

**RWE Renewables UK Dogger Bank
South (West) Limited**

**RWE Renewables UK Dogger Bank
South (East) Limited**

Dogger Bank South Offshore Wind Farms

Environmental Statement

Volume 7

**Appendix 18-5 Bats Report - Ground Level Tree
Assessment (Revision 3) (Clean)**

June 2025

Application Reference: 7.18.18.5

APFP Regulation: 5(2)(a)

Revision: 03

Unrestricted

Company:	RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited	Asset:	Development		
Project:	Dogger Bank South Offshore Wind Farms	Sub Project/Package:	Consents		
Document Title or Description:	Environmental Statement – Appendix 18-5 Bats Report – Ground Level Tree Assessment (Revision 3) (Clean)				
Document Number:	004300159-03	Contractor Reference Number:	PC2340-PEA-ONZZ-AX-Z-0111		
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Rev No.	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	June 2024	Final for DCO Application	Peak Ecology	RWE	RWE
02	January 2025	Submission in response to the ExA Rule 4, 6, 9, 13 and 17 Letter [PD-010]	Peak Ecology	RWE	RWE
03	June 2025	Submission for Deadline 7	Peak Ecology	RWE	RWE

Revision Change Log

Rev No.	Page	Section	Description
01	N/A	N/A	Final for DCO Submission
02	N/A	Appendix B	Appendix B: GLTA Survey Map has been updated at the request of the ExA in the Rule 4, 6, 9, 13 and 17 Letter [PD-010] to show the trees of roost potential as referenced in the ES Chapter 18 (Revision 4).
03	Various	Annex A	Appendix 18-5 Bats Report – Ground Level Tree Assessment has been updated to include Annex A , an updated bat ground level tree assessment and tree climbing inspection. This is at the request of the Examining Authority within the Rule 17 [PD-018] to accurately reflect the proposed development and incorporate any changes/updates which have occurred during the examination period.



Ground Level Tree Assessment 2023

Dogger Bank South (DBS) Offshore Wind Farms

ISSUE RECORD

Client name	Royal HaskoningDHV
Project name	Dogger Bank South (DBS) Offshore Wind Farms
Project number	HASK08.2
Status	FINAL (Revision 3)
Report title	Ground Level Tree Assessment 2023
Issue number	8
Date	06/01/2025
Written by	Jonathan Brickland MSc BSc (Hons) CEnv MCIEEM Director
Approved by	Charlotte Haylock BSc (Hons) Senior Ecologist

The information and advice contained in this report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Peak Ecology is accredited under ISO9001 and as such this report follows the styles and formatting template set out within our Quality Management Form.

ISO9001	QMF 32	Issue 1	Reviewed 04/03/2016
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EXECUTIVE SUMMARY

This data report has been prepared by Peak Ecology Ltd with Royal HaskoningDHV on behalf of RWE Renewables UK. It provides the results of a Ground Level Tree Assessment was undertaken of trees within the Onshore Development Area, associated with the Dogger Bank South (DBS) Offshore Wind Farms.

The majority of survey work was completed in February and March; all survey work was completed by September 2023.

The desk study included 18 bat records within 1km of the Onshore Development Area, this included four bat roosts. One bat record, a common pipistrelle, was within the Onshore Development Area; the four bat roosts were all outside of the Onshore Development Area. Records included a parti-coloured bat, a species typically found on mainland Europe and parts of Asia that is unusual in the UK.

Trees were assessed by a trained team of ecologists, recording various parameters include tree species, age and condition. The main purpose was to identify bat roost potential; this was categorised in accordance with Collins (2023).

A total of 61 trees in the Onshore Development Area were assessed. The majority (75%) of trees were oak, sycamore and ash. 78% of trees were considered to have higher bat roost potential.

It is recommended that the GLTA is repeated prior to the proposed works. Any trees with higher bat roost potential will require further survey work should they be impacted by the works.

Volume 7, Chapter 18 Terrestrial Ecology (application ref: 7.18) and Volume 7, Appendix 18-5 Bats Report - Ground Level Tree Assessment (application ref: 7.18.18.5) have been updated at the request of the Examining Authority within the Rule 17 [PD-018] to accurately reflect the proposed development and contains all the updated information within the appendix as a result of **Project Change Request 2** (document reference 10.53).

Annex A has been added following further surveys which were undertaken in November 2024. Ground-level and aerial assessments of trees within the Onshore Development Area of the the Dogger Bank South (DBS) Offshore Wind Farms for their potential to support roosting bats. These assessments were carried out to inform the detailed design and construction phases and inform the requirement for a future species mitigation licence prior to commencing works, subject to the Projects obtaining a Development Consent Order.

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ANNEX

ANNEX A: Bat Ground Level and Aerial Tree Assessment Report 2024

1 INTRODUCTION

1.1 Scope of Report

This report has been prepared by Peak Ecology Ltd with Royal HaskoningDHV on behalf of RWE Renewables UK. It provides the results of an assessment of trees to determine their potential to support roosting bats, known as a Ground Level Tree Assessment (GLTA) within the Onshore Development Area associated with the Dogger Bank South (DBS) Offshore Wind Farms.

The purpose of this report is to:

- Detail the methods employed to assess trees for their bat roost potential;
- Include the survey details, surveyors and any constraints to the surveys;
- Identify potential bat roosts that may be lost or affected by the proposed works;
- Identify key issues within the Onshore Development Area; and
- Identify any need for additional survey work.

As a data report this will not include an evaluation of impacts or details of mitigation; this will be addressed in the EIA.

The approach to this survey follows best practice published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2013) and the British Standards Institution (BSI, 2013). In general, standard accepted survey methods have been followed, details of methods are included in section 2.2 below.

1.2 Proposed Works

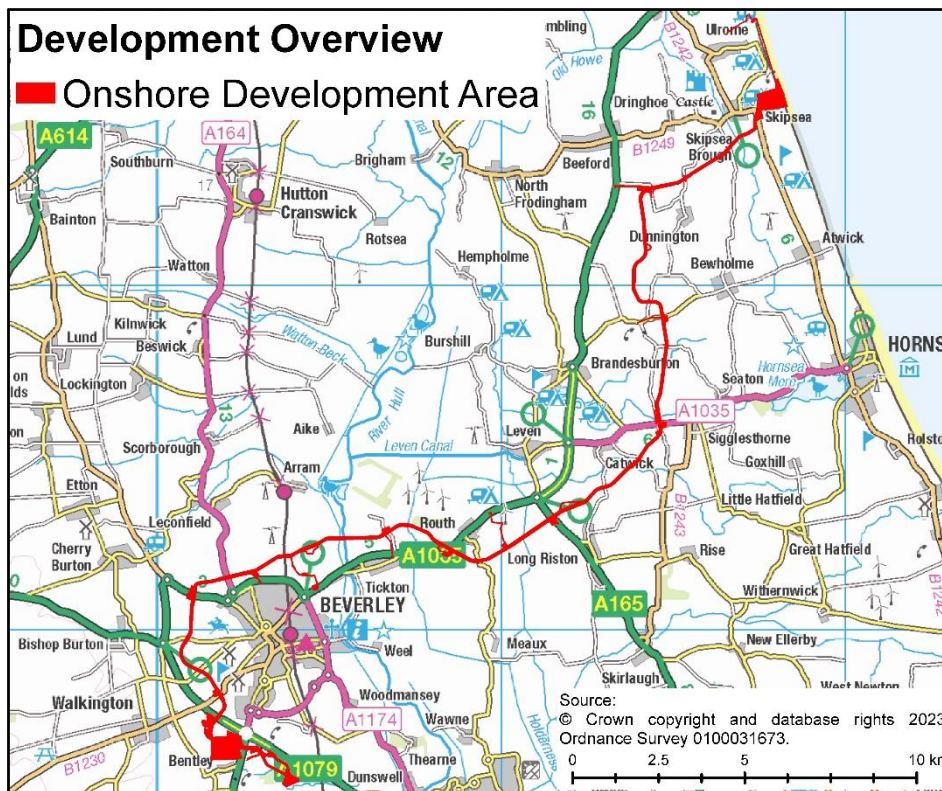
RWE Renewables is preparing an application for the development of DBS East and DBS West wind farms. The Projects will require a buried onshore export cable between the landfall location close to Skipsea and the onshore grid connection points at Creyke Beck, west of Beverley; this area with associated infrastructure is referred to as the Onshore Development Area.

1.3 Survey Area

The Onshore Study Area reflects the landfall and route options at that time, over time these options have been refined to the point that this area now equates to the Onshore Development Area. All trees which were likely to be affected by the projects were surveyed, this included trees which may not be relevant due to study area refinement.

All trees within the Onshore Development Area have been assessed. The Onshore Development Area has been included in **Figure 1** below.

Figure 1 – The Onshore Development Area



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1.4 Legislation

Bats and their roosts are fully protected under the Conservation of Habitats and Species Regulations 2017 and under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Section 1 (Schedule 5). Bats are also a UK Post-2010 Biodiversity Framework species. As such it is an offence to:

- Intentionally or deliberately kill, injure or capture (or take) bats:
- Deliberately disturb bats (whether in a roost or not);
- Recklessly disturb roosting bats or obstruct access to their roosts; or
- Damage or destroy bat roosts.

2 METHODOLOGY

2.1 Desk Study

A desk study was undertaken using records provided by the North and East Yorkshire Ecological Data Centre (NEYEDC). Data within a 1km buffer of the Onshore Study Area has been mapped in Appendix A. The Onshore Study Area reflects the landfall and route options at that time, over time these options have been refined to the point that this area now equates to the Onshore Development Area. Additionally, MAGIC was used to obtain any bat European Protected Species (EPS) licence returns from Natural England that were within the Onshore Development Area. The desk study has been reported in a standalone document (Peak Ecology, 2022) but relevant information is included in this report.

2.2 Tree Assessment

A ground level tree assessment was carried out on all trees which were likely to be affected by the Projects were surveyed, this included trees which may no longer be relevant due to study area refinement. The purpose of the survey was to identify any suitability to support roosting bats. Survey methodology was in line with the most up-to-date guidance available at the time of the survey (Collins (ed), 2016); however, methods are considered compliant with the recently published update to the good practice guidelines published by the Bat Conservation Trust (Collins (ed), 2023). All trees were assessed, however, trees with a DBH (diameter at breast height) value of less than 20cms were not recorded. Various data were recorded, including;

- Ten figure grid reference;
- Species;
- Height (estimate);
- Age (category);
- Condition; and
- Bat Roost Potential.

Comments were also included to add clarification to the assessment.

The suitability of a tree for roosting bats relies on the presence of potential roost features (PRFs); these may include:

- Fissures and cracks, often caused by tree damage;
- Rot holes/cavities;
- Woodpecker holes, knot holes; and
- Lifted bark.

Where PRFs were visible from the ground, their locations and characteristics were recorded to determine the requirement for further surveys. For trees that possess multiple PRFs, or where PRFs are considered likely to support roosts of a higher conservation significance

(PRF-M), up to three additional surveys may be required to confirm presence/ likely absence of a roost (Collins (ed), 2023). This further survey effort typically comprises aerial assessments, or activity surveys with night vision aids where climbing is considered an impractical, unsafe, or inefficient method of gathering additional data. Individual trees with singular features suitable for one or small numbers of bats (PRF-I) do not typically require further surveys, with precautionary methods recommended for any works or removal.

