

Environmental Statement: Volume 6, Annex 3.8 - Bat Surveys

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Environmental Impact Assessment

Environmental Statement

Volume 6

Annex 3.8 – Bat Surveys

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5 Howick Place,

London, SW1P 1WG

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Prepared by: Thomson Ecology Ltd

Checked by: Sarah Drljaca

Accepted by: Sophie Banham

Approved by: Sophie Banham







Table of Contents

1	Introd	uction	5				
1.1	Dev	relopment background	5				
1.2	Eco	logy background	5				
1.3	Leg	islative background	6				
1.4	The	brief and objectives	6				
2	Bat ha	abitat suitability assessment	7				
2.1	Met	hodology	7				
2.2	Sur	veyors	7				
2.3	Lim	itations	7				
2.4	Res	sults					
2.5	Furt	ther survey	g				
3	Bat a	ctivity survey	g				
3.1	Met	hodology	9				
3.2	Sur	veyors	11				
3.3	Lim	itations	11				
3.4	Res	sults	12				
4	Bat ro	ost survey	27				
4.1	Met	hodology	27				
4.2	Sur	veyors	30				
4.3	Limitations						
4.4	Res	sults	32				
5		lusion					
5.1		activity survey					
5.2	Bat	roost survey	35				
6	Refer	ences	36				
Apper	ndix A	Figures	38				
Apper	ndix B	British bats	46				
Apper	ndix C	Bat habitat suitability assessment results	49				
Apper	ndix D	Weather data recorded during the static monitoring surveys	74				
Apper	ndix E	Summary of static monitoring survey results	81				
Apper	ndix F	Weather data recorded during transect surveys	100				
Apper	ndix G	Summary of Transect Survey Results	102				
Apper	ndix H	Bat roost survey weather data	148				
Apper	ndix I	Preliminary ground level roost assessment results	152				
Apper	ndix J	Dusk emergence and dawn re-entry survey results	192				

List of Tables

Table 2.1:	Commuting and foraging habitat suitability criteria.	7
Table 2.2:	Number of parcels per level of habitat suitability for commuting bats and dominant habitat type	
Table 2.3:	Number of parcels per level of habitat suitability for foraging bats and dominant habitat type	
Table 2.4:	Number of parcels per level of overall habitat suitability for commuting and foraging bats and	
	dominant habitat type.	9
Table 3.1:	Categorisation of activity level.	
Table 3.2:	Habitat parcel groups in which static monitoring surveys could not be completed on at least on	
Table 3.3:	Habitat parcel groups in which transect surveys could not be undertaken, or only partial access	
	possible	
Table 3.4:	Distribution of bat activity levels recorded during the static monitoring survey.	12
Table 3.5:	Timing of first noctule record.	16
Table 3.6:	Timing of first record of soprano pipistrelle	17
Table 3.7:	Distribution of bat activity levels per group recorded during the transect surveys	19
Table 3.8:	Distribution of bat activity levels per leg recorded during the transect survey	
Table 3.9:	Activity scores of barbastelle per habitat parcel and leg at which barbastelle was recorded	22
Table 3.10:	Difference between activity scores of static monitoring and transects surveys of groups	25
Table 3.11:	Comparison of bat occurrence and activity as recorded by the NBS (Newson et al., 2014) and	during
	the static monitoring survey along Hornsea Three survey area	25
Table 3.12:	Habitat parcel groups identified as particularly important for foraging and commuting bats withi	n the
	survey area	26
Table 4.1:	Habitat suitability for roosting bats	27
Table 4.2:	Roost type definitions.	
Table 4.3:	Suitable weather conditions	28
Table 4.4:	Categorisation of activity level.	
Table 4.5:	Summary of access availability for emergence / re-entry surveys	31
Table 4.6:	Summary results of the PGLRA	
Table 4.7:	Location of trees where incidental barbastelle activity was recorded, including the maximum nu	
	of barbastelle passes on any one visit	
Table C.1	Full habitat suitability assessment results	
Table D.2:	Weather data recorded during static monitoring surveys	
Table E.3:	A summary of the static monitoring results.	
Table F.4:	Weather data recorded during transect surveys.	
Table G.5:	A summary of the transect survey results	
Table G.6:	Weather data for all dusk emergence and dawn return to roost surveys	
Table I.7:	Preliminary Ground Level Roost Assessment Results.	
Table J.1:	Dusk emergence and dawn re-entry survey results	192

List of Charts







Chart 3.2:	Number of static monitoring groups at which each bat species was recorded during the static	40
01 (00		.13
Chart 3.3:	Activity scores of barbastelle during the static monitoring surveys (absences not shown)	
Chart 3.4:	Activity scores of brown long-eared bats recorded during the static monitoring surveys (absences n shown)	ot .15
Chart 3.5:	Activity scores of noctule recorded during the static monitoring surveys (absences not shown)	16
Chart 3.6:	Activity scores of soprano pipistrelle recorded during the static monitoring surveys (absences not	17
Chart 3.7:	Activity scores of Leisler's bat recorded during the static monitoring surveys (absences not shown).	• • •
Chart 3.8:	Serotine activity scores recorded during the static monitoring surveys (absences not shown)	18
Chart 3.9:	Activity scores of Nathusius' pipistrelle recorded during the static monitoring surveys (absences not	
	shown)	19
Chart 3.10:	The species richness observed across transect groups.	20
Chart 3.11:	Number of transect groups at which each bat species was recorded during the transect surveys	21
Chart 3.12:	Activity scores of barbastelle recorded during the transect surveys (absences not shown)	21
Chart 3.13:	Activity scores of brown long-eared bat during the transect surveys (absences not shown)	23
Chart 3.14:		23
Chart 3.15:	Activity scores of soprano pipistrelle recorded during the transect surveys (absences not shown)	
Chart 4.1:	Distribution of species-richness recorded during emergence / re-entry surveys recorded incidentally	
O		,. 34
Chart 4.2:	The number of locations at which each bat species identified as incidental activity occurred	34







Glossary

Term	Definition				
Compound	A collective term used to refer to secondary construction compounds along the onshore cable corridor as well as the landfall construction compound (defined in detail in volume 1, chapter 3: Project Description). Although, there is also a main construction compound, this is referred to individually due to its distant location relative to the onshore cable corridor.				
Phase 1 Habitat Survey	A field survey technique which provides a relatively rapid system to record and map semi-natural vegetation and other wildlife habitats.				
Preliminary Ecological Appraisal	The first stage in any site ecological assessment. It has two main elements; an ecological desk study and an extended Phase 1 habitat survey.				
Epicornic	Growth emerging from dormant bud on the branch or trunk of a tree.				
Senescing	When a living organism deteriorates with age.				

Acronyms

Unit	Description			
DCO	Development Consent Order			
EIA	Environmental Impact Assessment			
HVAC	High Voltage Alternating Current			
HVDC	High Voltage Direct Current			
PEA	Preliminary Ecological Appraisal			
PEIR Preliminary Environmental Information Report				
PGLRA	Preliminary Ground Level Roost Assessment			
SAC	Special Area of Conservation			
SSSI	Site of Special Scientific Interest			

Units

Unit	Description
GW	Gigawatt (power)
ha	Hectare (area)
m	Metre (distance)
km	Kilometre (distance)







1 Introduction

1.1 Development background

- 1.1.1.1 Ørsted is promoting an application for a development consent order ('DCO') for the Hornsea Project Three Offshore Wind Farm (hereafter referred to as 'Hornsea Three') a proposed offshore wind farm located in the southern North Sea. The application for Hornsea Three includes an approximately 55 km onshore cable corridor which runs from Weybourne on the north Norfolk coast south to the National Grid Substation at Norwich.
- 1.1.1.2 At the time of ecological survey scoping in December 2016, a 200 m wide cable corridor search area had been identified by DONG Energy (now Ørsted). The 200 m wide search area included the locations of the proposed onshore cable corridor, HVAC booster station, HVDC converter/HVAC substation, Norwich main national grid substation and construction compounds and was the focus of the Preliminary Environmental Information Report (PEIR) submitted in July 2017. This search area is hereafter referred to as the 'PEIR onshore cable corridor search area'. During Phase 2 consultation some alternative route considerations were added. Ecological survey area boundaries were based on the PEIR onshore cable corridor search area and alternative routes considered, with an appropriate survey buffer added for some survey types where necessary. The survey area applicable to this report is shown in Appendix A, Figure 1.1.
- 1.1.1.3 Since the submission of the PEIR in July 2017, a route refinement process has been undertaken to refine the Hornsea Three onshore cable corridor to an approximately 80 m wide corridor (referred to as the 'onshore cable corridor') as well as identify locations of compounds, access roads and storage areas. The location of permanent and temporary land take associated with the HVDC converter/HVAC substation and HVAC booster station has also been refined. This process is described in more detail in volume 1, chapter 4: Site Selection and Alternative of the Environmental Statement.
- 1.1.1.4 A full description of Hornsea Three is provided in volume 1, chapter 3: Project Description.

1.2 Ecology background

1.2.1.1 A Preliminary Ecological Appraisal (PEA) of the onshore components of Hornsea Three was undertaken in 2016 (RPS, 2016). This included a Phase 1 survey which covered a survey area comprising a 500 m wide corridor (including the PEIR onshore cable corridor search area described above) and an ecological desk study, whereby protected species data for bats was requested from the Norfolk Biodiversity Information Service (NBIS) for the Phase 1 survey area and an additional 5 km search area. The PEA results were used to inform the Preliminary Environmental Information Report (PEIR) which was submitted to PINS in July 2017 and to determine the scope and extent of further ecological surveys required to inform the Environmental Impact Assessment (EIA) for Hornsea Three.

- 1.2.1.2 Records of bats were returned as part of the desk study and the PEA identified suitable foraging, commuting and roosting habitat for bats within the Phase 1 survey area.
- 1.2.1.3 The desk study highlighted records of 12 bat species and bat species groups within its search area:
 - Common pipistrelle Pipistrellus pipistrellus;
 - Soprano pipistrelle Pipistrellus pygmaeus;
 - Nathusius's pipistrelle Pipistrellus nathusii;
 - Unidentified Pipistrellus species;
 - Brandt's bat Myotis brandtii;
 - Daubenton's bat Myotis daubentonii;
 - Whiskered bat Myotis mystacinus;
 - Natterer's bat *Myotis nattereri*;
 - Unidentified Myotis species;
 - Brown long-eared Plecotus auritus;
 - Barbastelle Barbastella barbastellus;
 - Serotine Eptesicus serotinus;
 - Noctule Nyctalus noctula;
 - Unidentified Nyctalus species; and
 - Leisler's Nyctalus leisleri.
- 1.2.1.4 Within the Phase 1 habitat survey area, the following habitats were identified as being potential bat roosting, foraging and/or commuting habitat (RPS, 2016):
 - Scattered trees;
 - Semi-natural broadleaved woodland;
 - Semi-natural coniferous woodland:
 - Semi-natural mixed woodland:
 - Plantation mixed woodland;
 - Hedgerow (species-rich and species-poor);
 - Scattered trees:
 - Semi-improved grassland; and
 - Standing water.
- 1.2.1.5 Habitats identified as being particularly suitable for bats were found in Hundred Acre Wood, Kelling Heath and Booton Common. These areas can be found on Appendix A, Figure 2.1, 2.2 and 2.8.
- 1.2.1.6 Further survey for bats was recommended including: bat habitat suitability assessment (HSA); bat activity survey; preliminary ground level roost assessment of trees for bats; and dusk emergence and dawn reentry surveys for roosting bats.







- 1.2.1.7 A summary of the biology, conservation status and legal protection of bats in Britain is given in Appendix B: British bats, although the key aspects of the legislative framework are outlined in section 1.3.
- 1.2.1.8 Thomson Ecology was commissioned in November 2016 to undertake survey for bats within a survey area that included the PEIR onshore cable corridor search area (a 200 m wide cable corridor search area) and the alternative routes under consideration, as shown on Appendix A, Figure 1.1. Bat surveys comprised a bat habitat suitability assessment, a bat activity survey and a bat roost survey.
- 1.2.1.9 Results of the bat survey have been used to inform the final location and design of the Hornsea Three onshore cable corridor and to enable the assessment of the impacts of the onshore cable corridor on bats, reported in the volume 3, chapter 3: Ecology and Nature Conservation.

1.3 Legislative background

- 1.3.1.1 All bats are protected under the Conservation of Habitats and Species Regulations 2017 and are afforded additional protection under the Wildlife and Countryside Act 1981 (as amended). Taken together these make it an offence to:
 - Deliberately capture, injure or kill a bat;
 - Deliberately disturb a bat in such a way as to be likely:
 - To impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
 - To impair its ability to hibernate or migrate; or
 - To affect significantly the local distribution or abundance of the species to which it belongs.
 - Damage or destroy a breeding site or resting place of a bat.
- 1.3.1.2 Of the 12 species recorded in the desk study (see section 1.2), four are listed as Species of Principal Importance for the purpose of conserving biodiversity in England under section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. These comprise: barbastelle, brown long-eared, common noctule and soprano pipistrelle species. As such, they require consideration by the competent public authorities in the exercise of their duties. Additionally, all four of these bat species are considered priority species in Norfolk by the Norfolk Biodiversity Partnership (Norfolk Biodiversity Partnership, 2009a, 2009b) and should be a key consideration by the competent authorities.
- 1.3.1.3 The barbastelle is included on Annex II of the European Community Directive of the Conservation of Natural Habitats and of Wild Fauna and Flora, referred to as the Habitats Directive. The Habitats Directive is transposed into UK law by the Conservation of Habitats and Species Regulations 2017 (as amended). This legislation requires that areas are designated as Special Areas of Conservation (SACs) to protect populations of this species should it be roosting on site or nearby where the population could be impacted.

1.4 The brief and objectives

- 1.4.1.1 The brief of the bat surveys was to:
 - Undertake a bat habitat suitability assessment to determine whether habitats identified during the PEA (RPS, 2016) within the survey area have a negligible, low, moderate or high potential to support roosting, foraging or commuting bats; and ascertain the type and level of further survey effort required;
 - Undertake a static monitoring bat activity survey by deployment of static monitoring devices in areas
 of habitat identified with moderate or high potential for bats;
 - Undertake dusk and dawn bat activity surveys in areas of habitat identified with moderate or high potential for bats;
 - Undertake a Preliminary Ground Level Roost Assessment (PGLRA) of each individual tree within the survey area;
 - Undertake bat dusk emergence and dawn re-entry surveys of trees with moderate to high potential for roosting bats within the survey area; and
 - Analyse survey data and provide a report of the surveys including the methods, results and digitised mapping.
- 1.4.1.2 The objective of the survey was to identify the presence of bat roosts and important habitats used by bats for foraging and commuting activity within the Hornsea Three onshore cable corridor to enable an assessment of the impacts of Hornsea Three on bats within volume 3, chapter 3: Ecology and Nature Conservation.







2 Bat habitat suitability assessment

2.1 Methodology

- 2.1.1.1 The Habitat Suitability Assessment (HSA) survey area comprised the PEIR onshore cable corridor search area and alternative routes considered. The HSA survey area is shown on Appendix A, Figure 1.1.
- 2.1.1.2 A total of 611 habitat parcels were identified from the PEA as having the potential to be utilised as bat foraging and/or commuting habitat and therefore requiring an HSA for bats (RPS, 2016). Of these, access rights were granted to 281 (see section 2 3 below).
- 2.1.1.3 All 281 parcels were visited between 18 January 2017 and 8 June 2017, during daylight hours, and the following habitat characteristics were recorded:
 - Dominant habitat type: aquatic (rivers, streams, etc.), hedgerow, woodland, monoculture (including arable), diverse grassland (including semi-improved neutral grassland) and heathland;
 - Connectivity to other habitats; low (> 10 m), moderate (4 m 10 m), high (< 3 m), connectivity;
 - Continuity of habitat, with gaps or continuous;
 - Distance to the nearest hedgerow, woodland and/or waterbody; in habitat, < 200 m, 200 m 400 m, > 400 m;
 - Setting; rural, urban or semi-urban; and
 - Level of disturbance; low, moderate or high.
- 2.1.1.4 Each habitat parcel was then assigned a level of suitability for foraging and commuting bats, as per Table 2.1.
- 2.1.1.5 An overall suitability for both foraging and commuting bats was calculated based upon the highest suitability category observed within each parcel.

Table 2.1: Commuting and foraging habitat suitability criteria.

Suitability	Assessment criteria (adapted from Collins ed., 2016)
Negligible	Negligible habitat features for commuting or foraging bats include: less than 1% broadleaved woodland, scrub/scrub mosaic, wetland and heathland and less than 20% coniferous woodland within the habitat parcel. Typical habitats of negligible potential include arable and improved grassland areas, hard-standing and exposed upland and coastal habitats.
Low	Commuting and foraging habitat of low to moderate quality and poor connectivity to the wider landscape. Such habitats would often be isolated or heavily managed. Medium-aged coniferous plantation offers few foraging and commuting opportunities for bats. Hedgerows that were Species-poor, those with gaps and/or heavily managed were assessed as having low potential.

Suitability	Assessment criteria (adapted from Collins ed., 2016)			
Moderate	The habitat includes continuous connectivity to the wider landscape and includes trees, scrub, grassland and water. The habitat is over a hectare in size and includes some infrequently managed areas that offer a mosaic of habitat types. Wetland habitat or connectivity to wetland habitat is present.			
High	Commuting and foraging habitat of high quality and excellent connectivity. This includes high quality habitat that is dominated by infrequently managed broadleaved woodland, tree-lined watercourses, grazed parkland, continuous hedgerow and lines of trees. Proximity and connectivity to wetland habitat is important. Habitat parcels will generally be over 1 ha.			

2.1.1.6 The main construction compound to the east of the Hornsea Three onshore cable corridor is outside of the survey area for this study and comprises existing hard standing with negligible ecological importance. Therefore, a detailed survey of baseline conditions was not required.

2.2 Surveyors

2.2.1.1 The bat habitat assessment surveys were undertaken by Assistant Ecologists Philip Joyce BSc MSc, Kathryn Jones MBiolSci GradCIEEM, Irfaan Junaideen BSc MSc GradCIEEM, Robert Allen BSc MSc GradCIEEM, Kate Philpott BSc MSc GradCIEEM, Emily Power BSc MSc GradCIEEM, Emily Wallace BSc MSc GradCIEEM and Charlotte Hewitt BSc MSc GradCIEEM, and Senior Ecologist Robert Hutchinson BSc MSc GradCIEEM.

2.3 Limitations

- 2.3.1.1 The survey area for this study was based on the PEIR onshore cable corridor search area and alternatives under consideration. Following completion of the survey, the location of the Hornsea Three onshore cable corridor (80 m width), compounds, access roads and storage areas have been finalised. At some locations, these features fall outside of the survey area. As these areas were identified outside of the survey season, it was not possible to undertake bat surveys in these areas (which amount to 52.15 ha, which is equivalent to 9.8% of the footprint of the onshore cable corridor and associated infrastructure).
- 2.3.1.2 Land owner permission was necessary to access land for survey within the bat HSA survey area. Although the status of landowner permission to access survey areas was reviewed on a weekly basis during the survey season, 330 (of which 125 are within the onshore cable corridor) out of the 611 (of which 163 are within the onshore cable corridor) habitat parcels that were identified as requiring an habitat suitability assessment could not be surveyed due to permission to access the land not being granted. However, 58 of these habitat parcels that were not surveyed are in the discounted onshore cable corridor route and so this was not a limitation for these parcels. The location of un-surveyed areas for the HSA is shown on Appendix A, Figures 2.1 to 2.17 (relative to the survey are and onshore cable corridor).







- 2.3.1.3 Although it was not possible to survey all relevant areas along the onshore cable corridor, many of these areas are covered by the PEA (RPS, 2016) which provides ecological data, and when combined with the ability to characterise from the large volume of data on bat habitats collected in the remainder of the survey area, is considered sufficient to inform the impact assessment on bat habitats reported in volume 3, chapter 3: Ecology and Nature Conservation. It is assumed that foraging and commuting bats will be present where suitable habitat exists, where desk study records and/or survey information from other parts of the route indicate likely presence.
- 2.3.1.4 Any areas where survey could not be completed will be checked during pre-construction surveys enabling amendment or the application of further mitigation, to that specified in volume 3, chapter 3: Ecology and Nature Conservation, to be applied.
- 2.3.1.5 The main construction compound to the east of the Hornsea Three onshore cable corridor is outside of the survey area for this study and is not shown on Appendix A, Figure 2.1 to 2.17. However, given that this compound comprises existing hard standing with negligible ecological importance, it is considered that a detailed survey of baseline conditions were not required.

2.4 Results

- 2.4.1.1 A HSA was undertaken on a total of 281 habitat parcels. The location of these parcels is shown in Appendix A, Figures 2.1 to 2.17.
- 2.4.1.2 Of the 281 habitat parcels that were surveyed, 27 (9.6%), 116 (41.3%) and 138 (49.1%) were found to have low, moderate and high suitability respectively, for commuting bats. Forty-eight (17.1%), 148 (52.7%) and 85 (30.2%) were found to have low, moderate and high suitability respectively, for foraging bats. Eighteen (6.4%), 121 (43.1%) and 142 (50.5%) were found to have low, moderate and high overall suitability respectively. The overall suitability of each habitat parcel is shown in Appendix A, Figure 2.1 to 2.17 whilst full results are presented in Appendix C: Bat habitat suitability assessment results and Table 9.1. Photographs of each of the six dominant habitat types are presented in Appendix A, Figure 3.1. Table 2.2 and Table 2.3 present a summary of the survey results, detailing the number of surveyed habitat parcels within each dominant habitat type that have high, moderate and low suitability for commuting and foraging bats respectively.

Table 2.2: Number of parcels per level of habitat suitability for commuting bats and dominant habitat type.

11-1	la 14 a 4	Dominant habitat type						
	Habitat suitability	Aquatic	Diverse Grassland	Heathland	Hedgerow	Monoculture	Woodland	Total
L	.WO.	-	3	2	11	9	2	27
Mod	derate	1	4	1	90	4	16	116
Hi	ligh	-	2	-	100	-	36	138
To	otal	1	9	3	201	13	54	281

Table 2.3: Number of parcels per level of habitat suitability for foraging bats and dominant habitat type.

	Dominant habitat type						
Habitat suitability	Aquatic	Diverse Grassland	Heathland	Hedgerow	Monoculture	Woodland	Total
Low	-	2	-	34	8	4	48
Moderate	-	5	3	118	4	18	148
High	1	2	-	49	1	32	85
Total	1	9	3	201	13	54	281

2.4.1.3 The overall habitat suitability for both foraging and commuting bats is summarised in Table 2.4.







Table 2.4: Number of parcels per level of overall habitat suitability for commuting and foraging bats and dominant habitat type.

Habitat	Dominant habitat type and number of parcels						Total
Suitability	Aquatic	Diverse	Heathland	Hedgerow	Monoculture	Woodland	Total
Low	ı	2	-	9	6	1	18
Moderate	-	5	3	90	6	17	121
High	1	2	-	102	1	36	142
Total	1	9	3	201	13	54	281

2.4.1.4 The dominant habitats across all habitat parcels were hedgerow (present in 72% of all habitat parcels assessed) and woodland (present in 19% of all habitat parcels assessed). Many of the hedgerows supported mature trees that provide potential roosting habitat for bats which have been assessed as part of a Preliminary Ground Level Roost Assessment (see section 4).

2.5 Further survey

2.5.1.1 The degree to which species use the foraging and commuting habitat within the study has been assessed by undertaking bat activity surveys which are described in the following section. Emergence/return to roost surveys have been undertaken in habitats identified as having a moderate or high overall suitability for foraging and commuting bats to assert that the proposed development is abiding by legislation laws regarding roosting bats (see section 1.3). Habitats with a low potential for commuting and foraging were scoped out from further survey except with regards to where trees were present with bat roosting potential that required a Preliminary Ground Level Roost Assessment, as described in section 4.

3 Bat activity survey

3.1 Methodology

3.1.1 General survey approach

- 3.1.1.1 A survey area for the bat activity surveys was defined as the PEIR onshore cable corridor search area and the alternative routes considered as shown on Appendix A, Figure 1.1.
- 3.1.1.2 Within the survey area, habitat parcels requiring bat activity surveys were identified based on the results of the HSA (shown in Appendix A, Figures 2.1 to 2.17 and detailed in section 2). In this regard, all parcels identified as having moderate or high potential for foraging and commuting bats were taken forward into the survey scope.
- 3.1.1.3 In addition, bat activity surveys were undertaken at habitat parcels that were not assessed during the HSA, but where land access had become available after 8 June 2017 and there was the potential for foraging and commuting bats based on the findings of the PEA.
- 3.1.1.4 To achieve survey efficiencies, where multiple habitat parcels were identified as requiring bat activity surveys within a close proximity, these were grouped into habitat parcel groups. A total of 109 habitat parcel groups were identified, and each was given a unique identification code¹.

3.1.2 Field survey

- 3.1.2.1 The bat activity survey at each habitat parcel group comprised the deployment of a static monitoring device to record bat calls for a duration of five days on each of three occasions: in April/May (Visit 1 spring), between June and August (Visit 2 summer) and in September/October (Visit 3 autumn).
- 3.1.2.2 The static monitoring survey was designed to maximise the amount of bat activity recorded, as such, omni-directional microphones were located at heights between 2 to 4 m, and positioned to avoid background ambient noise, electrical interference and attenuation of bat calls by surrounding built structures or vegetation. The devices were set to commence recording 30 minutes before sunset and end 30 minutes after sunrise.
- 3.1.2.3 The summer survey (Visit 2) was complemented by a transect survey, whereby two ecologists walked the entire length of the habitat parcels within each group and recorded bat calls once at dusk and once at dawn within a 24-hour period.

¹ The group identification code numbers are not continuous along the cable route due to changes in survey boundary and land access availability throughout the study.







- 3.1.2.4 The transect surveys included a dusk and a dawn survey of each habitat parcel within one 24 hour period on at least one occasion in summer, coinciding with the second deployment of the static monitoring device. Dusk surveys began at sunset and ended 120 minutes after sunset. Dawn surveys began 120 minutes before sunrise and ended at sunrise.
- 3.1.2.5 The transect was further broken into survey "legs" to provide more detailed information. For health and safety reasons surveyors operated in pairs. Each surveyor pair was equipped with a Batlogger M bat detector with an omni-directional microphone recording all bat calls within a range of over 20 m.
- 3.1.2.6 Bat activity was recorded along each transect leg, including: species, number of passes, direction of flight paths, number of bats and habitat. A bat pass is defined as an unbroken stream of echolocation calls, heard as a series of 'clicks, slaps, tocks and warbles' on a bat detector as a bat crosses in and out of the detector's range.
- 3.1.2.7 The location of rare bat species was recorded on a GPS-enabled mobile mapping device.
- 3.1.2.8 Weather conditions including wind, precipitation, and air temperature at 1 m were recorded by the surveyors during both the static monitoring surveys and the transect surveys. Weather conditions were considered suitable when air temperature was at least 10°C, there was no rain or only light showers or drizzle, and wind speed was 5 on the Beaufort scale or less. When weather conditions proved unsuitable, the survey was postponed or repeated to ensure compliance with best practice guidelines (Collins ed., 2016). However, a survey undertaken during unsuitable weather conditions was considered valid if moderate to high levels of bat activity were recorded.

3.1.3 Data analysis

- 3.1.3.1 Bat calls recorded during the static monitoring surveys and transect surveys were analysed using Bat Explorer software. Quality assurance was undertaken on 10% of the bat calls and any rare or notable species.
- 3.1.3.2 Bat calls recorded by static monitoring devices were sub-sampled by analysing calls recorded on days one, three and five of each deployment period. Data from days two and four were analysed only when sub-optimal weather conditions were encountered on days one, three and five of the survey, or when there was high variability in the data collected. In a limited number of cases, the static monitoring device battery failed before day five, in which case data from days one to three was analysed instead.
- 3.1.3.3 An activity score was calculated using the following formula (where the survey duration is measured in minutes):
- 3.1.3.4 Bat Activity Score = $\left(\frac{Total\ number\ of\ passes}{Survey\ Duration}\right) * 100$

- 3.1.3.5 A separate activity score was calculated for the static monitoring surveys and for the transect surveys. To gain a better understanding of bat activity, activity scores were calculated for different levels of data aggregation:
 - Across all visits or per survey visit;
 - Per habitat parcel group or per transect leg; and
 - For all bat species combined or per species.
- 3.1.3.6 Activity scores were then ranked into activity levels as per Table 3.1 which is based on an analysis undertaken by Thomson Ecology between 2006 and 2007.

Table 3.1: Categorisation of activity level.

Assessment of Activity Level	Activity Score
Very Low	Up to 5
Low	6 – 30
Medium	31-50
High	51-90
Very High	90 plus

- 3.1.3.7 Analysis of the data considered levels of bat activity recorded, as well as:
 - Presence of priority and rare species and an evaluation of their activity levels and/or cumulative passes;
 - Activity levels compared with areas of similar habitat within Norfolk; and
 - Whether the habitats present in the onshore cable corridor search area are particularly important to common and rare bat species.
- 3.1.3.8 A comparison was made between the static monitoring survey results and the activity surveys where these occurred on the same night. This was done to compare the effectiveness of the two survey techniques to determine levels of bat activity.
- 3.1.3.9 The overall interpretation of the data focused on:
 - The identification of areas within the onshore cable corridor search area that are of importance to foraging and commuting bat species;







- The identification of areas of importance for rare and priority species and an evaluation of their activity levels;
- A comparison of species-specific emergence times reported in the literature with the timing of the first call recorded at dusk, to identify locations close to which a roost is likely present;
- A comparison of activity levels recorded during the static monitoring survey with those recorded during the transect surveys; and
- A comparison of activity levels recorded during the static monitoring survey with data collected as part of the Norfolk Bat Survey 2013.

3.2 Surveyors

- 3.2.1.1 The bat activity survey static monitoring devices were deployed by Justin Groves BSc (Hons) GradCIEEM, Callum Parradine BSc (Hons), Elizabeth Hankard BSc (Hons) MSc, Matthew Wisby BSc (Hons) MSc, Neil Whitehead BSc (Hons) MSc, Robert Allen BSc (Hons) MSc GradCIEEM, Adelle Pilfold BSc (Hons), Emily Bartlett BSc (Hons) MSc and Lauren Hornsby BSc (Hons).
- 3.2.1.2 The analysis of the static monitoring data was undertaken by Justin Groves BSc (Hons) GradCIEEM, who holds a Natural England Bat Survey Level 2 Class Licence and Irfaan Junaideen BSc (Hons) MSc GradCIEEM, who holds a Natural England Bat Survey Level 1 Class Licence.

3.3 Limitations

- 3.3.1.1 The survey area for the bat activity survey was based on the PEIR onshore cable corridor search area and extended accordingly to consider some alternative route options considered after issue of the PEIR. Following completion of the survey the locations of the Hornsea Three onshore cable corridor (80 m width), construction compounds, access roads and storage areas have been finalised. At some locations these features fall outside of the survey area. As these areas were identified outside of the survey season, it was not possible to undertake bat activity surveys in these areas which amount to 52.15 ha (9.8% of the onshore cable corridor and associated infrastructure area).
- 3.3.1.2 Although the status of landowner permission to access survey areas was reviewed on a weekly basis during the survey season, the absence of land access permissions was a survey limitation as detailed below:
 - Out of the 109 groups of habitat parcels identified as requiring bat activity survey, 25 groups could not be accessed for static monitoring and 33 groups could not be accessed for transects due to absence of land access permissions or, more rarely, device failures. Areas with no access are identified on Appendix A, Figure 4.1 to 4.36 and Figure 5.1 to 5.36, and are listed in Table 3.2 and Table 3.3 below.
 - Additionally, a number of habitat parcel groups became inaccessible while surveys were being undertaken due to a change in land access agreements. In these habitat parcel groups, it was not

- possible to complete all the survey visits that were required. These groups are also listed in Table 3.2 and Table 3.3.
- Due to access restrictions, a number of visits for various groups for static monitoring device deployment and transect survey were completed out of season. All of the visit 1 surveys were completed by mid-June 2017 (within season), visit 2 had visits undertaken out of season for groups 25, 49, 60, 75, 76, 88, 102, 103, 108, 110 and 111 covering both static monitoring and the associated transect survey. There were no restrictions for visit three.
- 3.3.1.3 Although it was not possible to survey these areas in 2017, they are mostly covered by the PEA (RPS, 2016) providing ecological data, which combined with the ability to characterise from the large volume of data on bats collected in the remainder of the survey area, is considered sufficient to inform the impact assessment on bat foraging and commuting activity reported in volume 3, chapter 3: Ecology and Nature Conservation. It is assumed that commuting and foraging bats will be present where suitable habitat exists, where desk study records and/or survey information from other parts of the route indicate likely presence.
- 3.3.1.4 Those areas where survey could not be completed will be checked during pre-construction surveys enabling amendment or the application of further mitigation, to that specified in volume 3, chapter 3: Ecology and Nature Conservation, to be applied.
- 3.3.1.5 The main construction compound to the east of the Hornsea Three onshore cable corridor is outside of the survey area for this study and is not shown on Appendix A, Figure 4.1 to 4.36, Figure 5.1 to 5.36 or Figure 6.1 to 6.36. However, given that this compound comprises existing hard standing with negligible ecological importance, it is considered that a detailed survey of baseline conditions were not required.







Table 3.2: Habitat parcel groups in which static monitoring surveys could not be completed on at least one visit.

	Visit 1 (Spring 2017)	Visit 2 (Summer 2017)	Visit 3 (Autumn 2017)	Total number of habitat parcel groups where no visits could be completed during 2017
No access	45, 47, 48, 51, 53, 65, 66, 75, 79, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114	18, 40, 45, 46, 47, 48, 51, 53, 54, 63, 65, 66, 67, 69, 77, 82, 90, 91, 92, 93, 94, 98, 99, 100, 101, 104, 105, 106, 107, 109, 112, 113, 114	6, 7, 13, 17, 18, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 53, 54, 56, 58, 63, 65, 66, 68, 69, 75, 82, 83, 89, 90, 91, 92, 93, 94, 98, 99, 100, 101, 103, 104, 105, 106, 107, 109, 112, 113, 114	A total of 25 habitat parcel groups (45, 47, 48, 51, 53, 65, 66, 82, 90, 91, 92, 93, 94, 98, 99, 100, 101, 104, 105, 106, 107, 109, 112, 113, 114)
Device Failure	55, 58, 61, 72	8, 10, 78, 79, 85	n/a	n/a

Table 3.3: Habitat parcel groups in which transect surveys could not be undertaken, or only partial access was possible.

Limitation	Habitat parcel groups
No access	18, 40, 45, 46, 47, 48, 51, 53, 54, 63, 65, 66, 67, 77, 83, 89, 90, 91, 92, 93, 94, 98, 99, 100, 101, 104, 105, 106, 107, 109, 112, 113, 114
Partial access	75, 81, 84

3.4 Results

3.4.1 Weather conditions

3.4.1.1 Table D.2 and Appendix F: Weather data recorded during transect surveys. Table F.4 show weather conditions recorded at two representative locations within the survey area during the static monitoring surveys and transect surveys, respectively.

3.4.2 Static monitoring surveys

Overview

- 3.4.2.1 Of the 84 habitat parcel groups surveyed:
 - 13 had one survey visit;
 - 35 had two survey visits; and
 - 36 had three visits.
- 3.4.2.2 Groups that could not be surveyed at all are shown on Appendix A, Figures 4.1 to 4.36 and listed in Table 3.2.
- 3.4.2.3 A total of 82,600 bat passes recorded by the static monitoring devices were analysed. Table 3.4 summarises activity levels in the 84 surveyed habitat parcel groups. Overall levels of bat activity in each group are shown on Appendix A, Figures 4.1 to 4.36. Detailed static monitoring data for each group is shown in Appendix E: Summary of static monitoring survey results Table 10.1, including the overall number of passes, the number of passes per species, the overall activity score and the overall activity level.

Table 3.4: Distribution of bat activity levels recorded during the static monitoring survey.

Overall activity level	No Activity	Very low	Low	Medium	High	Very high	Total
Number of groups	2	12	46	15	8	1	84

- 3.4.2.4 Eight bat species and four groups of species, which cannot be distinguished on the basis of their calls, were recorded during the static monitoring survey. These included:
 - Common pipistrelle;
 - Nathusius' pipistrelle;
 - Soprano pipistrelle;
 - Unidentified bats belonging to the pipistrelle genus;
 - Unidentified bats belonging to the Myotis genus;
 - Brown long-eared bat;
 - Barbastelle;
 - Serotine;







- Leisler's bat:
- Noctule:
- Unidentified bats belonging to the noctule / serotine / Leisler's bat guild; and
- Unidentified bats belonging to the *Nyctalus* genus.
- 3.4.2.5 Chart 3.1 shows the distribution of species richness (i.e. the total number of species or group of species recorded at a single location during the survey).

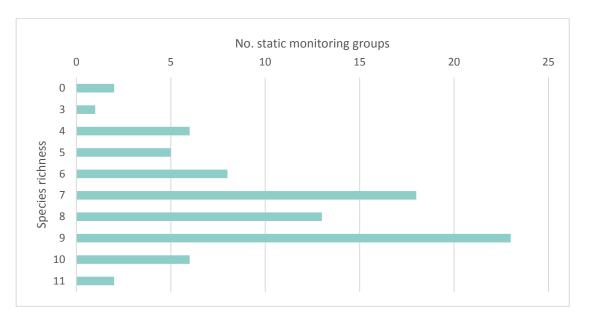


Chart 3.1: The species richness observed across static monitoring groups.

- 3.4.2.6 The largest numbers of species were recorded at habitat parcel group 41 and 52 with 11 species/species groups and habitat parcel groups 23, 34, 39, 56 and 72 with ten species/species groups. The fewest species was observed at habitat parcel group 46, with just three species (common pipistrelle, soprano pipistrelle and pipistrelle species). No bats were recorded in habitat parcel groups 14 and 89. The location of these habitat parcel groups is marked on Appendix A, Figure 4.1 to 4.36.
- 3.4.2.7 Chart 3.2 shows the number of locations at which each of the 12 species or species groups was encountered.

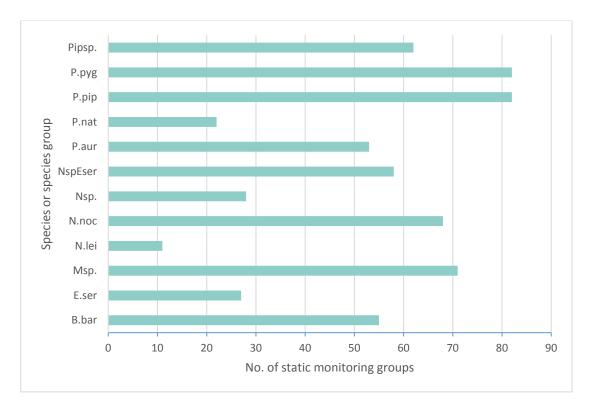


Chart 3.2: Number of static monitoring groups at which each bat species was recorded during the static monitoring surveys.

Chart codes: Pipsp – pipistrelle species, P.pyg – soprano pipistrelle, P.pip – common pipistrelle, P.nat – Nathusius' pipistrelle, P.aur – brown long-eared bat, NspEser – noctule, Leisler's and serotine guild, Nsp – *Nyctalus* species, N.noc – noctule, N.lei – Leisler's bat, Msp – *Myotis* species, E.ser – serotine and B.bar – barbastelle

- 3.4.2.8 A more detailed analysis of the static monitoring data is given below for the Species of Principal Importance: barbastelle, brown long-eared bat, noctule and soprano pipistrelle. The barbastelle is also listed in Annex II of the EEC/92/43 Habitats Directive. A detailed analysis is also given for the three species least frequently recorded during the static monitoring survey: Leisler's bat, serotine and Nathusius' pipistrelle.
- 3.4.2.9 This further analysis includes a discussion of the presence of possible bat roosts near the static monitoring locations (based on the time elapsed between the expected emergence of each species and the time when bats were first recorded each night). The analysis is based on data collected at dusk, as due to multiple factors the timing of return to roost at dawn can be much more variable and the results are unlikely to provide an accurate picture of potential bat roosts nearby.







Barbastelle

3.4.2.10 Chart 3.3 shows the activity score for barbastelle in locations where this species was recorded.

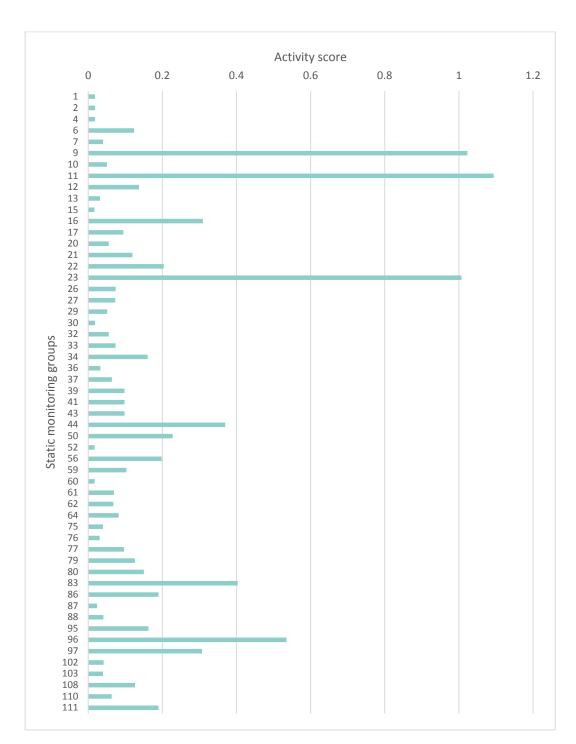


Chart 3.3: Activity scores of barbastelle during the static monitoring surveys (absences not shown).

- 3.4.2.11 Barbastelle was recorded in 55 of the 84 groups. A very low barbastelle activity level was generally recorded. However, the graph does highlight several locations where barbastelle activity was higher: habitat parcel group nine (activity score: 1.02), 11 (1.09), 23 (1.01) and 96 (0.53), located on Appendix A, Figure 4.6, 4.12 and 4.35 respectively. These habitat parcels refer to hedgerows in all groups and in group 11 to a monoculture in addition to hedgerows as detailed in Table 9.1. Group 23 and 96 are both located in the Hornsea Three onshore cable corridor, whilst group nine and 11 were within the survey area but outside the Hornsea Three onshore cable corridor.
- 3.4.2.12 No barbastelle activity was recorded at 29 groups: (3, 5, 8, 14, 18, 19, 24, 25, 28, 31, 35, 40, 42, 46, 49, 54, 55, 58, 63, 67, 68, 69, 72, 73, 78, 81, 84, 85 and 89).
- 3.4.2.13 According to the literature (Zeale *et al.* 2012; Russo *et al.*, 2007), barbastelles generally emerge from their roosts between 19 and 36 minutes after sunset. Barbastelle was first recorded later than 36 minutes after sunset in 54 of the 55 groups where the species was recorded, indicating that these bats had commuted from elsewhere and were not roosting nearby.
- 3.4.2.14 However, there was one habitat parcel group where barbastelle was first recorded less than 36 minutes after sunset, suggesting a possible roost nearby. This was group 16, with a first record approximately 25 minutes after sunset.







Brown long-eared bat

3.4.2.15 Chart 3.4 shows the activity score of brown long-eared bat in locations where this species was recorded.

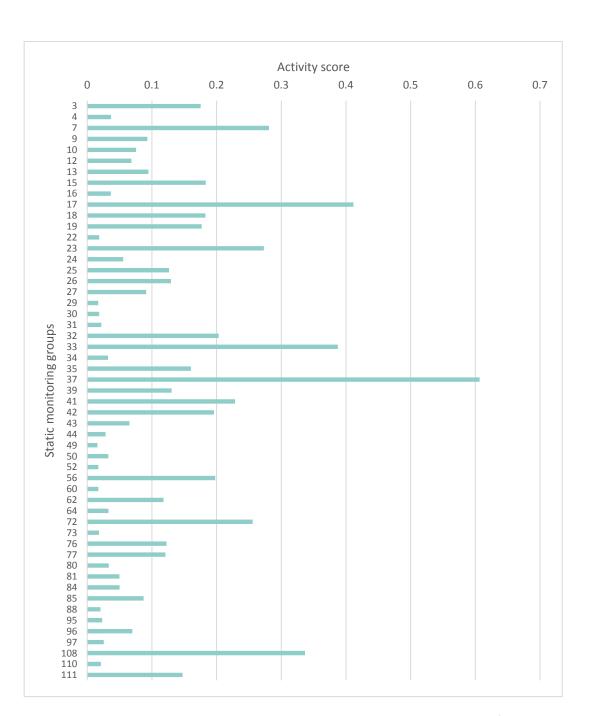


Chart 3.4: Activity scores of brown long-eared bats recorded during the static monitoring surveys (absences not shown).

- 3.4.2.16 Brown long-eared bats were recorded in 53 of the 84 groups. Activity levels of brown long-eared bats were generally very low. However, the chart does highlight several habitat parcel groups with higher activity: groups 17 (activity score: 0.41), 33 (0.39), 37 (0.61) and 108 (0.34). Groups 17, 33 and 37 are all hedgerows detailed in Appendix C: Bat habitat suitability assessment results. Group 108 is part of the new re-route and so no habitat suitability assessment was made. Group 17 and 108 are found within the Hornsea Three onshore cable corridor, whereas groups 33 and 37 were within the survey area but outside of the Hornsea Three onshore cable corridor.
- 3.4.2.17 No brown long-eared bats were recorded at 31 groups (1, 2, 5, 6, 8, 11, 14, 20, 21, 28, 36, 40, 46, 54, 55, 57, 58, 59, 61, 67, 68, 69, 75, 78, 79, 83, 86, 87, 89, 102 and 103).
- 3.4.2.18 Brown long-eared bats generally emerge from their roosts between 20 and 52 minutes after sunset (Jones & Rydell, 1994; Razgour *et al.* 2011). Brown long-eared bat was first recorded later than 52 minutes after sunset in 49 of the 53 groups where this species was recorded.
- 3.4.2.19 However, there were four habitat parcel groups in which brown long-eared bat was first recorded less than 52 minutes after sunset, suggesting possible roosts nearby. These are:
 - Group 9 first record approximately 50 mins after sunset;
 - Group 12 first record approximately 45 mins after sunset;
 - Group 17 first record approximately 50 mins after sunset; and
 - Group 18 first record approximately 50 mins after sunset.







Noctule

3.4.2.20 Chart 3.5 shows noctule activity score in locations where this species was recorded.

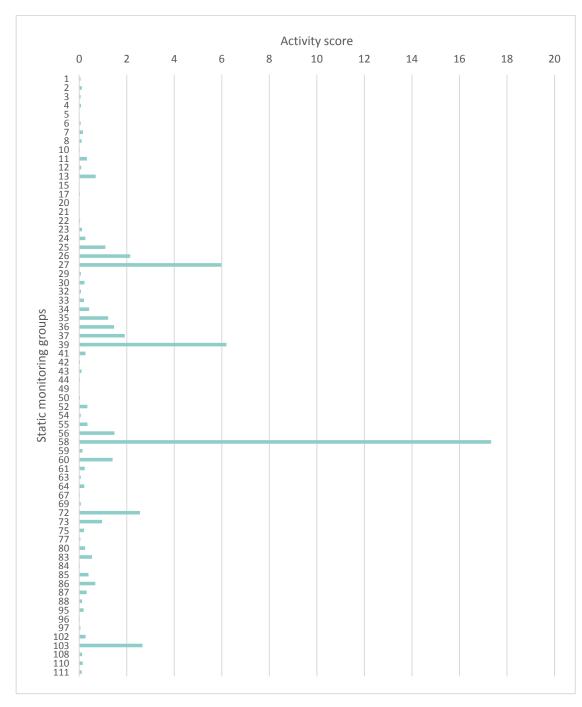


Chart 3.5: Activity scores of noctule recorded during the static monitoring surveys (absences not shown).

- 3.4.2.21 Noctule was recorded in 68 of the 84 groups. Noctule activity scores were highly variable along the route. The activity level was generally very low; however, the chart does highlight several locations with a low activity level: groups 27 (activity score: 5.98), 39 (6.2) and 58 (17.3). The activity at habitat parcel group 58, which is located close to the River Wensum, the activity observed was from just one visit. Group 27 and 39 consist of a hedgerow and group 58 contains a hedgerow and a small amount of woodland. Group 27 and 58 both occur within the Hornsea Three onshore cable corridor, whereas group 39 was within the survey area but outside of the Hornsea Three onshore cable corridor.
- 3.4.2.22 No noctule activity was recorded at 16 groups (9,14,16,18,19,28,31,40,46,62,68,76,78,79,81 and 89).
- 3.4.2.23 Noctules generally emerge from their roosts between 16 minutes before sunset and 31 minutes after sunset (Jones & Rydell, 1994; Jones, 1995; Kronwitter, 1988). Noctule was first recorded more than 30 minutes after sunset in 40 of the 68 groups where this species was recorded.
- 3.4.2.24 In 28 other groups, noctule was first recorded during the known emergence times of this species (or in some cases earlier i.e. 16 minutes or more before sunset), suggesting possible roosts nearby. These are shown in Table 3.5 and include group 86, where the presence of a noctule roost was confirmed during the emergence / re-entry survey (see Appendix A, Figure 7.1 to 7.49 and Figure 8.1).

Table 3.5: Timing of first noctule record.

	Habitat Parcel Group
First record more than 20mins before sunset	32, 103
First record 10 - 20mins before sunset	8, 24, 26, 27, 35, 72, 102, 110
First record between 10mins before sunset and sunset	33, 36, 37, 39, 52, 60, 73
First record between sunset and 10mins after	49, 55, 86 (confirmed roost of noctule), 108
First record 10 – 20mins after sunset	10, 20, 23, 35, 56, 58, 83, 87







Soprano pipistrelle

3.4.2.25 Chart 3.6 shows activity score of soprano pipistrelle in locations where this species was recorded.

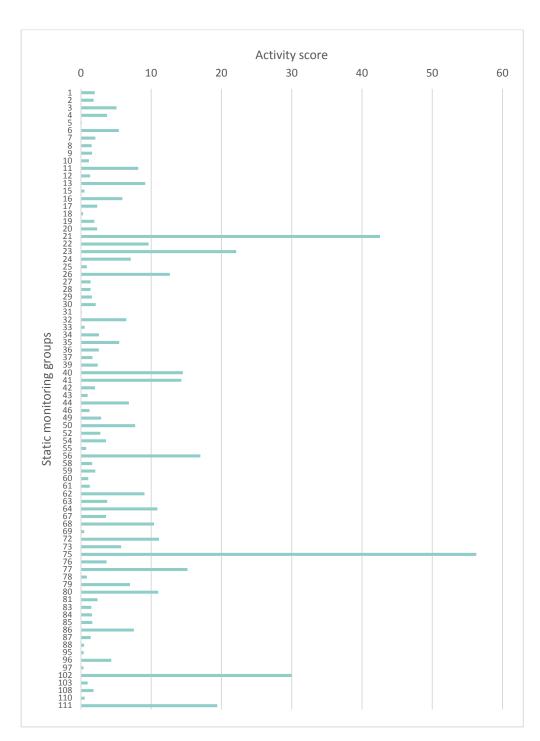


Chart 3.6: Activity scores of soprano pipistrelle recorded during the static monitoring surveys (absences not shown).

- 3.4.2.26 Soprano pipistrelle were recorded in 82 locations out of 84 that could be surveyed at least once. Activity levels were very low in 53 of the habitat parcel groups and low in 27. The two locations with the highest activity scores comprised group 21 with a medium activity score of 42.57 and Group 75 with a high activity score of 56.27. This was to be expected given that Group 75 is within approximately 600 m of the confirmed soprano pipistrelle roost at tree BA1FT23 (Appendix A, Figure 7.39). Both group 21 and 75 consist of hedgerows, group 21 is within the Hornsea Three onshore cable corridor and group 75 was within the survey area but outside of the Hornsea Three onshore cable corridor.
- 3.4.2.27 No soprano pipistrelle activity was recorded at two groups (14 and 89).
- 3.4.2.28 The literature suggests that soprano pipistrelles generally emerge from their roosts between 20 and 55 minutes after sunset (Davidson-Watts & Jones, 2006; Swift, 1980). Soprano pipistrelle was first recorded more than 55 minutes after sunset in 19 groups out of the 82 groups where this species was recorded. In the remaining 63 groups, soprano pipistrelle was recorded during known emergence times, suggesting that roosts may exist nearby. These groups are listed in Table 3.6 and include groups 29 and 102, where the presence of a roost of soprano pipistrelle was confirmed during the emergence / re-entry survey (see Appendix A, Figure 7.39).

Table 3.6: Timing of first record of soprano pipistrelle.

	Habitat Parcel Group
First record more than 20 mins before sunset	64
First record between 20 mins before sunset and sunset	32, 55, 68, 77, 84, 102 (confirmed soprano pipistrelle roost nearby)
First record between sunset and 10 mins after	10, 13, 17, 19, 20, 21, 23, 24, 26, 29 (soprano pipistrelle roost nearby), 44, 59, 60, 67, 80, 86, 87, 103, 111
First record between 10 and 20 mins after sunset	4, 8, 9, 11, 12, 16, 22, 25, 52, 62, 73 (confirmed soprano pipistrelle roost nearby), 88
First record between 20 and 55 mins after sunset	1, 27, 30, 31, 34, 35, 36, 37, 39, 40, 41, 49, 56, 61, 72, 75, 76, 78, 79, 81, 95, 96, 97, 108, 110







Leisler's bat

3.4.2.29 Chart 3.7 shows the activity scores of Leisler's bat in locations where it was recorded.

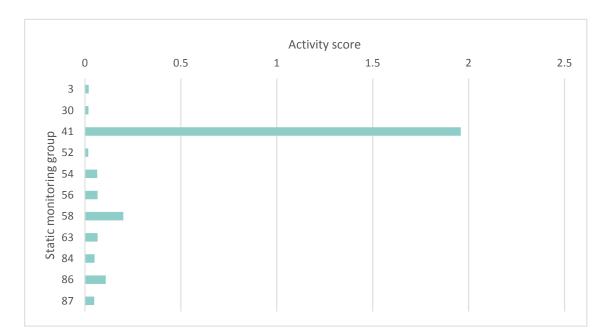


Chart 3.7: Activity scores of Leisler's bat recorded during the static monitoring surveys (absences not shown).

- 3.4.2.30 Leisler's was recorded in 11 of the 84 groups. A very low level of Leisler's bat activity was generally recorded. However, group 41 did record a higher activity level (albiet still very low) with an activity score of 1.96, it contains three hedgerows and an area of woodland which intercepts the Hornsea Three onshore cable corridor. Leisler's bat generally emerge from their roosts between 8-27 minutes after sunset (Jones & Rydell, 1994; Waters *et al.*, 1999). The first call of this species was recorded more than 27 minutes after sunset in all groups where it occurred, which does not point towards the presence of roosts of Leisler's bat in the vicinity of the static monitoring locations.
- 3.4.2.31 No Leisler activity was recorded at 73 groups (1 ,2 ,4-29, 31, 33, 34, 35, 36, 37, 39, 40, 42, 43, 44, 46, 49, 50, 55, 59, 60, 61, 62, 64, 67, 68, 69, 72, 73, 75, 76, 77, 78, 79, 80, 81, 83, 85, 88, 89, 95, 96, 97, 102, 103, 108, 110 and 111).

Serotine

3.4.2.32 Chart 3.8 shows serotine activity score in locations where this species was recorded.

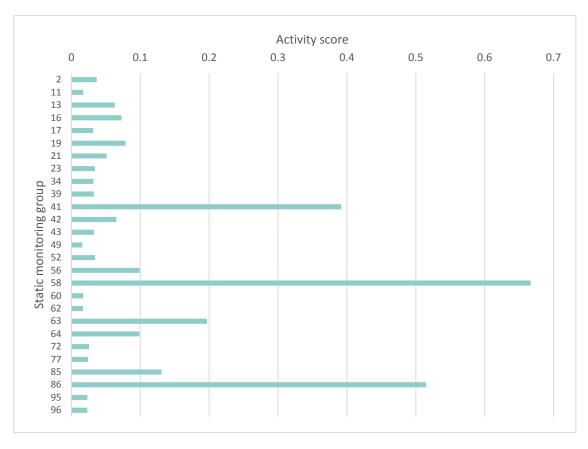


Chart 3.8: Serotine activity scores recorded during the static monitoring surveys (absences not shown).

- 3.4.2.33 Serotine was recorded in 27 of the 84 groups. A very low serotine activity level was generally observed. However, the graph does highlight several locations with slightly higher activity levels (albeit still very low). These are groups 41 (activity score: 0.39), 58 (0.67) and 86 (0.51). Groups 41 and 58 both contain hedgerows and an area of woodland and both intercept the onshore cable corridor. Group 86 is a woodland of high activity and is located within the Hornsea Three onshore cable corridor.
- 3.4.2.34 No serotine activity was recorded at 57 groups (1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 18, 20, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 40, 44, 46, 50, 54, 55, 59, 61, 67, 68, 69, 73, 75, 76, 78, 79, 80, 81, 83, 84, 87, 88, 89, 97, 102, 103, 108, 110 and 111).







3.4.2.35 Serotine generally emerge from their roosts between 4 and 19 minutes after sunset (Catto *et al.*, 1995). The first call of this species was recorded more than 20 minutes after sunset in all 27 groups where it occurred, suggesting that the individuals that were recorded did not emerge from a roost located in the vicinity of the static monitoring locations.

Nathusius' pipistrelle

3.4.2.36 Chart 3.9 shows Nathusius' pipistrelle activity score in locations where this species was recorded.

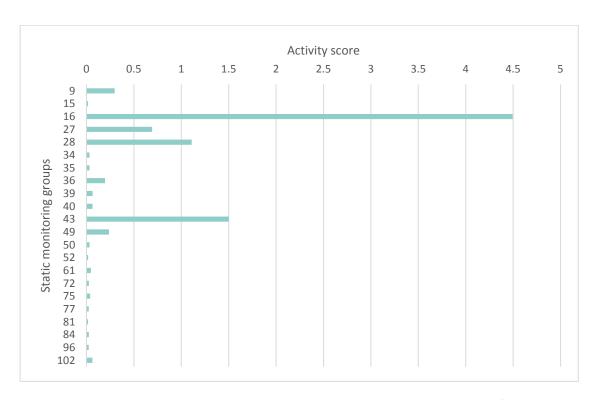


Chart 3.9: Activity scores of Nathusius' pipistrelle recorded during the static monitoring surveys (absences not shown).

- 3.4.2.37 Nathusius' pipistrelle was recorded in 22 of the 84 groups. The activity score of Nathusius' pipistrelle was fairly variable where these species occurred, although overall the activity level was very low. However, the graph does highlight several locations with slightly higher activity levels (albeit still very low). These are groups 16 (activity score: 4.49), 28 (1.11) and 43 (1.5), the former and latter of these groups occur in within the Hornsea Three onshore cable corridor where group 28 borders the edge of the Hornsea Three onshore cable corridor. All groups contain hedgerows although group 16 also contains woodland.
- 3.4.2.38 No Nathusius' pipistrelle activity was recorded at 62 groups: (1-8, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, 31, 32, 33, 37, 41, 42, 44, 46, 54, 55, 56, 58, 59, 60, 62, 63, 64, 67, 68, 69, 73, 76, 78, 79, 80, 83, 85, 86, 87, 88, 89, 95, 97, 103, 108, 110 and 111).

- 3.4.2.39 The literature suggests that Nathusius' pipistrelles emerge from their roosts between 10 and 50 minutes after sunset (Gelhaus & Zahn, 2010). Nathusius' pipistrelle was first recorded more than 50 minutes after sunset in 20 out of the 22 groups where this species was present.
- 3.4.2.40 However, Nathusius' pipistrelle was recorded during known emergence times in the remaining two locations, suggesting possible roosts nearby. These are:
 - Group 16 first record approximately 30 mins after sunset; and
 - Group 49 first record approximately 20 mins after sunset.
- 3.4.2.41 Group 16 is also the location where the highest activity of soprano pipistrelle was recorded during the static monitoring surveys and it is possible that the area is important for the pipistrelle genus as a whole, suggesting that there could be a Nathusius' pipistrelle roost nearby. Group 16 is also close to a soprano pipistrelle roost recorded in 2017 which also explains the high activity level.

3.4.3 Transect surveys

Overview

- 3.4.3.1 Transect surveys were undertaken at 76 groups and were divided in 168 legs, each essentially corresponding to one habitat feature.
- 3.4.3.2 Over 10,600 bat passes were recorded, and activity levels per habitat parcel group are summarised in Error! Reference source not found.7. A summary of the transect survey data for each group is shown in Appendix G: Summary of transect data survey results, Table G.5.

Table 3.7: Distribution of bat activity levels per group recorded during the transect surveys.

Overall activity level	No Activity	Very low	Low	Medium	High	Very high	Total
Number of habitat parcel groups	1	0	14	18	31	12	76







3.4.3.3 Additionally, the activity score was calculated for each transect leg, see Table 3.8 below and Appendix A, Figures 5.1 to 5.36. On Figures 5.1 to 5.36 (Appendix A), transect legs are labelled according to the habitat parcel group to which they belong and the number of the leg within this group (e.g. leg 2/1 corresponds to leg 1 in habitat parcel group 2).

Table 3.8: Distribution of bat activity levels per leg recorded during the transect survey.

Overall activity level	No Activity	Very low	Low	Medium	High	Very high	Total
Number of legs	9	13	38	34	37	37	168

- Overall, eight bat species and three groups of species that cannot be distinguished on the basis of their calls were identified during the transect surveys. These were:
 - Common pipistrelle;
 - Nathusius' pipistrelle;
 - Soprano pipistrelle;
 - Unidentified bats belonging to the pipistrelle genus;
 - Unidentified bats belonging to the Myotis genus;
 - Brown long eared bat;
 - Barbastelle;
 - Serotine;
 - Noctule;
 - Leisler's bat; and
 - Unidentified bats belonging to the noctule / serotine / Leisler's bat guild.
- 3.4.3.5 Chart 3.10 shows the distribution of species-richness recorded at each survey location during the transect surveys.

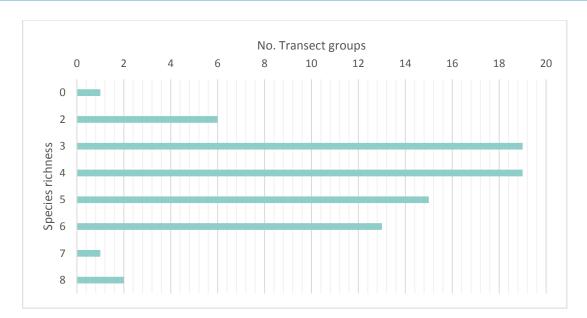


Chart 3.10: The species richness observed across transect groups.

- 3.4.3.6 Habitat parcel groups where the largest numbers of species were recorded were groups 7, 41 (eight species/species groups) and group 56 (seven species/species groups). The location of these groups is highlighted on Appendix A, Figure 5.1 to 5.36. The locations with the fewest species were groups 5, 27, 36, 68, 79 and 85 with just two species/species groups. These locations are also shown on Appendix A, Figure 5.1 to 5.36. No bats were observed at group 88.
- 3.4.3.7 Chart 3.11 shows the number of locations at which each of the 11 species or species groups were recorded during the transect surveys.







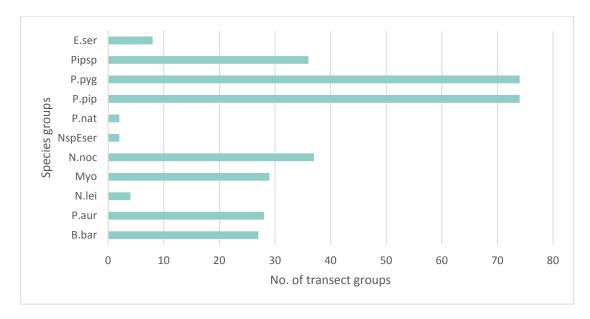


Chart 3.11: Number of transect groups at which each bat species was recorded during the transect surveys.

Chart codes: E.ser – serotine, Pipsp – pipistrelle species, P.pyg – soprano pipistrelle, P.pip – common pipistrelle, P.nat – Nathusius' pipistrelle, NspEser – noctule, Leisler's and serotine guild, N.noc – noctule, Myo – *Myotis* species, N.lei – Leisler's bat, P.aur – brown long-eared bat, and B.bar – barbastelle

- 3.4.3.8 A more detailed analysis of the transect data is given below for the four species of higher conservation importance: barbastelle, brown long-eared bat, noctule and soprano pipistrelle. All are Species of Principal Importance, whilst the barbastelle is also listed in Annex II of the EEC/92/43 Habitats Directive. A detailed analysis is also given for the three species least frequently recorded during the static monitoring survey: Leisler's bat, serotine and Nathusius' pipistrelle.
- 3.4.3.9 This further analysis includes a discussion of the presence of possible bat roosts near the transect (based on the time elapsed between the expected emergence of each species and the time when bats were first recorded each night). The analysis is based on data collected at dusk, as due to multiple factors the timing of return to roost at dawn can be much more variable and the results are unlikely to provide an accurate picture of potential bat roosts nearby.

Barbastelle

3.4.3.10 Chart 3.12 shows the overall barbastelle activity score recorded during the transect survey in each habitat parcel group where this species was present. Barbastelle activity levels are also shown on Appendix A, Figures 6.1 to 6.36.

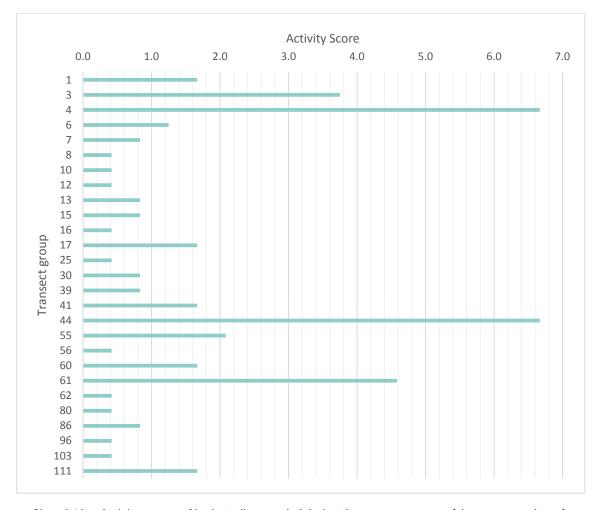


Chart 3.12: Activity scores of barbastelle recorded during the transect surveys (absences not shown).

- 3.4.3.11 Barbastelle was recorded in 27 of the 76 groups. The overall activity level of barbastelle was very low to low. Two locations recorded slightly higher activity level (but still low): these were groups 4 which contains two hedgerows (activity score: 6.7) and 44 which is made up of woodland (activity score: 6.7). The woodland occurs within the Hornsea Three onshore cable corridor and group 4 is within the survey area but outside of the Hornsea Three onshore cable corridor.
- 3.4.3.12 No barbastelle activity was recorded at 49 groups: (2, 5, 9, 11, 14, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 42, 43, 49, 50, 52, 54, 58, 59, 64, 68, 69, 72, 73, 75, 76, 78, 79, 81, 84, 85, 87, 88, 95, 97, 102, 108 and 110).
- 3.4.3.13 Table 3.9 below shows the barbastelle activity score and level in each of the 27 groups and individual legs at which barbastelle was recorded. It shows that the activity level overall was very low to low.







Table 3.9: Activity scores of barbastelle per habitat parcel and leg at which barbastelle was recorded.

Habitat parcel group number	Leg number	Activity	score per leg	Overall act	ivity score for the habitat parcel group
1	1	3.3	Very low	1.7	Very low
3	1	20.0	Low	3.8	Very low
J	2	2.5	Very low	5.0	very low
4	1	33.4	Medium	6.7	Low
6	3	12.5	Low	1.3	Very low
7	1	3.3	Very low	0.8	Very low
1	3	2.0	Very low	0.0	very low
8	2	2.5	Very low	0.4	Very low
10	2	4.0	Very low	0.4	Very low
12	1	1.1	Very low	0.4	Very low
13	2	10.0	Low	0.8	Very low
15	2	5.0	Very low	0.8	Very law
15	3	5.0	Very low	0.0	Very low
16	3	2.5	Very low	0.4	Very low
17	3	10.0	Low	1.7	Very law
17	2	3.3	Very low	1.7	Very low
25	3	3.3	Very low	0.4	Very low
30	2	5.0	Very low	0.8	Very low
39	6	10.0	Low	0.8	Very low
41	1	5.0	Very low	1.7	Very law
41	2	8.6	Low	1.7	Very low
44	1	13.3	Low	6.7	Low
55	1	8.33	Low	2.1	Very low
56	2	2.22	Very low	0.4	Very low
60	1	3.33	Very low	1.7	Very low
00	3	6.67	Low	1,7	very low
	1	6.67	Low		
61	2	3.33	Very low	4.6	Very low
	3	10.00	Low		
62	2	1.67	Very low	0.4	Very low
80	3	3.3	Very low	0.4	Very low
86	1	6.7	Low	0.8	Vorylow
00	3	4.0	Very low	0.0	Very low
96	2	1.4	Very low	0.4	Very low
103	1	2.5	Very low	0.4	Very low
111	1	3.8	Very low	4.7	Veryley
111	2	2.5	Very low	1.7	Very low







Brown long-eared bat

3.4.3.14 Chart 3.13 shows brown long-eared bat activity score in each of the 28 groups in which this species was recorded during the transect surveys.

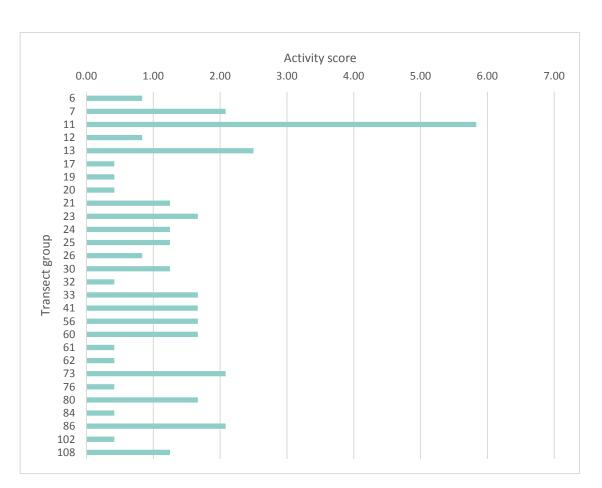


Chart 3.13: Activity scores of brown long-eared bat during the transect surveys (absences not shown).

3.4.3.15 Brown long-eared bat was recorded in 27 of the 76 groups. Overall the activity score of brown long-eared bat was very low in the 27 locations where it occurred except in group 11 where a low activity level (activity score: 5.8) was recorded. When considering activity scores at the transect leg level, 13 transect legs recorded low activity, one recorded a high activity level (leg 5, group 86, where an activity score of 60.00 was recorded) and the remainder of legs recorded very low activity. The leg with high activity intercepts the Hornsea Three onshore cable corridor.

3.4.3.16 No activity for brown long-eared bat was recorded in 49 groups: (1, 2, 3, 4, 5, 8, 9, 10, 14, 15, 16, 22, 27, 28, 29, 31, 34, 35, 36, 37, 38, 39, 42, 43, 44, 46, 49, 50, 52, 55, 58, 59, 64, 68, 69, 72, 75, 78, 79, 81, 85, 87, 88, 95, 96, 97, 103, 110 and 111).

Noctule

3.4.3.17 Chart 3.14 shows noctule activity score in each of the 37 groups where this species was recorded.

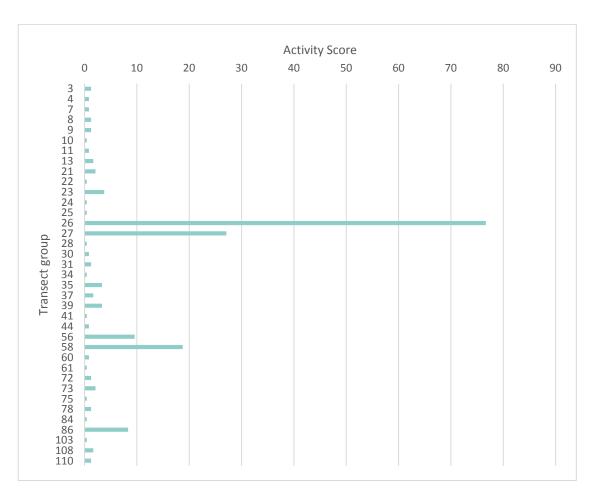


Chart 3.14: The location and activity score of noctule (absences not shown).

3.4.3.18 Noctule was recorded in 37 of the 76 groups. The activity of noctule was highly variable in the survey area, although the activity level was in general very low. However, Chart 3.14 does highlight several groups where the activity was higher. These are groups 26 which recorded a high activity level (76.7) and 27 which recorded a medium activity level (27.1). Both groups are adjacent to the River Bure and both are located within the Hornsea Three onshore cable corridor.

3.4.3.19 No noctule activity was recorded in 39 groups: (1, 2, 5, 6, 12, 14, 15, 16, 17, 19, 20, 29, 32, 33, 36, 38, 42, 43, 49, 50, 52, 55, 59, 62, 64, 68, 69, 76, 80, 81, 82, 85, 87, 88, 95, 96, 97, 102 and 111).







Soprano pipistrelle

3.4.3.20 Chart 3.15 below shows soprano pipistrelle activity score in each of the 74 locations where this species was recorded (i.e. all habitat parcel groups that could be surveyed).

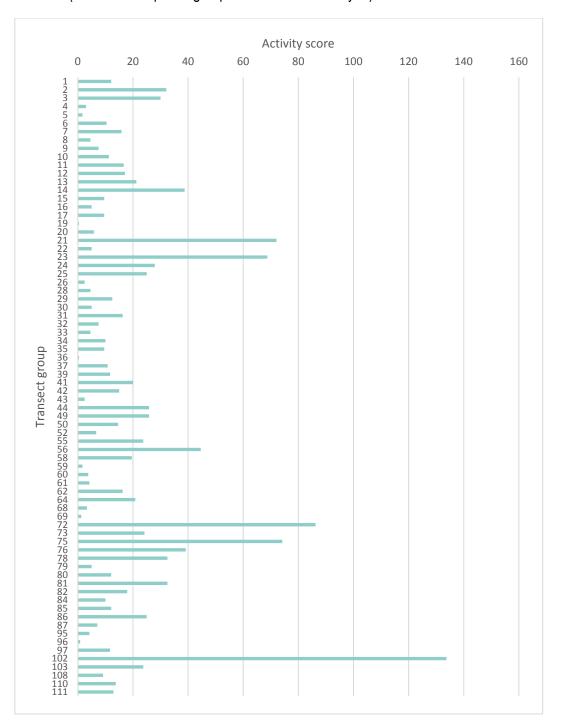


Chart 3.15: Activity scores of soprano pipistrelle recorded during the transect surveys (absences not shown).

- 3.4.3.21 Soprano pipistrelle was recorded in 74 of the 76 groups. The soprano pipistrelle was widespread during the transect surveys. Very low bat activity levels were recorded in 23 of the groups, and low bat activity levels in an additional 42 groups. Higher activity levels were recorded at groups 102 (133.8, corresponding to a very high activity level) and groups 21, 23, 72 and 75 (72.1, 68.8, 86.3 and 74.2, corresponding to high activity levels). Groups 21, 23 and 72 are found in the Hornsea Three onshore cable corridor and group 75 is located within the survey area, but outside of the Hornsea Three onshore cable corridor. When split further into caterogising legs, the highest activity score per leg is group 102 leg 1 which is caterogised as very high whereas leg 2 is caterogised as very low, this may be because leg 1 is closer to the confirmed soprano roost (see Appendix A, Figures 5.1 to 5.36 and Figures 7.1 to 7.49). Group 102 is located within the Hornsea Three onshore cable corridor.
- 3.4.3.22 No soprano pipistrelle activity was recorded in two groups (27 and 88).
- 3.4.3.23 Groups 102, 72 and 75 were within approximately 200, 700 and 800 m, respectively, of the confirmed soprano pipistrelle roost at tree BA1FT23 (located on Appendix A, Figure 7.39).

Leisler's bat

3.4.3.24 Leisler's bat was recorded at four locations during the transect surveys. Overall the activity level of Leisler's bat was very low at all groups where it occurred. The location with the highest activity score per leg (10.0) was leg 3 in group 42.

Serotine

.4.3.25 Serotine were recorded at eight locations of the 76 groups within the survey area. Overall the activity level of serotine was very low across all eight groups. When transect legs are considered, the activity level only increases slightly with seven of the eight groups remaining very low; the eight group, Group 42 increased only slightly to low (leg 2, 13.3).

Nathusius' pipistrelle

3.4.3.26 Nathusius' pipistrelle was recorded at two locations only: groups 8 and 19. The activity level was very low in both locations overall and when transect legs are considered.

Comparison of activity levels recorded during the static monitoring surveys and the transect surveys

3.4.3.27 Activity levels recorded during the static monitoring surveys and the transect surveys were compared, see Table 3.10. The transect surveys recorded a greater number of areas with medium, high or very high activity levels. This is likely to be a result of the fact that transect surveys were mostly undertaken in summer, when bat activity is greater.







Table 3.10: Difference between activity scores of static monitoring and transects surveys of groups.

Overall activity level	No Activity	Very low	Low	Medium	High	Very high	Total
Number of groups from static monitoring	2	12	46	15	8	1	84
Number of groups from transects	1	0	14	18	31	12	76

Comparison of activity levels within the survey area and within areas of similar habitat in Norfolk.

3.4.3.28 The Norfolk Bat Survey (NBS) (Newson *et al.*, 2014) provides valuable information on bat occurrence and activity in Norfolk. It details the species recorded in the county, the number of locations at which they were observed and the levels of activity (in passes) observed. The results of the NBS can be compared with the static monitoring data collected for the survey area since both sets of data were collected using similar static monitoring devices (SM2Bat+ and SM4-FS). Table 3.11 below compares bat occurrence and activity recorded at the 448 NBS locations with those recorded at the 84 static monitoring locations where data could be collected within the survey area.

Table 3.11: Comparison of bat occurrence and activity as recorded by the NBS (Newson *et al.*, 2014) and during the static monitoring survey along Hornsea Three survey area.

	No	rfolk Bat Survey D	ata	Horr	nsea Three Survey	Data
Species/ species groups	Number of passes recorded during the NBS	Number of passes per survey night and per site	Percentage of sites with those species from the NBS (from n=448)	Number of passes recorded during the static monitoring survey	Number of passes per survey night and per site	Percentage of sites with those species from static monitoring surveys (n=84)
P.pip	153,580	114.27	94%	56,567	98.72	98%
P.pyg	81,894	60.93	89%	20,698	36.12	98%
P.nat	230	0.17	21%	447	0.78	26%
N.noc	2,899	2.16	53%	1,796	3.13	81%
E.ser	537	0.40	22%	89	0.16	32%
N.lei	101	0.08	8%	78	0.14	13%
P.aur	1,191	0.89	46%	278	0.49	63%
B.bar	1,019	0.76	36%	420	0.73	65%
Pipsp.	11,891	8.85	Not given	1,273	2.22	74%
Msp.	4,088	3.04	Not given	561	0.98	85%
NspEser	1,398	1.04	Not given	346	0.60	69%
Nsp	No covered	Not covered	Not covered	58	0.10	33%

Species codes: Pipsp – pipistrelle species, P.pyg – soprano pipistrelle, P.pip – common pipistrelle, P.nat – Nathusius' pipistrelle, P.aur – brown long-eared bat, NspEser – noctule, Leisler's and serotine guild, Nsp – *Nyctalus* species, N.noc – noctule, N.lei – Leisler's bat, Msp – *Myotis* species, E.ser – serotine and B.bar - barbastelle







- 3.4.3.29 Once standardised per site and per survey night, activities recorded in Norfolk as a whole and within the survey area were broadly similar, although the NBS recorded a larger activity of common pipistrelle, unidentified pipistrelle, soprano pipistrelle and *Myotis* species. Activity indices recorded by the two studies were broadly comparable, even though there were some small differences for some species. The percentage of locations at which species belonging to the *Pipistrellus* genus (common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle and unidentified *Pipistrellus* species) were recorded was very similar in both surveys.
- 3.4.3.30 Noctule, serotine and Leisler's bat occurred at a slightly higher percentage of sites surveyed as part of this work than as part of the NBS. This could be explained by the more rural character of the survey area compared to the NBS locations.
- 3.4.3.31 Brown long-eared bat and barbastelle were recorded at a greater percentage of locations within the survey area than as part of the NBS. As mentioned above in paragraph 3.4.3.30, this is probably due to the more rural character and the greater number of woodland habitats that are favoured by these species.
 - Important areas for bats within the survey area.
- 3.4.3.32 High to very high levels of activity were recorded during both the static monitoring survey and the transect survey at nine of the habitat parcel groups. These groups were identified as being important areas within the survey area for foraging and commuting bats, and are listed in Table 3.12 and can be seen in Appendix A, Figures 4.1 to 4.36 and 5.1 to 5.36.
- 3.4.3.33 Groups 2, 35 and 75 are located within the survey area, but outside of the Hornsea Three onshore cable corridor, whereas groups 16, 26, 56, 86 and 102 are found within the Hornsea Three onshore cable corridor.

Table 3.12: Habitat parcel groups identified as particularly important for foraging and commuting bats within the survey area.

Group number	Activity level	Habitats present nearby	Importance to bats
2	High (both static monitoring and transect)	Open arable land and hedgerows	Direct commuting routes within the arable landscape.
16	High (both static monitoring and transect)	Young woodland, hedgerows and arable land	Foraging areas for bats within the immediate vicinity of the cable route.
26	High (static monitoring) – Very High (transect)	Pasture, arable, hedgerow, woodland, buildings, river floodplain and the River Bure	Foraging and commuting along the river corridor. Likely presence of bat roosts in houses within the immediate vicinity of the cable route.
35	High (both static monitoring and transect)	Arable, hedgerow, farmland ponds	Foraging and commuting corridors possibly associated with roosts in nearby buildings
56	High (static monitoring) – Very High (transect)	Pasture, woodland, hedgerow, river floodplain, the River Wensum	Foraging and commuting along the river corridor. Likely presence of bat roosts in the houses within the immediate vicinity of the cable route.
75	High (static monitoring) and Very High (transect)	Hedgerow, pasture	Foraging and commuting routes for bats, a soprano pipistrelle roost was found nearby (Appendix A, Figure 7.39).
86	High (static monitoring) – Very High (transect)	Woodland, hedgerow, arable.	Foraging and commuting routes for bats, a large noctule roost was found within the woodland (Appendix A, Figure 7.43 and Figure 8.1)
102	High (static monitoring) and Very High (transect)	Woodland, hedgerow, pasture, river floodplain, the River Yare	Foraging and commuting routes for bats, a soprano pipistrelle roost was found nearby (Appendix A, Figure 7.39). Likely presence of bat roosts in the large farm complex nearby.







4 Bat roost survey

4.1 Methodology

4.1.1 Survey area

- 4.1.1.1 The initial survey area for the PGLRA and emergence / re-entry surveys was defined as including all land within the Hornsea Three PEIR onshore cable corridor search area and the alternative routes considered as shown on Appendix A, Figure 1.1.
- 4.1.1.2 Within this initial survey area, areas likely to support roosting bats were identified from the PEA (RPS, 2016) and the HSA and this informed the locations for the PGLRA.

4.1.2 General survey approach

- 4.1.2.1 A PGLRA was undertaken of all trees with bat potential in the areas identified for survey where land access was permitted (see section 4.3). The PGLRA included a search from ground level for bats, signs of bats or their roosts, and an assessment of the potential of each tree to support maternity, hibernation and transitional roosts. An overall potential of the tree to support roosting bats was assigned based on the highest roost type (maternity, transition or hibernation) potential. Each tree with potential (low, moderate or high) was given a unique identification code² and the need for further survey considered. Trees with negligible potential to support roosting bats were not mapped or described.
- 4.1.2.2 The survey methodology used follows good practice guidelines (Collins ed., 2016) and is given in more detail below.

4.1.3 Preliminary ground level roost assessment of trees

- 4.1.3.1 PGLRAs were undertaken between February June and October 2017. A detailed and systematic inspection of the exterior of the tree was undertaken to look for potential roosting features (PRF) that could be used by bats. Binoculars and a high-powered torch were used to assist the assessment. Potential roosting opportunities searched for include:
 - Natural crevices and holes;
 - Woodpecker and rot holes;
 - Loose bark, splits and cracks;
 - Bird and bat boxes; and
 - Presence or absence of dense ivy or dense epicormic growth.

- 4.1.3.2 A photograph of each tree was taken and its location was recorded on a GPS-enabled mapping device. Information collected on the tree included species, diameter at breast height, age, condition and height.
- 4.1.3.3 Further details were recorded on each PRF, including a description of the PRF, height of the feature above the ground, orientation of the feature in relation to the trunk and the orientation of the access to the feature.
- 4.1.3.4 Where present, signs of bats were recorded including bat droppings in and around the PRF, odours, audible squeaking and staining below the PRF. Accessible PRFs were inspected using an endoscope to further define the level of potential for roosting bats.
- 4.1.3.5 Trees were assigned a level of potential to support a bat roost based upon the criteria detailed in Table 4.1. The type of potential bat roost was defined in accordance with Table 4.2.

Table 4.1: Habitat suitability for roosting bats.

Potential	Determining Roosting Potential (adapted from Collins ed., 2016)
Negligible	A tree with no potential roosting sites, unlikely to be used by roosting bats.
	A tree with one or more potential roosting sites that can be used by individual bats opportunistically. PRFs would be seen as having limited roosting potential.
Low	Or a tree of a sufficient size and age to contain PRFs but none is seen from the ground.
	Habitat connectivity from the PRFs to the wider landscape is generally poor. The roosting habitat is generally located in an area with high disturbance or lighting.
Moderate	A tree with one or more potential roosting sites that could be used by bats due to their size, shelter, protection, condition and surrounding habitat, but unlikely to support a roost of high conservation status (i.e. maternity or hibernation roost). Based on these conditions, the PRFs would be of a sufficient size, shelter, protection and connectivity to foraging and commuting habitat to support bats.
	Connectivity from the roost site to the wider landscape would be moderate, as would the level of disturbance and lighting.
High	A tree with one or more PRFs that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, condition and surrounding habitat. The tree would generally be veteran, sensing or dead and would have multiple PRFs that would be relatively large and sheltered.
	Connectivity to the landscape, with particular reference to foraging and commuting habitat would be high.

² It is noted that tree identification code numbers are not continuous along the route due to changes in survey boundary and land access throughout the study.







Table 4.2: Roost type definitions.

Roost Type	Definition of Roost Types
Transitional	Day roosts: Where bats shelter as individuals or small groups of males but are rarely found at night. Night roosts: Where bats shelter at night as individuals or a whole colony, rarely used in the day. Feeding roost: Used by individuals or small groups for feeding, rarely used during the day. Occasional roost: Used by a few individuals or small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation. Satellite roost: An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females or small groups of breeding females throughout the breeding season.
Maternity roost	Mainly dominated by females where they give birth to young and raise these. Maternity roost characteristic preferences differ between species, however warm conditions are generally favoured.
Hibernation roost	Where bats are found individually or in groups during winter. Hibernation roosts need to have a stable cool temperature and high humidity.

- 4.1.3.6 Each tree was classified according to the highest suitable PRF identified during the inspection. The potential of the tree was increased where there were a number of suitable features present i.e. multiple area of lifted bark or several cavities.
- 4.1.3.7 Trees identified during the PGLRA as having overall moderate or high overall potential to support a bat roost were subsequently surveyed for bats emerging at dusk or re-entering a roost at dawn (see below). Trees identified during the PGLRA as having negligible or low potential to support a bat roost were not further surveyed.

4.1.4 Emergence / re-entry survey

Field survey

- 4.1.4.1 Emergence / re-entry surveys were carried out to ascertain the presence or likely absence of roosting bats within trees which were identified as having a moderate or high potential to support roosting bats during the PGLRA.
- 4.1.4.2 For moderate potential trees, one dusk emergence and one dawn re-entry survey was undertaken, spaced at least two weeks apart. For trees identified as having a high potential to support roosting bats, one dusk survey, a separate dawn survey and a third dusk or dawn survey were undertaken. These were also spaced at least two weeks apart.

- 4.1.4.3 The emergence surveys began 15 minutes before sunset and ended 90 minutes after sunset, in accordance with the good practice guidelines (Collins ed., 2016). Where late-emerging species were identified as likely to be present, the survey was subsequently extended to total 120 minutes after sunset.
- 4.1.4.4 The re-entry surveys began 90 minutes before sunrise and ended 15 minutes after sunrise. The survey ended at sunrise if bats were not recorded in the last 15 minutes. Where early returning species were identified as likely to be present, the survey was extended to commence 120 minutes before sunrise.
- 4.1.4.5 Weather conditions including wind, precipitation, and air temperature at 1 m were recorded by the lead surveyor at the start and end of the survey. Weather conditions were considered suitable when all criteria listed in Table 4.3 were met throughout the survey. When weather conditions proved unsuitable, the survey was postponed or repeated to ensure compliance with good practice guidelines (Collins ed., 2016). However, should there be moderate to high levels of bat activity during unsuitable conditions the survey was considered valid. Weather conditions recorded on each survey date at two representative locations are shown in Appendix H: Bat roost survey weather data and Table 13.1.

Table 4.3: Suitable weather conditions.

Temp (°C)	Rain	Wind (Beaufort)
>=10	None to light showers/drizzle	0 to 5

- 4.1.4.6 Ecologists were stationed at one or a number of locations around the tree based upon the results of the PGLRA. The location of the surveyors was selected to ensure that each access points / PRF could be viewed without obstruction.
- 4.1.4.7 Where the presence of a roost had been confirmed during the first visit, a 1080p HD infrared night vision camera with an external infrared light source was used in addition to surveyors on the subsequent visit to record the number and behaviour of bats emerging from or returning to roost.
- 4.1.4.8 The location of each surveyor was recorded and a sketch was drawn of the surveyor's view.
- 4.1.4.9 During the emergence surveys, access points / PRFs were watched continuously by the surveyor, whilst during the re-entry surveys bats were tracked back to any access points / PRFs within the view of the surveyor.
- 4.1.4.10 Incidental bat activity around the tree was recorded by each surveyor using a Batlogger M bat detector. Information recorded included species, number of passes, direction of flight paths, habitat and number of bats.







