



**Vattenfall Wind Power Ltd**

**Thanet Extension Offshore Wind Farm**

**Annex 5-8: Badger Survey Report**

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Vattenfall Wind Power Ltd

Badger Survey Report

Thanet Extension Offshore Wind Farm

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June, 2018

|                  |                |
|------------------|----------------|
| Drafted By:      | SLR Consulting |
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| Date of Approval | June 2018      |
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# THANET EXTENSION OFFSHORE WIND FARM – ONSHORE GRID CONNECTION

**Badger Survey Report**  
Prepared for: GoBe Consultants

SLR Ref: 414.05356.00003  
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February 2018



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## 1.0 Introduction

### 1.1 Background

SLR Consulting was commissioned by GoBe Consultants (on behalf of Vattenfall Wind Power Ltd) in July 2017 to carry out a range of ecological surveys along the route of the onshore grid connection for the proposed Thanet Extension Offshore Wind Farm (TEOW). The purpose of the surveys was to provide baseline data to inform an Environmental Impact Assessment (EIA).

### 1.2 Site Location and Description

The site is located in east Kent, to the north of Sandwich and south-west of Ramsgate. The route of the proposed onshore grid connection extends from the proposed landfall within Pegwell Bay Country Park, south and then west to the proposed converter station location, to the west of the former Richborough Power Station. The site boundaries (henceforth referred to as the Red Line Boundary (RLB)) are shown in Drawing 1. It is important to note that at the time of survey the boundaries were necessarily larger to accommodate different project options being considered at the time of survey. The study areas considered at that time have been retained for the purpose of illustration, with the refined RLB illustrated in the relevant chapters of the Environmental Statement.

Within the RLB, access has not been granted to the former Richborough Power Station site, to the west of the A256, beyond an initial Phase 1 walkover. This area is subject to existing ecological monitoring, data from which have been provided to inform the EIA. This area is therefore not considered within this report.

The area within the part of the RLB considered by this report includes a range of habitat types including semi-improved, improved and amenity grassland, dense and scattered scrub, small blocks of broad-leaved woodland, scattered trees and areas of hardstanding. The part of the RLB considered by this report is bordered to the east by an extensive area of mudflats, coastal saltmarsh, coastal sand dune and floodplain grazing marsh. The Stonelees golf course lies to the west and north, to the west of Sandwich Road, with Richborough Port lying to the south.

The area within the RLB includes, in part, land forming part of the Sandwich and Pegwell Bay National Nature Reserve (NNR), Sandwich Bay to Hacklinge Marshes Sites of Special Scientific Interest (SSSI), Thanet Coast and Sandwich Bay Ramsar, and Thanet Coast and Sandwich Bay Special Protection Area (SPA). Sandwich Bay Special Area of Conservation (SAC) lies approximately 90m east of the RLB. The RLB also includes land within the Pegwell Bay Country Park and Stonelees Nature Reserve, managed by Kent Wildlife Trust.

### 1.3 Scope of Study

This report presents the findings of a survey to identify signs of badger activity.

The aims of the survey were to provide baseline data to inform the EIA and the detailed design for the project. The assessment of impacts resulting from the proposed development and the development of mitigation measures, if required, are beyond the scope of this report and are covered in the Environmental Statement.

### 1.4 Relevant Legislation

#### 1.4.1 Protection of Badgers Act 1992

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it. A sett can be defined as a place or structure where signs indicate current use by a badger. Often, it is formed by a network of tunnels and chambers, but can include other structures.

## 2.0 Methodology

### 2.1 Survey Area

The survey area included all land within the RLB under consideration at the time, with the exception of the area to the west of the A256 (see Section 1.2) plus a buffer zone of *circa* 50m, as shown in Drawing 1. 50m was considered a suitable buffer zone to identify any setts that could potentially be affected by the proposed development and to assess badger activity for the purpose of the EIA.

### 2.2 Badger Ecology

Badgers are found in suburban landscapes and in the countryside. Although their main food is earthworms, badgers are omnivores and at times of year when earthworms are scarce they top up their diet with various other foods such as fruit, berries, nuts, and crops such as maize and prey such as young rabbits.