Woodlands were also assessed, in the case of smaller more open woodlands, all trees were assessed. Larger and denser stands of trees were assessed as a block, the peripheral trees were assessed individually as well as any trees along woodland rides or other more open areas within the woodland; the block of trees was then given a suitability category. The surveyors also assessed the suitability of the habitat for foraging and commuting bats.

Once cable micro-siting is complete and any trees which could be impacted is known, further survey work will be necessary, in order to ensure legal compliance.

Lead surveyors were all experienced in assessing trees from ground level. Trees were not climbed; where necessary, binoculars were used to identify and classify potential roost features (PRFs). The survey team comprised nine ecologists as listed in **Table 1** below.

Table 1 – The Survey Team

Survey Team Members		
Paul Fisher	Charlotte Haylock	Darran Sharp
Joe Freer	Frank Marshall	Emily Stephenson
Niamh Gibson	Eve Scott	Amy Wardle

2.2.1 Survey Dates

The surveys were undertaken in February and March 2023 with the exception of a few cases where land access could not be obtained; these areas were accessed between April and September 2023, inclusive. The final refinements to the Onshore Study Area resulted in a reduced survey area and in some cases, the Onshore Study Area has been extended to accommodate access routes, corridor revisions and laydown areas; trees in these areas were assessed upon receipt of access permissions.

2.3 Limitations

2.3.1 Survey Methods

All trees were assessed from all sides, with the exception of trees in dense woodland; any features were noted and used to formulate the overall suitability of each tree. It is possible that some features could not be seen from ground level and not taken into consideration.

Trees that were surveyed during the growing season may have been in part or in full leaf and this can obscure features and make it more difficult to see potential roost sites.

Some woodlands were very dense and could not be fully accessed; in these cases, peripheral trees were assessed and other open areas such as woodland rides, where surveyors could access. Consequently, it is possible that some trees with bat roost potential in dense woodland were not assessed.

2.3.2 **Access**

There were no access constraints.

2.3.3 ***Lifespan of Data***

It is likely that more features suitable for roosting bats will form over time as a result of tree aging and storm damage, and some features may disappear over time as a result of tree wounds healing. Most ecological survey data is considered to be valid for up to two years; however, additional survey effort within this time may provide more accurate data.

3 **RESULTS**

3.1 **Desk Study**

Species data obtained from the North & East Yorkshire Ecological Data Centre (NEYEDC) contained records of bats and roosts within a 1km buffer of the Onshore Study Area from 2002 onwards. This is mapped in Appendix A and presented in **Table 2** below. In some cases, data is provided at 1km square resolution without revealing the exact location of the record. For mapping purposes, 1km grid squares which have been intersected by the 1km buffer have been included in the table.

There were no records of bat roosts within the Onshore Development Area. Four records of bat roosts were obtained from the desktop study outside of the Onshore Development Area but within a 1km buffer, as shown on figures in Appendix A. The confirmed record of a parti-coloured bat in 2010 is of particular interest, as it is a species typically found on mainland Europe and parts of Asia that is unusual in the UK.

Table 2- Desk Study Data (displayed in Appendix A)

Common Name	Scientific	Grid Ref	Year	Comment
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	TA016378	2008	
Common Pipistrelle	<i>P. pipistrellus</i>	TA017378	2010	
Common Pipistrelle	<i>P. pipistrellus</i>	TA02663822	2015	Roost - 1 Count
Common Pipistrelle	<i>P. pipistrellus</i>	TA028379	2003	
Common Pipistrelle	<i>P. pipistrellus</i>	TA035405	2009	
Common Pipistrelle	<i>P. pipistrellus</i>	TA038408	2010	
Common Pipistrelle	<i>P. pipistrellus</i>	TA041403	2010	
Common Pipistrelle	<i>P. pipistrellus</i>	TA054417	2011	
Common Pipistrelle	<i>P. pipistrellus</i>	TA055415	2004	
Common Pipistrelle	<i>P. pipistrellus</i>	TA062419	2009	
Common Pipistrelle	<i>P. pipistrellus</i>	TA083424	2002	
Common Pipistrelle	<i>P. pipistrellus</i>	TA1381446064	2016	Roost - 5 Count
Common Pipistrelle	<i>P. pipistrellus</i>	TA162567	2010	
Common Pipistrelle	<i>P. pipistrellus</i>	TA174570	2010	Roost - 10 Count
Nathusius' Pipistrelle	<i>Pipistrellus nathusii</i>	TA133454	2010	
Parti-coloured Bat	<i>Vespertilio murinus</i>	TA032407	2010	Roost - 1 Count
Pipistrelle	<i>Pipistrellus</i> sp.	TA155458	2005	
Whiskered Bat	<i>Myotis mystacinus</i>	TA059436	2002	

The data presented here gives a degree of context and is discussed more fully in the Bat Transect Report (Peak Ecology, 2023).

3.2 Survey

In total, 61 trees were assessed. Tree assessment data is mapped and included in Appendix B; the raw data is included in Appendix C and a summary is included in **Table 3** below. An oak tree (Grid Reference TA 01616 36574) with no bat roost potential was noted because it contained a barn owl nest box, believed to be unused at the time of survey.

Table 3 – Tree Assessment Data Summary

Common Name	Scientific Name	Number Surveyed	Suitability of Trees or Groups	
			PRF-I	PRF-M
Oak	<i>Quercus</i> sp.	19	6	13
Ash	<i>Fraxinus excelsior</i>	12	2	10
Sycamore	<i>Acer pseudoplatanus</i>	16	3	13
Silver Birch	<i>Betula pendula</i>	4*	0	4
Beech	<i>Fagus sylvatica</i>	2	0	2
Field Maple	<i>Acer campestre</i>	3	0	3
Apple	<i>Malus</i> sp.	2	0	2
Elm	<i>Ulmus procera</i>	1	0	1
Holly	<i>Ilex aquifolium</i>	1	1	0
Poplar	<i>Populus</i> sp.	1	1	0
TOTALS			13	48

*Includes two groups of trees

The majority of trees assessed were considered mature (53), whilst four trees were over-mature and two were semi-mature. Of the trees assessed, 33 appeared alive and healthy, 25 included dead limbs and four were completely dead.

Of all trees surveyed, the majority (75%) were either oak, sycamore or ash. 78% of trees were of a higher bat roost potential; these trees would require further survey work, based on the information provided in section 2.2, in the event that they could be impacted by the proposed works.

4 CONCLUSIONS AND RECOMMENDATIONS

Surveys were completed in 2023, following the guidelines as set out in Collins (2023).

In total 61 trees were surveyed; 48 trees were considered to be suitable for multiple bats, or suitable to support roosts of higher conservation significance. It is recommended that the GLTA is repeated on all trees, prior to the proposed works; this data is considered valid for up to two years; however, the bat roost potential of trees is likely to change within this time.

If the proposed works were to impact on trees assigned a suitability of PRF-M, then bat activity survey work will be required. This would initially comprise aerial assessments within the bat activity season (May to September, inclusive) by licenced tree climbers. Bat activity surveys may then be required should aerial assessments be considered insufficient or inappropriate. The advantage of the aerial inspection is that it might rule out the need for any other survey work.

5 **REFERENCES**

Chartered Institute of Ecology and Environmental Management (2013) *Competencies for Species Surveys in Britain and Ireland; Overview*. CIEEM, Winchester. Online

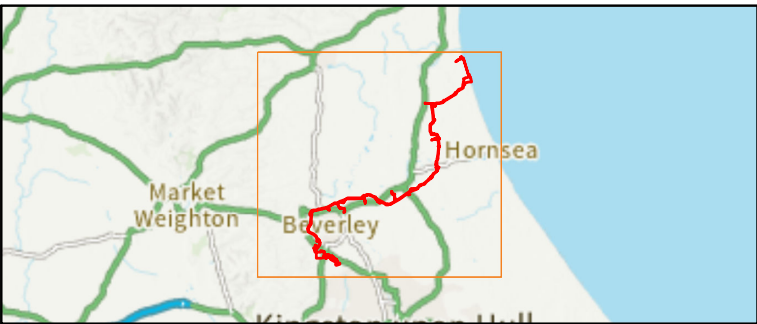
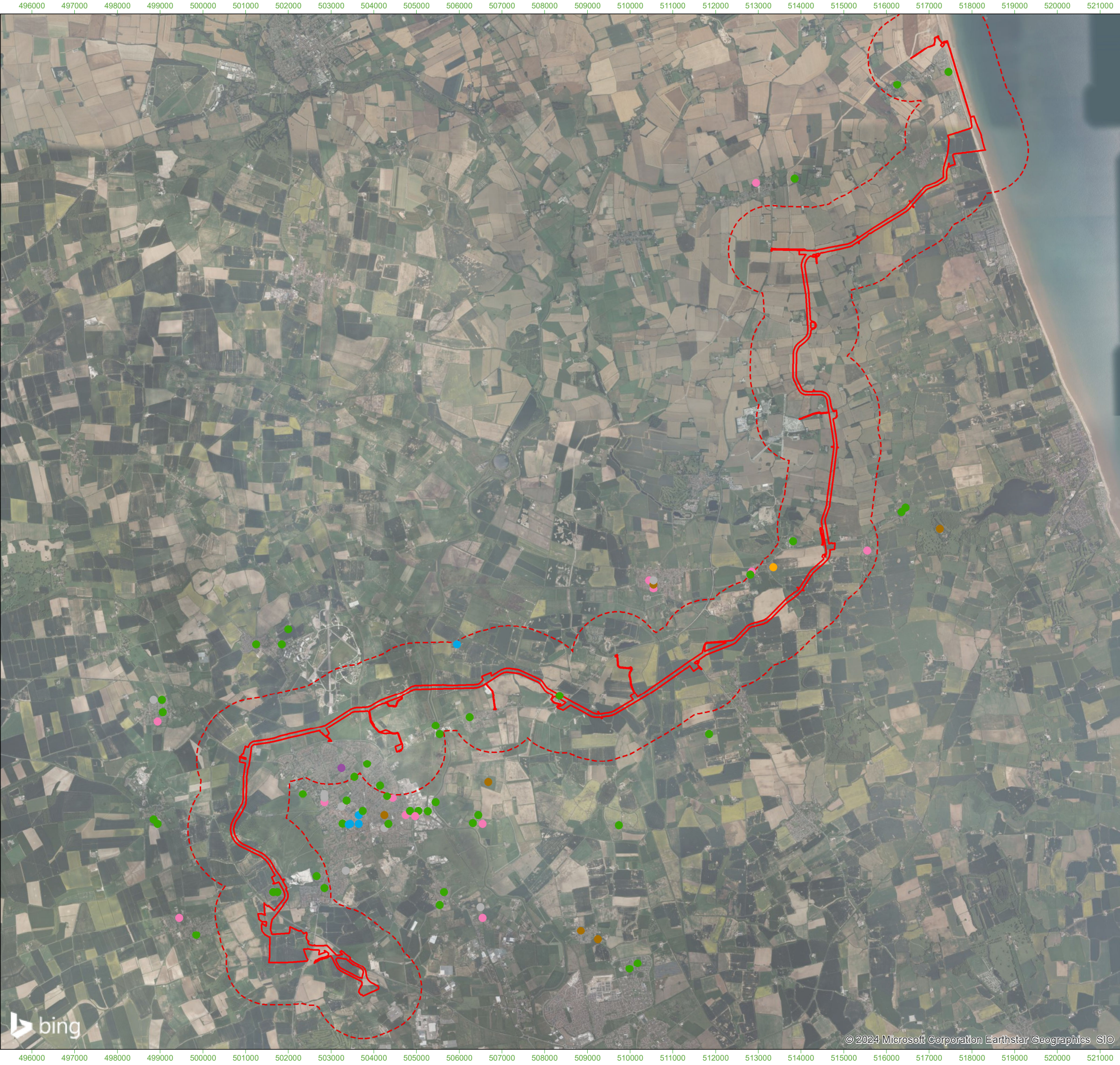
[REDACTED]

Collins J. (ed) (2023) *Bat Surveys For Professional Ecologists: Good Practice Guidelines* (4th Edition). Bat Conservation Trust, London.