- 4.1.4.11 The bat emergence / re-entry surveys were undertaken between 17 July and 13 October 2017. The survey effort, number of survey visits and timeframes followed good practice guidance (Collins ed., 2016), with the exception of a small number of visits undertaken in October at a sub-optimal period except for the detection of transitional roosting. Any limitations that could affect bat behaviour were recorded.
- 4.1.4.12 In some locations the surveys were lengthened following the detection of incidental calls of late-emerging species including barbastelle, brown long-eared bat and unidentified species belonging to the *Myotis* group. However, at no point following the extension of such surveys were late-emerging bats seen to emerge from or return to roost.
- 4.1.4.13 Where no bats were seen to emerge or re-enter a potential roost site, bats were determined likely absent at the time of survey. However, due to the continued presence of features that could be used by roosting bats, the level of potential assigned to the tree remains and it is possible that bats may be found to use the tree in the future.

Data analysis

- 4.1.4.14 All bat calls were recorded and these were analysed using Bat Explorer software. Quality assurance was undertaken on 10% of the bat calls and any rare or notable species. Camera footage was played back noting any bat activity within the field of view or at access points / PRFs and cross checked against the analysed sound files.
- 4.1.4.15 A bat activity score was calculated at each survey point using the following formula:

$$Bat\ Activity\ Score = \left(\frac{Total\ number\ of\ passes}{Survey\ Duration}\right)*100$$

- 4.1.4.16 Survey duration is expressed in minutes, and a pass is defined as an unbroken stream of echolocation calls, heard as a series of 'clicks, slaps, ticks or warbles' on a bat detector as the bat passes in and out of the detector's range.
- 4.1.4.17 The activity level was ranked on a five-class scale presented in

³ The levels have been developed based on an analysis undertaken by Thomson Ecology between 2006 and 2007.





Table 4.4³.



Table 4.4: Categorisation of activity level.

Activity Level	Activity Score
Very Low	Up to 5
Low	6 – 30
Medium	31-50
High	51-90
Very High	90 plus

4.1.4.18 Where bats were seen to emerge from or return to an access point or PRF, a further inspection of the feature was undertaken to characterise the roost. Information collated included the size, aspect, orientation, temperature, humidity and lighting of the roost and the location of perching points in the vicinity of the roost. Where necessary, further photographic evidence was recorded.

4.2 Surveyors

4.2.1.1 The dusk emergence and dawn re-entry surveys, including data analysis, were completed by Anna Clark BSc (Hons) MSc, Adelle Pilfold BSc (Hons), Ben Griffin BSc (Hons), Charles Griffiths BA, Charlotte Hewitt BSc (Hons) MSc, Callum Parradine BSc (Hons), Christopher Walsh (BSc (Hons), Emily Bartlett BSc (Hons) MSc, Elizabeth Hankard BSc (Hons) MSc, Felicity Andruszko BSc (Hons) MSc GradCIEEM, Freya McCarthy BSc (Hons) MSc, Hannah Rawnsley MSc BSc (Hons), Irfaan Junaideen BSc (Hons) MSc GradCIEEM, Joseph Baker BSc (Hons), John Cooper BSc (Hons), John Mason BA (Hons) PG Cert, Jess Green BSc (Hons), James Westgate BSc (Hons), Karen Akehurst BSc (Hons) MSc GradCIEEM, Lauren Hornsby BSc (Hons), Matthew Freeman BSc (Hons), Matthew Kirby BSc (Hons), Mercedes Malax-Echevarria BSC (Hons), Matthew Wisby BSc (Hons) MSc, Neil Whitehead BSc (Hons) MSc, Robert Allen BSc (Hons) MSc GradCIEEM, Rebecca Carter BSc (Hons), Rhiannon Williams BSc (Hons) MRes GradCIEEM, Sarah Hawes BSc (Hons) MSc GradCIEEM, Thomas Davey BSc (Hons), and Vivien Hartwell BSc (Hons) MSc GradCIEEM.

4.2.1.2 The PGLRA inspections were completed by: Justin Groves BSc (Hons) GradCIEEM, who holds a Natural England Bat Survey Level 2 Class Licence for use of an endoscope; Daniel Sidoli BSc (Hons) Mres, who holds a Natural England Bat Survey Level 1 Class Licence: Irfaan Junaideen BSc (Hons) MSc GradCIEEM, who holds a Natural England Bat Survey Level 1 Class Licence; Nia Bowen BSc (Hons) GradCIEEM, who holds a Natural England Bat Survey Level 2 Class Licence for use of an endoscope; Rhiannon Williams BSc (Hons) MRes Grad CIEEM, who holds a Natural England Bat Survey Level 1 Class Licence; Sarah Hawes BSc MSc GradCIEEM, who holds a Natural England Bat Survey Level 2 Class Licence for use of an endoscope; Emily Power BSc (Hons) MSc, who holds a Natural England Bat Survey Level 1 Class Licence; Callum Parradine BSc (Hons), Caroline Ritchie BSc (Hons) MSc, Charlotte Hewitt BSc (Hons) MSc, Felicity Andruszko BSc (Hons) MSc GradCIEEM, Gregory Surgenor-Aldridge BSc (Hons) MSc GradCIEEM, Ishbel Campbell BSc (Hons) MSc ACIEEM, James Westgate BSc (Hons), John Mason BA (Hons) PG Cert, Joseph Baker BSc (Hons), Karen Akehurst BSc (Hons) MSc GradCIEEM, Kathryn Jones MBiolSci (Hons) GradCIEEM, Lauren Hornsby BSc (Hons), Matthew Brown BSc (Hons) MSc, Matthew Freeman BSc (Hons), Mercedes Malax-Echevarria BSc (Hons), Neil Whitehead BSc (Hons) MSc, Phillip Joyce BSc (Hons) MSc, Robert Allen BSc (Hons) MSc GradCIEEM and Thomas Davey BSc (Hons) MSc.

4.3 Limitations

- 4.3.1.1 The survey area for the bat roost survey was based on the PEIR onshore cable corridor search area and extended accordingly to consider some alternative route options considered after issue of the PEIR. Following completion of the survey the locations of the Hornsea Three onshore cable corridor, construction compounds, access roads and storage areas have been finalised. At some locations, this infrastructure falls outside of the survey area. As these areas were identified in November 2017, which is outside of the survey season, it was not possible to undertake bat roost surveys in these areas which amount to 52.15 ha (9.80% of the area within the Hornsea Three onshore cable corridor).
- 4.3.1.2 Landowner permission was required to undertake field surveys within the survey area identified. Although the status of landowner permission to access survey areas was reviewed on a weekly basis during the survey season, absence of land access permissions was a survey limitation as detailed below:
 - Some areas identified as requiring a PGLRA could not be surveyed due to permission to access the
 land not being granted. These areas are identified as 'no access for survey' on Appendix A, Figure
 7.1 to 7.49. The potential of trees to support roosting bats is therefore unknown within these areas;
 - The bat emergence / re-entry surveys were undertaken between 17 July and 13 October 2017. The
 survey effort, number of survey visits and timeframes followed good practice guidance (Collins ed.,
 2016), with the exception of a small number of visits undertaken in October at a sub-optimal period
 except for the detection of transitional roosting. Therefore, other types of bat roost such as maternity
 roosts could not be detected for these surveys;







- Due to permission to access the land not being granted, or later withdrawn, regarding the alternative routes considered throughout 2017, the number of PGLRAs which could be undertaken in some parcels was limited where access became possible late in the survey season, and no dusk emergence or dawn re-entry surveys could be completed before the end of the bat survey season. Of those that had a PGLRA undertaken, eight moderate potential trees and nine high potential trees were identified but could not be surveyed further;
- A number of trees and structures within of the survey area considered became inaccessible after completion of the PGLRA due to access agreements being withdrawn. These are identified as "No access to survey" on Appendix A, Figure 7.1 to 7.49. Consequently, of the 222 trees identified during the PGLRA as having moderate or high potential to support roosting bats, 116 (52%) could not be accessed again to undertake dusk emergence or dawn re-entry surveys. In addition, access limitations meant that five trees with moderate potential (BA1FT36, BA1FT62, BA1FT63, BA1FT64 and BA1FT70) could only be surveyed on one occasion (out of two visits recommended) and one tree with high potential (BA1ET113) could only be surveyed on two occasions (out of three visits recommended). Full access was possible to 100 trees and these were fully surveyed. Table 4.5 summarises access availability for emergence / re-entry surveys.

Table 4.5: Summary of access availability for emergence / re-entry surveys.

Overall roosting potential	High	Moderate	Total
Full access possible (all survey visits completed)	35	65	100
Partial access only (the last visit could not be completed)	1	5	6
Not accessible for survey	34	82	116

- Due to access constraints, a number of moderate potential trees were surveyed for bat emergence / re-entry twice at dusk (24 trees) or twice at dawn (13 trees). This is a deviation from good practice guidelines which recommend that trees with moderate potential are surveyed once at dusk and once at dawn. This deviation ensured that the recommended survey effort could be completed. This is not considered to be a serious limitation to the survey results since the surveys were completed in suitable conditions and roosting bats, if present, are likely to have been detected.
- Additionally, four trees, BA1ET126, BA1CT92, BA1FT23 (a soprano pipistrelle roost) and BA1ET122 (a common pipistrelle roost) did not have the recommended number of surveys according to good practice guidelines (Collins ed., 2016) within the maternity seasons (May August) due to access restrictions which may have placed a limitation on determining roost type in these locations. However, depending on the level of potential all the surveys were undertaken at these locations as required by good practice guidelines for moderate, high potential trees or confirmed roosts.

- Due to the time of year in which PGLRAs and dusk emergence and dawn re-entry surveys were undertaken no surveys for hibernating bats have been undertaken.
- It is not possible to know whether roosts are present or likely absent in any of the 116 trees identified as having moderate or high potential during the PGLRA but that could not be surveyed for bat emergence and re-entry due to access constraints.
- 4.3.1.3 Although it was not possible to survey these areas in 2017, they are mostly covered by the PEA (RPS, 2016) providing ecological data, which combined with the ability to characterise from the large volume of data on bats collected in the remainder of the survey area, is considered sufficient to inform the impact assessment on bats reported in volume 6, chapter 3: Ecology and Nature Conservation of the Environmental Statement. Where specific information is not available, it is assumed that bat roosts may be present where suitable habitat exists and/or where desk study records and survey information from other parts of the route indicate likely presence.
- 4.3.1.4 Of the trees listed in Table 4.5, 14 moderate potential trees and five high potential trees are located within the onshore cable corridor route that has now been discounted and therefore is not part of the proposed Hornsea Three onshore cable corridor route.
- 4.3.1.5 Those areas which may be impacted by Hornsea Three but where survey could not be completed will be checked during pre-construction surveys enabling amendment or the application of further mitigation, to that specified in volume 3, chapter 3: Ecology and Nature Conservation, to be applied. If roosts are recorded during pre-construction surveys that will be impacted by Hornsea Three, a licence mitigation method statement, approved by Natural England, will be obtained to enable works to proceed.
- 4.3.1.6 The main construction compound to the east of the Hornsea Three onshore cable corridor is outside of the survey area for this study and is not shown on Appendix A, Figure 7.1 to 7.49. However, given that this compound comprises existing hard standing with negligible ecological importance, it is considered that a detailed survey of baseline conditions were not required.







4.4 Results

4.4.1 Preliminary ground level roost assessment of trees

4.4.1.1 A PGLRA was undertaken on a total of 665 trees. The results of the PGLRA are summarised in Table 4.6. Trees identified as having low, moderate or high potential to support roosting bats are shown on Appendix A, Figures 7.1 to 7.49 and are listed in Appendix I: Preliminary ground level roost assessment results Table 15.1. No roosts were confirmed during the PGLRA.

Table 4.6: Summary results of the PGLRA.

Overall roosting potential	High	Moderate	Low	Total
No. of trees	70	152	443	665

- 4.4.1.2 Of the 222 trees identified as having moderate or high overall potential to support roosting bats:
 - 150 trees had moderate and 70 high potential to support a transitional roost;
 - 47 trees had moderate and 11 high potential to support a maternity roost;
 - 27 trees had moderate and seven high potential to support a hibernation roost;
 - Six trees (BA1CT94, BA1CT101, BA1CT108, BA1CT123, BA1DT40 and BA1ET41) had high potential for all three categories;
 - Two trees (BA1ET154 and BA1GT9) had a high potential to support a transitionary roost and a hibernation roost, and a moderate potential to support a maternity roost; and
 - Four trees (BA1FT15, BA1FT19, BA1FT35 and BA1FT36) had moderate potential for all three roost categories.
- 4.4.1.3 Following good practice guidelines (Collins ed., 2016), further dusk emergence and dawn re-entry surveys were undertaken at trees with moderate or high potential for roosting bats, where land access was available (see section 4.3), to determine whether bat roosts were present or likely absent from those trees.

4.4.2 Emergence / re-entry survey

Roost characterisation

4.4.2.1 During the dusk emergence and dawn re-entry surveys, four roosts were identified in trees BA1CT71 (grid reference: TG 1022 2934), BA1ET122 (grid reference: TG 1200 1645), BA1FT23 (grid reference: TG 1420 0876) and BA1FT110 (grid reference: TG 1699 0490). These are further described below and their location shown on Appendix A, Figure 8.1.

4.4.2.2 No roosts were identified within the remaining 102 trees that were surveyed.

Bat roost BA1CT71

- 4.4.2.3 One soprano pipistrelle was recorded re-entering tree BA1CT71, a veteran pedunculate oak (*Quercus robur*) on the 22 August 2017. The location of the tree is shown on Appendix A, Figure 7.18. The bat reentered under an area of loose bark, 3 m from the ground. This loose bark was adjacent to a woodpecker hole that likely leads into a cavity on the northern aspect of the tree, in addition the tree also has a large central trunk cavity, nevertheless it is not believed the soprano pipistrelle entered these cavities.
- 4.4.2.4 The pedunculate oak has a height of 9 m and a diameter at breast height of 1 m. It has multiple features for bats which include woodpecker holes, loose bark, crevices and significant dead wood. The tree is located within a defunct farmland hedgerow surrounded by arable fields. During the PGLRA, the tree was given an overall high potential to support roosting bats. Photograph 1 on Appendix A, Figure 8.1 shows the approximate location of the roost on the tree.
- 4.4.2.5 A further two visits were undertaken at this location on the 6 September and 18 September 2017, no further emergences or re-entries by bats were made on these two visits.
- 4.4.2.6 Since the feature being used is lifted bark, it is assumed that the roost is used for transitional roosting.

Bat roost BA1ET122

- 4.4.2.7 Four common pipistrelle bats were recorded emerging from tree BA1ET122 on the 10 August 2017. The location of the tree is shown on Appendix A, Figure 7.30. The bats emerged from a branch tear out that had exposed a cavity on the northern aspect of the tree. The tree is a Scots pine (*Pinus sylvestris*), 30 m in height with a diameter at breast height of 0.7 m, and is found on the edge of a pine plantation close to an area of deciduous woodland. The cavity is located 20 m from ground level and was the only potential roosting feature identified during the PGLRA. The tree was given moderate potential. Photograph 2 on Appendix A, Figure 8.1 shows the location of the roost on the tree.
- 4.4.2.8 As the presence of a roost was confirmed during the first visit, a further two visits were undertaken at this location on the 12 September and 26 September 2017. No further bat emergences were recorded on these two visits. Due to access limitations, this tree was subject to three dusk surveys instead of one dusk survey, one dawn survey and one dusk or dawn survey as recommended by good practice guidelines (Collins ed., 2016). This is not seen as a major limitation to the survey results. In addition the further surveys were outside the recommended period to detect a maternity roost due to access limitations.
- 4.4.2.9 Given the small number of bats that were recorded, this is likely to be a transitional roost. However the presence of a small maternity roost cannot be excluded as the first survey was undertaken in late summer at a time when some bats have already left maternity colonies.







Bat roost BA1FT23

- 4.4.2.10 Three soprano pipistrelle bats were recorded returning to roost at tree BA1FT23 on the 4 October 2017. The location of the tree is shown on Appendix A, Figure 7.38. The bats returned to roost entering the gaps surrounding a large callus roll on a large dead limb on the southern aspect of the tree, the tree also has multiple broken off limbs and dead/dying wood, potentially from a lightning strike. The re-entry location is located 8 m from ground level. The tree is a large veteran pedunculate oak, 30 m in height with a diameter at breast height of 2 m, and is found on a hedge/tree line on the edge of a small rural road with pasture to the west. The tree was given moderate potential. Photograph 3 on Figure 8.1 (Appendix A) shows the location of the roost on the tree.
- 4.4.2.11 As the presence of a roost was confirmed during the second visit, a further third visit was undertaken at this location on the 25 October 2017, visit one was undertaken in the 16 August 2017. The third visit to the tree recorded the emergence of one soprano pipistrelle from the same feature as the returns on the 4 October 2017. No bats emerged on the first visit.
- 4.4.2.12 Due to access limitations, the further surveys for this tree; visits two and three were outside the recommended period to detect a maternity roost. Given the small number of bats that were recorded, this is likely to be a transitional roost. However, the presence of a small maternity roost cannot be excluded due to the high quality features noted on this tree and because the first survey was undertaken in late summer at a time when some bats have already left maternity colonies.

Bat roost BA1FT110

- 4.4.2.13 Seventeen noctule bats were recorded re-entering tree BA1FT110 on the 20 July 2017. The location of the tree is shown on Appendix A, Figure 7.43. The bats emerged from multiple woodpecker holes and a rotting split, particularly on the north-western aspect of the tree. These features are located between 3 m and 5 m above ground level. The woodpecker holes and rotting split are likely to be interconnected internally. The tree is an ash (*Fraxinus excelsior*). The tree has a dual leader, is 20 m high and has a diameter at breast height of 0.7 m. The tree is found in an area of secondary woodland dominated by ash and pedunculate oak, nearby habitats include areas of pasture. The tree was given high potential during the PGLRA. Photograph 4 on Appendix A, Figure 8.1 shows the location of the roost.
- 4.4.2.14 The level of bat activity recorded during the first survey visit was very high, with the noctules exhibiting frequency modulating calls and social calls due to the cluttered environment and re-entering the roost. Levels of activity recorded when surveying surrounding trees were also high to very high, probably due to bats flying around tree BA1FT110.
- 4.4.2.15 A further two visits were undertaken at this location on the 10 August and 31 August 2017. No further bat emergences were recorded. There was also a marked drop in incidental noctule activity being recorded, and no activity with regards to swarming outside roost entrances or scouting potential features for roosting was observed by any bats at BA1FT110.

4.4.2.16 Based on the number of bats and the season, it is highly likely that the tree is a maternity roost for noctule bats. This assessment is supported by the high degree of social calling and audible calls that could be heard by the surveyors on the 20 July 2017. It is likely the roost conditions changed following the survey on the 20 July 2017 and that the bats moved to another roost between the first and second survey visits.

Incidental bat activity

- 4.4.2.17 During the emergence / re-entry surveys, over 41,400 incidental bat calls were recorded. Seven individual bat species and three groups of species that cannot be distinguished on the basis of their calls were identified from these calls. These included:
 - Barbastelle (Barb);
 - Brown long eared bat (BLE);
 - Leisler's bat (Lei):
 - Noctule (Noc);
 - Common pipistrelle (Ppip);
 - Soprano pipistrelle (Ppyg);
 - Serotine (Sero):
 - Unidentified bats belonging to the pipistrelle genus (Psp);
 - Unidentified bats belonging to the noctule / serotine / Leisler's bat guild (NSL); and
 - Unidentified bats belonging to the Myotis genus (Myo).
- 4.4.2.18 Incidental bat activity taken as an average recorded during the emergence / re-entry surveys was very low at one location, low at 30 locations, medium at ten locations, high at 17 locations and very high at 48 locations. The incidental activity level is displayed in Appendix J: Dusk emergence and dawn re-entry survey results Table J.1, along with species diversity at each location.
- 4.4.2.19 Based on incidental bat activity, species-richness was distributed as follows as is highlighted in Chart 4.1. Locations with the highest species diversity were BA1ET116 and BA1FT5 with nine species/species groups.







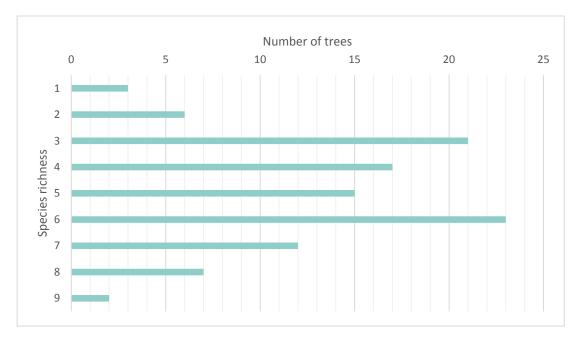


Chart 4.1: Distribution of species-richness recorded during emergence / re-entry surveys recorded incidentally.

4.4.2.20 Chart 4.2 shows the number of locations individual species or species groups were recorded.

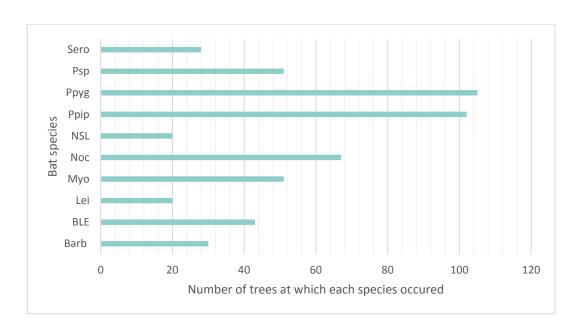


Chart 4.2: The number of locations at which each bat species identified as incidental activity occurred.

- 4.4.2.21 The most frequently recorded species was soprano pipistrelle at 105 locations, followed by common pipistrelle at 102 locations. The least frequent was Leisler's bat and the noctule/serotine/Leisler's guild at just 20 locations each.
- 4.4.2.22 Incidental barbastelle activity
- 4.4.2.23 The barbastelle is a protected species, details of which can be found in section 1.3 and therefore is a species of interest in regards to potential roosting sites.
- 4.4.2.24 The barbastelle was recorded incidentally at 30 locations; these locations and the maximum number of barbastelle passes on any one visit are shown in Table 4.7. Overall 328 barbastelle passes were recorded from up to three visits. A medium level of barbastelle activity was recorded at one location only (tree number BA1CT70); and very low to low levels of activity at the remaining 29 locations. At only four locations were barbastelles recorded on two or more visits; this included trees BA1ET105, BA1ET113, BA1ET120 and BA1ET114. These trees are shown on Appendix A, Figure 7.30. Key locations are potentially a commuting route for barbastelle around BA1CT70 (Norton Corner) suggesting a favoured route to the River Bure. Additionally, a large cluster of barbastelle activity was found in Scotchwood Hills (woodland) near Morton, close to the River Wensum around tree BA1ET122.

Table 4.7: Location of trees where incidental barbastelle activity was recorded, including the maximum number of barbastelle passes on any one visit.

Roosting Potential	Tree number	Figure No. (Appendix A)	Maximum number of passes recorded in one survey visit	Overall Bat activity level
	BA1AT44	2.8	2	Very low
	BA1BT142	2.15	2	Very low
	BA1CT73	2.18	3	Very low
	BA1ET100	2.30	16	Low
	BA1ET111	2.30	1	Very low
	BA1ET115	2.30	2	Very low
Moderate	BA1ET116	2.30	6	Low
	BA1ET122	2.30	14	Low
	BA1ET124	2.30	3	Very low
	BA1ET127	2.30	6	Low
	BA1ET47	2.29	25	Low
	BA1ET61	2.29	10	Low
	BA1FT135	2.43	1	Very low







Roosting Potential	Tree number	Figure No. (Appendix A)	Maximum number of passes recorded in one survey visit	Overall Bat activity level
	BA1FT5	2.38	1	Very low
	BA1CT21	2.17	2	Very low
	BA1CT26	2.17	1	Very low
	BA1CT70	2.18	44	Low
	BA1CT71	2.18	11	Low
	BA1ET103	2.30	6	Low
	BA1ET105	2.30	4	Very low
	BA1ET106	2.30	3	Very low
High	BA1ET112	2.30	9	Low
підп	BA1ET113	2.30	12	Low
	BA1ET114	2.30	28	Low
	BA1ET120	2.30	35	Low
	BA1ET126	2.30	3	Very low
	BA1ET43	2.29	1	Very low
	BA1ET92	2.30	2	Very low
	BA1ET95	2.30	4	Very low
	BA1FT110	2.43	2	Very low

5 Conclusion

5.1 Bat activity survey

- 5.1.1.1 Eight bat species and four species groups were identified during the surveys. This included four priority species: brown long-eared bat, noctule, soprano pipistrelle and barbastelle. Static monitoring recorded barbastelle in 55 locations, with groups 9, 11, 23 and 96 being key locations and the transect surveys recorded barbastelle in 27 locations with groups 4 and 44 being key locations. Groups 23, 44 and 96 are all within the onshore cable corridor, group 4, 9 and 11 are outside of the onshore cable corridor, though group 9 is within 50 m of the onshore cable corridor.
- 5.1.1.2 The data suggest that roosts of barbastelle, brown long-eared bat, noctule, soprano pipistrelle and Nathusius' pipistrelle may exist within the survey area or in close proximity. Three of these locations correspond to known roosts of soprano pipistrelle and noctule within the survey area (see Appendix A, Figure 7.1 to 7.49).

- 5.1.1.3 Groups 2, 16, 26, 35, 56, 75, 86 and 102 (see Appendix A, Figure 4.1 to 4.36, Figure 5.1 to 5.36 and Table 4.12) are characterised by higher activity levels recorded during both the static monitoring and transect surveys were identified along the route. Three of these locations are close to two known bat roosts of noctule and soprano pipistrelle (shown on Appendix A, Figure 7.18, 7.38 and 7.43). Group 2, 35 and 75 are outside of the onshore cable corridor whereas group 16, 26, 56 and 102 are within the onshore cable corridor. Group 86 crosses the onshore cable corridor but the majority of it is outside.
- 5.1.1.4 Results of the bat activity survey have been used to inform the final location and design of Hornsea Three (see volume 1, chapter 4: Site Selection and Alternatives) and to enable the assessment of the impacts on ecology and nature conservation, reported in volume 3, chapter 3: Ecology and Nature Conservation. Where impacts are identified appropriate mitigation is specified in the same chapter of the Environmental Statement.

5.2 Bat roost survey

- 5.2.1.1 Four bat roosts were identified during the bat emergence / re-entry surveys. Details of the roosts identified are given below, confirmed roost locations are shown on the figures below and photographs of the trees are shown on Appendix A, Figure 8.1.
 - BA1CT71 (Appendix A, Figure 7.18), a roost of one soprano pipistrelle identified during visit one. The roost is within the onshore cable corridor;
 - BA1ET122 (Appendix A, Figure 7.30), a roost of four common pipistrelles identified during visit one. Roost ET122 is located roughly 80 m from the onshore cable corridor;
 - BA1FT23 (Appendix A, Figure 7.39) a roost of three soprano pipistrelle identified during visit two and one soprano pipistrelle during visit three. Roost FT23 is roughly 120 m away from the Hornsea Three onshore cable corridor; and
 - BA1FT110 (Appendix A, Figure 7.43), a roost of 17 noctule bats identified during visit one. Roost FT110 is about 80 m from the onshore cable corridor corridor.
- During the dusk emergence and dawn re-entry surveys, over 41,400 incidental bat passes were recorded. These included seven individual bat species (barbastelle, brown long-eared bat, Leisler's bat, noctule, common pipistrelle, soprano pipistrelle and serotine), as well as three groups of bat species that cannot be readily identified to species level (unidentified bats belonging to the pipistrelle genus; unidentified bats belonging to the noctule / serotine / Leisler's bat guild; and unidentified bats belonging to the *Myotis* genus). Highest diversity of bat species was recorded at two locations (River Wensum and River Yare floodplains), where a total of nine species or species groups were recorded.







- 5.2.1.3 The rarest bat from a legislative prospective recorded during the survey was the barbastelle. A total of 328 passes of barbastelle were recorded at 30 different locations distributed along the length of the cable route, with high levels of activity for this species on the River Wensum floodplain and to a lesser extent towards the River Bure. The majority of incidental barbastelle activity was recorded within the Hornsea Three onshore cable corridor, all other records are found within 80 m or less. The location of barbastelle records is shown on Appendix A, Figure 7.1 to 7.49.
- 5.2.1.4 Results of the bat roost survey have been used to inform the final location and design of Hornsea Three (see volume 1, chapter 4: Site Selection and Alternatives) and to enable the assessment of the impacts of Hornsea Three on ecology and nature conservation, reported in volume 3, chapter 3: Ecology and Nature Conservation. Where impacts are identified appropriate mitigation is specified in the same chapter of the Environment Statement.

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Appendix A Figures

A.1 Bat survey area

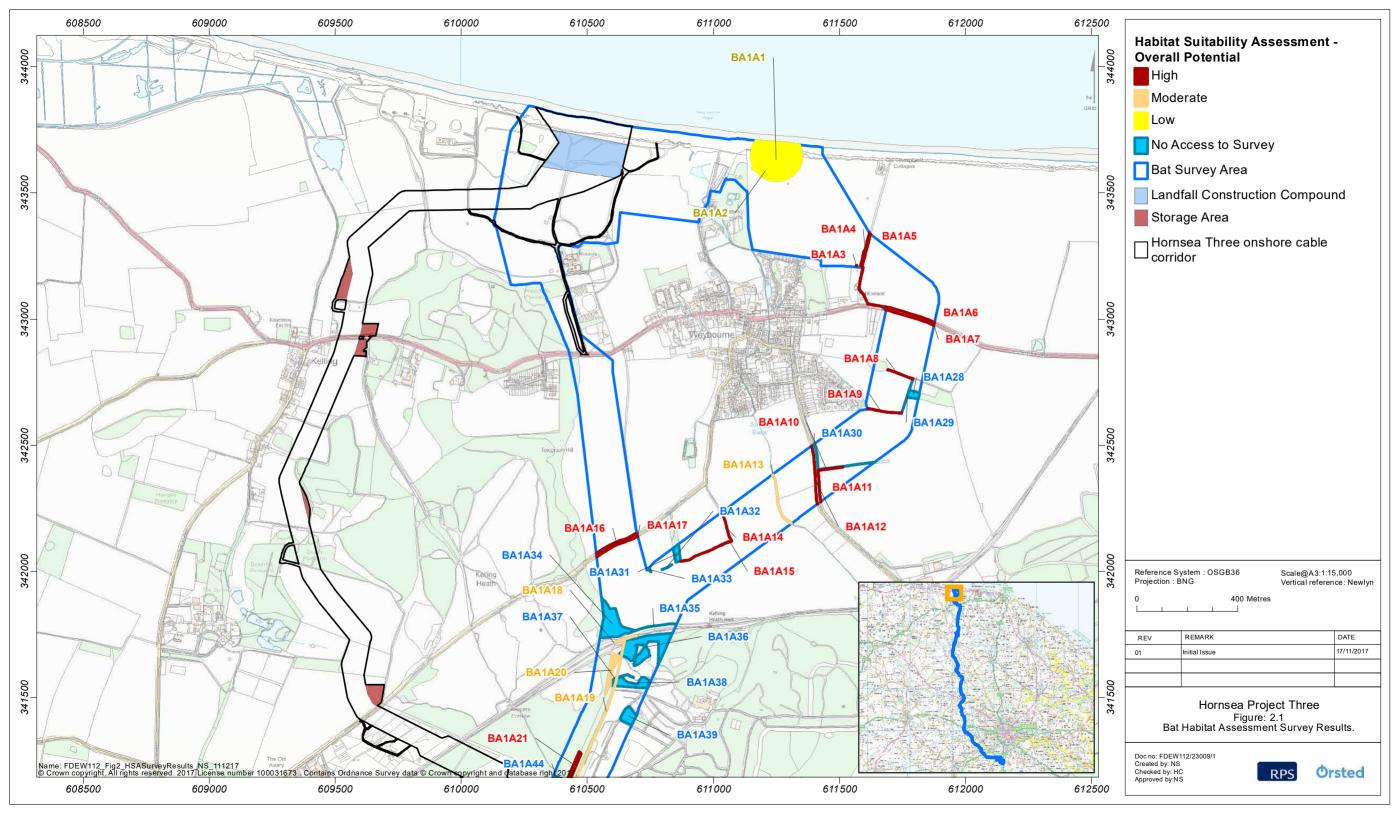


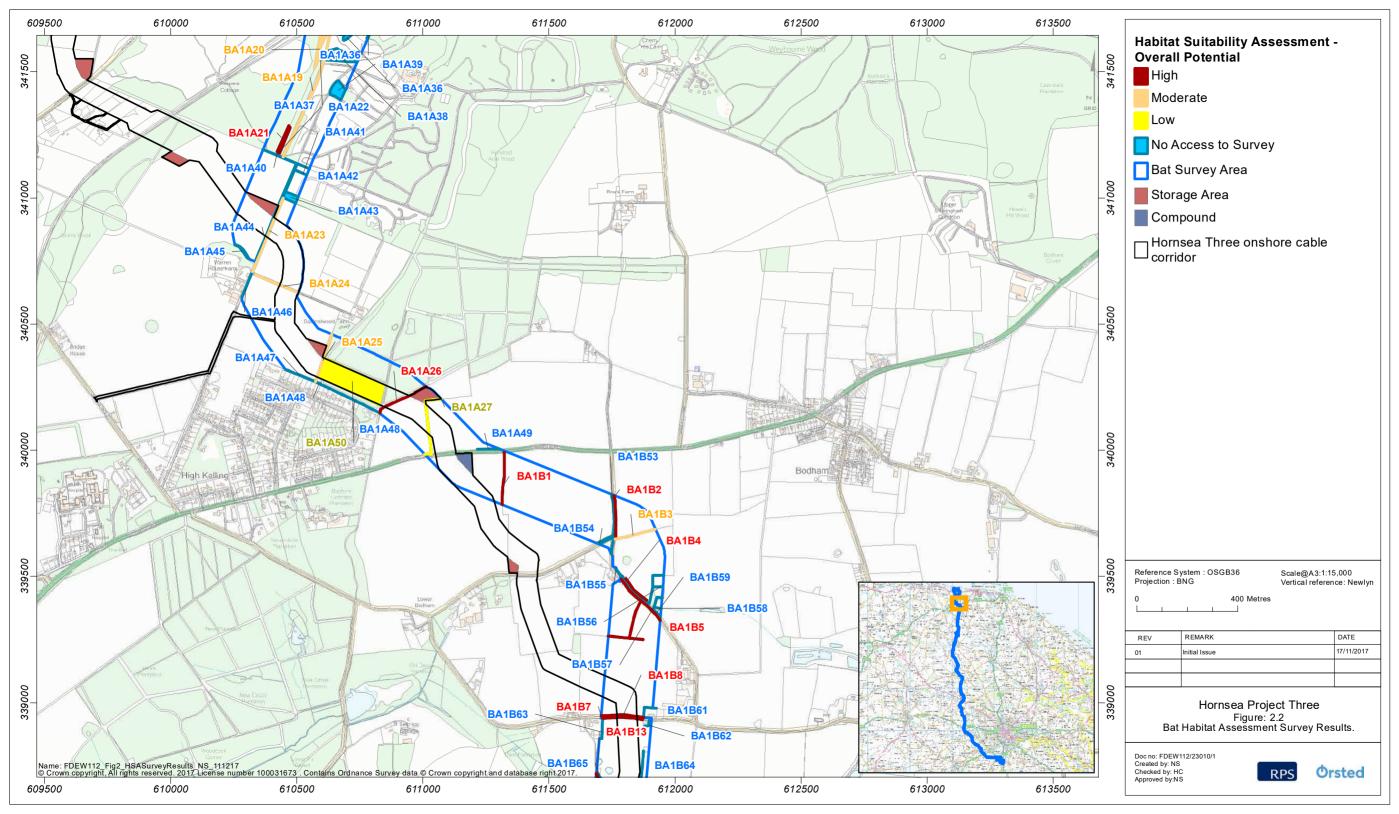


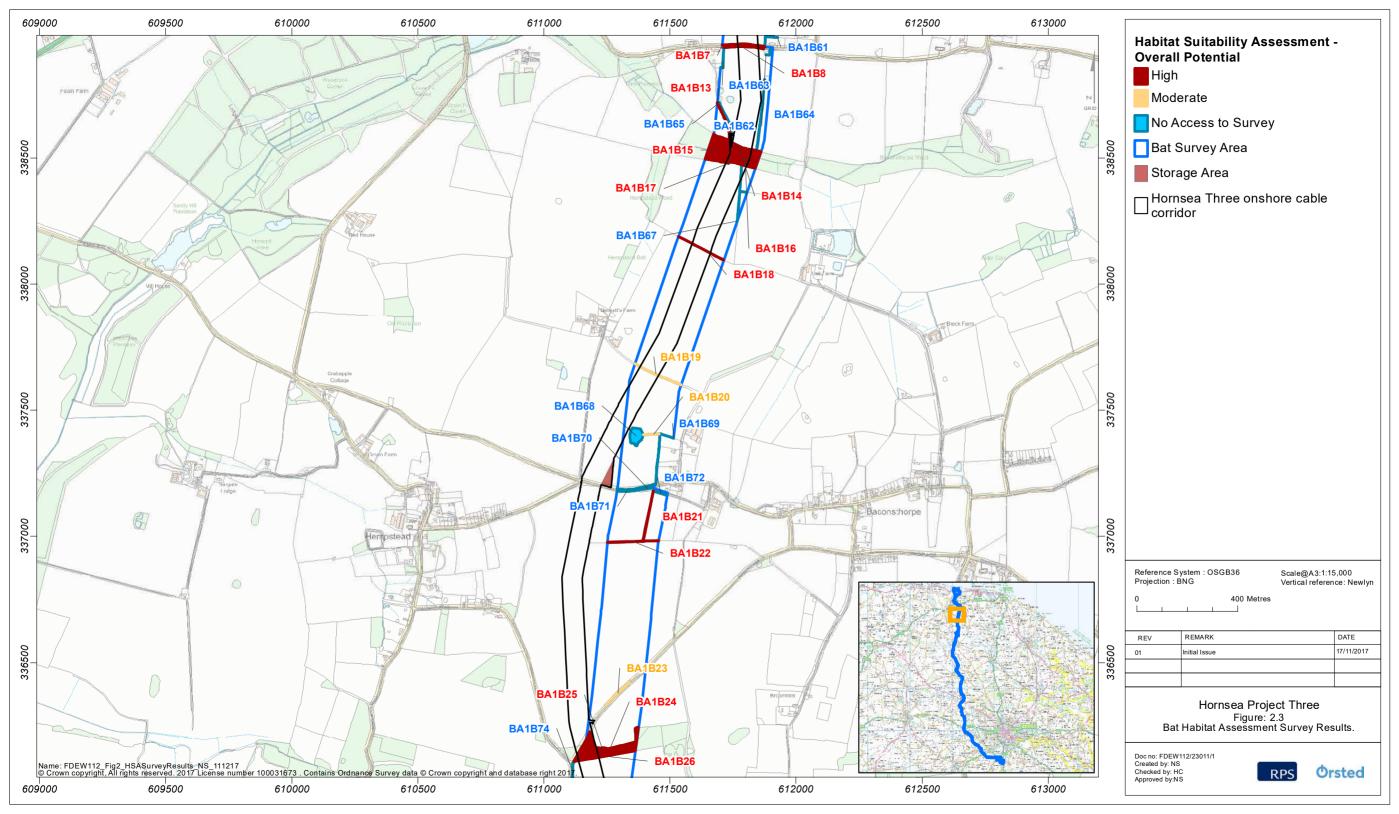


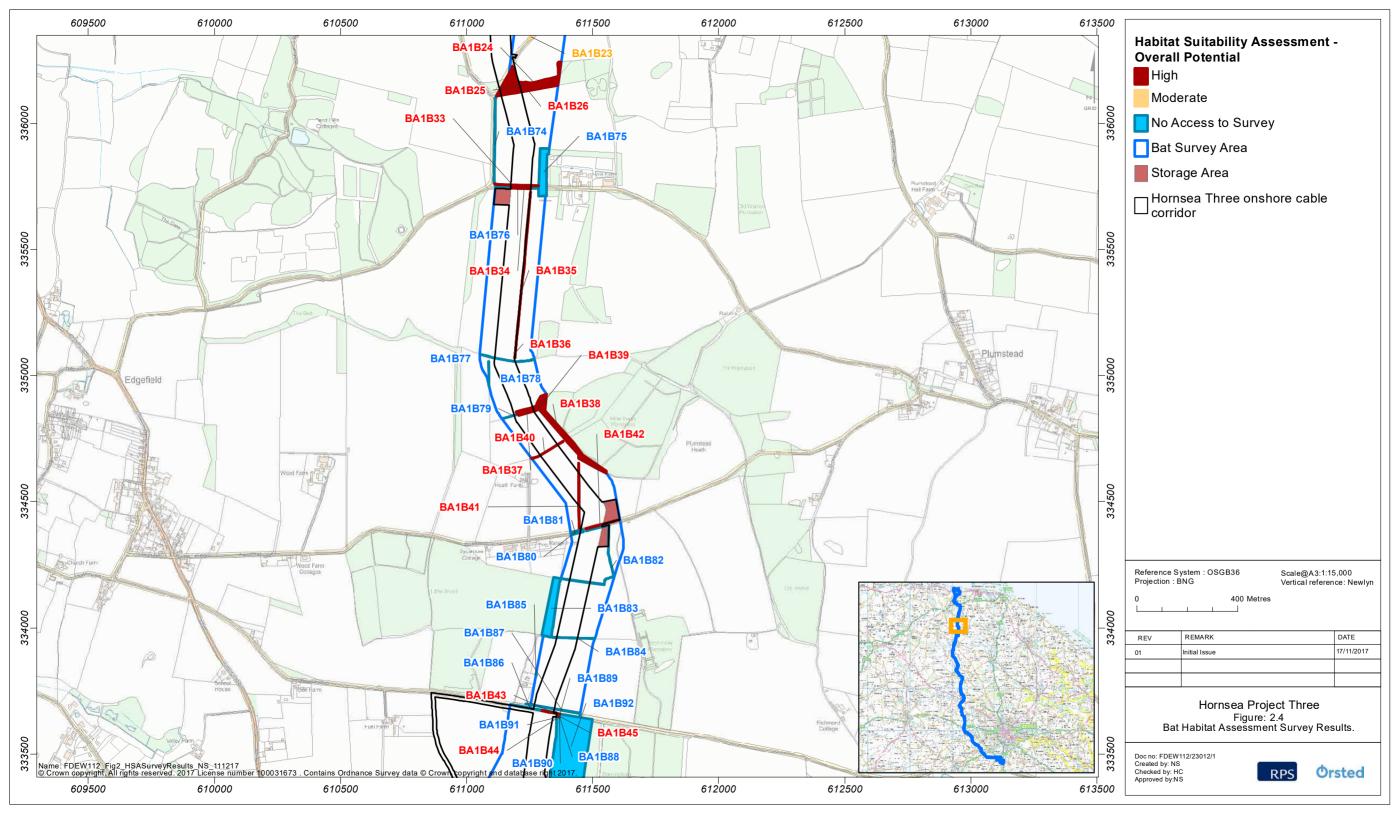
A.2 Bat habitat assessment survey results

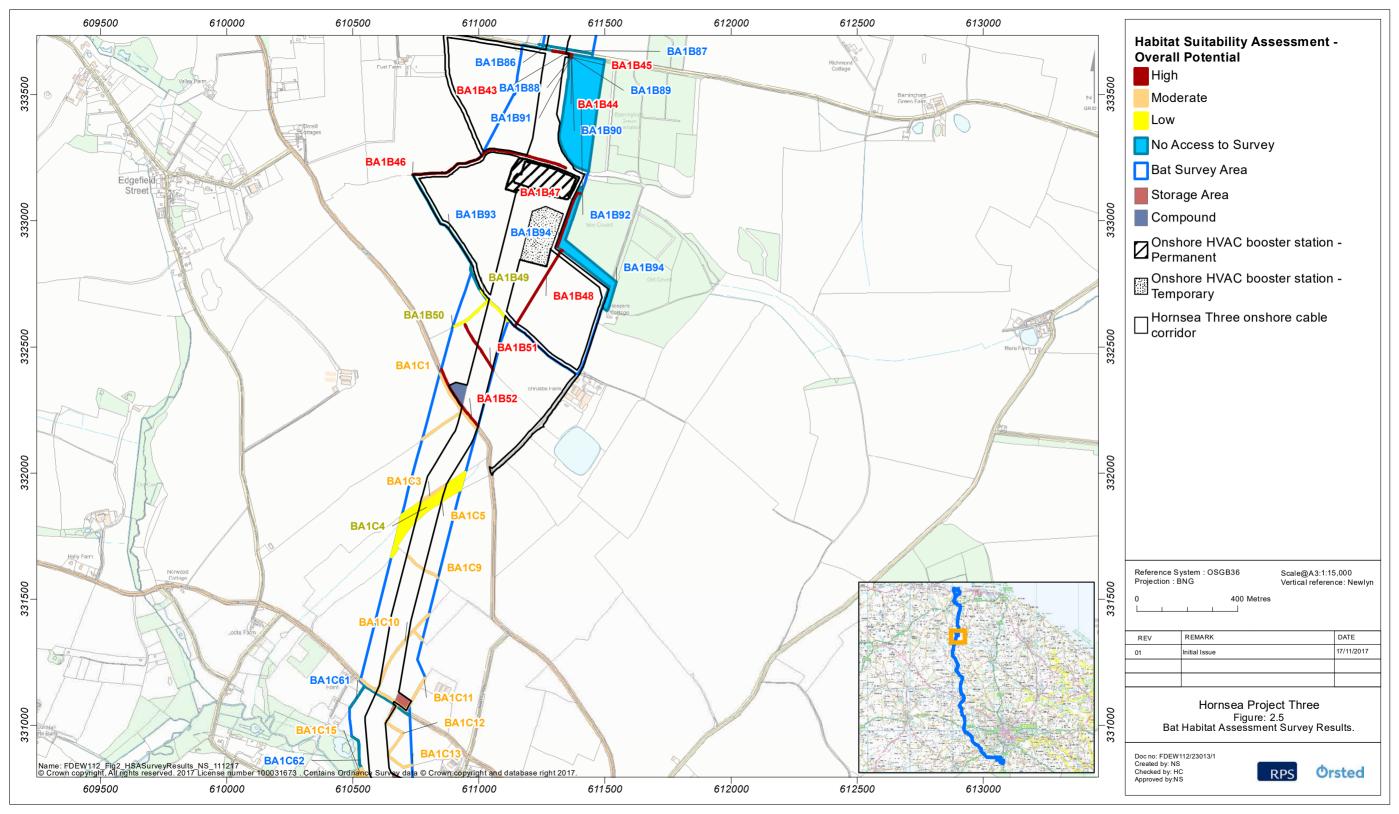


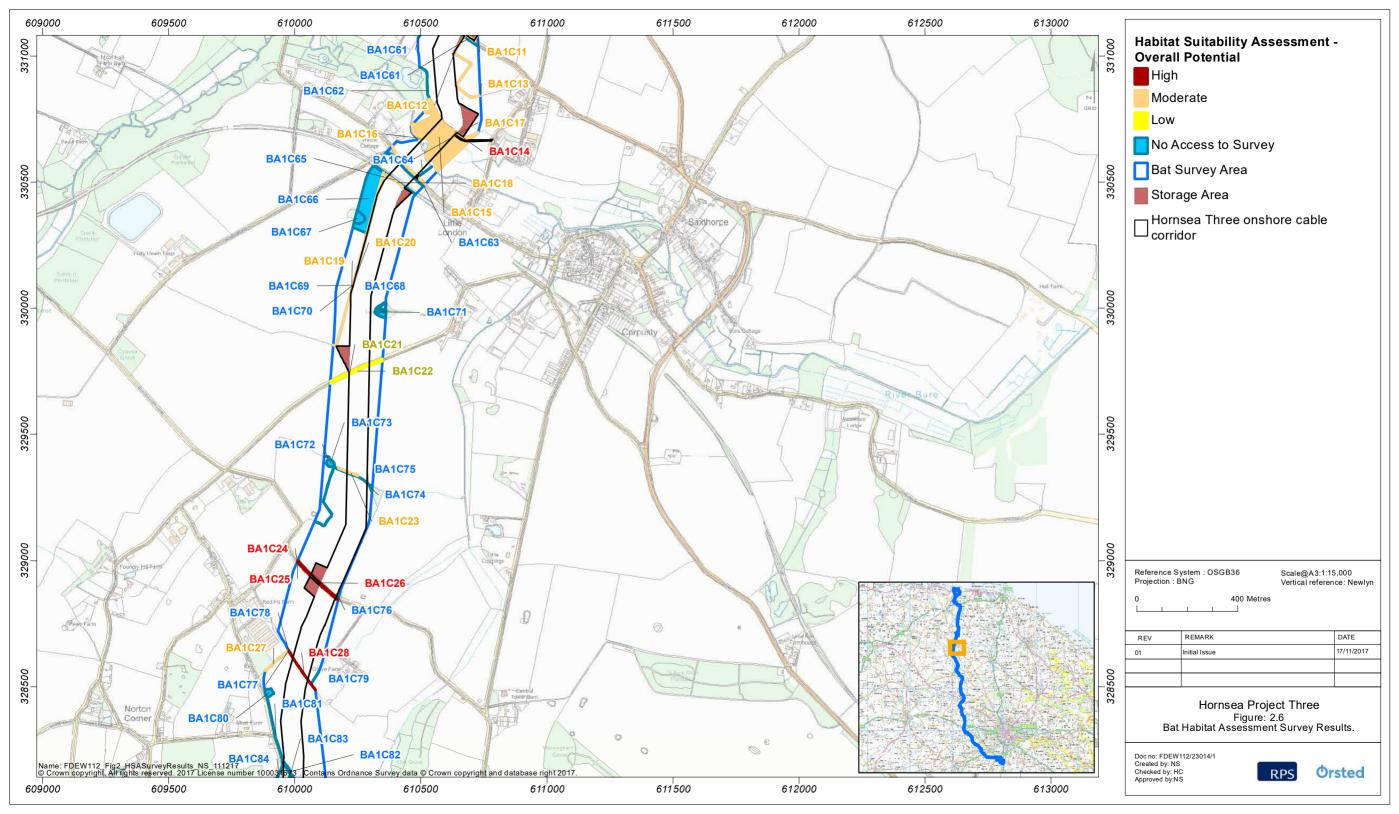


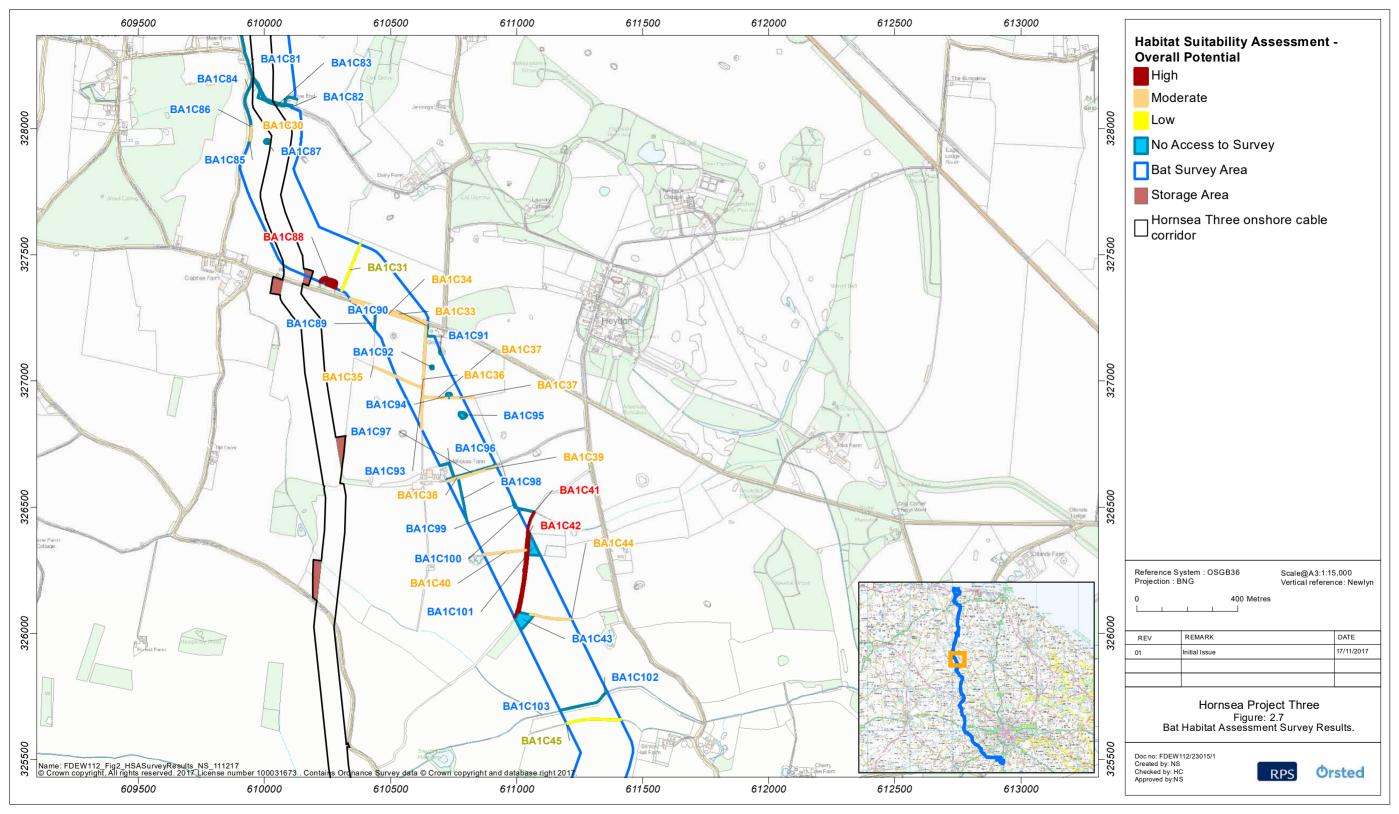


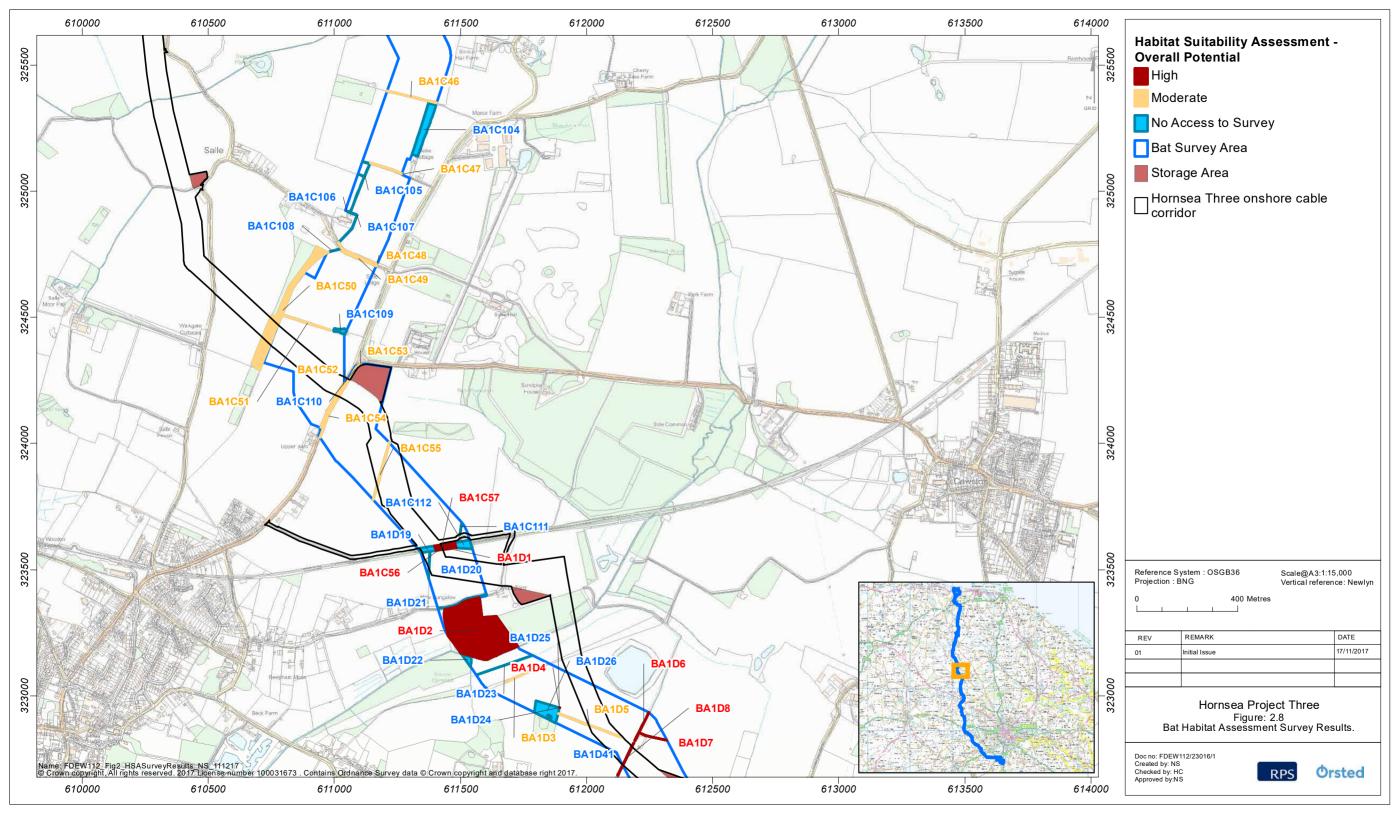


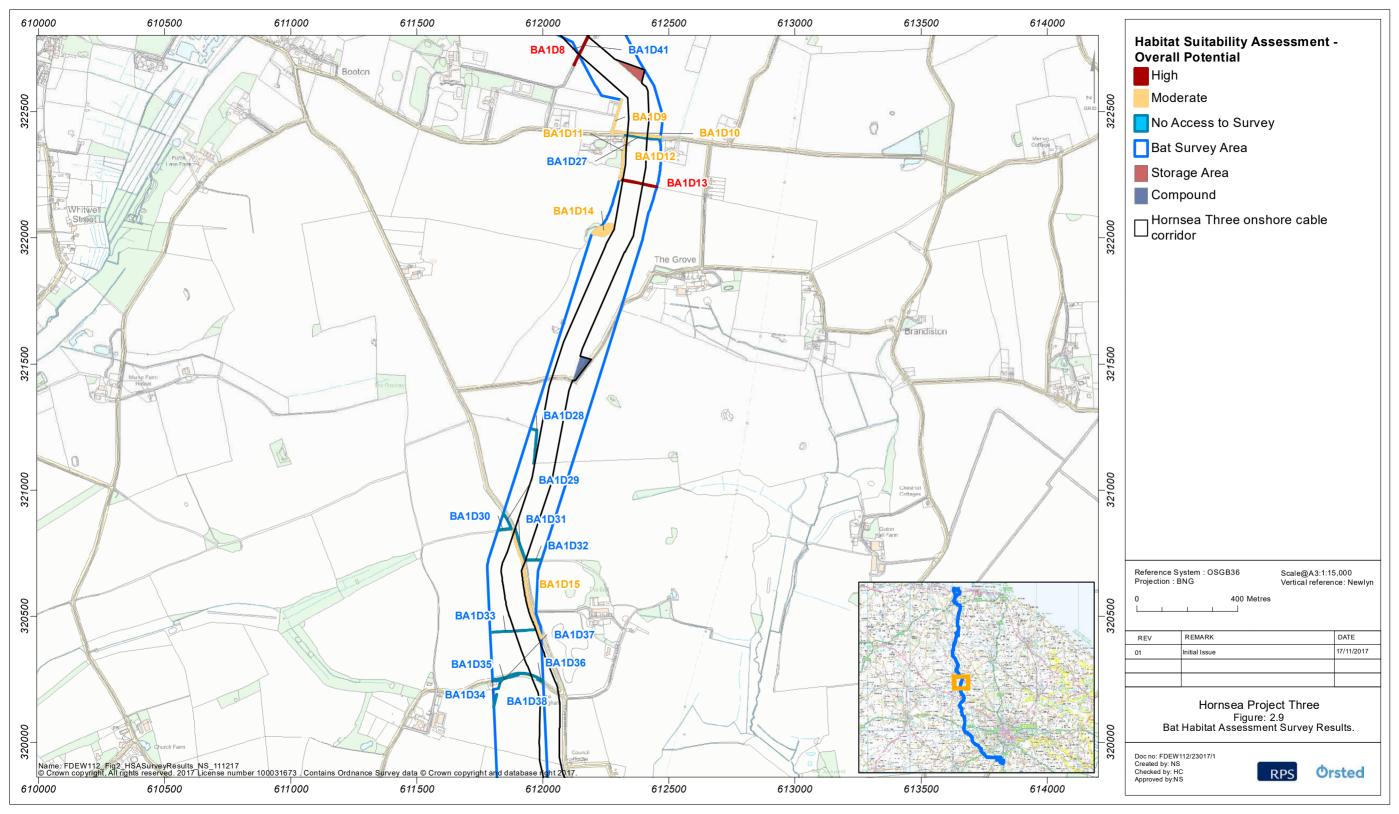


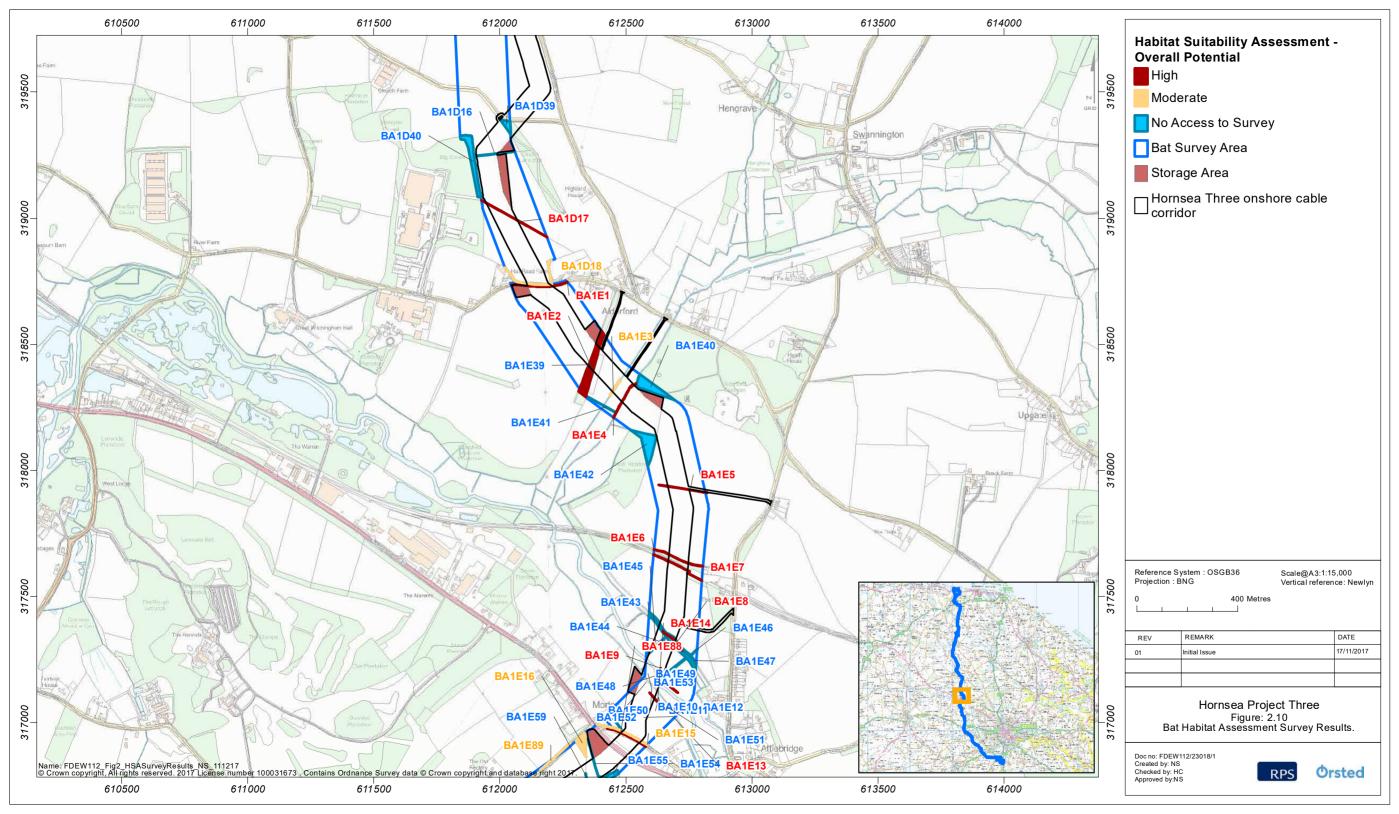


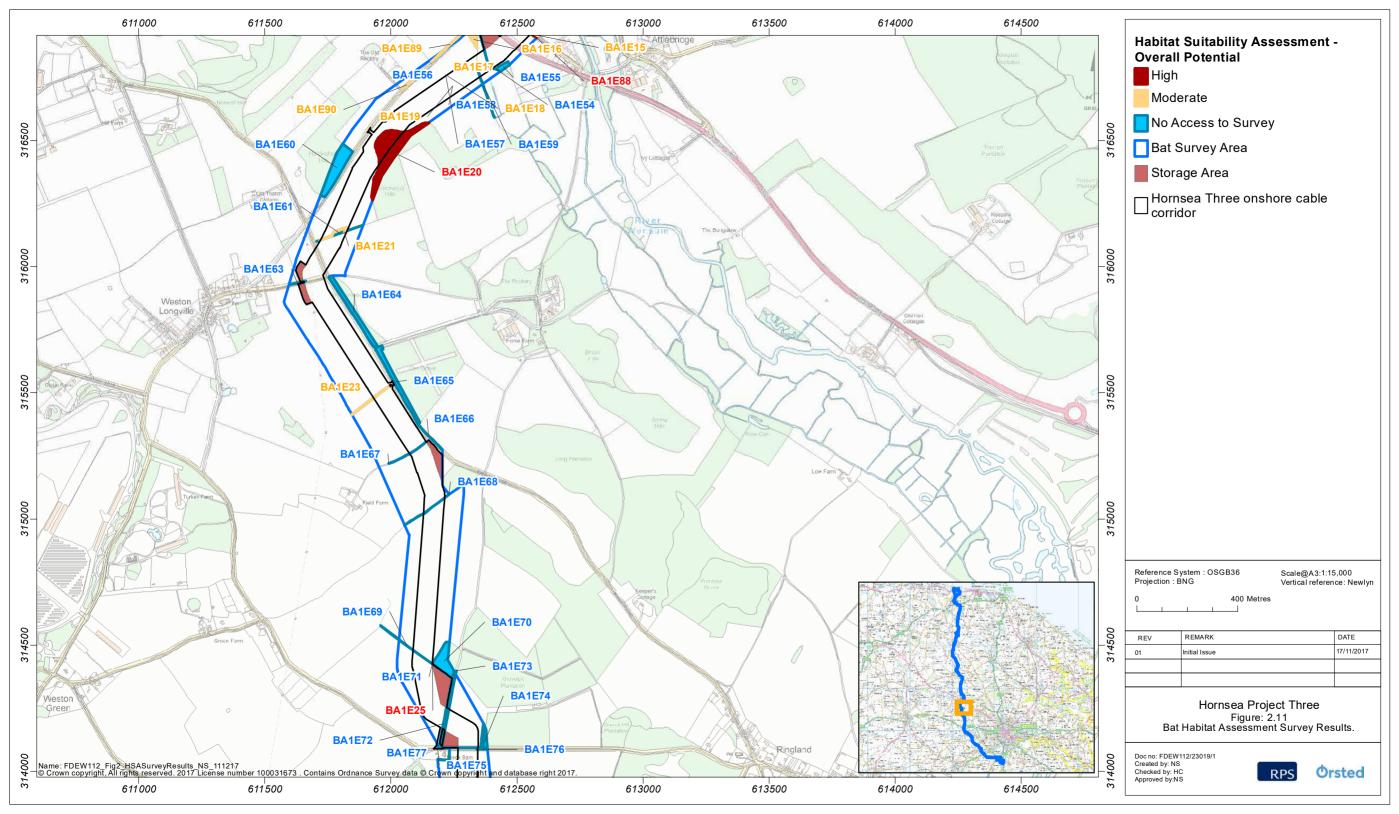


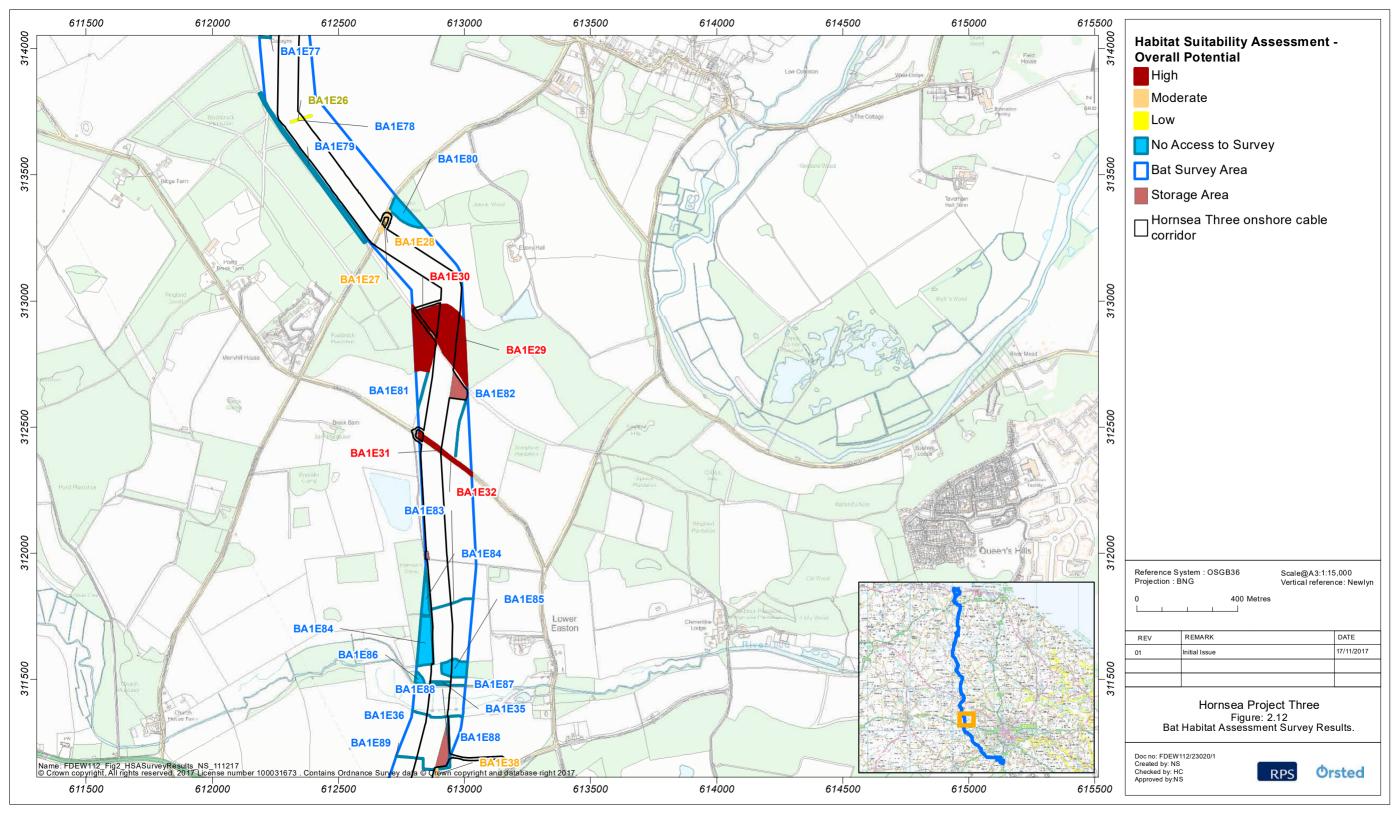


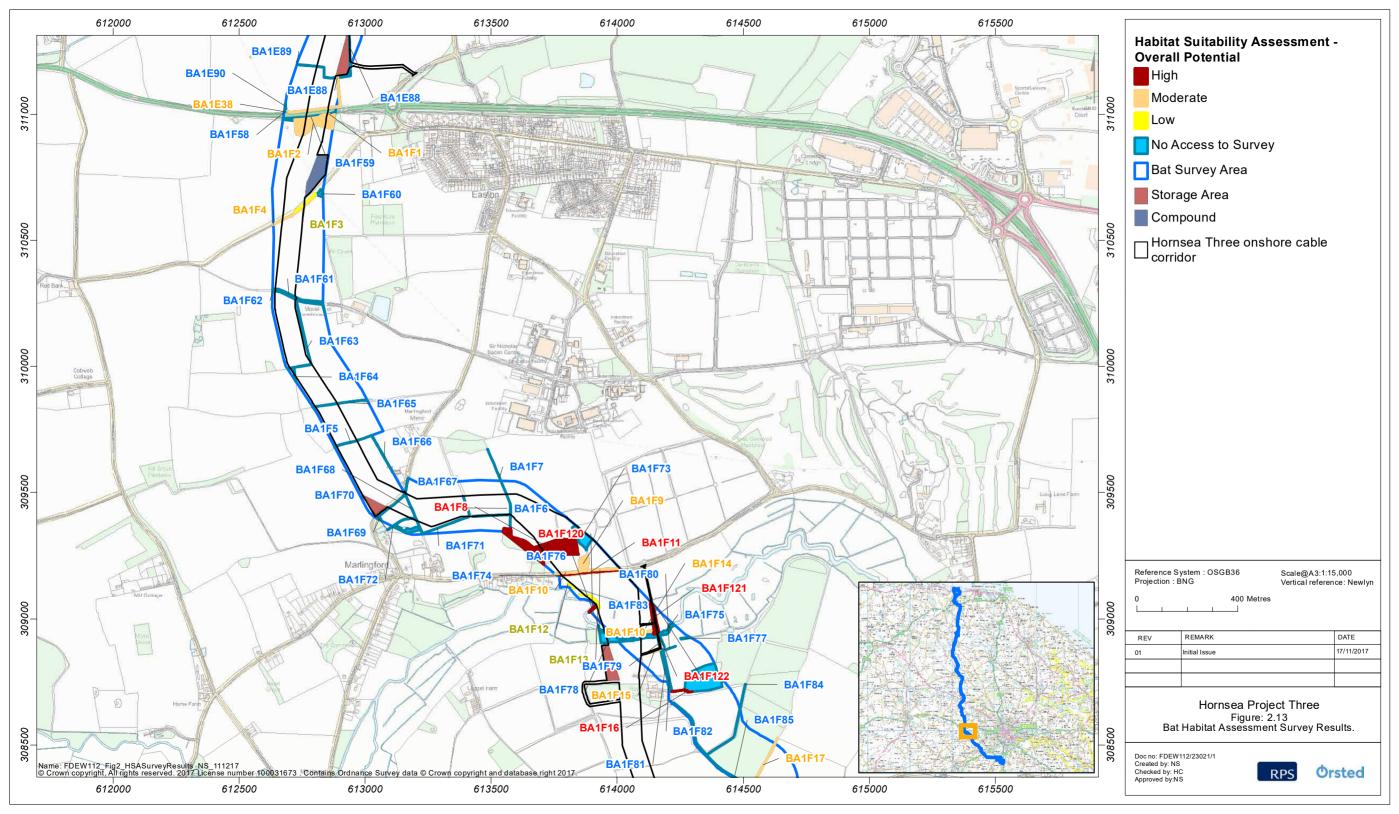


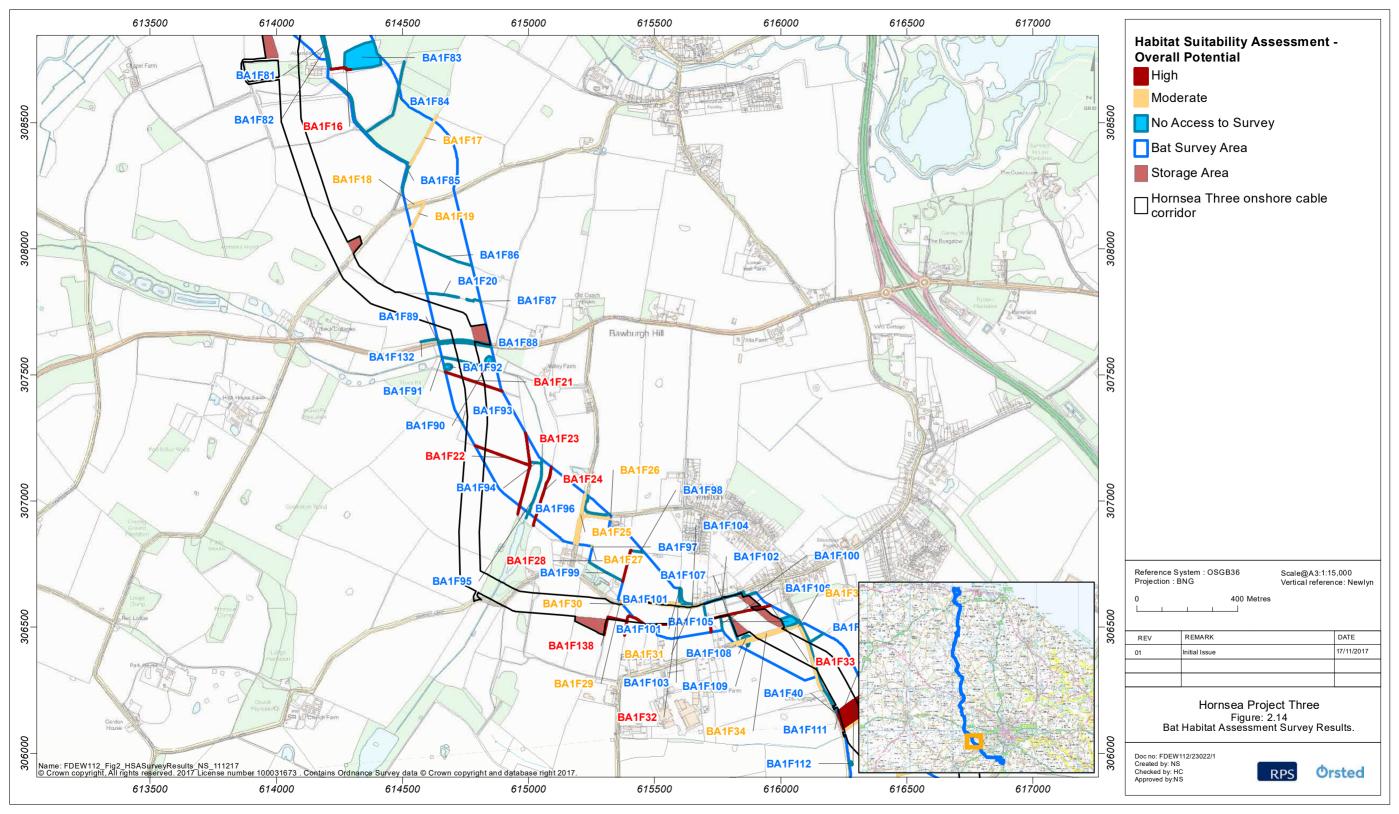


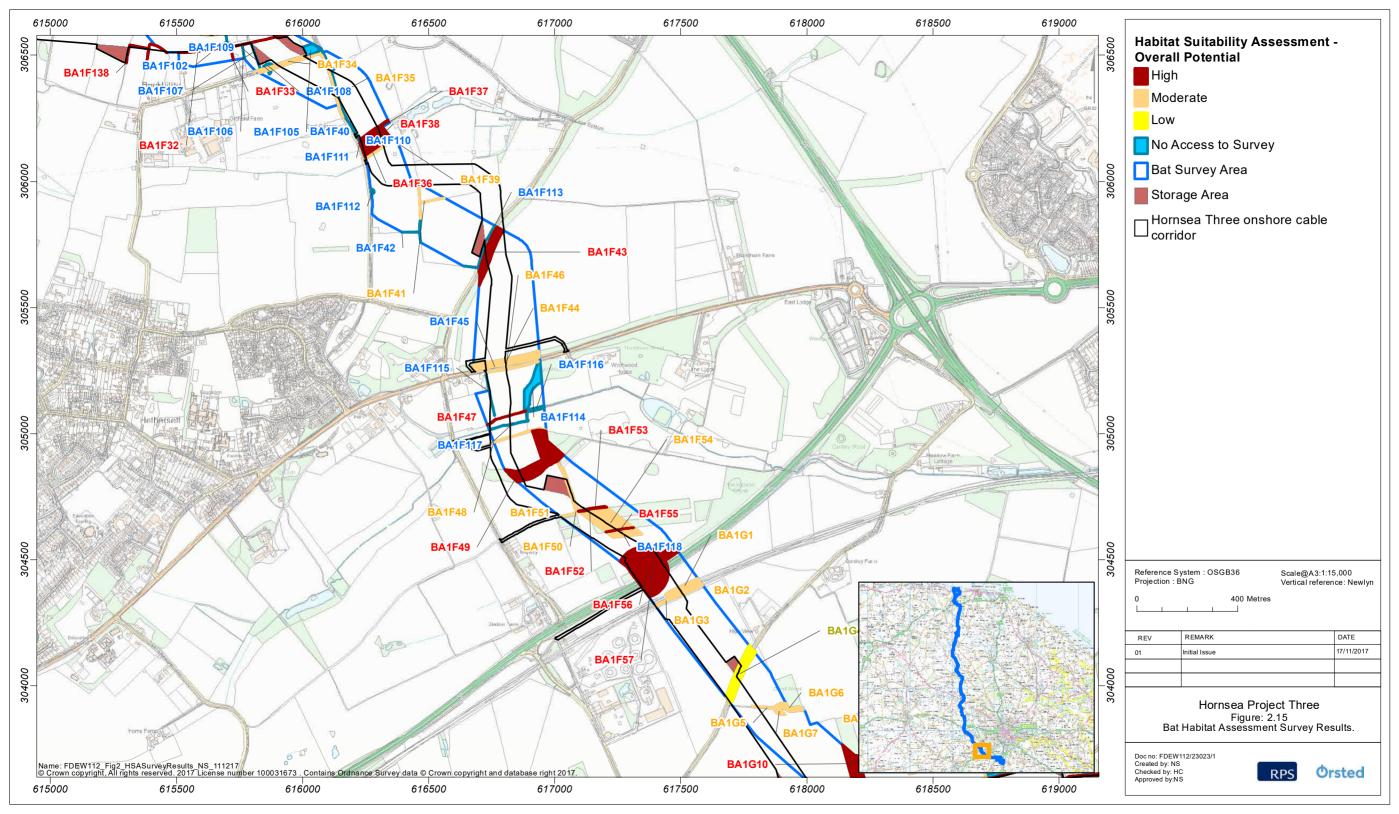


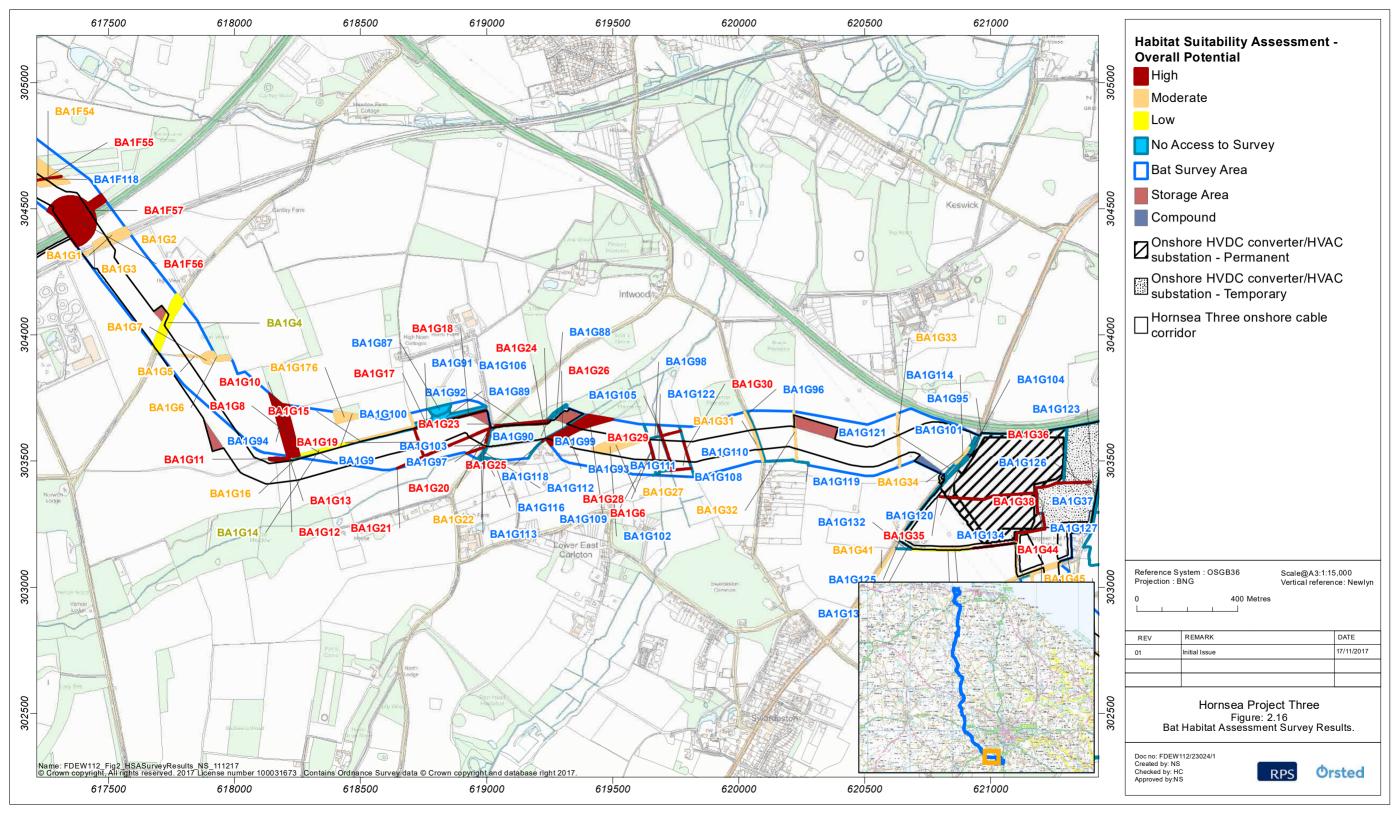


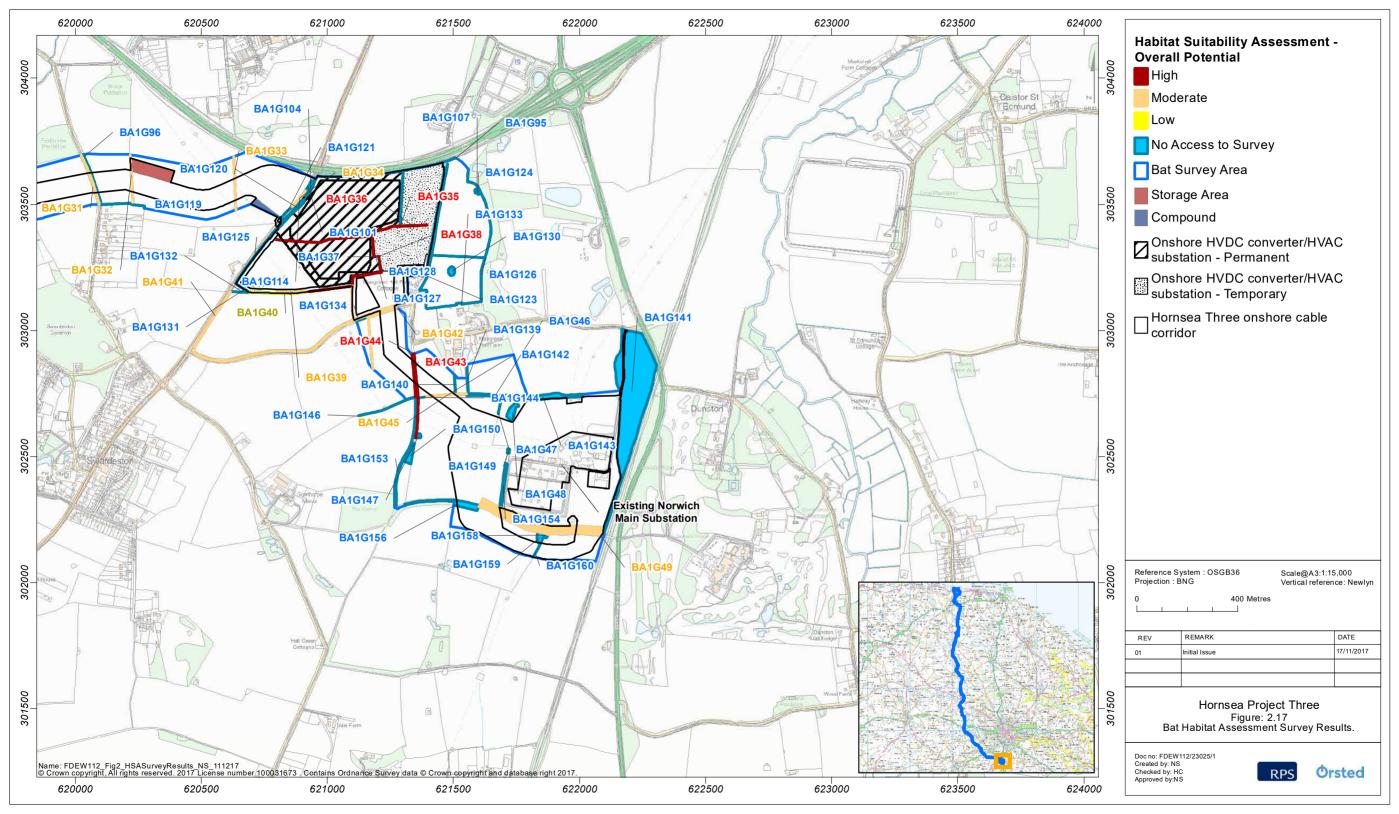














A.3 Photographs of representative habitats from the HSA survey







Photograph 1: Example of heathland habitat in parcel BA1A20.

