or notable bird species was therefore not considered in detail.

#### 3.2.3 Amphibians

No waterbodies additional to those surveyed by AFW in 2017<sup>4</sup> were identified within terrestrially connected habitat within 250m of the proposed tenant relocation area (Area 8). A waterbody is present within 250m to the south of the Richborough Port site; however, it is separated from the application site by the River Stour so is therefore discounted from assessment as amphibians would not be able to migrate from the waterbody to terrestrial habitat within the RLB.

<sup>&</sup>lt;sup>4</sup> Amec Foster Wheeler. 2017. Thanet Extension Offshore Wind Farm Great Crested Newt Survey Report.



<sup>&</sup>lt;sup>3</sup> Amec Foster Wheeler. 2017. *Thanet Extension Offshore Wind Farm Ornithology Baseline Report*.

#### SLR Ref No: 414.05356.00003 May 2018

#### 3.2.4 Reptiles

The northern part of Area 8 was subject to reptile surveys in 2017<sup>5</sup>. The reptile survey confirmed the presence of a small population of viviparous lizard (*Zootoca vivipara*) here. This species is more adaptable than other reptile species, and may use the cracks between the edge of the hard standing and grassland areas for hibernation opportunities. The hard standing and ephemeral vegetation would facilitate basking opportunities, and the availability of scrub that has encroached onto the hard standing provides some cover from predation. Although the southern part of Area 8 was not included in the 2017 reptile survey (as it was not included within the RLB at that time) given the similarity of the habitats it is anticipated that small numbers of viviparous lizard are also present in the areas of ephemeral vegetation / scrub mosaic elsewhere within Area 8.

#### 3.2.5 Mammals

#### **Badger**

The dominant habitat in the area is hard standing. Peripheral broadleaved trees are also present along with areas of scrub, grassland and ephemeral grassland. With the exception of the embankment along the southern boundary, none of the habitats present were suitable for badger sett creation due to the extensive areas of hardstanding. As the survey area is located between the A256 Ramsgate Road to the west; an access road to the British Car Auction site to the north; and the River Stour to the east, the survey area is relatively isolated. Furthermore, the habitats within the survey area provide very limited foraging opportunities that would attract badger. No field signs of badger (*Meles meles*) were found during the survey and badger is considered unlikely to use the area.

#### **Bats**

A preliminary assessment was undertaken of the trees and tree groups within and adjacent to Area 8. Where features were identified, an assessment was undertaken of the potential for those trees or groups of trees to provide roosting habitat for bats in accordance with current Bat Conservation Trust (BCT) guidelines<sup>6</sup>. The results of the assessment of eight trees/ tree groups are described in Table 3.1 below, numbered to follow on from the trees previously identified as part of the bat survey undertaken in 2017<sup>7</sup>. Tree locations are shown in Drawing 3. All of these trees are located on the boundaries of the site or outside.

Table 3-1 Preliminary Ground Level Roost Assessment for Trees Lying Adjacent to Area 8

PRELIMINARY GROUND LEVEL ROOST ASSESSMENT									
Map Reference	Approximate grid ref	Species	Stem Diameter	Description of PRF and position in tree	Tree Category N/L/M/H <sup>8</sup>	Additional Notes			
13	TR33578 61435	White poplar ( <i>Populus alba</i> )	Mostly all 25cm DBH	Row of ivy clad trees	L				



<sup>&</sup>lt;sup>5</sup> SLR Consulting (2017). TEOW Onshore Grid Connection –Reptile Survey Report 414.05356.00003

<sup>&</sup>lt;sup>6</sup> Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.

<sup>&</sup>lt;sup>7</sup> SLR Consulting (2017) TEOW Onshore Grid Connection – Bat Survey Report 414.05356.00003

<sup>&</sup>lt;sup>8</sup> N = negligible, L = low, M = medium, H = high.

Map Reference	Approximate	Species	Stem Diameter	Description of PRF and position in tree	Tree Category	Additional Notes
	grid ref			and position in the	N/L/M/H <sup>8</sup>	
14	TR33536 61335 to TR33505 61259	Nearly all white poplar	25 – 60cm DBH	Approximately 35 ivy clad trees	М	No crevices foun although a mor detailed search woul be needed to establis bat potential categor more accurately if an of these trees could b affected.
15	TR33449 61636 to TR33429 61297	Various	Largest found 50cm DBH	Thin ivy cladding on large number of trees	L	Quite a few ivy clar trees but not though thick enough to obscur- holes or crevices.
16	TR33445 61762	White poplar	Not recorded	3m high, split with crevice at top	М	Hole checked wit endoscope, small an no evidence of bats Some other dead woo in tree, currently low burot hole could becombigger.
17	TR33456 61872	Willow sp. ( <i>Salix sp.</i> )	Not recorded	Two branches growing together creating crevice.	M	Checked from ground with endoscope not evidence of bats update survey advised identified for removal.
18	TR33409 61899	Poplar sp. ( <i>Populus sp.</i> )	Not recorded	None found	L	Mature tree within 50n buffer of boundary.
19	TR33411 61815	Weeping willow ( <i>Salix</i> <i>sp</i> .)	Not recorded	None found	L	Mature tree within 50r buffer of boundary.
20	TR33401 61451	Sparse young hedge mixed species	Not recorded	None	N	Located within 50r buffer of boundary.