Multi-Agency Geographic Information for the Countryside Website. <http://www.magic.gov.uk/>

Peak Ecology Ltd (2022). *Dogger Bank Desk Study Report*. Peak Ecology Ltd.

APPENDIX A: Desk Study Bat Data Map



Desk Study Survey Results

	Onshore Development Area
	Onshore Survey Area (1,000m Buffer)
	Brown Long-eared Bat
	Daubenton's Bat
	Nathusius's Pipistrelle
	Noctule Bat
	Parti-coloured Bat
	Whiskered Bat
	Common Pipistrelle
	Pipistrelle species
	Unidentified bat species
	Bat roost record

Source:
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Ordnance Survey 0100031673.

N

0 500 1,000
Metres

PROJECT TITLE

DOGGER BANK SOUTH

DRAWING TITLE

Appendix A.1A. Bat Desk Study Data - Section A

VER	DATE	REMARKS	Drawn	Checked
2.1	30/04/24	BatDeskStudy- Overview	MP	FM

DRAWING NUMBER:

PeakEcology/BatDeskStudy/Interim/Suitability

ECOLOGICAL CONSULTANTS

Arden House,
Deepdale Business Park,
Bakewell,
Derbyshire.
DE45 1GT.
www.peakecology.co.uk

DATUM	OSGB
PROJECTION	BNG
PLOT SIZE	A3
SCALE	1:87,000

APPENDIX B: GLTA Survey Map



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

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Ordnance Survey 0100031673.

N

0 500 1,000
Metres

PROJECT TITLE

DOGGER BANK SOUTH

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Appendix B.1A. Ground Level Tree Assessment (GLTA) Results - Section A

VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Overview	MP	FM

DRAWING NUMBER:

PeakEcology/GLTA/Interim/Suitability

peakecologyLIMITED

ECOLOGICAL CONSULTANTS

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DATUM	OSGB
PROJECTION	BNG
PLOT SIZE	A3
SCALE	1:87,000



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

Source:
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N

0130260

Metres

PROJECT TITLE

DOGGER BANK SOUTH

DRAWING TITLE				
Appendix B.1B. Ground Level Tree Assessment (GLTA) Results - Section B				
VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Section 1	MP	FM
DRAWING NUMBER:				
PeakEcology/GLTA/Interim/Suitability				

peakecology

ECOLOGICAL CONSULTANTS

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DATUM	OSGB
PROJECTION	BNG
PLOT SIZE	A3
SCALE	1:20,000



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

Source:
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Ordnance Survey 0100031673.

N

0130260

Metres

PROJECT TITLE

DOGGER BANK SOUTH

DRAWING TITLE

Appendix B.1C. Ground Level Tree Assessment (GLTA) Results - Section C

VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Section 2	MP	FM

DRAWING NUMBER:

PeakEcology/GLTA/Interim/Suitability

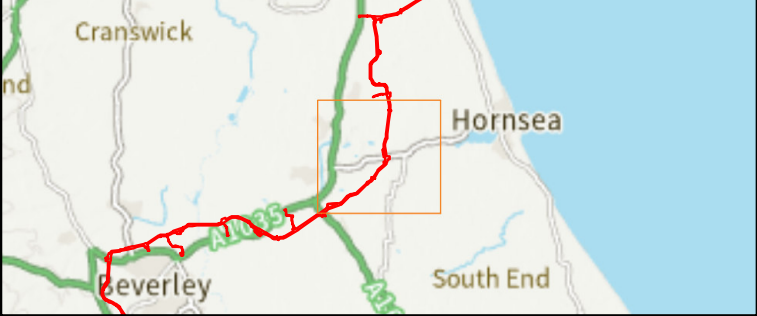
peakecology

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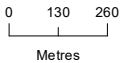
DATUM	OSGB
PROJECTION	BNG
PLOT SIZE	A3
SCALE	1:20,000



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

* Any tree without a X - impacted or a ✓ - avoided is located within the proposed landscaping or Bentley Moor Wood and is not impacted by the Projects

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Ordnance Survey 0100031673.



PROJECT TITLE

DOGGER BANK SOUTH

DRAWING TITLE

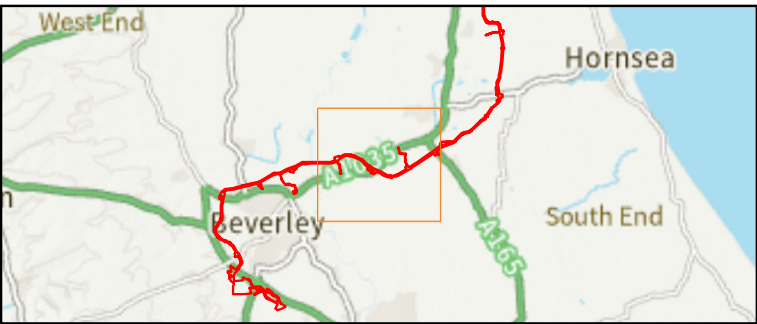
Appendix B.1D. Ground Level Tree Assessment (GLTA) Results - Section D

VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Section 3	MP	FM

DRAWING NUMBER:

PeakEcology/GLTA/Interim/Suitability

peakecology LIMITED ECOLOGICAL CONSULTANTS	Arden House, Deepdale Business Park, Bakewell, Derbyshire. DE45 1GT. www.peakecology.co.uk	DATUM	OSGB
		PROJECTION	BNG
		PLOT SIZE	A3
		SCALE	1:20,000



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

* Any tree without a X - impacted or a ✓ - avoided is located within the proposed landscaping or Bentley Moor Wood and is not impacted by the Projects

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0130260

Metres

PROJECT TITLE

DOGGER BANK SOUTH

DRAWING TITLE

Appendix B.1E. Ground Level Tree Assessment (GLTA) Results - Section E

VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Section 4	MP	FM

DRAWING NUMBER:

PeakEcology/GLTA/Interim/Suitability

peakecology

ECOLOGICAL CONSULTANTS

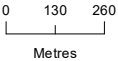
Arden House,
Deepdale Business Park,
Bakewell,
Derbyshire.
DE45 1GT.
www.peakecology.co.uk

DATUM	OSGB
PROJECTION	BNG
PLOT SIZE	A3
SCALE	1:20,000



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

Source:
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Ordnance Survey 0100031673.



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DRAWING TITLE

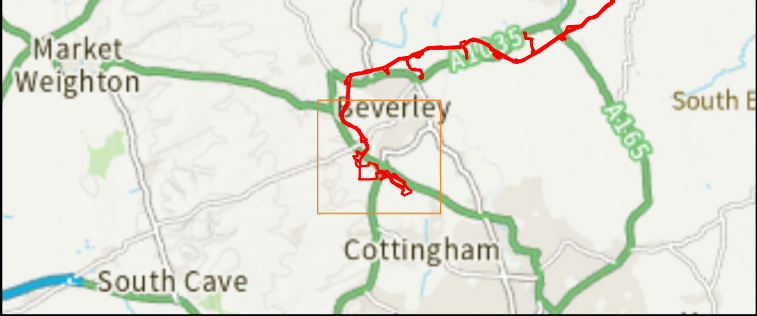
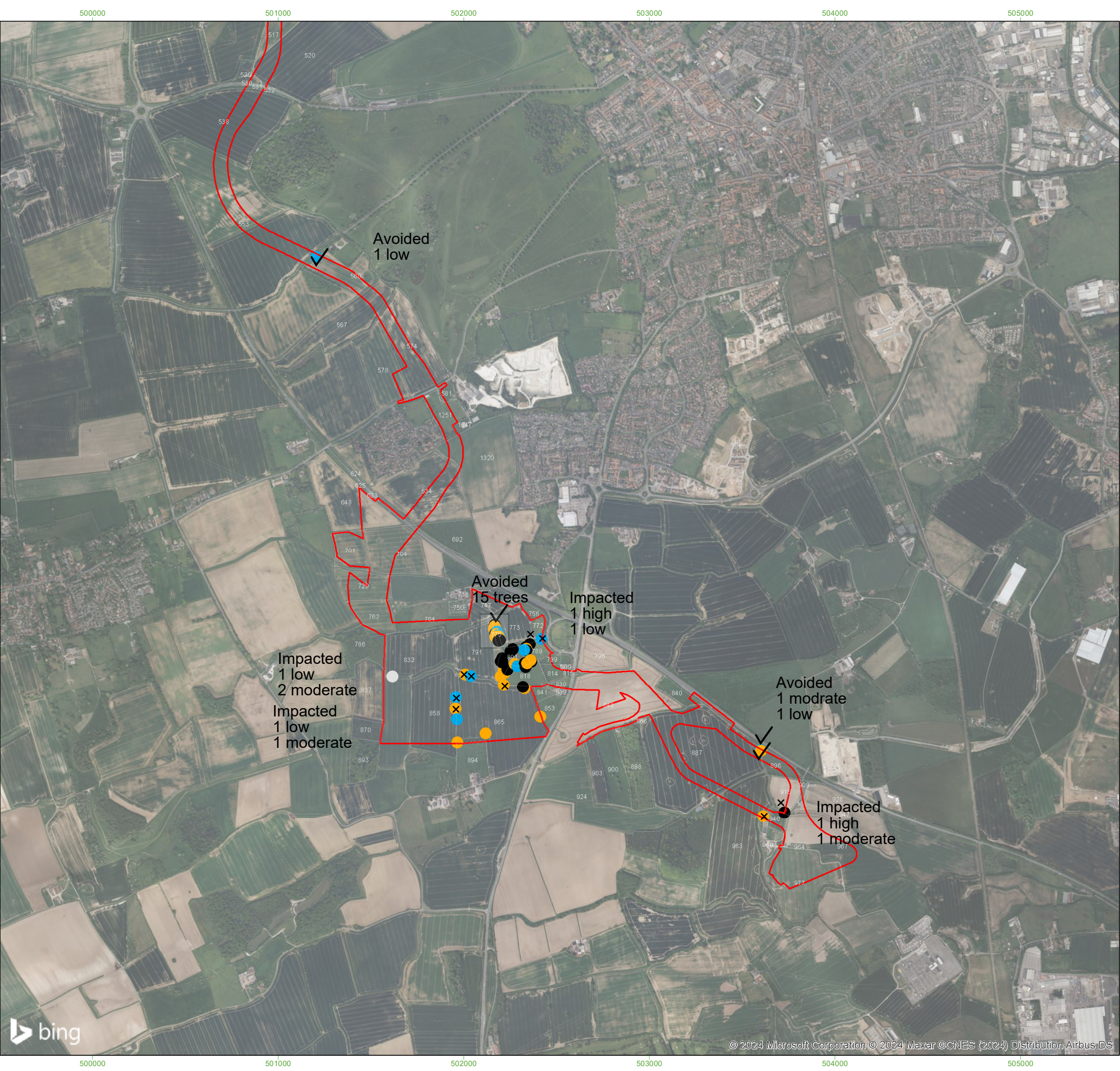
Appendix B.1F. Ground Level Tree Assessment (GLTA) Results - Section F

VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Section 5	MP	FM

DRAWING NUMBER:

PeakEcology/GLTA/Interim/Suitability

peakecology LIMITED ECOLOGICAL CONSULTANTS	Arden House, Deepdale Business Park, Bakewell, Derbyshire. DE45 1GT. www.peakecology.co.uk	DATUM	OSGB
		PROJECTION	BNG
		PLOT SIZE	A3
		SCALE	1:20,000



GLTA Survey Results	
<div></div>	Onshore Development Area
<div></div>	GLTA - high suitability
<div></div>	GLTA - moderate suitability
<div></div>	GLTA - low suitability
<div></div>	GLTA - suitability TBC

* Any tree without a X - impacted or a ✓ - avoided is located within the proposed landscaping or Bentley Moor Wood and is not impacted by the Projects

Source:
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Ordnance Survey 0100031673.