Photograph 2: Example of monoculture in parcel BA1C35.

Photograph 3: Example of diverse grassland habitat in parcel BA1E9.



Photograph 4: Example of woodland habitat in parcel BA1E29.



Photograph 5: Example of aquatic habitat (river passing through grassland) in parcel BA1F14.



Photograph 6: Example of hedgerow in parcel BA1F32.

Reference System : N/A Projection : N/A Scale@A3: N/A Vertical reference: N/A

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 Initial Issue
 13/12/2017

Hornsea Project Three Figure 3.1: Photographs of Representative Habitats from the HSA Survey

Doc no: FDEW112/24898/1 Created by: DJ Checked by: NS Approved by:NS

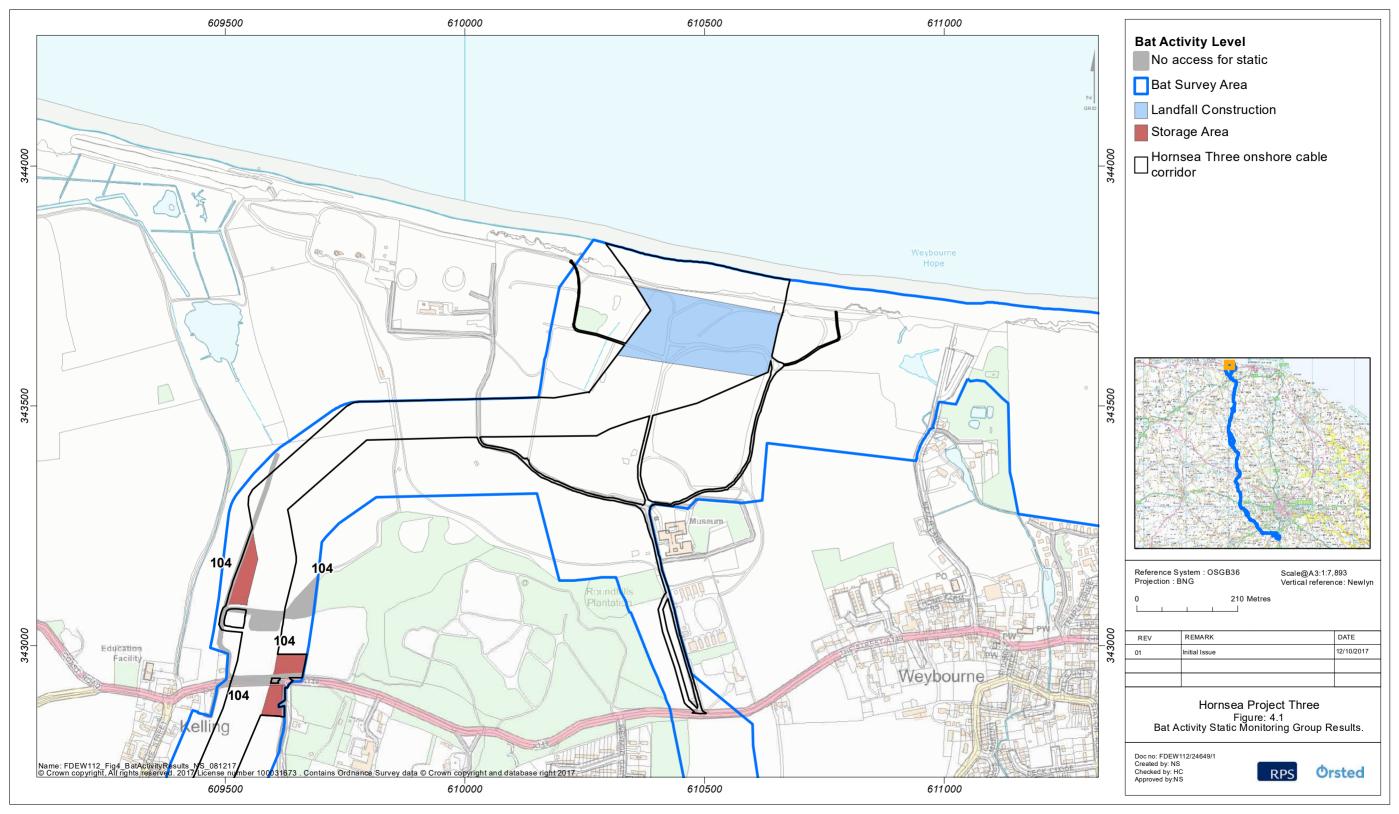


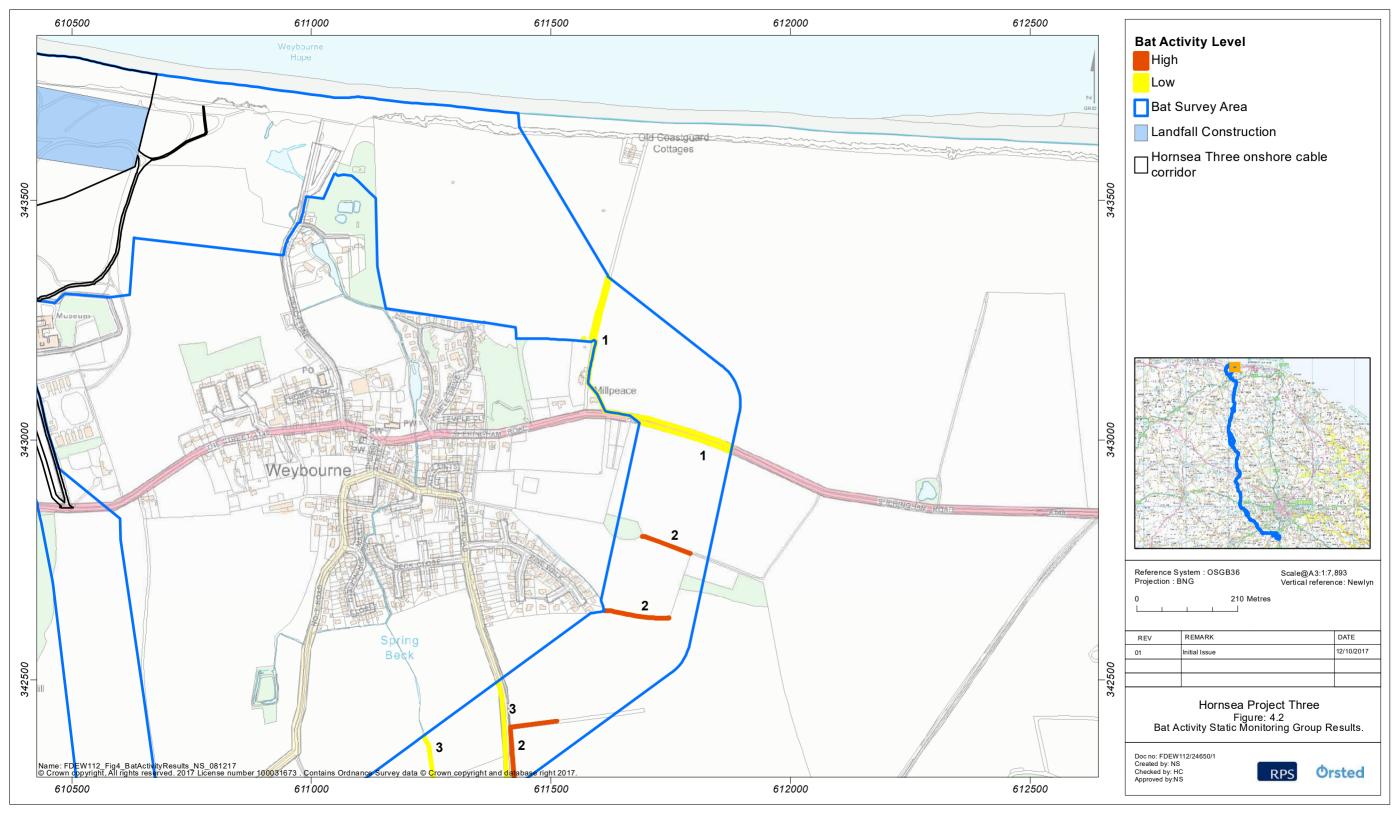


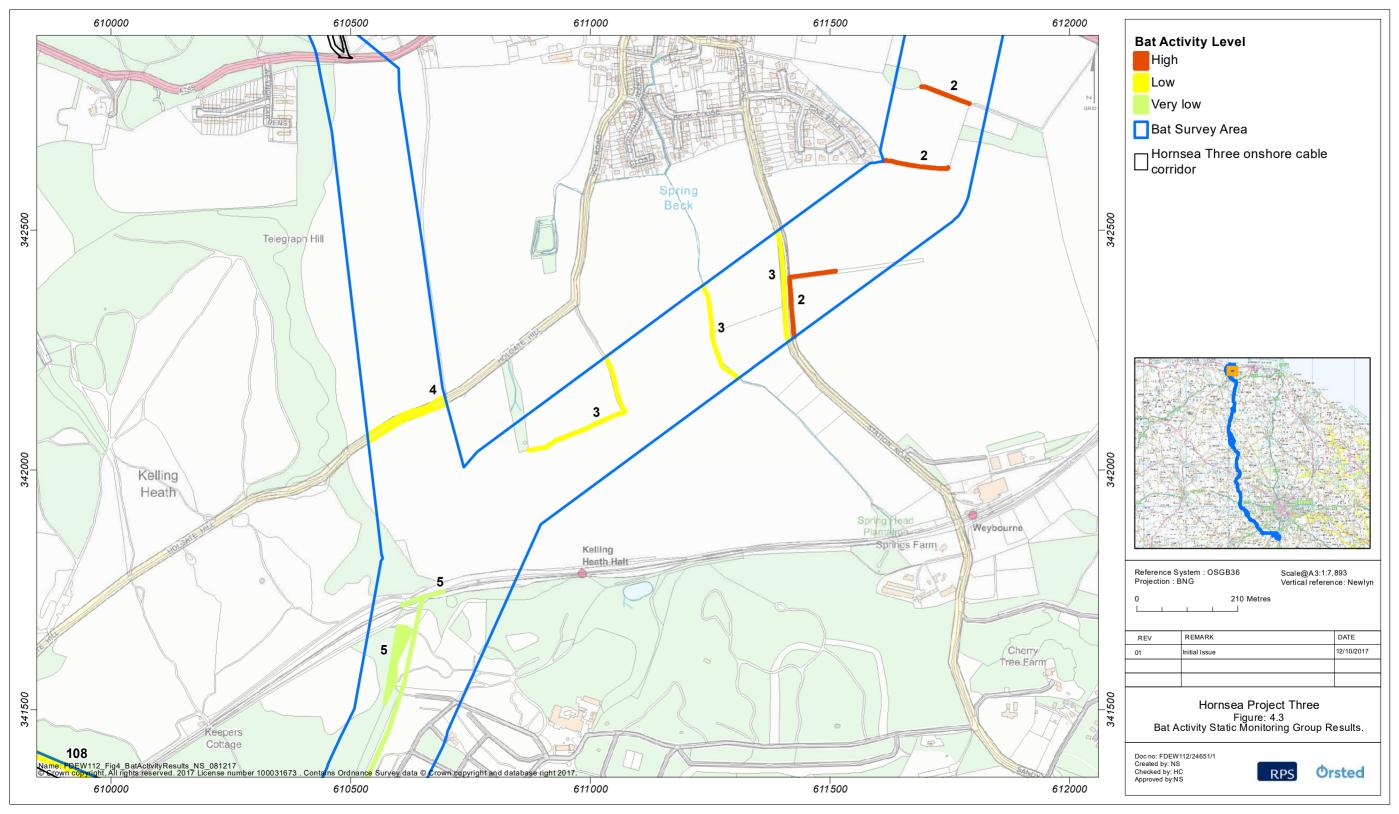


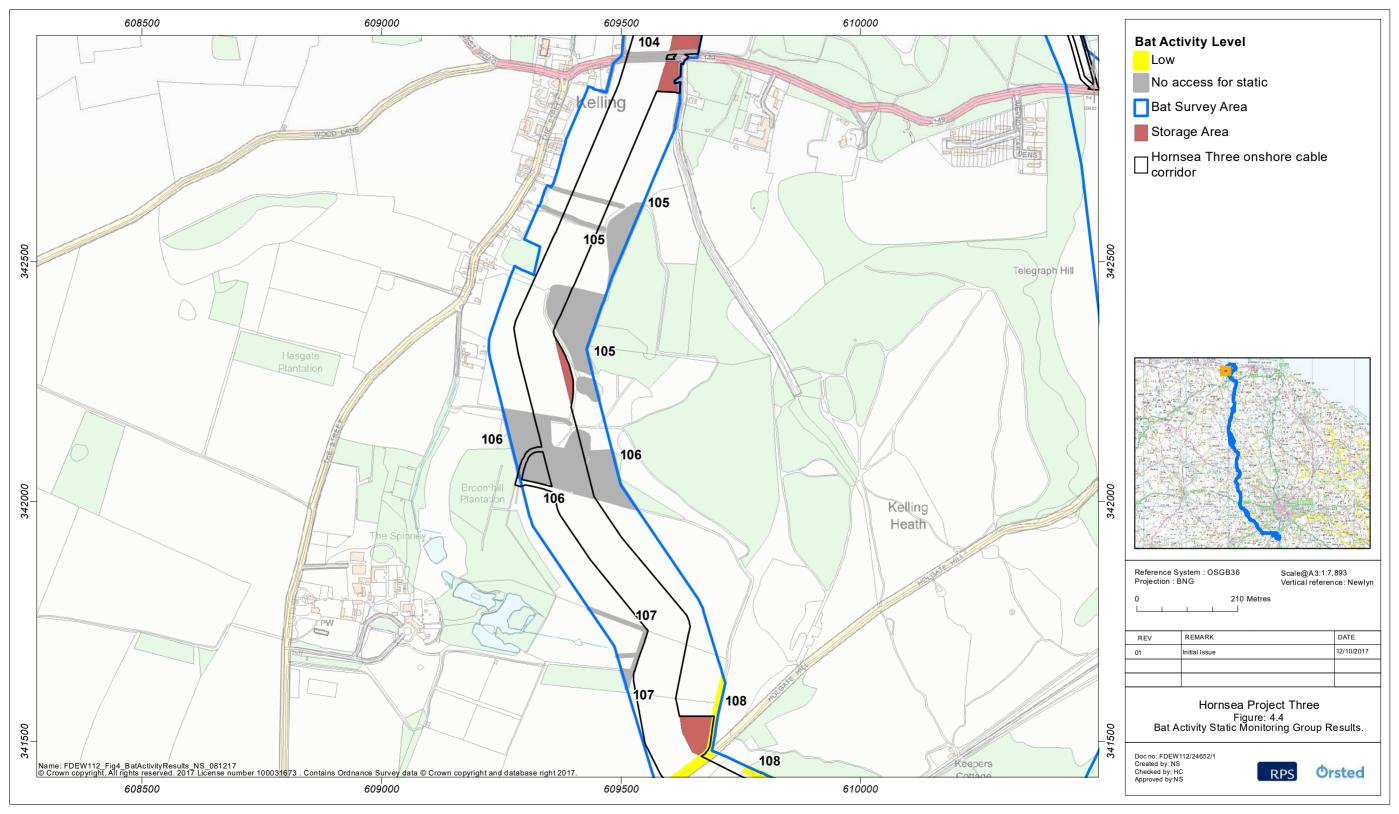
A.4 Bat activity static monitoring group results