#### **Other Mammal Species**

Rabbit (*Oryctolagus cuniculus*) scrapes and holes were found and one fox (*Vulpes vulpes*) faecal deposit was found towards the south of the site, within the hard standing. No other protected or notable mammal species are likely to be present within or adjacent to the proposed tenant relocation area (Area 8) given the nature of the habitats present.



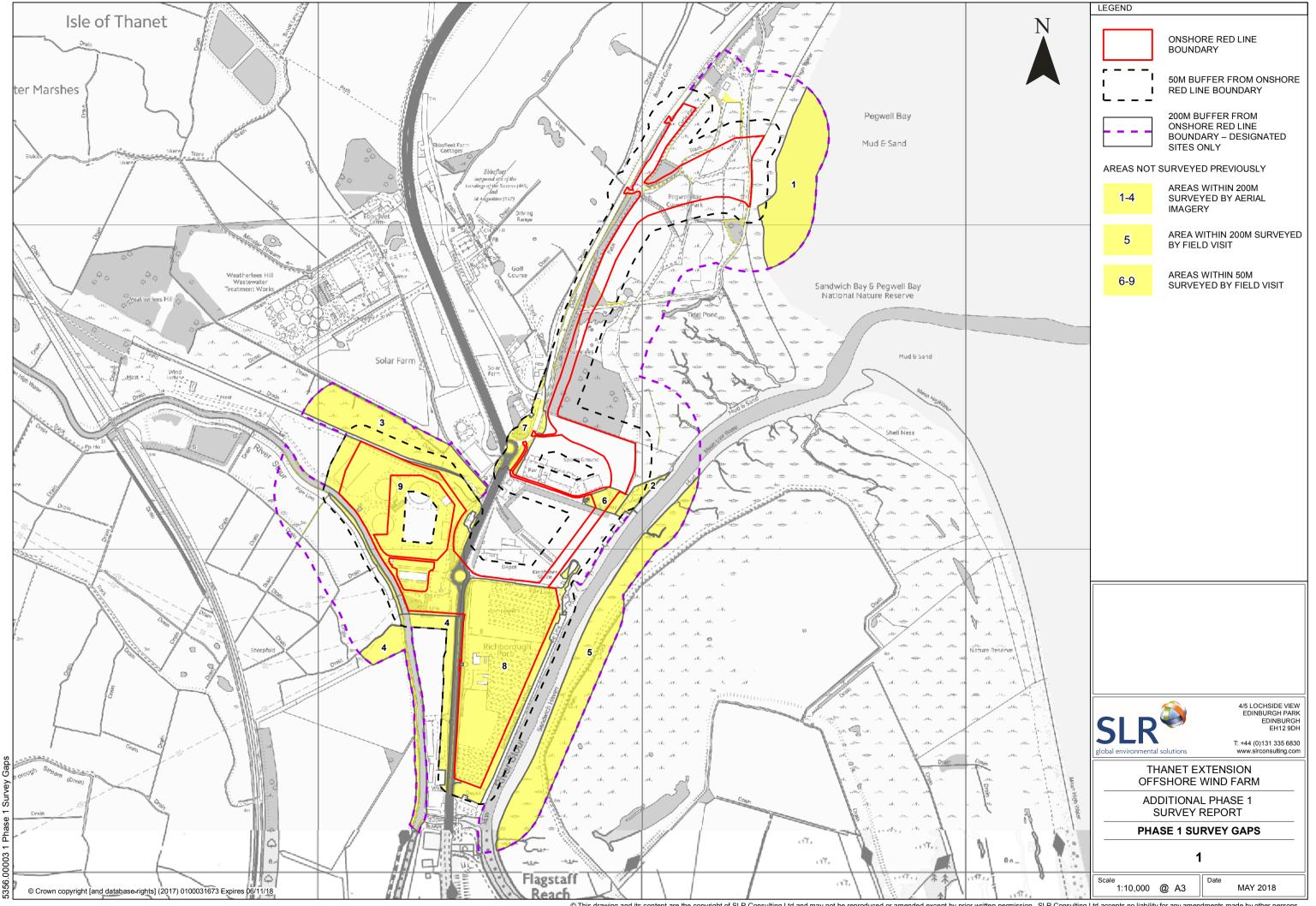
#### **DRAWINGS**

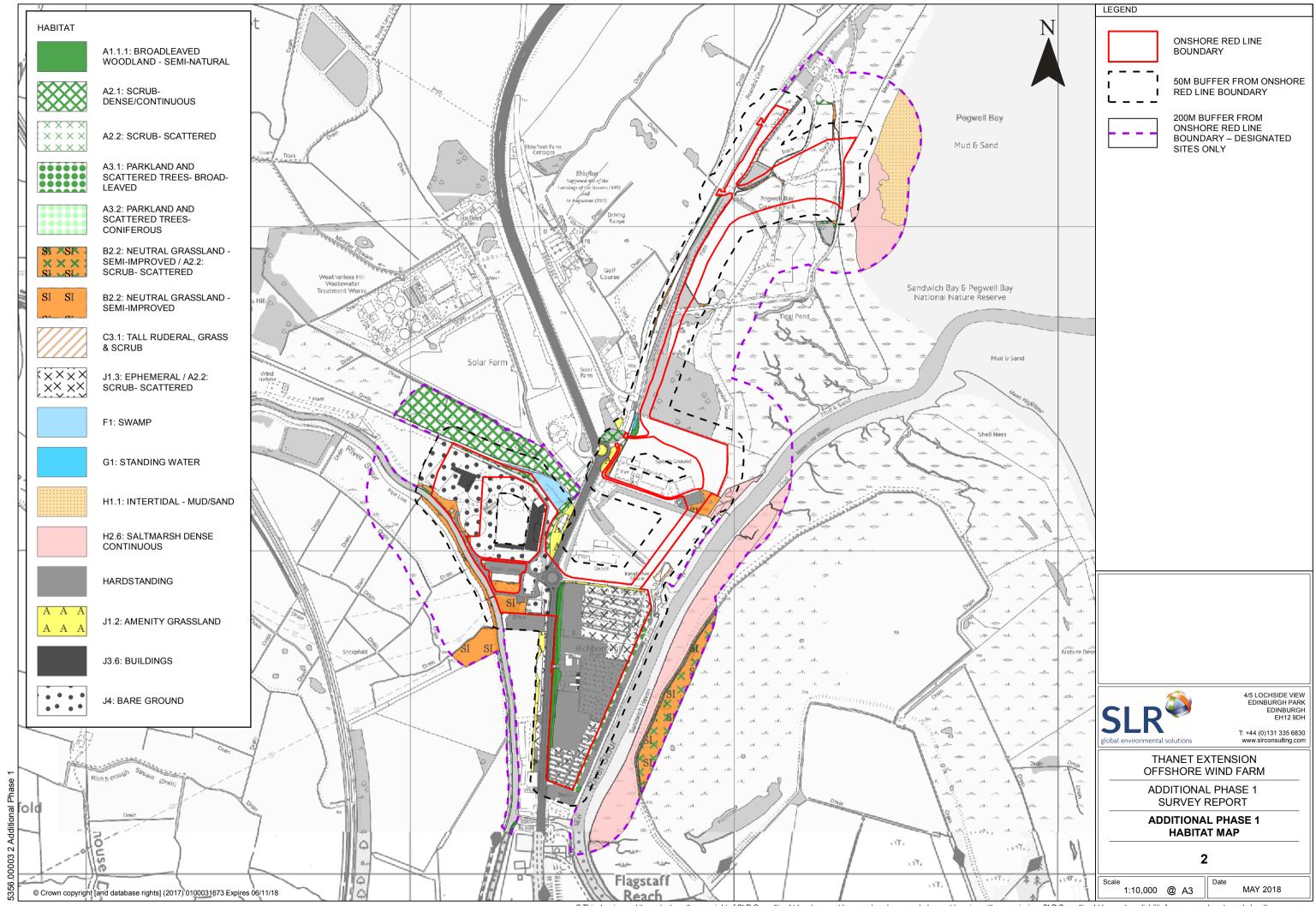
Drawing 1: Phase 1 Survey Gaps

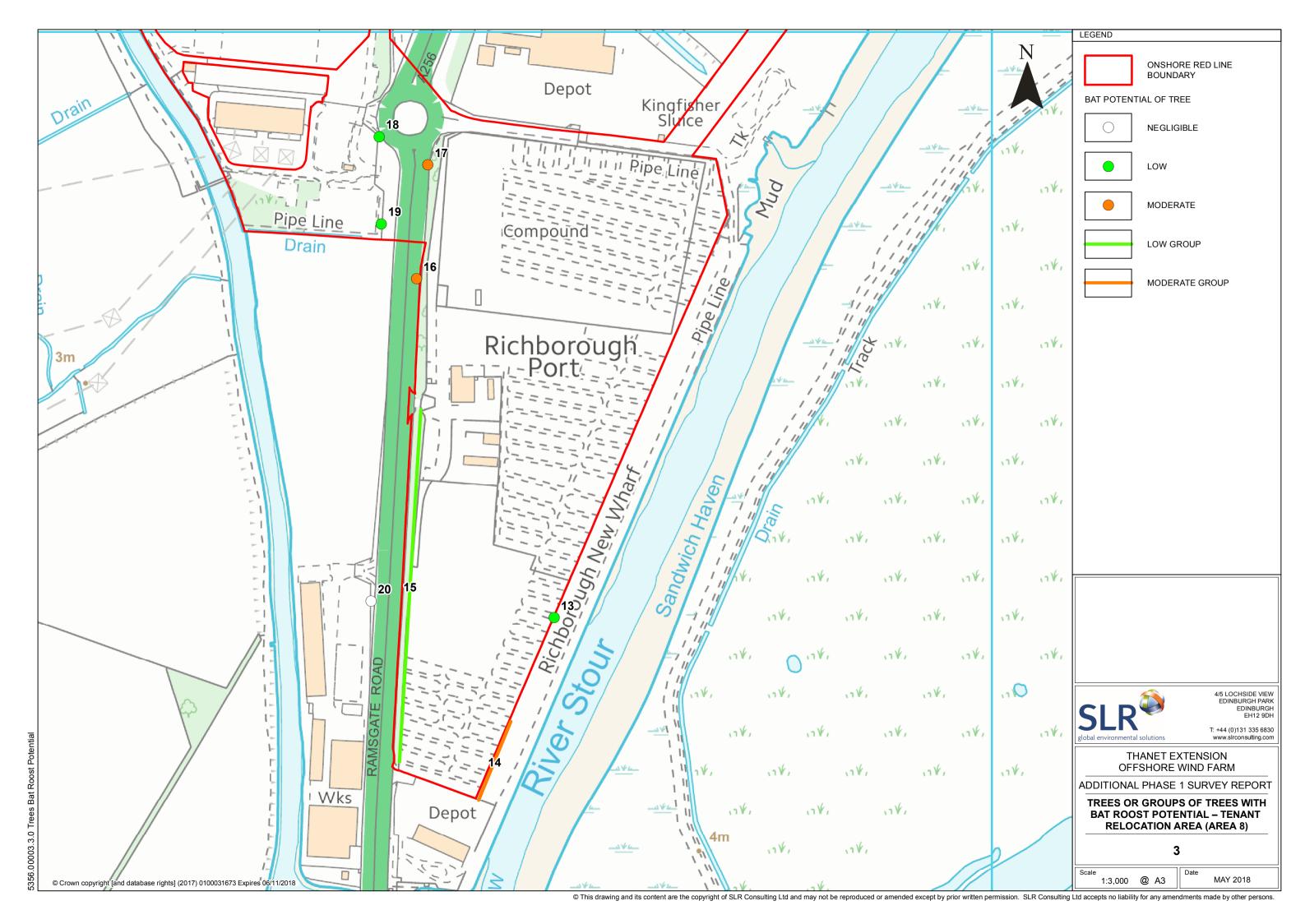