PROJECT TITLE
DOGGER BANK SOUTH

DRAWING TITLE Appendix B.1G. Ground Level Tree Assessment (GLTA) Results - Section G				
VER	DATE	REMARKS	Drawn	Checked
2.3	19/12/24	GLTA suitability - Section 6	MP	FM
DRAWING NUMBER: PeakEcology/GLTA/Interim/Suitability				

peakecology ECOLOGICAL CONSULTANTS LIMITED Arden House, Deepdale Business Park, Bakewell, Derbyshire. DE45 1GT. www.peakecology.co.uk	DATUM	OSGB
	PROJECTION	BNG
	PLOT SIZE	A3
	SCALE	1:20,000

APPENDIX C: GLTA Survey Data

APPENDIX C – GLTA Survey Data

Field No	Grid Ref	Species	Height (m)	Age	Condition	Comments	Roost Potential
789	TA 02187 36765	Apple	9	Over-mature	Mixed	Cankers on stem leading to large trunk cavity, NE aspect, 2m.	High
801	TA 02338 36722	Apple	5	Over-mature	Mixed	Knot-holes on N and S aspects, 2m, hazard beam and snapped stem.	Moderate
915	TA 03729 35843	Ash	13	Mature	Alive	Large tear-out with callus rolls S; knot-hole W; tear-outs top of main stem NW.	High
775	TA 02167 36850	Ash	13	Mature	Alive	Wound/ branch cavity, 2m, N aspect, and knot-hole/ stub end 4m E aspect	High
775	TA 02196 36769	Ash	7	Over-mature	Mixed	Large open trunk cavity extending upwards into leading limbs, various cankers around burrs.	High
789	TA 02365 36654	Ash	12	Mature	Alive	Butt rot x2 on different stems <2m	High
801	TA 02336 36731	Ash	11	Mature	Mixed	Tear-out/ trunk cavity E aspect <2m. Large traverse snapped co-dominant stem, E and W aspects, 2m.	High
202	TA 14599 45660	Ash	8	Semi-mature	Alive	Canker, E, 1m.	Low
204	TA 14387 45483	Ash	9	Mature	Mixed	Knot -hole N, 5m	Low
896	TA 03602 36174	Ash	11	Mature	Mixed	Hollow stem, cankers, knot-hole SW. Snapped branches in canopy.	Moderate
775	TA 02167 36843	Ash	12	Mature	Alive	Callused knot-holes / stud ends W Aspect, 2.5m and 5m	Moderate
865	TA 02008 36585	Ash	10	Mature	Alive	Tear-out and callus >2m, S aspect, butt rott.	Moderate
1334	TA 14615 45661	Ash	12	Mature	Mixed	Knot-hole, branch end, N, 2m. Tear-out, W, 5m.	Moderate
801	TA 02360 36661	Ash	10	Mature	Alive	Butt rot from ground to 2m on 2 adjacent trunks	Moderate
193	TA 14645 46025	Beech	17	Mature	Alive	Canker/hole, S, 10m.	High
194	TA 14567 46020	Beech	18	Mature	Alive	Included stems, S, 5m. Branch callus/Tear-out, N, 7m.	Moderate
775	TA 02193 36777	Elm	15	Mature	Dead	Lifted bark at various heights on stem. NE aspect.	Moderate
801	TA 02337 36726	Field Maple	6	Mature	Mixed	Tear-out/ canker NE aspect, 2m	High
865	TA 01965 36219	Field Maple	8	Mature	Mixed	Cankers and fluting leading to basal cavity, W aspect, <1m.	Moderate
801	TA 02221 36594	Field Maple	14	Mature	Alive	Fused trunks cracks	Moderate
775	TA 02180 36815	Holly	8	Mature	Alive	Cavities between welded branches, 1 - 2m	Low
773	TA 02356 36748	Oak	12	Mature	Mixed	Woodpecker hole, W aspect, 4.5m. Other multiple Tear-outs and knot-hole in canopy.	High
801	TA 02337 36714	Oak	15	Mature	Mixed	Butt rot cavity extends upwards into stem, NE aspect, 1.5m.	High
865	TA 02320 36518	Oak	13	Mature	Mixed	Large subsidance split/callus/butt rot, ground -3m, S aspect.	High
801	TA 02236 36611	Oak	15	Mature	Alive	Tearout at 1.5m	High
801	TA 02253 36709	Oak	16	Mature	Alive	Woodpecker holes at 12m on both opposite sides of the tree	High
896	TA 03599 36178	Oak	15	Mature	Alive	Callused weld, NE aspect.	Low
789	TA 02418 36775	Oak	14	Mature	Alive	Traverse snaps and broken limb S aspect	Low
865	TA 02039 36576	Oak	10	Mature	Alive	Knot-hole, S aspect, looks superficial. Deadlimbs, dessicated fissures.	Low
865	TA 01958 36460	Oak	7	Mature	Mixed	Deadlimb with dissicated fissures , W aspect 4m.	Low
865	TA 01963 36343	Oak	7	Mature	Mixed	Flaking bark E aspect, desiccated fissures in dead limb N aspect.	Low
1290	TA 12104 43705	Oak	10	Mature	Mixed	1 potential Knot-hole 4m up	Low
801	TA 02289 36629	Oak	14	Mature	Alive	Hazard beam -lateral branch at 2.5m	Low
946	TA 03614 35822	Oak	11	Mature	Alive	Split branch, 9m, SW, feature facing N,	Moderate
865	TA 01956 36400	Oak	8	Mature	Mixed	Dense ivy concealing feature ie. Tear-out E aspect, 2m. Butt rott, E aspect. Deadwood in canopy.	Moderate
865	TA 02119 36268	Oak	12	Mature	Mixed	Impact shatter, NE limb, SW aspect, 4m. Superficial callus around dead stubs S aspect. Other deadwood/snapped branches in canopy.	Moderate
865	TA 02413 36357	Oak	14	Mature	Mixed	Callus around deadwood of snapped limb, NW aspect, 4m. Flaking bark on dead branch N side of tree. Dessicated fissure and poss woodpecker hole in large snapped limb, 8m, SE side of tree NW aspect.	Moderate
865	TA 02328 36510	Oak	13	Mature	Mixed	Callus around branch collar of dead limb, W aspect, 7m , others in canopy. Delaminated bark N aspect , 0-2m.	Moderate
865	TA 02215 36528	Oak	13	Mature	Mixed	Dead seam, callus rolls, 5-8m	Moderate
1192	TA 11061 42965	Oak	9	Mature	Mixed	Trunk cavity, E. Tear-out on main leader, 5m	Moderate
831	TA 01616 36574	Oak			Alive	Owl box	Not stated
801	TA 02326 36717	Poplar	14	Semi-mature	Alive	Knot-hole or canker visible 10m, E facing.	Low
801	TA 02200 36656	Silver Birch	13	Mature	Alive	woodpecker holes at 3m and 4m.	High
801	TA 02207 36650	Silver Birch	4	Mature	Dead	4x woodpecker holes at 3.5-4m	High

Field No	Grid Ref	Species	Height (m)	Age	Condition	Comments	Roost Potential
801	TA 02207 36672	Silver Birch grp	0	Mixed	Mixed		High
801	TA 02330 36646	Silver Birch grp	0	Mature	Mixed	Various woodpecker and rot holes also cracks	High
775	TA 02172 36806	Sycamore	12	Mature	Alive	Large trunk cavity / wound from fallen double leader, W aspect, 2m	High
801	TA 02333 36626	Sycamore	12	Mature	Alive	Woodpecker hole at 5m facing cracked/split underside above woodpecker hole	High
801	TA 02265 36721	Sycamore	14	Mature	Alive	Woodpecker hole at 4m	High
775	TA 02190 36795	Sycamore	6	Over-mature	Dead	Knot-hole, south facing branch, E aspect, other small crevices on stem.	Low
560	TA 01206 38835	Sycamore	15	Mature	Alive	Fissures on ends of dead branches, dense ivy.	Low
1290	TA 12104 43705	Sycamore	10	Mature	Alive	small Knot-hole and bark crevicees	Low
775	TA 02162 36831	Sycamore	14	Mature	Alive	Knot-hole on W stem, W aspect, 2m	Moderate
775	TA 02168 36818	Sycamore	13	Mature	Alive	Knot-hole/ branch stub , E aspect, 1.2m	Moderate
775	TA 02175 36803	Sycamore	12	Mature	Alive	Butt rot , W aspect, <1m (pos.hibernation potential)	Moderate
775	TA 02171 36785	Sycamore	9	Mature	Mixed	Knot-hole, 1m, W aspect, other wounds and possible cavities, 7-9m	Moderate
775	TA 02187 36789	Sycamore	12	Mature	Alive	Knot-hole SE facing, 5m, other cankers and wounds on tree.	Moderate
801	TA 02215 36607	Sycamore	14	Mature	Alive	Butt rot from ground level	Moderate
801	TA 02274 36641	Sycamore	12	Mature	Alive	Butt rot from ground to at least 70cm + in trunk	Moderate
801	TA 02341 36645	Sycamore	12	Mature	Alive	Tearout at 5m on woodland side	Moderate
775	TA 02187 36765	Sycamore x2	10	Mature	Mixed	Butt rott and included stems, W aspect, canker E aspect 3m.	Moderate
801	TA 02200 36574	Unknown	10		Dead	Rot holes - 2m. Woodpecker holes 3-4m.	Moderate

ANNEX A: Bat Ground Level and Aerial Tree Assessment Report 2024

**RWE Renewables UK Dogger Bank
South (West) Limited**

**RWE Renewables UK Dogger Bank
South (East) Limited**

**Dogger Bank South Offshore
Wind Farms**

**Annex A Bat Ground Level and Aerial Tree
Assessment Report 2024**

Document Date: June 2025

Application Reference: 7.18.18.5

Revision Number: 01

Classification: Unrestricted

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Glossary

Term	Definition
NVA	Night Vision Aid – infrared/thermal imaging cameras used to aid dusk emergence surveys
PRF-I	PRF is only suitable for individual bats or small numbers of bats either due to size or lack of suitable surrounding habitat.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.
DBH	Diameter at Breast Height
RWE	RWE Renewables -secure and clean energy supplies
SSE	Scottish and Southern Electricity
FAR	Further Assessment Required

Acronyms

Acronym	Definition
BCT	Bat Conservation Trust
DBS	Diameter at breast height
GLTA	Ground Level Tree Assessment
MEWP	Mobile Elevating Work Platform
PRF	Potential Roost Feature
PWMS	Precautionary Working Method Statement
TCI	Tree Climbing Inspection

Executive Summary

Ecology Resources Limited was commissioned by Royal HaskoningDHV on behalf of RWE Renewables UK to conduct ground-level and aerial assessments of trees within the Onshore Development Area of the Dogger Bank South (DBS) East and West Offshore Wind Farm Projects ('the Projects') for their potential to support roosting bats. These assessments were carried out to inform the detailed design and construction phases.