Badgers live in social groups called ‘clans’, with an average of six animals in each clan (though these numbers can be considerably greater). A clan lives within a home range which varies greatly in size depending on the number of other clans within the local area and the quality of the foraging habitat within the home range. In areas where the abundance of earthworms is low or widely dispersed, badgers move longer distances and defend large territories. Home ranges in good rural habitat can be less than 30 hectares (ha), whilst home ranges in areas of poor foraging habitat can be as large as 1500ha<sup>1,2</sup>. Within these home ranges, the clan holds a territory which they actively defend against other clans.

Within the territory badgers live within ‘setts’; complex underground structures with a series of passages and chambers. Badgers are nocturnal and spend their days resting up within these setts. A clan can have a number of setts, which may be used interchangeably and seasonally<sup>3</sup>. The different types of setts are defined in Table 1 below.

**Table 1** Sett Classification

| Sett Type  | Definition   |
|------------|--|
| Main       | Several holes with large spoil heaps and obvious pathways originating from and between sett entrances.                           |
| Annexe     | Normally less than 150m from the main sett, comprising several holes. Not used all of the time.                                  |
| Subsidiary | Usually at least 50m from the main sett with no obvious paths connecting to other setts. Used intermittently.                    |
| Outlier    | No obvious paths connecting to other setts and only used sporadically. Little spoil outside holes. May be used by other mammals. |

<sup>1</sup> Kowalczyk, R., Zalewski, A. and Bogumila, J. Daily movement and territory use by badgers *Meles meles* in Białowieża Primeval Forest, Poland. *Wildlife Biology*, **12**(4):385-391.

<sup>2</sup> Species Factsheet: Badger (*Meles meles*) The Mammal Society.

<sup>3</sup> Harris, S., Jefferies, D., Chesseman, C. & Bright, P. (1989) Projects on Badgers. Occasional Publication No. 12. The Mammal Society.

Badger activity, including sett creation; sett status; distribution; and social group compositions can be irregular, with bursts of new sett creation activity and intermittent use of setts<sup>4</sup>. However, badgers are also known to exhibit loyalty to setts and habitual behaviour. They have a tendency to use the same routes, creating pathways and breaking down fencing in order to access preferred foraging areas. Badger latrines, which comprise shallow pits into which badgers excrete, may be found throughout a territory but are often concentrated on the peripheral boundaries of the territory and conspicuous landmarks, such as fence lines, field and woodland margins<sup>5</sup>.

## 2.3 Survey Methodology

The walkover survey to identify presence of badgers and activity within the survey area included a search for the following field signs, in accordance with current guidance<sup>6</sup>:

- Latrines;
- Setts (including both single and multiple hole entrances, and couches or day nests paths);
- Paths between setts (leading to, or between, foraging areas); and
- Any evidence of scratching, snuffle (foraging) holes, footprints, and hairs (often found where badgers push through fences and vegetation).

## 2.4 Desk Study Methodology

Although a comprehensive desk study was beyond the scope of this study, online sources (NBN Gateway, available from: <https://nbn.org.uk/content-block/nbn-gateway/>) and the results of a desk study carried out by Amec Foster Wheeler<sup>7</sup> were reviewed for any historic records of badger presence.

## 2.5 Survey Dates, Times and Weather Conditions

Badger surveys may be undertaken at any time of year but are optimal during winter when vegetation has died back.

The walkover survey was undertaken on the 8<sup>th</sup> and 9<sup>th</sup> August 2017 on dry, bright days. Following a change in the RLB, an additional visit was also made to the north of the survey area on the 12<sup>th</sup> October 2017. Numerous visits were also made to the site at all times of day and night as part of other ecological surveys and any incidental records of badger were recorded as seen.

## 2.6 Survey Personnel

All ecologists that undertook the survey work are experienced in undertaking ecological assessments and surveys for badgers. The surveys were led by Natasha Nixon, a Senior Ecologist with approximately ten years of experience and a full member of Chartered Institute of Ecology and Environmental Management (MCIEEM) and

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<sup>4</sup> Harris, S., Cresswell, W. and Jefferies, D. 1989. *Surveying badgers*. Mammal Society Occasional Publication No. 9. Mammal Society, London.

<sup>5</sup> Delahay R.J., Brown, J.A., Mallinson, P.J., Spyvee, P.D., Handoll, D., Rogers, L.M., Cheeseman, C.L (2000) The use of marked bait in studies of the territorial organisation of the European badger (*Meles meles*). *Mammal Review* 30: 73-87.

<sup>6</sup> Natural England (2015). Badgers: surveys and mitigation for development projects. [Online] Available from: <https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects>.