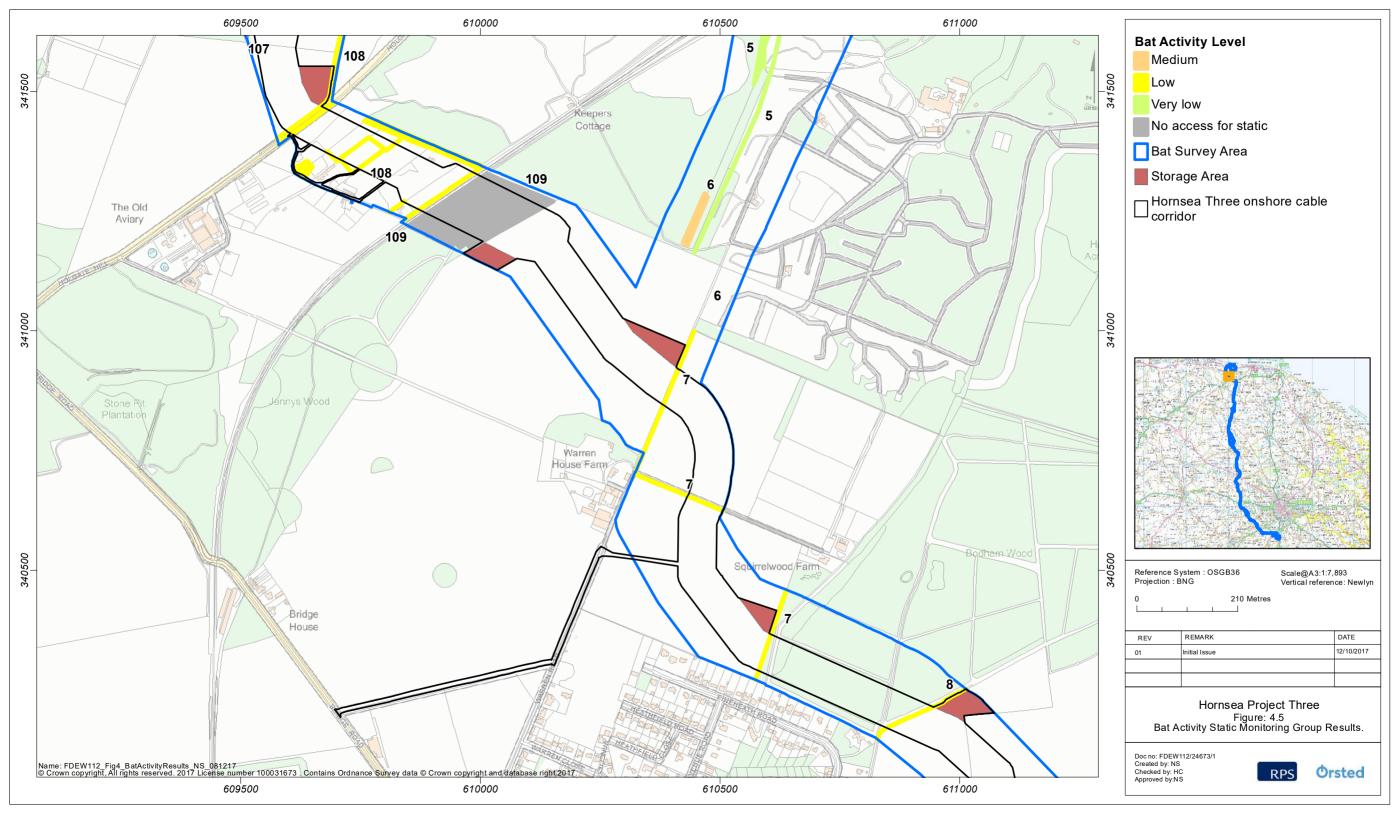


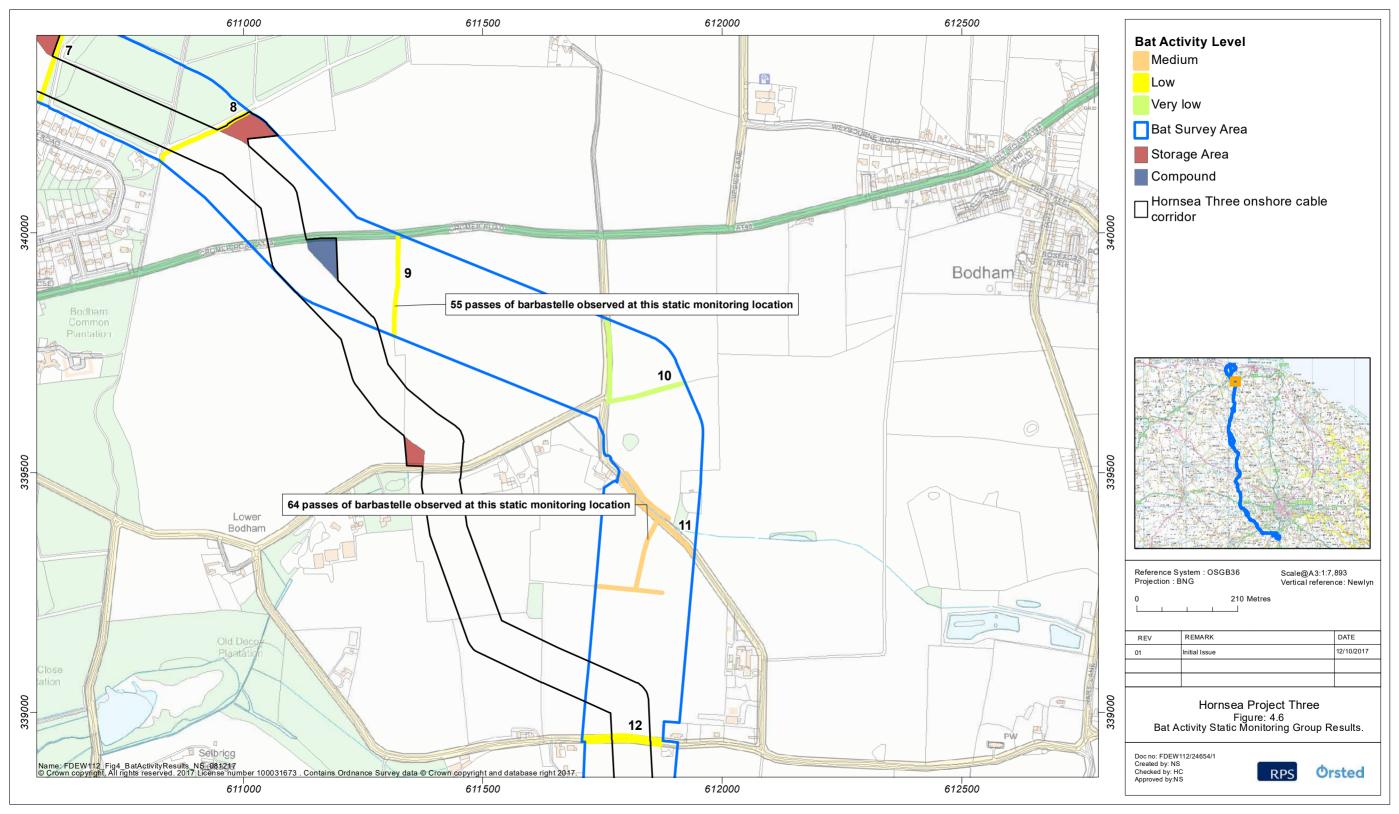


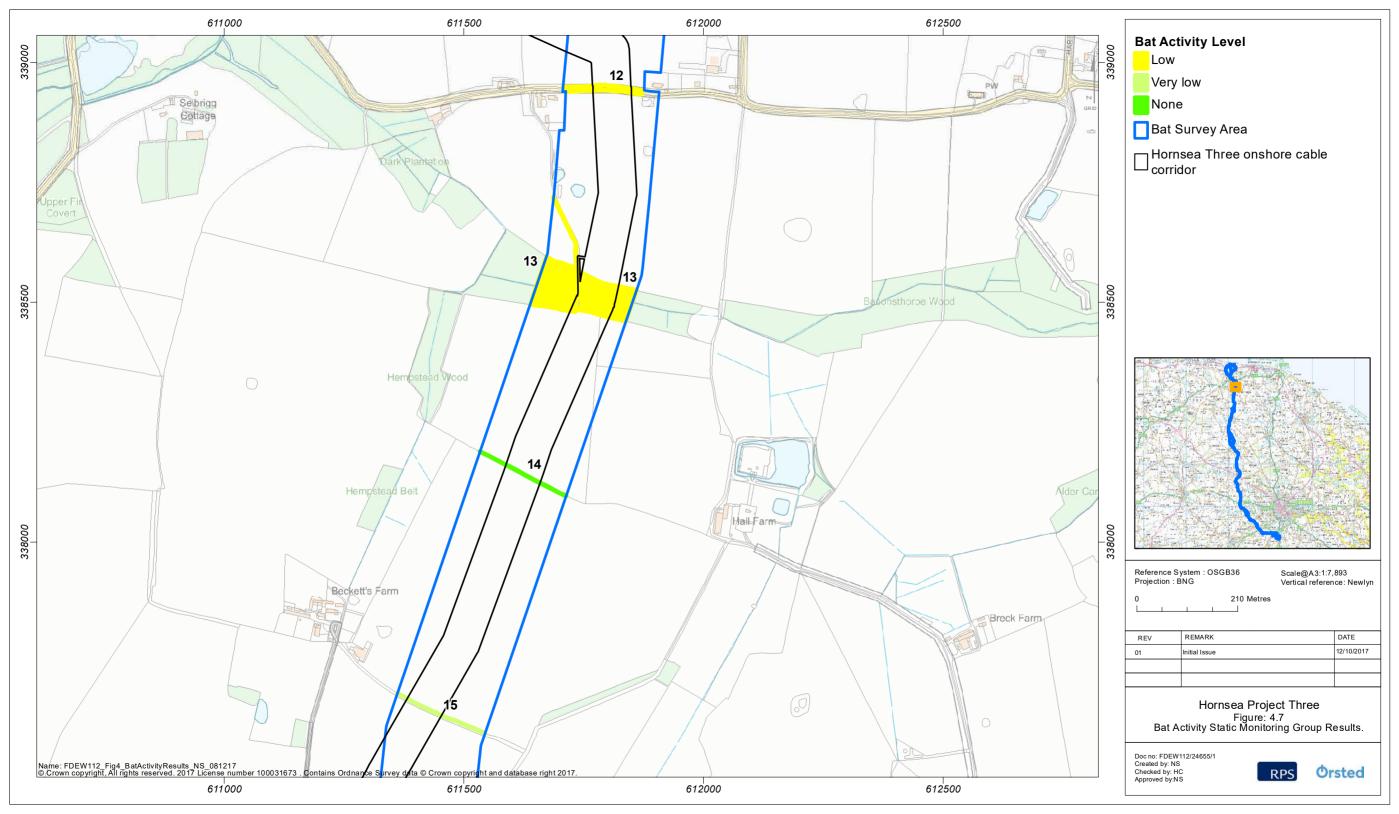


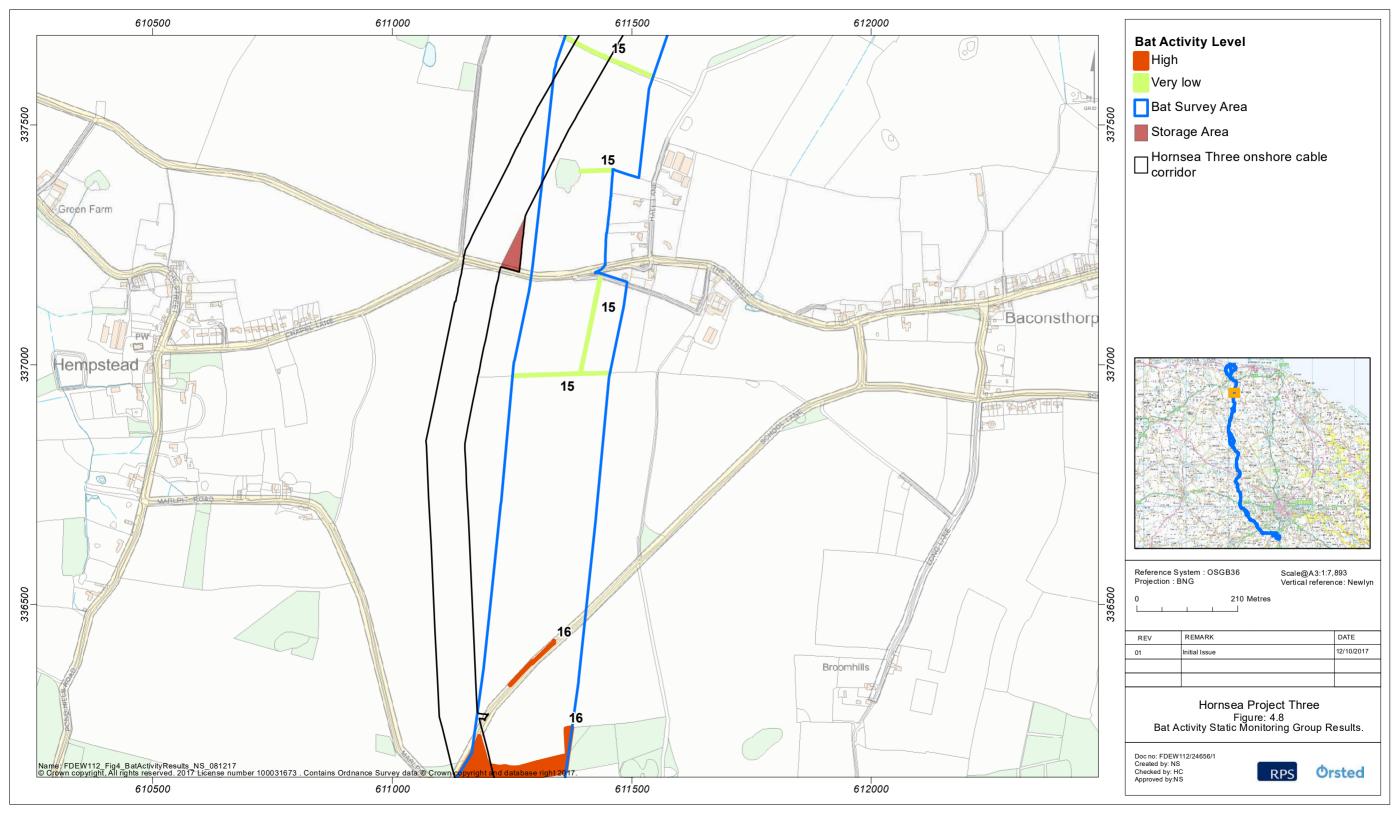


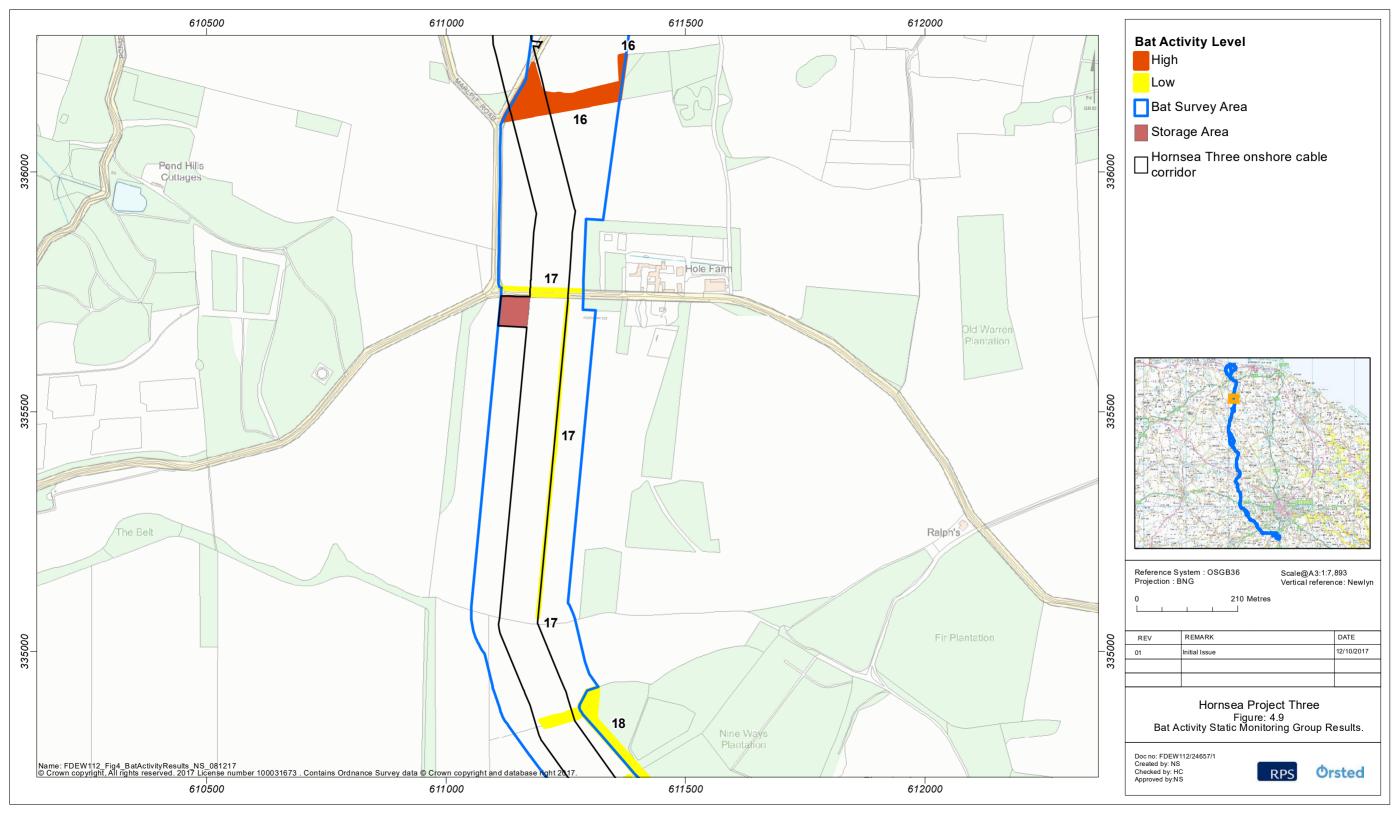


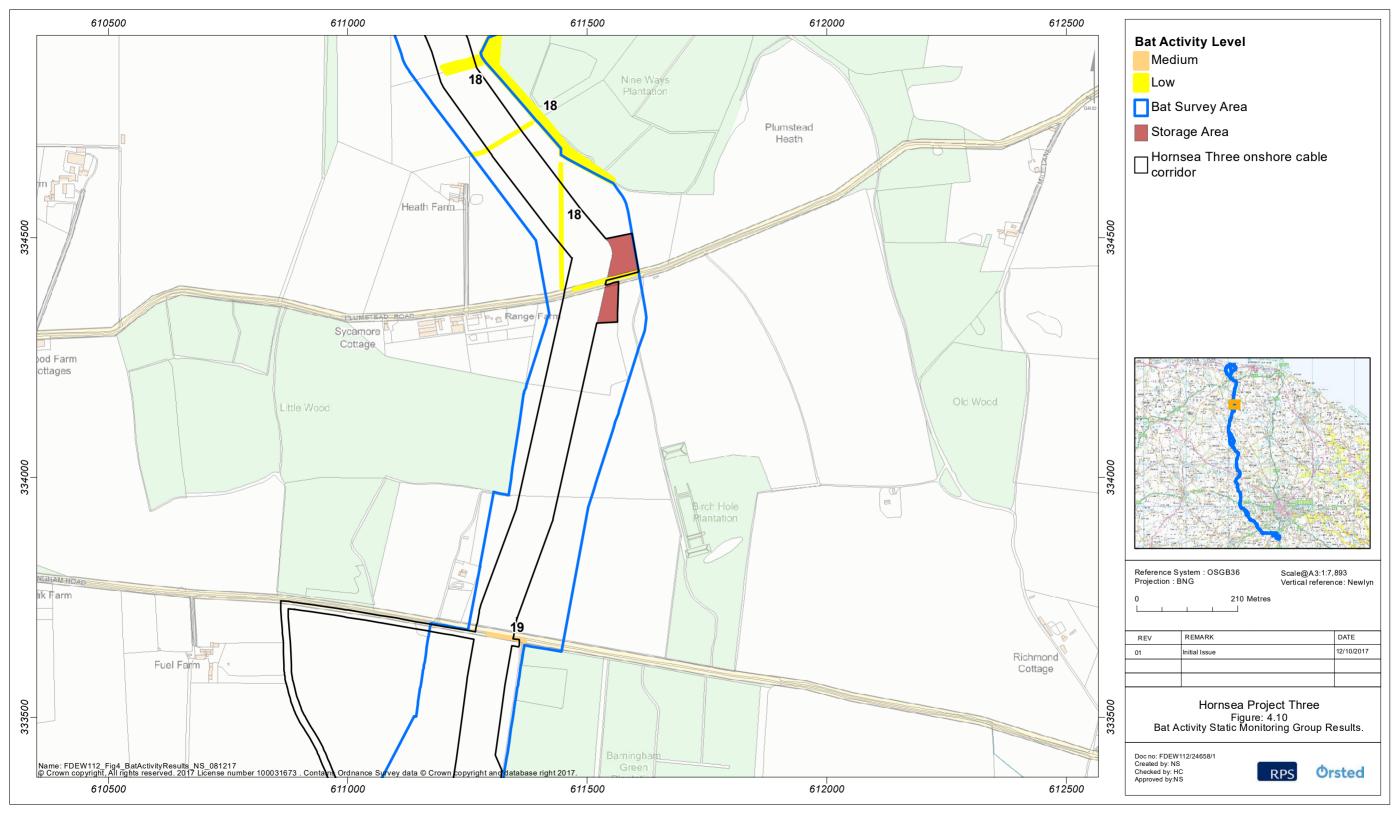


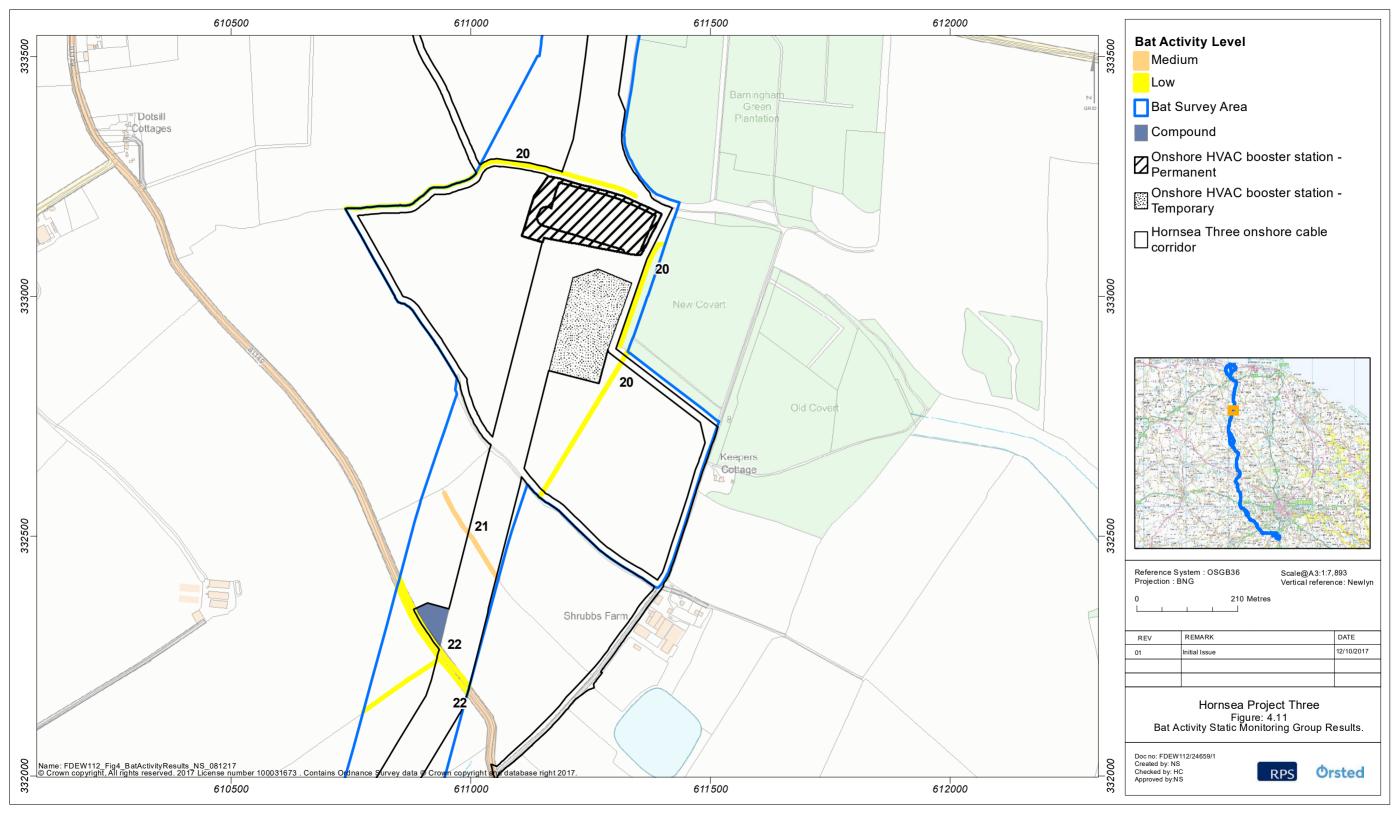


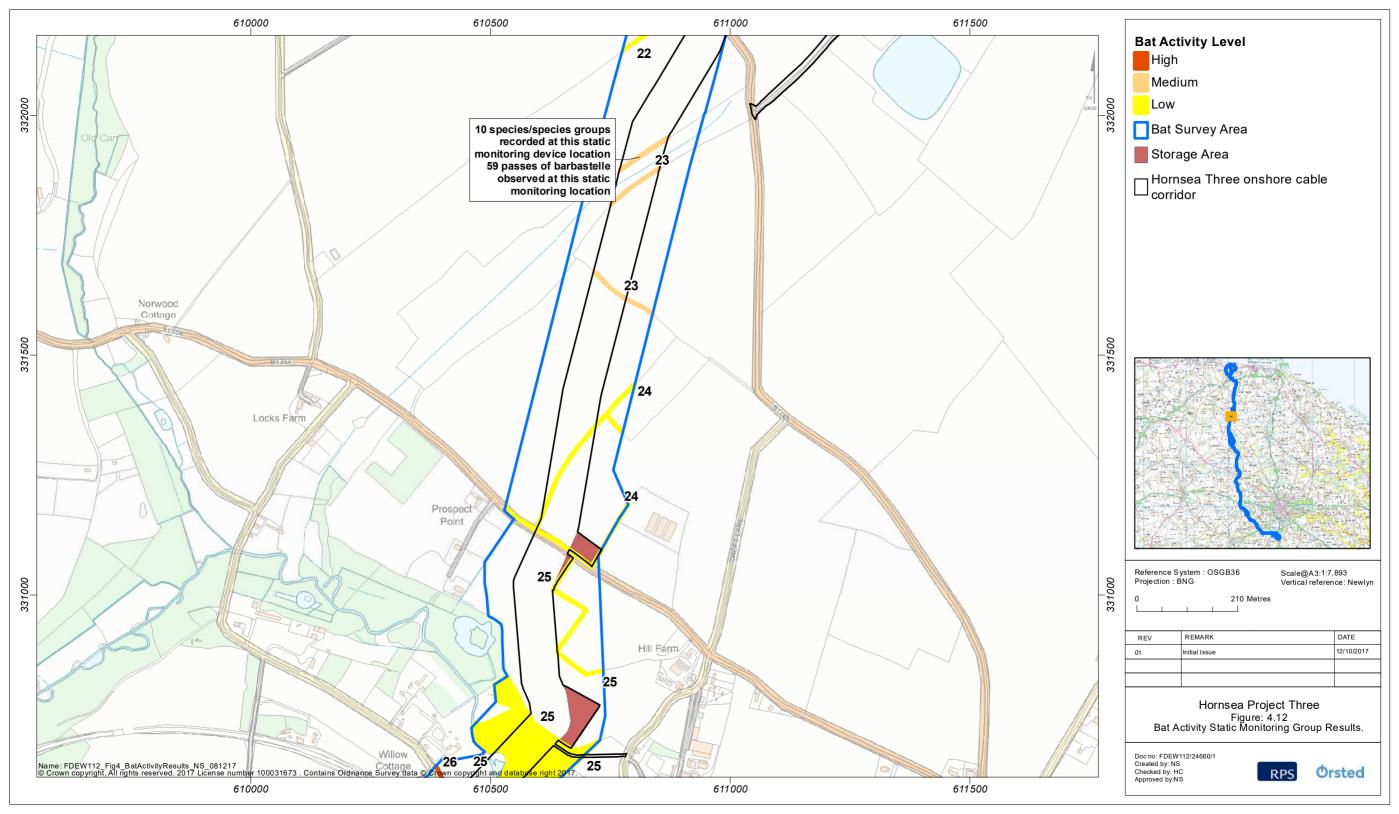


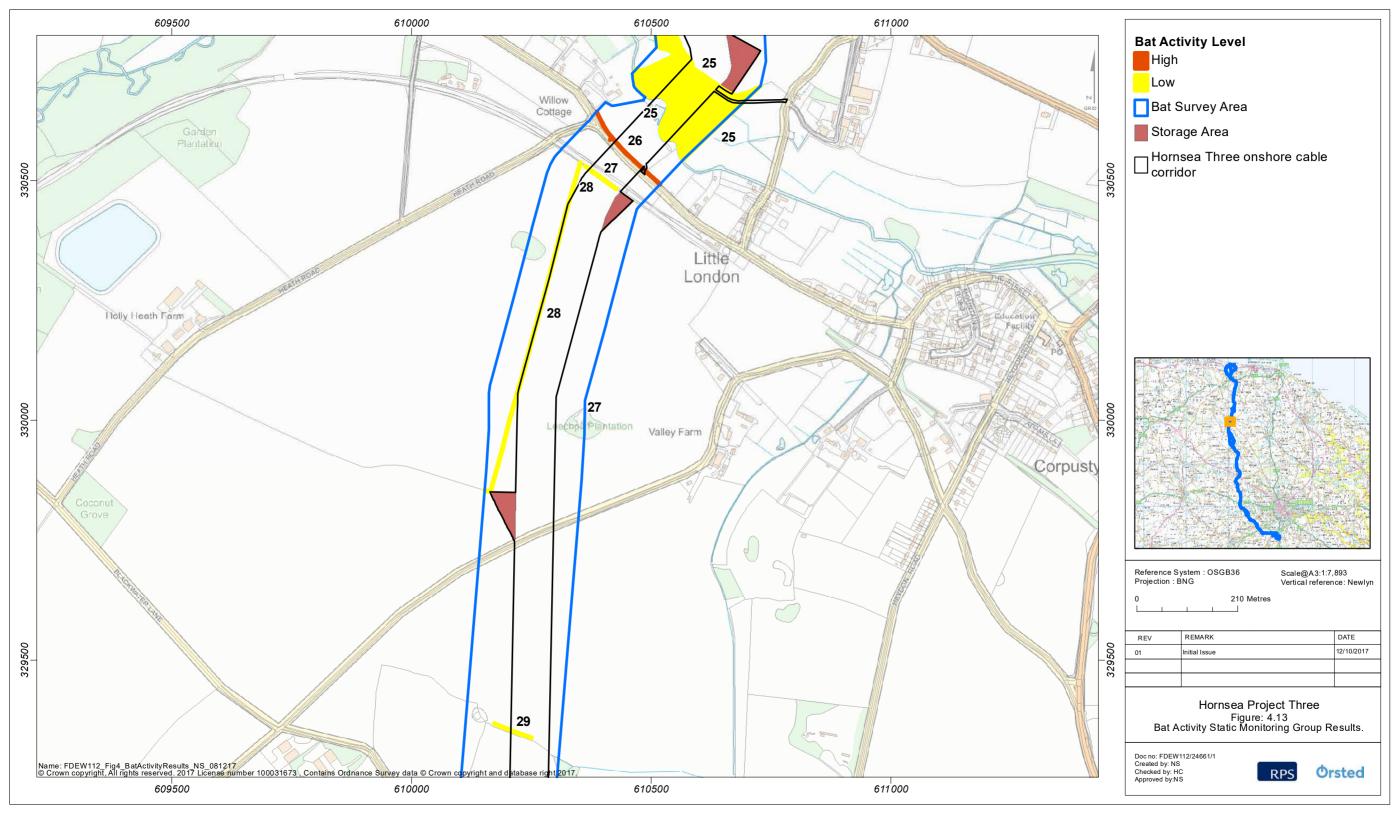


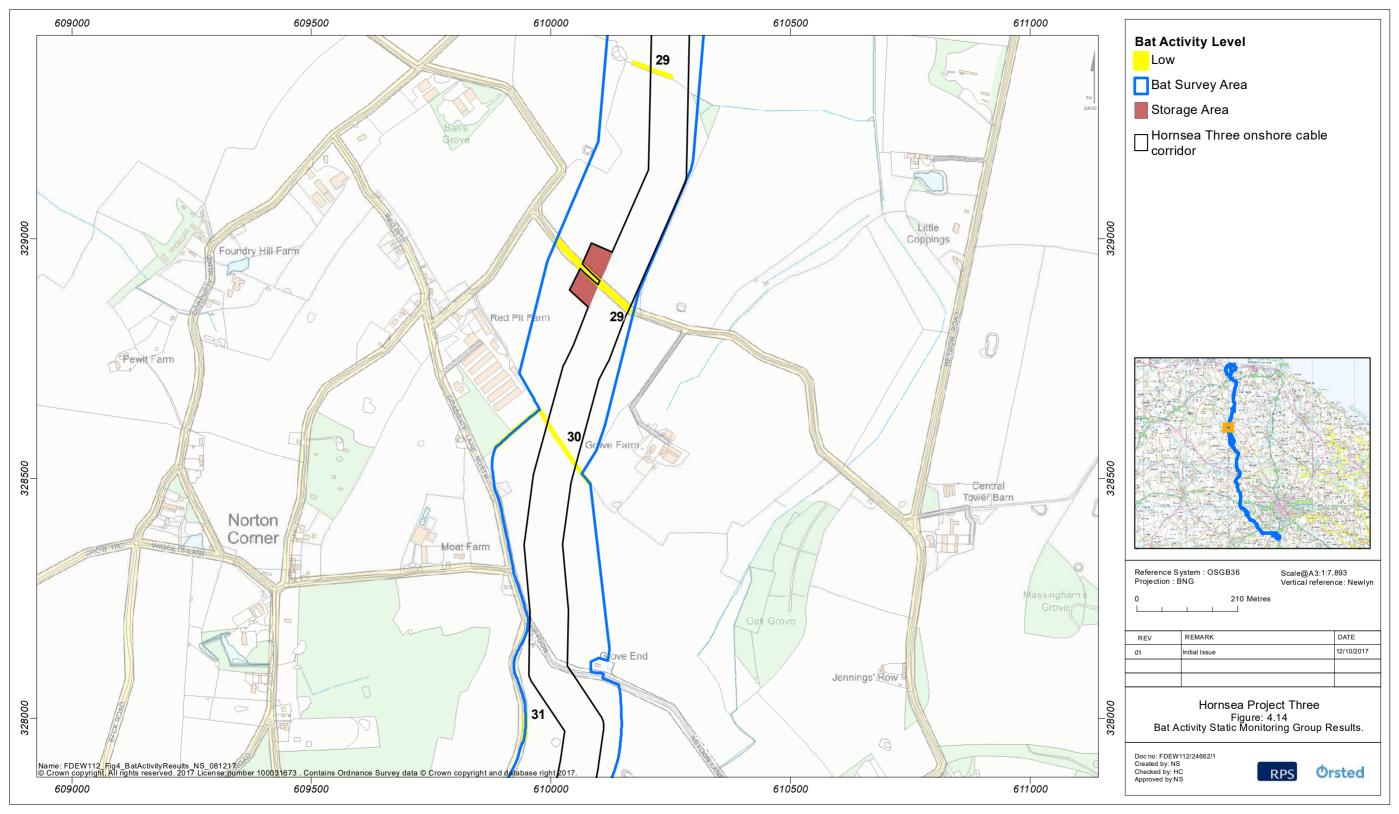


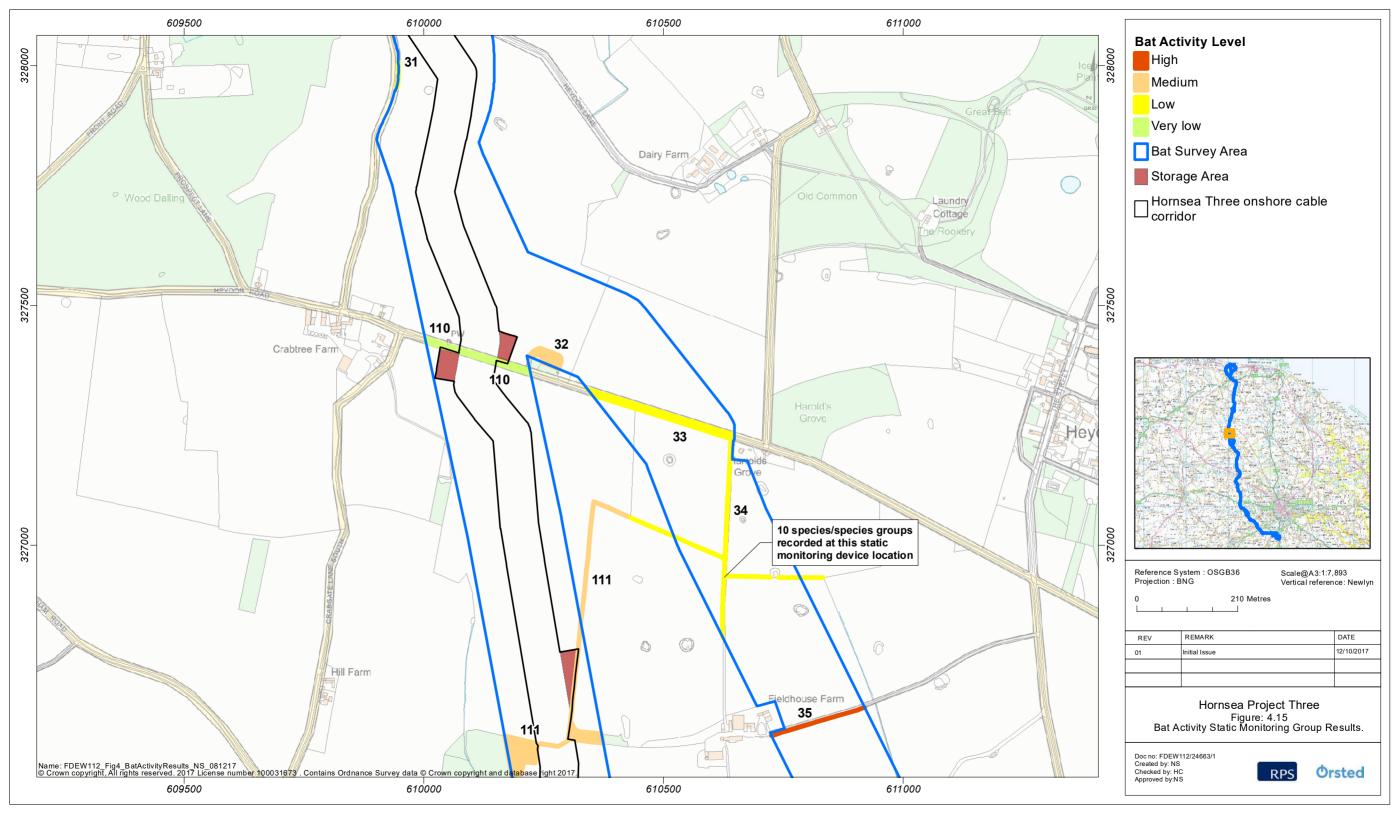


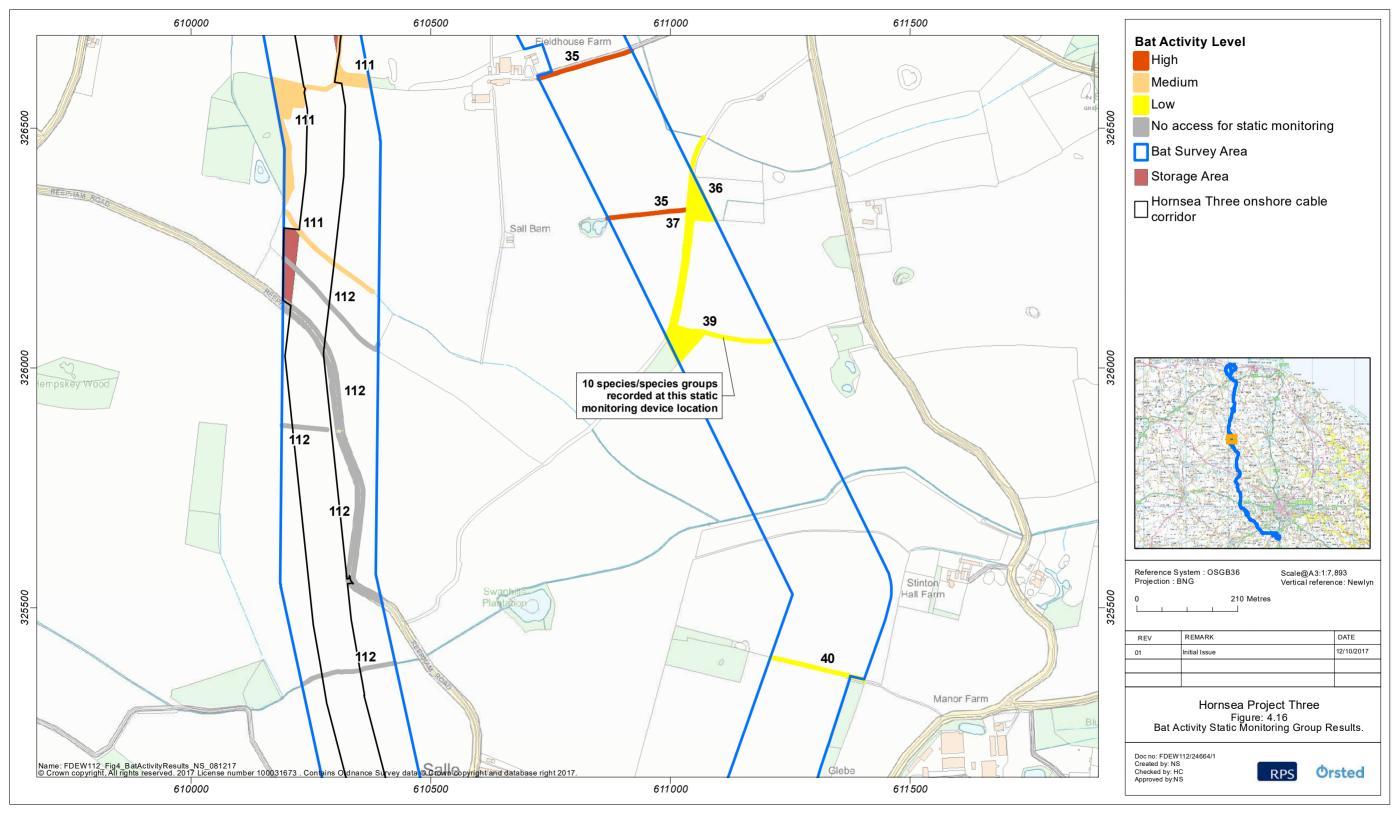


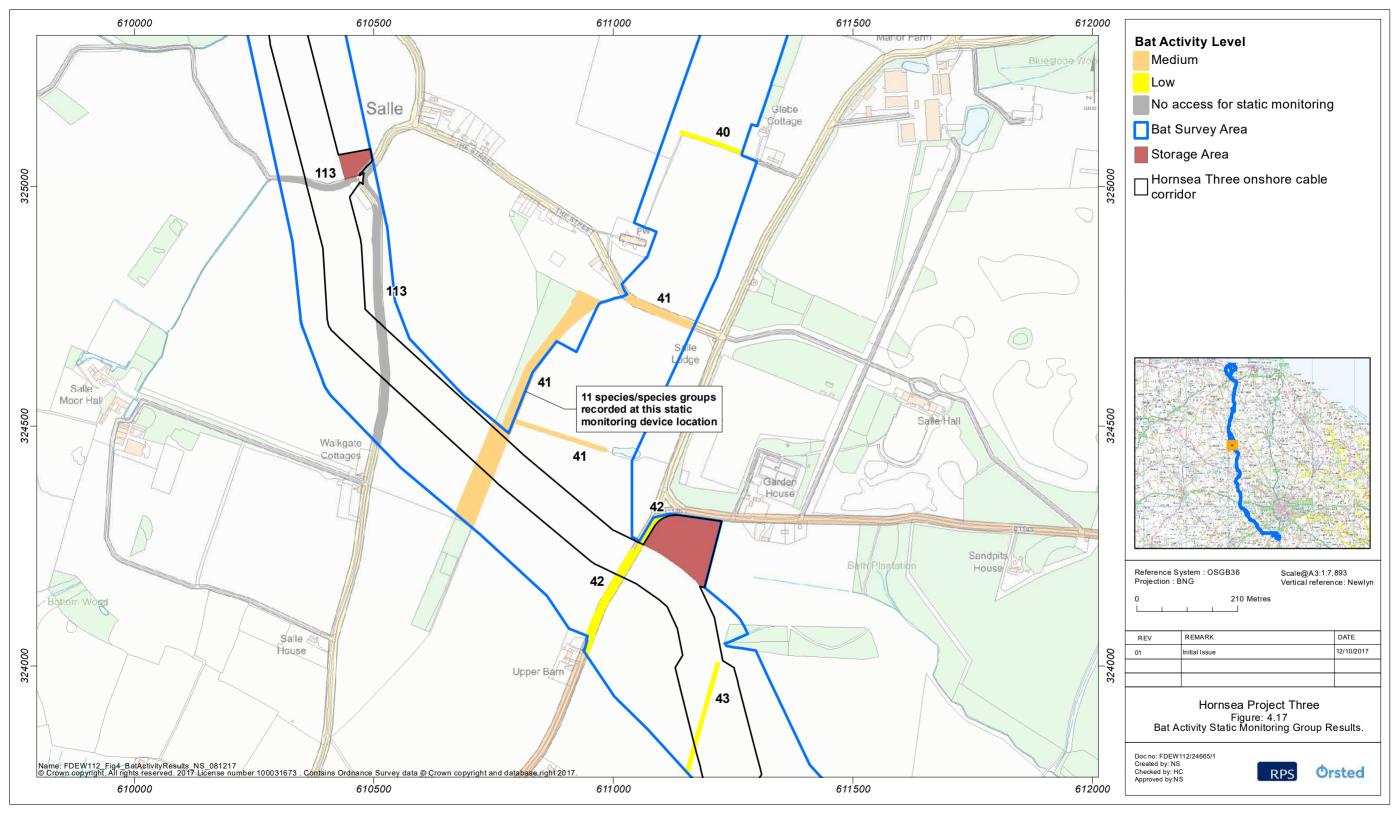


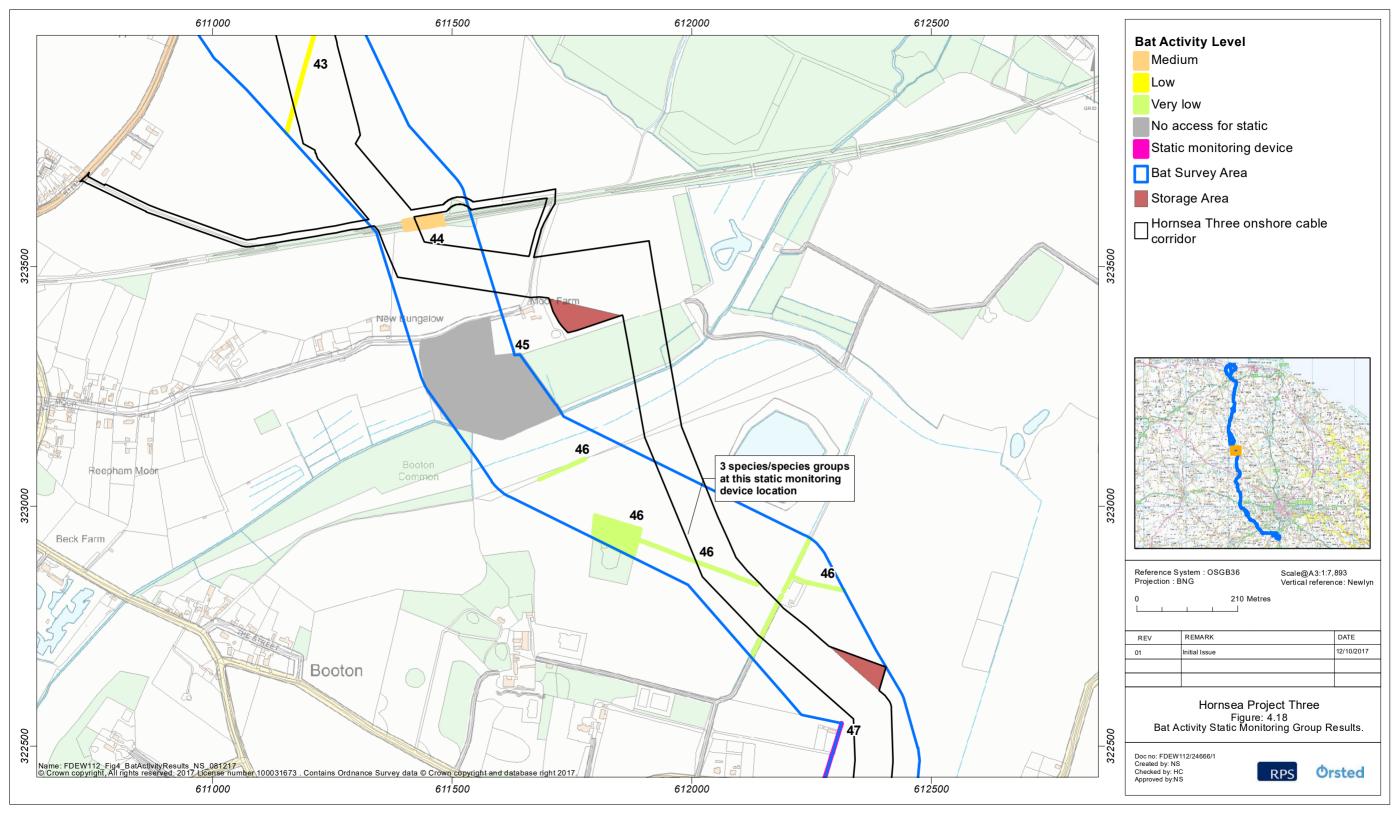


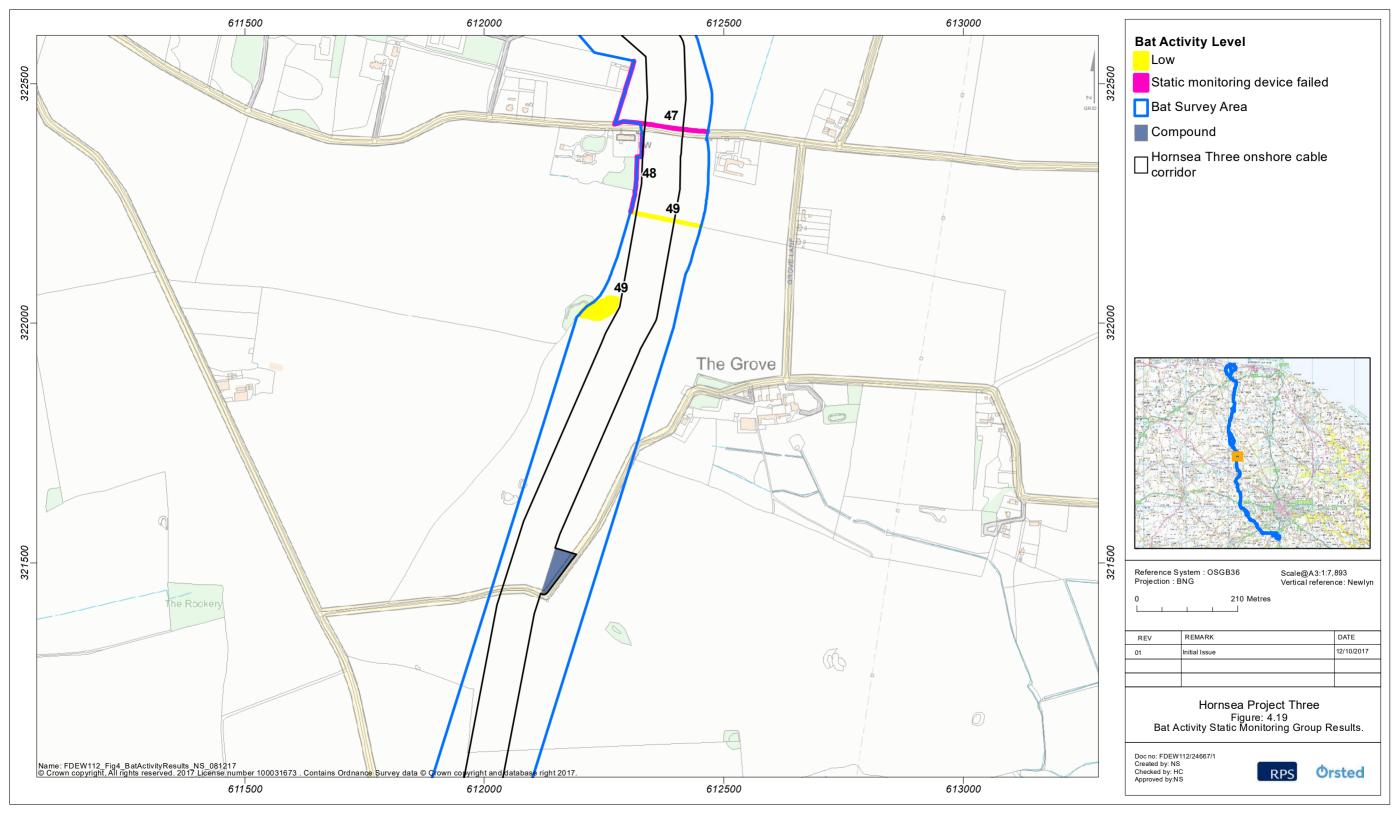


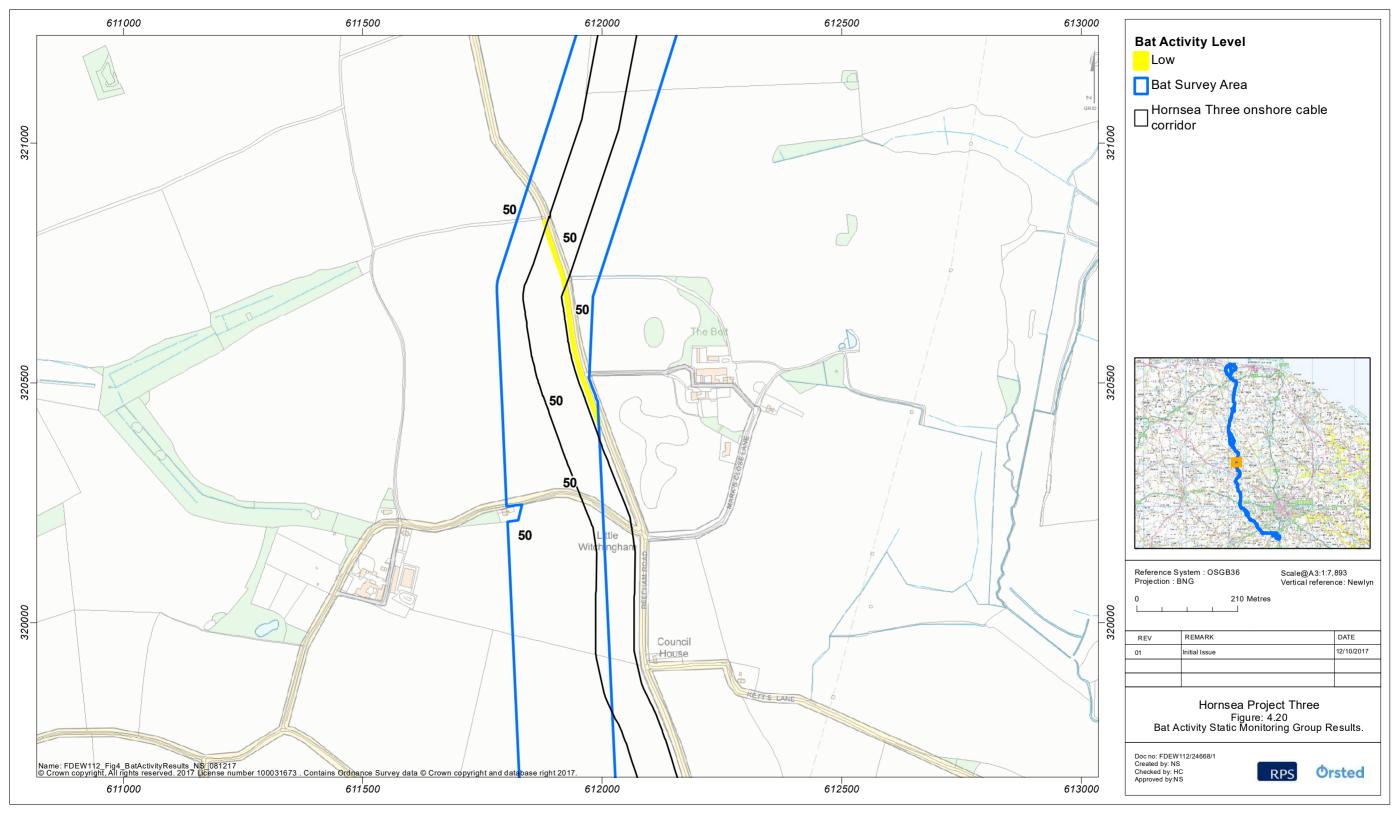


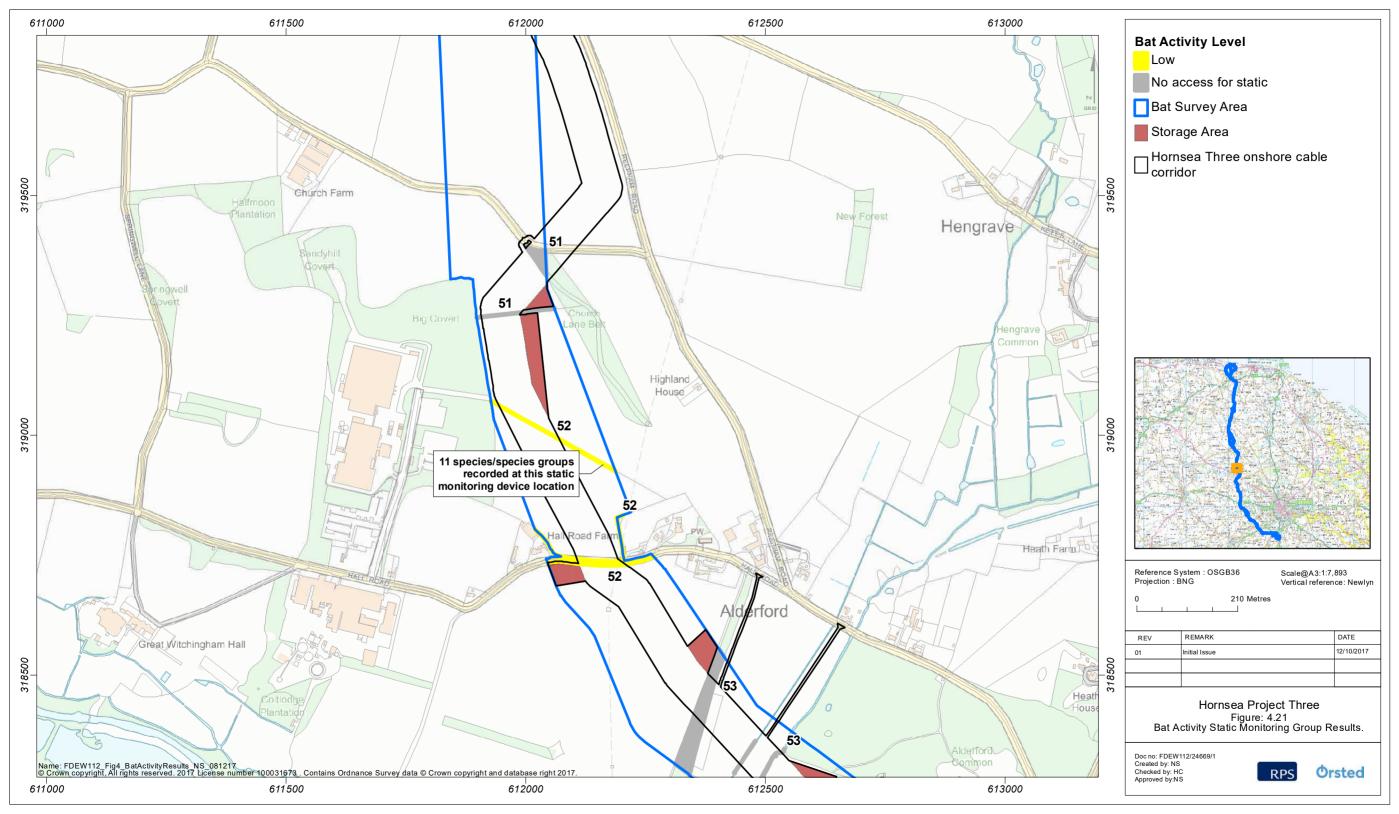


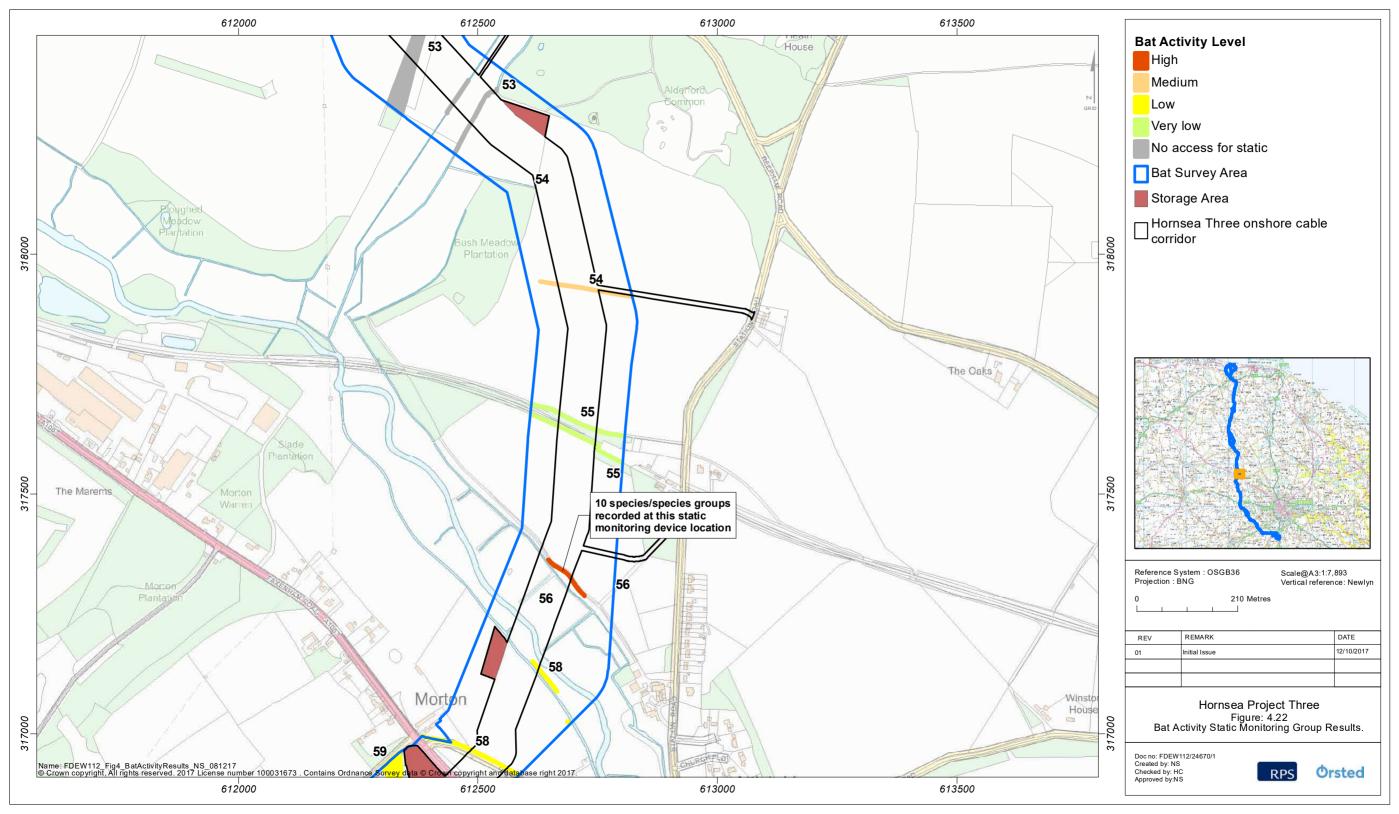


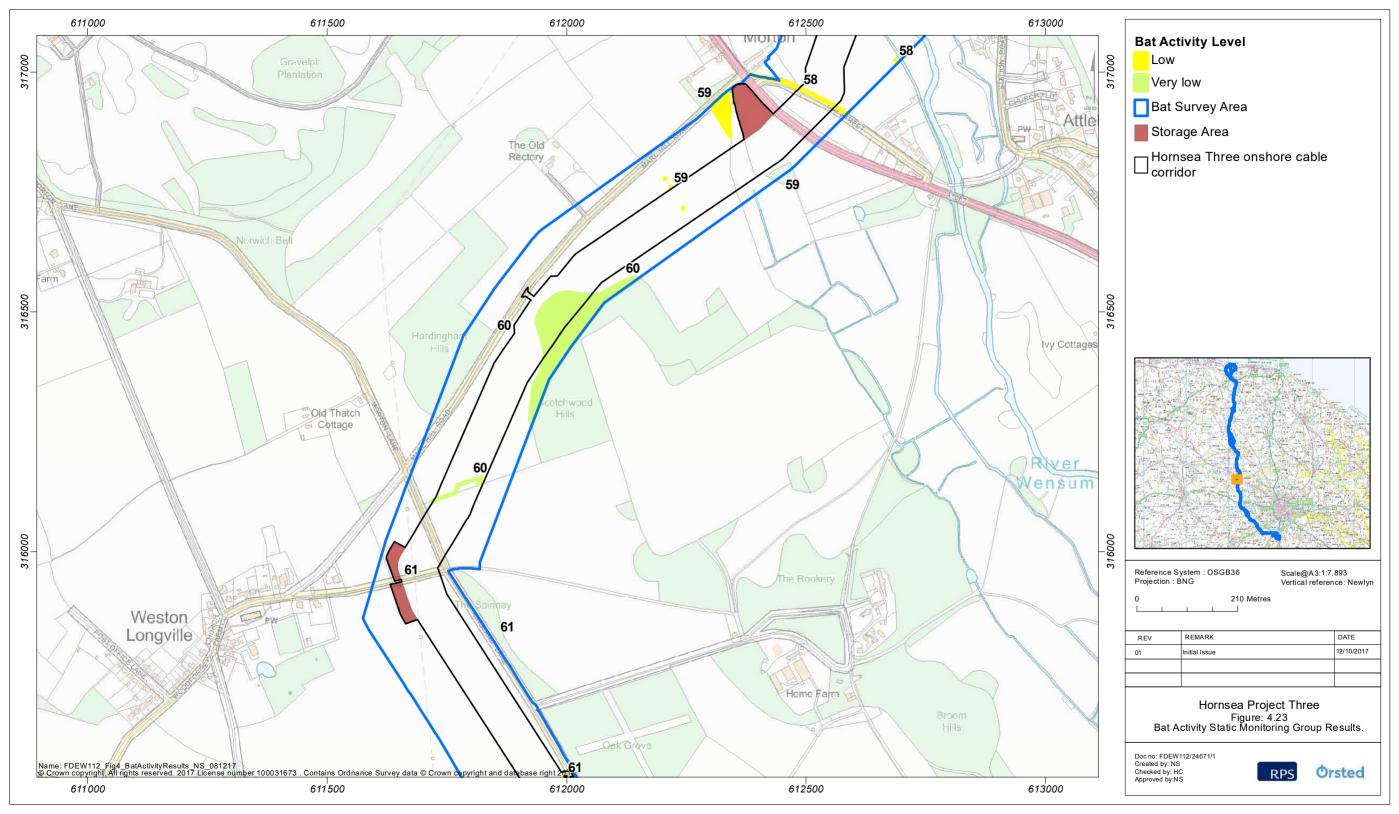


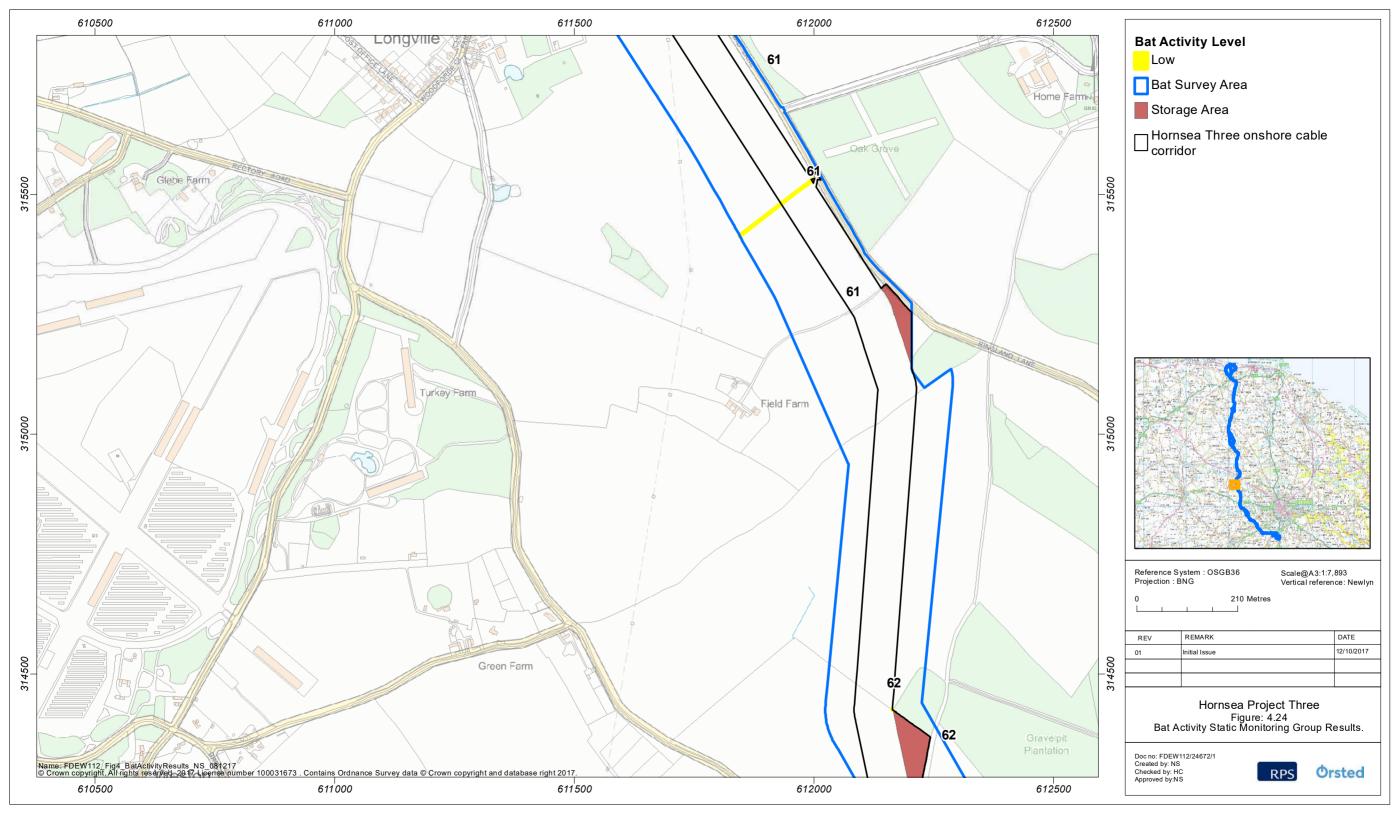


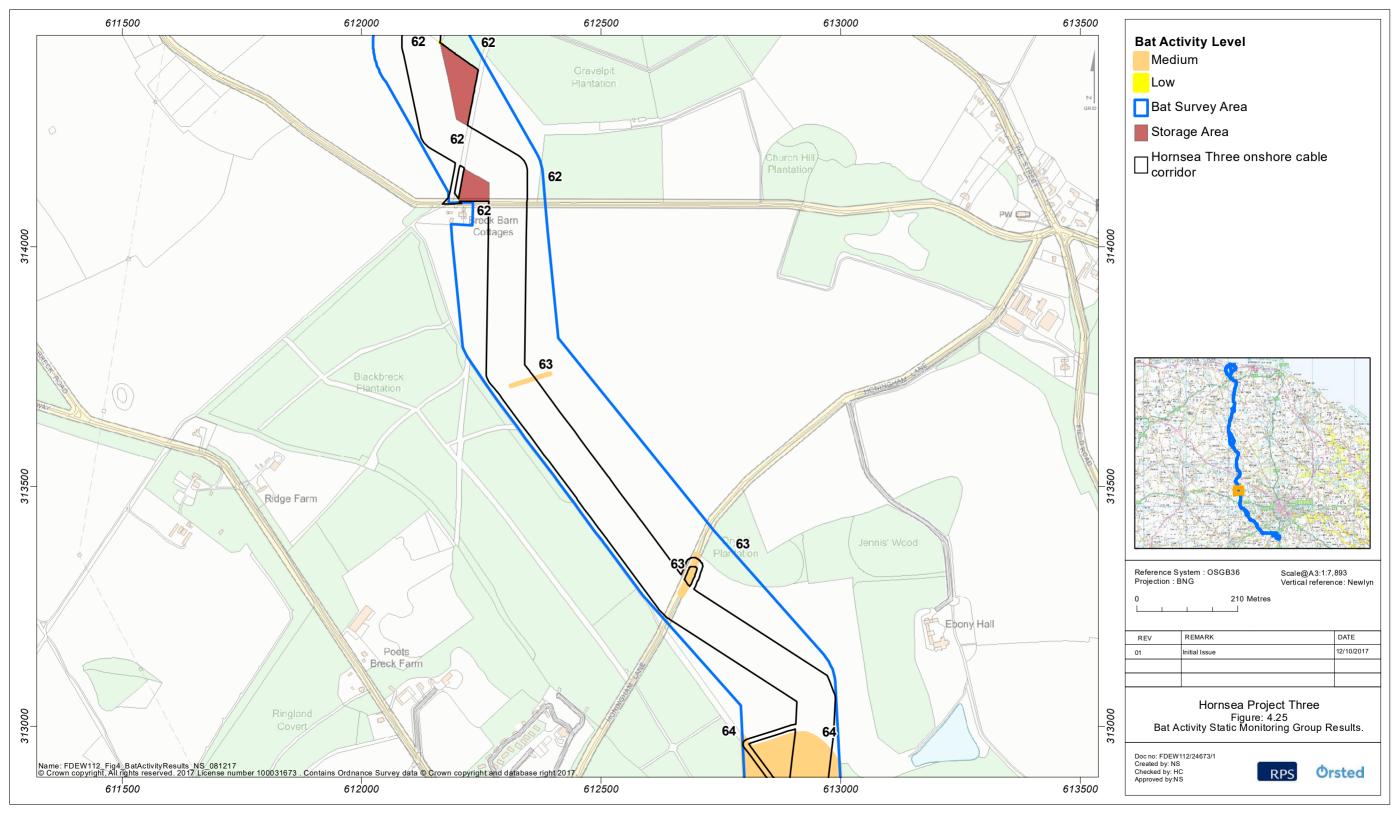




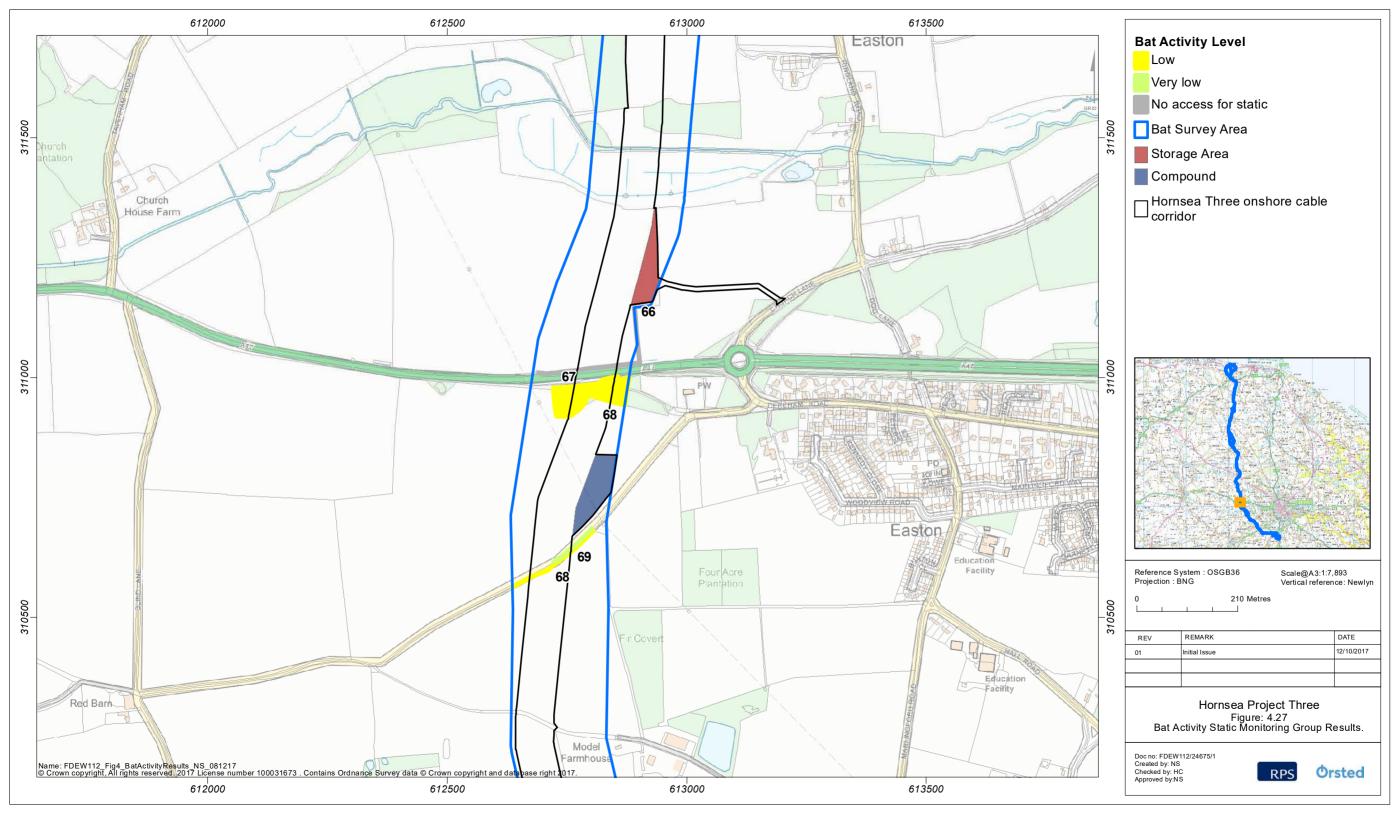


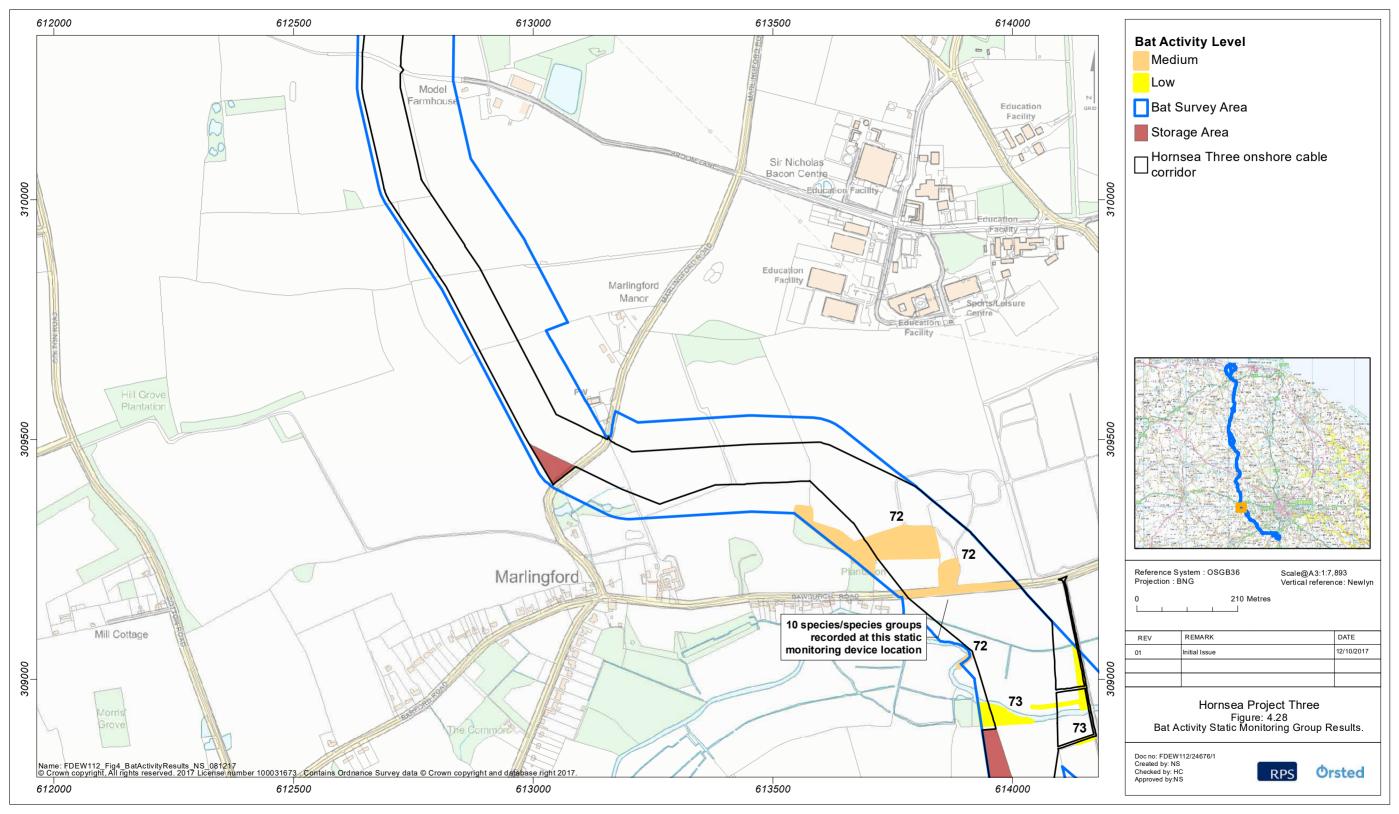


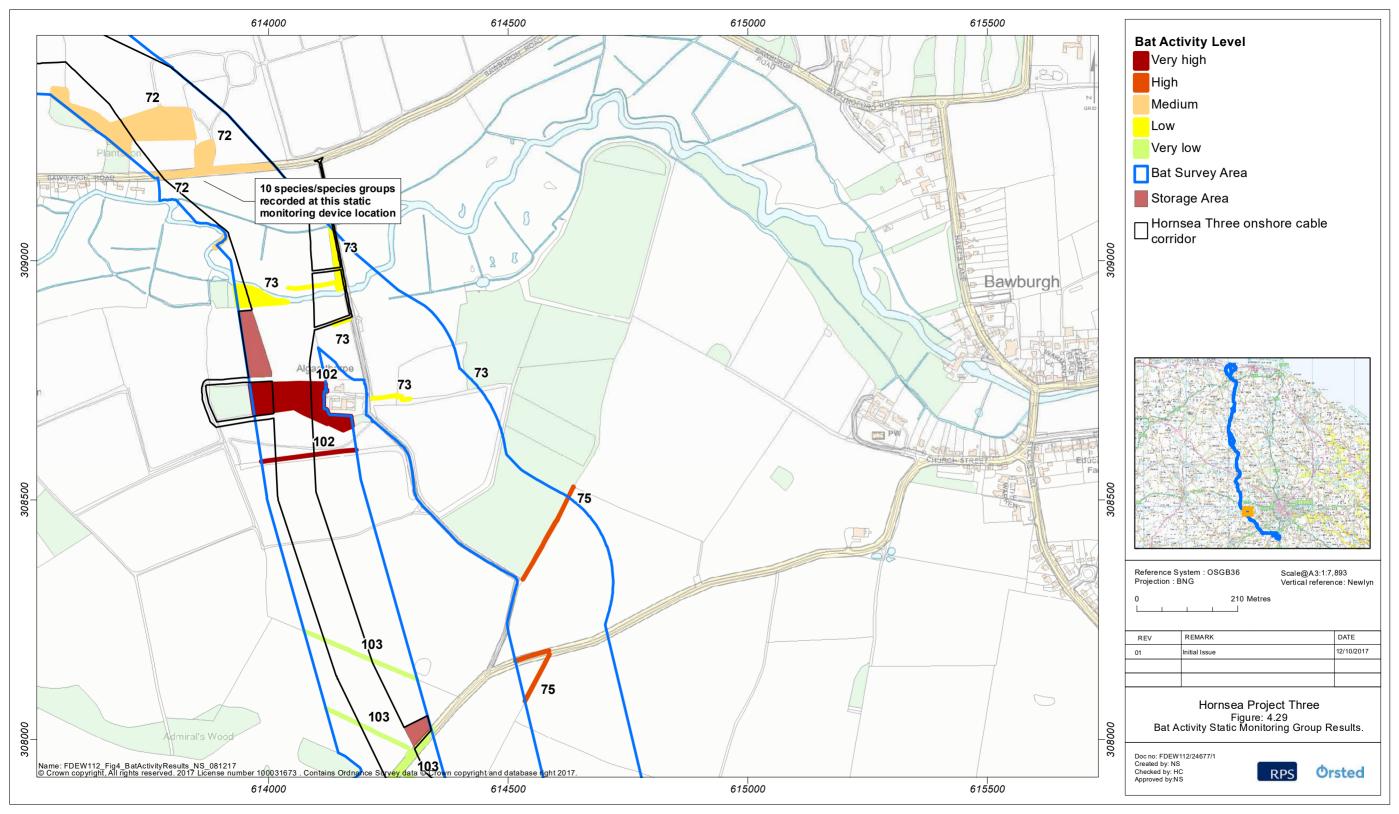


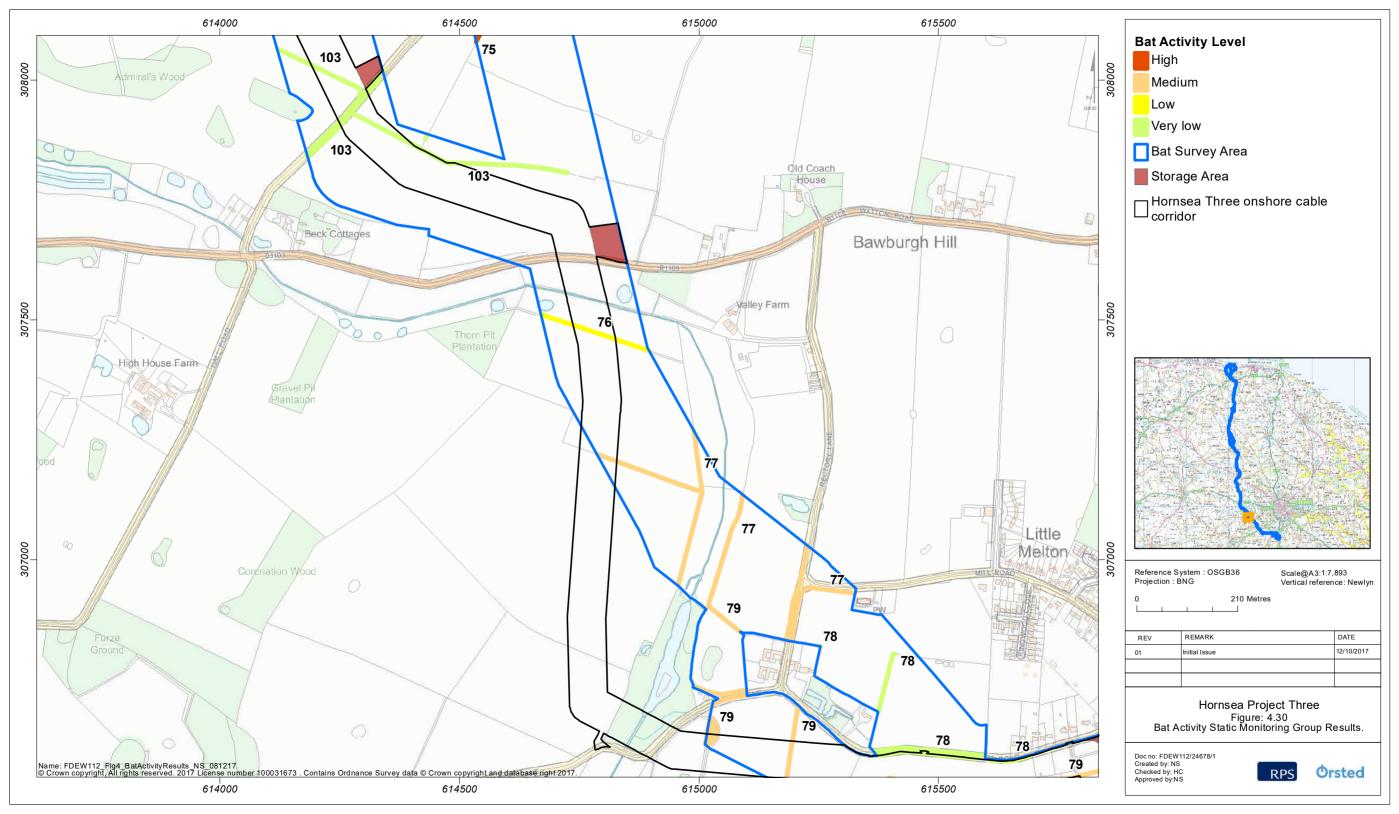


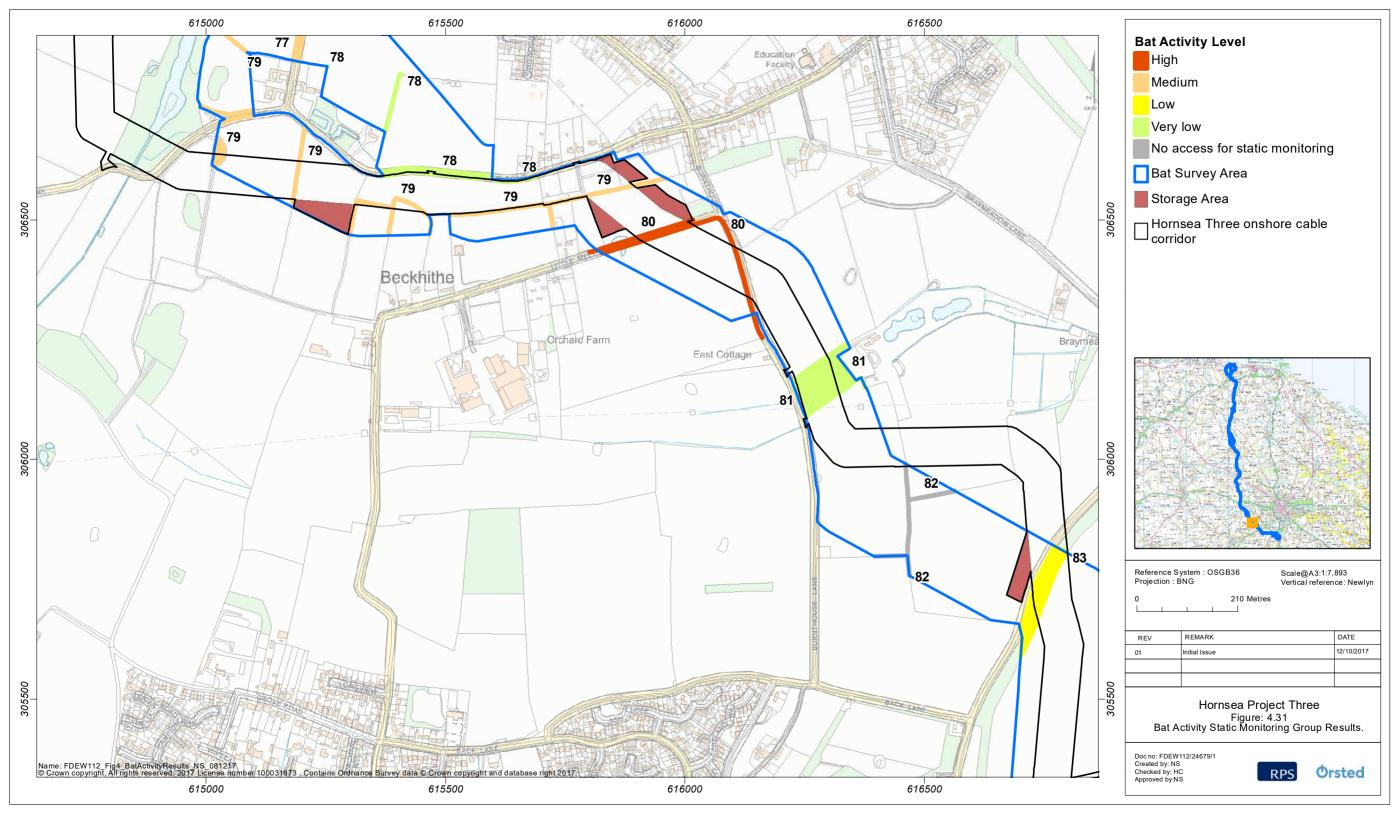


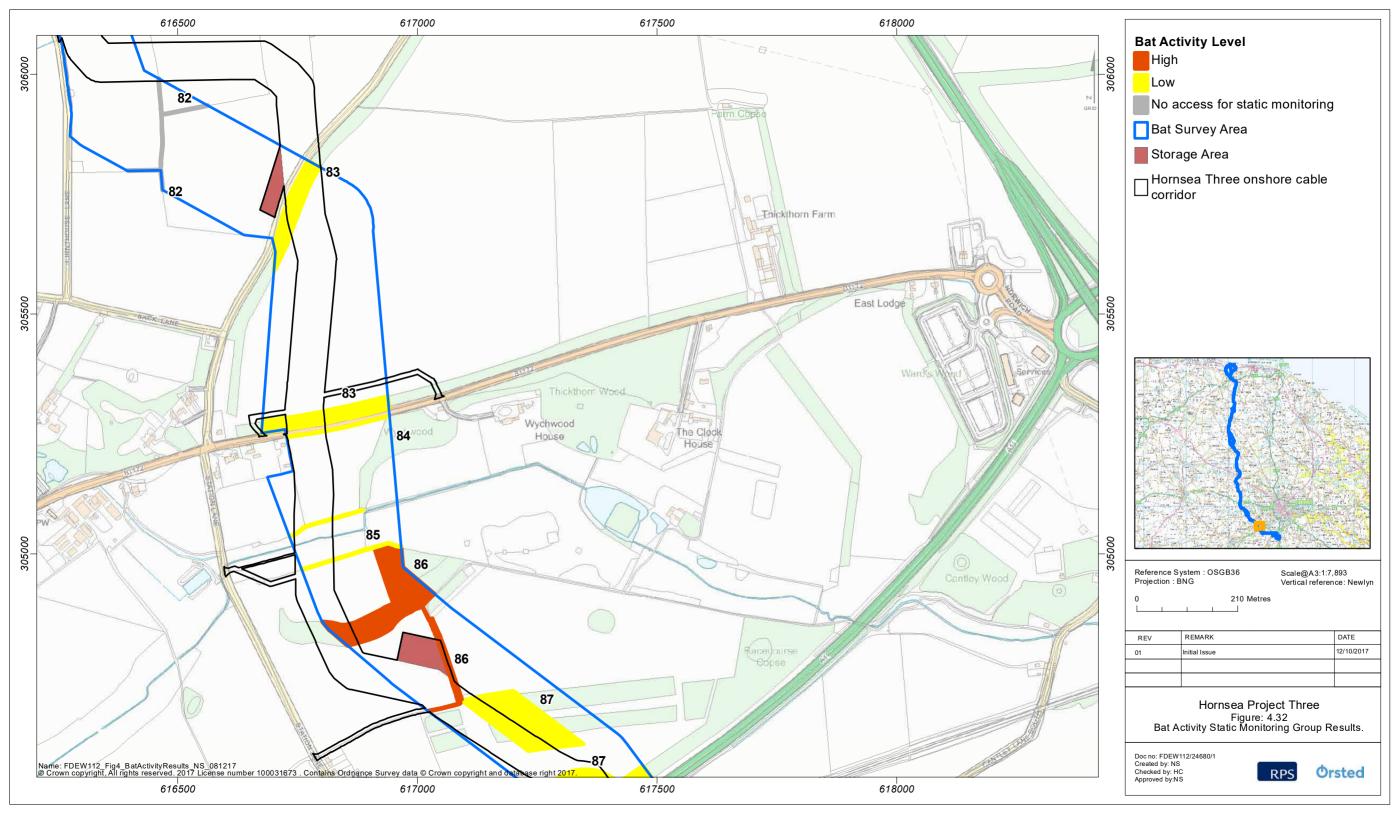


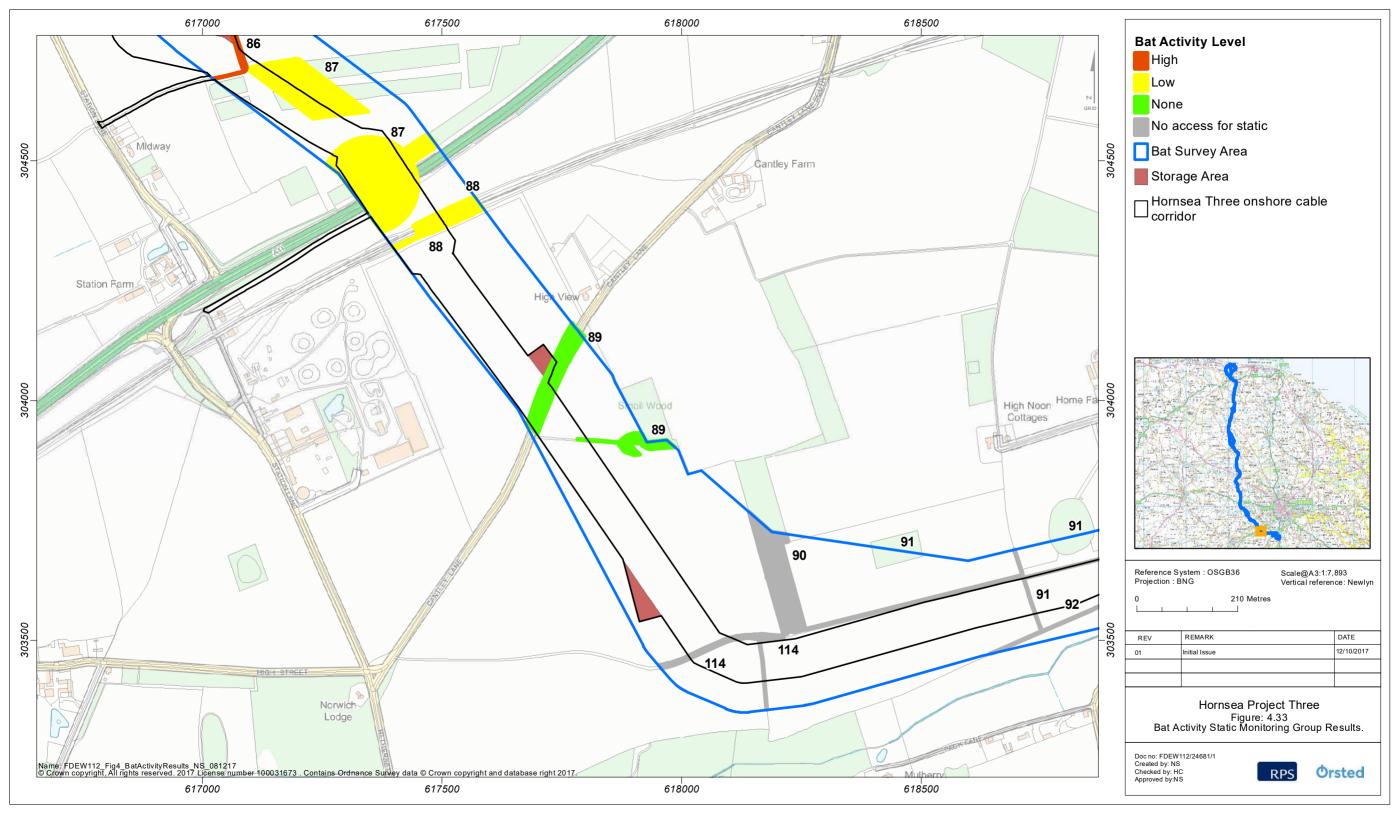


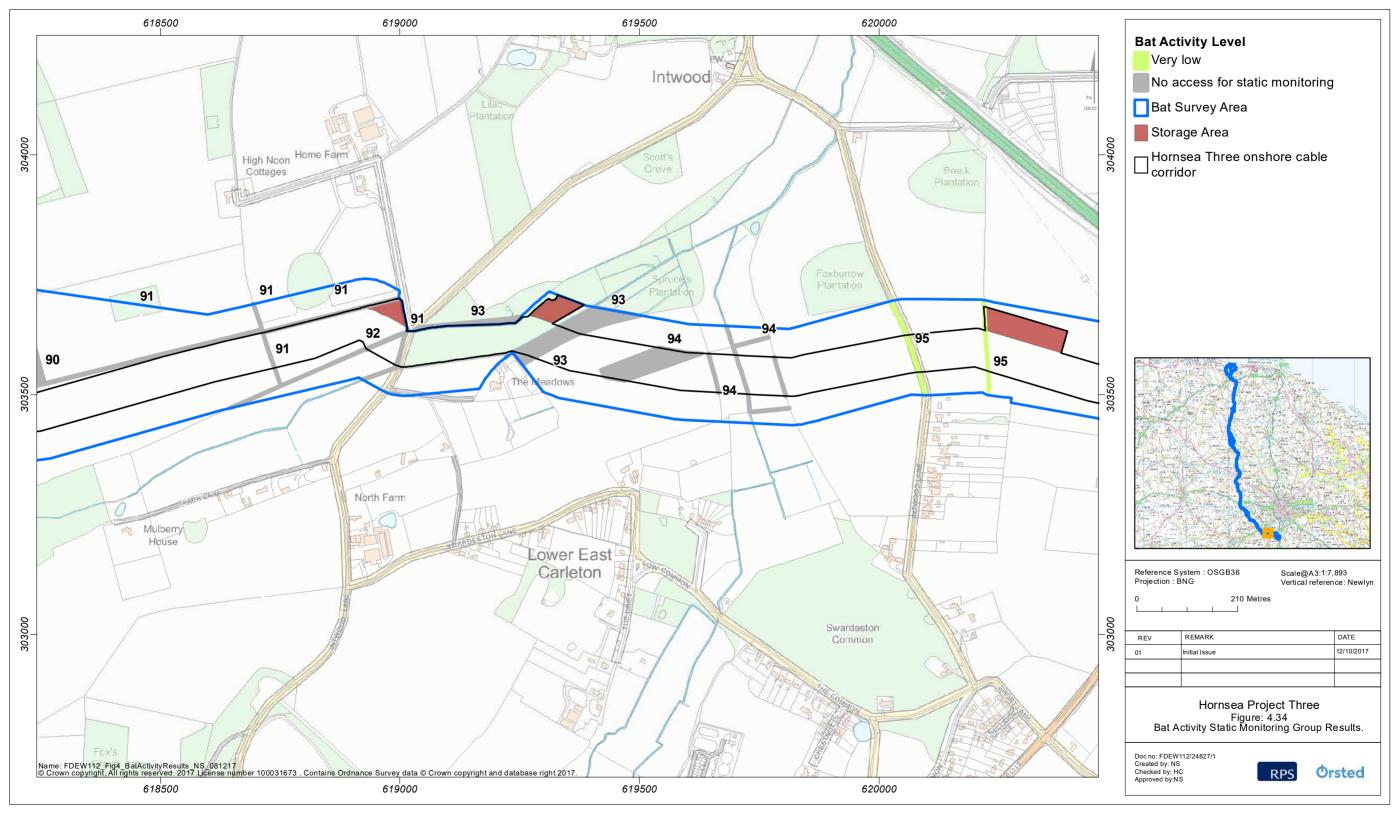


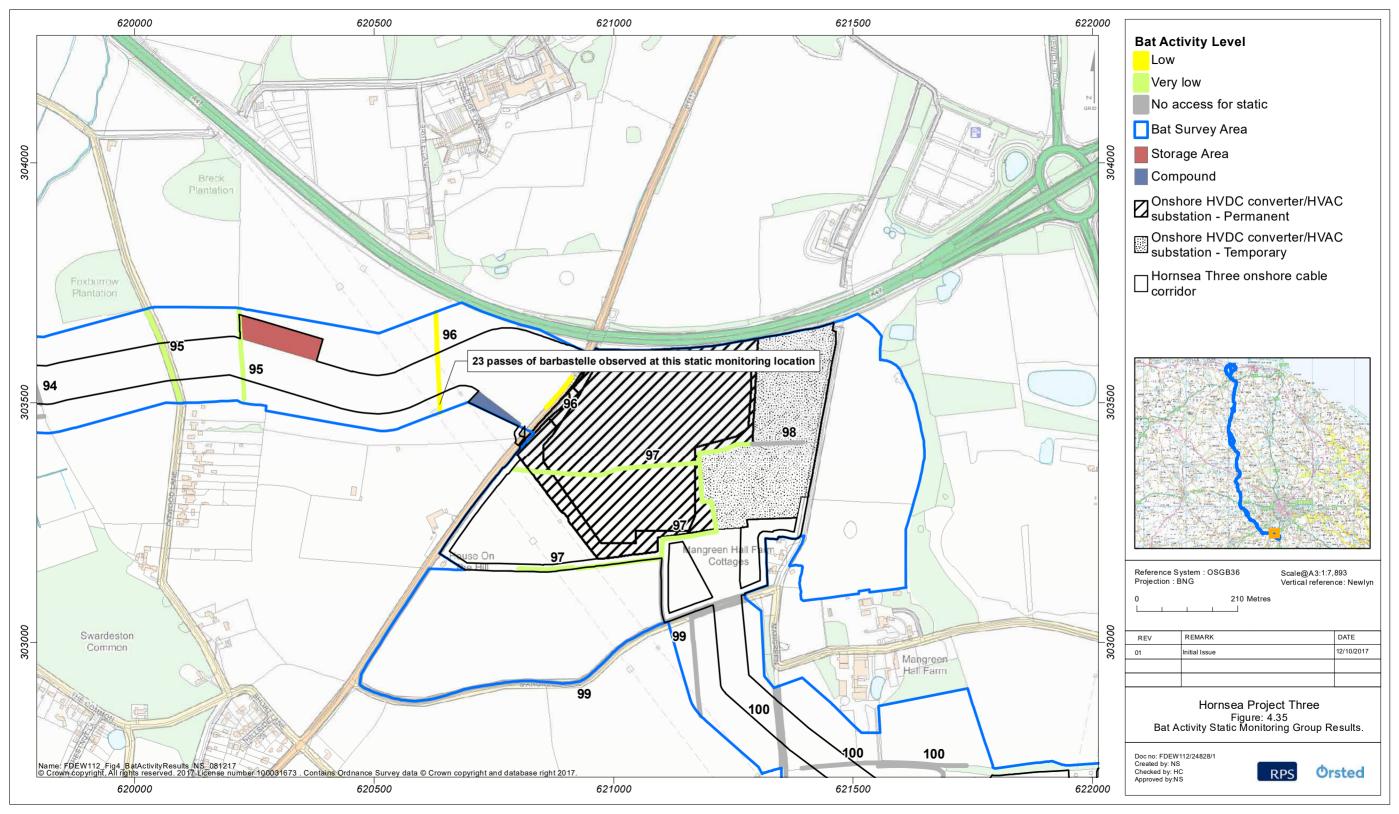