The surveys, conducted in November 2024 over five visits, focused on the Onshore Development Area, encompassing the landfall point near Skipsea, the Onshore Export Cable Corridor, Onshore Substation Zone, and the onward connection to the proposed Birkhill Wood National Grid Substation south of Beverley.

Key Findings:

- No bat roosts were identified in trees as part of this survey.
- Ground Level Tree Assessment (GLTA) surveys were undertaken on 44 trees in total, of which 9 were categorised as having no bat roost potential and 35 required further inspection.
- One tree (To21) has been added to the project scope since the completion of the surveys, bringing the total number of trees covered in this report to 45 and a total of 36 trees requiring further inspection
- Of the 36 trees requiring further inspection, 25 were climbed and were fully inspectable, yielding the following results as shown in Appendix B:
 - 11 trees with no potential
 - 7 trees with Potential Roost Feature -Individual (PRF-I)
 - 7 trees with Potential Roost Feature -Multiple (PRF-M)
- Of the remaining 11 trees,
 - 2 were reassessed from ground level by the Level 2 licensed team and determined to have no bat potential
 - 1 could only be partially climbed and was assigned PRF-M based on the one inspectable feature
 - 7 were either unclimbed or partially climbed due to being unsafe, or in one instance due to the presence of barn owl. These trees were assigned as Further Assessment Required (FAR).
 - 1 tree (To21) due to being added to scope post-survey completion has been assigned as Further Assessment Required (FAR), with the expectation that this will undergo aerial inspection or emergence surveys (if deemed unsafe to climb).
- The results above are summarised in Table 1-1.

Table 1-1 Summary of tree classification per survey method

Survey Method	Classification			
	None	PRF-I	PRF-M	FAR
GLTA	9			
Tree Climbing Inspection	11	7	7	
GLTA (reassessed)	2			
Partial/Unclimbed			1	8

Recommendations and further works:

- Through a combination of survey methods, 22 trees were deemed to have no bat potential and therefore require no further survey effort.
- Seven trees were classified as PRF-I¹, indicating that the tree may offer roosting potential for individual or small numbers of bats. Whilst no further surveys are required, any remedial/ removal works must be carried out in accordance with a dedicated Precautionary Work Method Statement (PWMS). To compensate for the loss of suitable roosting features, bat boxes shall also be installed prior to the felling of the tree(s).
- Eight trees were assessed as PRF-M², indicating that the tree may offer roosting potential for multiple bats. If their removal is required, in accordance with BCT guidelines, three aerial inspections shall be conducted between May and September, with at least two undertaken in the period between May and August. Where features are inaccessible via ladder, climbing, or MEWP, emergence surveys using Night Vision Aid (NVA) may be employed as an alternative.
- Seven trees were assigned FAR due to reasons precluding climbing inspection. These trees will require three emergence surveys with the use of NVAs.
- To21 was not covered by the original GLTA, and has been assigned FAR.
- Under the current design, only two trees—two oak trees with potential to support multiple roosting bats, To20 and To21 (as shown on Appendix B(ii) and Appendix B(iv) —are likely to require removal to accommodate the construction of the Projects. Further surveys on these trees will be required before proceeding, with the methodology for PRF-M trees outlined above, and before applying for any necessary licences.

¹ PRF-I is only suitable for individual bats or small numbers of bats either due to size or lack of suitable surrounding habitat.

² PRF-M is suitable for multiple bats and may therefore be used by a maternity colony.

The findings and recommendations ensure compliance with ecological best practice while facilitating informed decision-making for the Projects development. Detailed methodologies, survey outcomes, and proposed mitigation strategies align with industry standards to minimise potential ecological impacts.

1 Introduction

1.1 Background

Ecology Resources Limited was commissioned by Royal HaskoningDHV on behalf of RWE Renewables UK to conduct ground-level and aerial assessments of trees within the Onshore Development Area of the Dogger Bank South (DBS) East and West Offshore Wind Farm Projects ('the Projects') for their potential to support roosting bats. These assessments were carried out to inform the detailed design and construction phases.

The surveys, conducted in November 2024 over five visits, focused on the Onshore Development Area which is 39km, encompassing the landfall point near Skipsea, the Onshore Export Cable Corridor, Onshore Substation Zone, and the onward connection to the proposed Birkhill Wood National Grid Substation south of Beverley.

1.2 Survey scope

The assessment comprised a Ground Level Tree Assessment (GLTA) of 44 trees, 37 of which were previously identified (**Volume 7, Appendix 18-5 Bats Report - Ground Level Tree Assessment (application ref: 7.18.18.5)** (To47 could not be located in the field) through a series of ecological surveys undertaken in connection with the Projects as potentially suitable for roosting bats and to classify Potential Roosting Features (PRF) in accordance with the applicable BCT guidelines³. Where required, the GLTA was followed by a Tree Climbing Inspection (TCI).

Additionally, surveyors were tasked with identifying and recording any additional trees within the Onshore Development Area considered at risk from the proposed construction activities that were deemed to have potential to support roosting bats, categorising them in accordance with the applicable guidance.

1.3 Legislation

All UK bats and their breeding sites or resting places are protected under Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (the "Conservation Regulations"), which makes it illegal to:

- Deliberately capture, injure, or kill any such animal.
- Deliberately disturb such an animal; and/or
- Damage or destroy a breeding site or resting place of such an animal.

³ Collins, J (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust. London

- Bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) from:
- Intentional or reckless disturbance (at any level);
- Intentional or reckless obstruction of access to any place of shelter or protection;
- and/or
- Selling, offering, or exposing for sale, possession or transporting for purpose of sale.

2 Methodology

The surveys were undertaken in accordance with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins *et al.*, 2023)⁴. The methods adopted to conduct the surveys are outlined below.

2.1 Ground Level Tree Assessment (GLTA) Surveys

A comprehensive, systematic ground inspection of each tree was conducted from all angles using binoculars where necessary to assess potential roost features (PRFs) and identify any direct evidence of bat presence or activity. Table 2-1 lists typical PRFs found in trees, while Table 2-2 outlines the latest method for categorizing PRFs.

Table 2-1 PRF features typically found in trees

PRF Feature		
Formed by decay and disease	Formed by damage	Formed by association
Woodpecker holes	Lightning strikes	Fluting
Holes	Hazard beams	Ivy
Squirrel holes	Subsidence	
Pruning cuts	Cracks	
Tear outs	Shearing cracks	
Wounds	Transverse snaps	
Cankers	Welds	
Compression	Lifting bark	
Forks	Desiccation	
Butt rots	Fissures	

⁴ Collins, J (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London

PRF Feature		
	Frost cracks	

Table 2-2 Guidelines for categorising the potential suitability of PRFs

Suitability	Description
PRF-I	A PRF that is only suitable for individual or very small numbers of bats, either due to size or lack of suitable surrounding habitats
PRF-M	A PRF that is suitable for multiple bats and may therefore be used by a maternity colony

2.2 Tree Climbing Inspection (TCI) Surveys

Tree climbing inspections were carried out to reclassify any suspected PRFs identified from ground level, in adherence with the method outlined in Table 2-3. Where inspections required the use of an endoscope, it was operated in line with best practice guidance.

Table 2-3 Aerial Inspection Survey Methods

Survey Method	Qualifications and experience	Methods
PRF aerial inspection	<p>Natural England Level 2 survey bat licence</p> <p>003922 - City & Guilds Level 2 Certificate of Competence in Tree Climbing and Aerial Rescue</p> <p>Knowledge and understanding of:</p> <p>BS 8596:2015</p> <p>Surveying for bats in trees and woodland. Guide⁵.</p>	Use of ropes to systematically climb trees allowing safe observation of PRFs using torch and/or endoscope to fully inspect suspected or known bat roosts.

2.3 Data Collection

Data collection was delivered using QField⁶, a mobile application for geospatial data collection developed by OPENGIS. This app is fully compatible with QGIS, a popular open-source software widely used in ecology for geospatial data analysis.

Prior to field deployment, a dedicated survey form was created and preloaded with the existing dataset of from the original scope (**Volume 7, Appendix 18-5 Bats Report - Ground**

⁵

⁶

Level Tree Assessment (application ref: 7.18.18.5)). This dataset included attributes typically recorded during arboricultural assessments, such as species, living status of the tree, diameter at breast height (DBH), height, and potential for bats.

Data recorded on-site included weather conditions, survey date and time, surveyor details, tree tag number (if present), PRFs identified (if any), and detailed information for each PRF. This information encompassed the PRF's aspect, height, photographic evidence, and any other notable observations relevant to the specific tree or its setting.

Data gathered during the GLTA stage were shared with a climbing team, who subsequently conducted aerial assessments where required.

2.4 Survey Limitations

Whilst surveys were undertaken in November, some of the surveyed trees were still bearing foliage, making PRF identification difficult in some instances.

3 Results

A total number of 44 trees were subjected to GLTA. 35 of these were deemed to require further inspection using TCI, where possible. To21 (Plate 1) has been added since the completion of surveys and has been assigned FAR, bringing the total to 45 trees.

Plate 1 Tree To21 located within the DBS Onshore Substation Zone that will require further assessment



Following further inspection, 23 were deemed to have bat potential. In summary:

- PRF-I (7 trees)
- PRF-M (8 trees)
- FAR (7 trees)
- FAR – added to scope (1 tree)

The results for trees with bat potential are presented in Table 3-1 and shown in Appendix B.

Table 3-1 Survey results of trees subject to further inspection

Tree reference	Species	GLTA Survey Date	Further inspection result (per feature)	Overall Assessment
10	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M PRF-I PRF-I	PRF-M
T020	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M	PRF-M
T021	Pedunculate oak <i>Quercus robur</i>	Not surveyed	FAR Raptor box installed	FAR
T024	Pedunculate oak <i>Quercus robur</i>	08/11/2024	None PRF-I PRF-I	PRF-I
T026	Pedunculate oak <i>Quercus robur</i>	08/11/2024	Only partially accessible by climbing FAR PRF-I FAR	FAR
T034	Pedunculate oak <i>Quercus robur</i>	08/11/2024	None PRF-I None PRF-I	PRF-I
T035	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M PRF-I PRF-I	PRF-M

Tree reference	Species	GLTA Survey Date	Further inspection result (per feature)	Overall Assessment
			PRF-I	
T037	Pedunculate oak <i>Quercus robur</i>	08/11/2024	None PRF-I	PRF-I
T038	Pedunculate oak <i>Quercus robur</i>	08/11/2024	Deemed unsafe to climb FAR FAR	FAR
T039	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-I PRF-I None PRF-M	PRF-M
T040	Ash <i>Fraxinus excelsior</i>	08/11/2024	None None PRF-I PRF-I	PRF-I
T041	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M PRF-M PRF-M	PRF-M
T075	Ash <i>Fraxinus excelsior</i>	08/11/2024	PRF-M assigned from GLTA but not climbed due to barn owl presence	FAR
T076	Ash <i>Fraxinus excelsior</i>	08/11/2024	PRF-M assigned from GLTA but tree unsafe to climb due to ash dieback	FAR
T115	Horse chestnut <i>Aesculus hippocastanum</i>	08/11/2024	None PRF-M	PRF-M
T151	Sycamore <i>Acer pseudoplatanus</i>	08/11/2024	PRF-I	PRF-I
T152	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-I	PRF-I