<sup>7</sup> Amec Foster Wheeler Environment & Infrastructure UK Limited (2017) *Thanet Extension Offshore Wind Farm; Annex 5.1: Extended Phase 1 Habitat Survey Report*.



a Chartered Environmentalist (CEnv). Eleanor Davies MCIEEM assisted with the surveys. Eleanor is a Senior Field Ecologist with extensive experience in badger survey and mitigation.

## 2.7 Survey Limitations

### 2.7.1 Time of year

The walkover survey was undertaken during the summer, when vegetation can cover field signs. However, most of the wooded areas had limited scrub and ground cover; therefore this constraint is pertinent to small, localised areas of extensive nettle and bramble growth only. In the event of badger activity within those areas, it is likely that the activity would have been evident around the periphery of these areas.

### 2.7.2 Access

The survey incorporated all parts of the survey area that were accessible. However, part of the area within the Country Park was blocked by existing construction works and could not be accessed. It is assumed that these areas had already been checked for badger activity in order to be legally compliant.

Where the survey area passed through Pegwell Bay Country Park, fields that were entirely fenced were assessed from the outer perimeter, along the adjacent footpath. This was to avoid livestock or other sensitive and/or unsafe areas (i.e. the salt marsh). Given the number of visits to the site at all times of day and night, there were many opportunities to identify badger activity around the field peripheries and therefore this is not considered to be a limitation to the assessment.

For safety reasons it was not possible to walk along the verge of Sandwich Road, as the road is fast and the verge is narrow due to the proximity of the tree line to the edge of the carriageway. It was possible to view the verge to some degree whilst travelling by car along the road, and through the trees adjacent to the verge.

Whilst presence of badger signs cannot be entirely discounted, the likelihood of presence in the areas which could not be accessed is low given the absence of other field signs across the survey area, and therefore this is not considered to be a limitation to this assessment.

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## 3.0 Results

### 3.1 Desk study

A search of data using online sources identified three records of badger within a 5km radius, recorded in 1993. Badger records are never precise as they are kept confidential due to the persecution of badgers, but the records indicate the locations were somewhere to the west and south of the survey area.

The record search undertaken by Amec Foster Wheeler in March 2017 identified badger records within 2km to the south (dated 2001) and east of the survey area (no date).

### 3.2 Habitat assessment

The habitat within the survey area comprises numerous paddocks dominated by rough grassland with areas of scrub; woodland edge habitat; amenity grassland (including the sports centre and two golf courses); salt marsh; and extensive hard standing, including the Sandwich Road and various commercial enterprises. Other habitats in the nearby vicinity include riparian and scrub habitats; amenity and heavily managed grasslands; and residential properties. The habitats are mostly subject to a high degree of anthropogenic disturbance, although this may be tolerated by badgers that have become habituated and that have access to large territories.

The habitats within the study area on their own are poor for badger. Whilst there is potential that the habitats on site could form part of a wider territorial area to be used on an ad hoc basis, the extent of the habitats available that are suitable for badger are not sufficient to support a clan, and would need to form part of a much wider network of habitats.

However, with Pegwell Bay to the east; the River Stour to the south; and presence of the Sandwich Road, A256 Richborough Way and A299 Canterbury Road to the north and east of the site, the capability for badger to range freely over a wide territory is constrained. While the roads may not present complete barriers to dispersal, they would prove an impediment, particularly to young and male badgers.

Overall, given the poor suitability of the habitats and limitations to the range and mobility of the species, the survey area is considered to be limited value for badger.

### 3.3 Badger activity

No signs of badger were found during the dedicated badger survey or incidentally during any other survey visit.