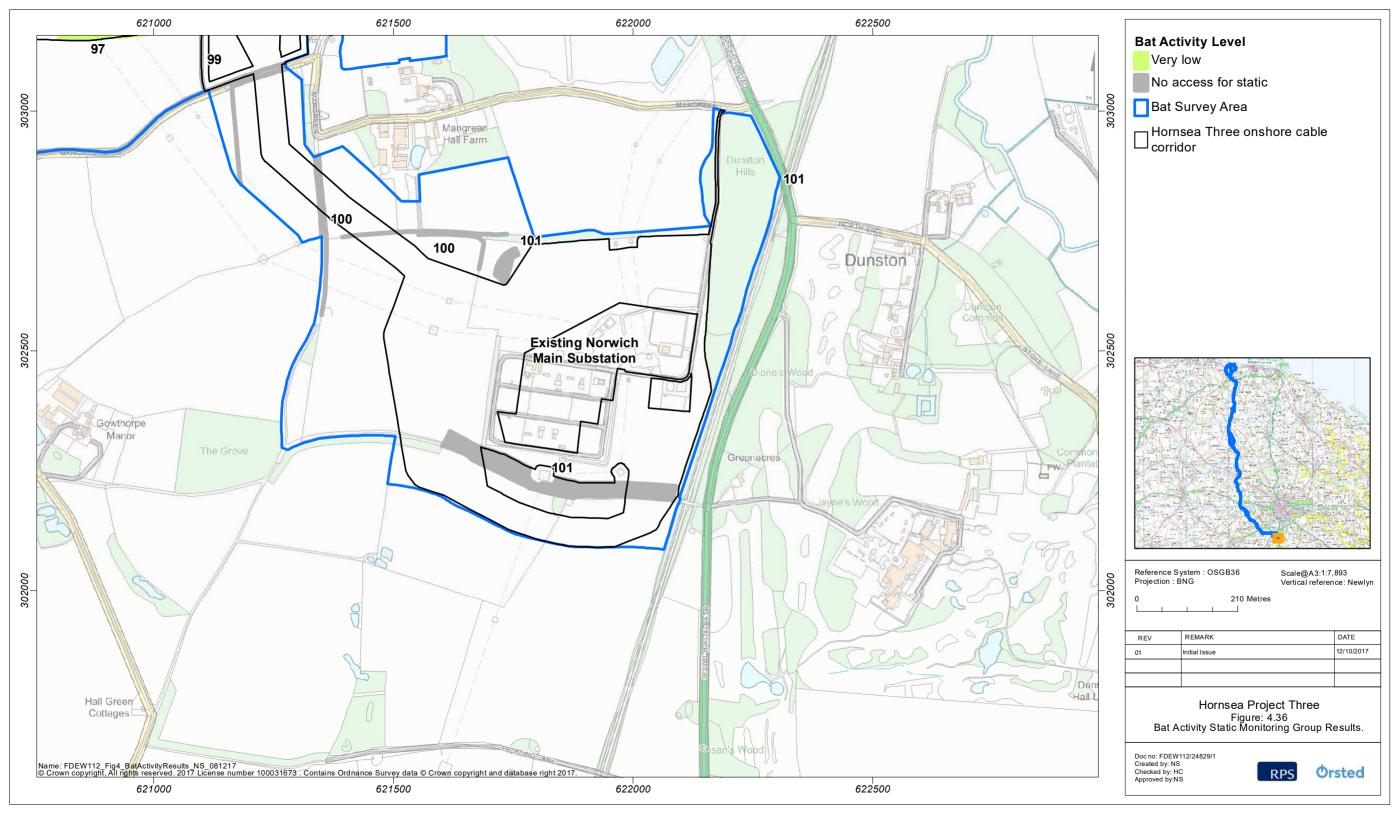








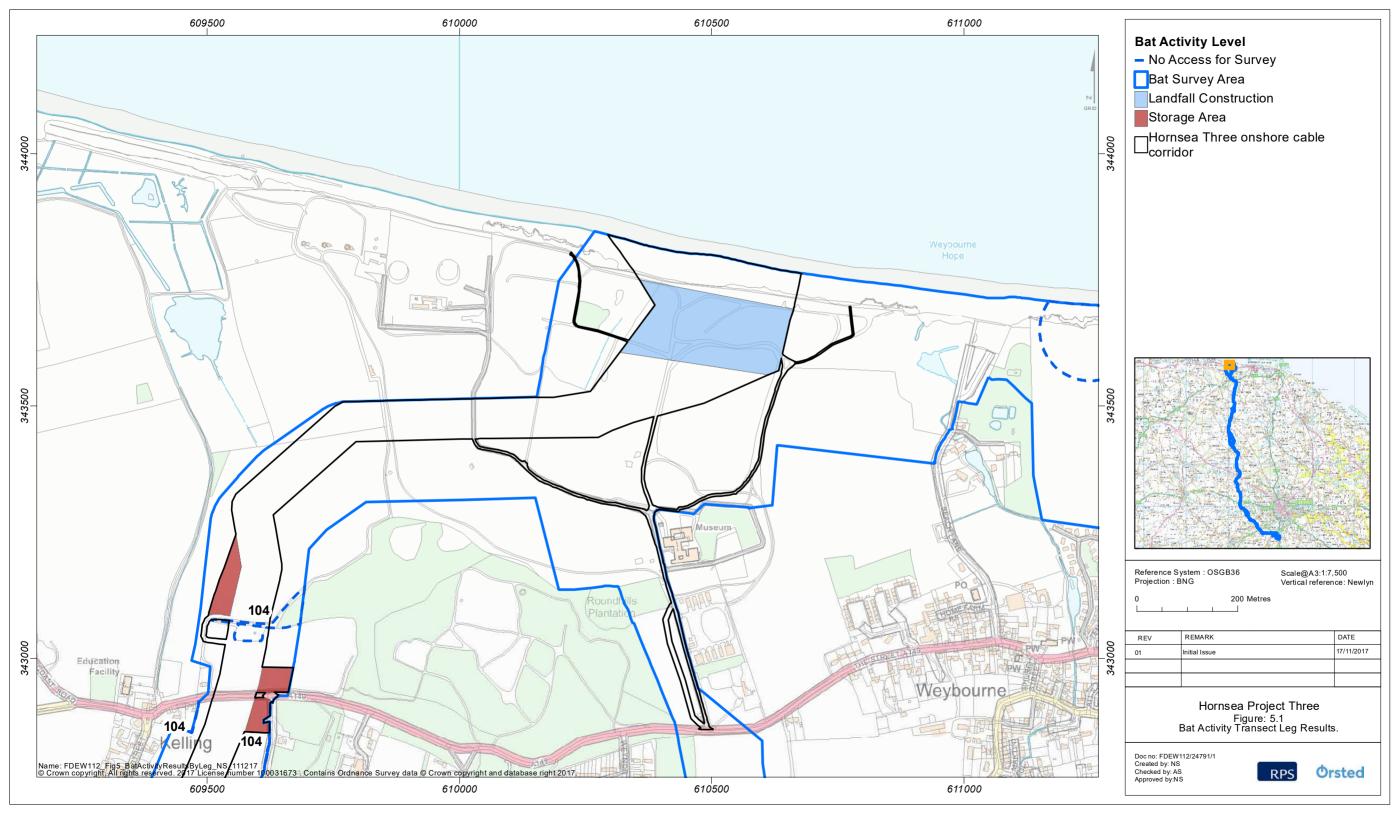


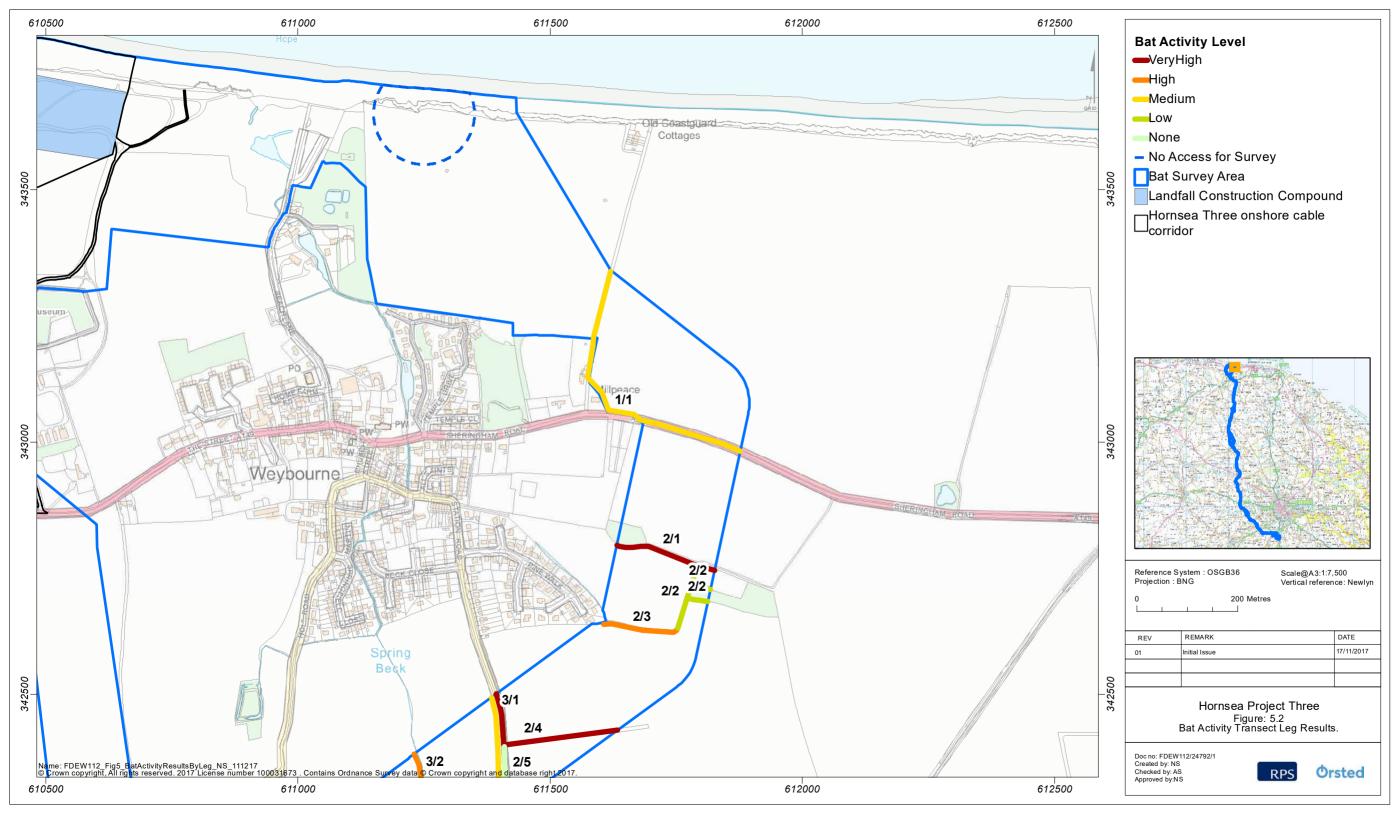


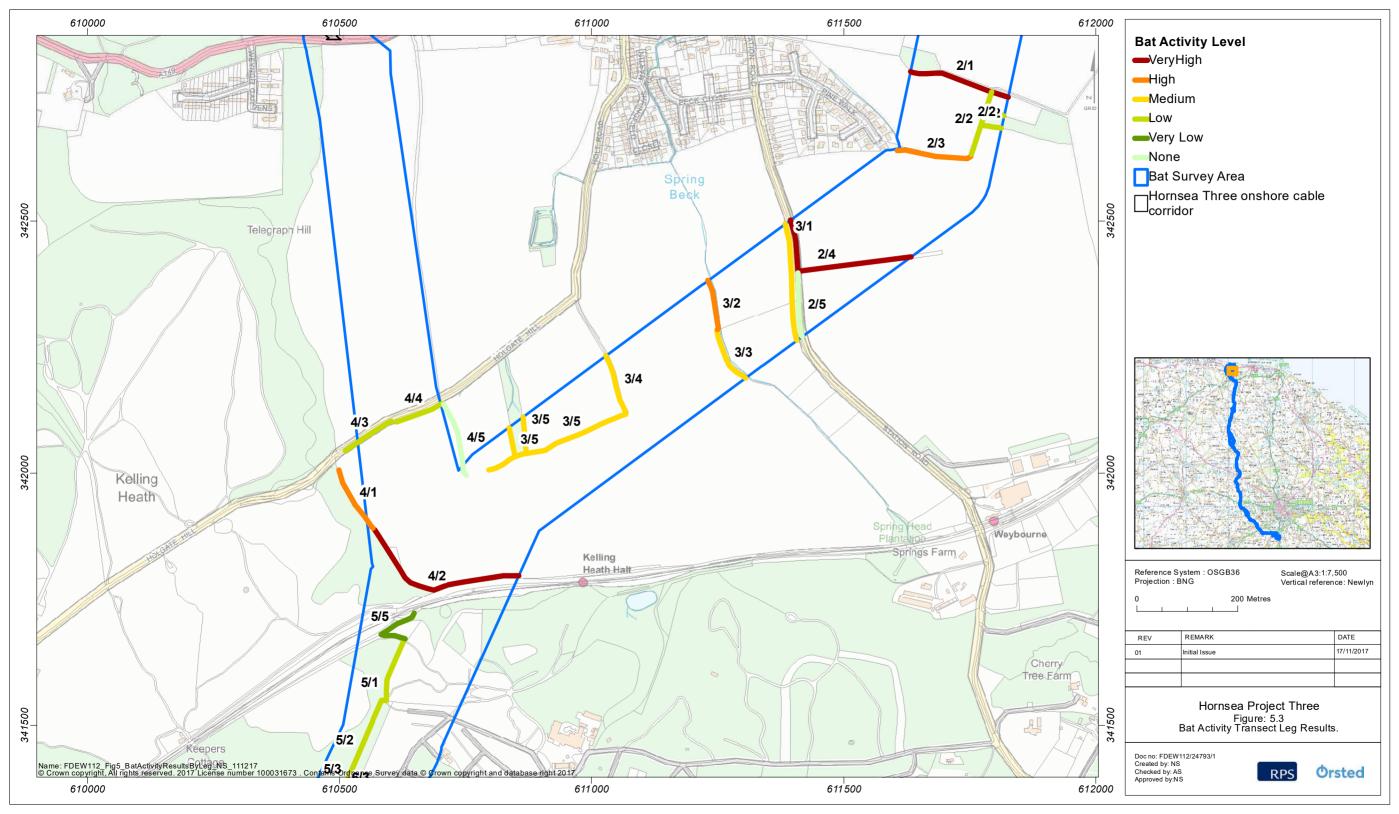


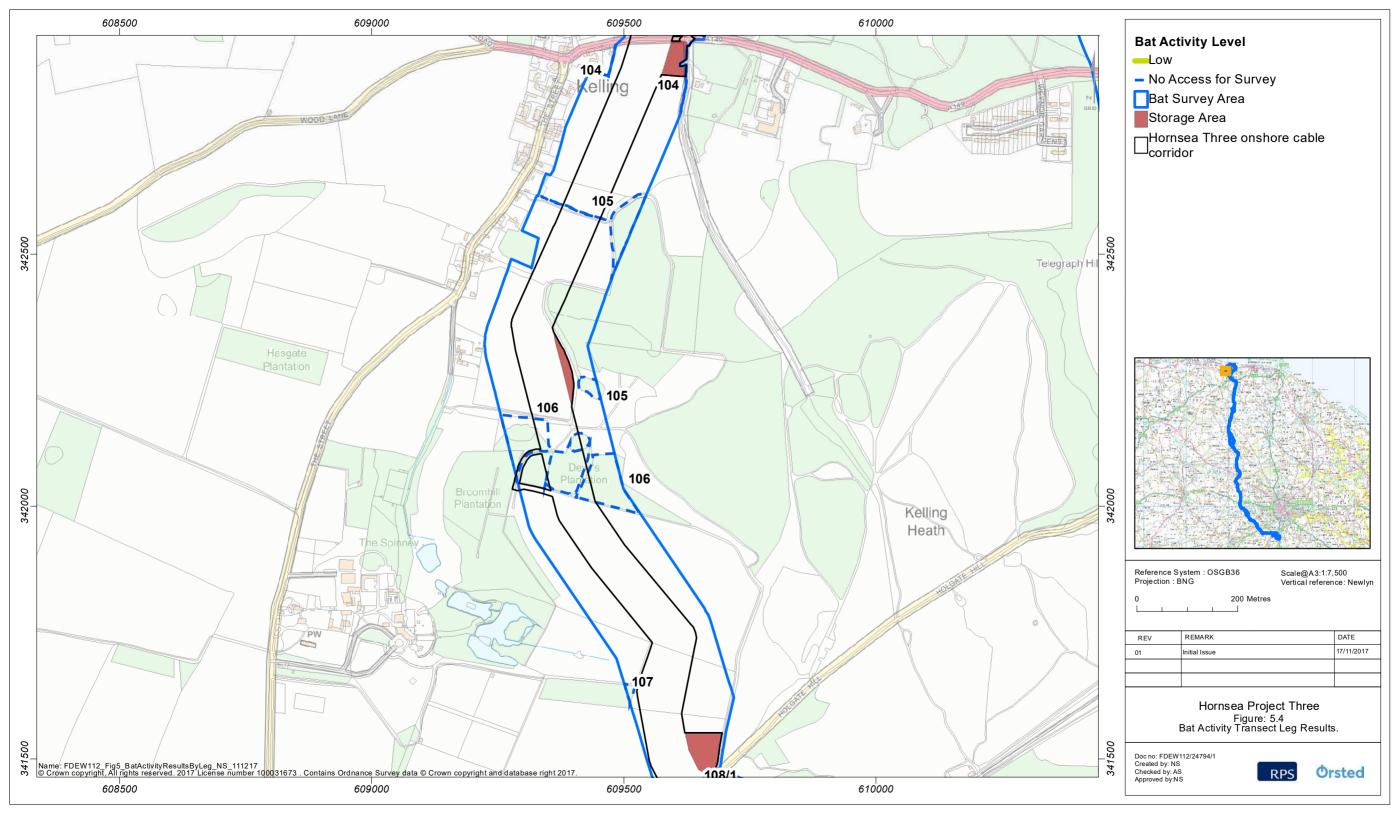
A.5 Bat activity transect leg results

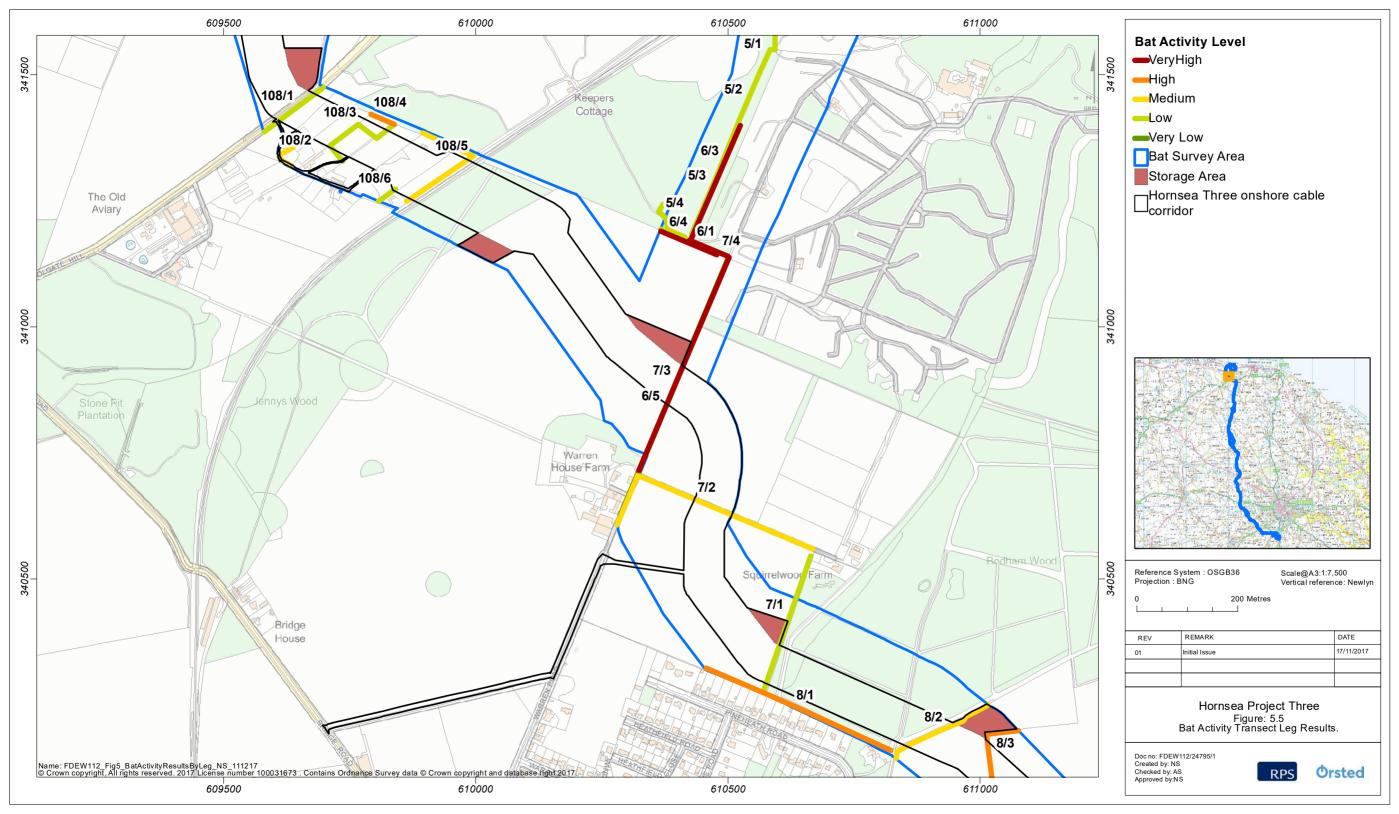


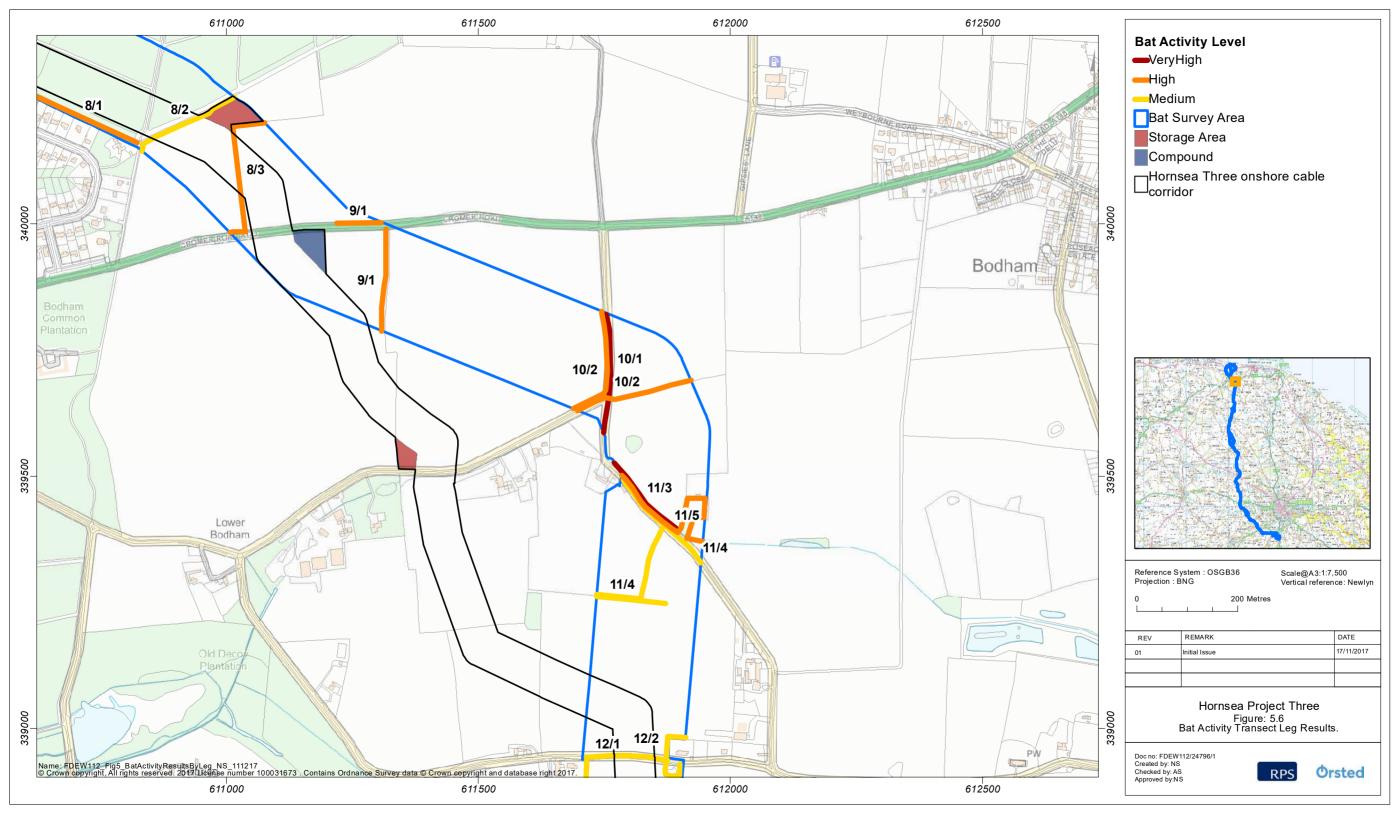


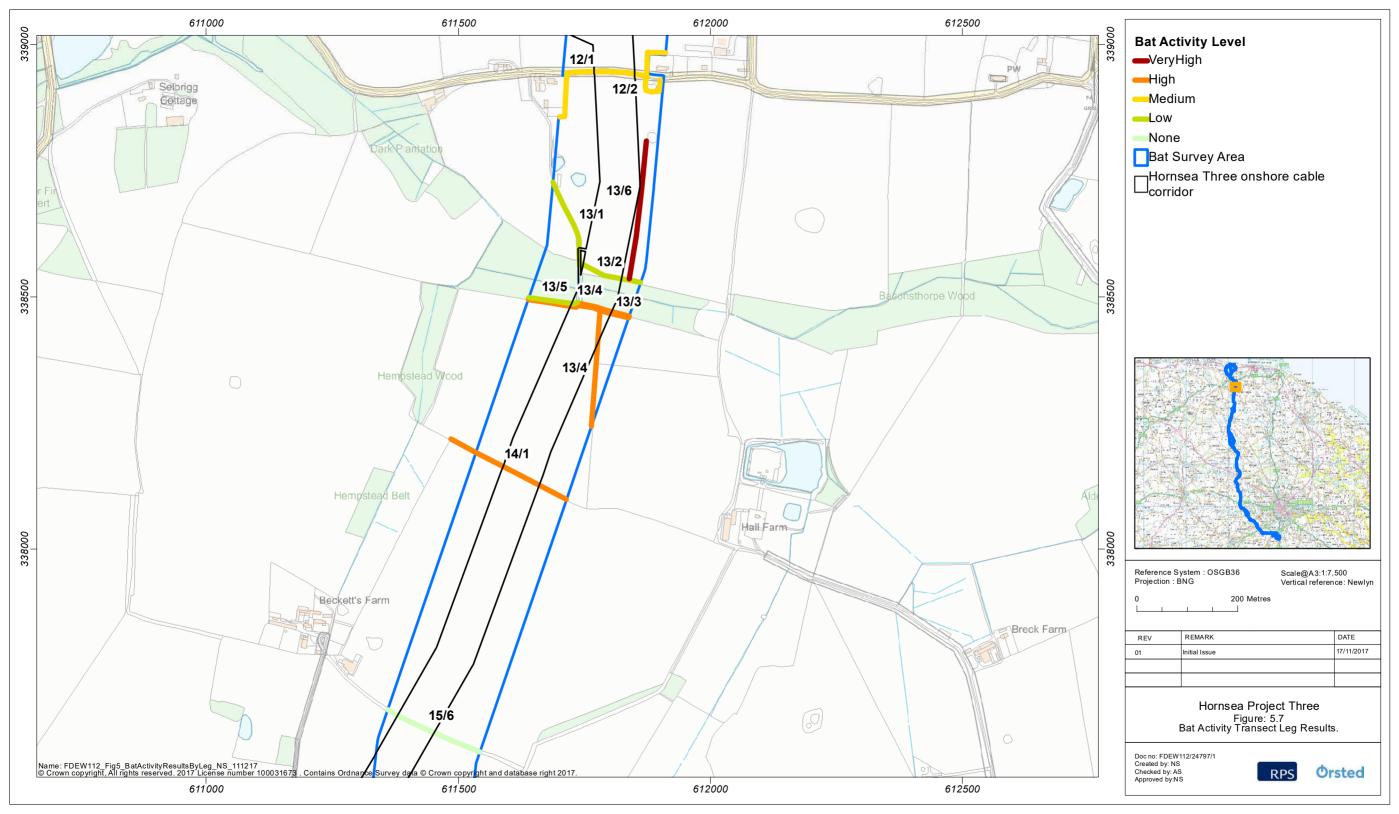


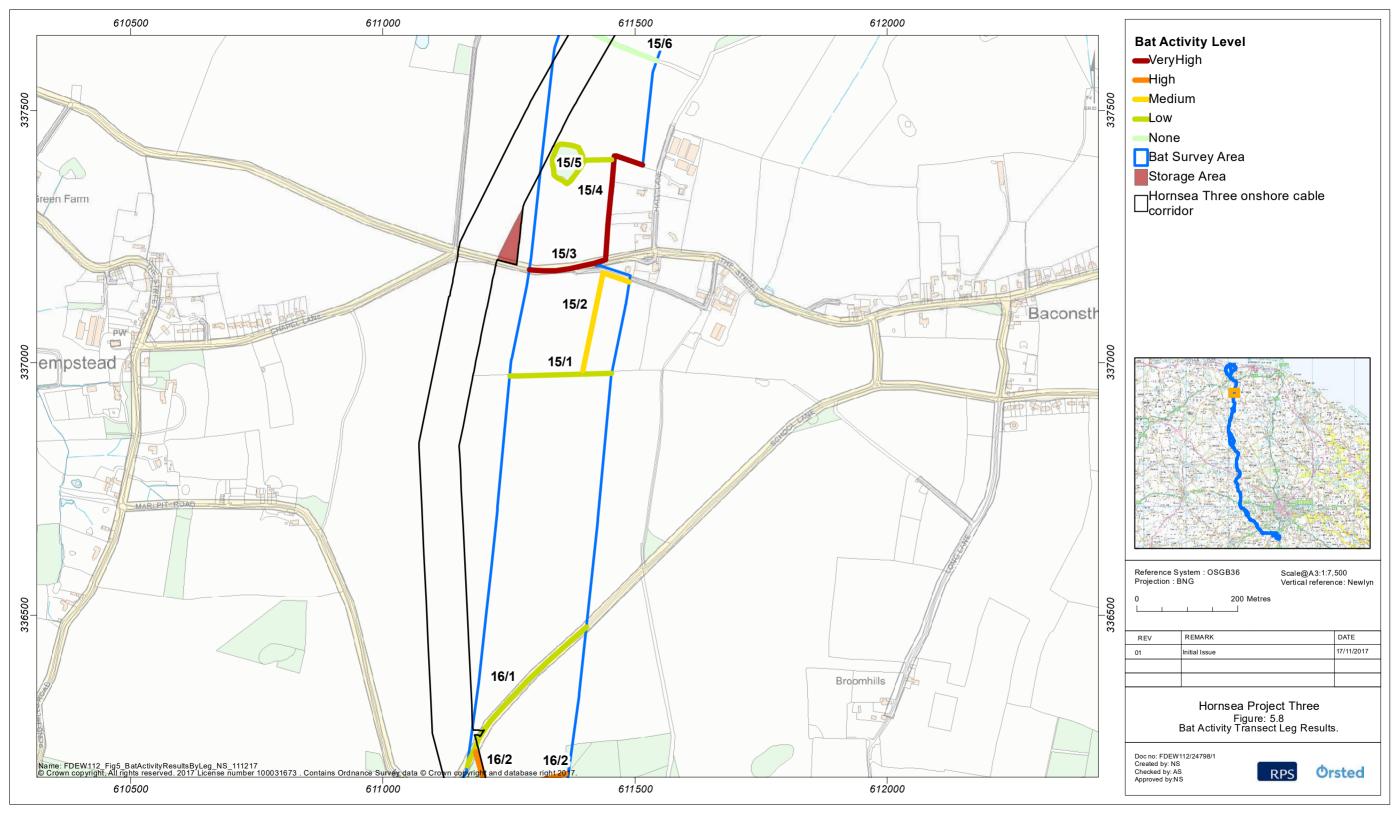


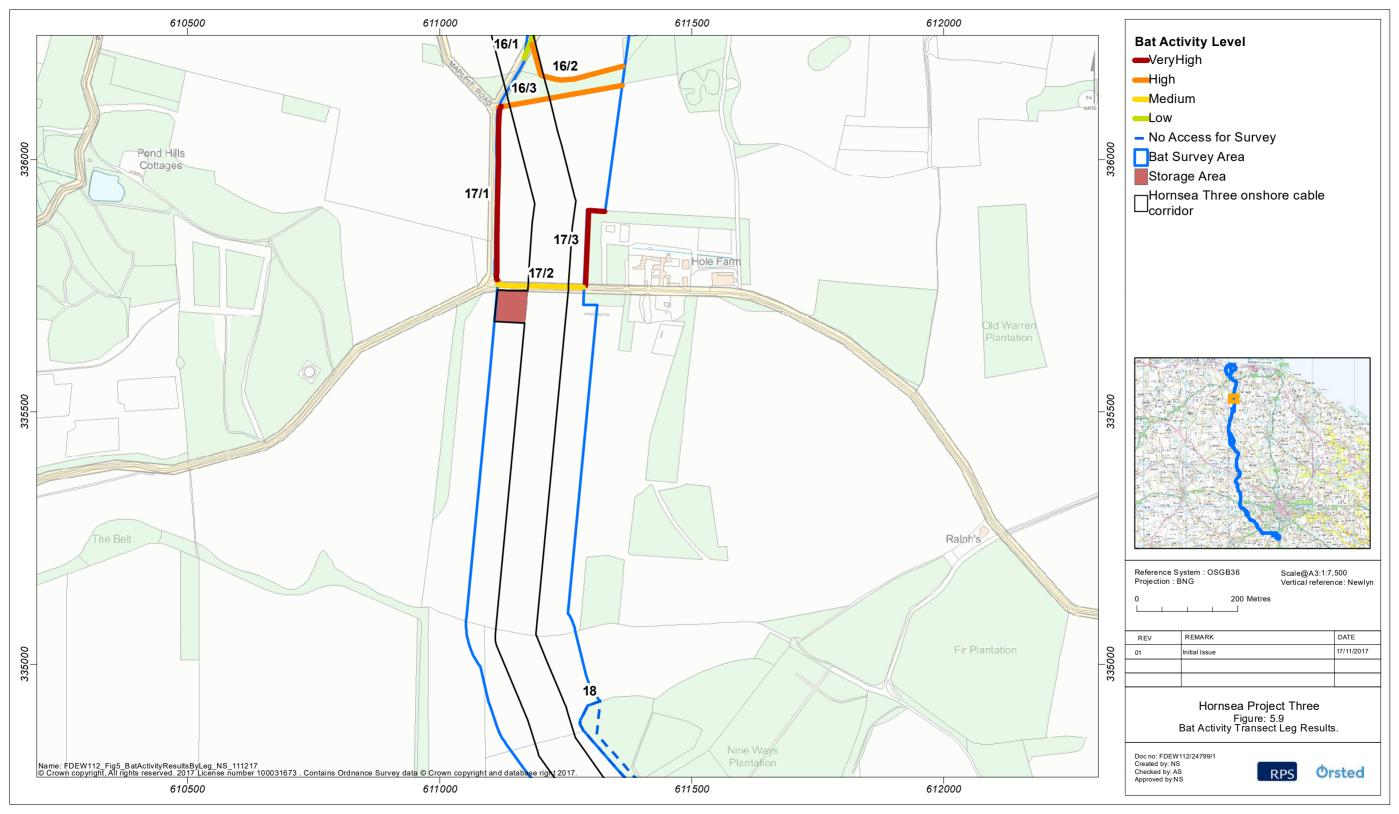


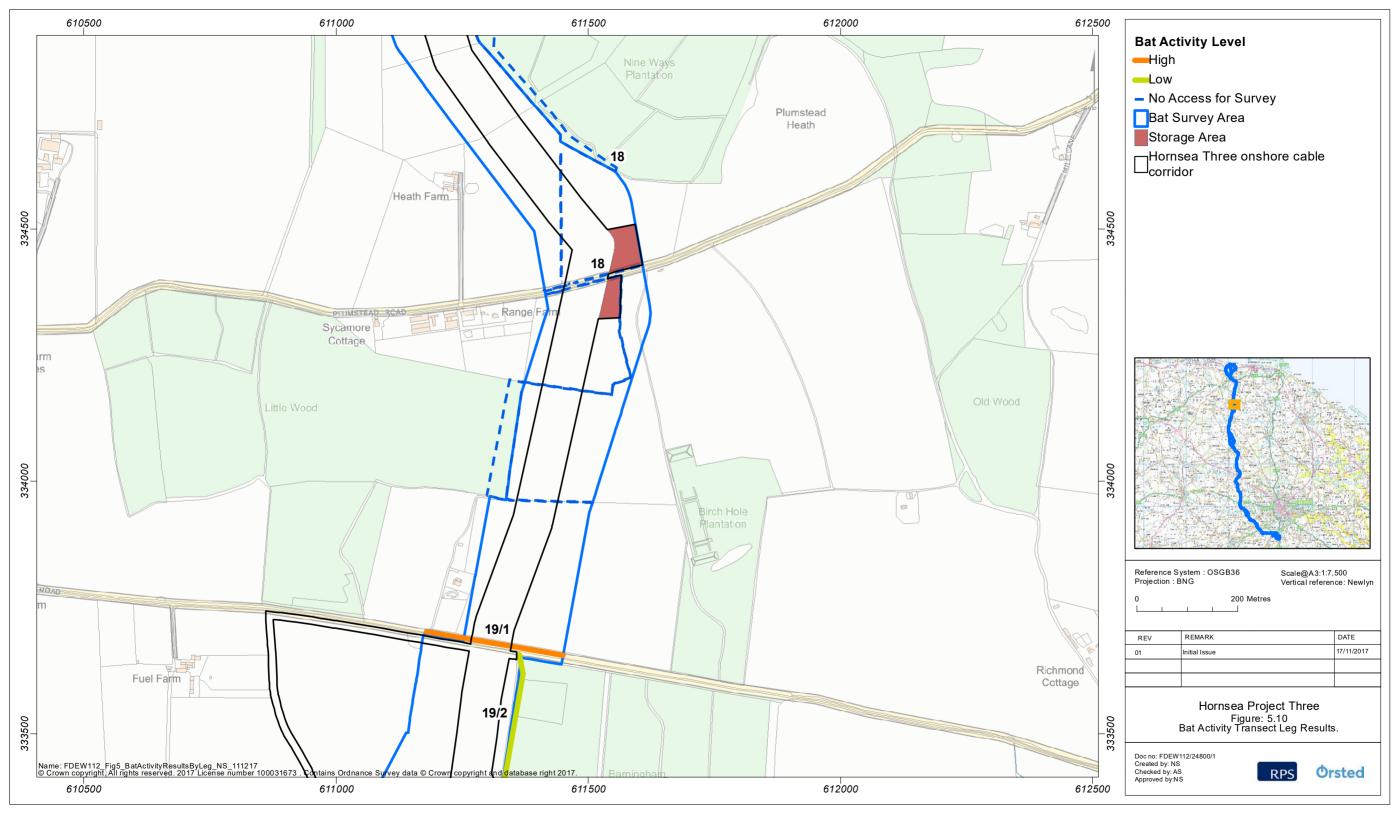


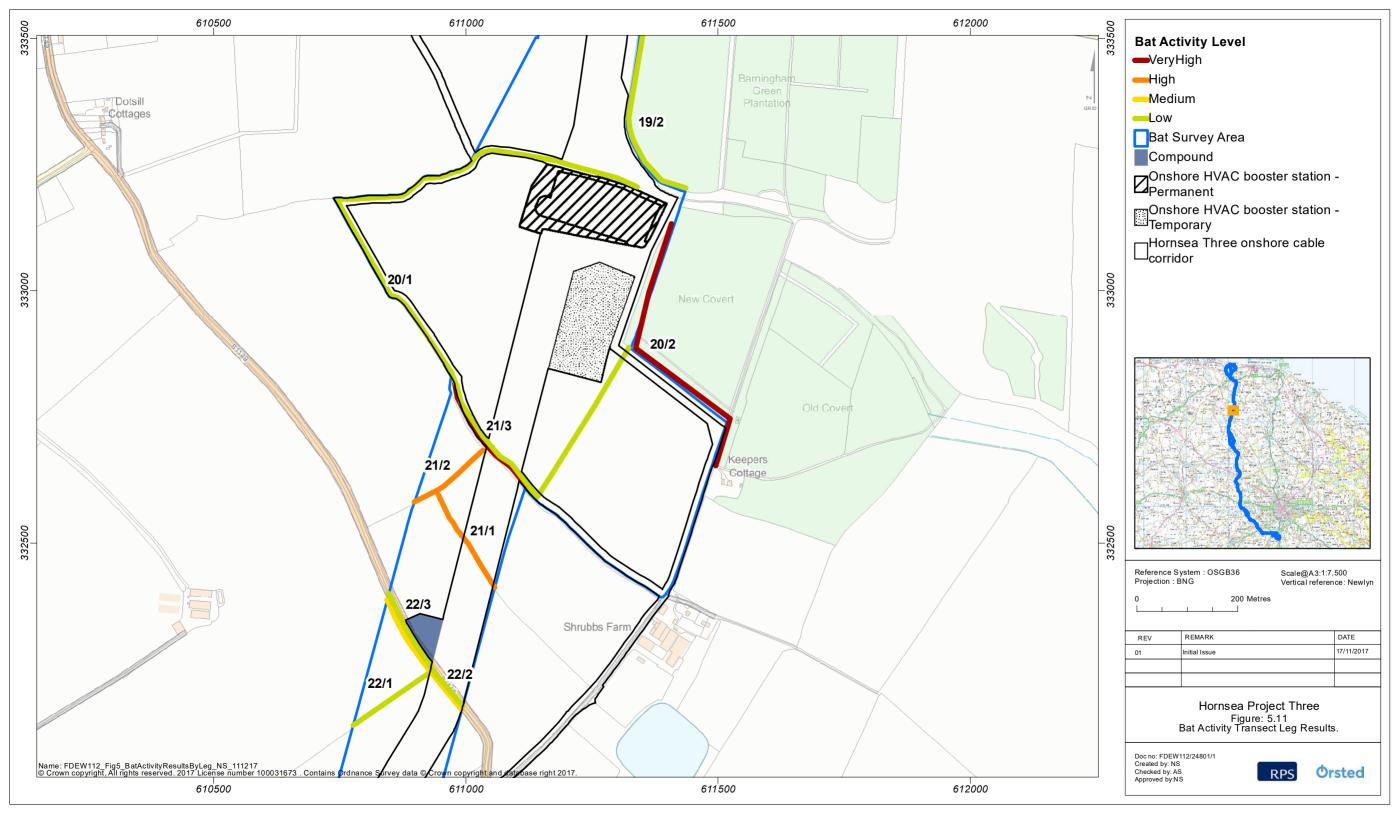


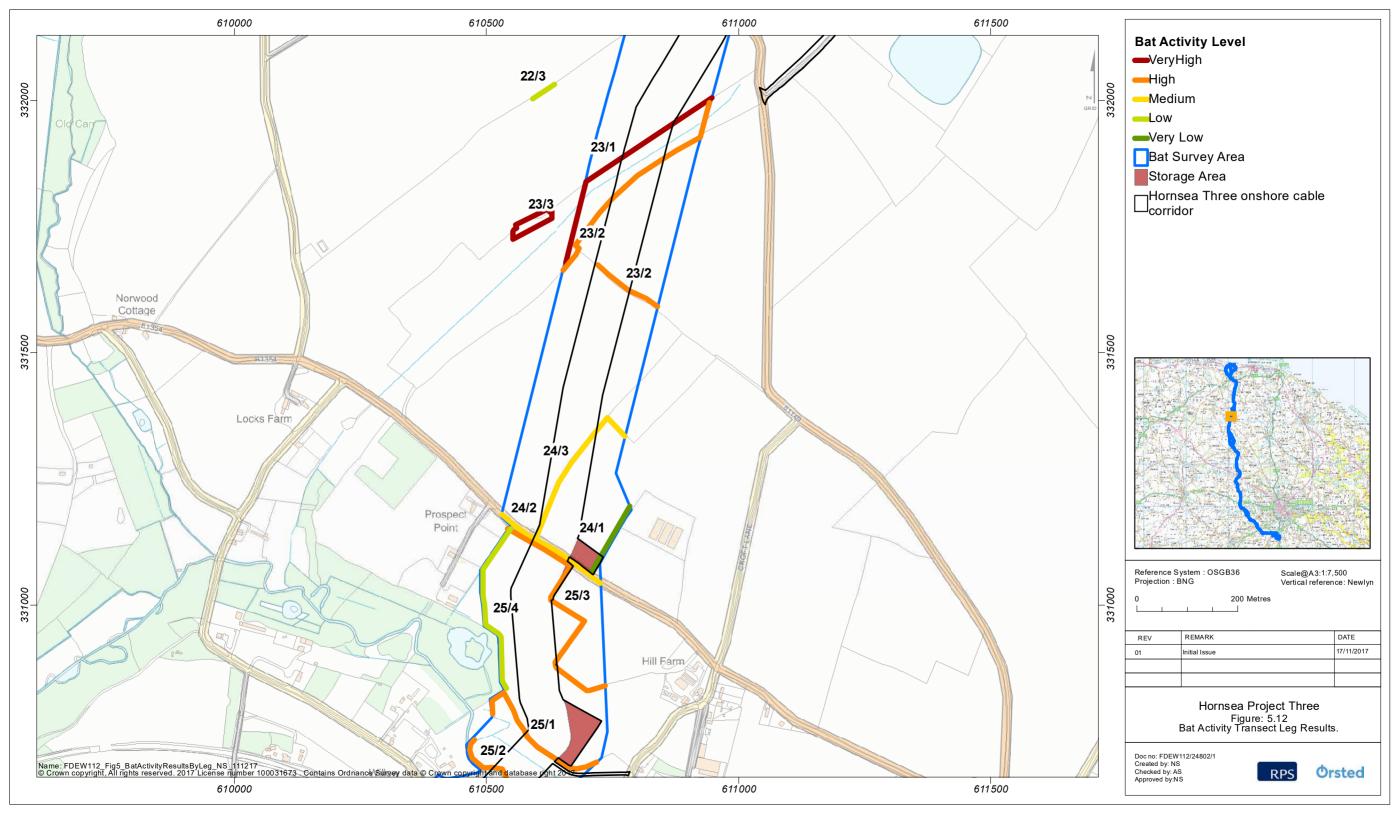


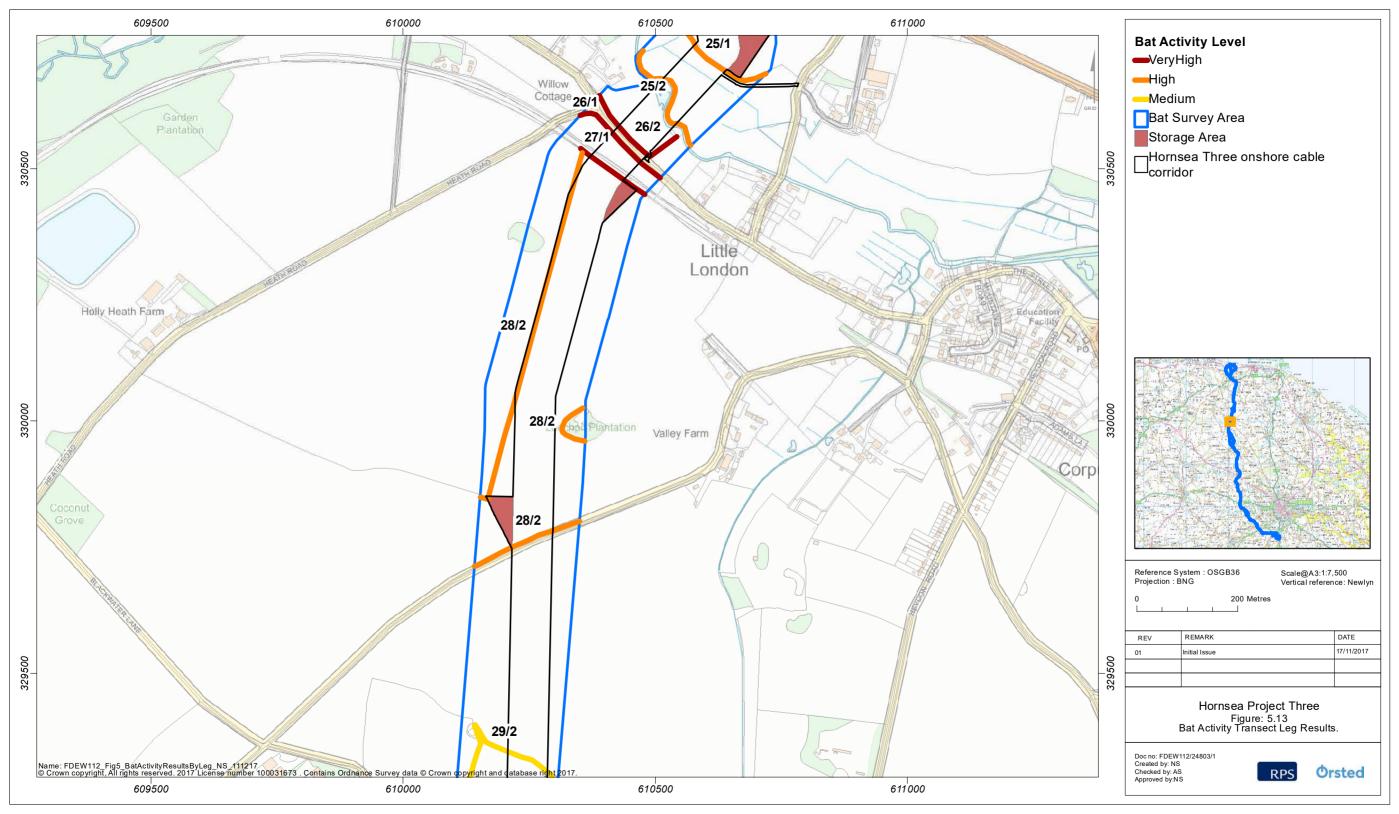


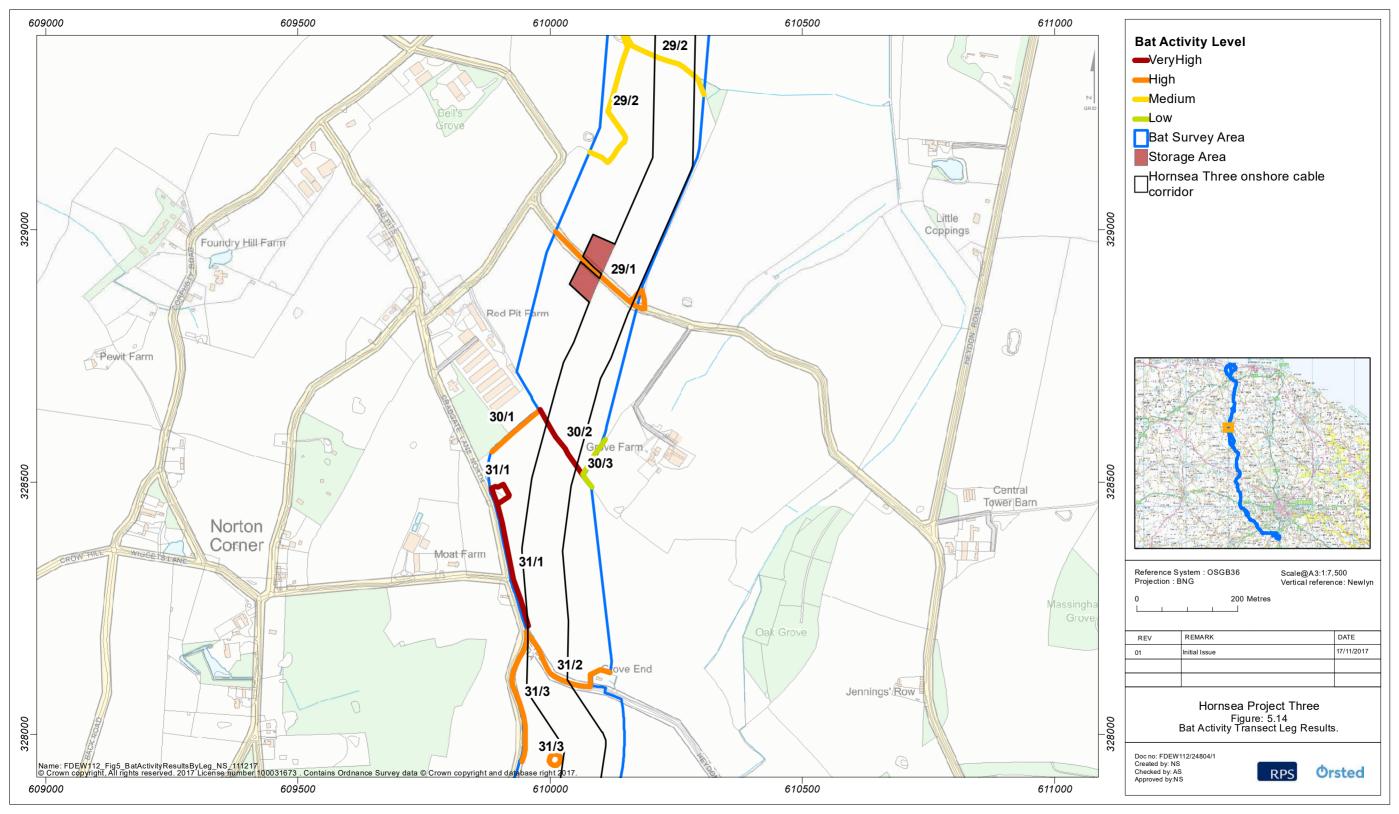


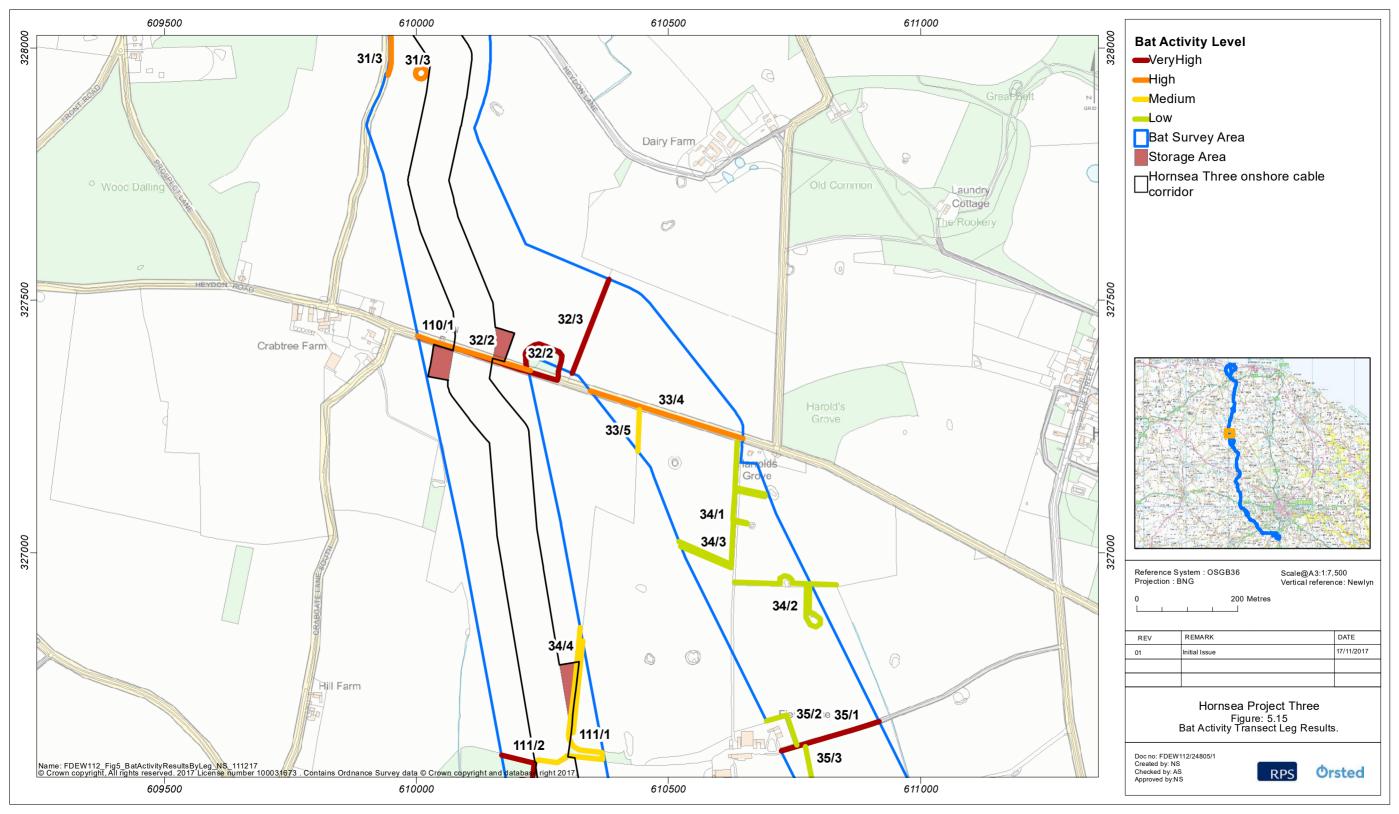


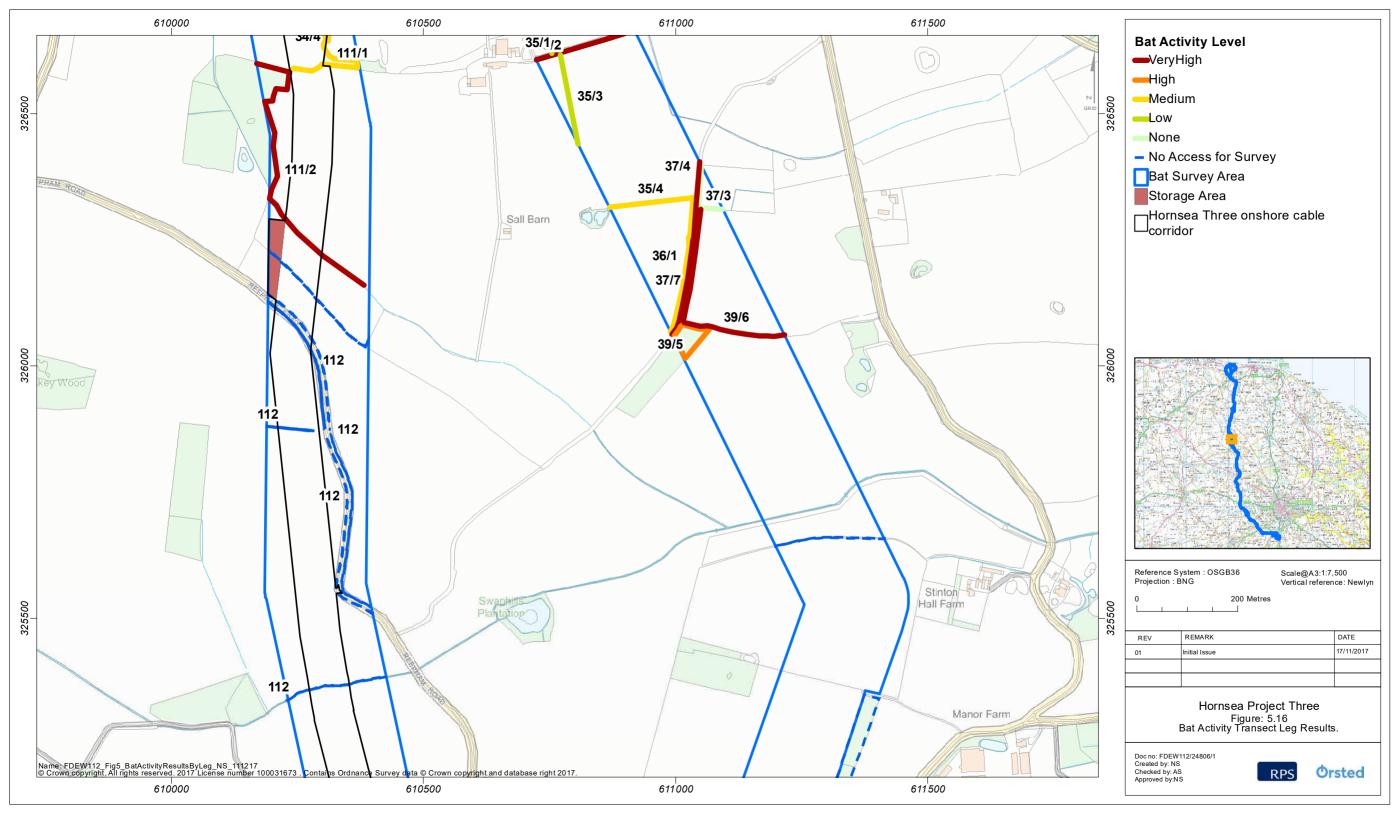


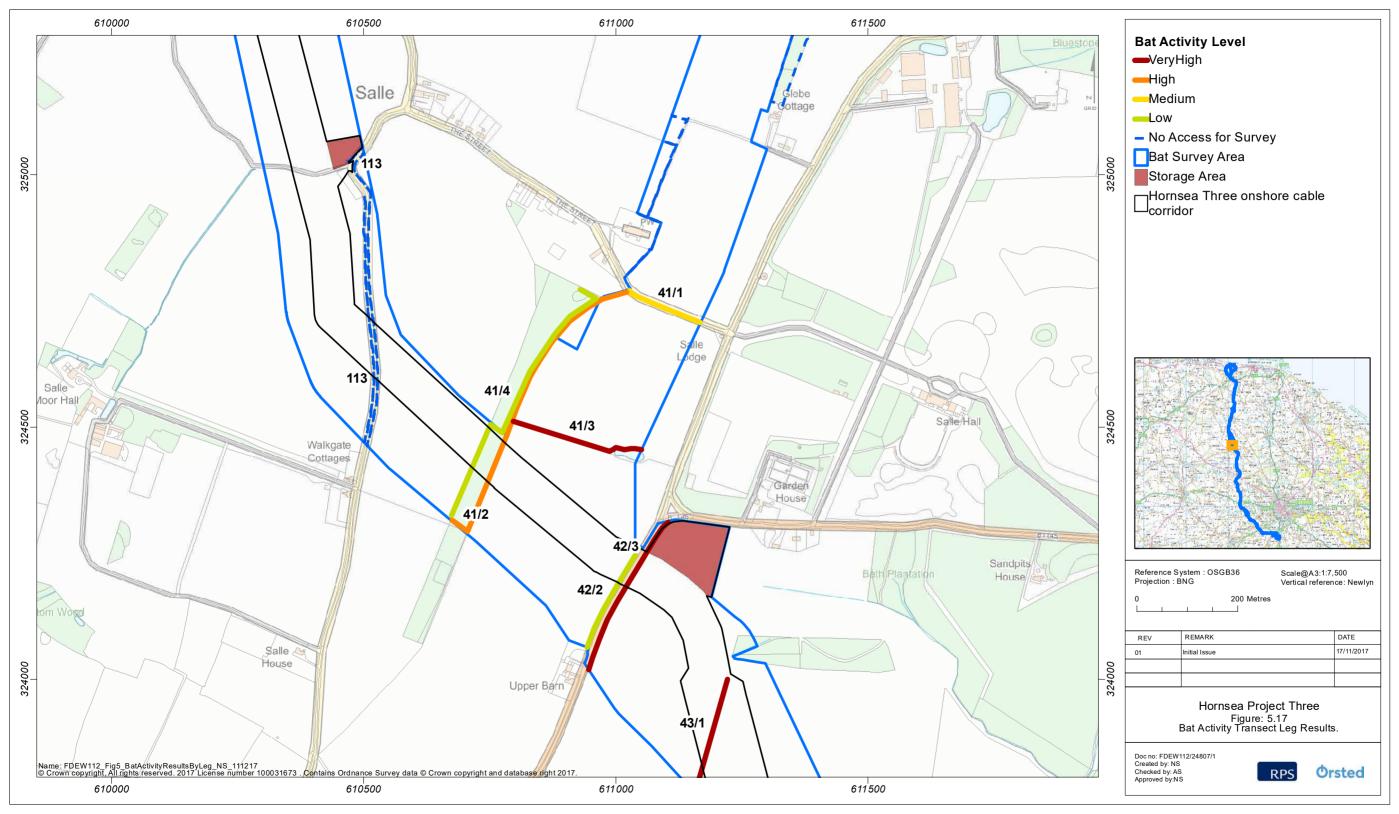


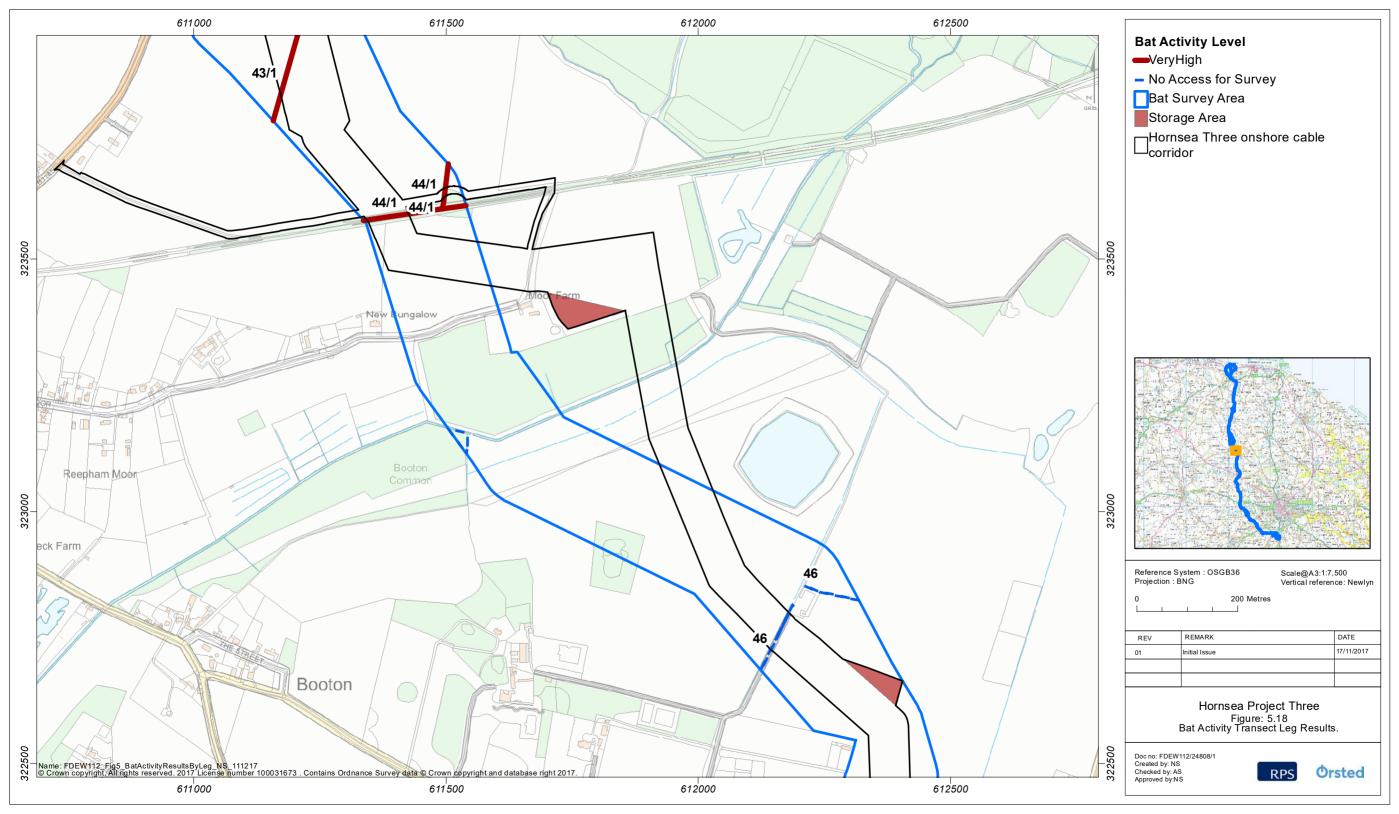




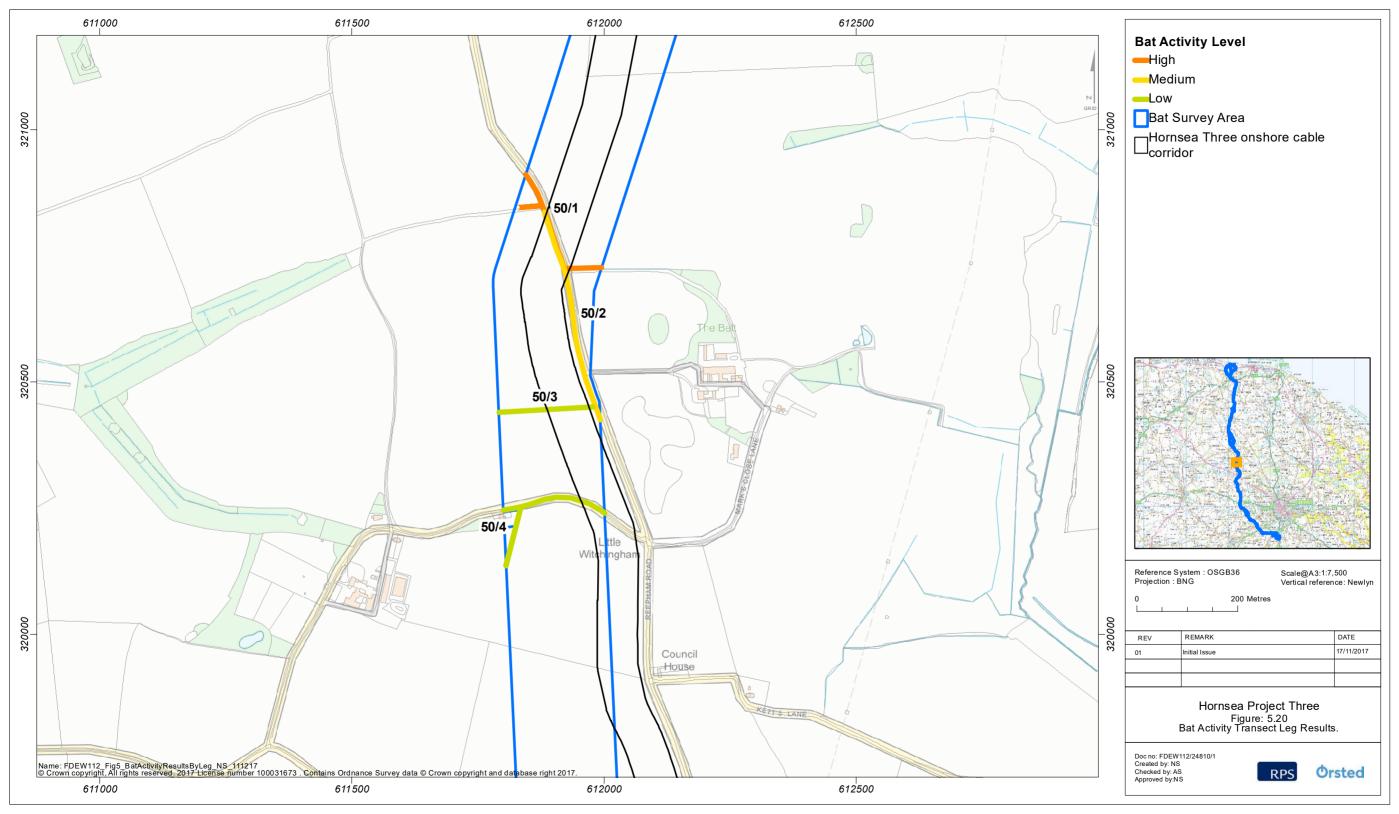


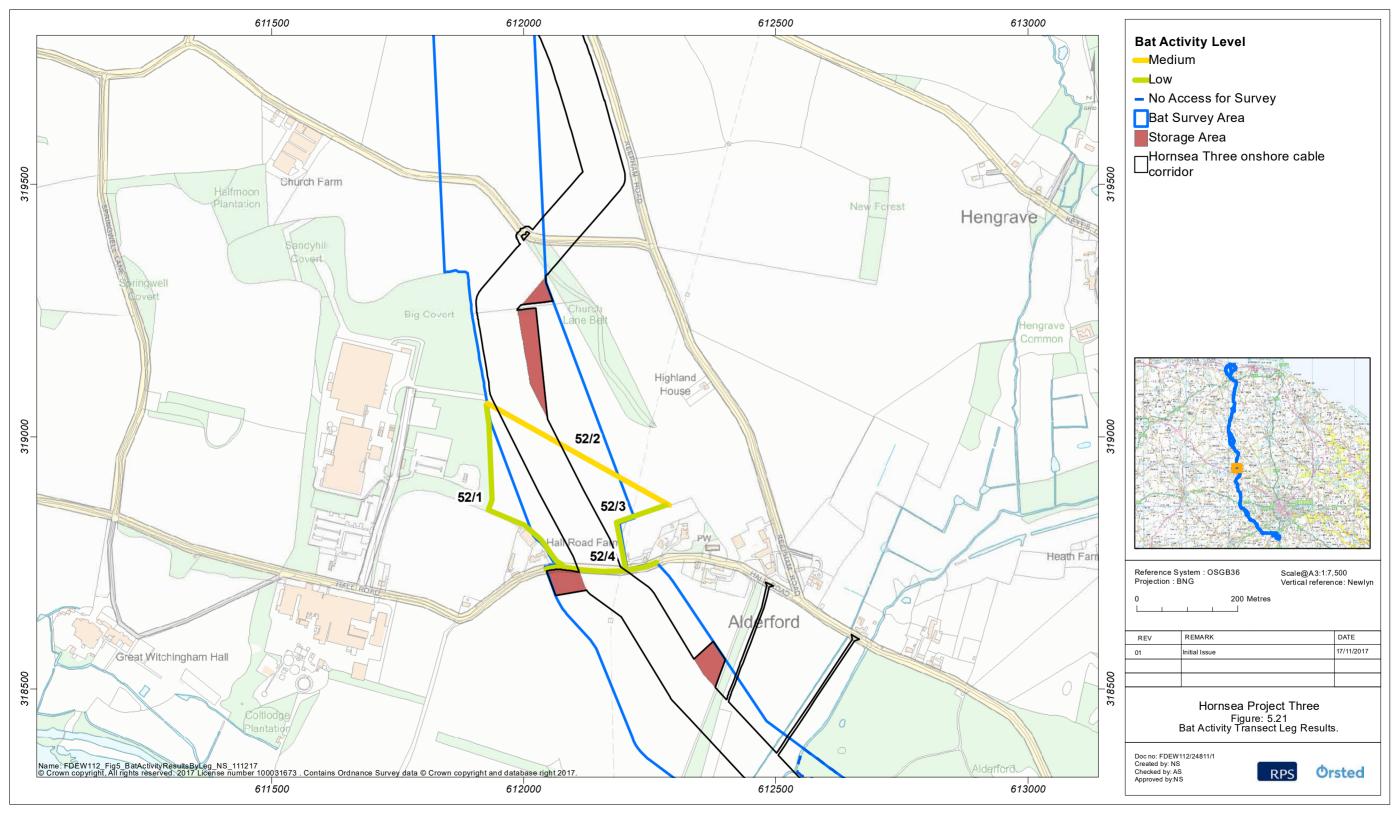


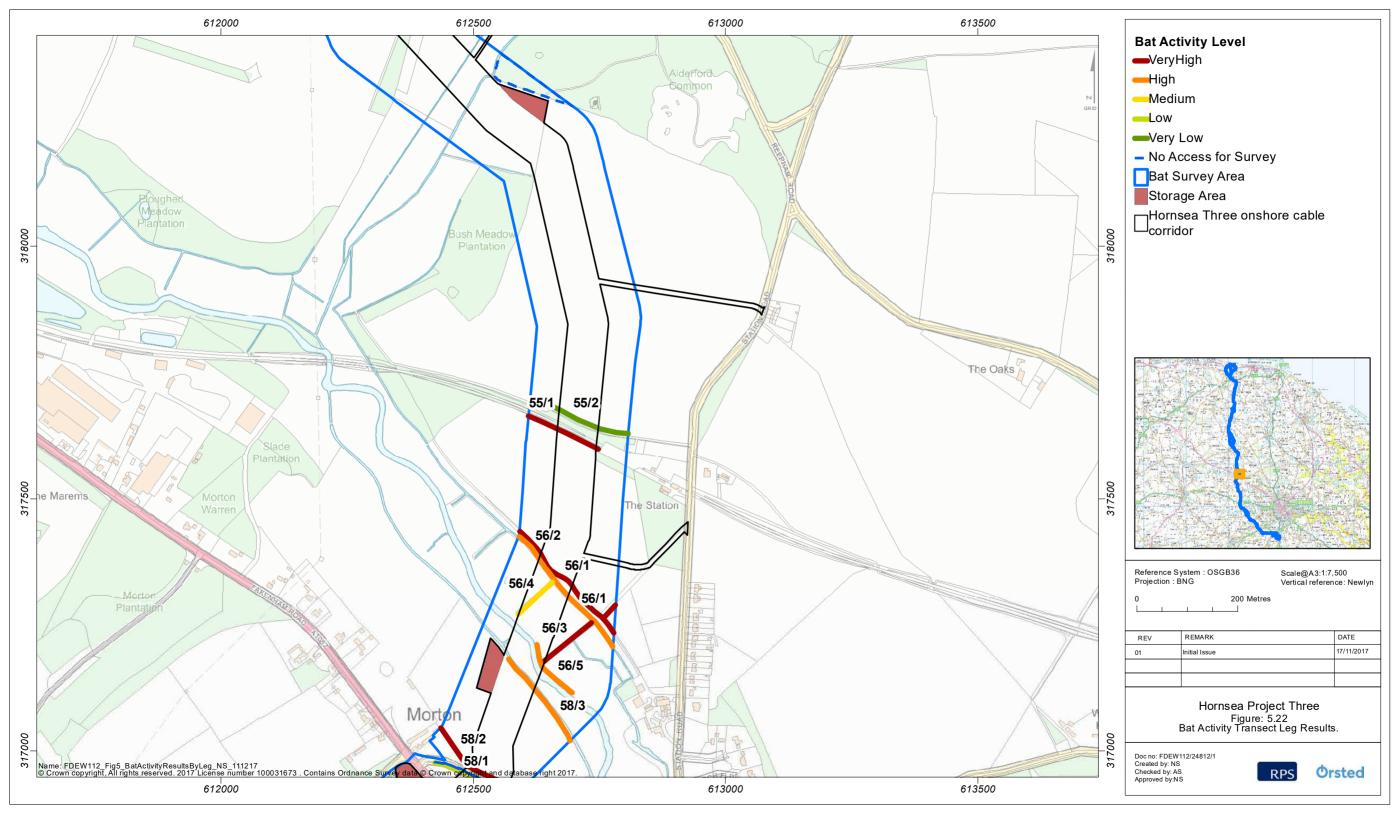


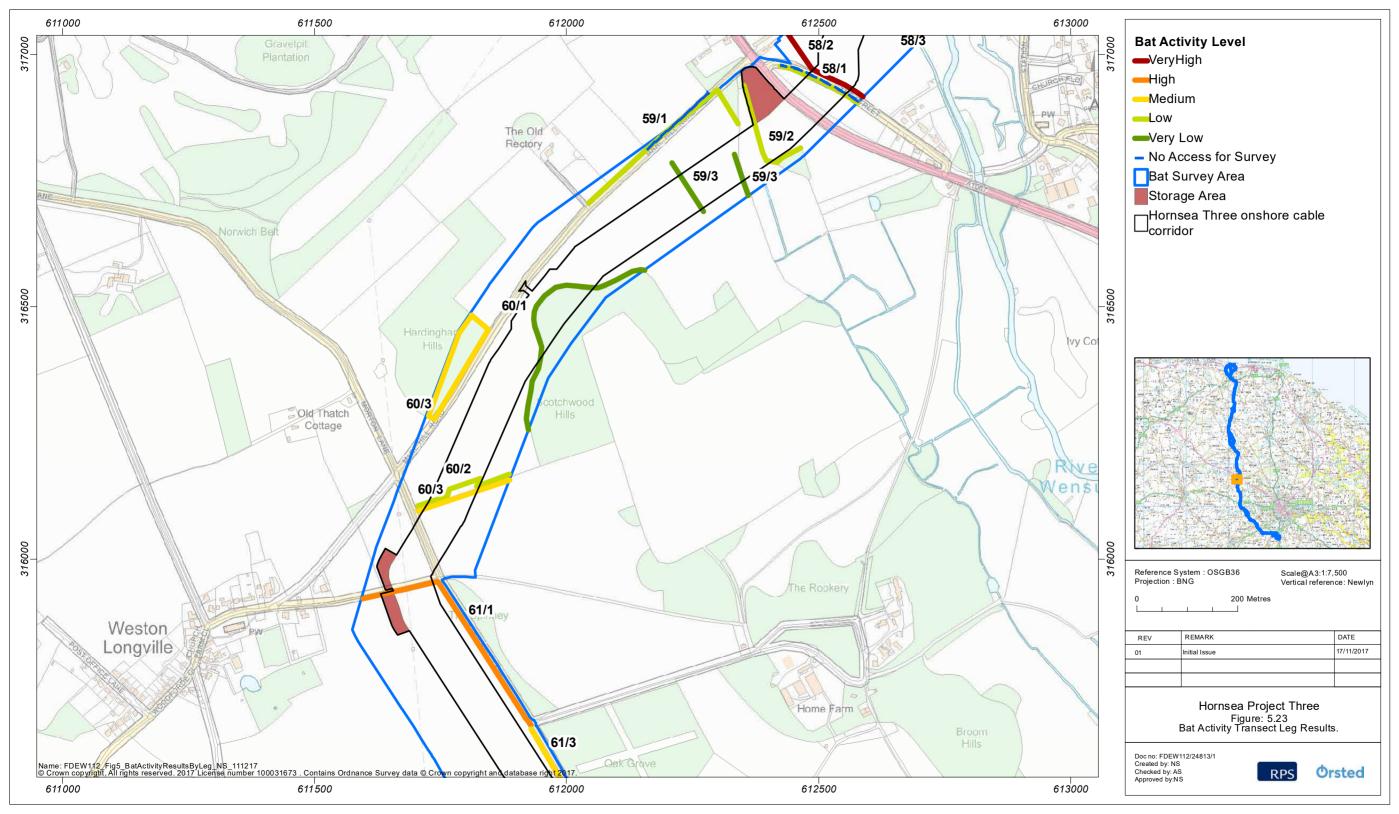


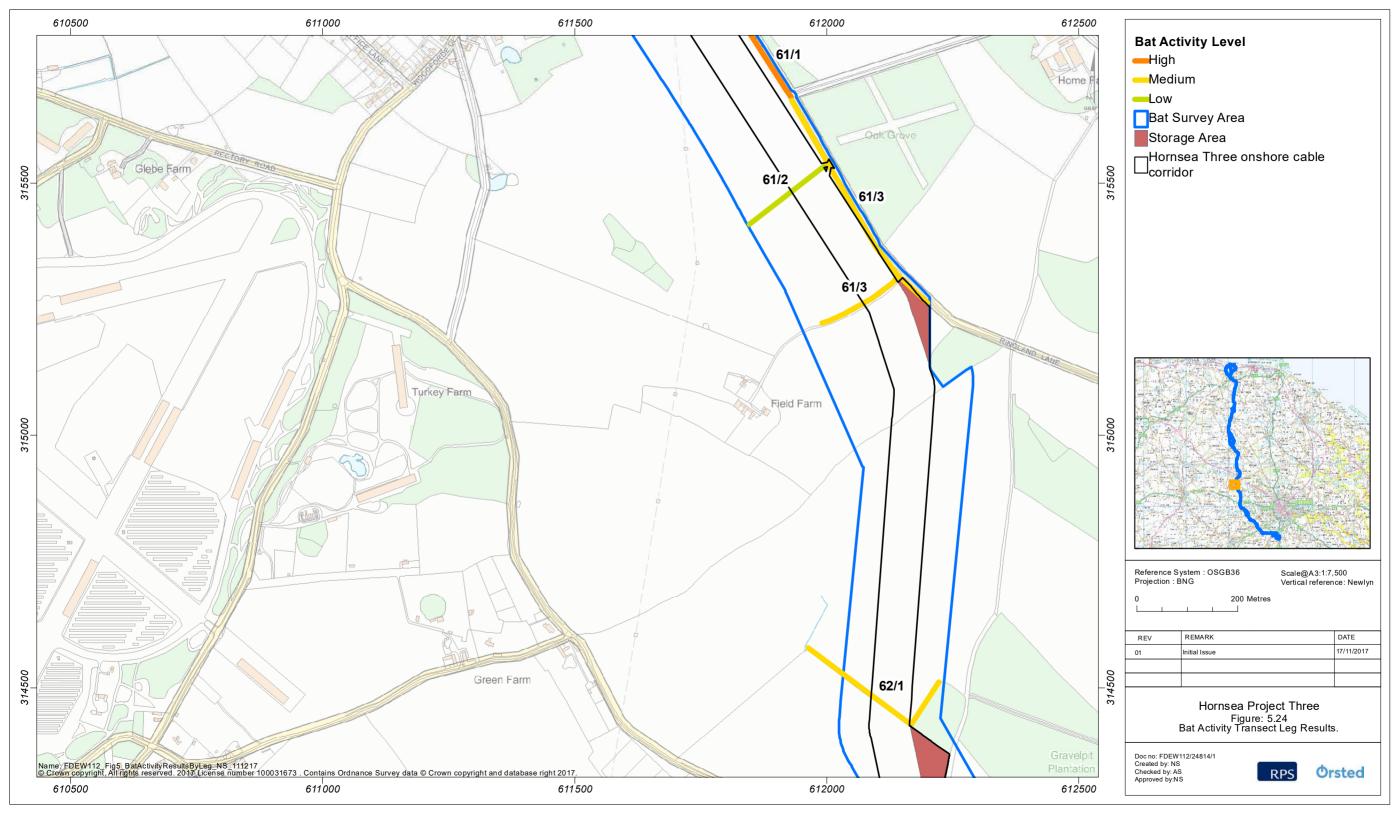


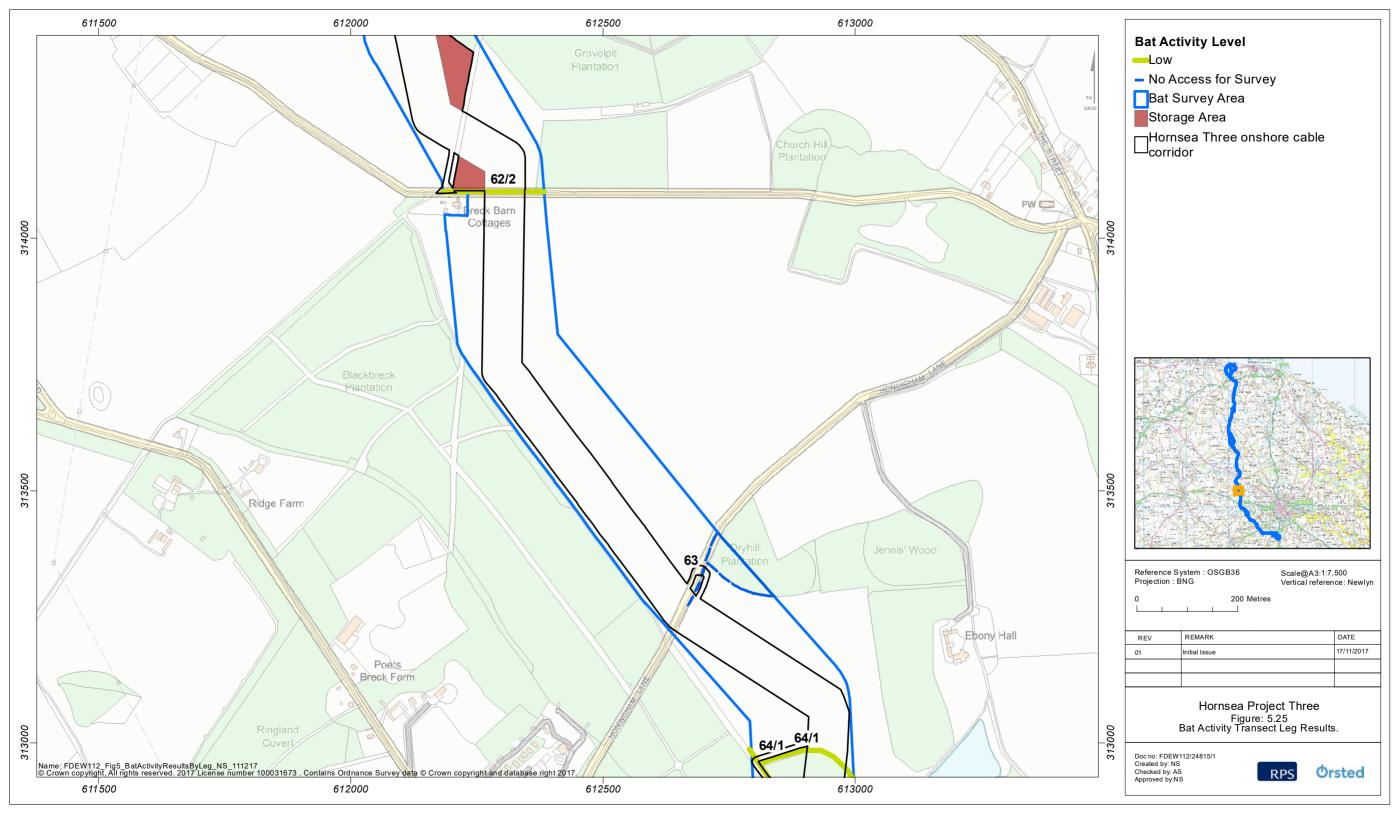


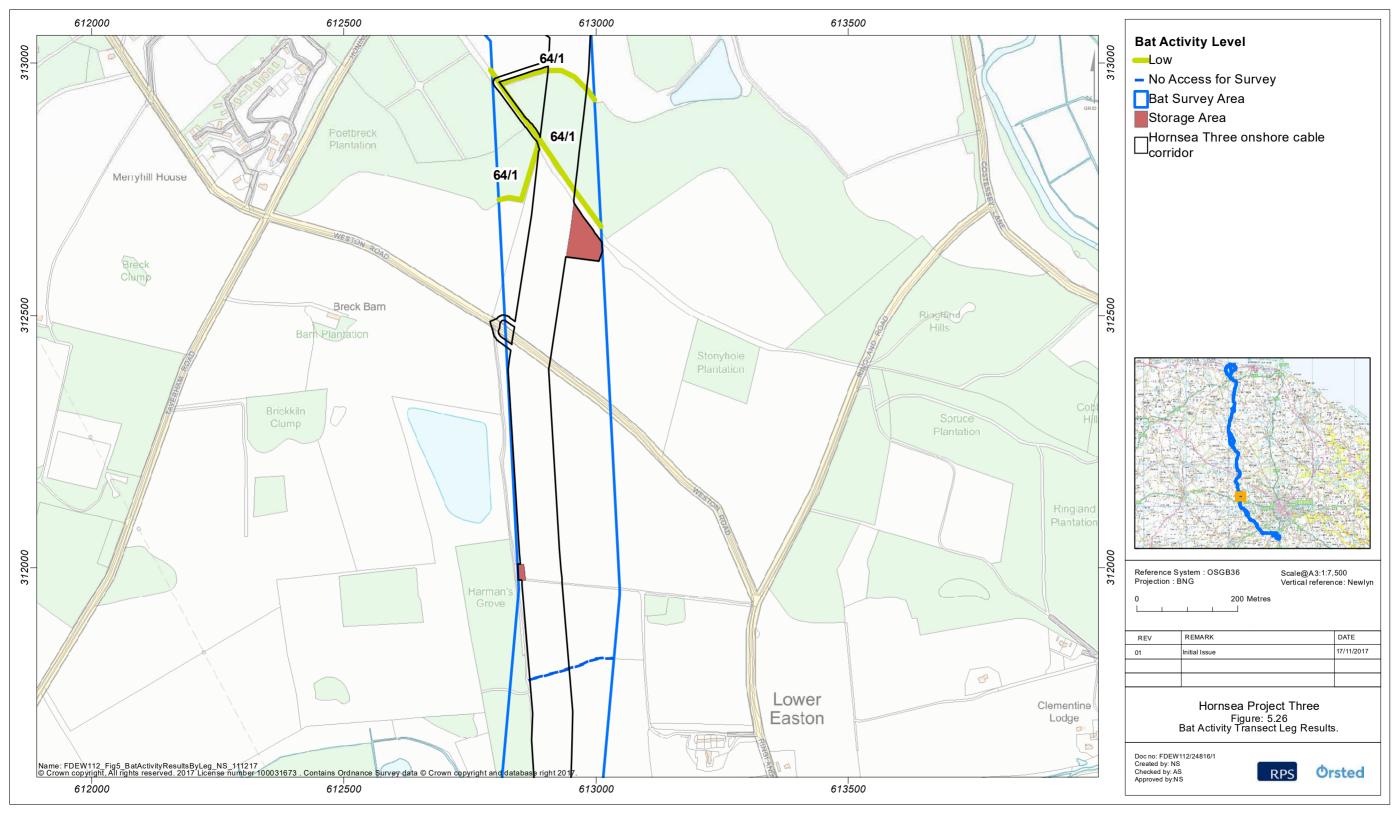


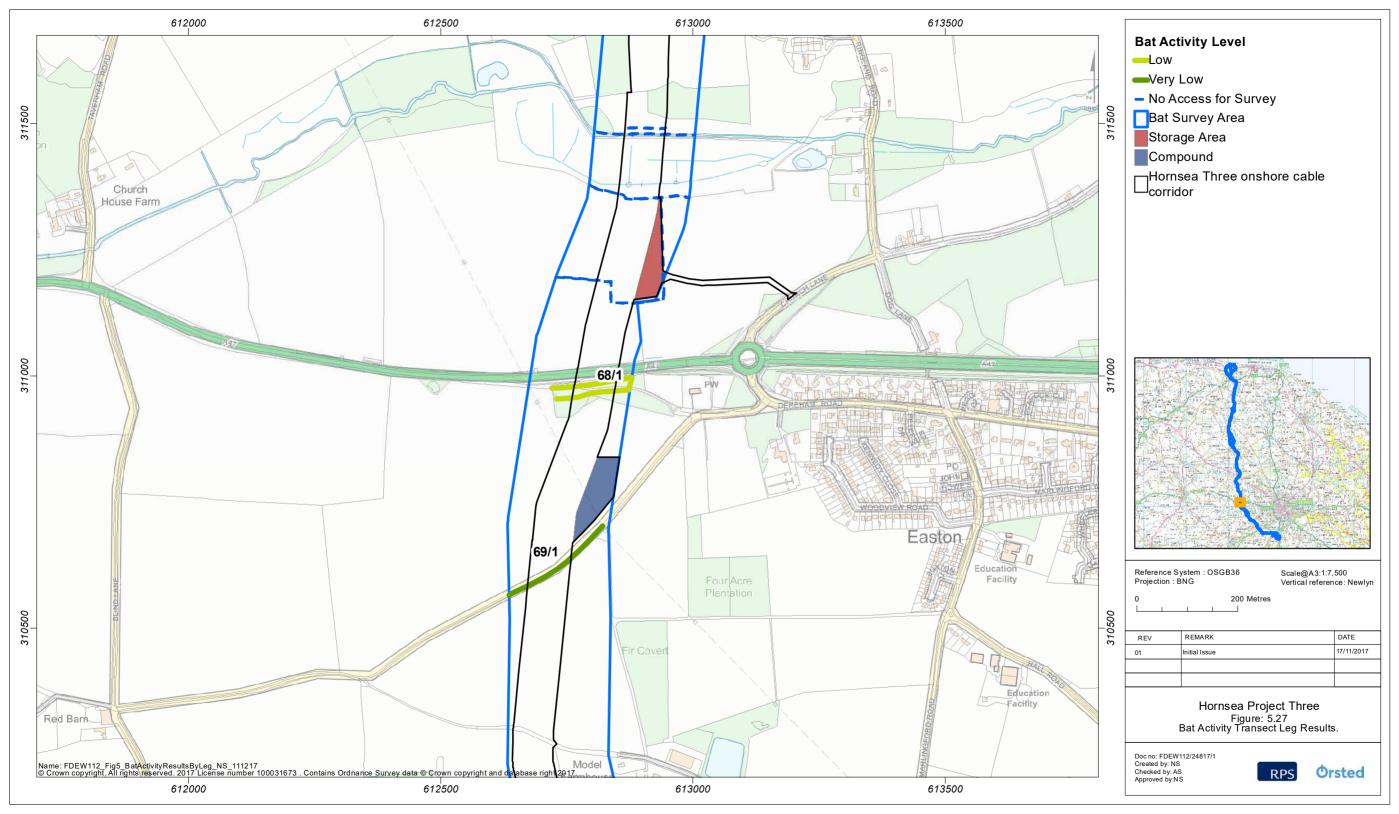


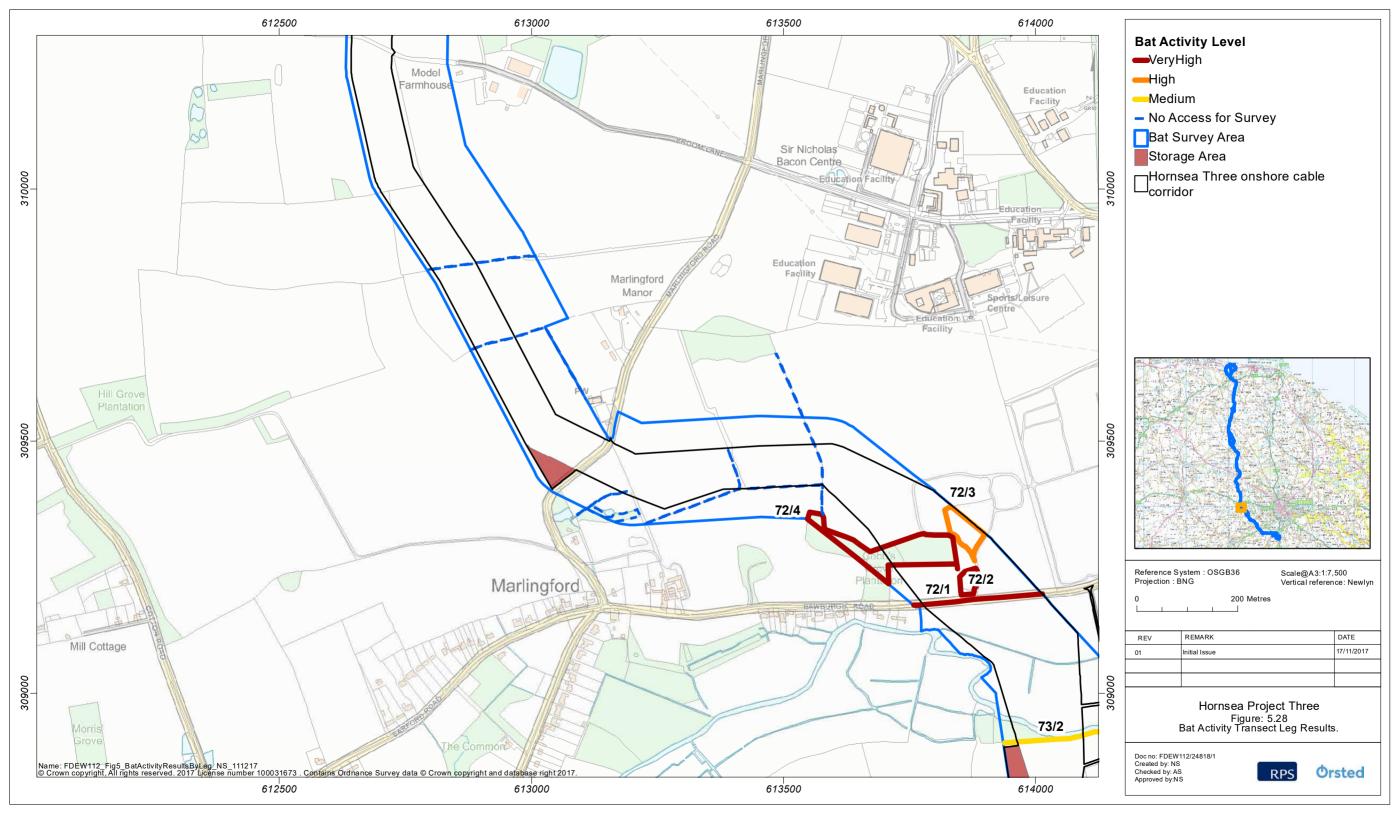