Tree reference	Species	GLTA Survey Date	Further inspection result (per feature)	Overall Assessment
G31.2	Ash <i>Fraxinus excelsior</i>	08/11/2024	Only partially accessible by climbing None None FAR	FAR
G31.4	Ash <i>Fraxinus excelsior</i>	08/11/2024	None PRF-M None None	PRF-M
G31.6	Ash <i>Fraxinus excelsior</i>	08/11/2024	None None PRF- I None None None	PRF-I
G31.7	Ash <i>Fraxinus excelsior</i>	08/11/2024	Deemed unsafe to climb FAR FAR FAR FAR FAR	FAR
G31.8	Ash <i>Fraxinus excelsior</i>	11/11/2024	Parts of tree were unsafe to climb, assessment based on single accessible feature FAR FAR PRF-M	PRF-M

Tree reference	Species	GLTA Survey Date	Further inspection result (per feature)	Overall Assessment
G31.10	Ash <i>Fraxinus excelsior</i>	11/11/2024	Deemed unsafe to climb due to ash dieback FAR FAR FAR FAR	FAR

None = No bat roost potential

PRF-I = PRF is only suitable for individual bats or small numbers of bats either due to size or lack of suitable surrounding habitat

PRF-M = PRF is suitable for multiple bats and may therefore be used by a maternity colony

FAR = Further assessment required

Eight trees were identified as having PRFs during the GLTA. These include two pedunculate oaks (T039 & T152), one sycamore (T151), and five additional ash trees found within section G31. which were labelled G31.1 to G31.10 for consistency. These additional trees were recorded in QField with descriptive notes detailing the observed features, such as height and aspect.

In accordance with BCT guidelines, further survey recommendations are made only for trees classified as PRF-M.

Trees T075 and T076 (with PRF-M assigned assigned) and T078, T111 and G31.9 (all with no roosting potential and therefore not included in Table 3-1), all specimens of ash, were identified as having barn owl roost potential. Confirmed barn owl (roosting) was recorded in one tree (T075) at time of climbing, therefore, the aerial assessment was abandoned, and the particular feature was not scoped further in order to reduce disturbance.

Additionally, wasps were found within a cavity in Tree T111 (an ash) and an old pigeon nest was observed in Tree T115 (a horse chestnut *Aesculus hippocastanum*).

One tree, a pear tree *Pyrus domestica*, referenced in the original dataset as T047, could not be found at the specified location. Considering the possibility of misidentification, trees of other species with comparable dimensions were also searched for in the area but were not located.

Trees not subjected to tree climbing inspections

Of all the trees identified with potential roost features, eight were not climbed and should not be climbed on further surveys. Reasons included a lack of safe anchor points for aerial access,

the tree being dead, extensive ash dieback causing instability or, in one case, presence of a confirmed barn owl roost.

Tree G31.10, an ash with large amounts of dead wood was inspected from the ground only and was deemed unsafe to climb. The tree displayed woodpecker holes which have the potential to provide suitable roosting space. Due to safety issues the TCI assessment was FAR.

4 Discussion

The surveys, which combined GLTA with TCI (where possible) found:

- 22 trees with no bat potential requiring no further survey or mitigation
- 23 trees with bat potential requiring further survey or mitigation
 - 7 trees PRF-I
 - 8 trees PRF-M
 - 8 trees FAR

No bat roosts were identified during the surveys.

PRF-I Trees

Seven trees were assessed as PRF-I and as such, will not require further surveys; however, if remedial works are planned, appropriate mitigation must be implemented before work begins, and a PWMS shall be followed. Mitigation can be provided in the form of bat boxes, where the original tree or parts of it containing the PRF cannot be retained. Boxes will need to be installed prior to trees being felled².

PRF-M Trees

Eight trees were assessed as supporting PRF-M features, which have the potential to support multiple bats (listed in Table 4-1).

One of these trees (G31.8) was only partially accessible via climbing due to safety reasons and the PRF-M classification was based on the assessment of the single accessible feature. This tree should not be resurveyed via climbing. Emergence surveys should be used to further assess this tree for bat presence.

In accordance with BCT guidelines, all trees with PRF-M potential will require either three aerial inspections (where possible) or emergence surveys during the active bat season. Preferably, secondary surveys should be conducted between May and September, with at least two undertaken in the period May to August, to capture activity across the species' reproductive cycle¹. However, should this not be possible, the survey effort could be concentrated between May and July, provided that surveys are carried out at least 3 weeks apart.

Table 4-1 Overall assessment and further survey requirement of trees categorised as PRF-M

Tree reference	Species	TCI Assessment	Overall Assessment	Survey recommendation
10	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M	Three close inspection aerial surveys between May - September, with at least two undertaken in the period May – August. If features are inaccessible via ladder, climbing or MEWP, emergence surveys with NVA's may need to be considered ^a .
To20	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M	
To35	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M	
To39	Pedunculate oak <i>Quercus robur</i>	25/11/2024	PRF-M	
To41	Pedunculate oak <i>Quercus robur</i>	08/11/2024	PRF-M	
T115	Horse chestnut <i>Aesculus hippocastanum</i>	08/11/2024	PRF-M	
G31.4	Ash <i>Fraxinus excelsior</i>	11/11/2024	PRF-M	Three separate dusk survey visits ^b .
G31.8	Ash <i>Fraxinus excelsior</i>	11/11/2024	PRF-M Two limbs unsafe to access	

PRF-M = PRF is suitable for multiple bats and may therefore be used by a maternity colony.

^aWhere PRF inspection via aerial survey is not possible multiple emergence survey visits should be undertaken and spread out to sample as much of the recommended survey season as possible. Surveys should be spaced at least three weeks apart, preferably more. If the survey year's spring is cold, surveys should not be started in early May. Surveys should also maximise the detection of maternity roosts.

^bSurveys should be spaced at least three weeks apart to ensure as much of the survey period as possible is sampled

FAR Trees

Eight trees were assessed as FAR, due to limitations in accessibility (i.e. unsafe to climb or barn owl presence) or addition to scope.

Due to the presence of Barn Owl, To75 should only undergo further aerial assessment by a barn owl licensed surveyor. If on further inspection Barn Owls are found to be nesting, then aerial assessment should cease and resort to emergence surveys.

For all other FAR trees, where feasible, inspection could take place via a MEWP. If this is not possible then assessment should resort to emergence surveys. FAR trees are listed in Table 4.2

Table 4-2 Overall assessment and further survey requirement of trees not fully inspectable

Tree reference	Species	TCI Assessment	Overall Assessment	Survey recommendation
To21	Pedunculate oak <i>Quercus robur</i>	Not surveyed in November 2024	FAR (added to scope)	Three close inspection aerial surveys between May - September, with at least two undertaken in the period May – August. If features are inaccessible via ladder, climbing or MEWP, emergence surveys with NVA's may need to be considered ^a
To26	Pedunculate oak <i>Quercus robur</i>	08/11/2024	FAR Parts of tree were unsafe to climb	Three separate dusk Survey visits ^{b*}
To38	Pedunculate oak <i>Quercus robur</i>	08/11/2024	FAR Deemed unsafe to climb	Three separate dusk Survey visits ^{b*}
To75	Ash <i>Fraxinus excelsior</i>	08/11/2024	FAR (Barn owl roost present)	Three separate dusk Survey visits ^{b*}
To76	Ash <i>Fraxinus excelsior</i>	08/11/2024	FAR Deemed unsafe to climb (Ash dieback)	Three separate dusk Survey visits ^{b*}
G31.2	Ash <i>Fraxinus excelsior</i>	11/11/2024	FAR Unsafe limb to access	Three separate dusk Survey visits ^{b*}
G31.7	Ash <i>Fraxinus excelsior</i>	11/11/2024	FAR Deemed unsafe to climb (Ash dieback)	Three separate dusk Survey visits ^{b*}

G31.10	Ash <i>Fraxinus excelsior</i>	11/11/2024	FAR Deemed unsafe to climb (Ash dieback)	Three separate dusk Survey visits ^{b*}

FAR = Further assessment required

^b = Surveys should be spaced at least three weeks apart to ensure as much of the survey period as possible is sampled

* = Surveys to be repeated until bat absence confirmed¹⁰

Under the current design, only two trees—two oak trees with potential to support multiple roosting bats, To20 and To21 (as shown in Appendix B(ii) and Appendix B(iv)—are likely to require removal to accommodate the construction of the Projects. Further surveys on these trees will be required before proceeding, following the methodology for PRF-M trees as outlined above, before applying for any necessary licences.

Other considerations

The barn owl is a schedule 1 species on the Wildlife and Countryside Act 1981 (WCA)⁷ and as such receives protection against disturbance while nesting. Presence of a barn owl roosting within tree T075 is a potential constraint to works on and around this tree. The felling of hollow trees has been cited as one of the main negative impacts on barn owl in the UK. Barn owls show high fidelity to breeding sites therefore, it is important not to disturb or destroy known sites.⁸

Ash dieback was observed in several of the trees surveyed, this species provides important roosting habitat for bats⁹. Considered on a case-by-case basis, if there are no health and safety implications, the BCT recommends trees with ash dieback remain where features for bats are present. Additional features suitable for roosting bats such as broken branches may also be formed through the deterioration of the tree due to the disease⁹.

⁷ [Redacted] [Accessed 26.02.25]

⁸ Sawyer, C. 2011. Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment. Developing Best Practice in Surveying and Reporting

⁹ [Redacted] [Accessed 26.02.25]

Appendix A: Tree Survey Results

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb ?	TCI Assessment	TCI notes
T001	Pendunculate oak (<i>Quercus robur</i>)	13	950	Mature	08/11/2024	F001	Branch Cavity	3	South	PRF-I	No	No	Hollow branch with opening at both ends	11/08/2024	Yes	PRF-M	Could potentially be used by multiple bats, small mammal may have been nesting inside
						F002	Split	3	South	PRF-I	No	No	Knot hole	11/08/2024	Yes	PRF-I	No comment
						F003	Callus Roll	2	South	PRF-I	No	No	Cavity entrance has been chewed. Joins with other splits in dead limb	11/08/2024	Yes	PRF-I	No comment
T001	Pendunculate oak (<i>Quercus robur</i>)	11	450	Semi mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T002	Pendunculate oak (<i>Quercus robur</i>)	10	400	Semi mature	08/11/2024	F001	Other	3	South	FAR	No	No	Gap where branches fork	11/08/2024	Yes	None	Small cavity at fork in branch. No roosting potential. Ivy not dense enough
T003	Sycamore (<i>Acer pseudoplatanus</i>)	15	790	Early mature	08/11/2024	F001	Ivy Cover	1	South	FAR	No	No	Ivy not dense enough for bat potential	11/08/2024	Yes	None	No comment
						F002	Loose Bark	2	East	FAR	No	No	No comment	11/08/2024			No comment
T006	Ash (<i>Fraxinus excelsior</i>)	11	572	Early mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T007	Sycamore (<i>Acer pseudoplatanus</i>)	13	546	Early mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb?	TCI Assessment	TCI notes
T012	Pendunculate oak and hybrid turkey oak (<i>Quercus robur</i> and <i>Quercus cerris</i>)	12	1100	Mature	08/11/2024	F001	Other	5	South west	FAR	No	No	No comment	11/08/2024	Yes	None	Knot hole sealed
						F002	Branch Cavity	4	South east	FAR	No	No	No comment	11/08/2024	Yes	None	Very narrow and open split
T015	Ash (<i>Fraxinus excelsior</i>)	14	1000	Early mature	08/11/2024	F001	Trunk Cavity	1	South west	FAR	Yes	No	No comment	11/08/2024	Yes	None	Hollow trunk, floor visible from opening at top
						F002	Trunk Cavity	1	South	FAR	No	No	Large opening at the base of trunk and splits in trunk	11/08/2024	Yes	None	Hollow trunk, floor is visible from opening at top. Too open for bats
T016	Sycamore (<i>Acer pseudoplatanus</i>)	14	550	Early mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T017	Sycamore (<i>Acer pseudoplatanus</i>)	10	500	Early mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T018	Sycamore (<i>Acer pseudoplatanus</i>)	13	600	Early mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T019	Pendunculate oak (<i>Quercus robur</i>)	11	720	Early mature	08/11/2024	F001	Branch Cavity	4	South west	FAR	No	No	Branch completed hollow no suitable shelter from elements to house bats	11/08/2024	Yes	None	No comment
						F002	Loose Bark	3	South west	FAR	No	No	Too open to provide a roosting feature	11/08/2024	Yes	None	No comment
						F003	Branch Cavity	4	North east	FAR	No	No	No crevices providing g enough	11/08/2024	Yes	None	No comment