## 4.0 Discussion and Conclusions

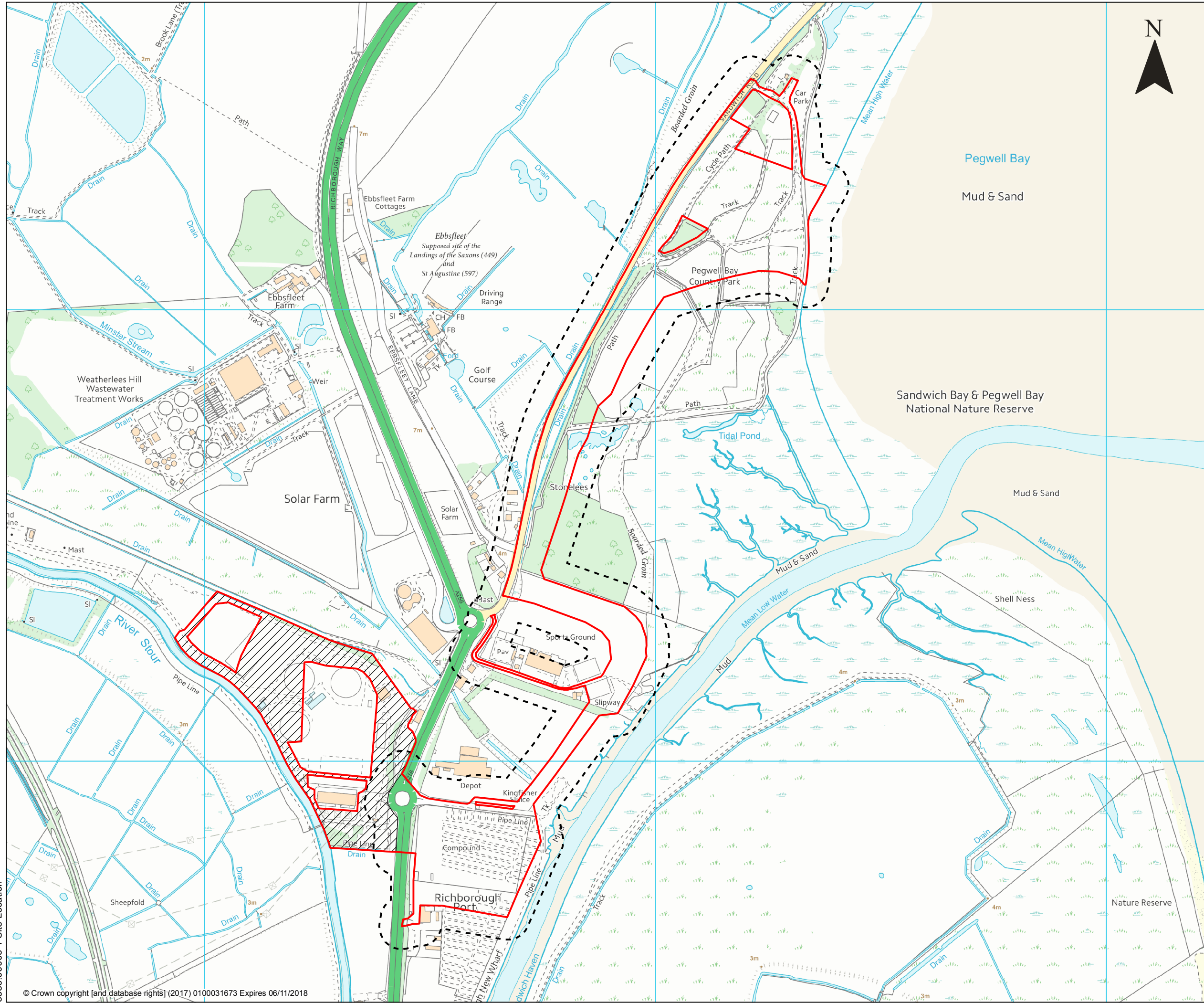
The survey for badger activity did not find any evidence of badger presence within the survey area, there are no recent, existing records of badgers within the survey area and the survey area is generally considered to be of limited value to badgers given the poor suitability of the habitats and limitations to the range and mobility of the species. Numerous other survey visits undertaken over late summer – early autumn 2017 as part of other ecology surveys also did not identify any evidence of badgers. Therefore it is considered that badgers are not currently using the habitats within the survey area on a regular basis.

However, future presence can never be entirely discounted given the large territorial ranges and seasonal behaviour associated with badger. Environmental changes within the wider landscape could also encourage badgers to become active within the study area. As such it is recommended that survey data are updated prior to the proposed works commencing.

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## DRAWINGS

### Drawing 1: Site Location and Badger Survey Area



**LEGEND**

- SITE BOUNDARY
- 50m BUFFER FROM SITE BOUNDARY (BADGER SURVEY AREA)
- AREA EXCLUDED FROM SURVEY AREA

5356.00003 1 Site Location

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**SITE LOCATION AND  
BADGER SURVEY AREA**

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**1**

Scale 1:8,000 @ A3      Date NOVEMBER 2017

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