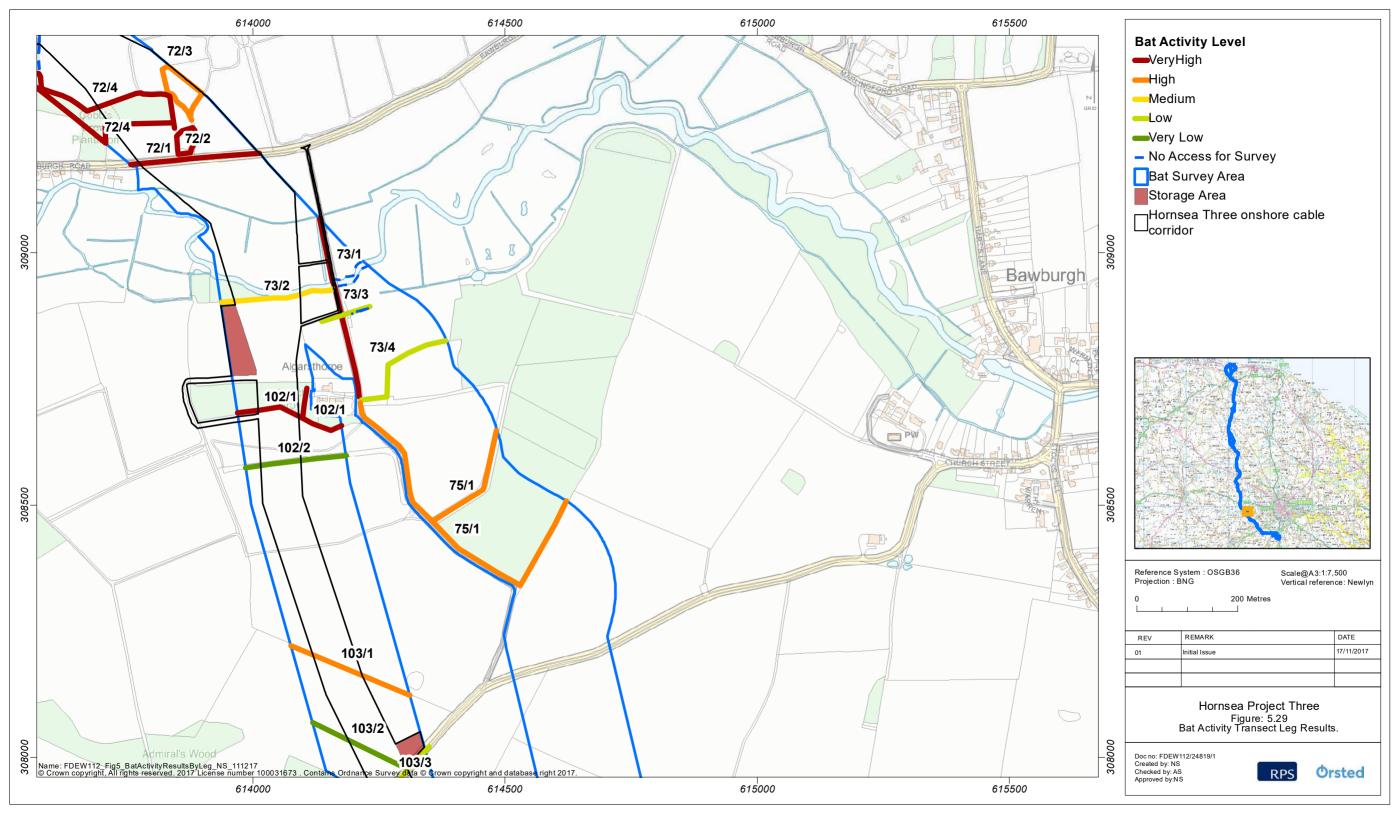


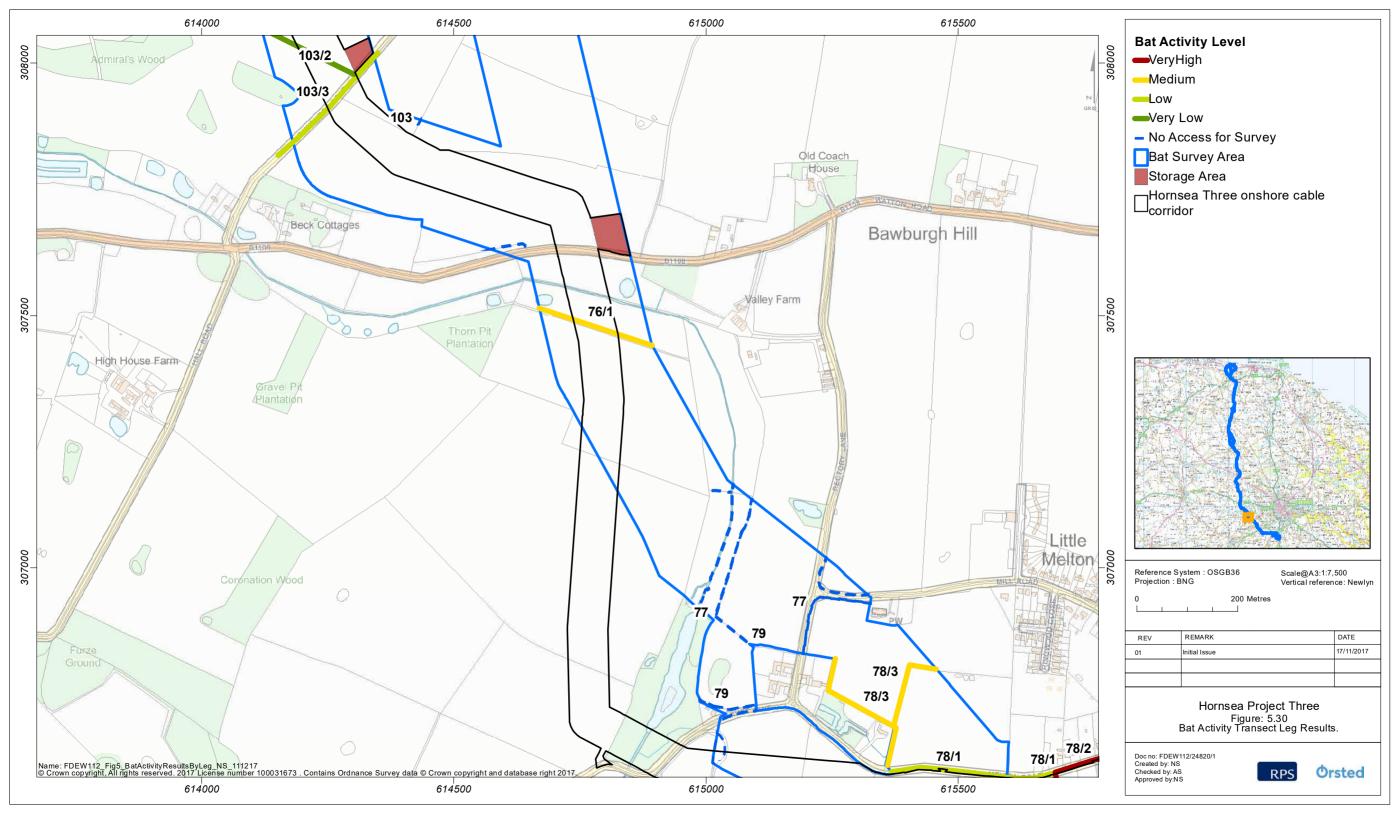


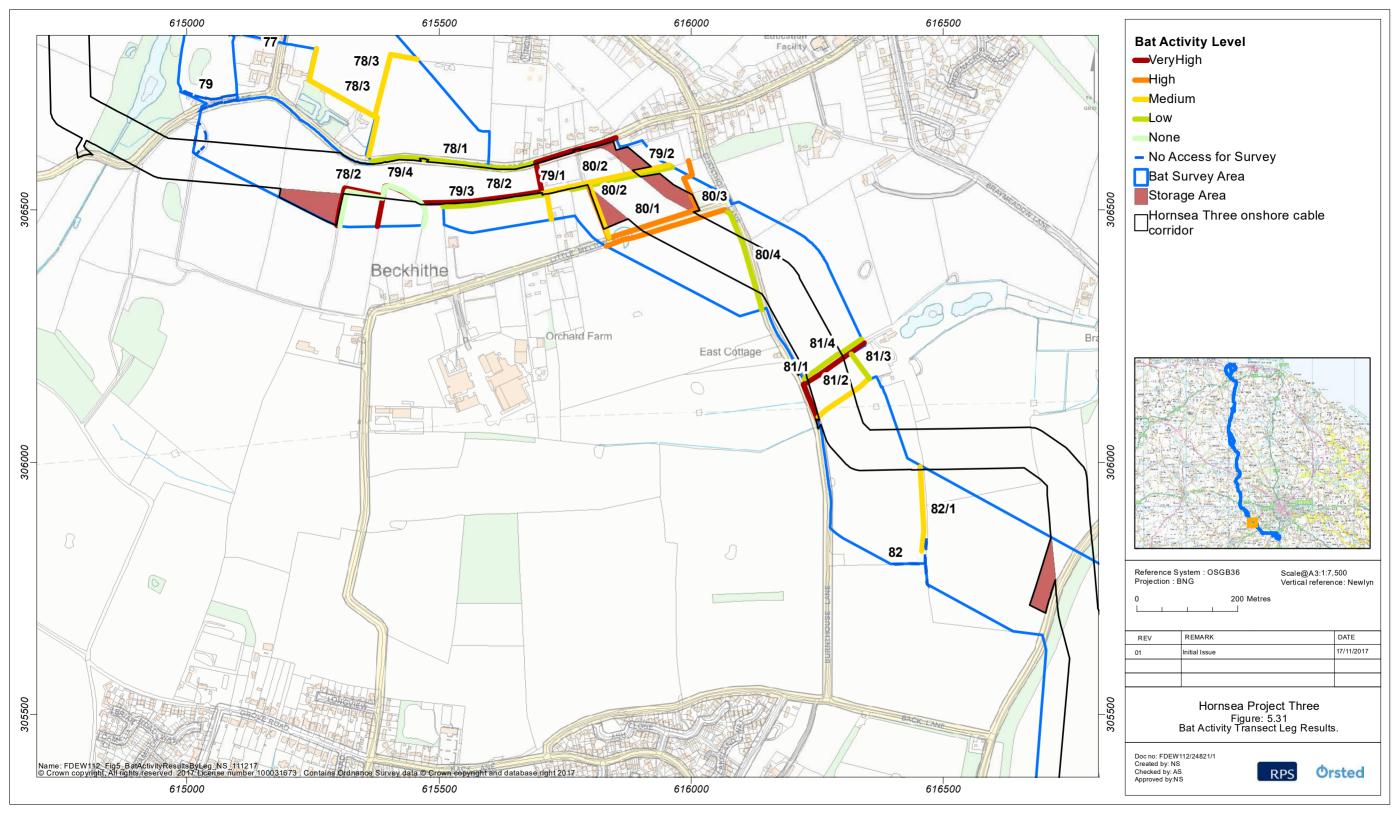


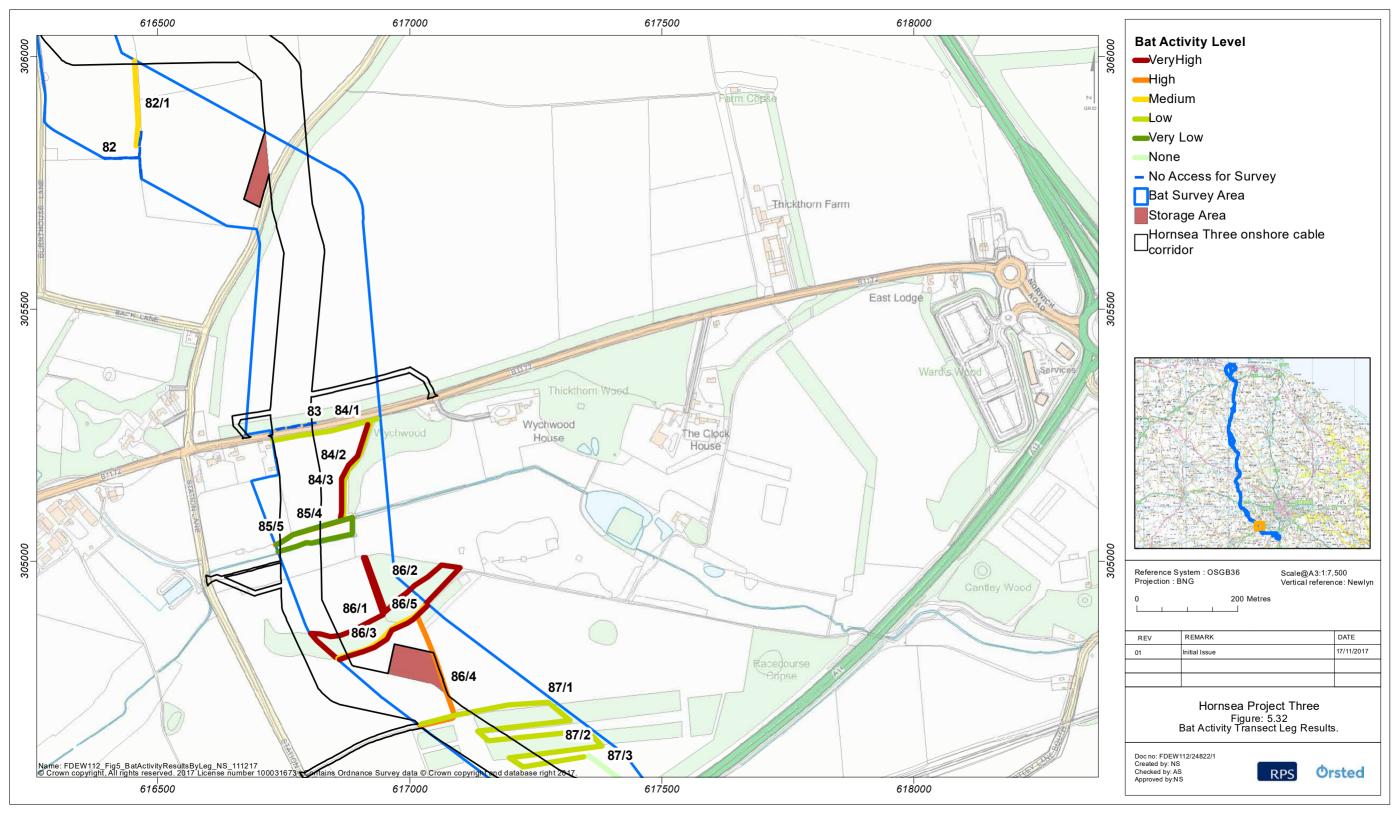


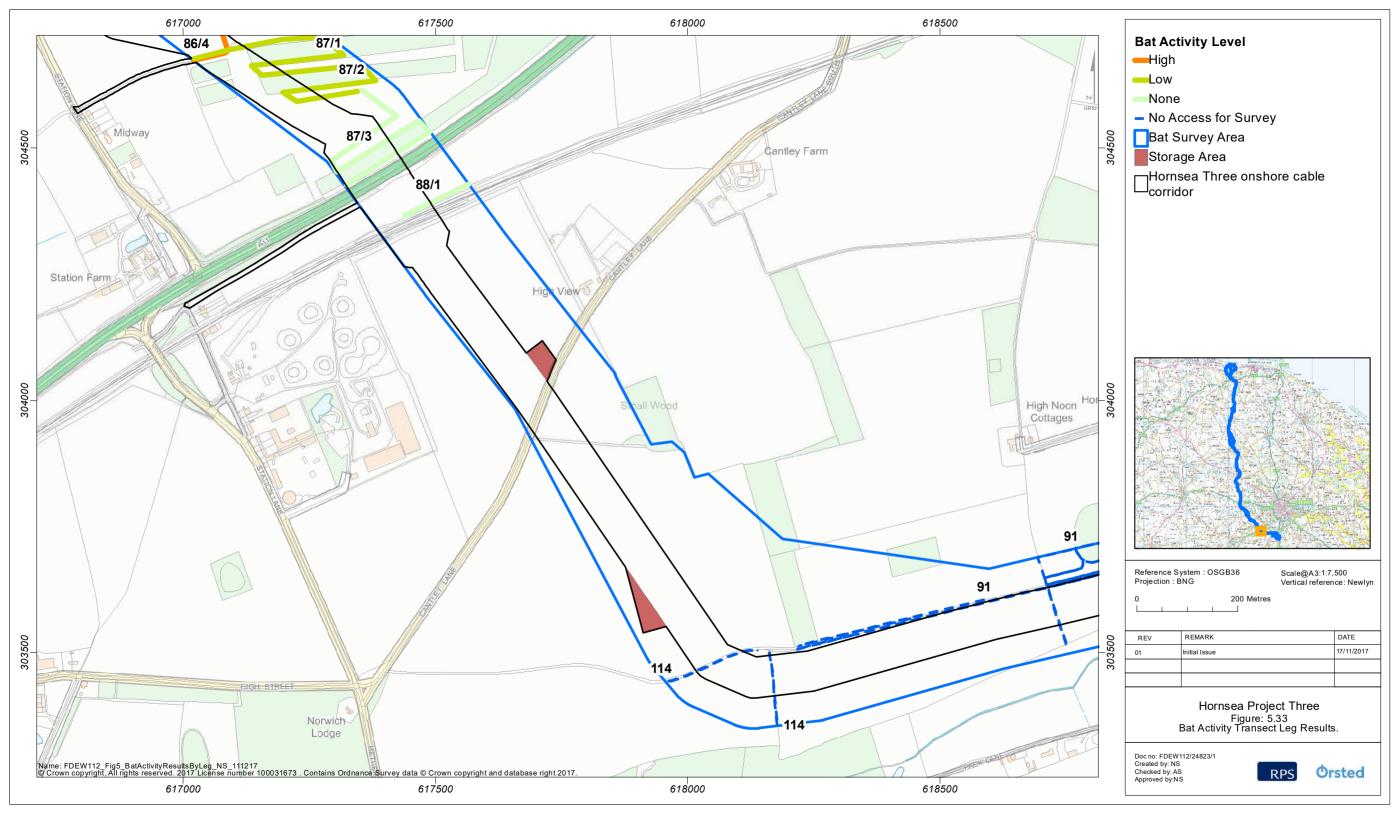


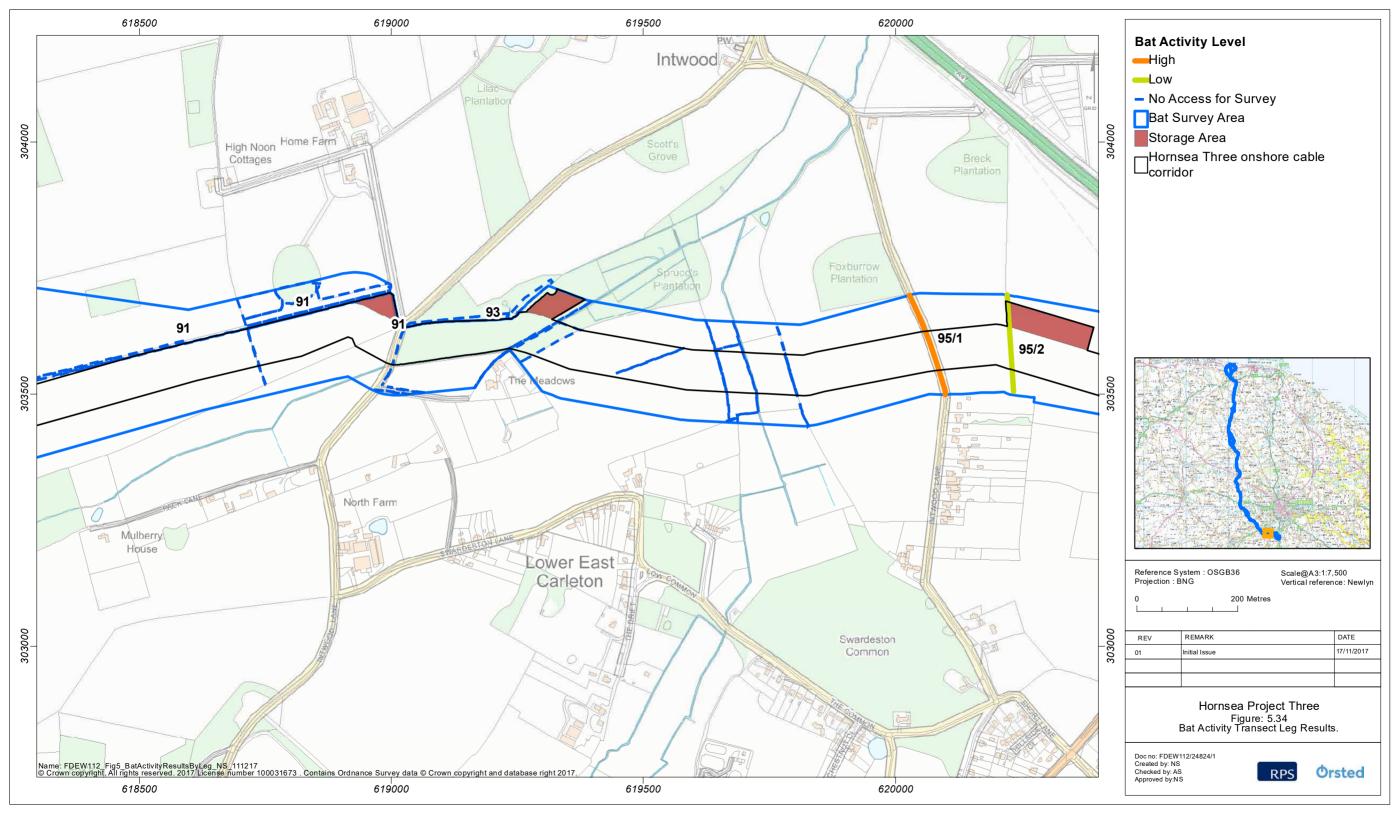


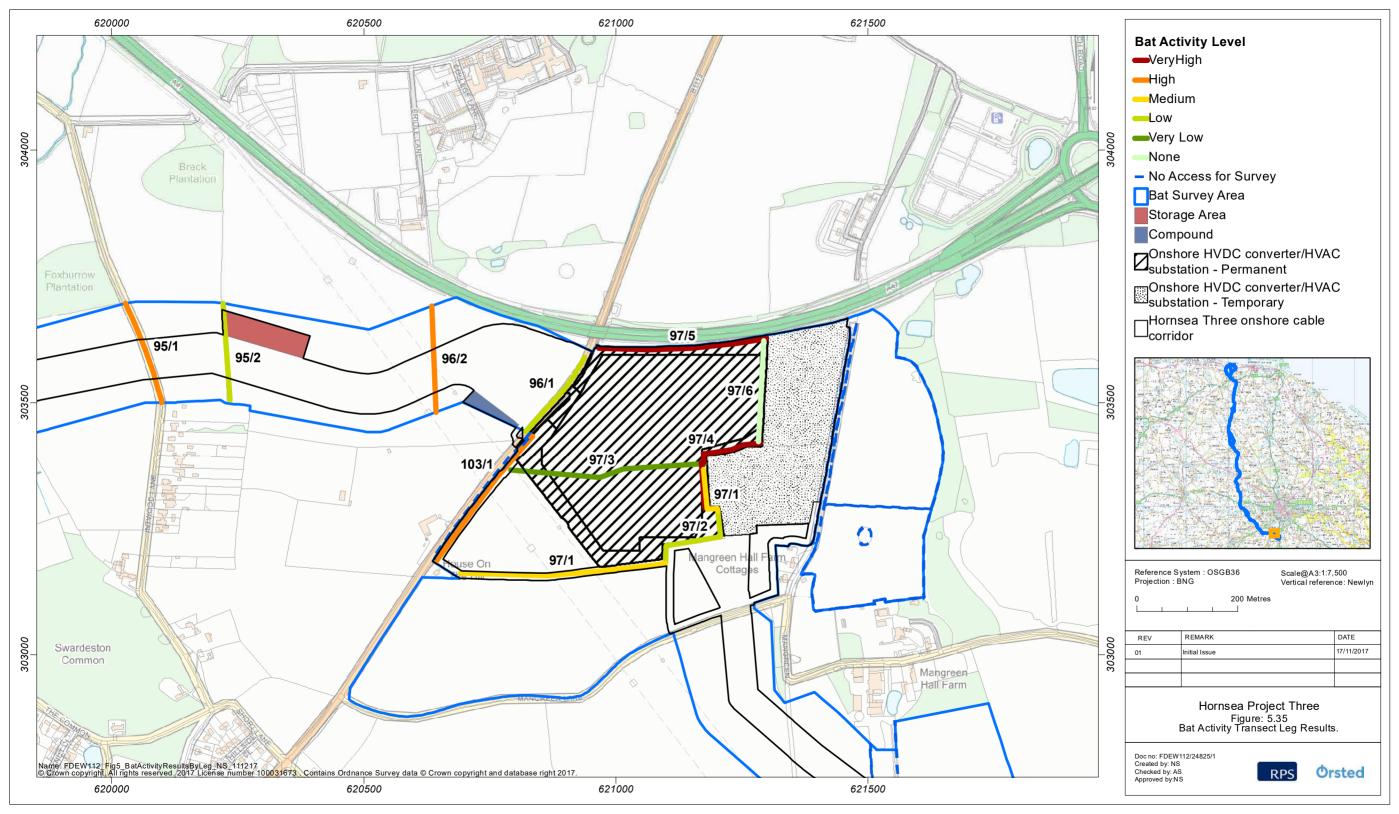


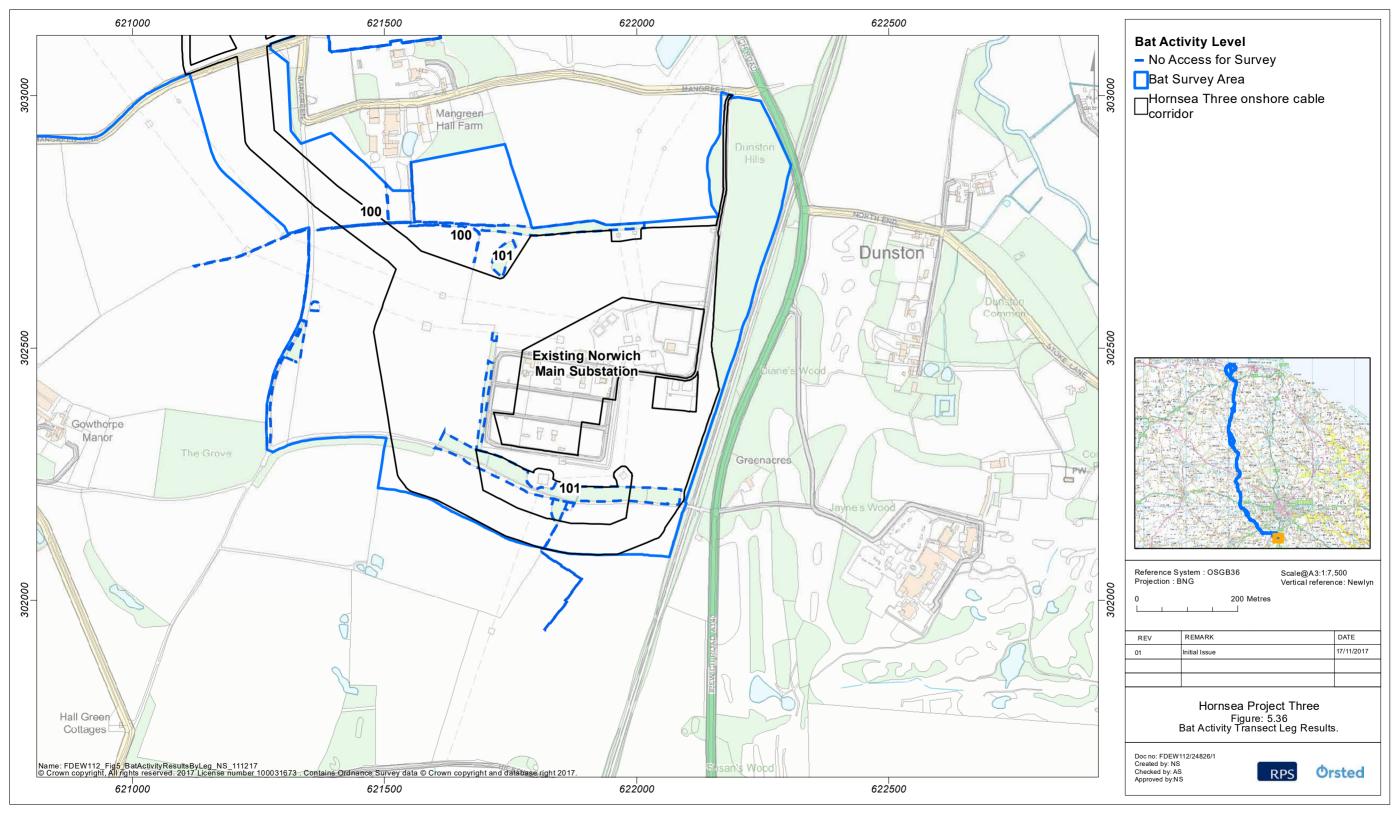








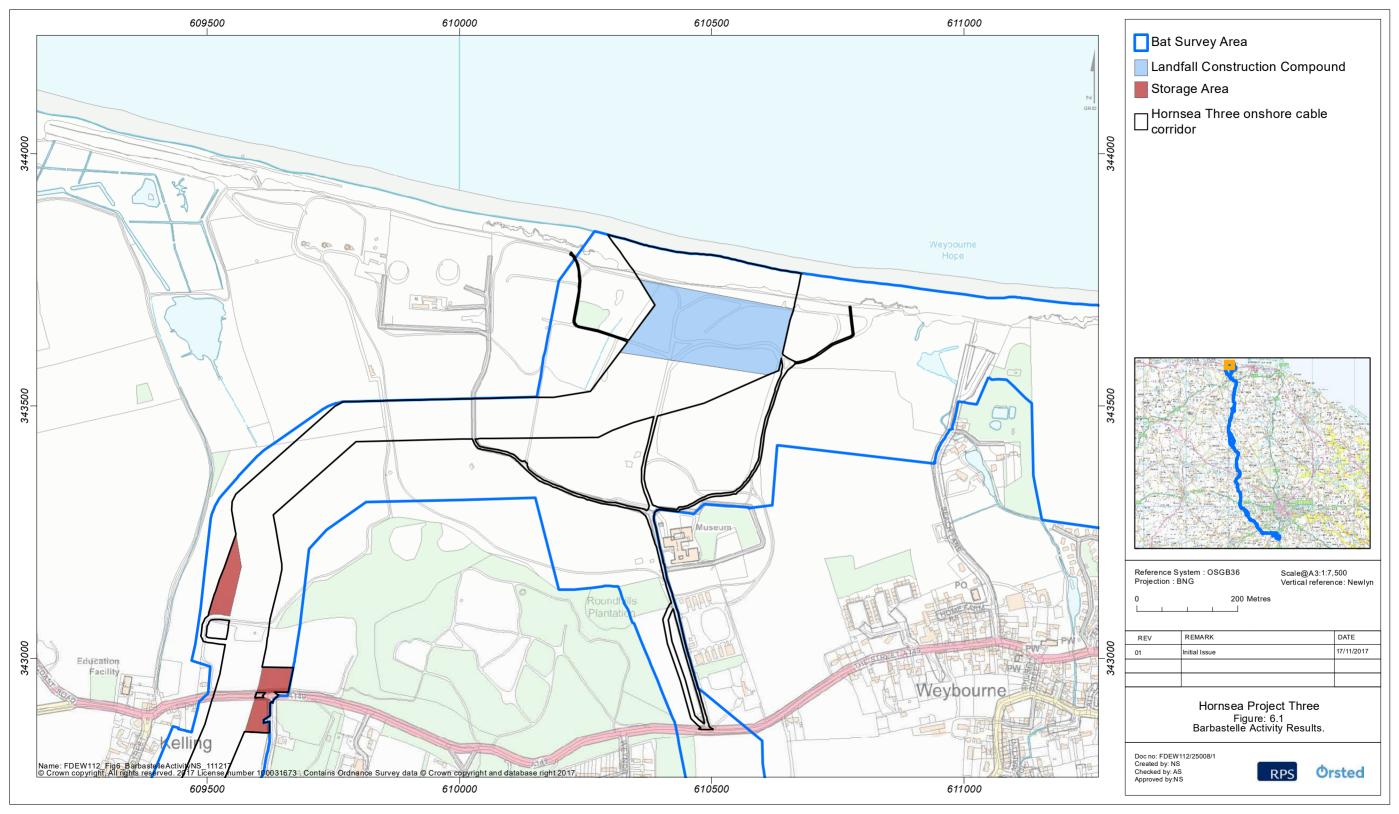


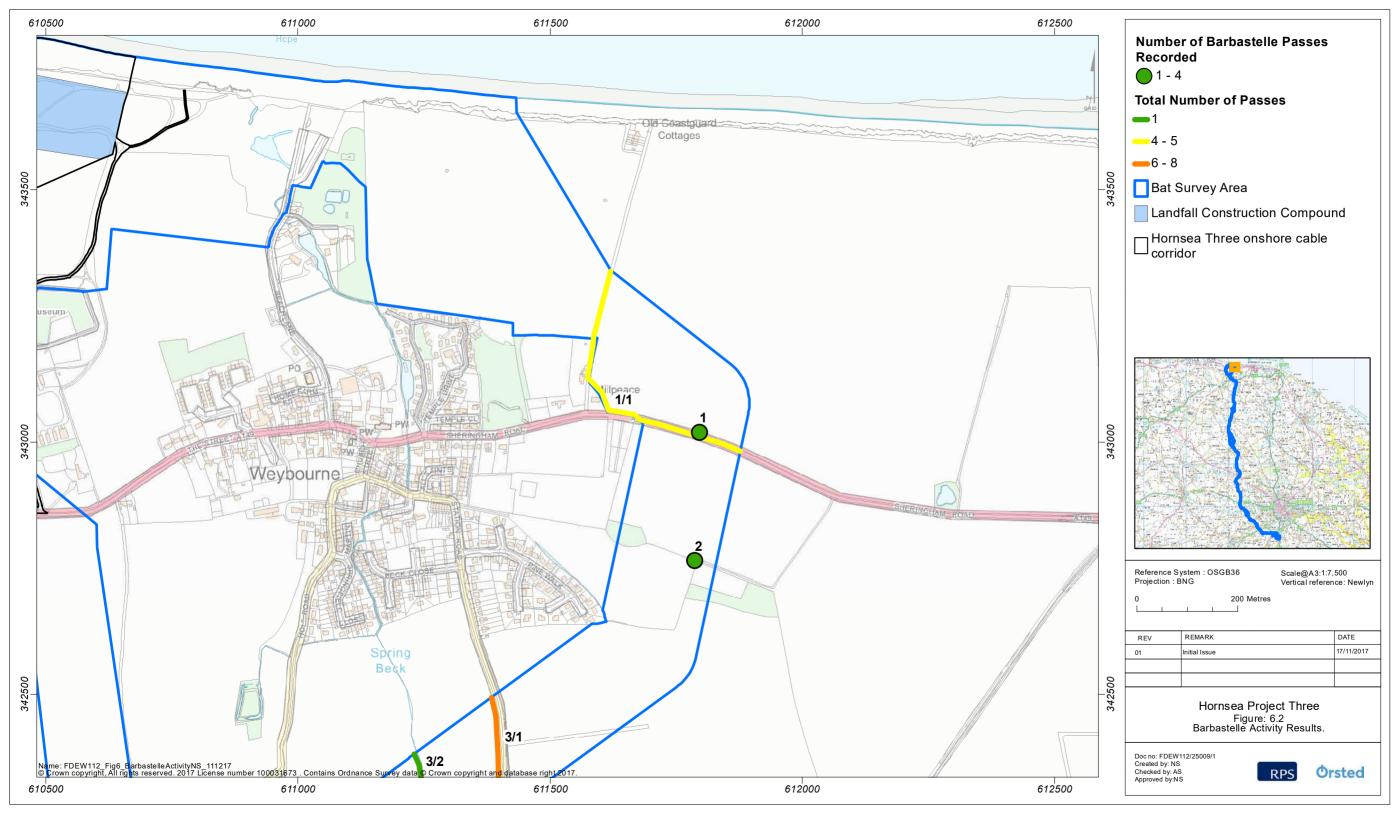


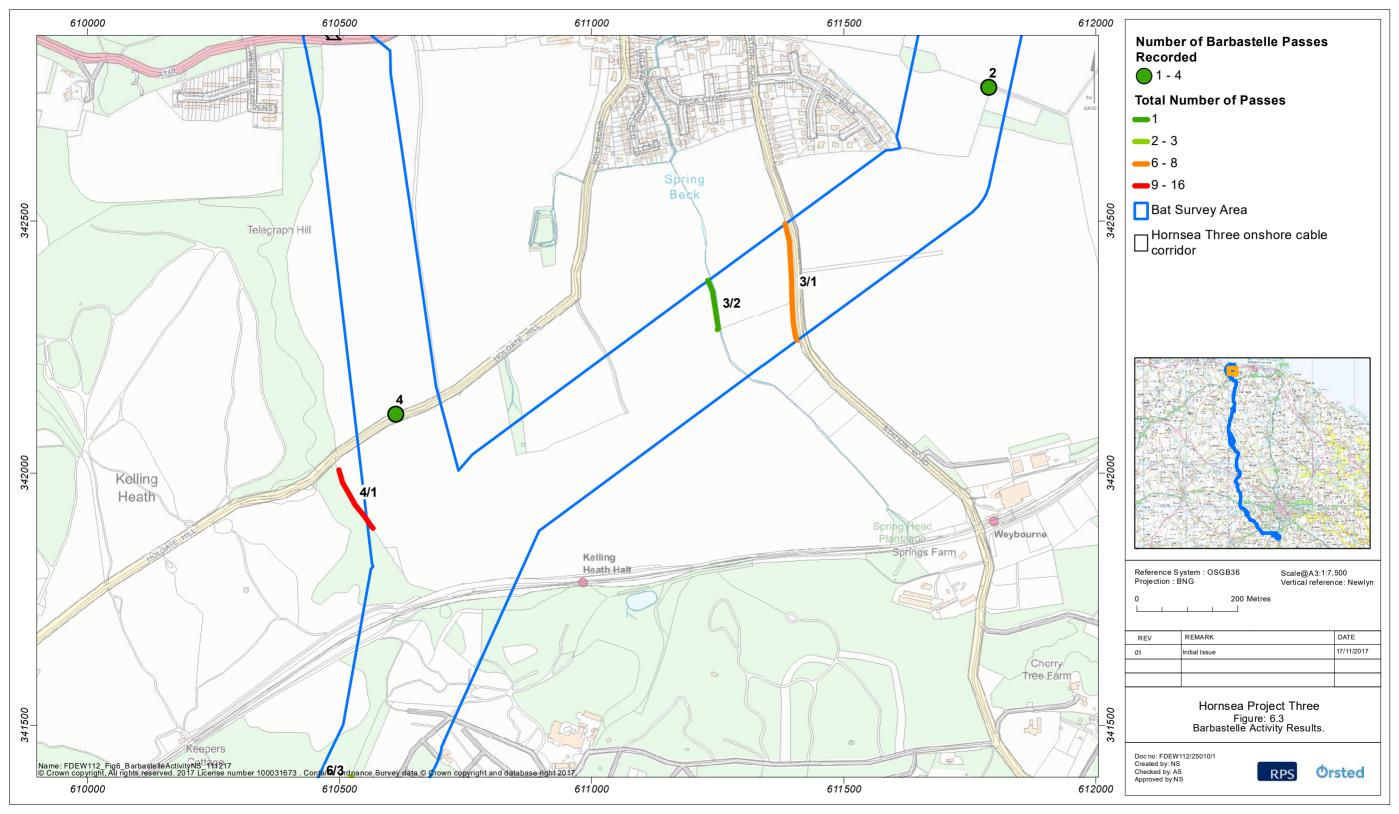


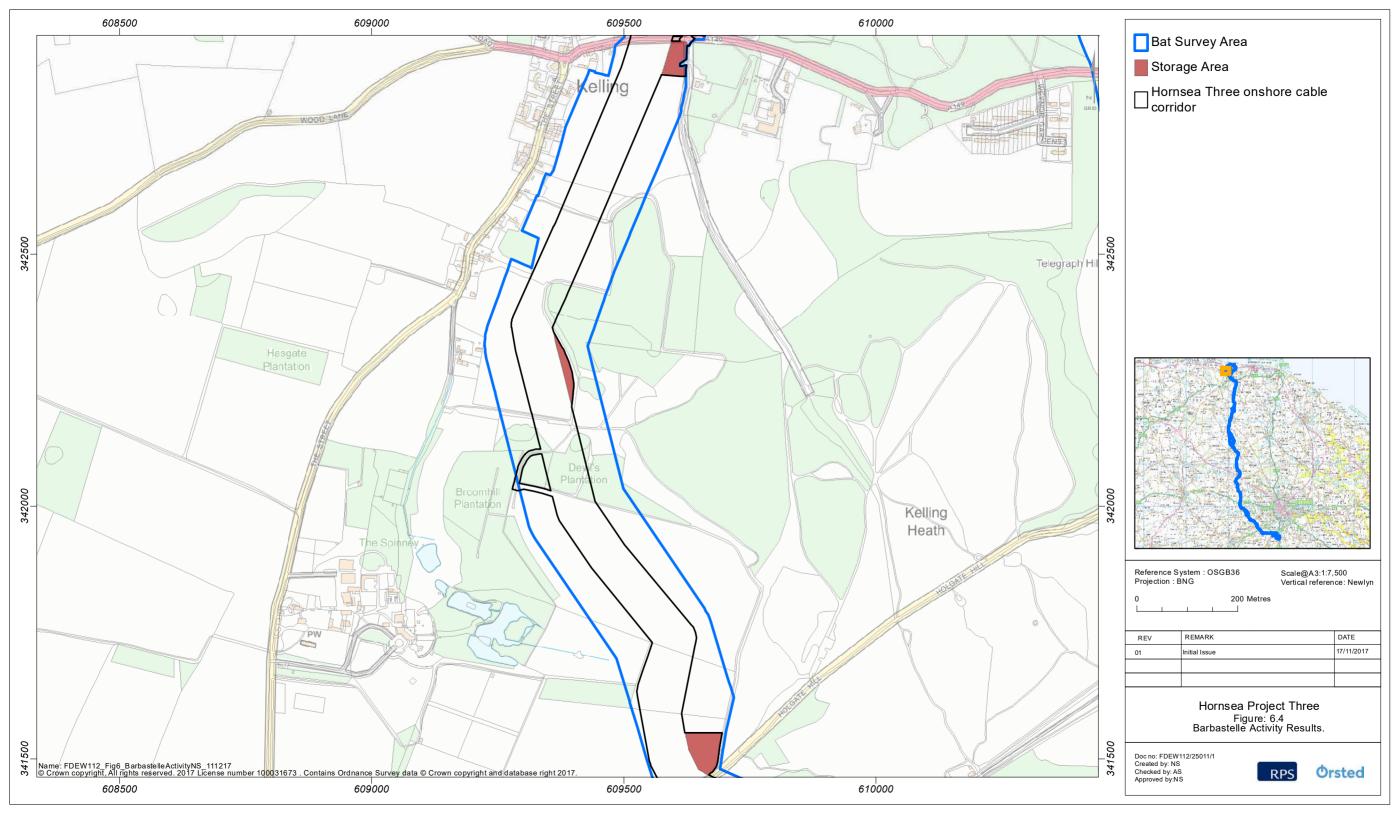
A.6 Barbastelle activity results

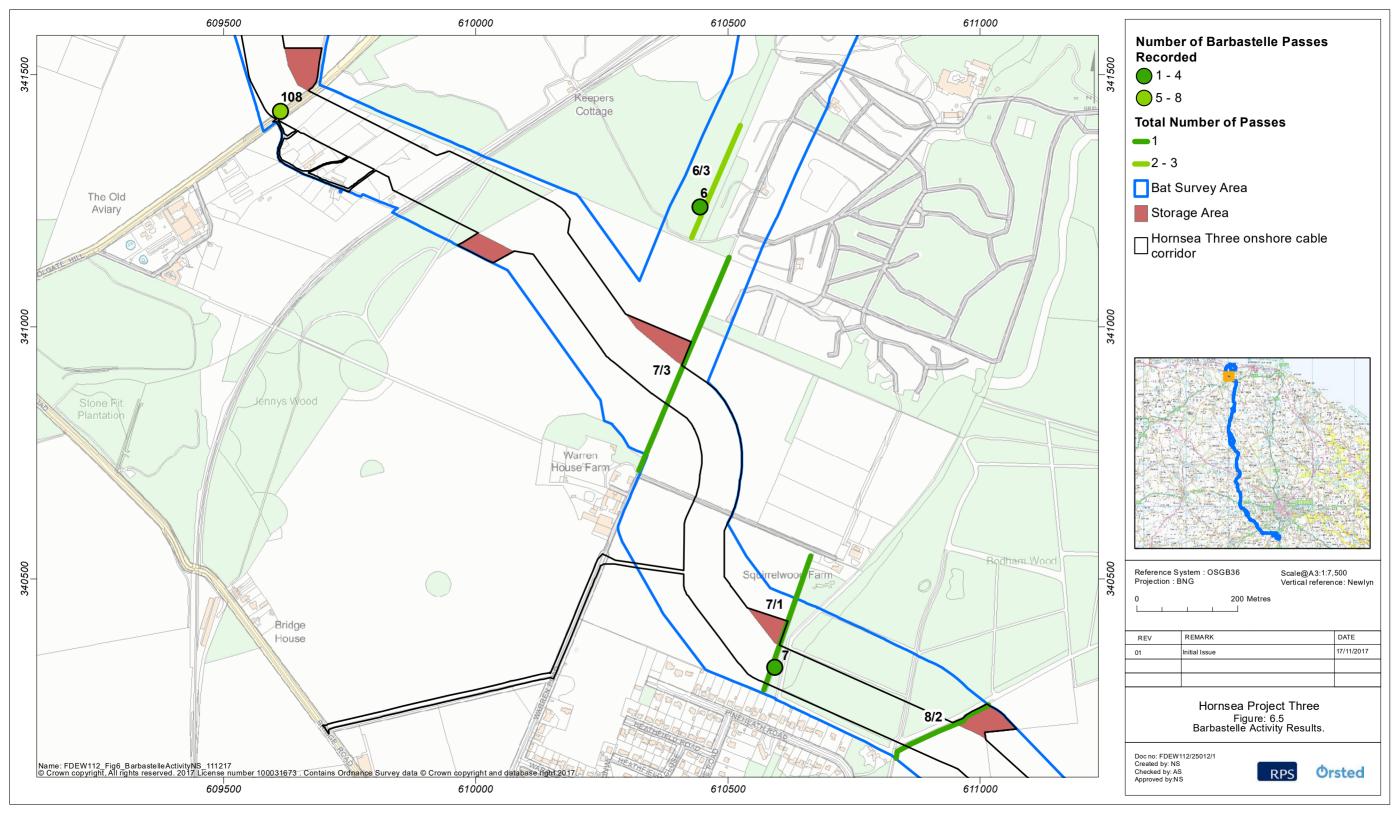


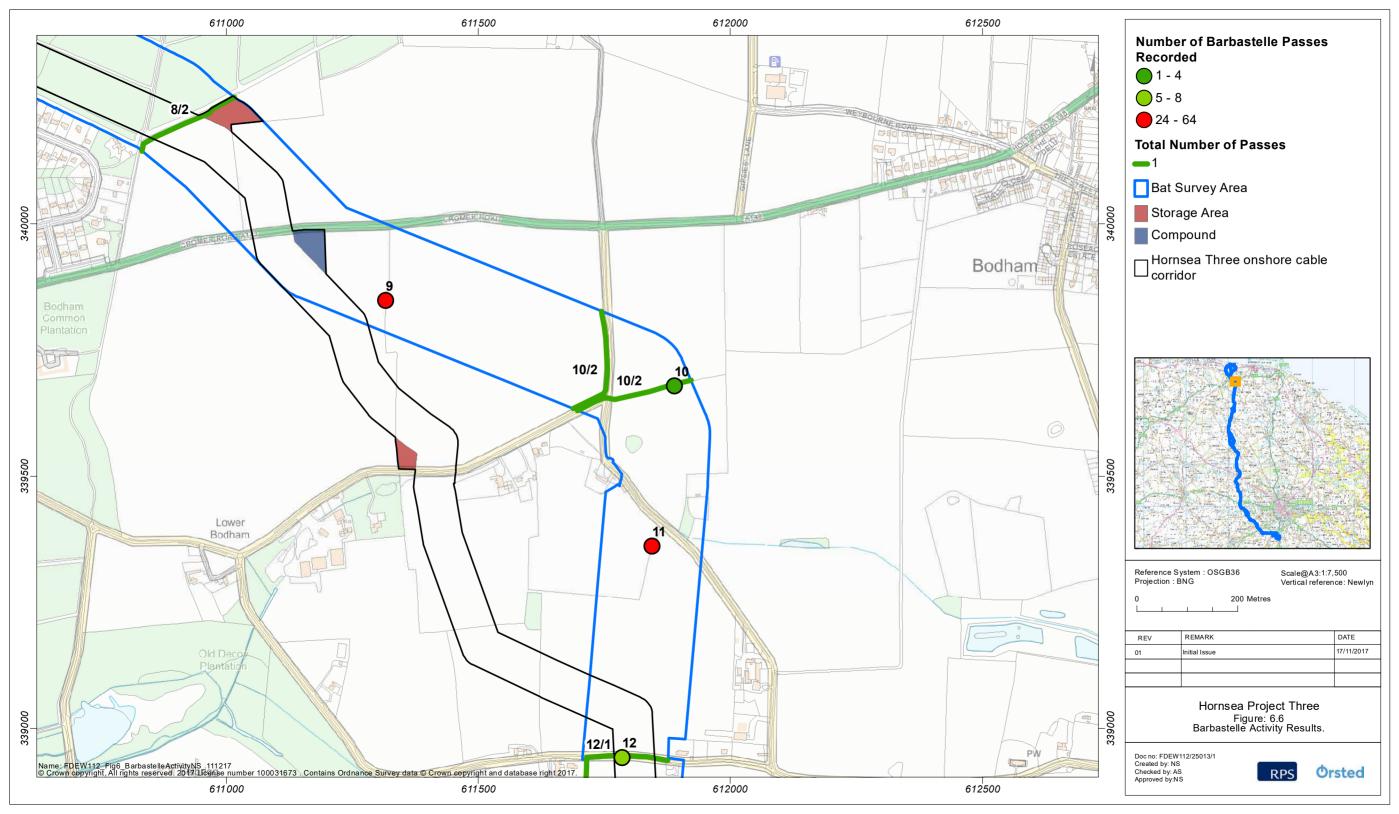


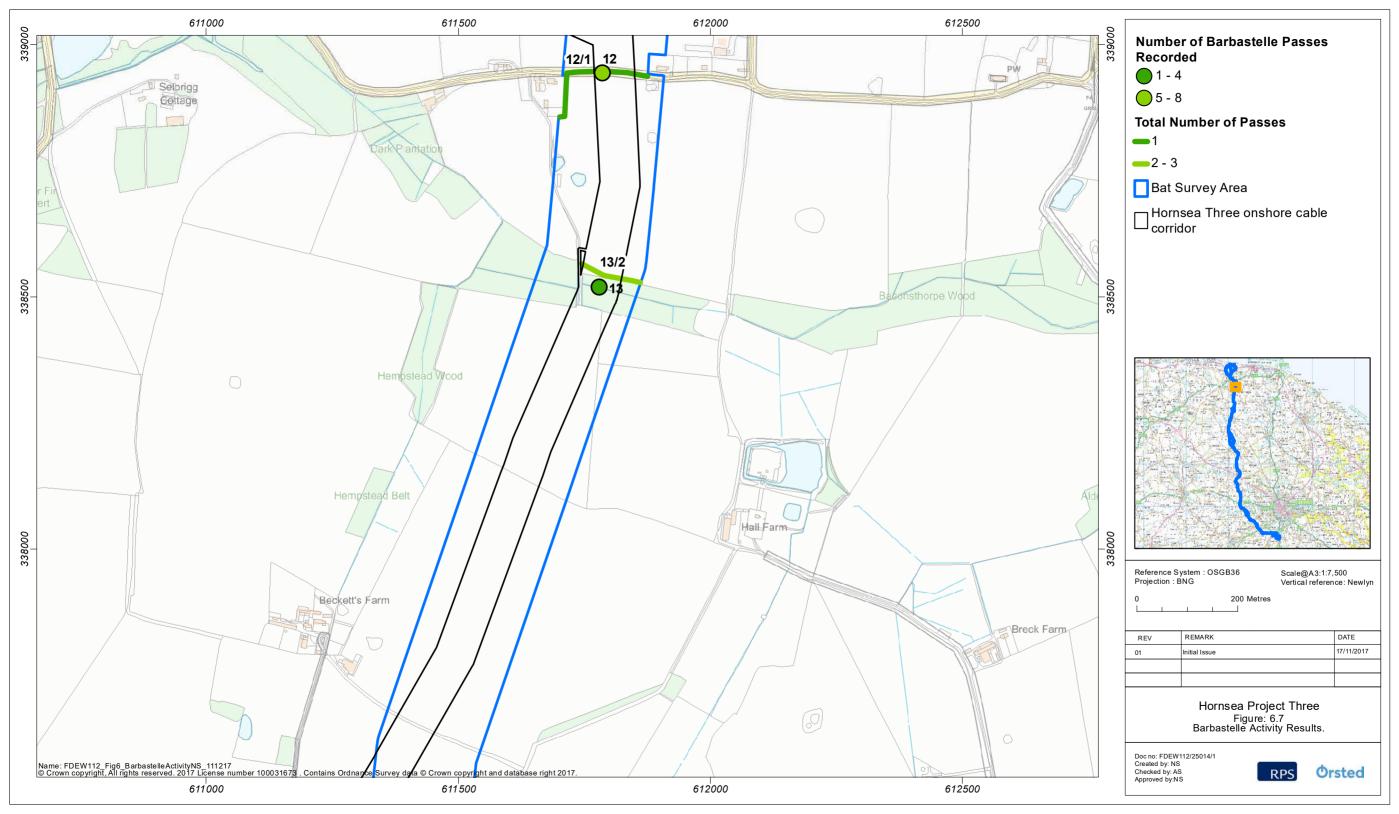


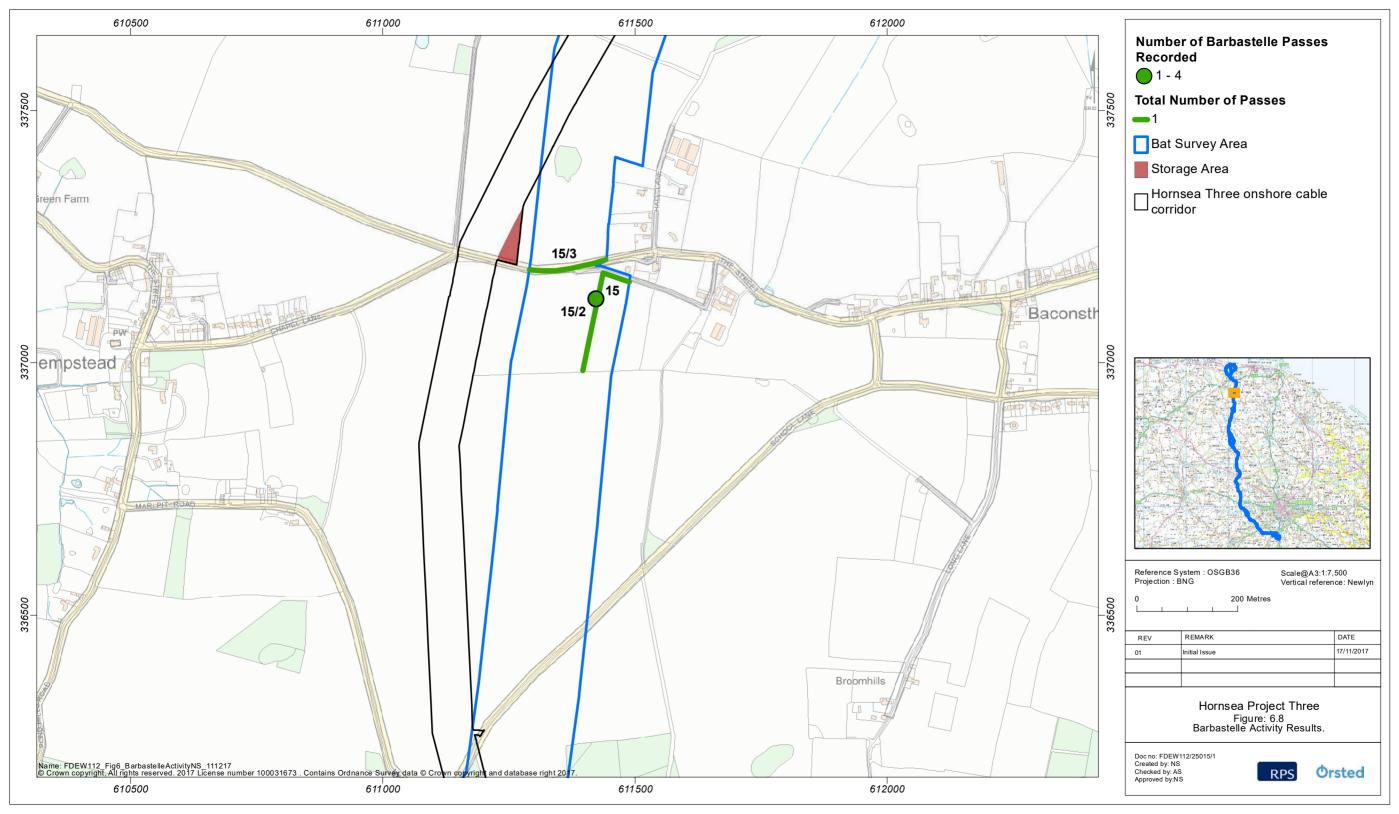


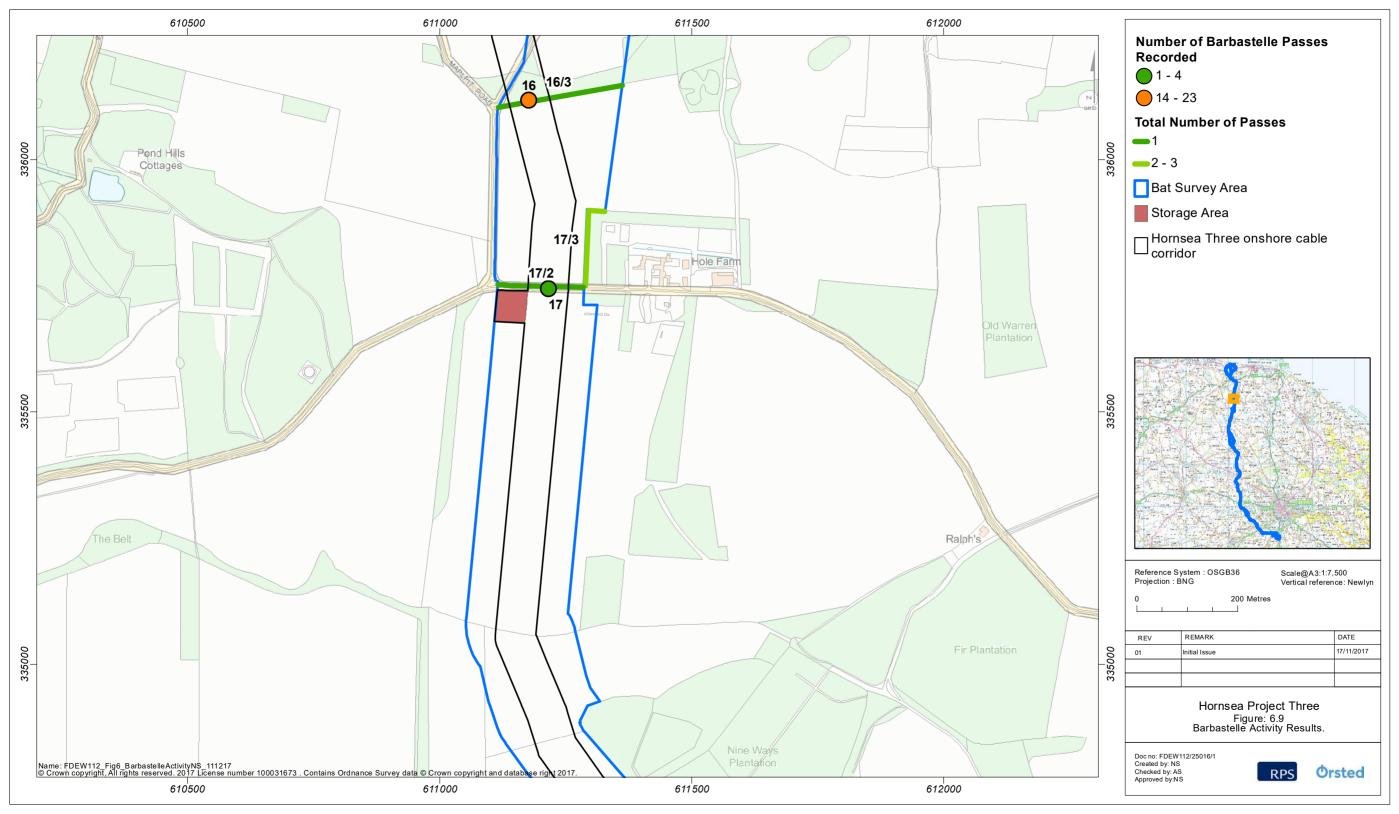




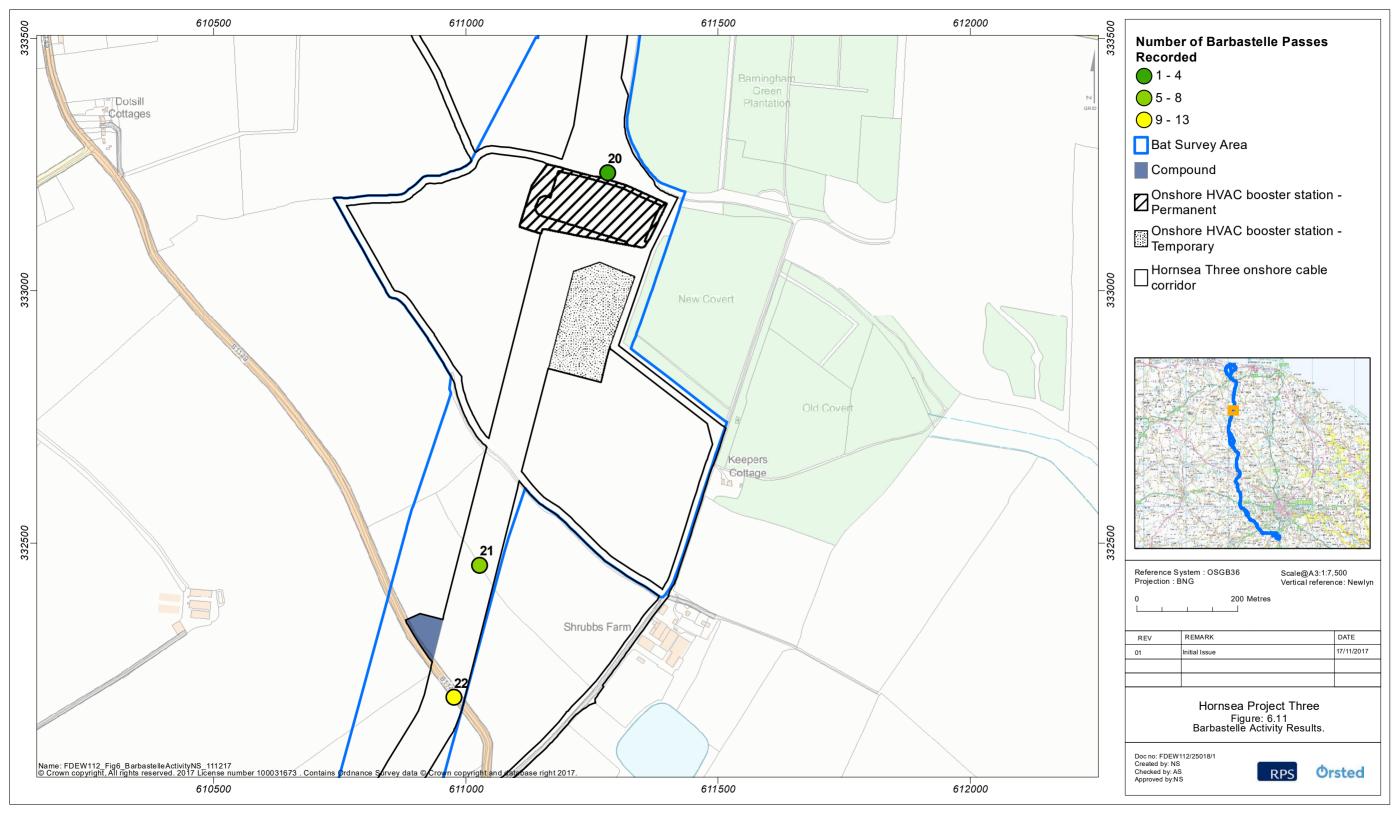


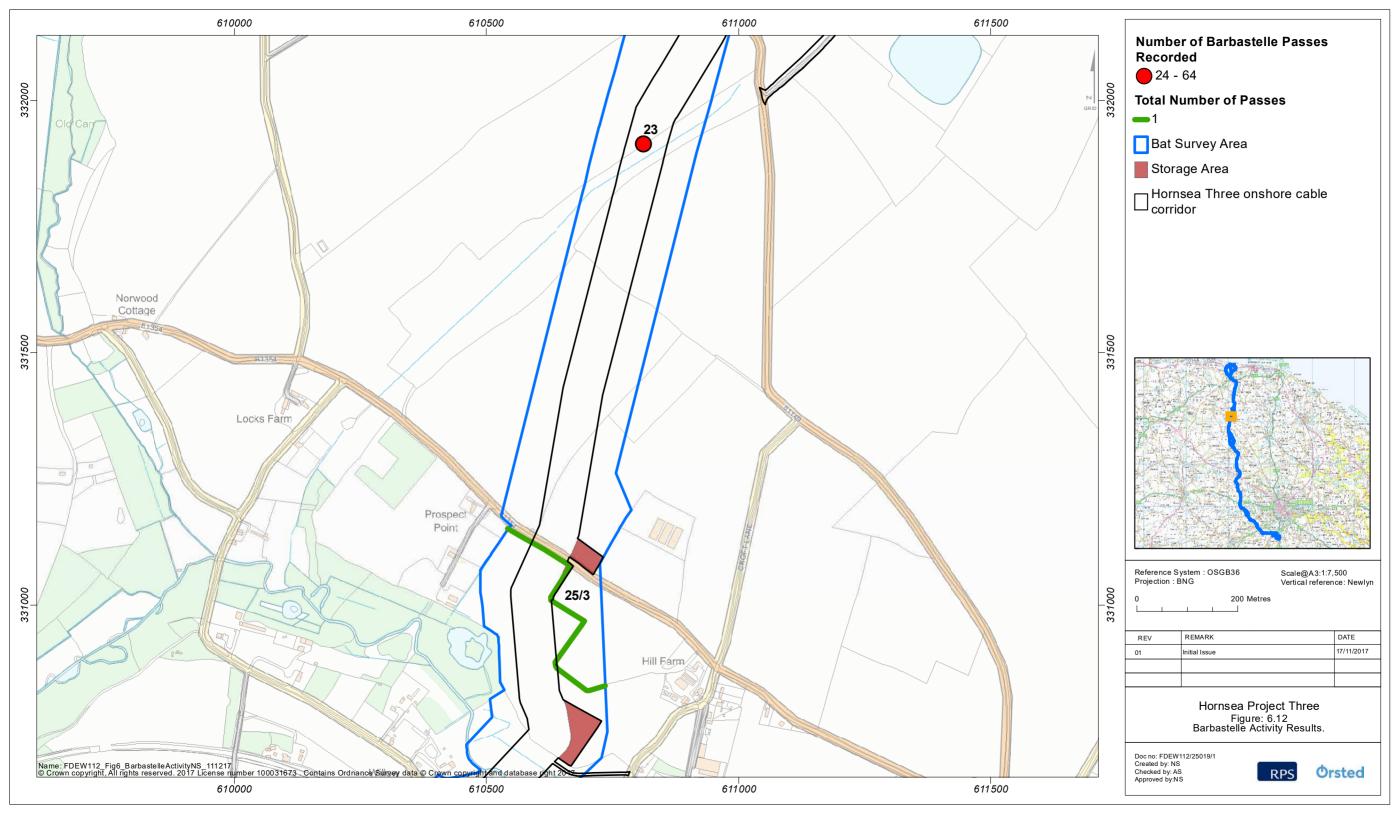


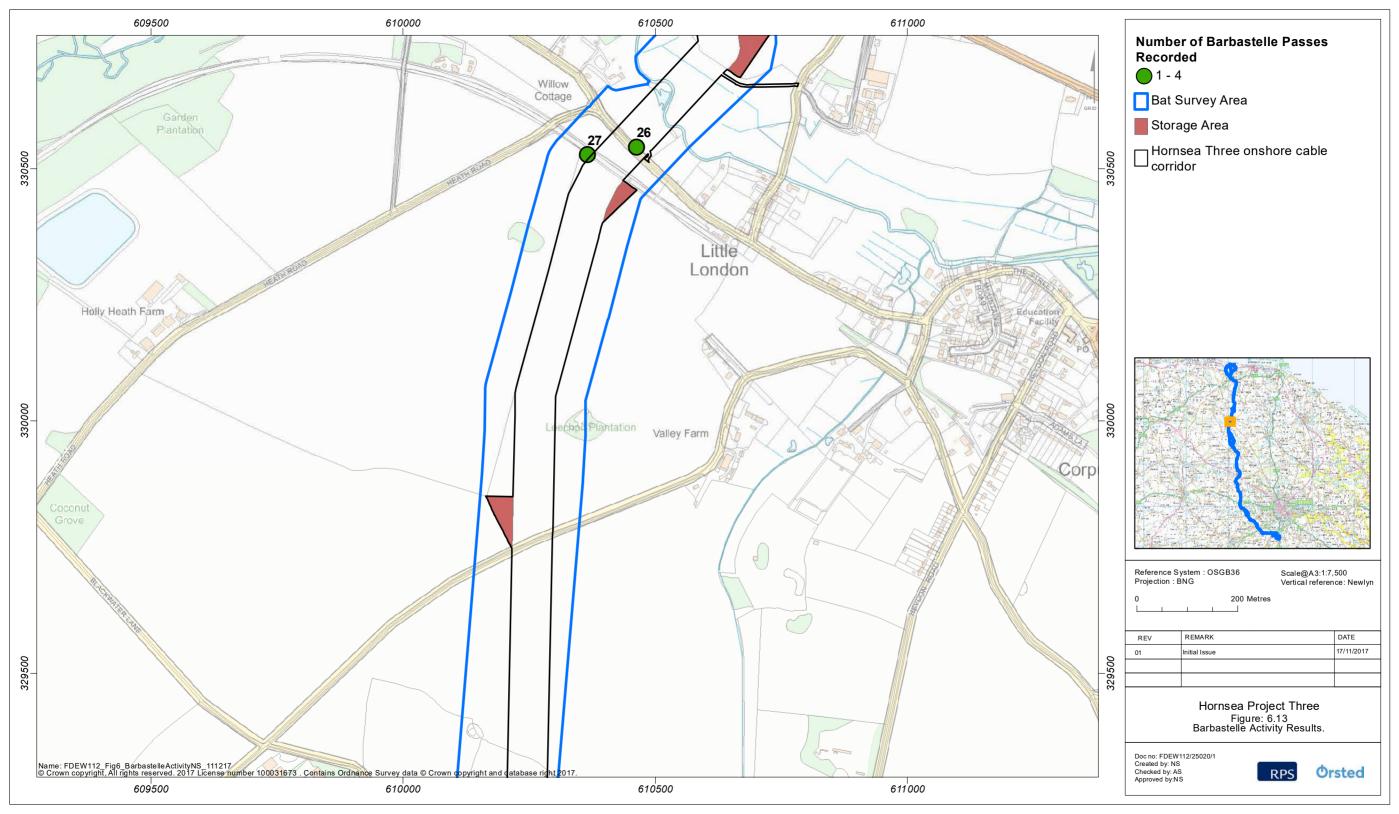


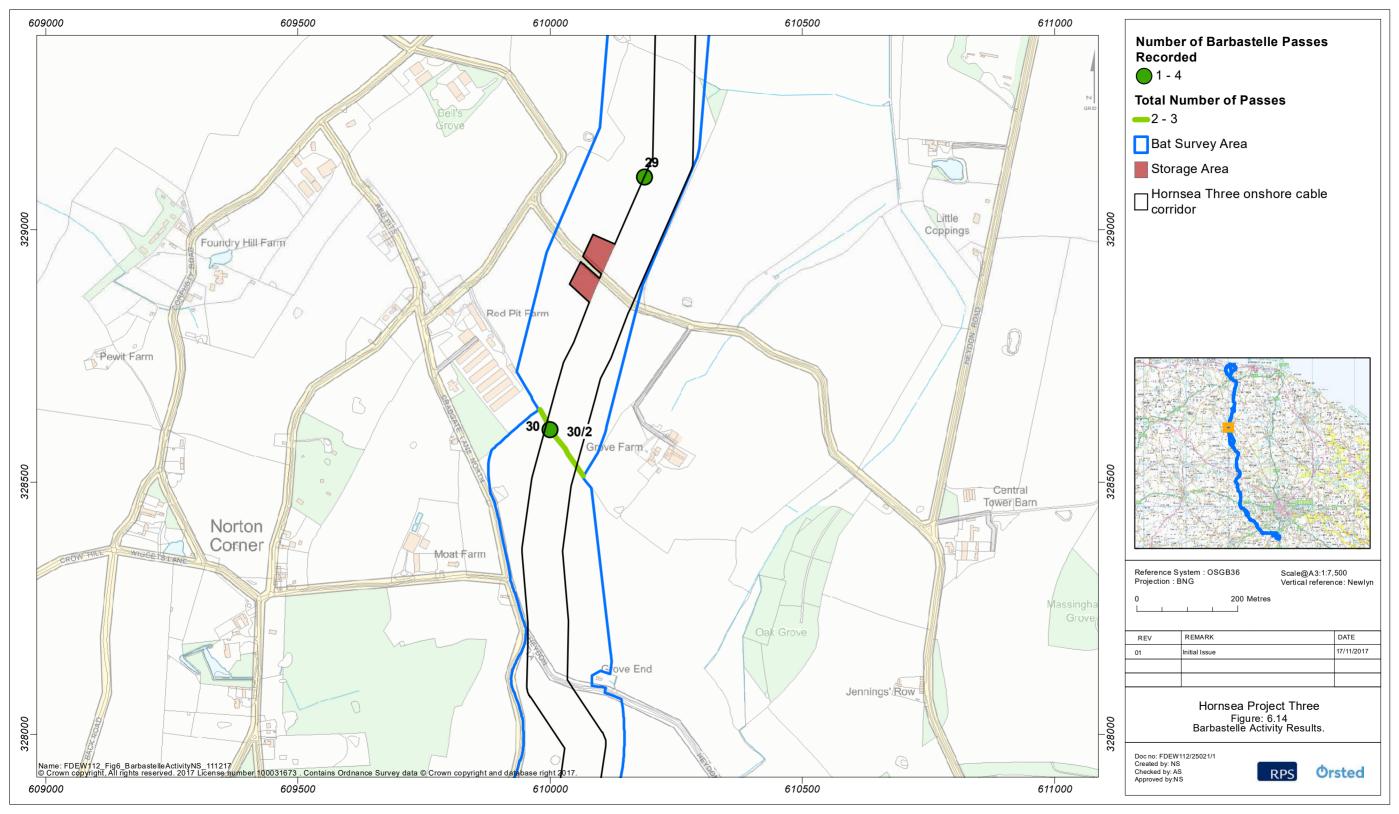


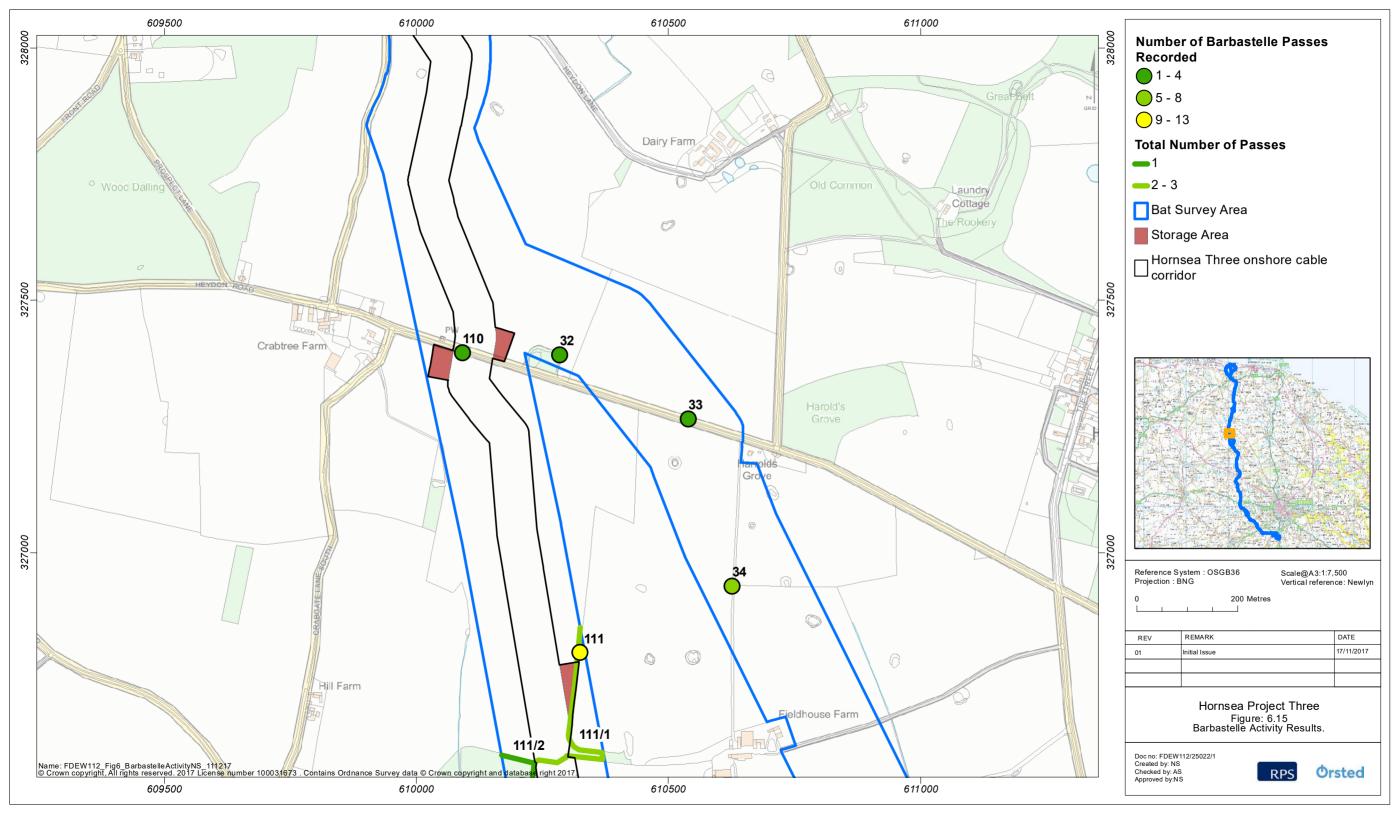


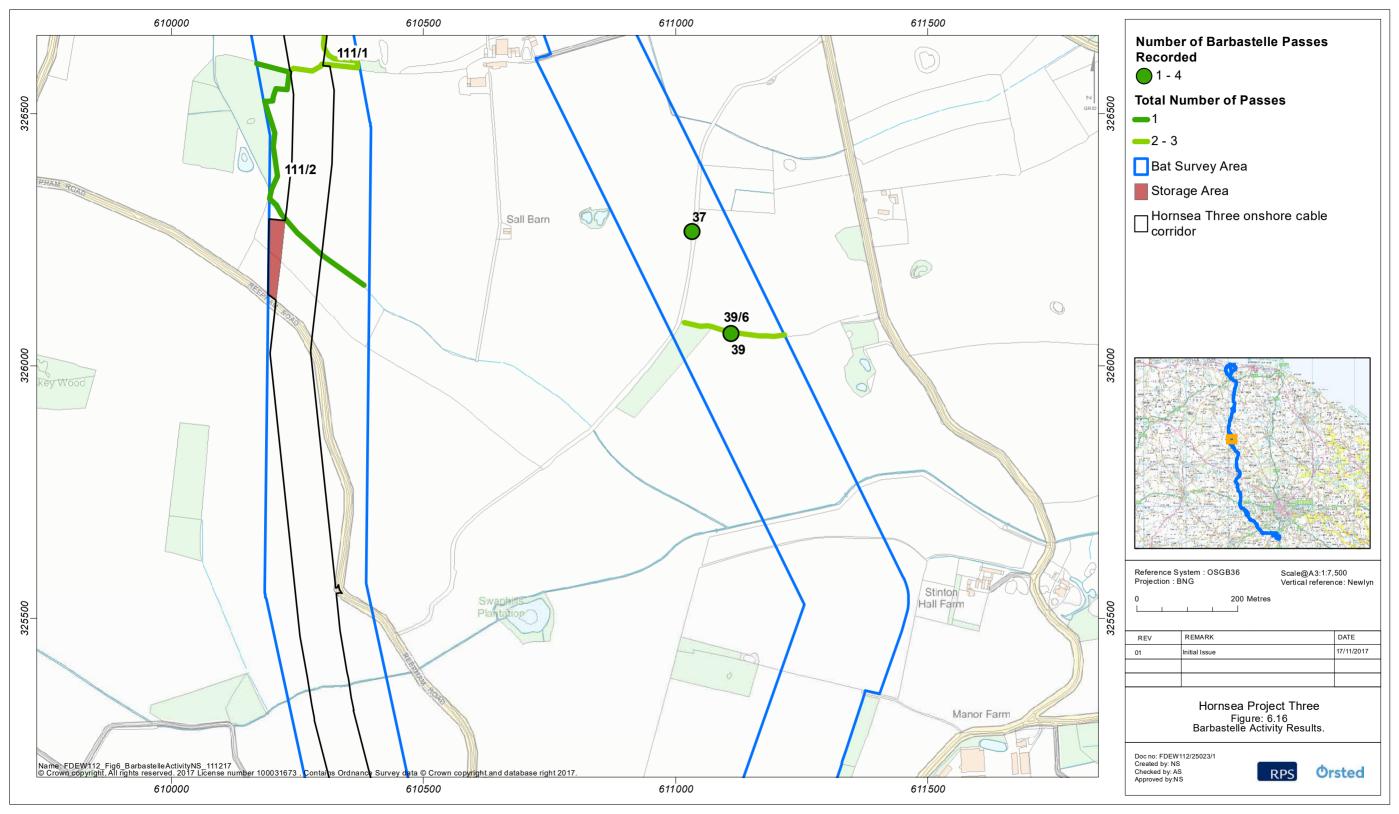


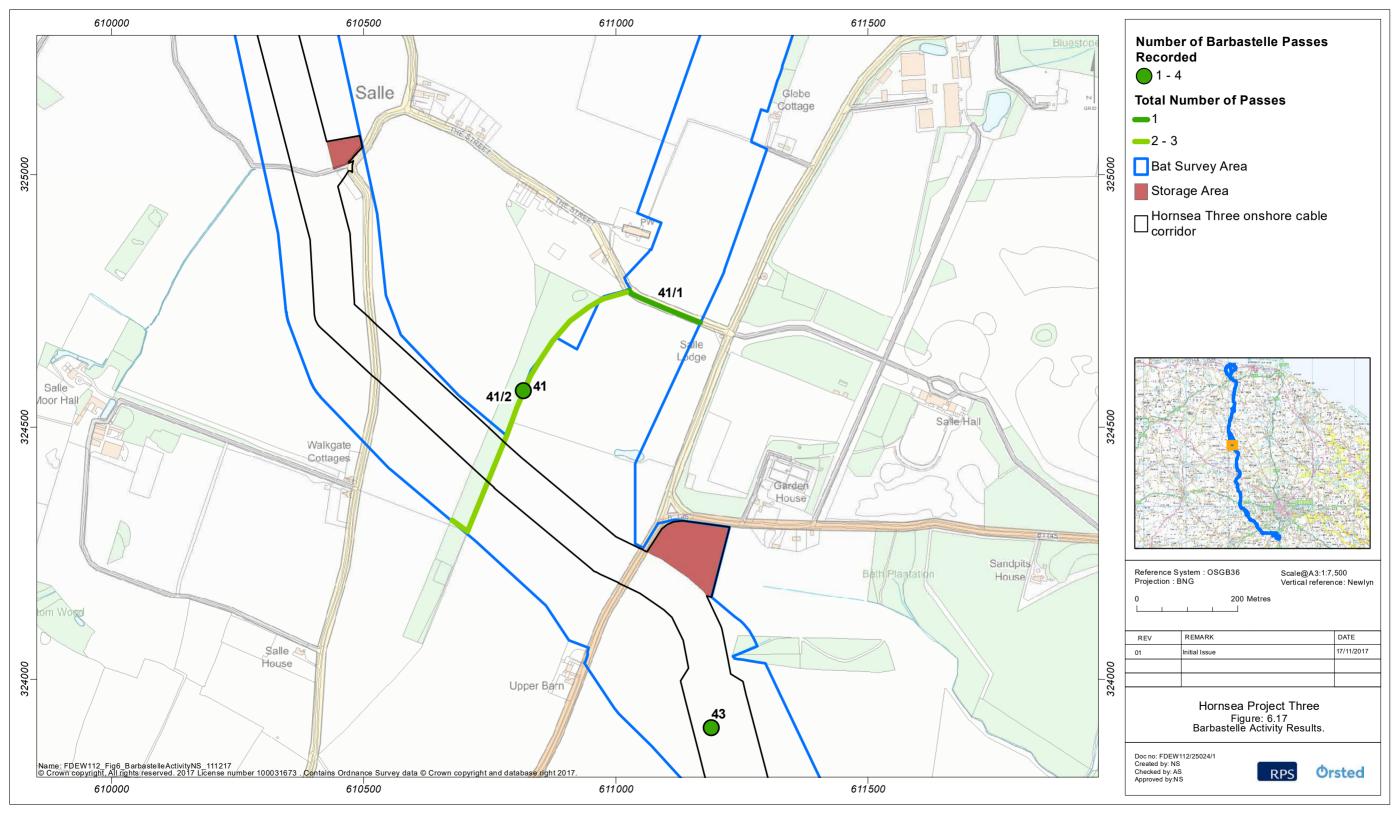


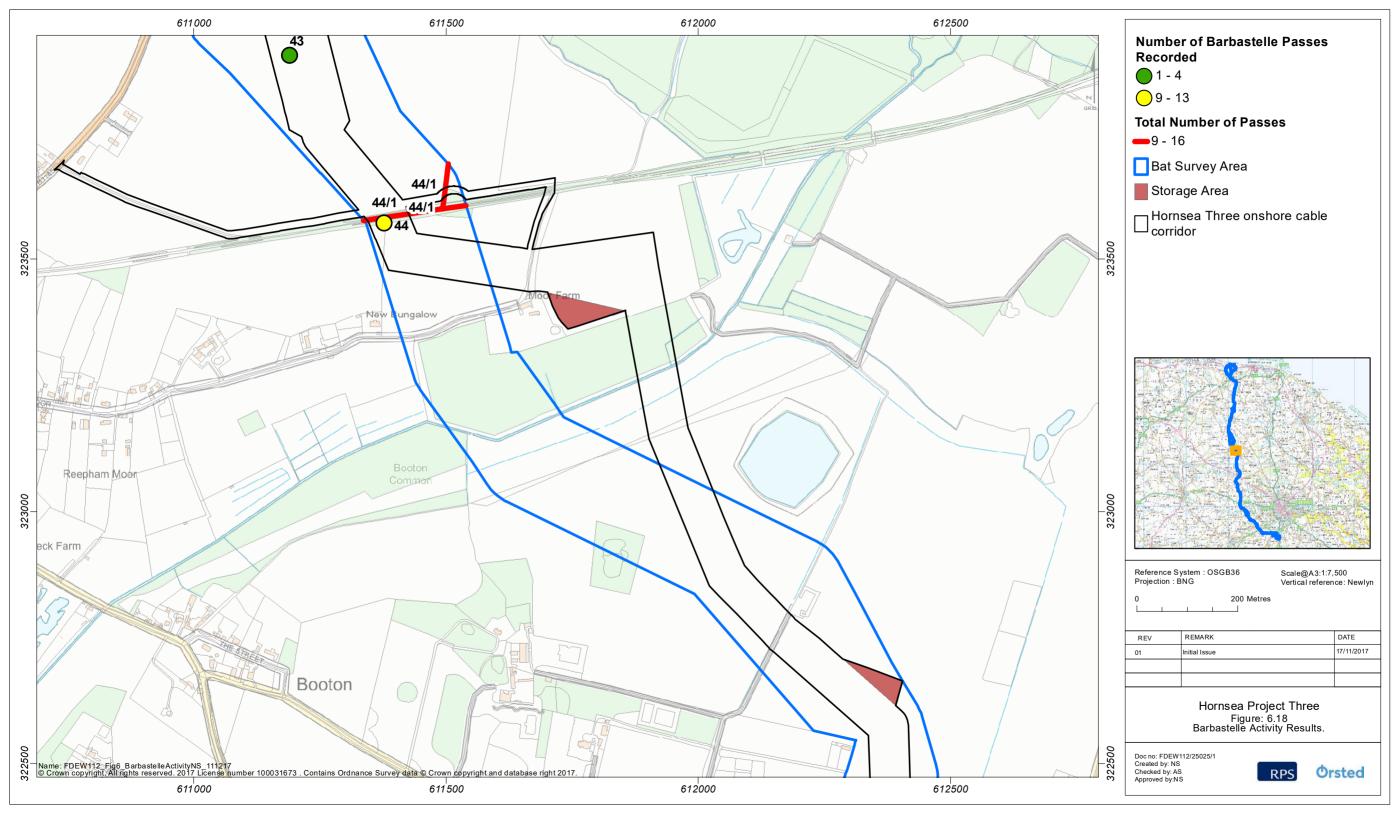






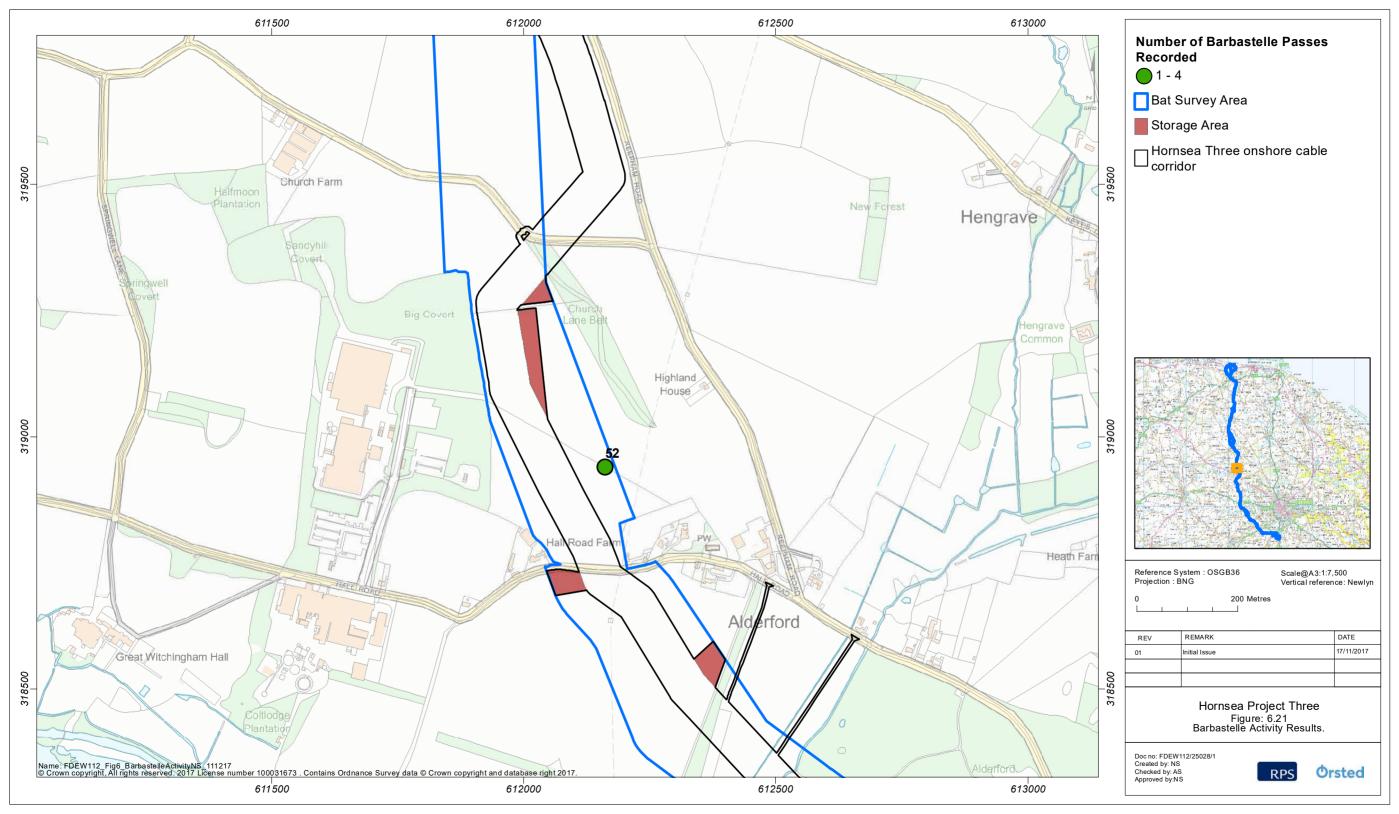


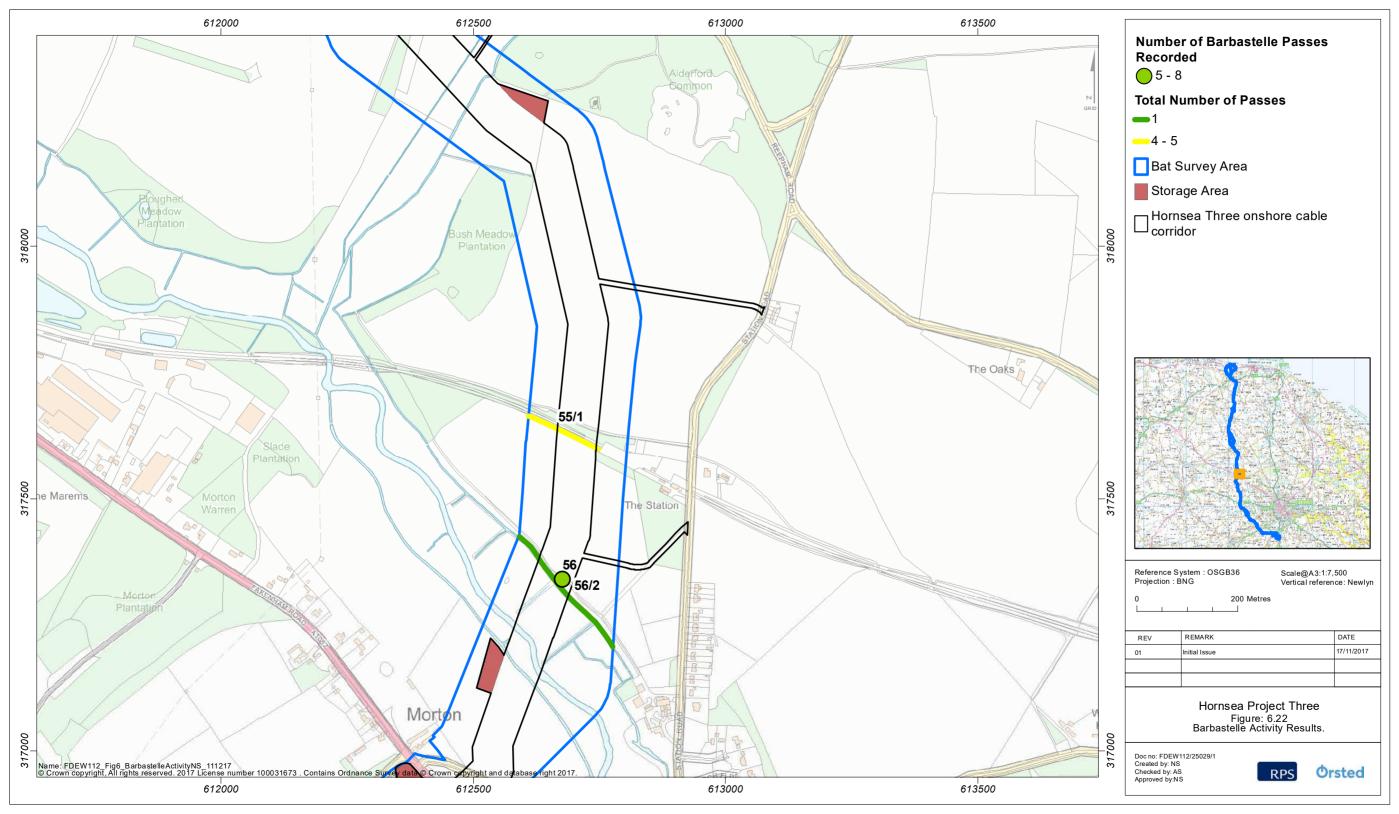


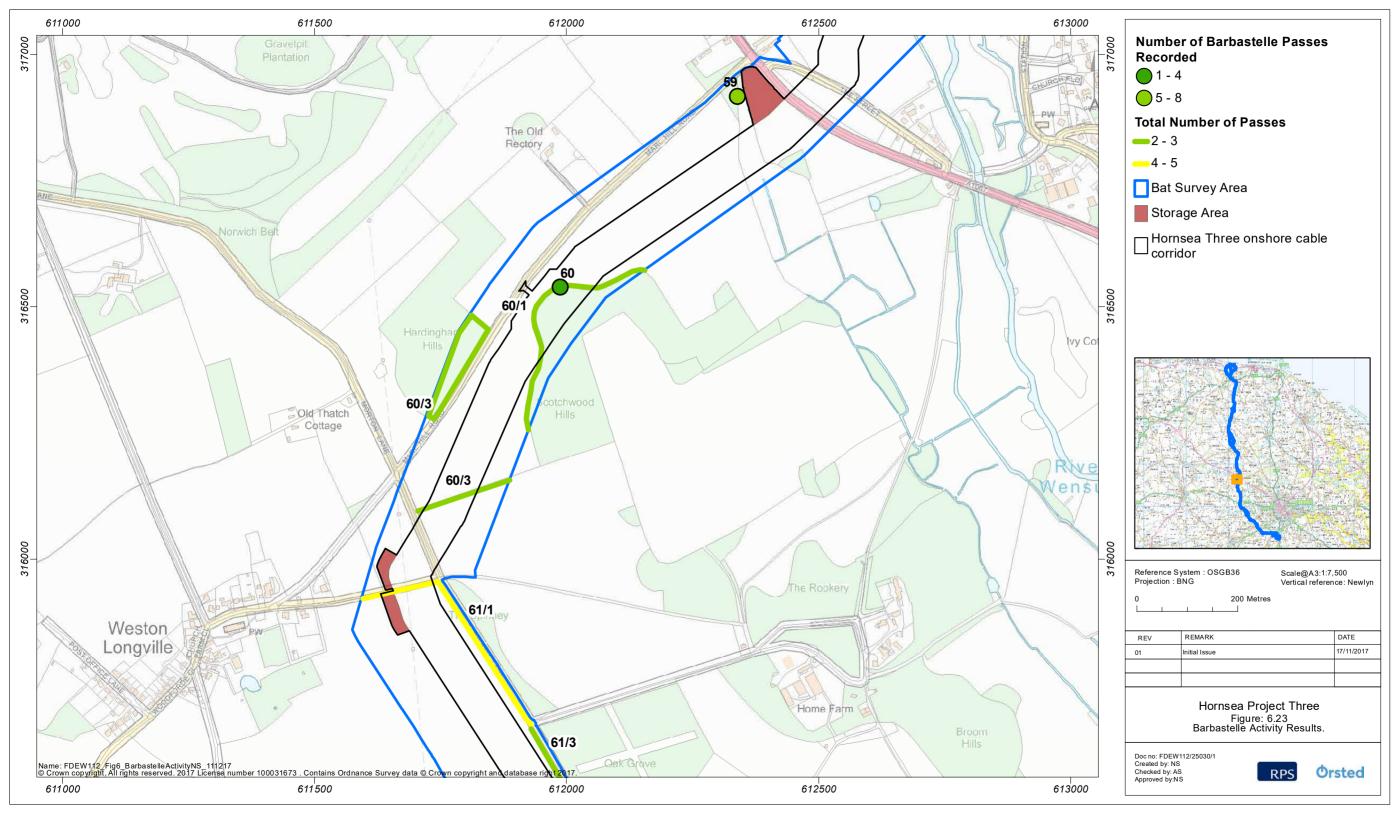


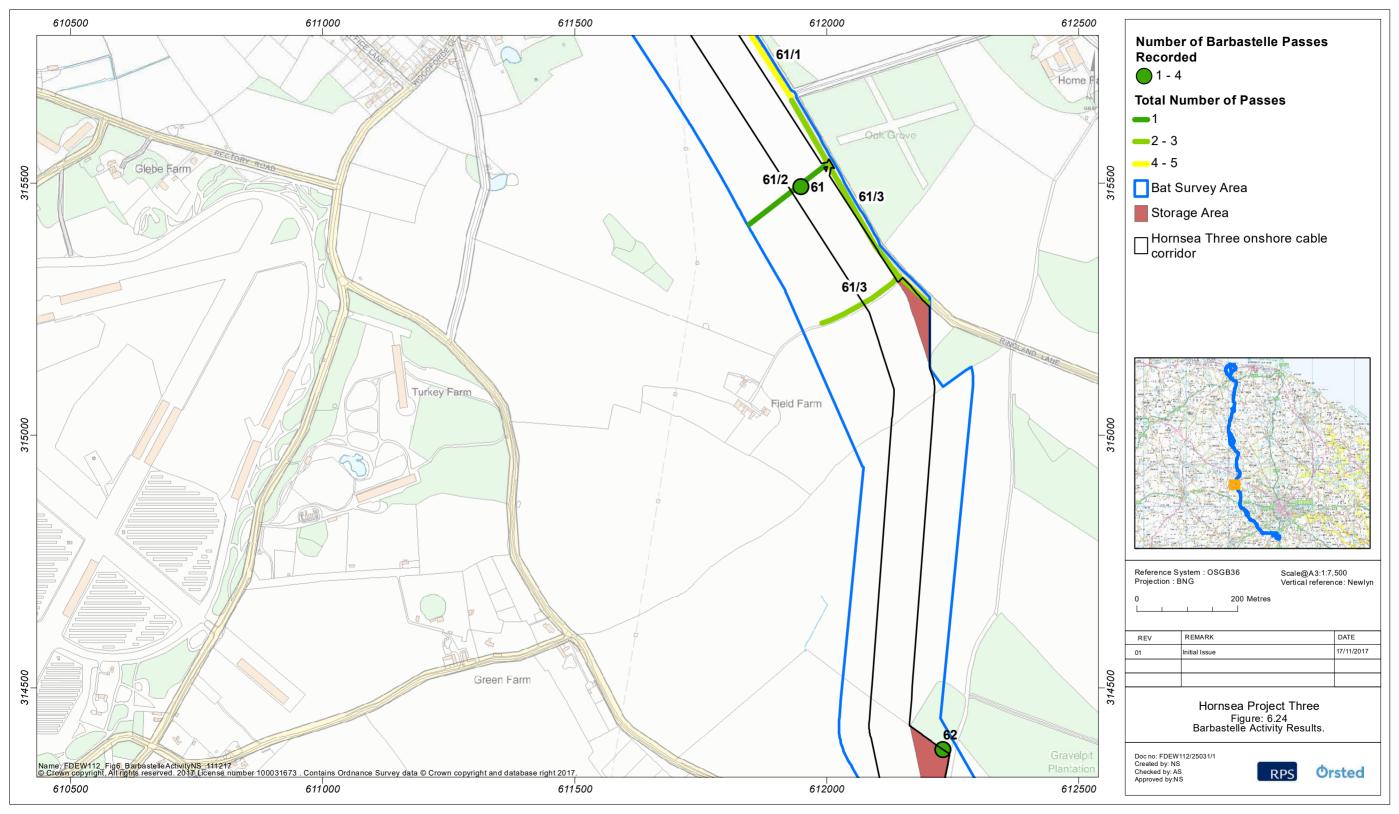