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb ?	TCI Assessment	TCI notes
													shelter for bats				
						F004	Split	6	South west	FAR	No	No	No comment	11/08/2024	Yes	None	Too exposed to elements
						F005	Other	5	South west	FAR	No	No	Tear outs too exposed, squirrel drey	11/08/2024	Yes	None	No comment
T020	Oak (<i>Quercus robur</i>)	10.5	500	Early mature	08/11/2024	F001	Branch Cavity	4	South west	FAR	No	No	hollow branch with knot hole, splits and lifted bark on same branch	11/08/2024	Yes	PRF-M	Multiple splits in dead limb, some gaps leading to hollow limb, some lead into open
T022	Ash <i>Fraxinus excelsior</i>	6.5	282	Early mature	08/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T023	Pendunculate oak (<i>Quercus robur</i>)	45511	630	Mature/Early mature	08/11/2024	F001	Branch Cavity	5	East	FAR	No	No	No comment	11/08/2024	Yes	None	No comment
T024	Pendunculate oak (<i>Quercus robur</i>)	8-13.5	950-1110	Mature/Early mature	08/11/2024	F001	Other	0	South east	None	No	No	Butt rot sludge inside too wet for bat	11/08/2024	Yes	None	No comment
						F002	Trunk Cavity	4	South east	PRF-I	No	No	Could be prf-m if ivy wasn't obstructing feature	11/08/2024	Yes	PRF-I	No comment
						F003	Ivy Cover	2	South east	FAR	No	No	Multiple splits and lifting bark concealed by ivy	11/08/2024	Yes	PRF-I	No comment

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb?	TCI Assessment	TCI notes
T026	Pendunculate oak (<i>Quercus robur</i>)	7-9.5	900-950	Mature	08/11/2024	F001	Branch Cavity	4	South east	FAR	No	No	Branch broken off, creating cavity	11/08/2024	No	FAR	No comment
						F002	Trunk Cavity	3	North west	FAR	No	No	trunk split, hole in trunk	11/08/2024	Yes	PRF-I	No comment
						F003	Branch Cavity	4	North east	FAR	No	No	Branch broken off leaving hole	11/08/2024	No	FAR	No safe limbs to access
T027	Field maple <i>Acer campestre</i>	9.5	885	Mature	07/11/2024	None	N/A	N/A	N/A	None	No	No	N/A	N/A	N/A	N/A	
T034	Pendunculate oak (<i>Quercus robur</i>)	12-14.5	1010 - 1170	Mature	08/11/2024	F001	Other	3	West	FAR	No	No	Tear out within knot hole	11/08/2024	Yes	None	Does not extend up or down, not a suitable roosting feature
						F002	Split	4	South west	PRF-I	No	No	Multiple splits in dead limb	11/08/2024	Yes	PRF-I	Multiple splits with potential to be used by an individual bat, some parts upward facing
						F003	Branch Cavity	3	North east	PRF-I	No	No	Large broken off limb	11/08/2024	Yes	None	No comment
						F004	Branch Cavity	4	South east	PRF-I	No	No	Splits in rotten limb	11/08/2024	Yes	PRF-I	Some splits could be used by an individual bat but mostly upward facing
T035	Pendunculate oak <i>Quercus robur</i>	14-17	1160 - 1170	Mature	08/11/2024	F001	Trunk Cavity	0	West	FAR	No	No	Butt rot large cavity could house multiple bats but unlikely as at ground level	11/08/2024	Yes	PRF-M	No comment
						F002	Loose Bark	3	East	FAR	No	No	N/A	11/08/2024	Yes	PRF-I	No comment
						F003	Split	6	North	FAR	No	No	Spit going up to cavity upward facing to the elements	11/08/2024	Yes	PRF-I	No comment

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb?	TCI Assessment	TCI notes
						F004	Split	6	East	PRF-I	No	No	Split extending along limb	11/08/2024	Yes	PRF-I	No comment
T037	Pendunculate oak (<i>Quercus robur</i>)	13-16.5	890-1200	Mature	08/11/2024	F001	Callus Roll	7	North west	FAR	No	No	Multiple splits on various dead limbs. No potential	11/08/2024	Yes	None	No comment
						F002	Loose Bark	5	North west	FAR	No	No	Some lifting bark in places prf-i	11/08/2024	Yes	PRF-I	No comment
T038	Pendunculate oak <i>Quercus robur</i>	14	1400	Mature	08/11/2024	F001	Trunk Cavity	1	South	FAR	Yes	No	No features extending far enough to provide roosting potential	11/11/2024	No	FAR	No comment
						F002	Split	4	North	FAR	No	No	Split in branch, dead wood and lifted bark	07/11/2024	No	FAR	No comment
T039	Pedunculate oak <i>Quercus robur</i>				08/11/2024	F001	Callus Roll	6	North east	FAR	No	No	Split in callus roll 2m long	25/11/2024	Yes	PRF-I	Small split in branch but quite open
						F002	Callus Roll	7	North east	FAR	Yes	No	Callus roll and split, 2.5m long	25/11/2024	Yes	PRF-I	Wider split in callus roll could be used by an individual bat
						F003	Callus Roll	4	South east	FAR	No	No	1.5m long split in callus roll	25/11/2024	Yes	None	Upward facing split
						F004	Callus Roll	7	South east	FAR	No	No	2m long split in callus roll	25/11/2024	Yes	PRF-M	Large split suitable for multiple bats
T040	Ash <i>Fraxinus excelsior</i>	13	950	Mature	08/11/2024	F001	Trunk Cavity	5	North west	FAR	No	No	Large hole in trunk, too open to provide bat potential	11/08/2024	Yes	None	Open hollow trunk, no roosting potential
						F002	Branch Cavity	6	North west	FAR	No	No	Split in split stem	11/08/2024	Yes	None	No comment

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb?	TCI Assessment	TCI notes
						F003	Branch Cavity	7	North east	FAR	No	No	No comment	11/08/2024	Yes	PRF-I	Small cavity extending upwards
						F004	Branch Cavity	3	South east	FAR	Yes	No	Cavity above main hollow trunk cavity	11/08/2024	Yes	PRF-I	Honeycomb like structure inside. Could fit multiple bats but not a clear drop zone and low down
T041	Pendunculate oak <i>Quercus robur</i>	11.5	730-830	Mature/Early mature	08/11/2024	F001	Other	4	South	FAR	No	No	Downward facing knot hole	11/08/2024	Yes	PRF-M	Large cavity in knot hole suitable for multiple bats
						F002	Other	7	South	PRF-I	No	No	Two tear outs one above the other, hollow tube about 150cm long between them	11/08/2024	Yes	PRF-M	Large hollow cavity between two tear outs
						F003	Trunk Cavity	3	North	PRF-M	No	No	Cavity in trunk formed from tear out	11/08/2024	Yes	PRF-M	Large cavity but limited drop zone
T042	Pendunculate oak <i>Quercus robur</i>	14-16	780-790	Mature/Early mature	08/11/2024	F001	Split	3	South east	FAR	No	No	split in tree limb	11/08/2024	Yes	None	Split in dead limb does not extend, only a small wedge. Not suitable for bats
						F002	Loose Bark	5	West	FAR	No	No	Lifted and missing bark, bare branch	11/08/2024	Yes	None	Small area of loose bark, not big enough for a bat to fit behind
						F003	Split	4	South west	FAR	No	No	No comment	11/08/2024	Yes	None	Small open split in broken off branch, nowhere for a bat to access
T047	Pear <i>Pyrus domestica</i>	14.5	640	Semi mature	Could not locate this tree anywhere in the vicinity or any other species matching these dimensions												
T075	Ash <i>Fraxinus excelsior</i>	16.5	850	Mature	08/11/2024	F001	Trunk Cavity	6	North	PRF-M	Yes	Yes	Multiple trunk cavities in decaying stem. Barn owl flushed from SW facing cavity	11/08/2024	No	FAR	Barn owl roost present

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb ?	TCI Assessment	TCI notes
													when securing ropes so not climbed				
T076	Ash <i>Fraxinus excelsior</i>	15.5	900	Mature	08/11/2024	F001	Trunk Cavity	6	North	PRF-M	Yes	Yes	Almost completely dead from dieback, hollow stem, butt rot, only half trunk remaining at base, multiple cavities with significant bracket fungi throughout trunk. Unsafe to climb, MEWP required	11/08/2024	No	FAR	Significant dieback, unsafe to climb
T078	Ash <i>Fraxinus excelsior</i>	11	700	Early mature	08/11/2024	F001	Trunk Cavity	2	North	FAR	No	Yes	Entire tree hollow. Assessed using ladder and torch	11/08/2024	No	None	Completely hollow dead tree
T111	Ash <i>Fraxinus excelsior</i>	10.5	1110	Mature	08/11/2024	F001	Trunk Cavity	1	North east	FAR	No	Yes	Entire Tree is hollow with various smaller holes. Unsafe to climb . Wasps nest present	11/07/2024	No	None	Extensive rot and wasp nest
T115	Horse Chestnut <i>Aesculus hippocastanum</i>	18.5	880	Mature	08/11/2024	F001	Other	7	North	PRF-I	No	No	Tree mislabelled as a horse chestnut, but is a beech	11/07/2024	Yes	None	Knot hole is sealed

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb?	TCI Assessment	TCI notes
						F002	Trunk Cavity	5	North	PRF-M	No	No	Large cavity in trunk with surrounding dead wood	11/07/2024	Yes	PRF-M	Old pigeon nest at base. Fairly large cavity for bats but has potential to be used
T150	Ash <i>Fraxinus excelsior</i>	6.5	700	Mature	08/11/2024	F001	Trunk Cavity	1	South east	None	No	No	Hollow dead trunk, can be assessed from ground, no roosting potential	11/08/2024	No	None	No comment
T151	Sycamore <i>Acer pseudoplatanus</i>	6	500	Mature	08/11/2024	F001	Trunk Cavity	3	South east	FAR	Yes	No	Woodlouse at apex	25/11/2024	Yes	PRF-I	Not on original scope
T152	Pendunculate oak <i>Quercus robur</i>	12	700	Mature	08/11/2024	F001	Ivy Cover	1	South east	FAR	No	No	No comment	25/11/2024	Yes	PRF-I	Some thick ivy stems but not very dense/ Not on original scope
G31.1	Beech <i>Fagus sylvatica</i>	20	890	Early mature	08/11/2024	F001	Other	3	South east	FAR	No	No	No comment	11/11/2024	Yes	None	No comment
G31.2	Ash <i>Fraxinus excelsior</i>	20	890	Early mature	08/11/2024	F001	Other	3	South	FAR	No	No	No comment	11/11/2024	Yes	None	Sealed, no access for bats. Very cluttered
						F002	Other	4	West	FAR	No	No	No comment	11/11/2024	Yes	None	Sealed, no access for bats