Drawing 2: Additional Phase 1 Habitat Map

Drawing 3: Trees or Groups of Trees with Bat Roost Potential – Tenant Relocation Area (Area 8)









#### **EUROPEAN OFFICES**

#### **United Kingdom**

**AYLESBURY** 

T: +44 (0)1844 337380 T: +44 (0)113 258 0650

**BELFAST** 

T: +44 (0)28 9073 2493 T: +44 (0)203 691 5810

LONDON

**MAIDSTONE** 

MANCHESTER

**NOTTINGHAM** 

**SHREWSBURY** 

SHEFFIELD

**STAFFORD** 

WORCESTER

**BRADFORD-ON-AVON** 

T: +44 (0)1225 309400 T: +44 (0)1622 609242

**BRISTOL** 

T: +44 (0)117 906 4280 T: +44 (0)161 872 7564

**CAMBRIDGE** 

**NEWCASTLE UPON TYNE** T: + 44 (0)1223 813805 T: +44 (0)191 261 1966

**CARDIFF** 

T: +44 (0)29 2049 1010 T: +44 (0)115 964 7280

**CHELMSFORD** 

T: +44 (0)1245 392170 T: +44 (0)114 245 5153

**EDINBURGH** 

T: +44 (0)131 335 6830 T: +44 (0)1743 23 9250

**EXETER** 

T: + 44 (0)1392 490152 T: +44 (0)1785 241755

**GLASGOW** 

STIRLING T: +44 (0)141 353 5037 T: +44 (0)1786 239900

**GUILDFORD** 

T: +44 (0)1483 889800 T: +44 (0)1905 751310

**Ireland** 

**France** 

**DUBLIN** 

T: + 353 (0)1 296 4667

**GRENOBLE** 

T: +33 (0)4 76 70 93 41