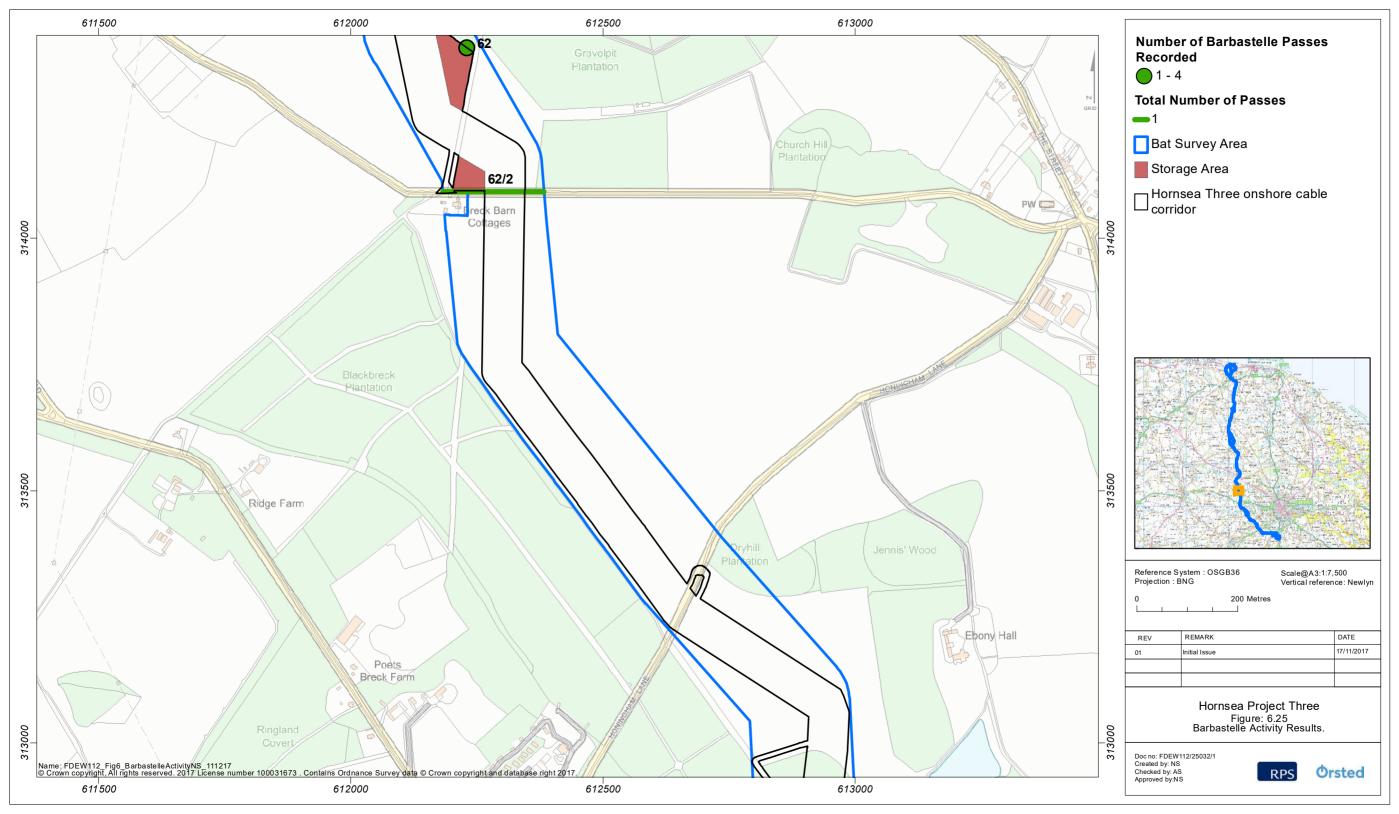


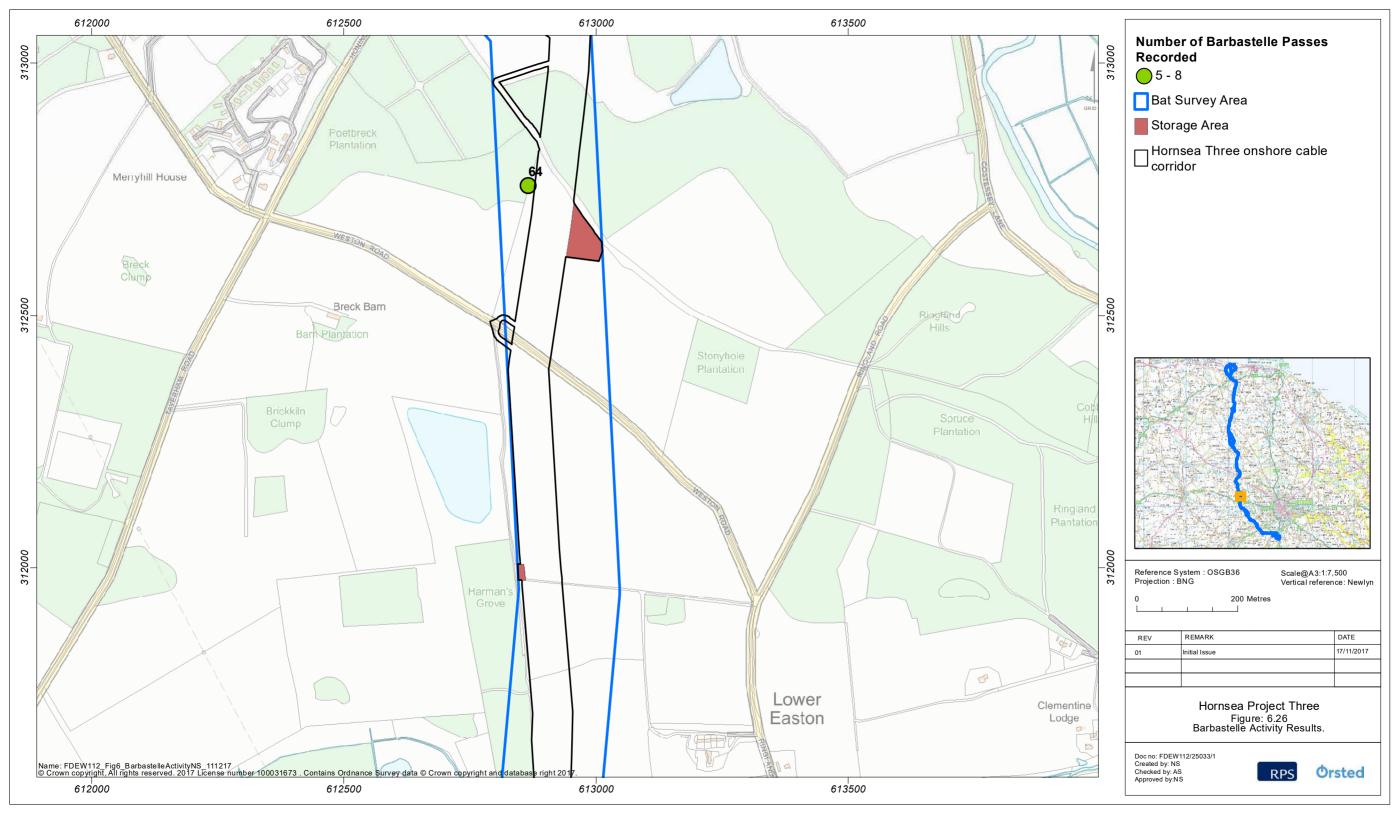


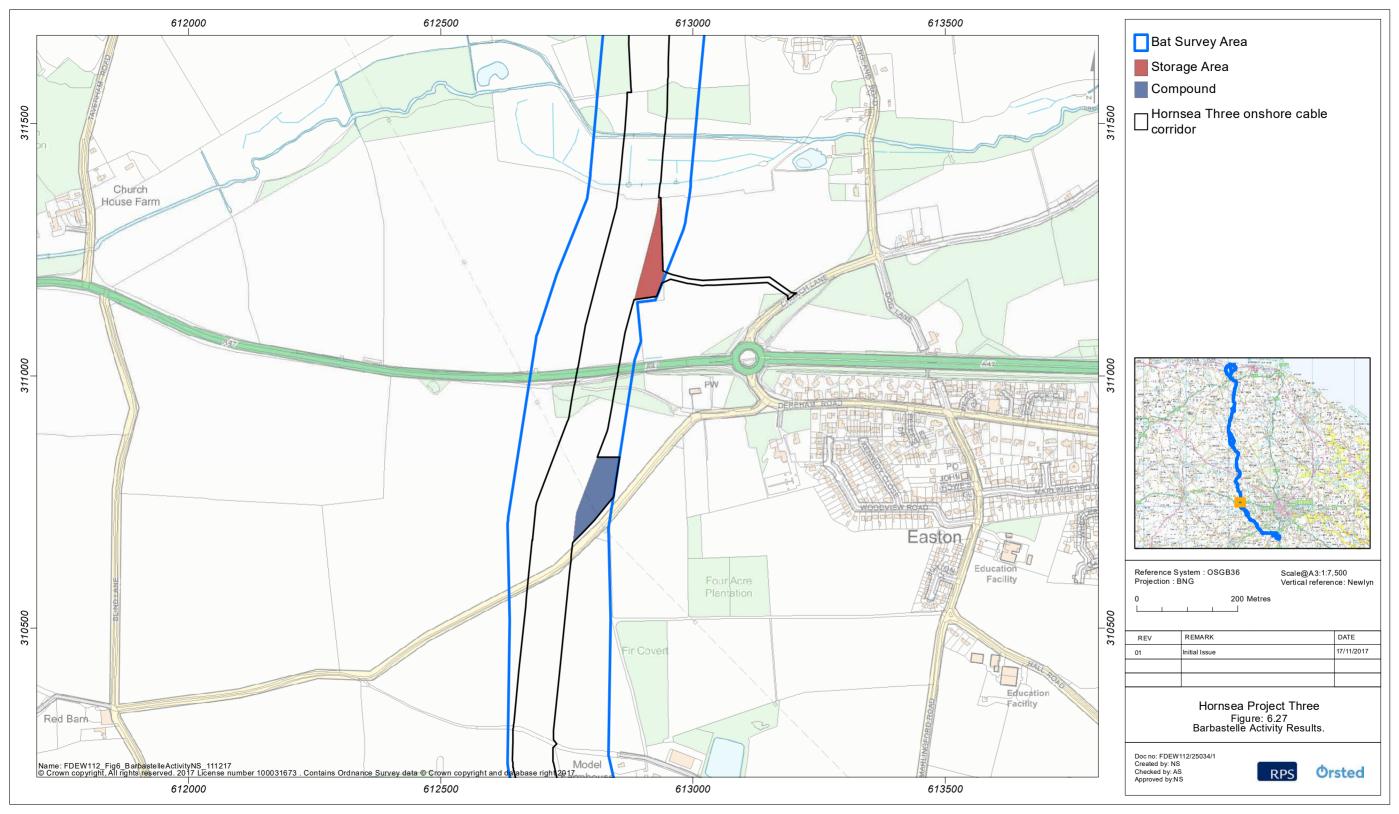


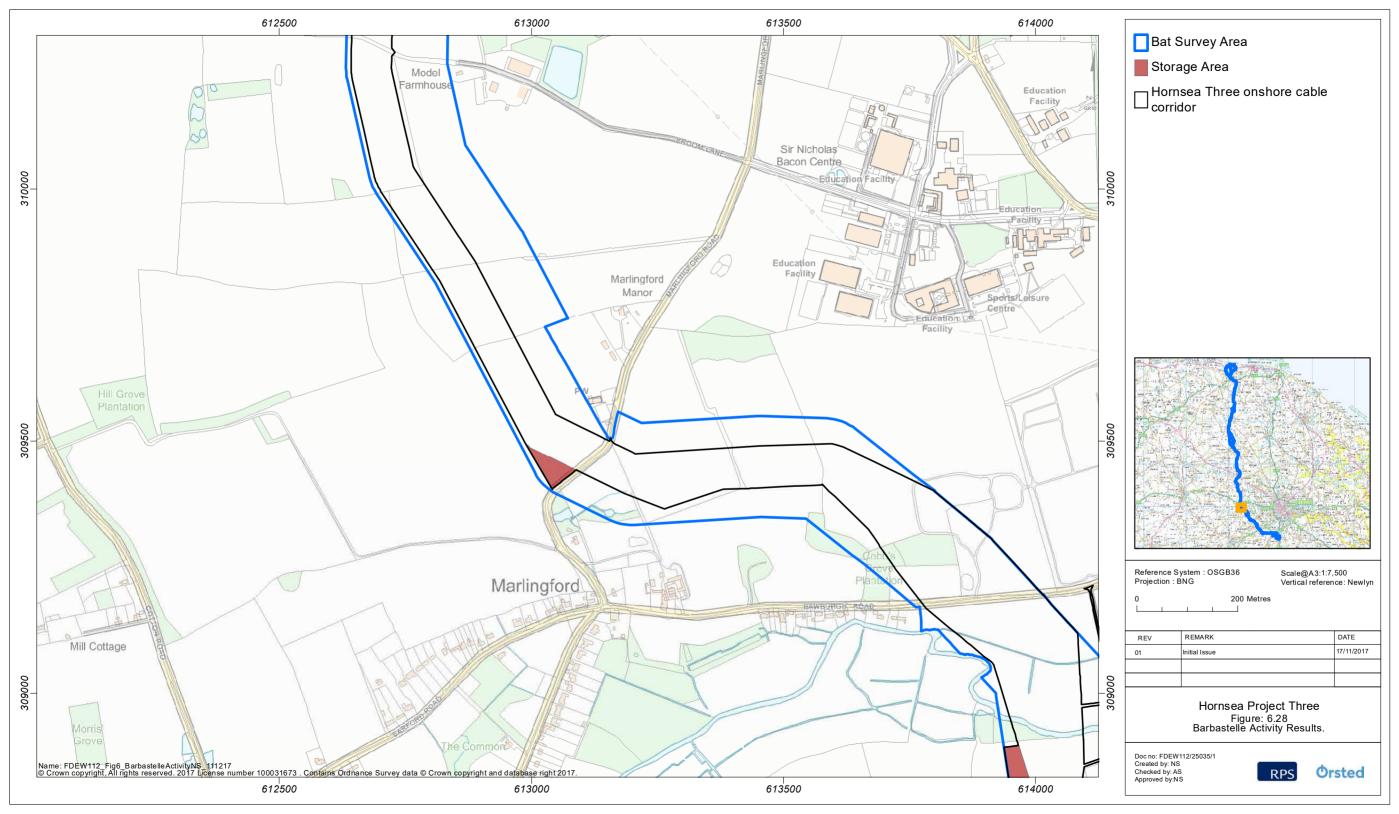


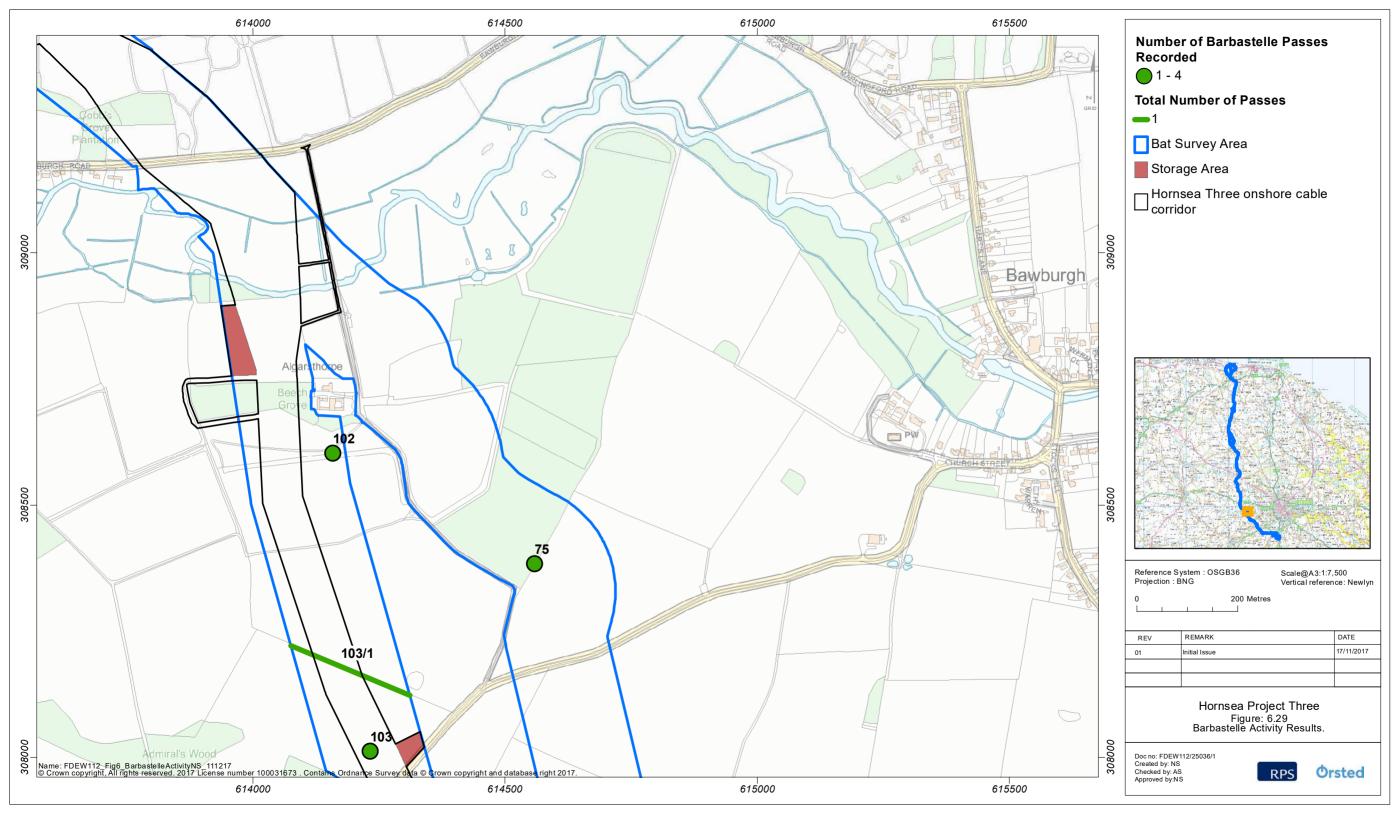


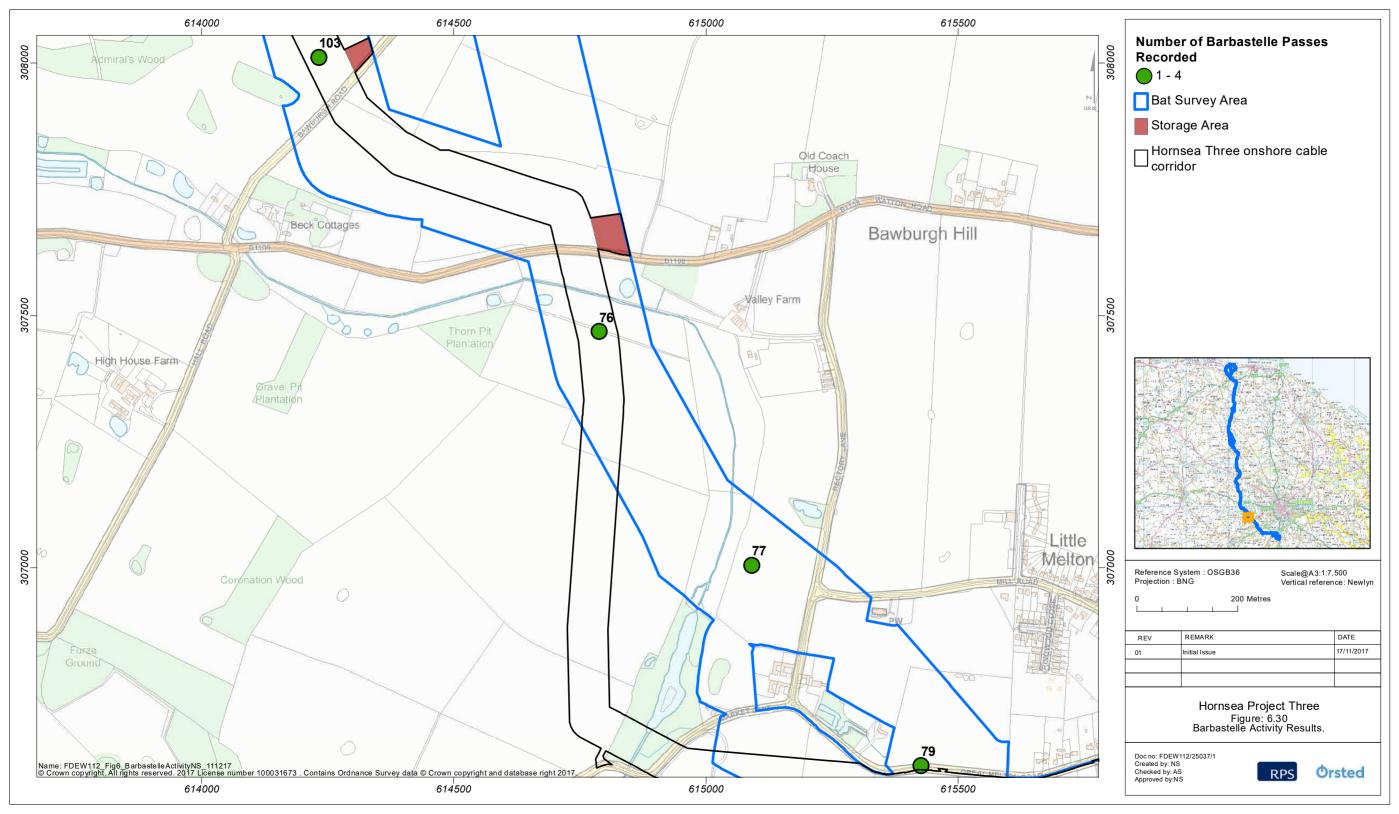


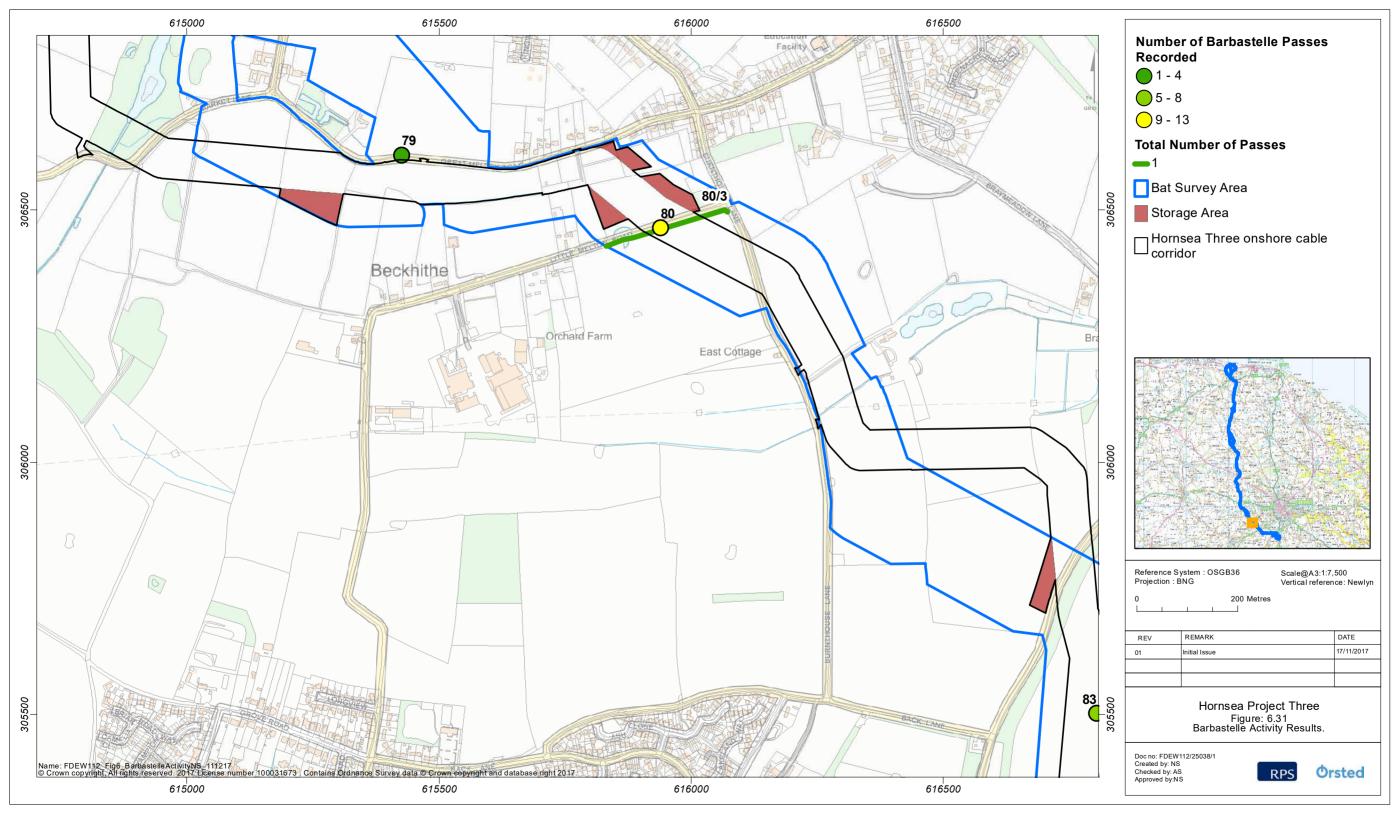


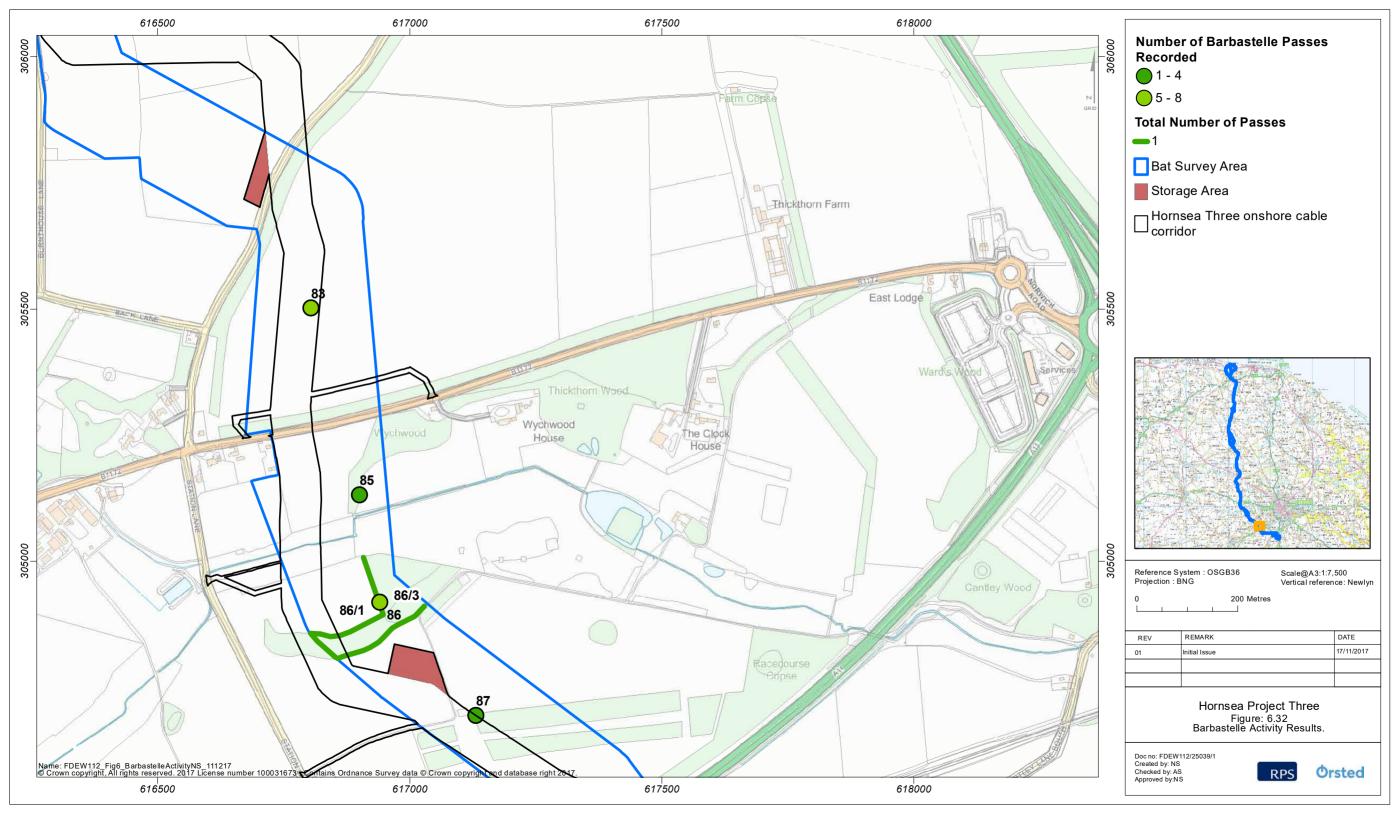


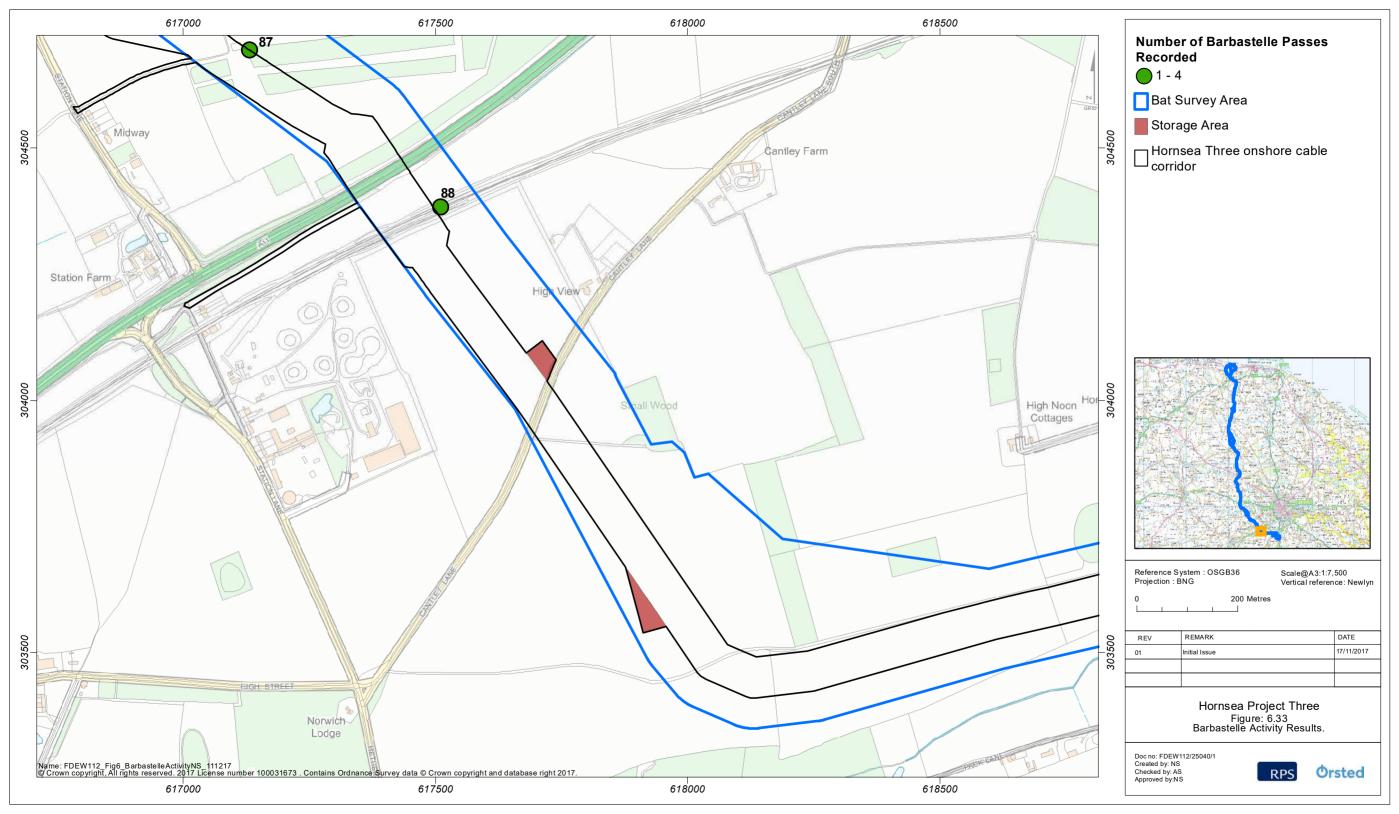


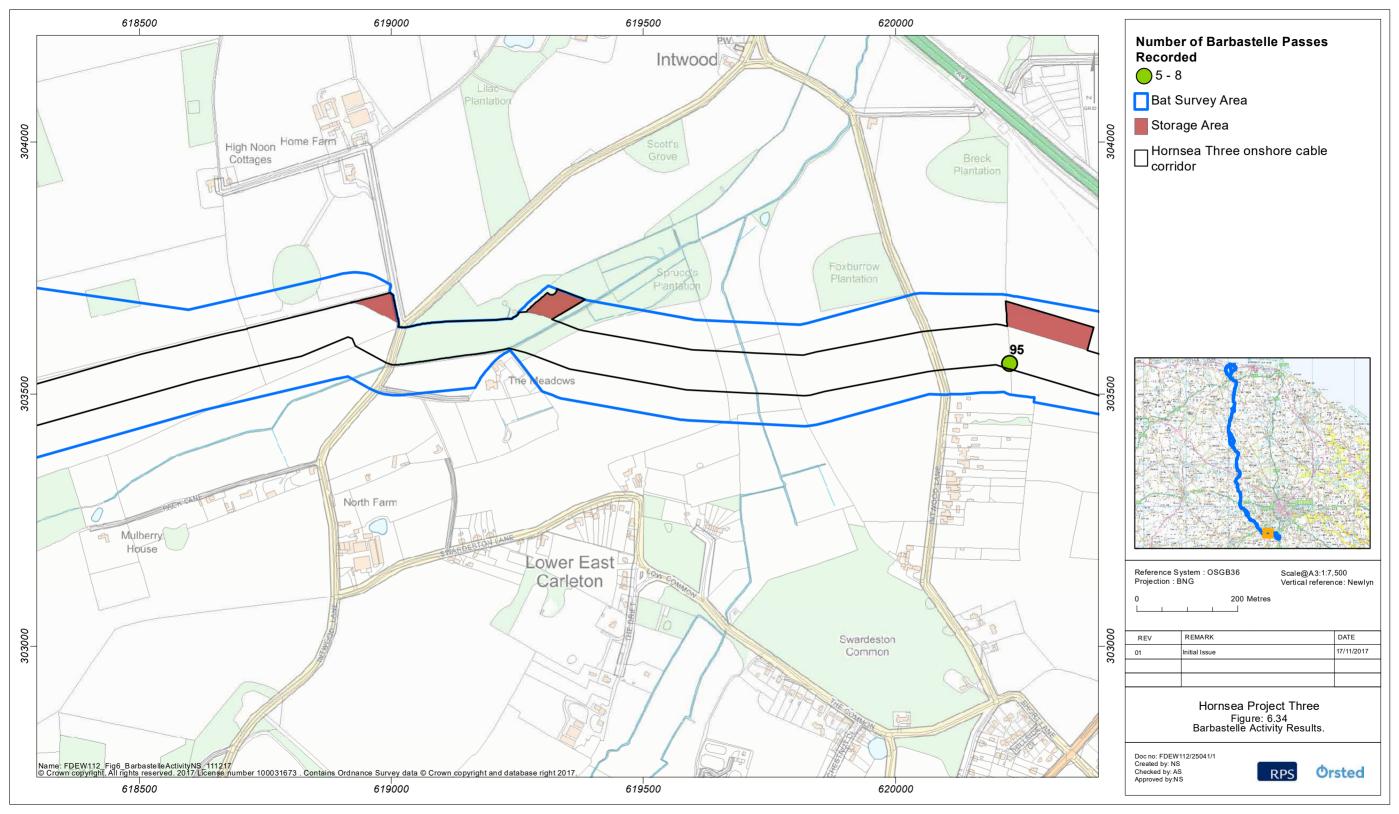


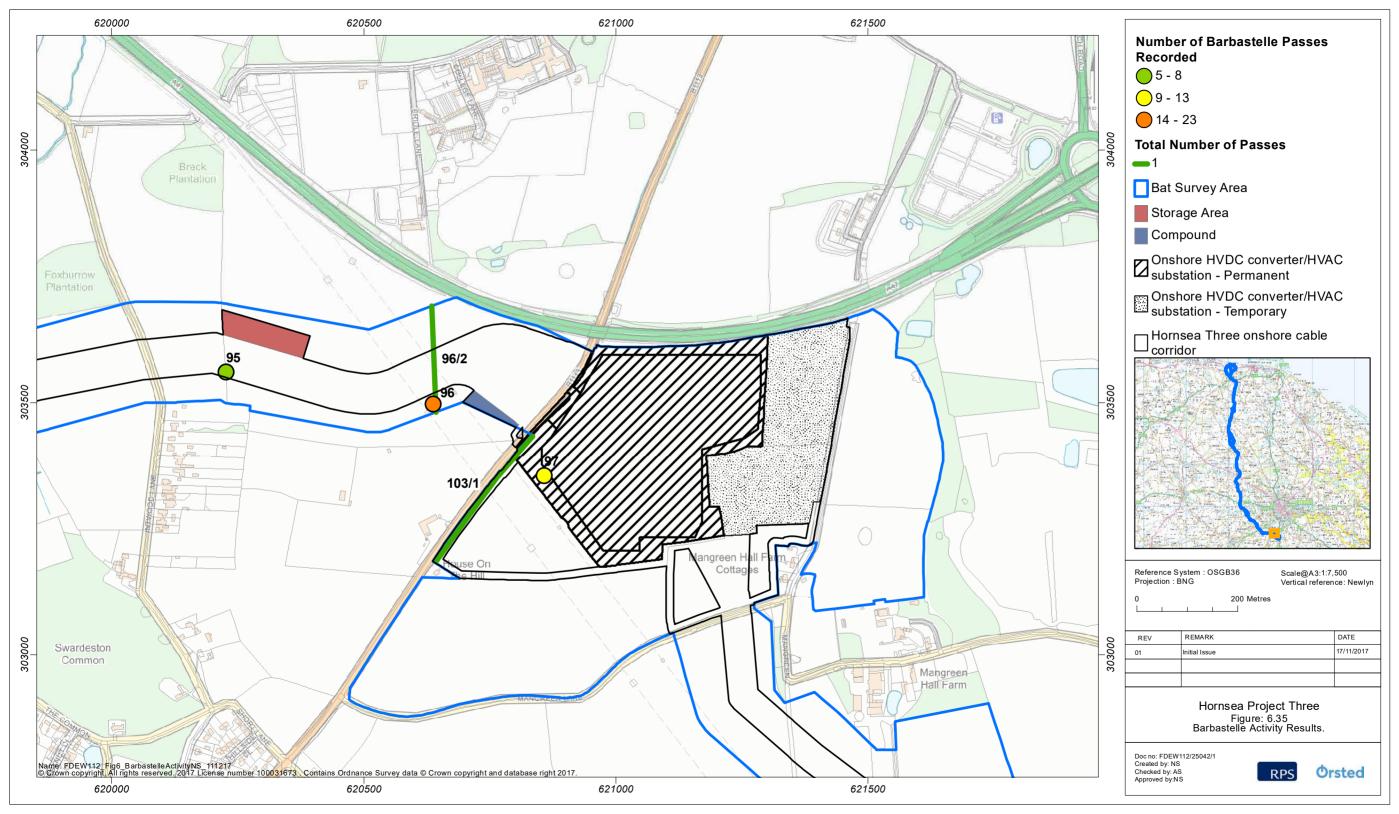


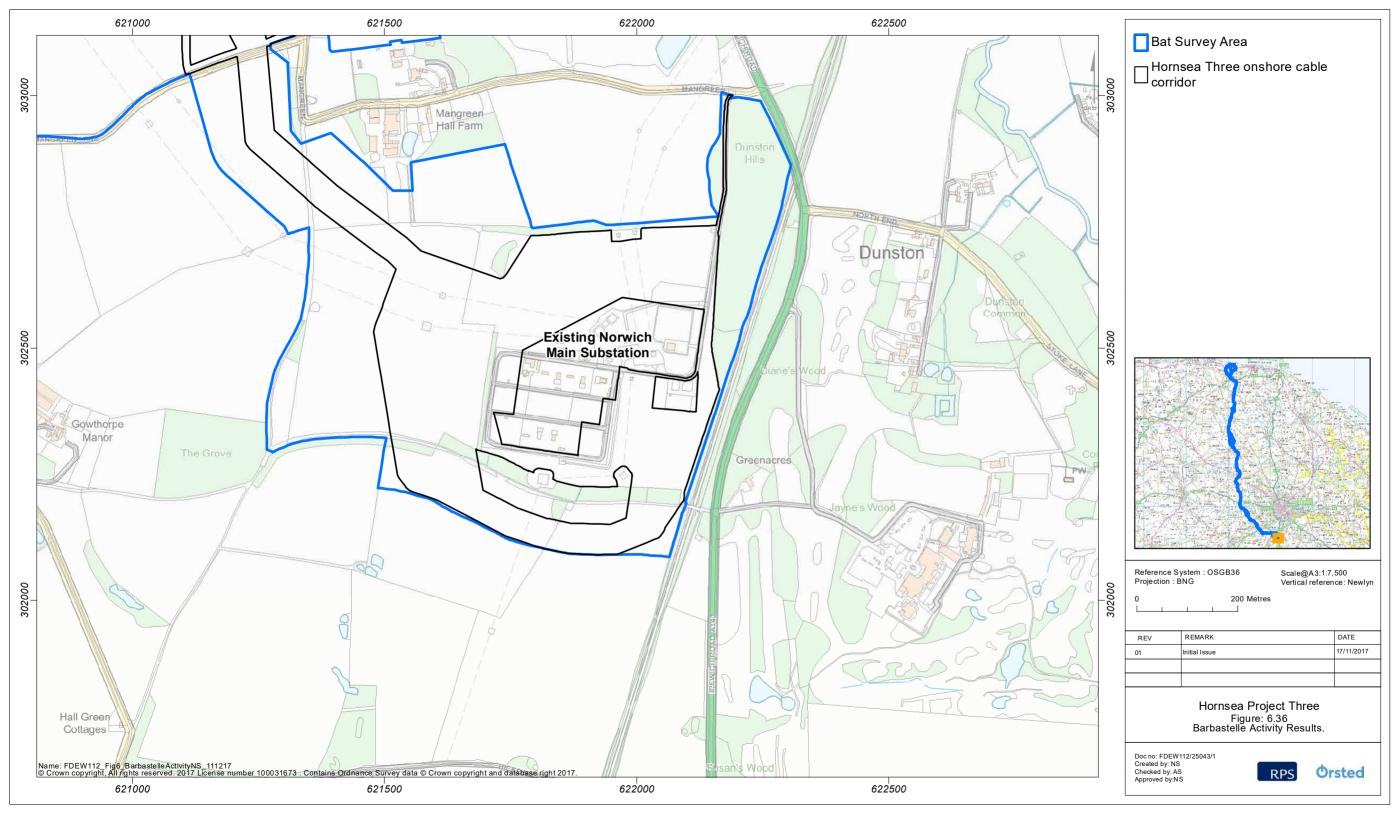








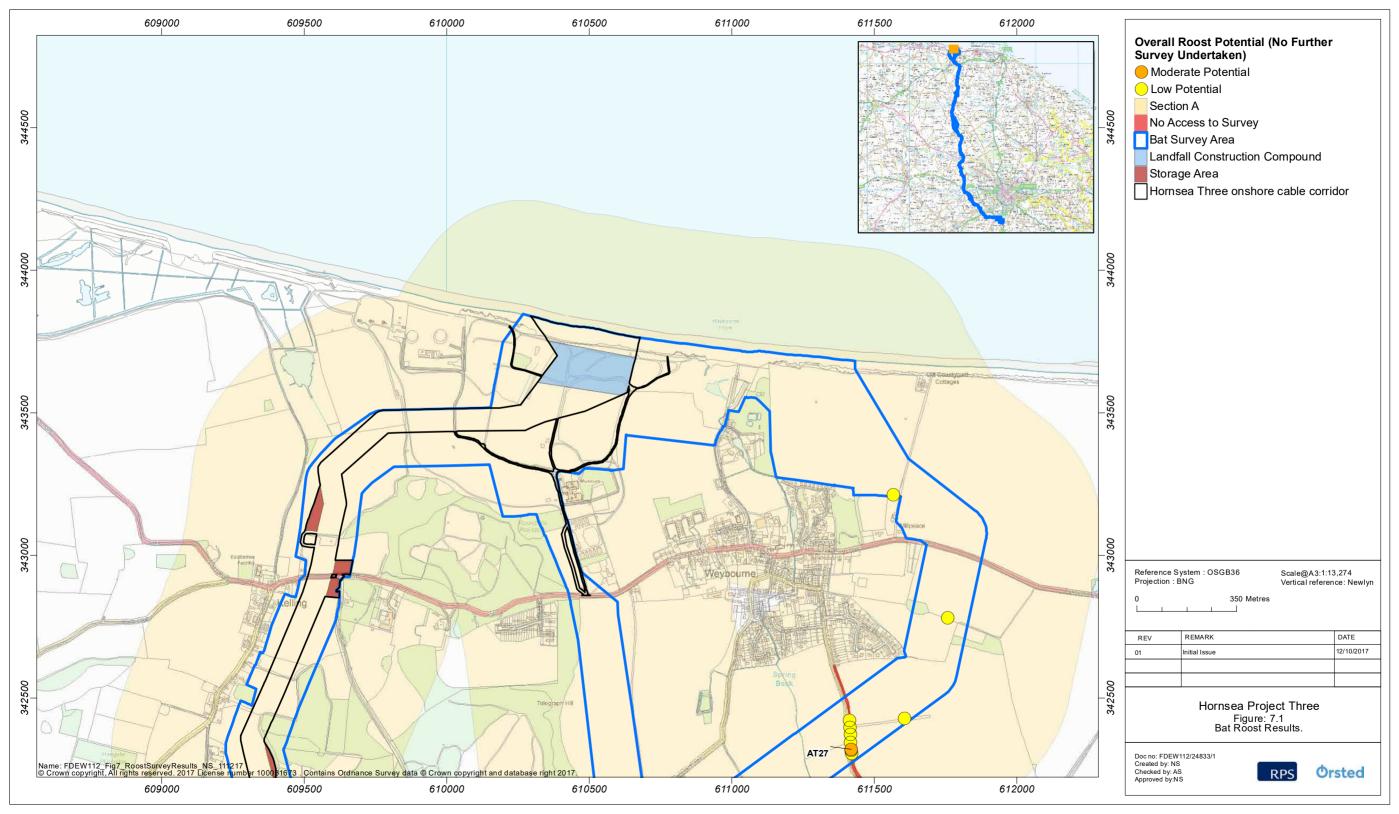


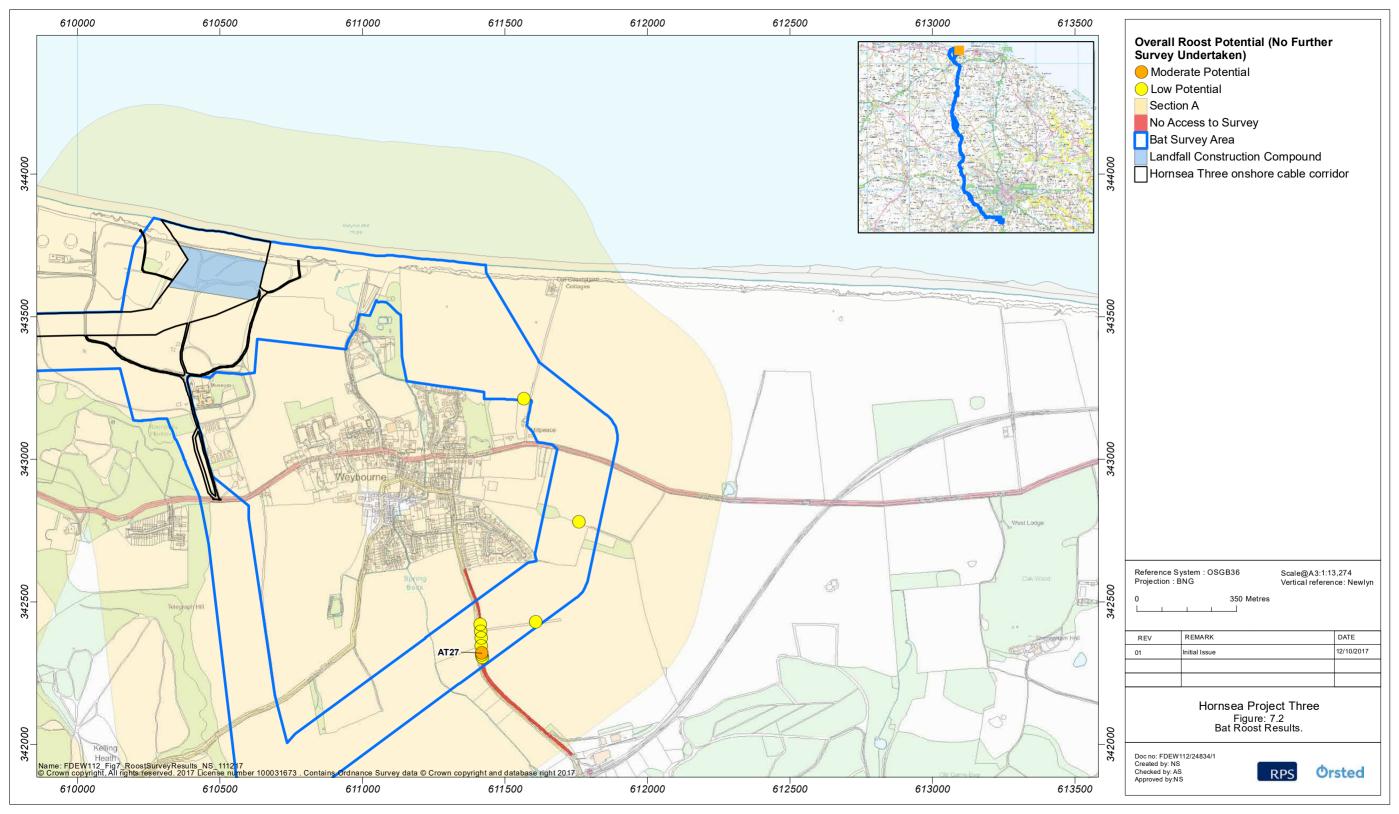


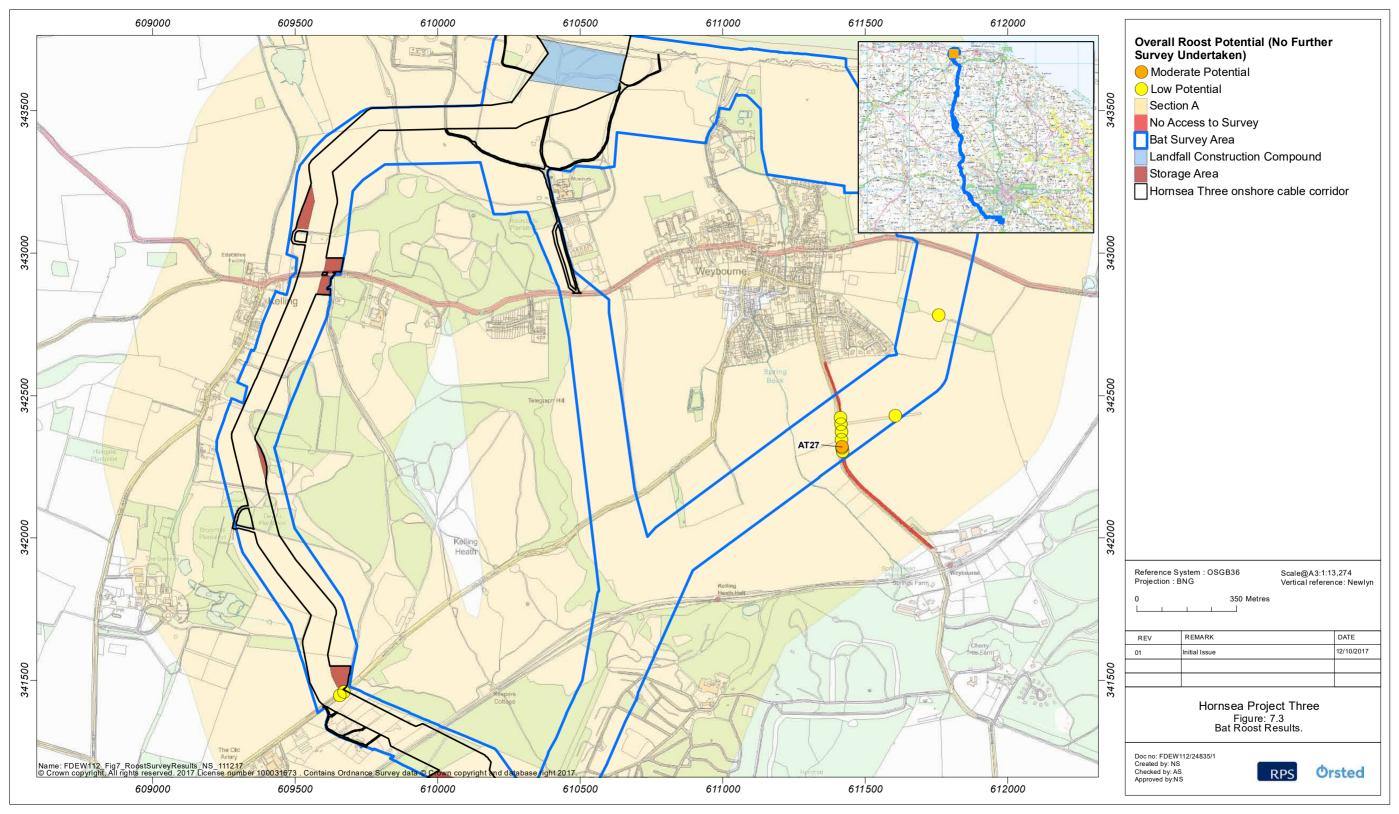


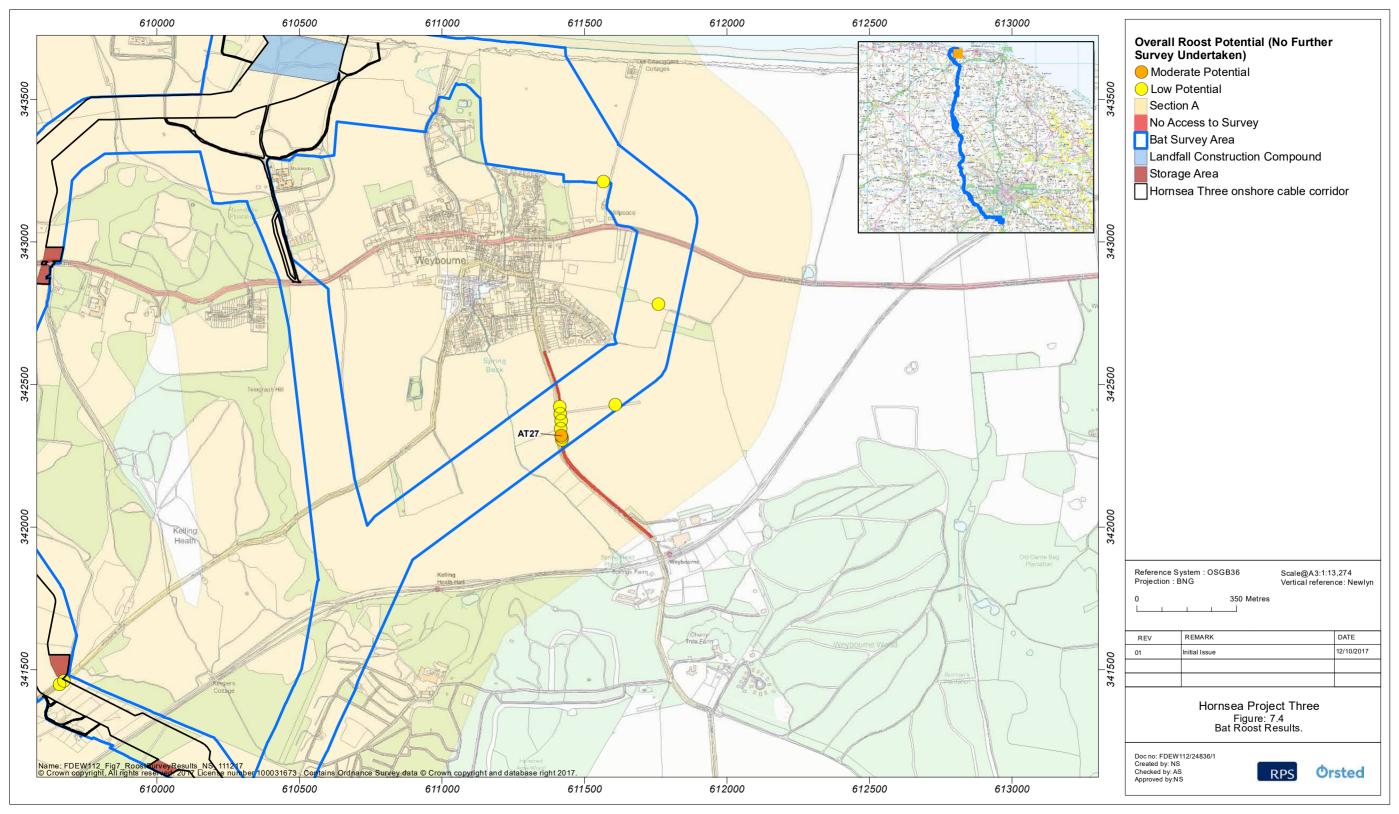
A.7 Bat roost survey results

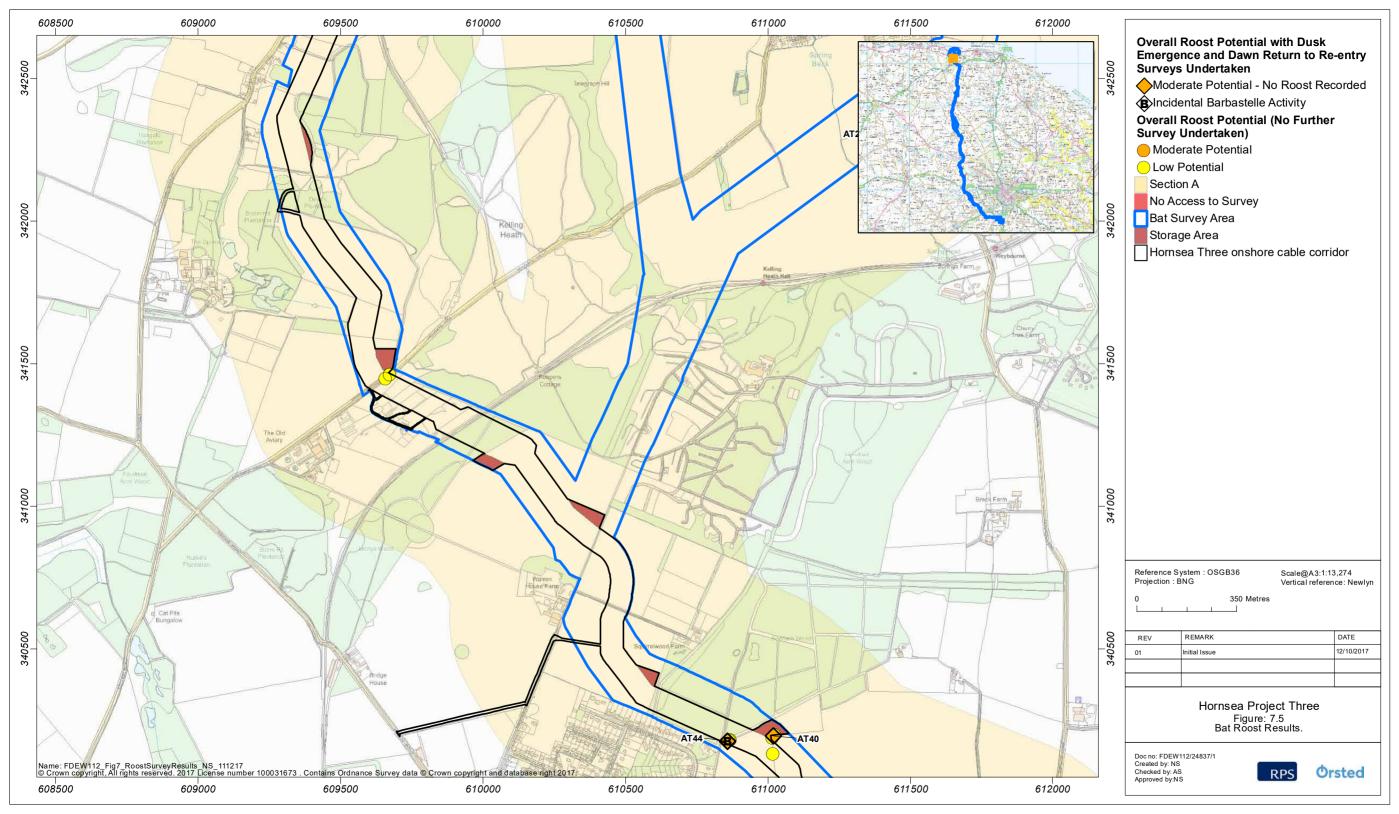


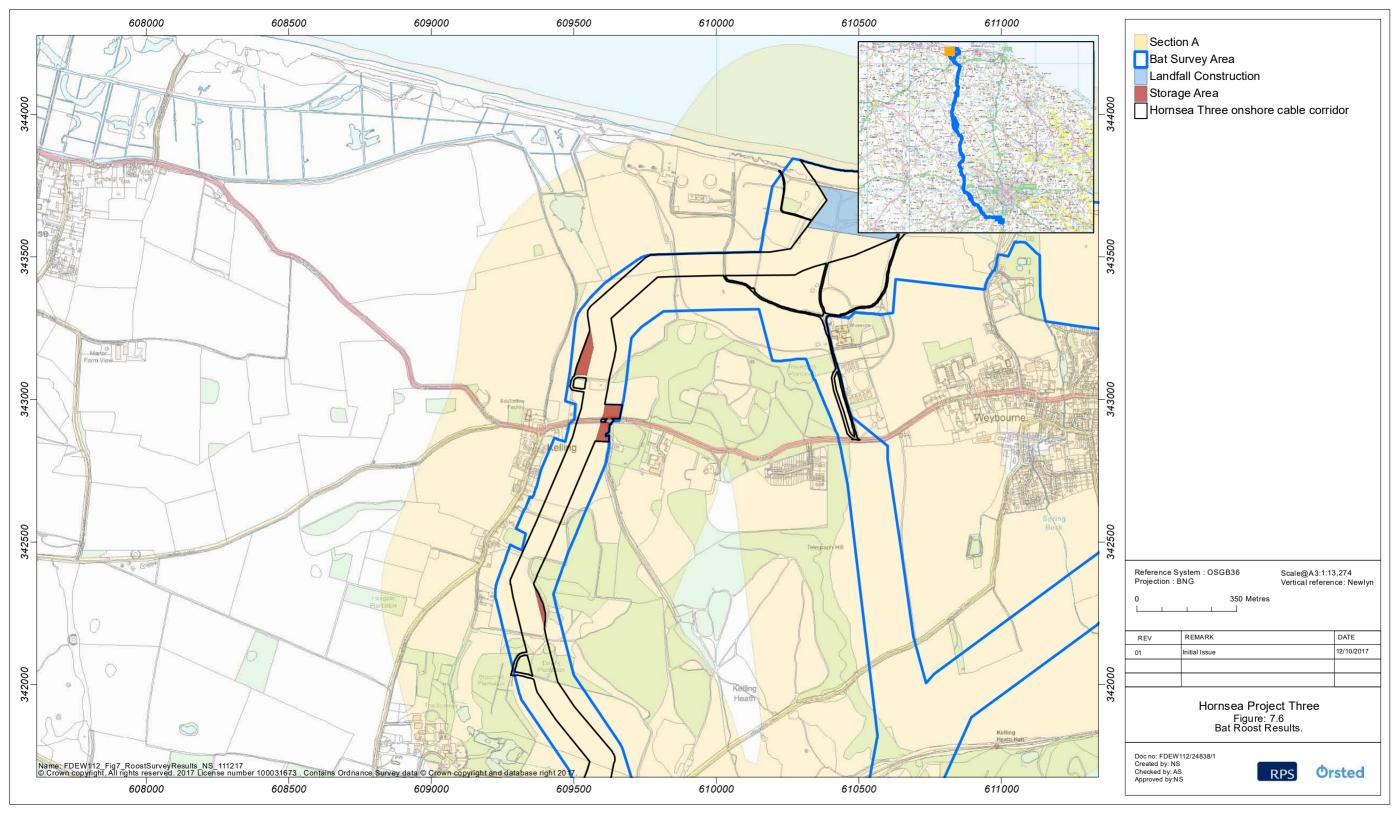


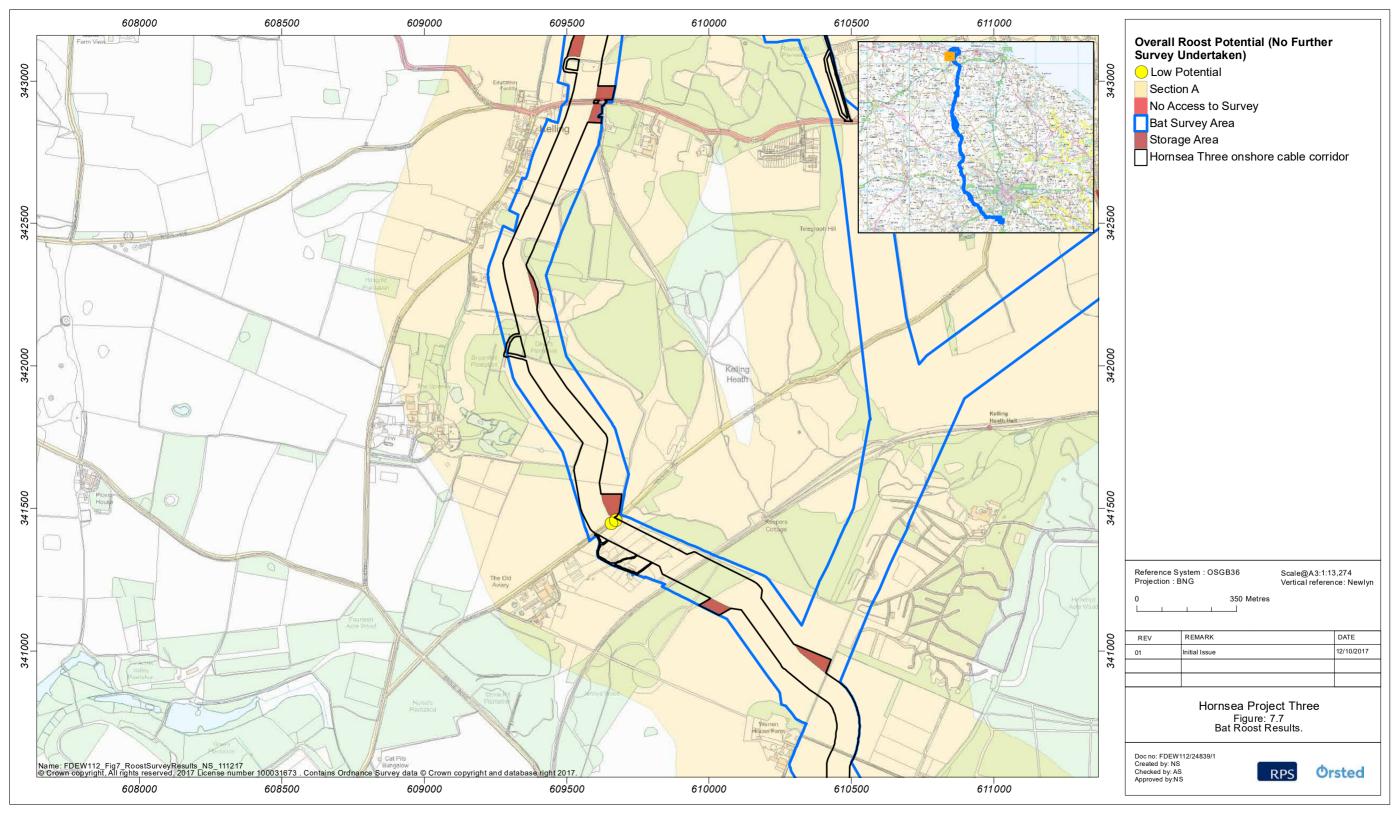


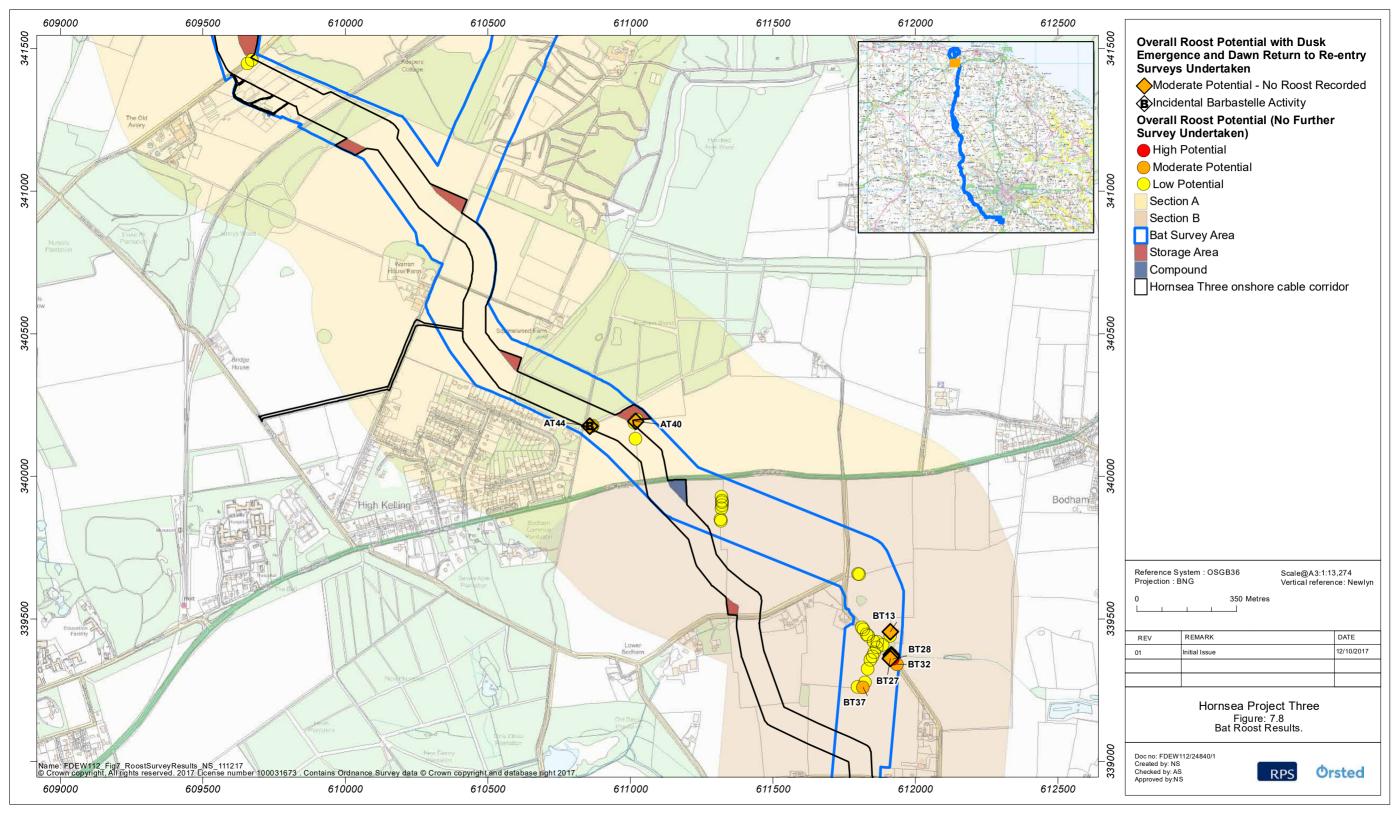


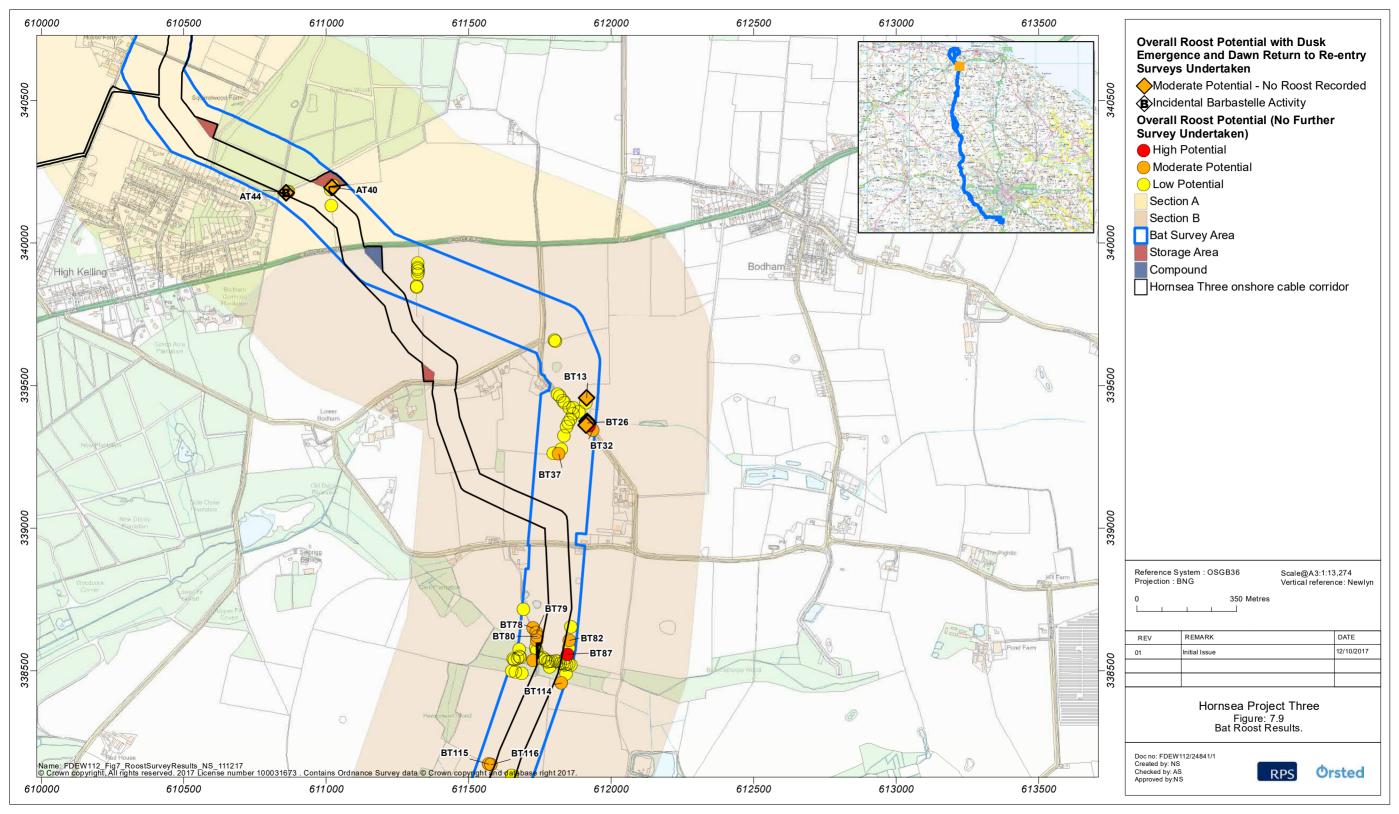


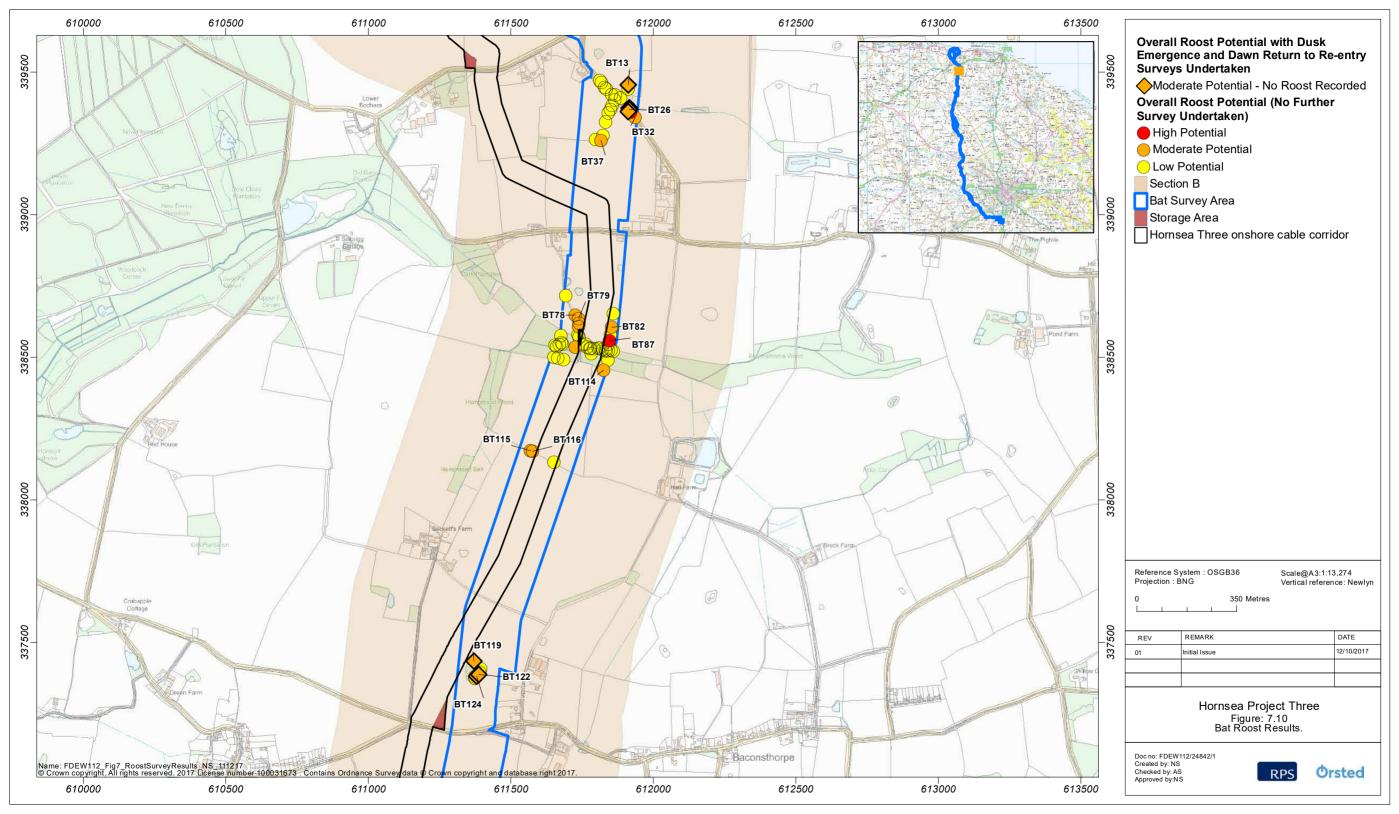


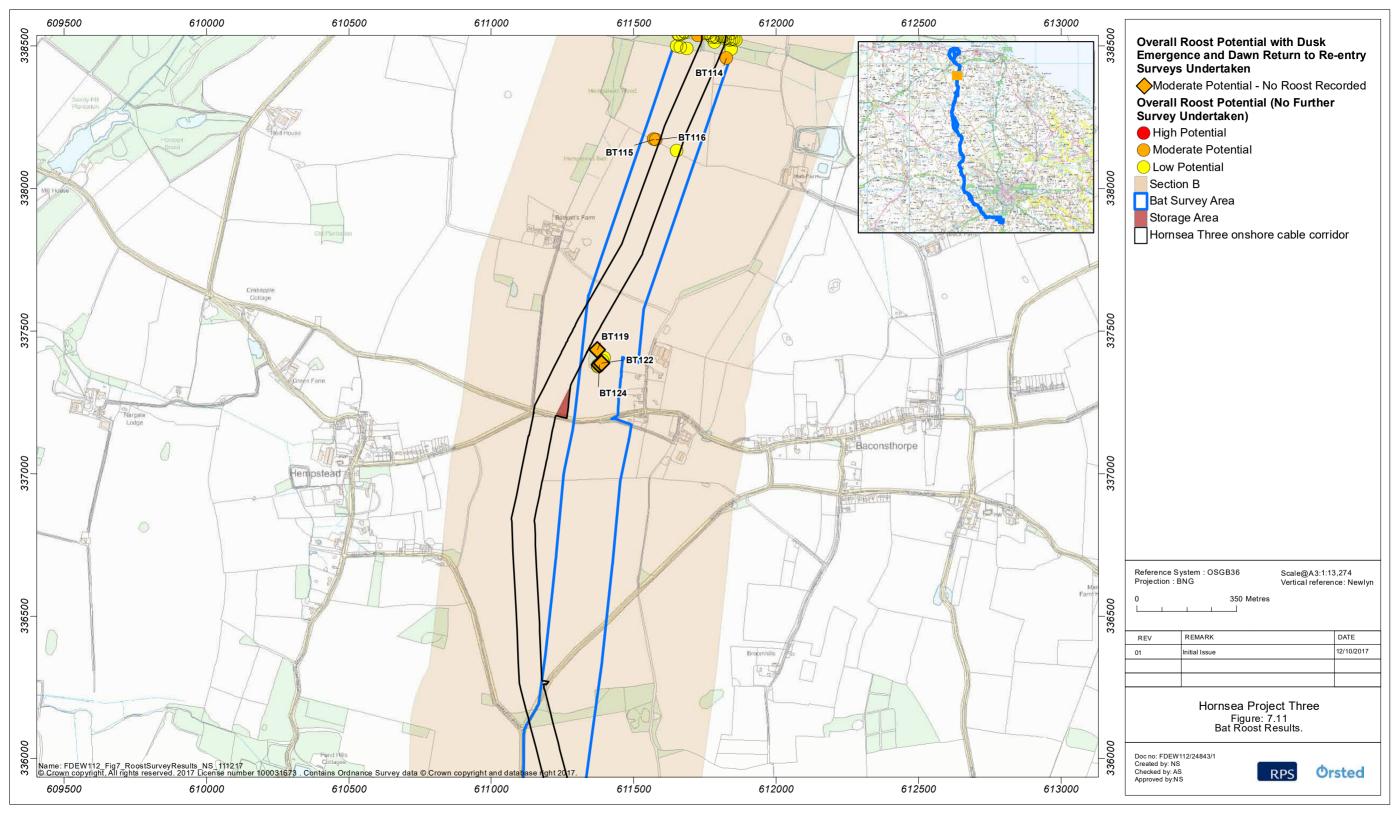


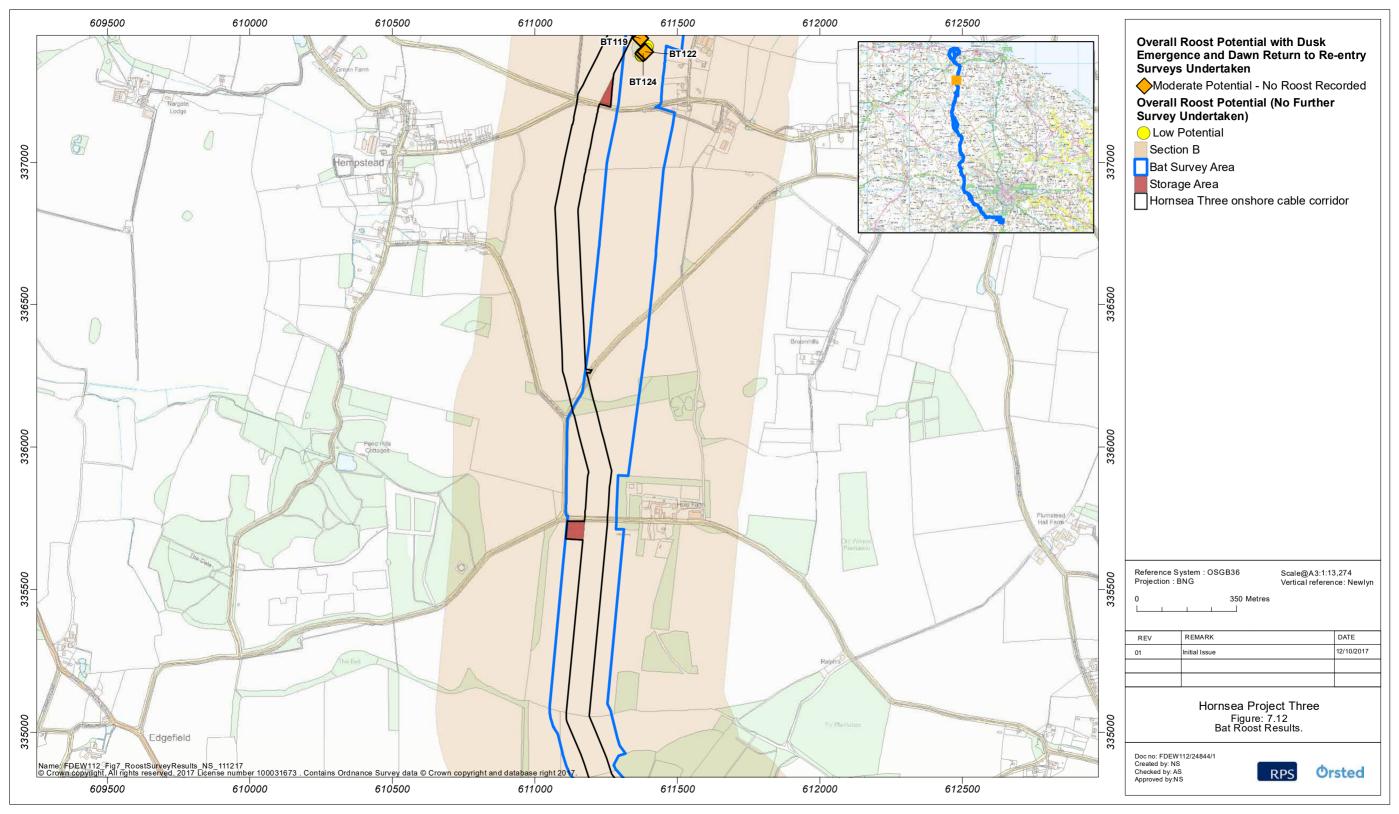


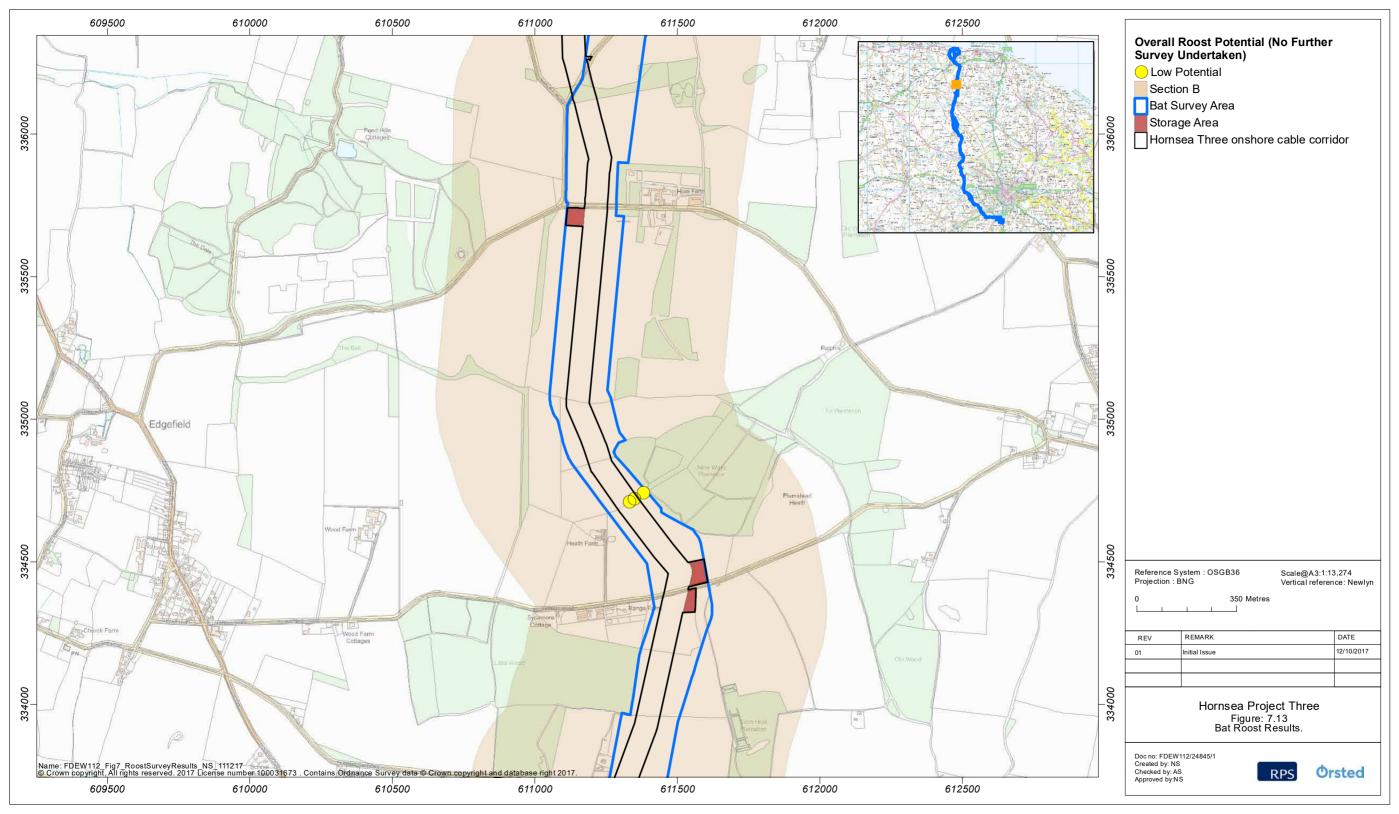


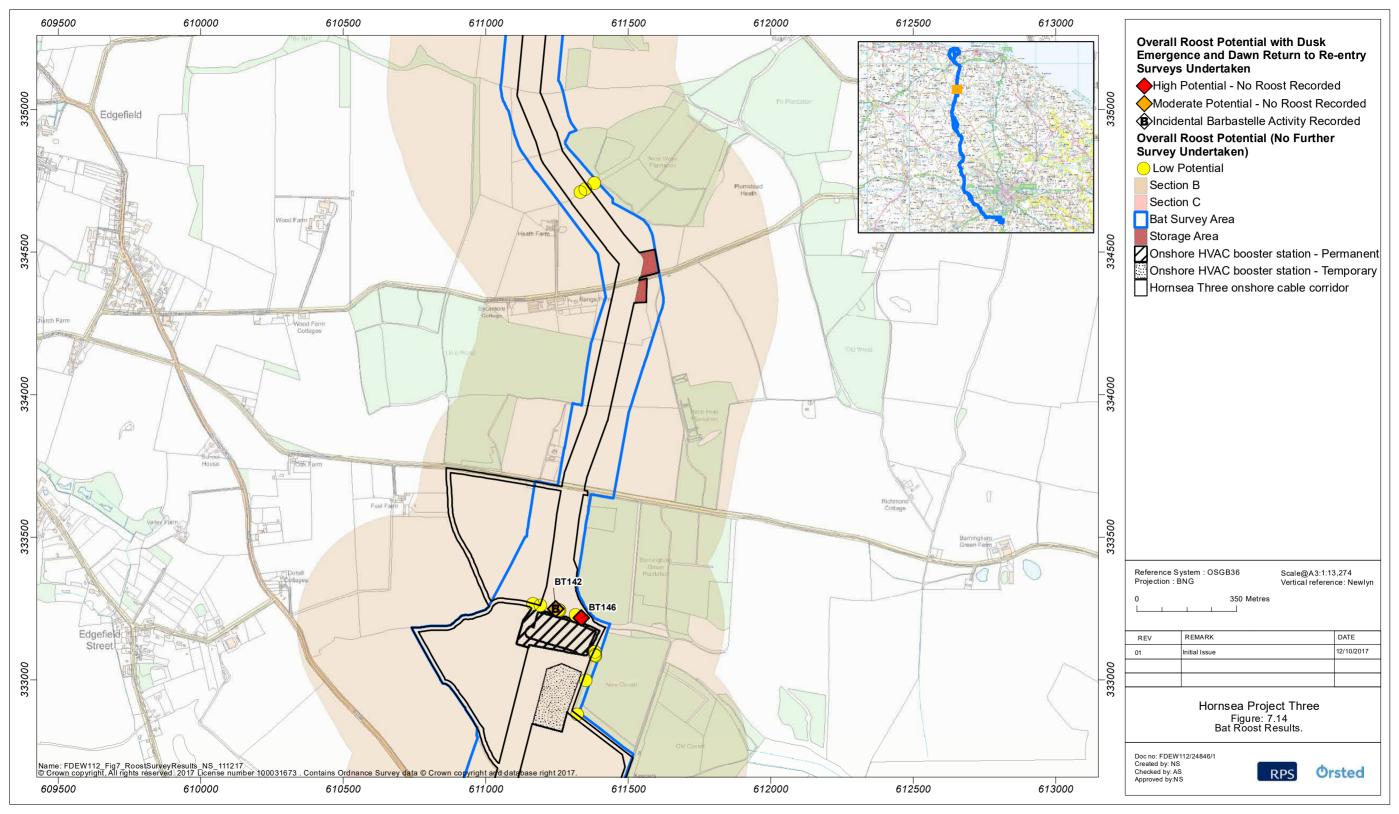


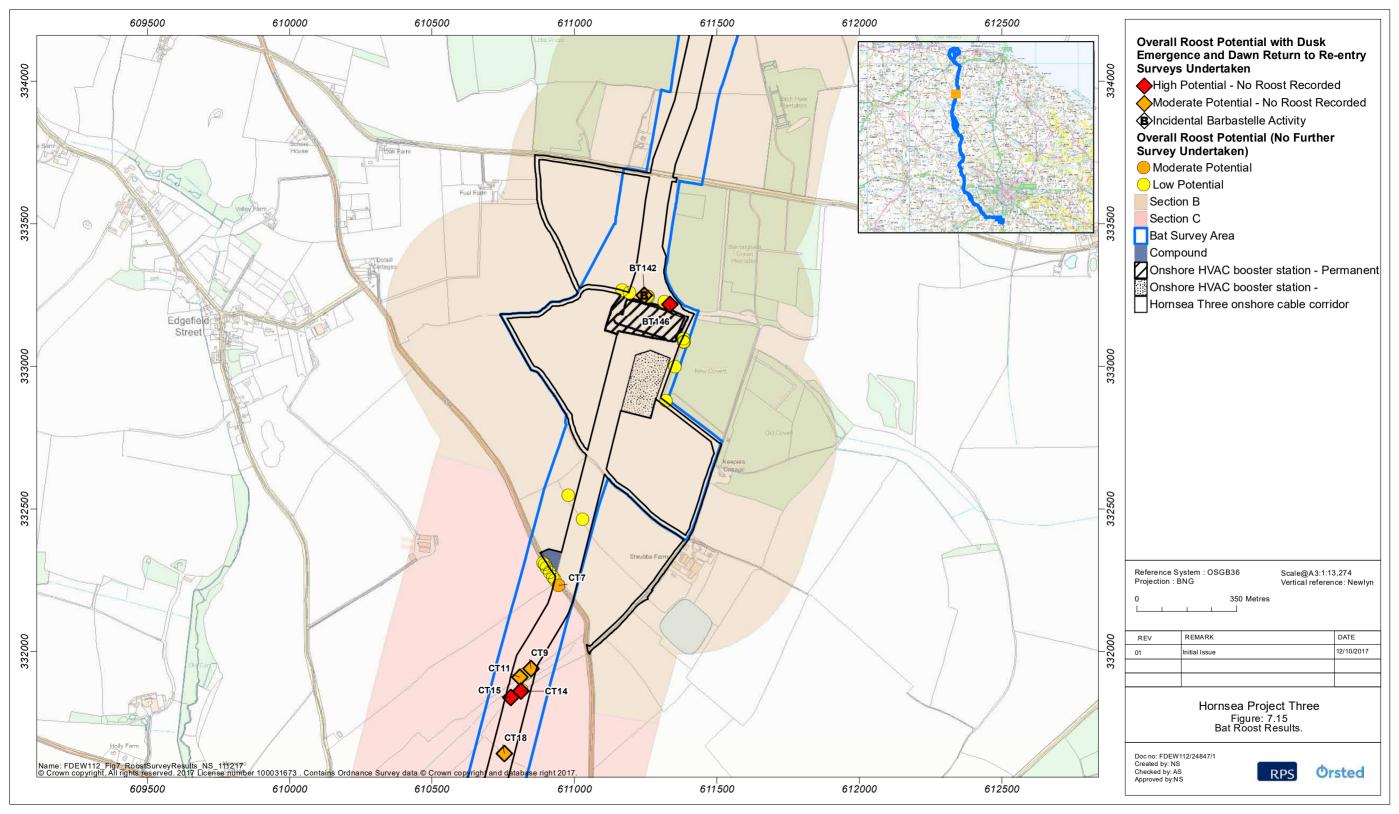


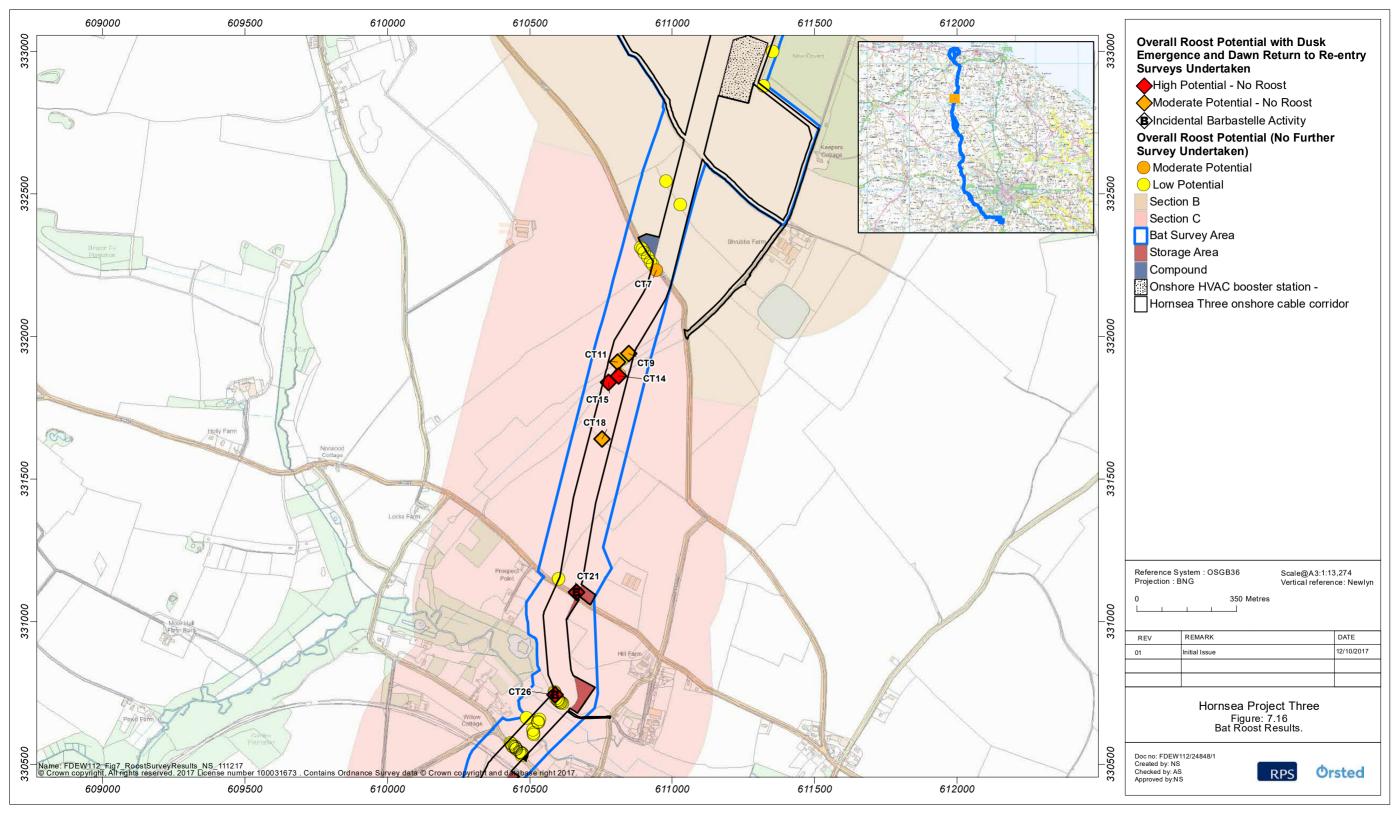