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb ?	TCI Assessment	TCI notes
						F003	Other	5	East	FAR	No	No	No comment	11/11/2024	No	FAR	Unsafe limb to access
G31.3	Ash <i>Fraxinus excelsior</i>	20	700	Early mature	08/11/2024	F001	Callus Roll	3	North east	FAR	Yes	No	Bird nest at base	11/11/2024	Yes	None	No comment
G31.4	Beech <i>Fagus sylvatica</i> ,	25	900	Early mature	08/11/2024	F001	Other	2	West	FAR	No	No	Tear out	11/11/2024	Yes	None	No roosting potential
						F002	Callus Roll	3	North east	FAR	Yes	No	No comment	11/11/2024	Yes	PRF-M	Cavity extends far into branch
						F003	Other	3	North east	FAR	No	No	No comment	11/11/2024	Yes	None	Lots of dead wood, no cavities
						F004	Split	4	South east	FAR	Yes	No	No comment	11/11/2024	Yes	None	Upward facing and open
G31.5	Ash <i>Fraxinus excelsior</i>	20	890	Early mature	08/11/2024	F001	Trunk Cavity	1	South east	FAR	No	No	Large open cavity	11/11/2024	Yes	None	Cavity with two entry points, very open and exposed
						F002	Other	1	South	FAR	No	No	No comment	11/11/2024	Yes	None	No comment
G31.6	Ash <i>Fraxinus excelsior</i>	20	890	Early mature	08/11/2024	F001	Other	3	South	FAR	No	No	Knot hole	11/11/2024	Yes	None	Does not extend up or down, no roosting potential
						F002	Other	3	South	FAR	No	No	Wound in branch		Yes	None	Does not extend up or down, no roosting potential
						F003	Other	4	South	FAR	Yes	No	Split in tree trunk		Yes	PRF-I	
						F004	Callus Roll	3	East	FAR	Yes	No	Tear out leading to callus roll		Yes	None	Does not extend far
						F005	Other	4	East	FAR	No	No	Knot hole		Yes	None	Does not extend
						F006	Other	4	East	FAR	No	No	Cavity in dead branch		Yes	None	Open and exposed hollow
G31.7	Ash <i>Fraxinus excelsior</i>	20	890	Early mature	08/11/2024	F001	Other	3	South east	FAR	Yes	No		11/11/2024	No	FAR	

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb ?	TCI Assessment	TCI notes
						F002	Split	4	South east	FAR	Yes	No	Split and lifted bark				Severe Ash dieback, trunk mostly hollow, unsafe to climb
						F003	Other	4	South east	FAR	Yes	No	No comment				
						F004	Other	4	South east	FAR	Yes	No	No comment				
						F005	Loose Bark	3	North	FAR	Yes	No	Large part of trunk dead on North aspect, unsafe				
G31.8	Ash <i>Fraxinus excelsior</i>	20	700	Early mature	08/11/2024	F001	Callus Roll	1	North east	FAR	Yes	No	No comment	11/11/2024	Yes	PRF-M	Hollow trunk extends beyond 2m
						F002	Woodpecker Hole	5	West	FAR	Yes	No	No comment	11/11/2024	No		Unsafe to access higher limbs
						F003	Other	5	South west	FAR	Yes	No	No comment	11/11/2024	No		Unsafe to access higher limbs
G31.9	Ash <i>Fraxinus excelsior</i>	20	700	Early mature	08/11/2024	F001	Other	3	South	FAR	Yes	Yes	Knot hole	11/11/2024	Yes	None	Only extends back 20cm. No roosting potential
G31.10	Ash <i>Fraxinus excelsior</i>	20	700	Early mature	08/11/2024	F001	Woodpecker Hole	6	South east	FAR	Yes	No	X2 woodpecker holes	11/11/2024	No	FAR	Severe Ash dieback, unsafe to access any features
						F002	Other	5	South east	FAR	Yes	No	Hole and split in bark. May not be safe to climb split-off trunk, dead wood	11/11/2024			
						F003	Woodpecker Hole	6	West	FAR	Yes	No	X2 woodpecker holes	11/11/2024			

Ref	Species	Height(m)	DBH(cm)	Age class	GLTA survey date	PRF number	PRF description	PRF height (m)	PRF orientation	GLTA Roosting potential	Hibernation potential	Barn owl potential	PRF specific notes	TCI date	TCI safe to climb ?	TCI Assessment	TCI notes
						F004	Split	3	West	FAR	Yes	No	Lifted bark, split and cavity	11/11/2024			

Appendix B: Bat Trees Survey Plans



LEGEND

Onshore Development Area

Trees

Potential Roost Feature - Suitable for multiple bats (PRF-M)

Potential Roost Feature - Suitable for an individual bat (PRF-I)


Further Assessment Required (FAR)

No bat potential

Unsafe to climb

Appendix B(i) - Bat Tree Surveys Plan

PROJECT	Dogger Bank South Offshore Wind Farms	
CLIENT	RHDHV	
Revision	Date	Produced by
-	12 Mar 25	Robert Harmsworth
Scale @ A3	Ecology Resources Reference	
1:40000	24141	



ECOLOGY
RESOURCES



LEGEND

Onshore Development Area

Trees

- Potential Roost Feature - Suitable for multiple bats (PRF-M)
- Potential Roost Feature - Suitable for an individual bat (PRF-I)
- Further Assessment Required (FAR)
- No bat potential
- Tree not present
- Unsafe to climb

Appendix B(ii) - Bat Tree Surveys Plan		
PROJECT	Dogger Bank South Offshore Wind Farms	
CLIENT	RHDHV	
Revision	Date	Produced by
-	03 Jun 25	Robert Harmsworth
Scale @ A3		Ecology Resources Reference
1:3500		24141





LEGEND

Onshore Development Area

Trees

Further Assessment Required (FAR)

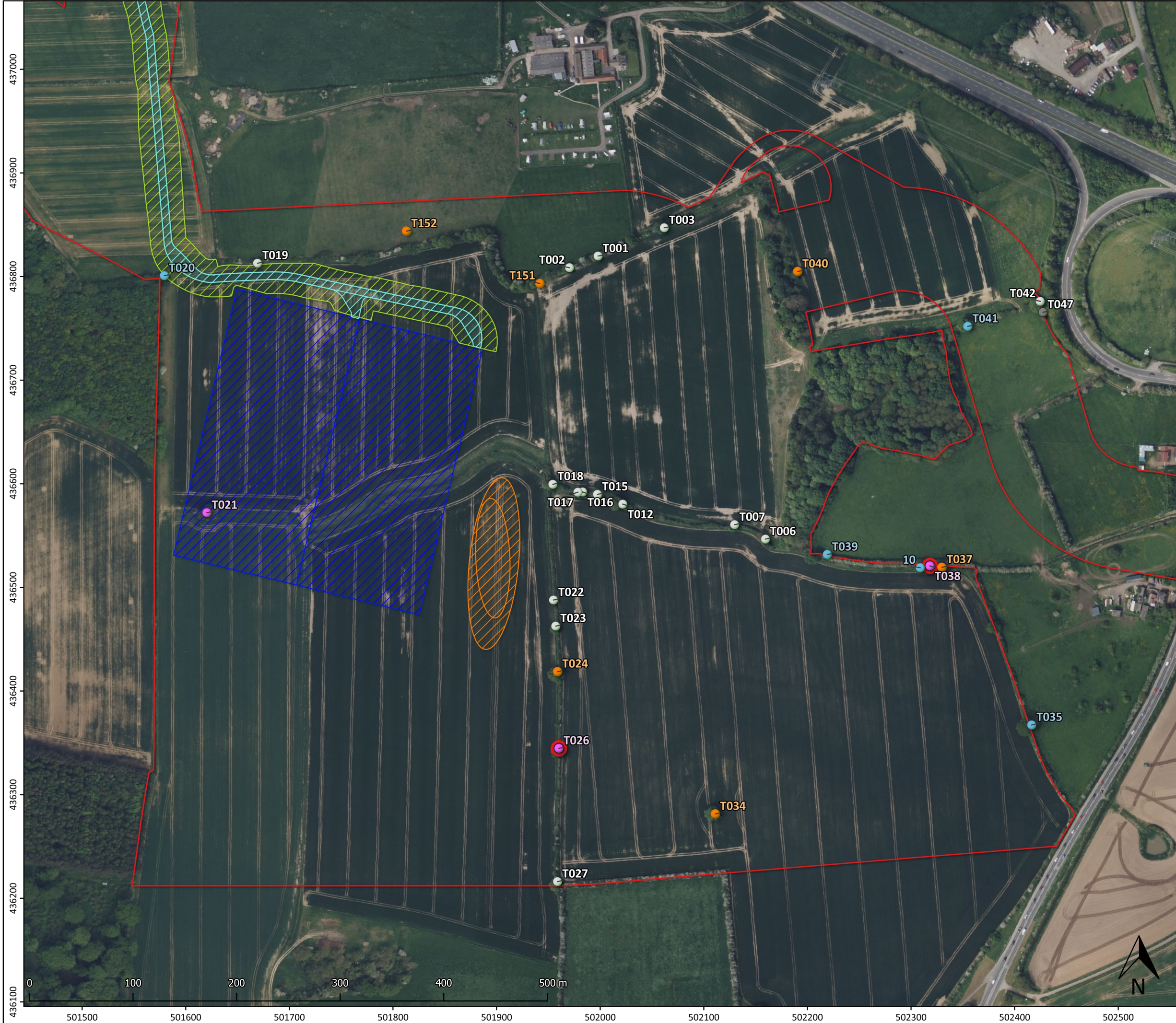
No bat potential

Unsafe to climb

Unable to climb due to presence of barn owl roost

Appendix B(iii) - Bat Tree Surveys Plan		
PROJECT	Dogger Bank South Offshore Wind Farms	
CLIENT	RHDHV	
Revision	Date	Produced by
-	12 Mar 25	Robert Harmsworth
Scale @ A3		Ecology Resources Reference
1:2500		24141





LEGEND

Onshore Development Area

Trees


- Potential Roost Feature - Suitable for multiple bats (PRF-M)
- Potential Roost Feature - Suitable for an individual bat (PRF-I)
- Further Assessment Required (FAR)
- No bat potential
- Tree not present
- Unsafe to climb

Construction works

- Indicative permanent drainage basins
- Indicative road construction area
- Indicative substation footprints
- Indicative substation permanent access road

Appendix B(ii) - Bat Tree Surveys Plan

PROJECT	Dogger Bank South Offshore Wind Farms	
CLIENT	RHDHV	
Revision	Date	Produced by
-	19 Jun 25	Robert Harmsworth
Scale @ A3		Ecology Resources Reference
1:3500		24141


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RESOURCES

RWE Renewables UK Dogger Bank
South (West) Limited

RWE Renewables UK Dogger Bank
South (East) Limited