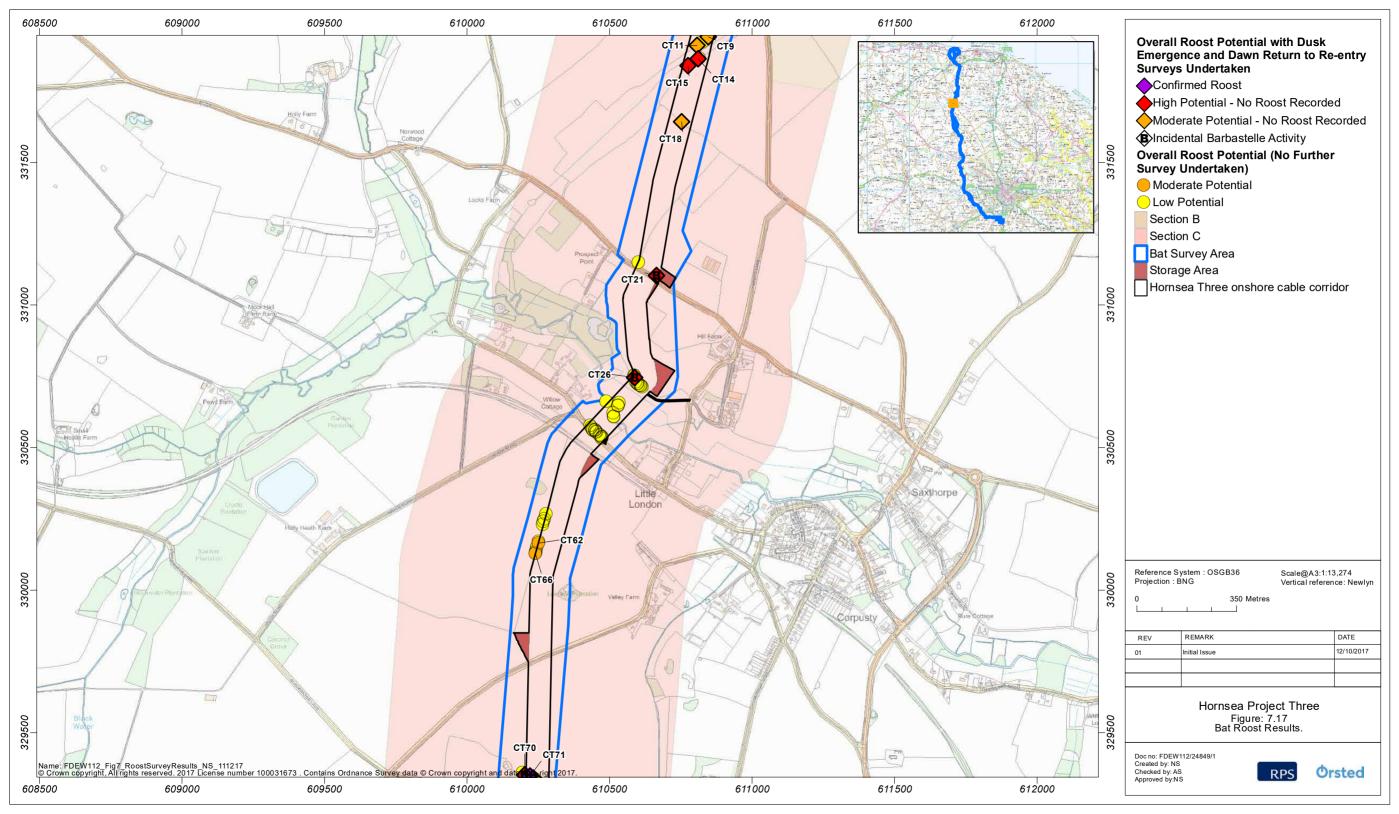


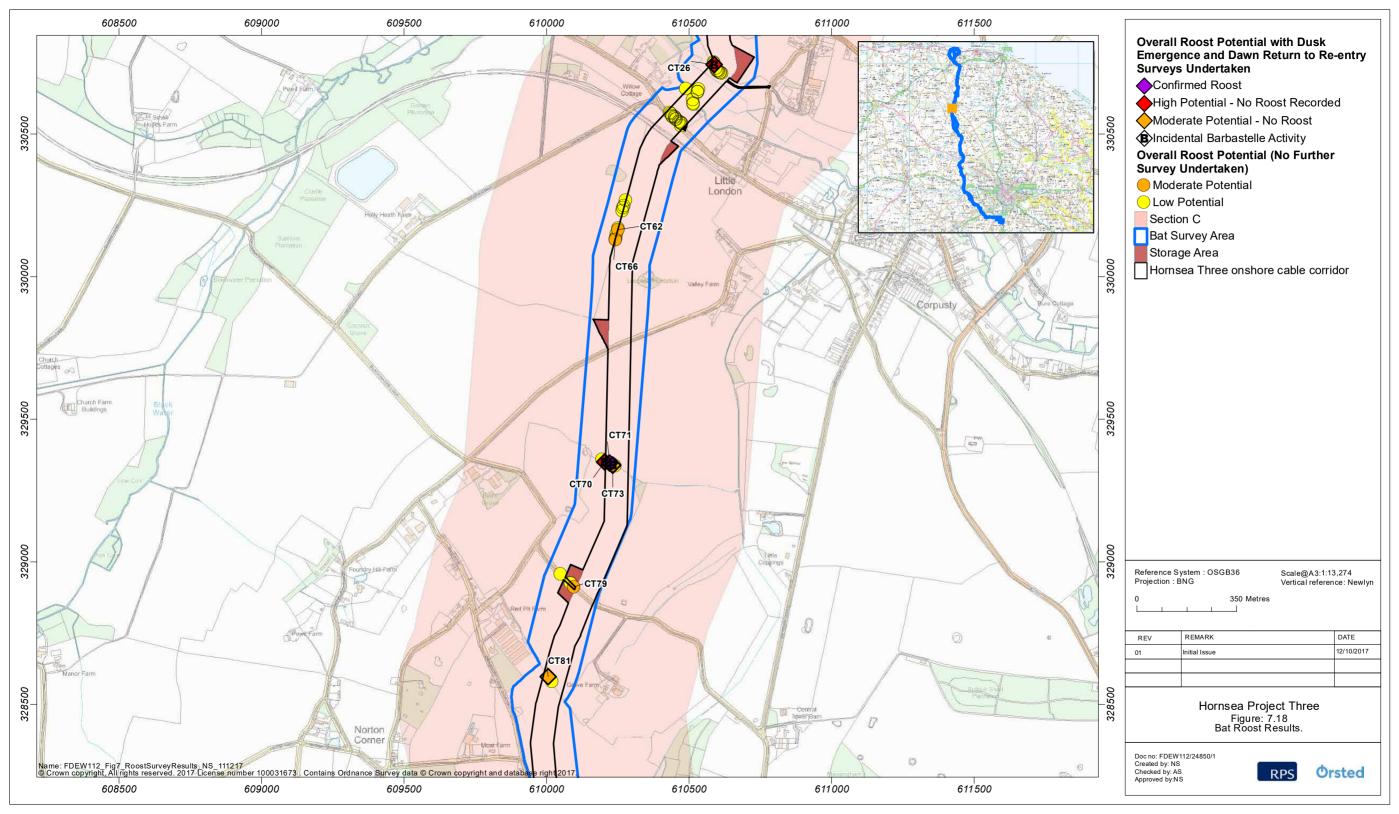


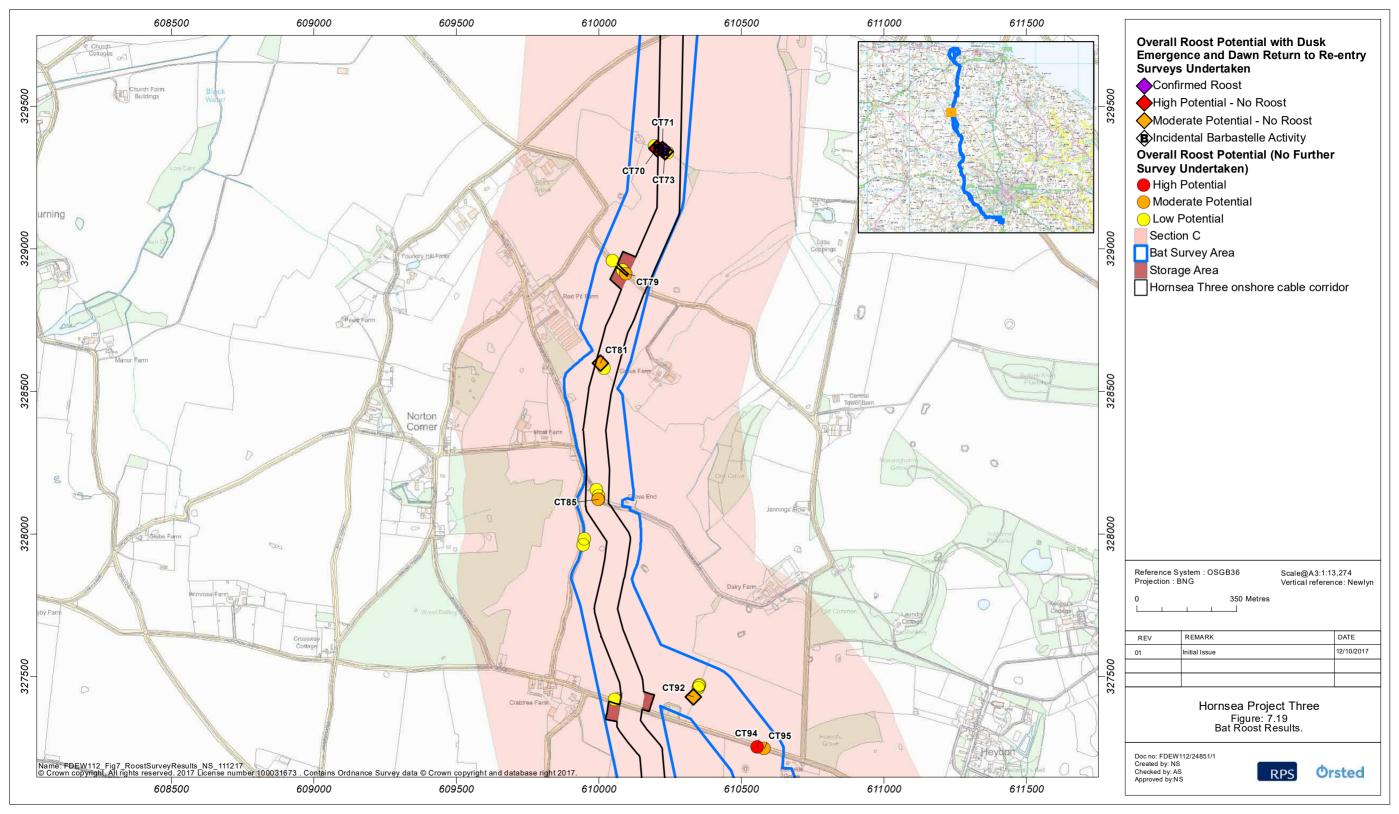


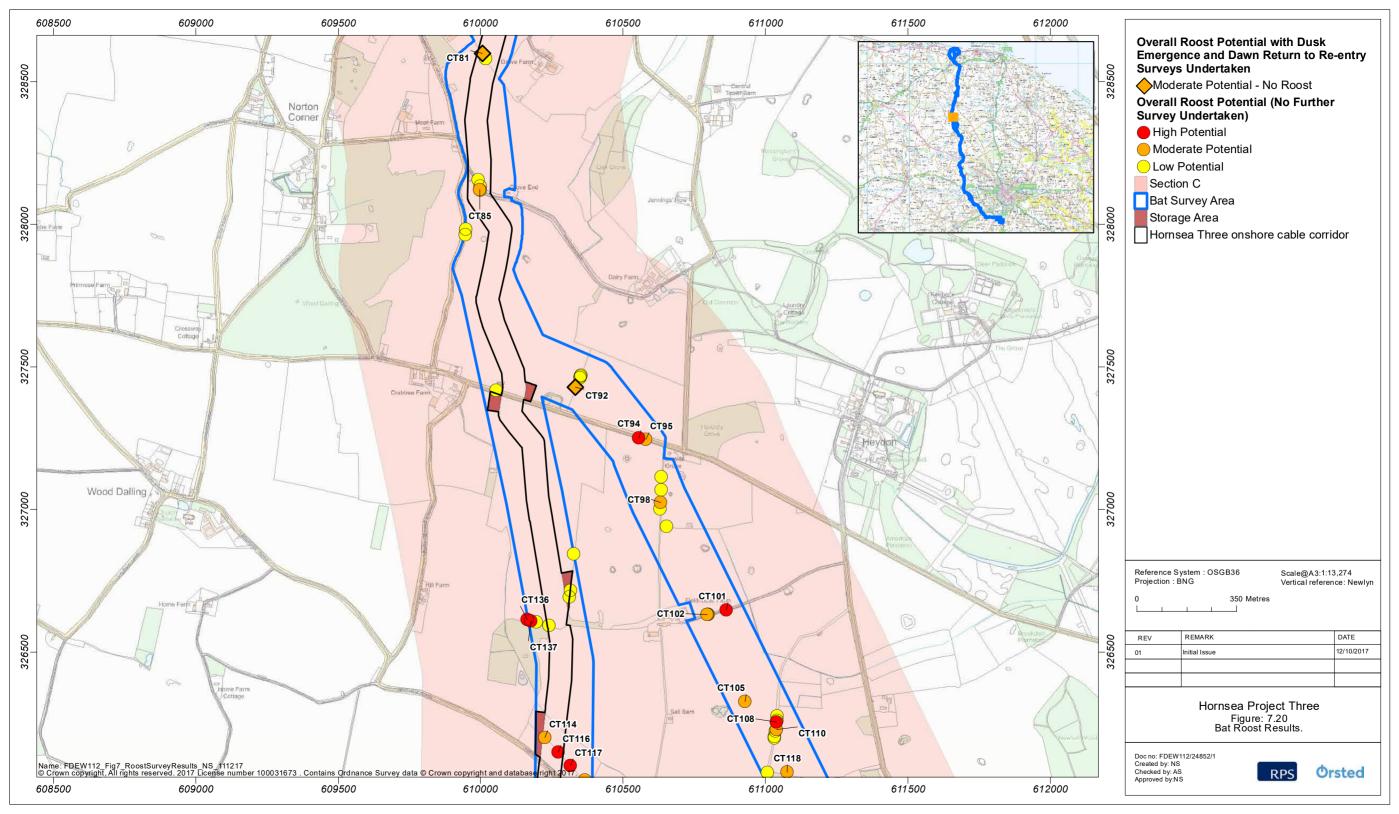


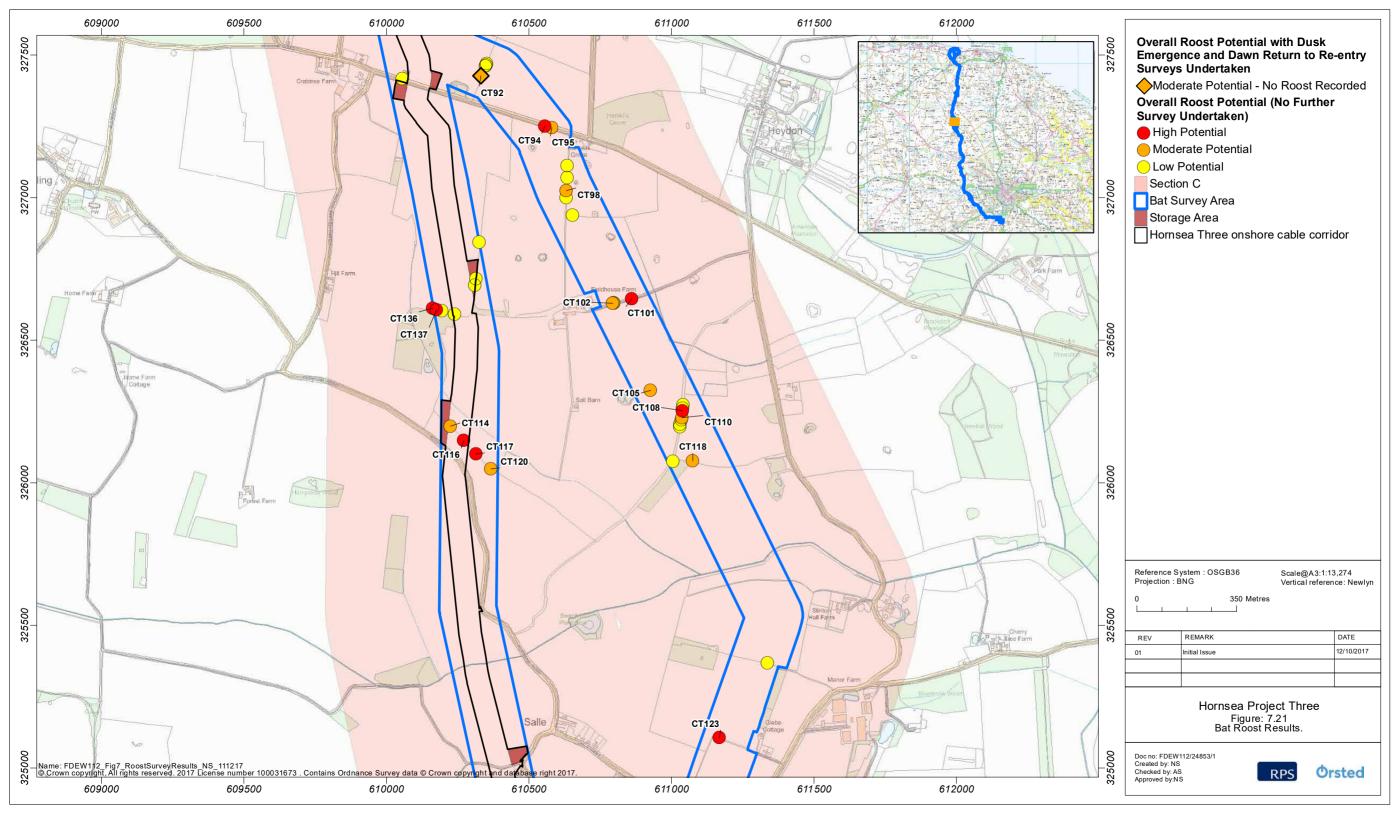


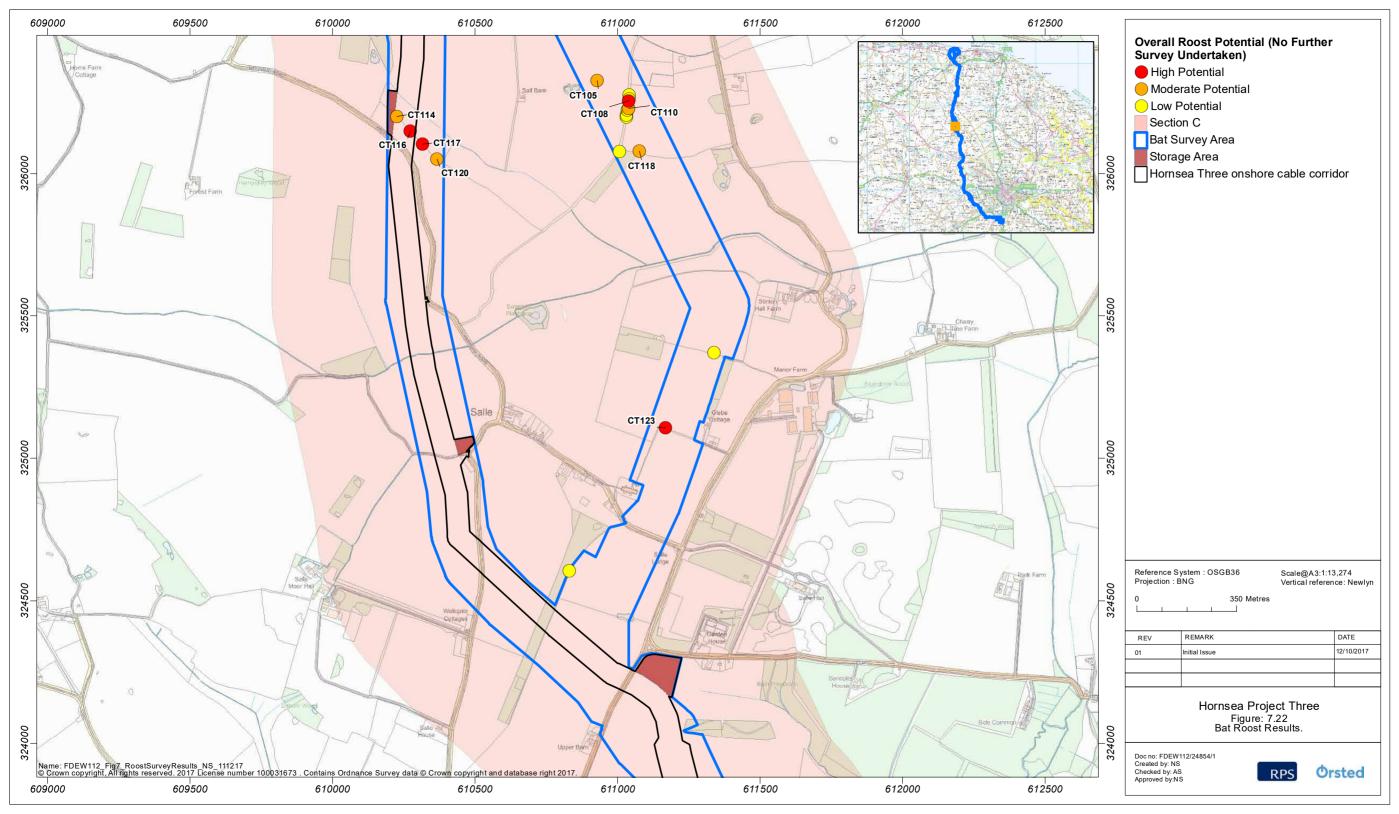


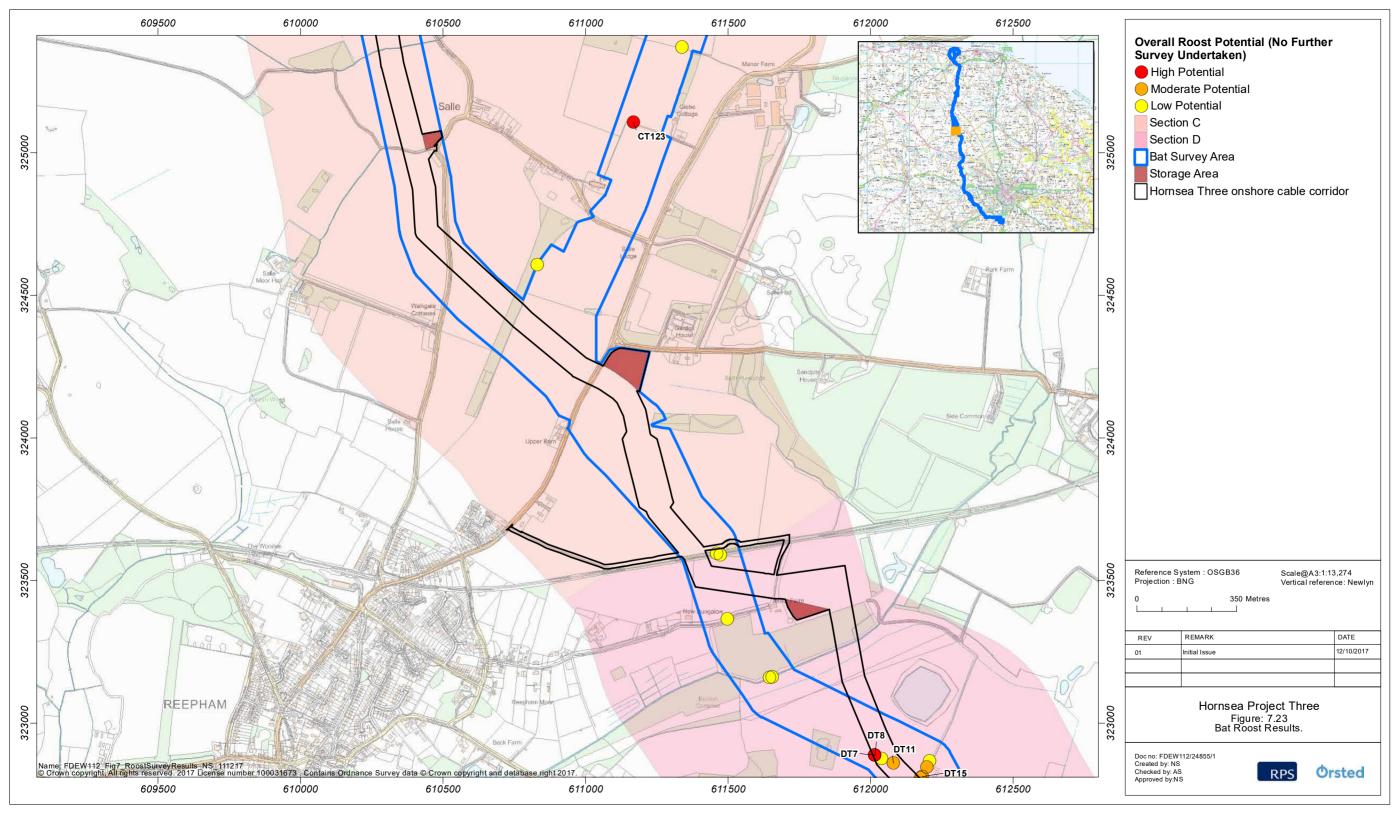


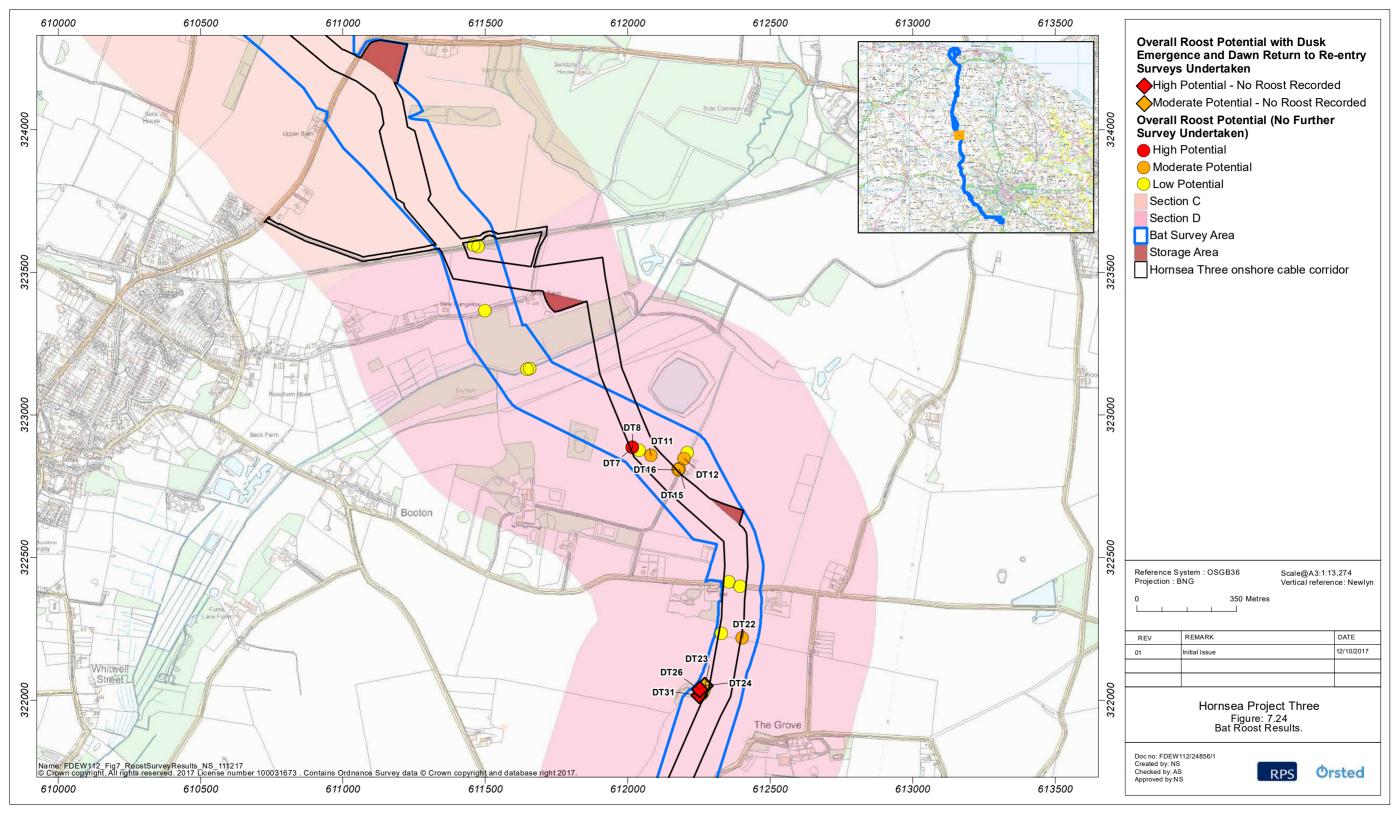


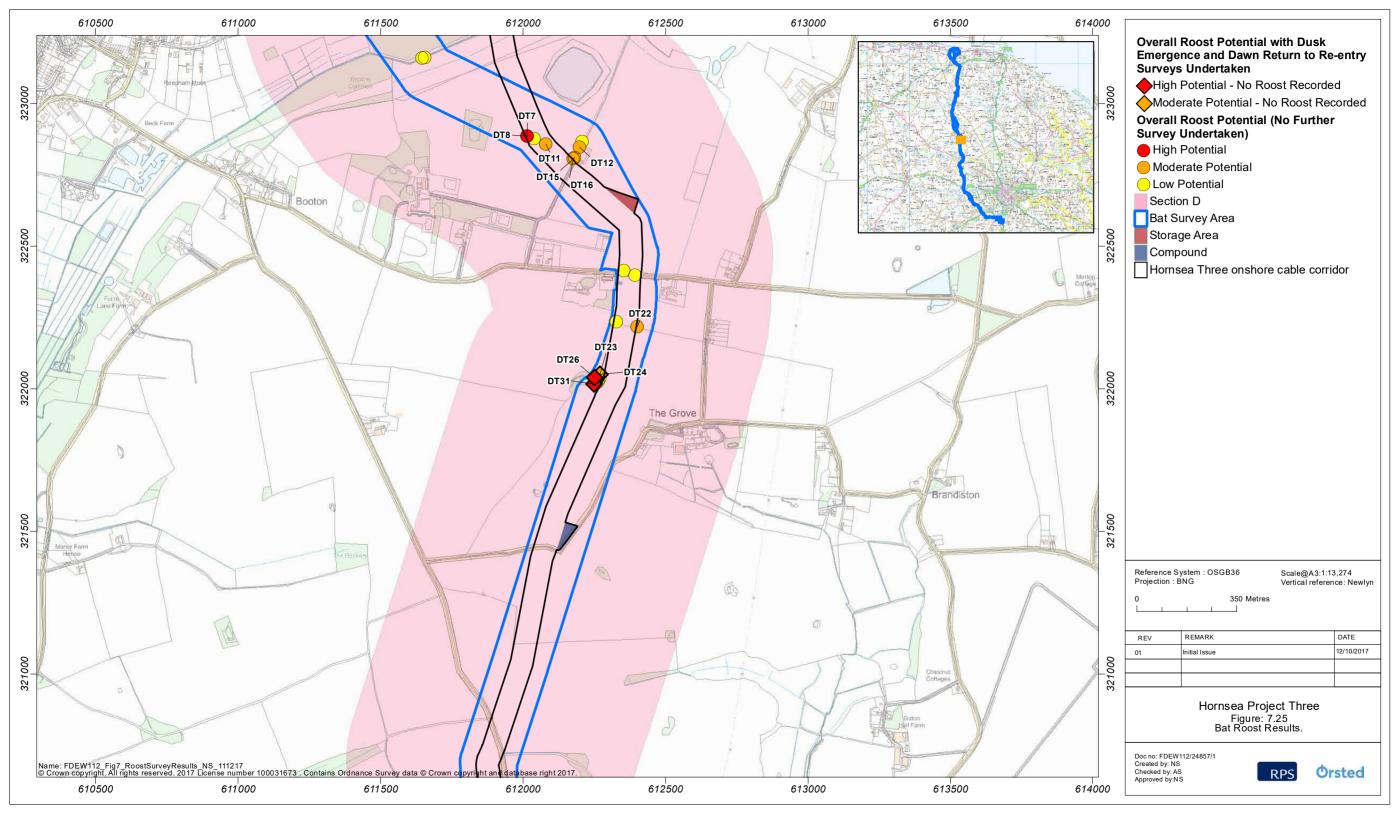


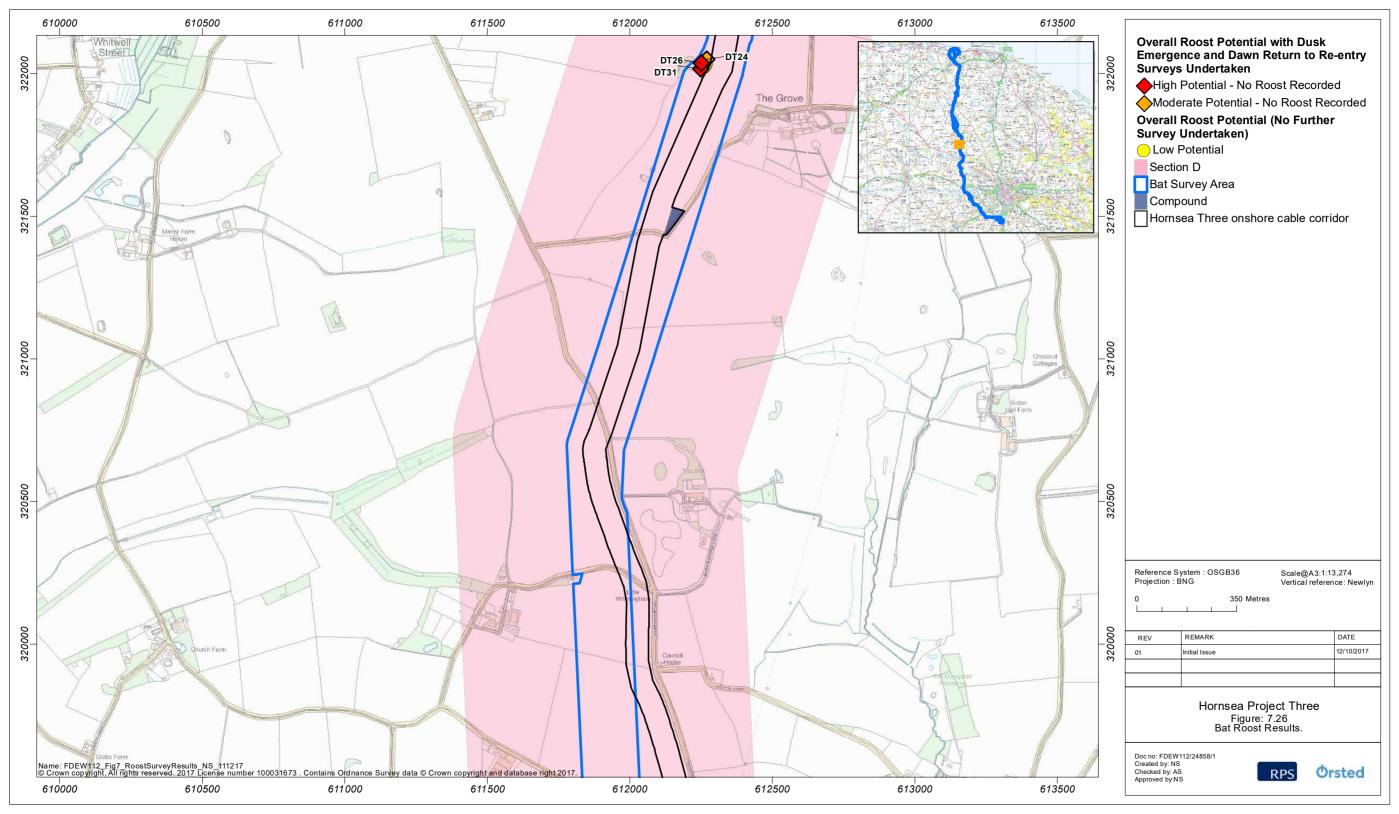


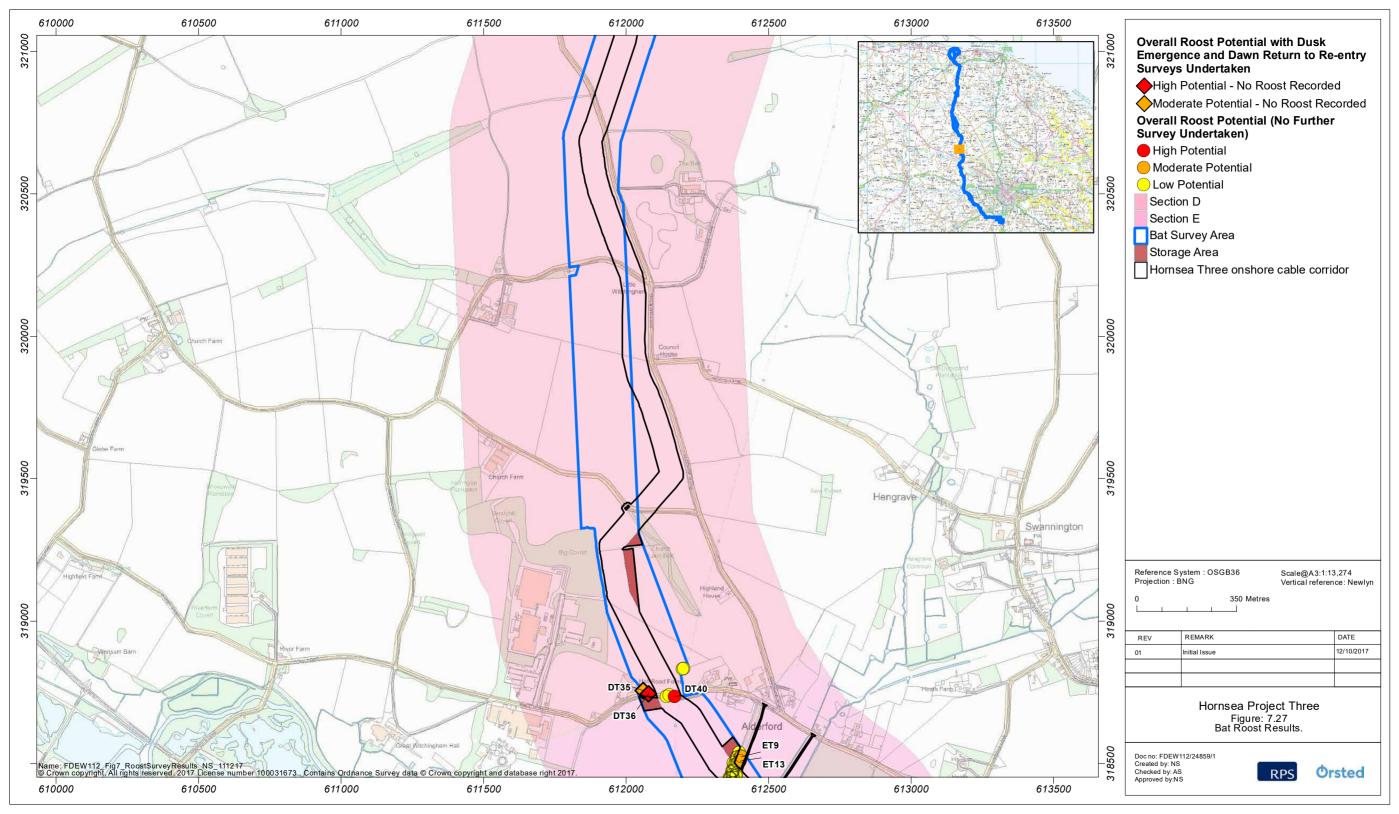


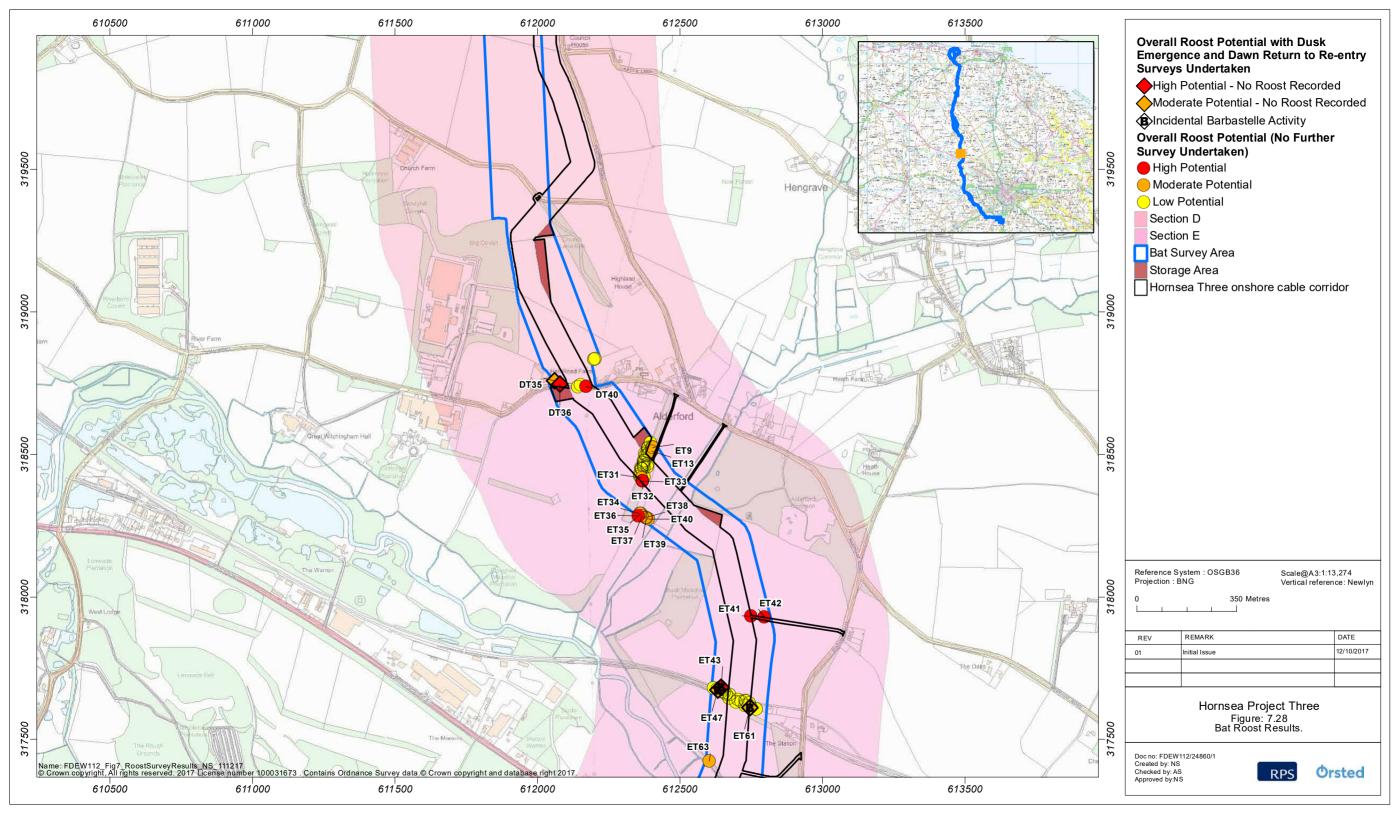


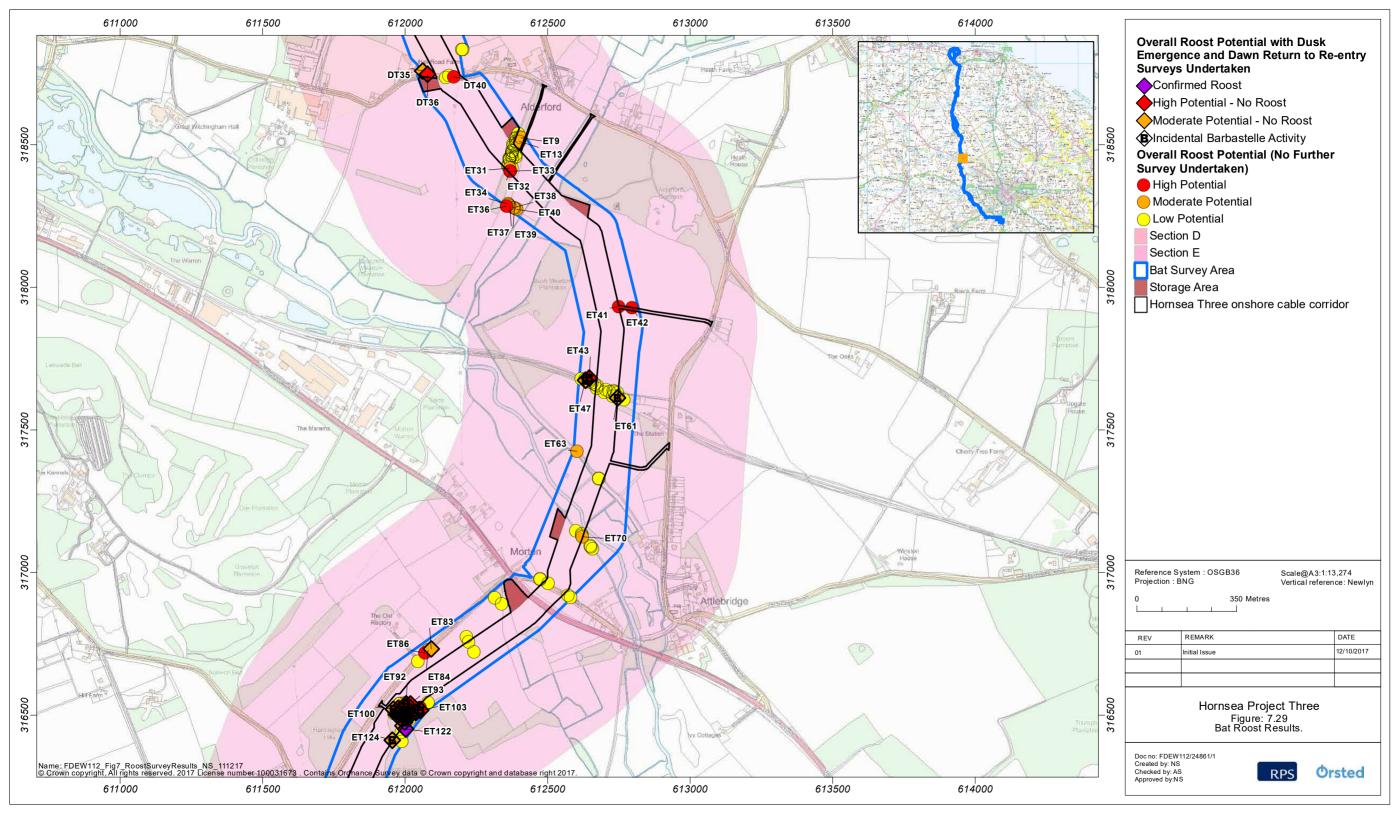


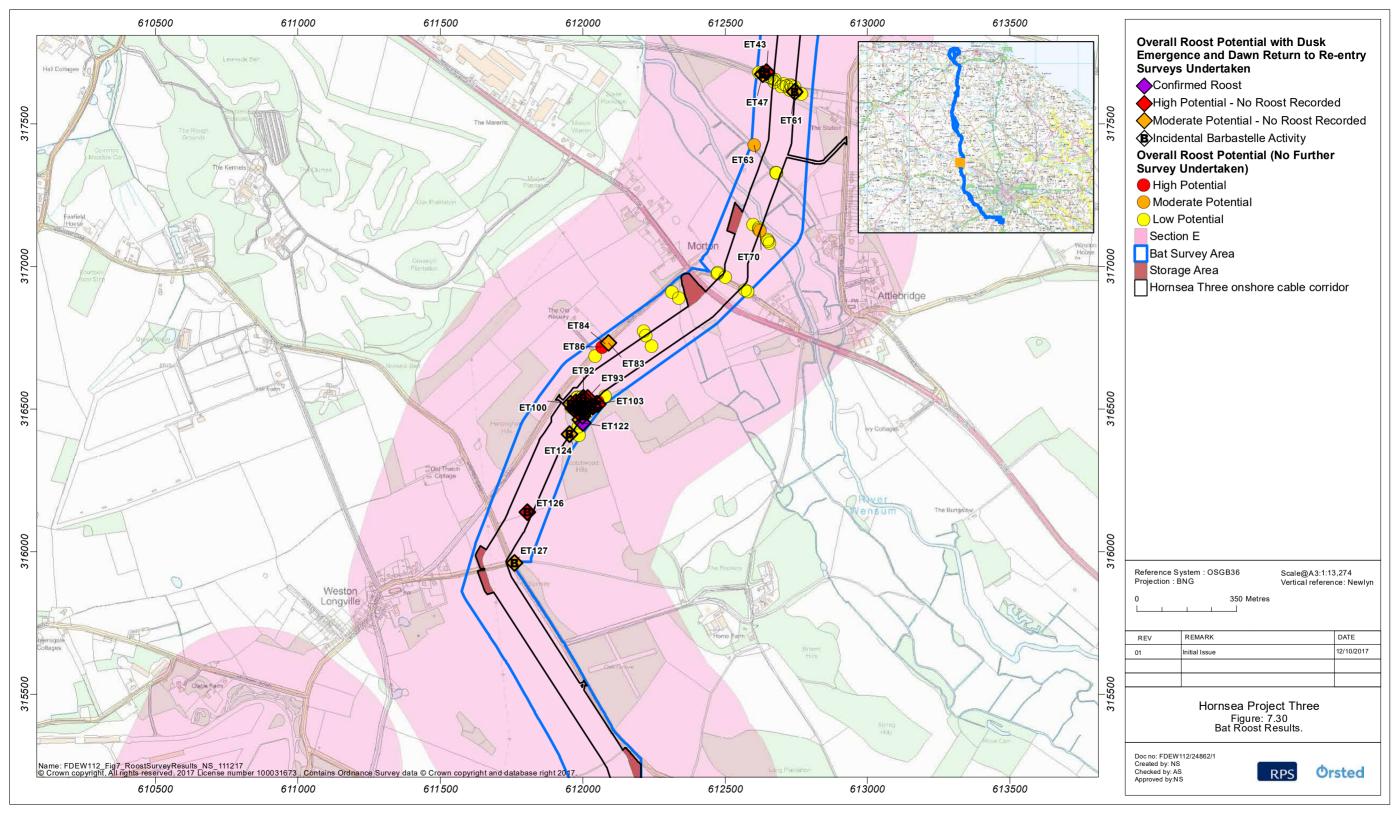


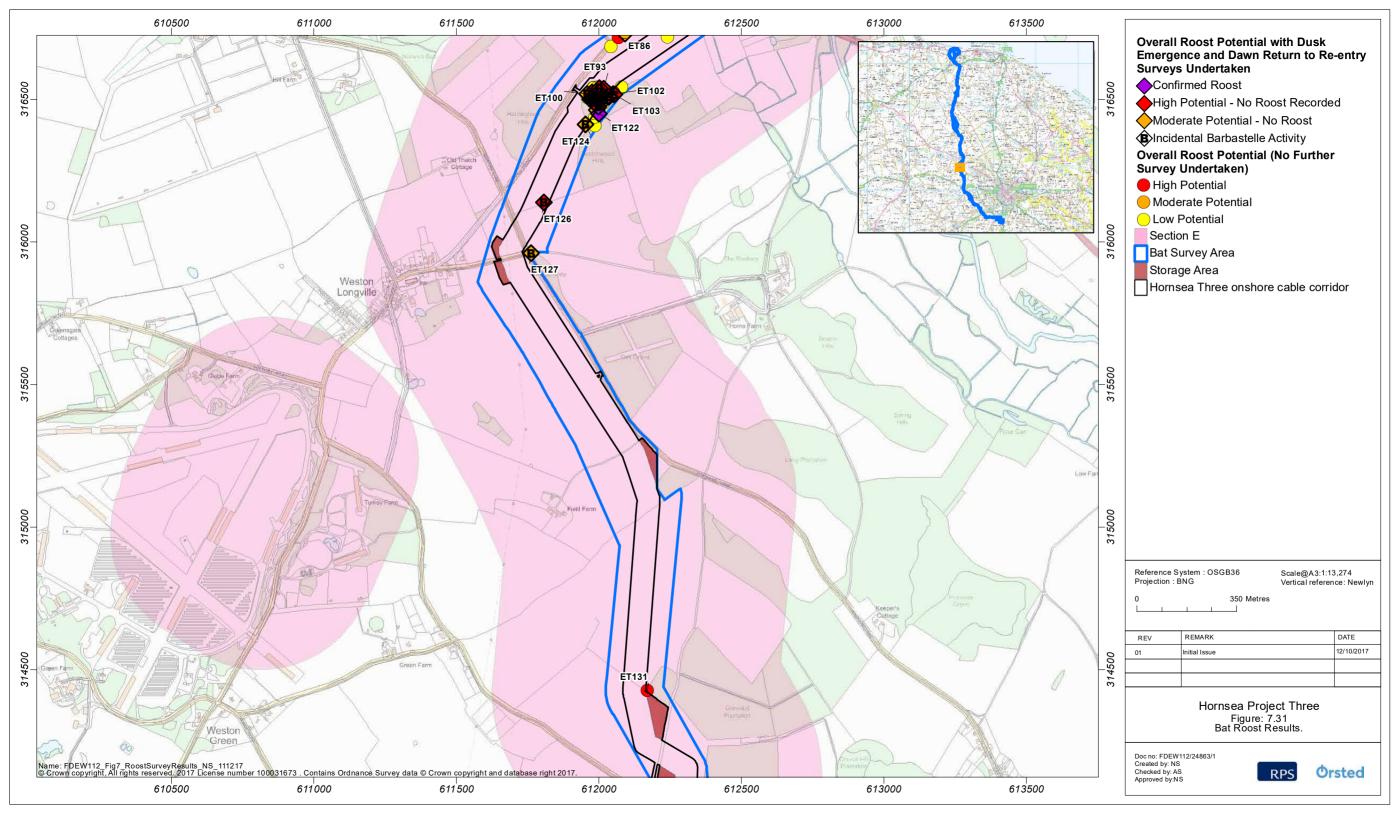


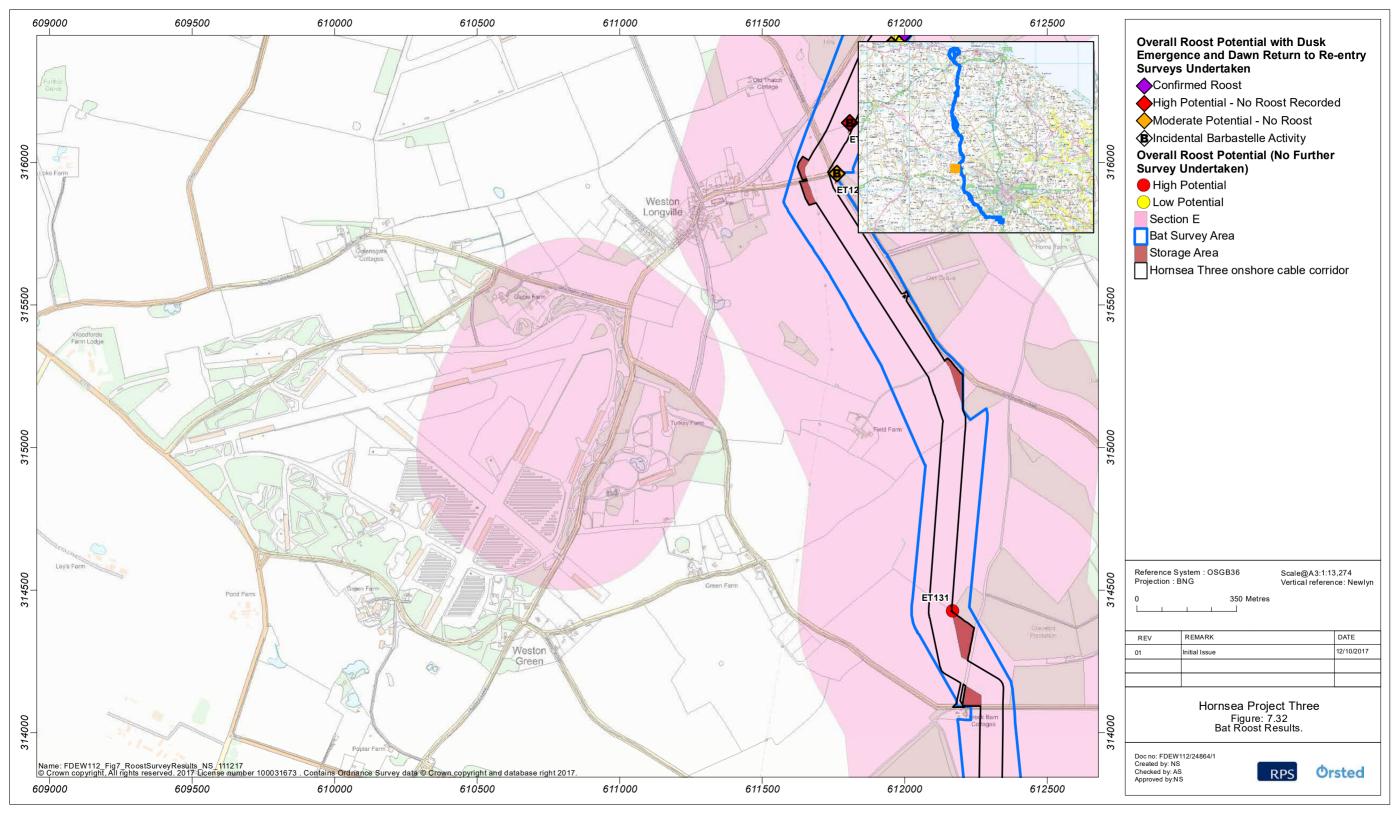


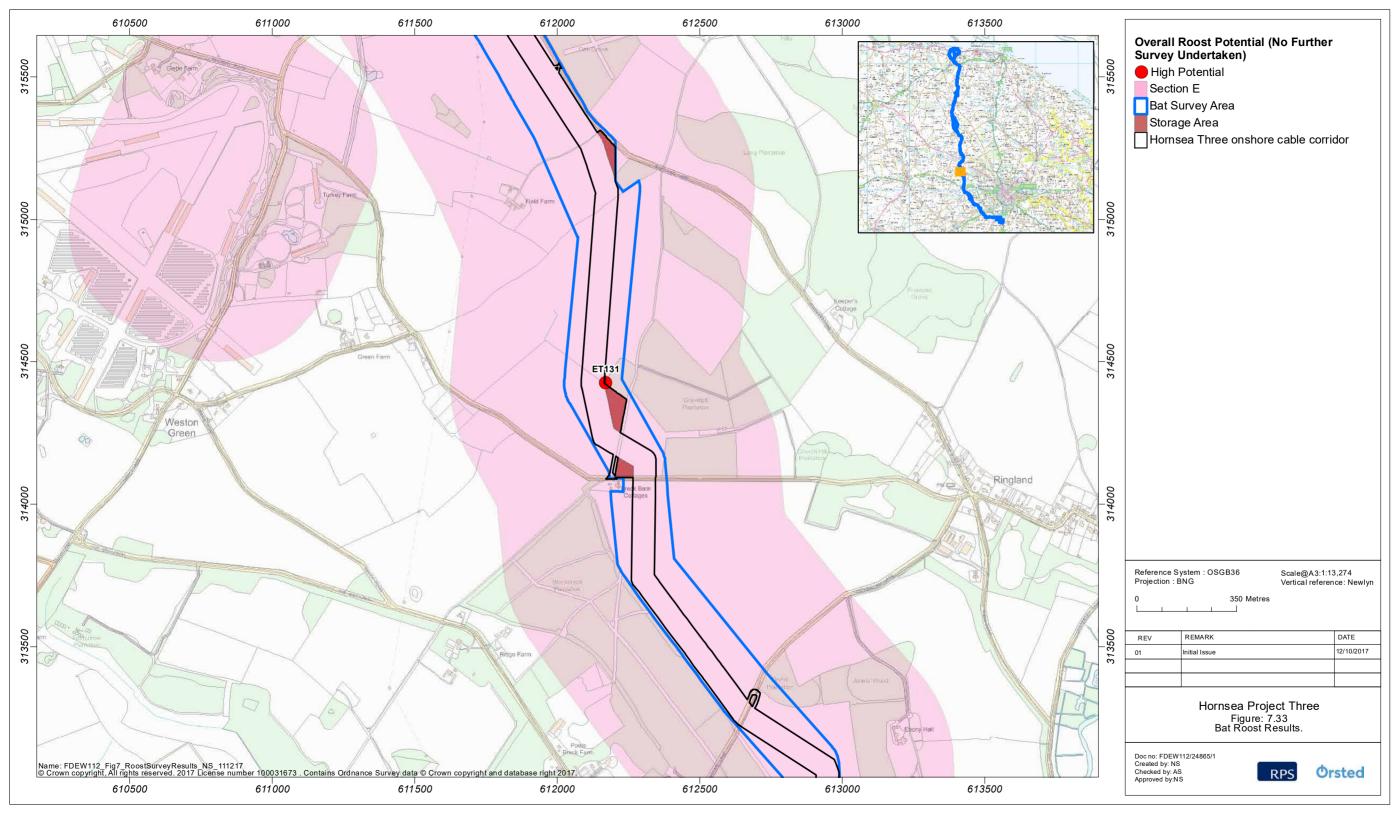


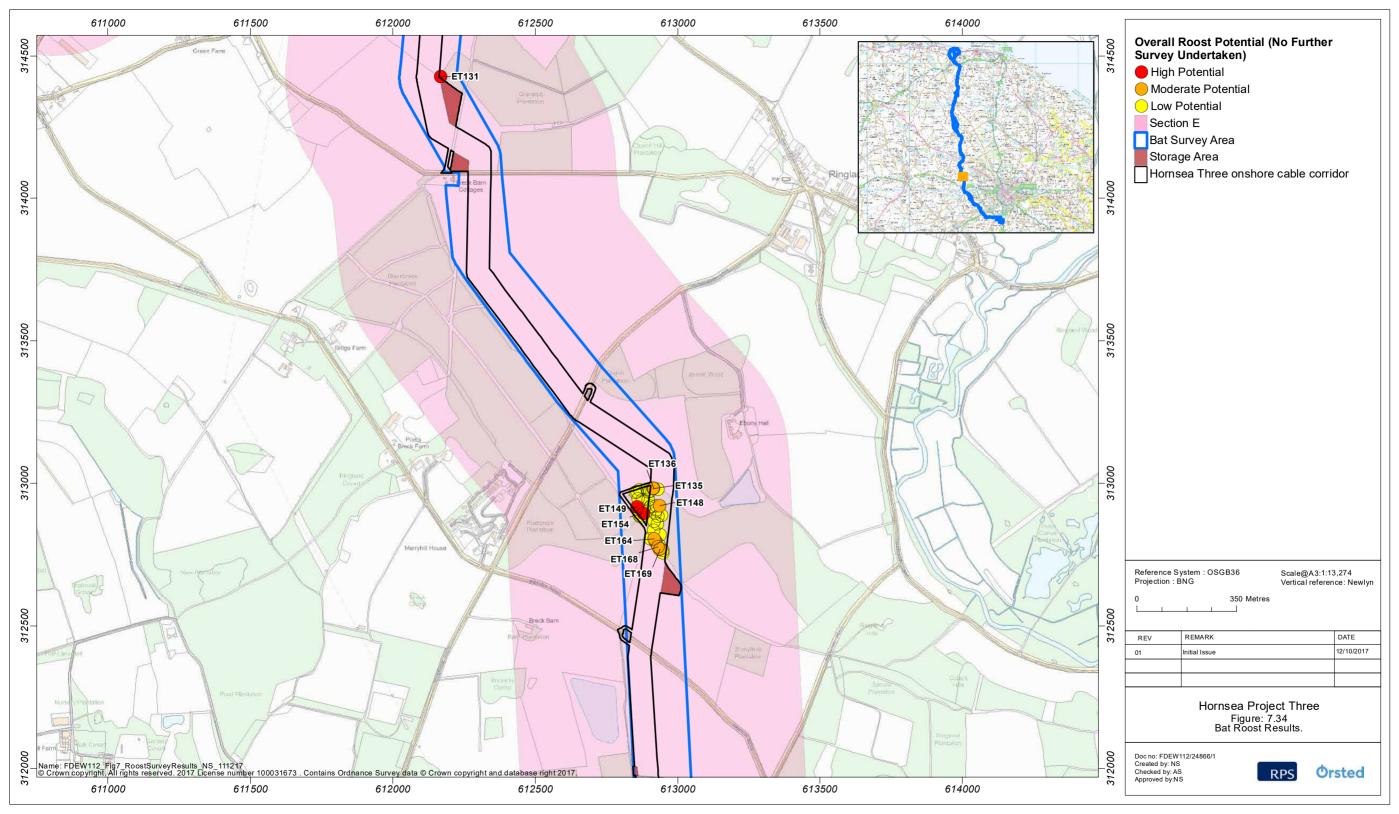


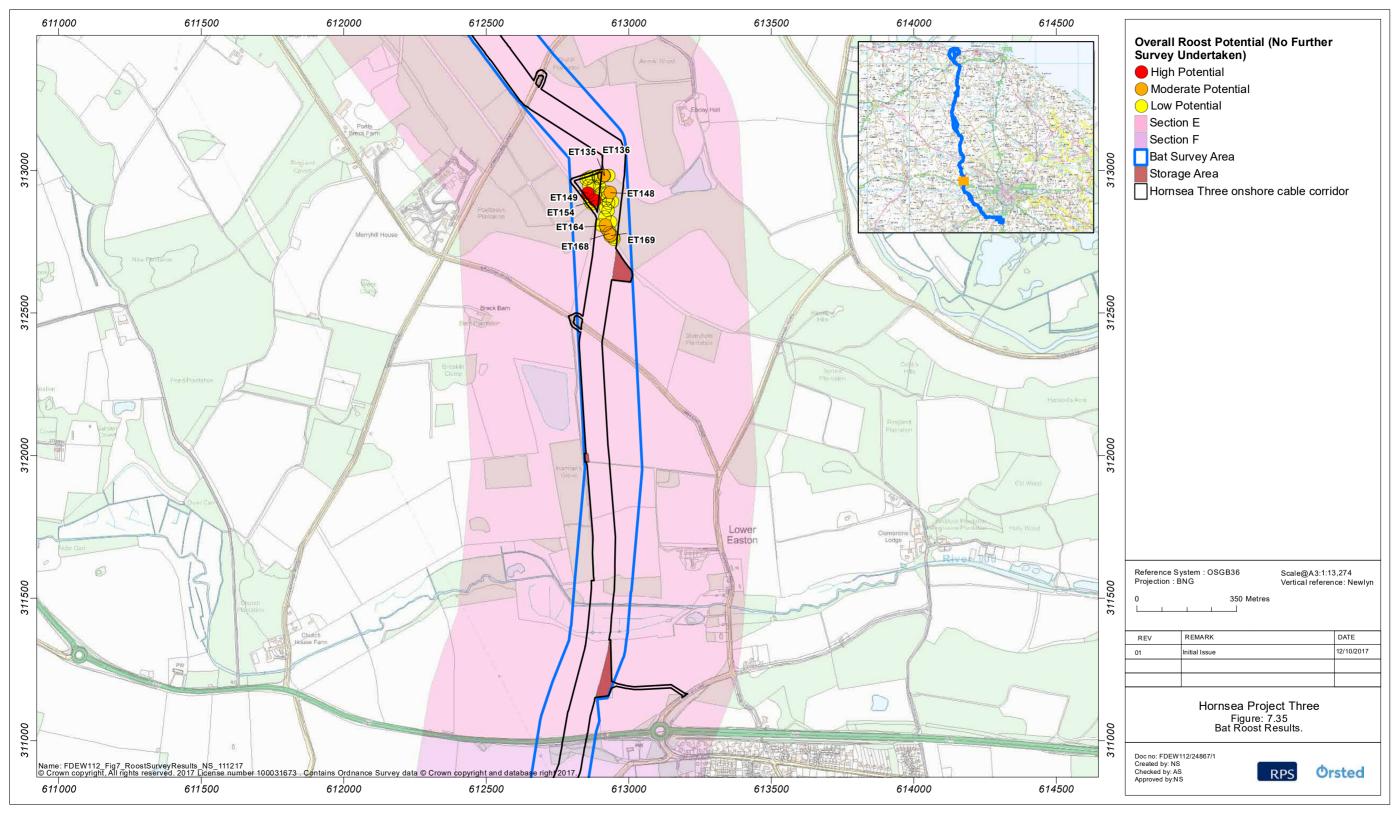


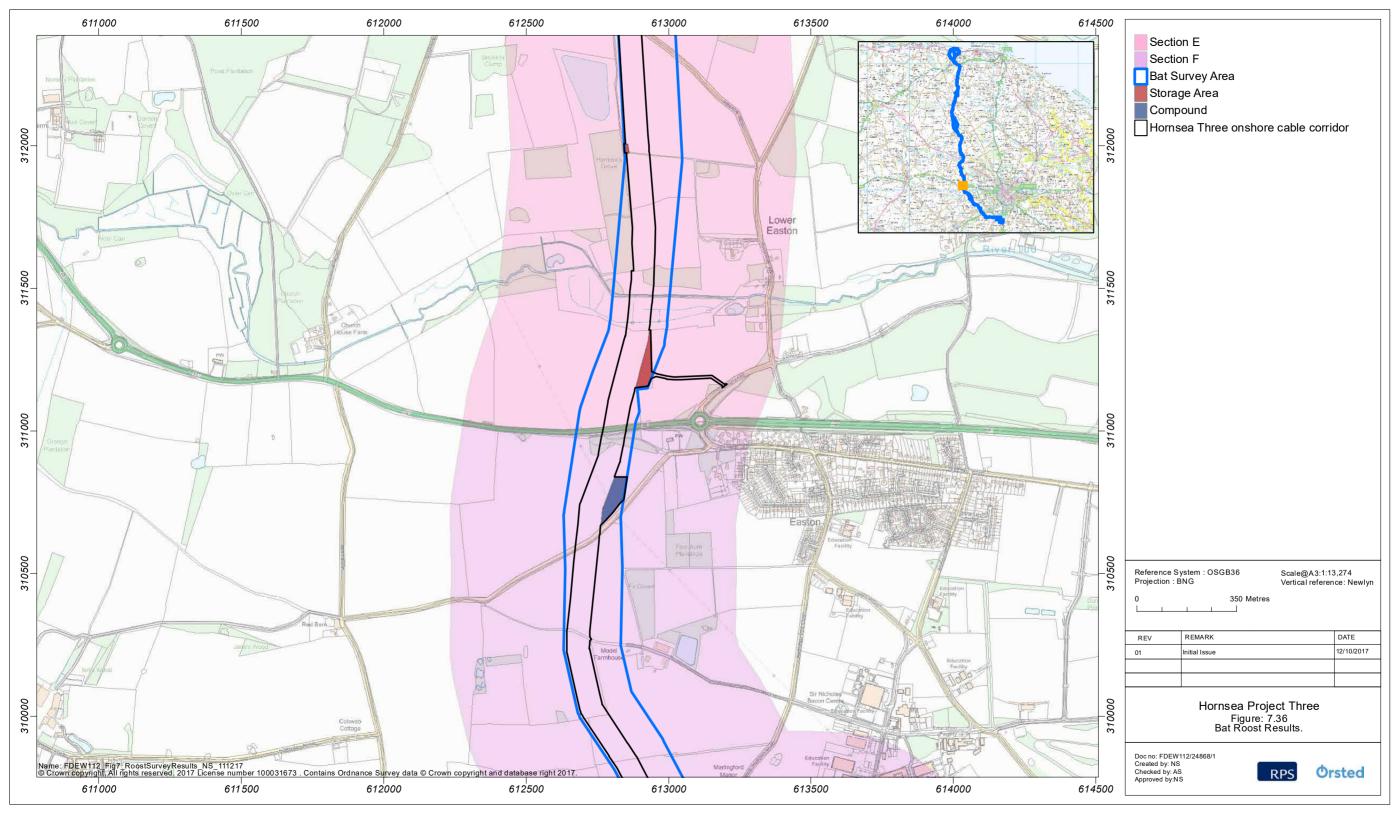


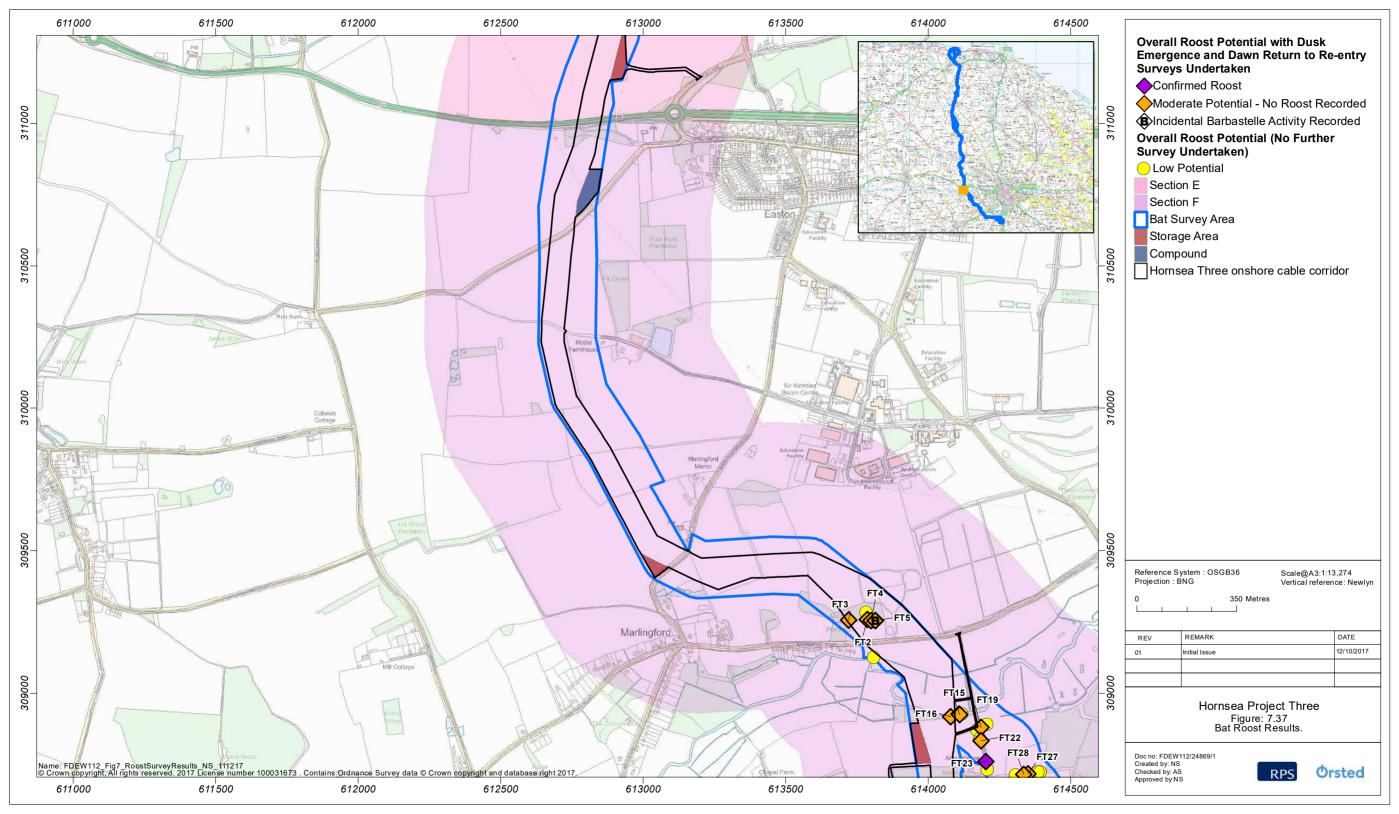


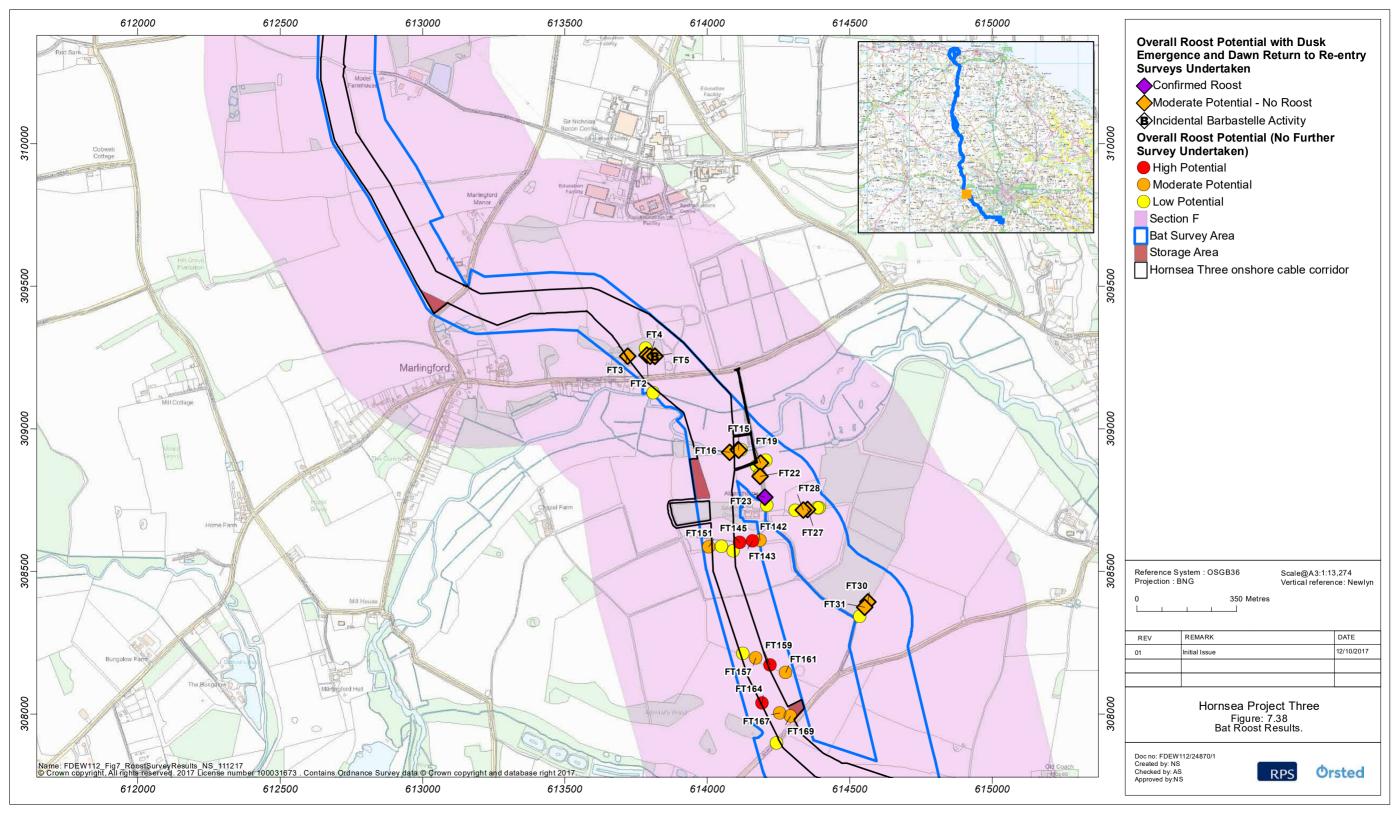


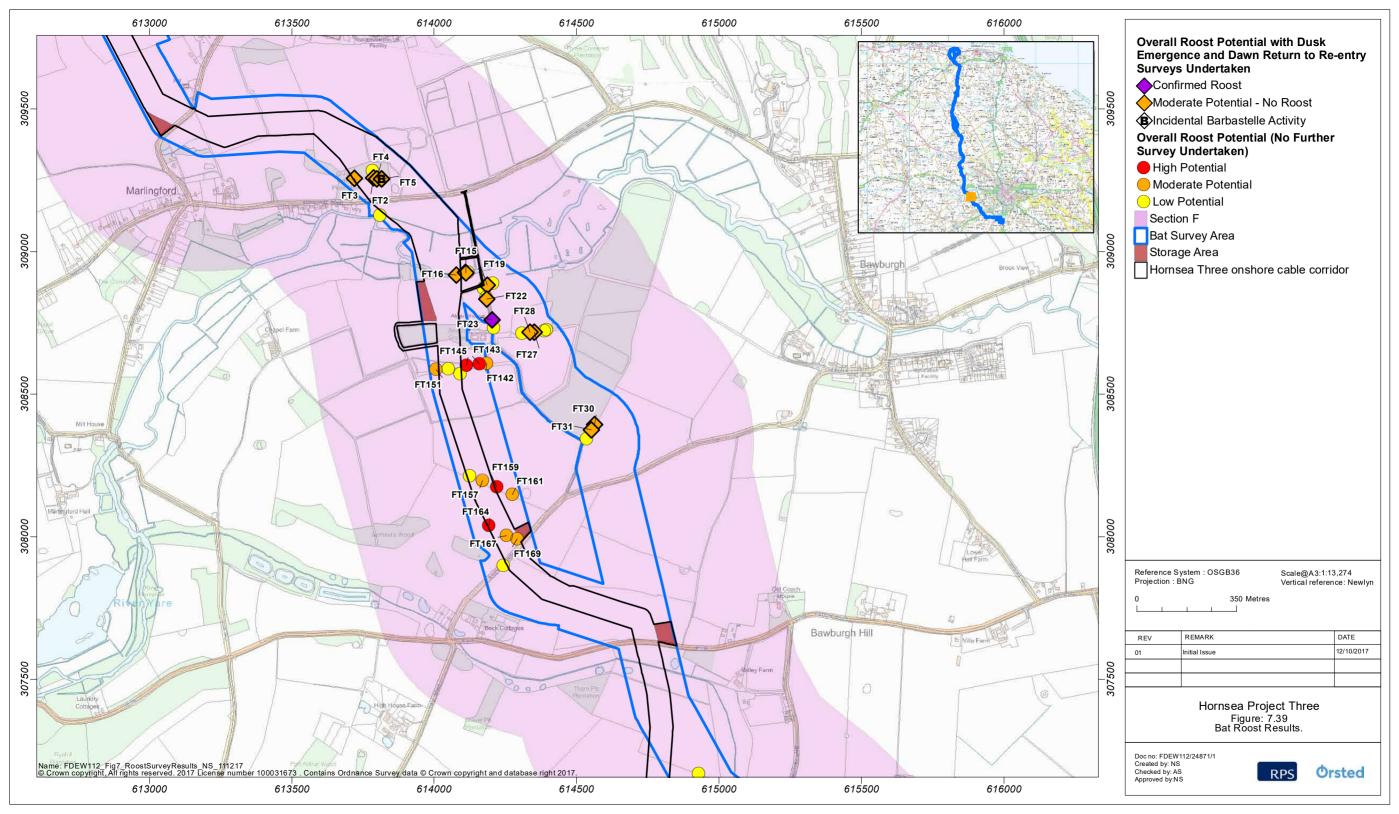


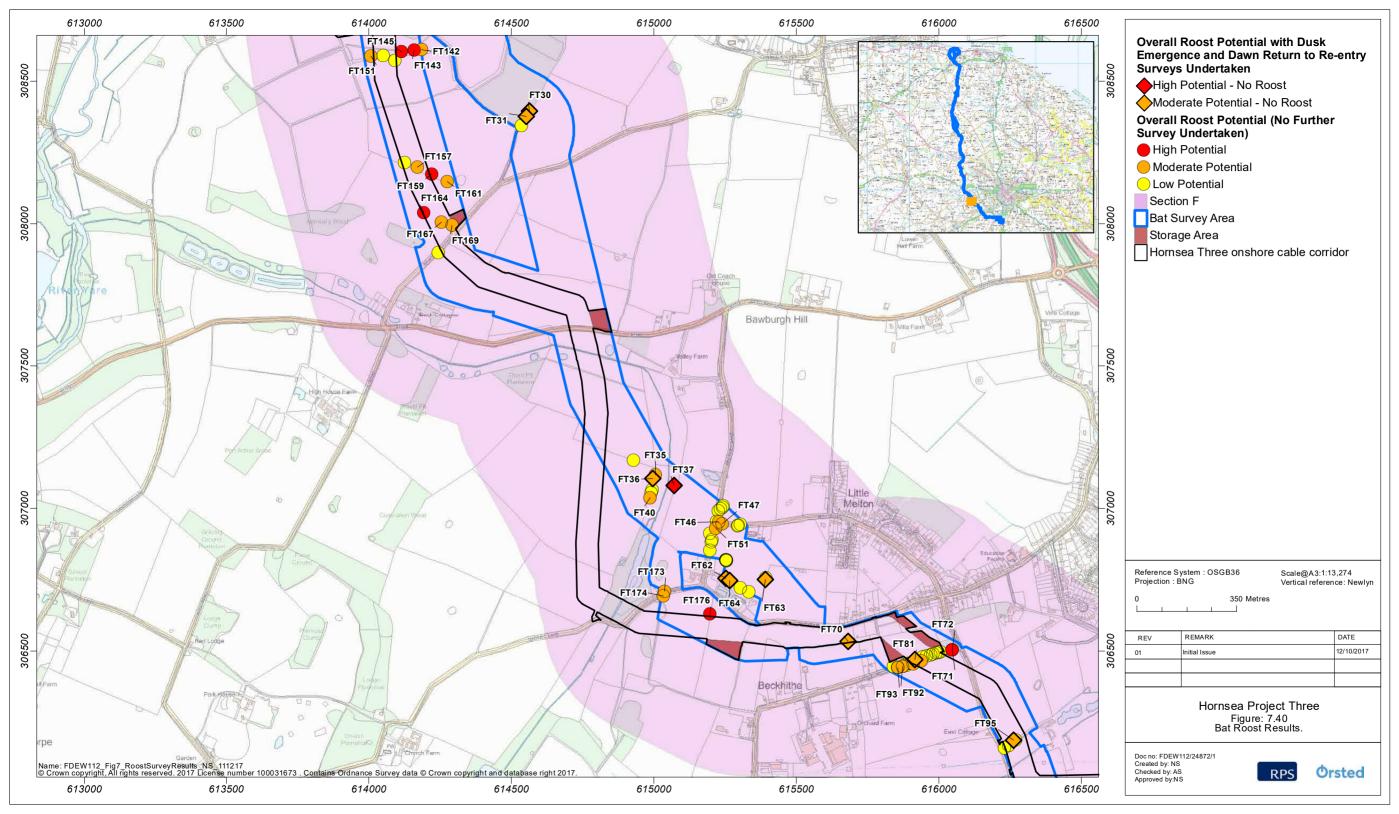


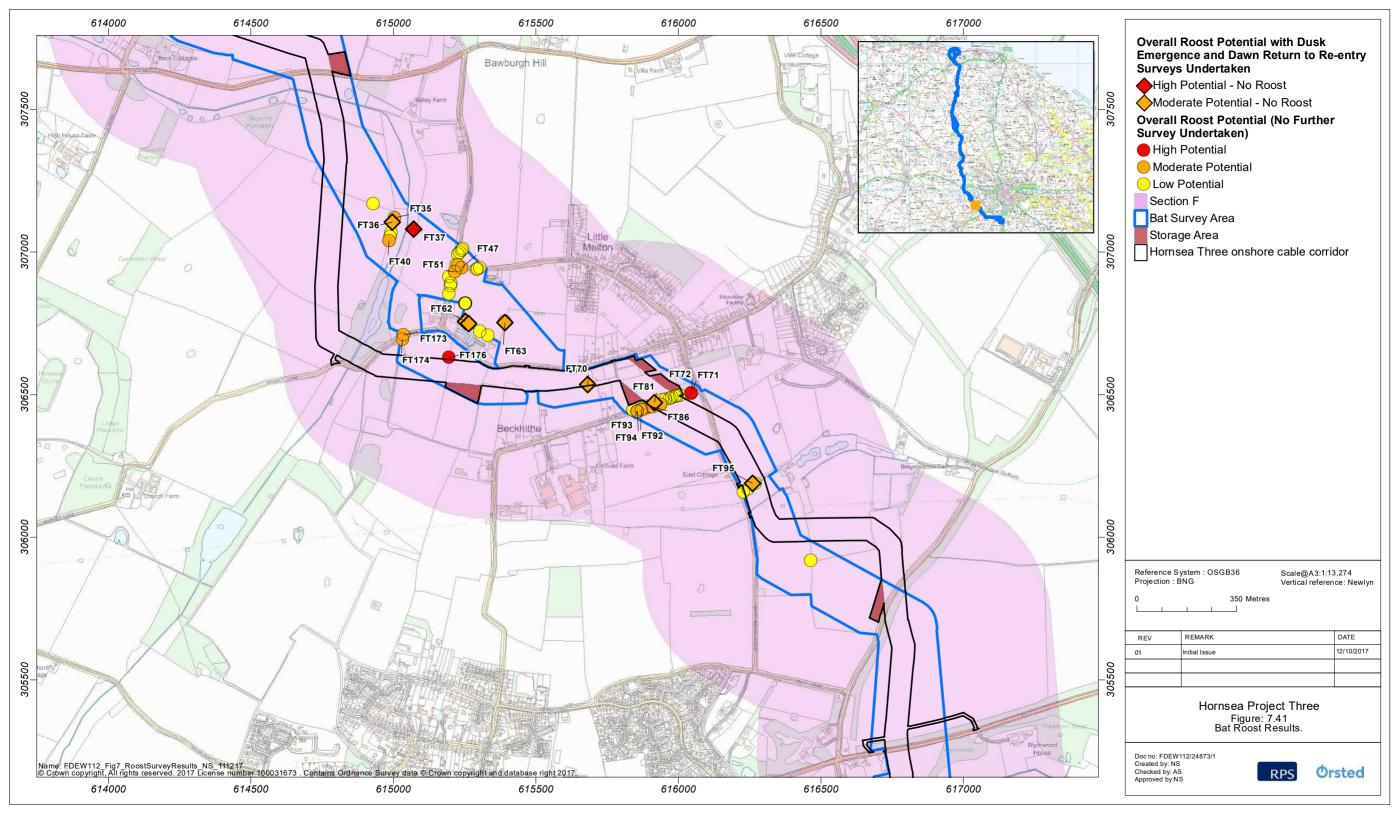


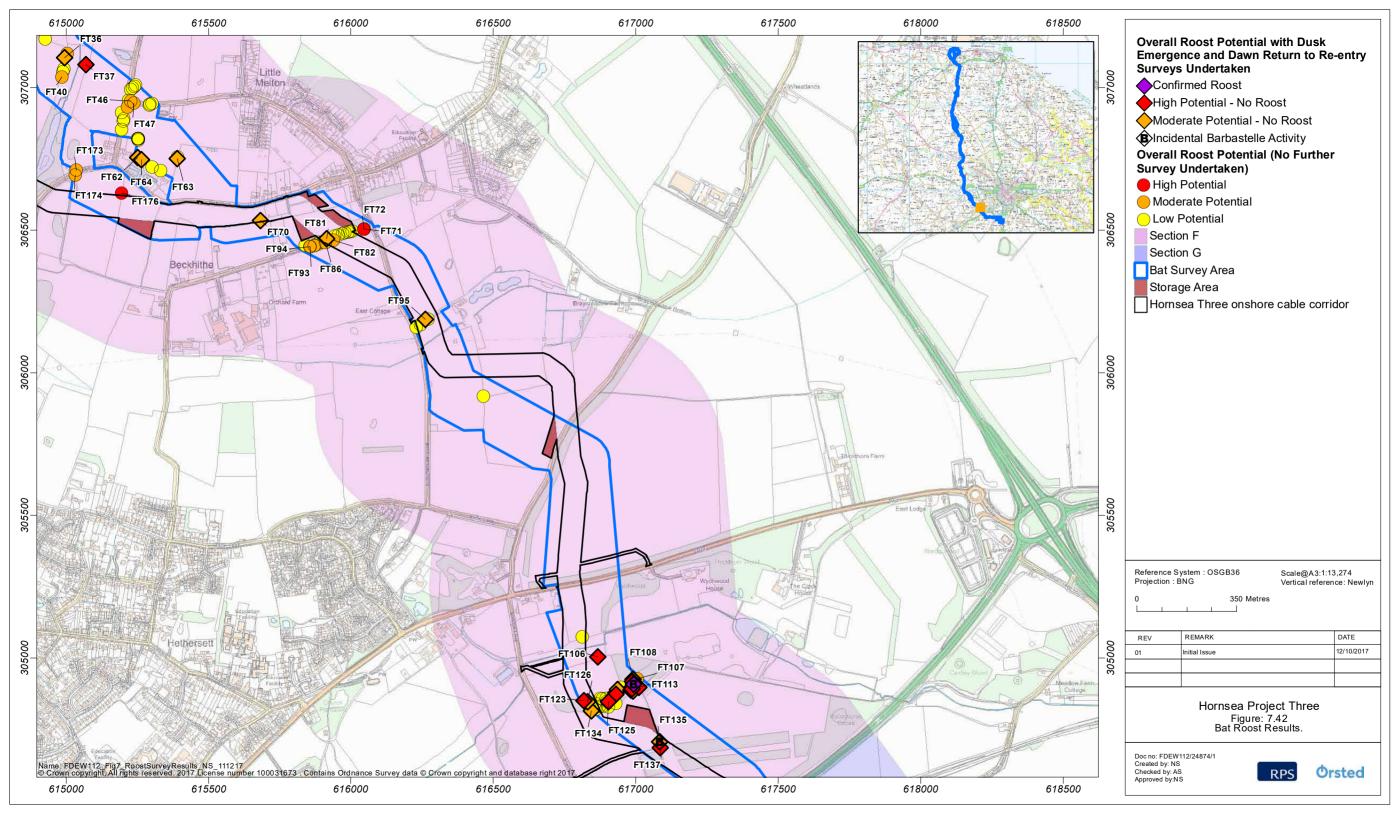


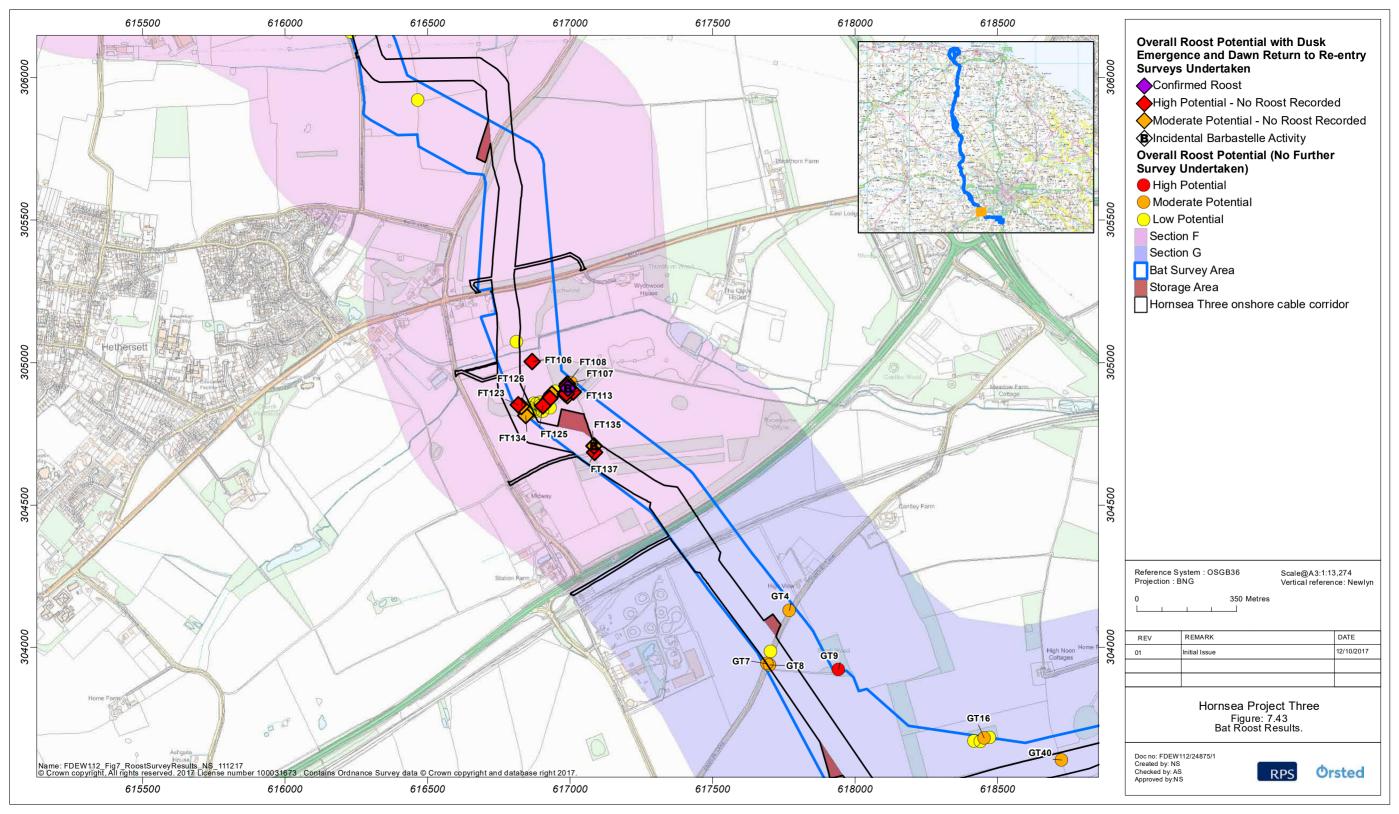


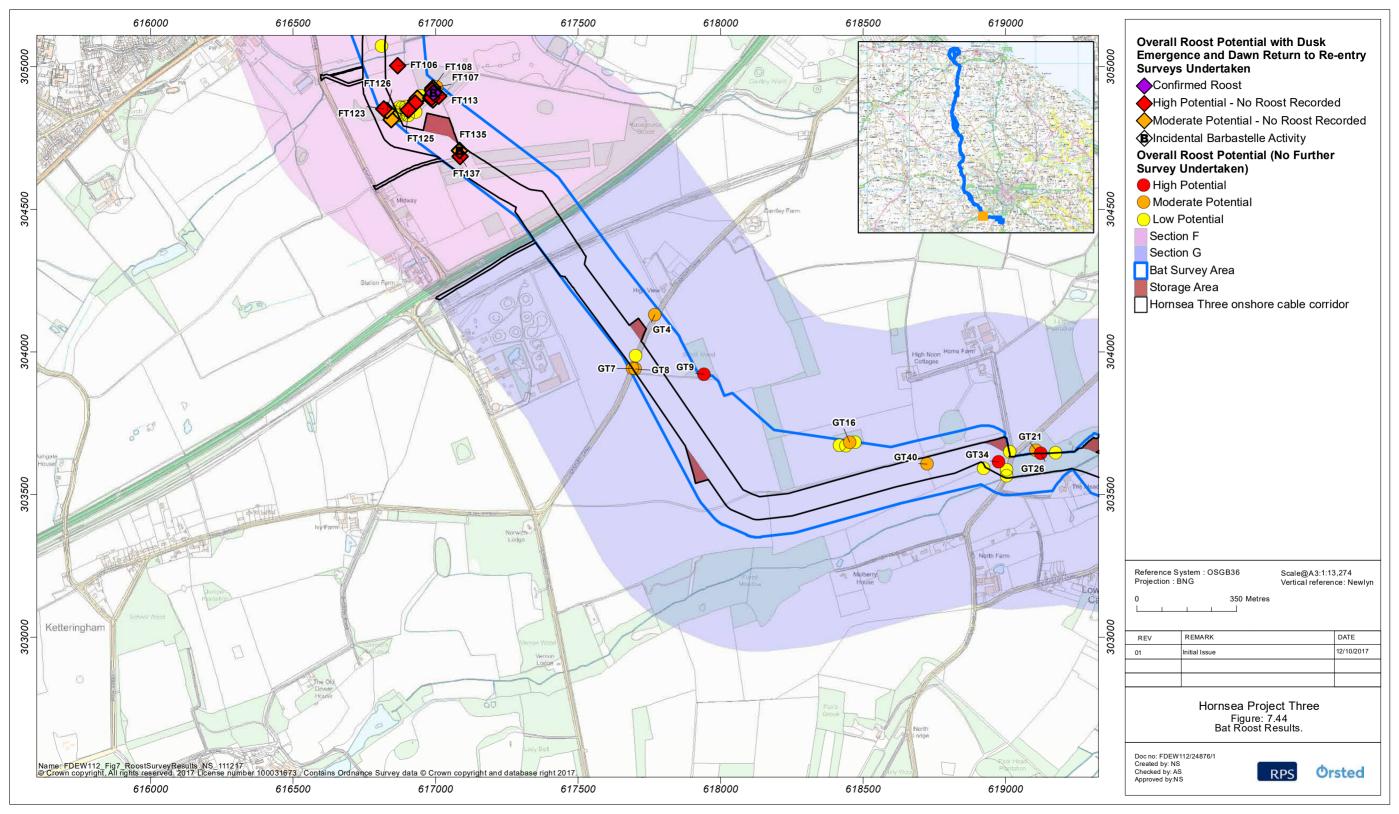


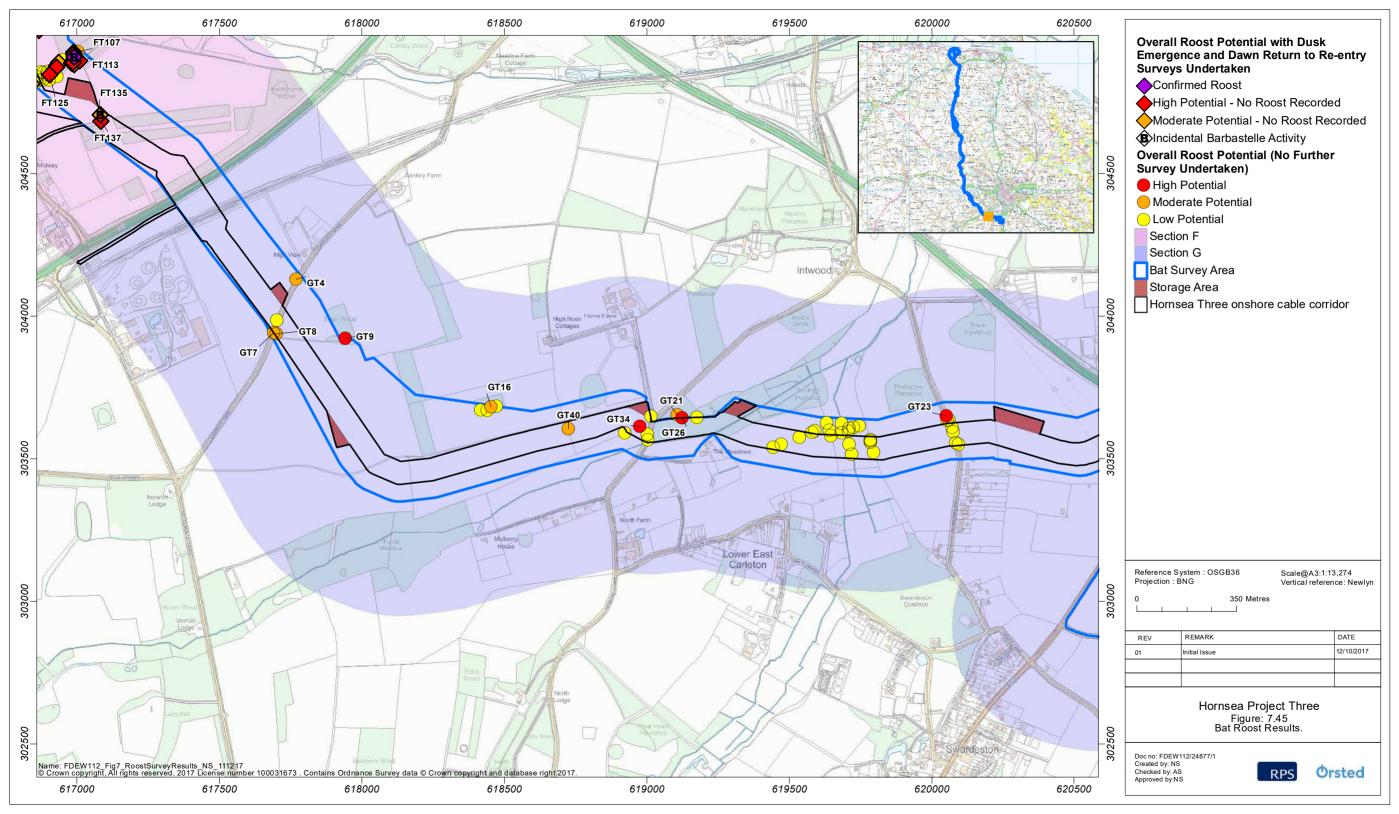


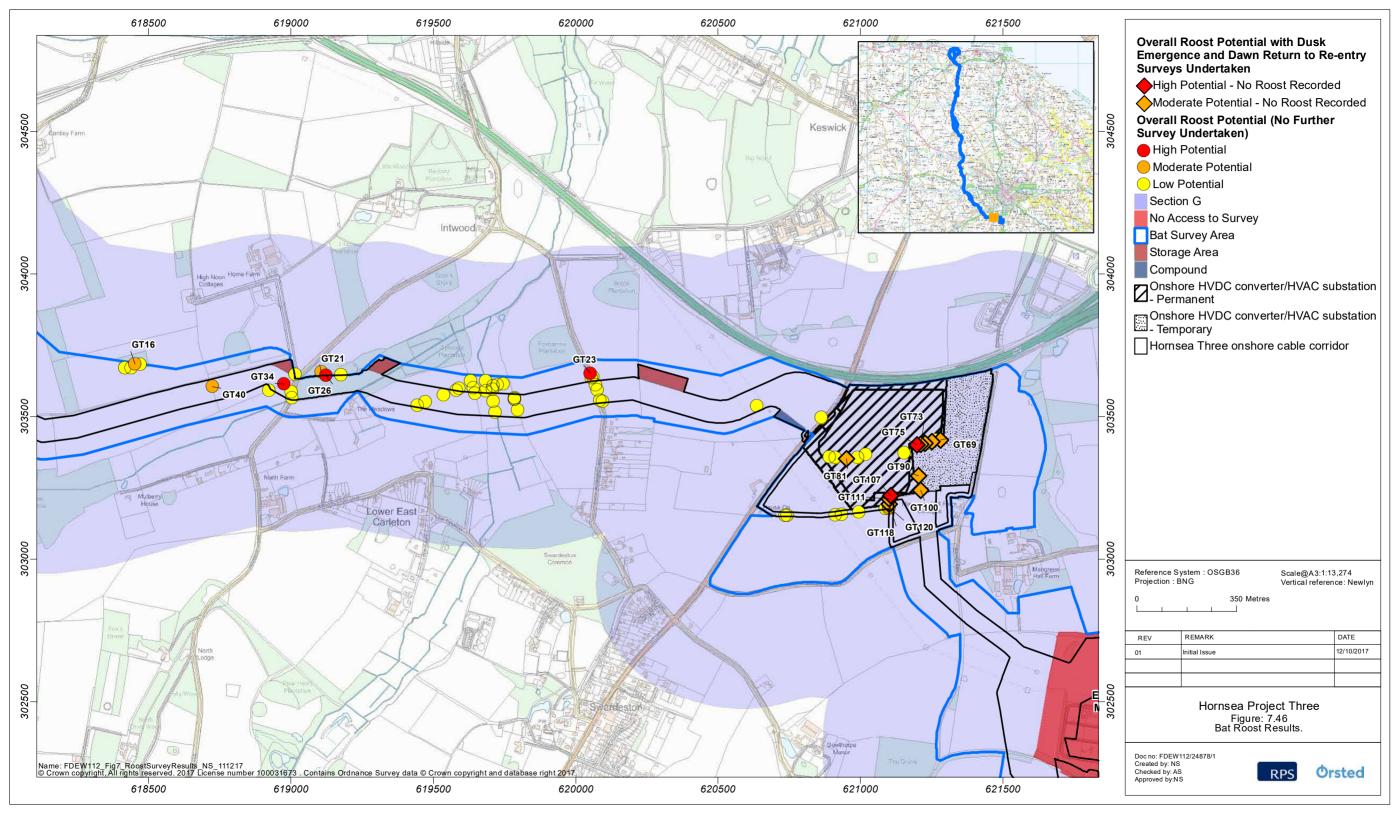


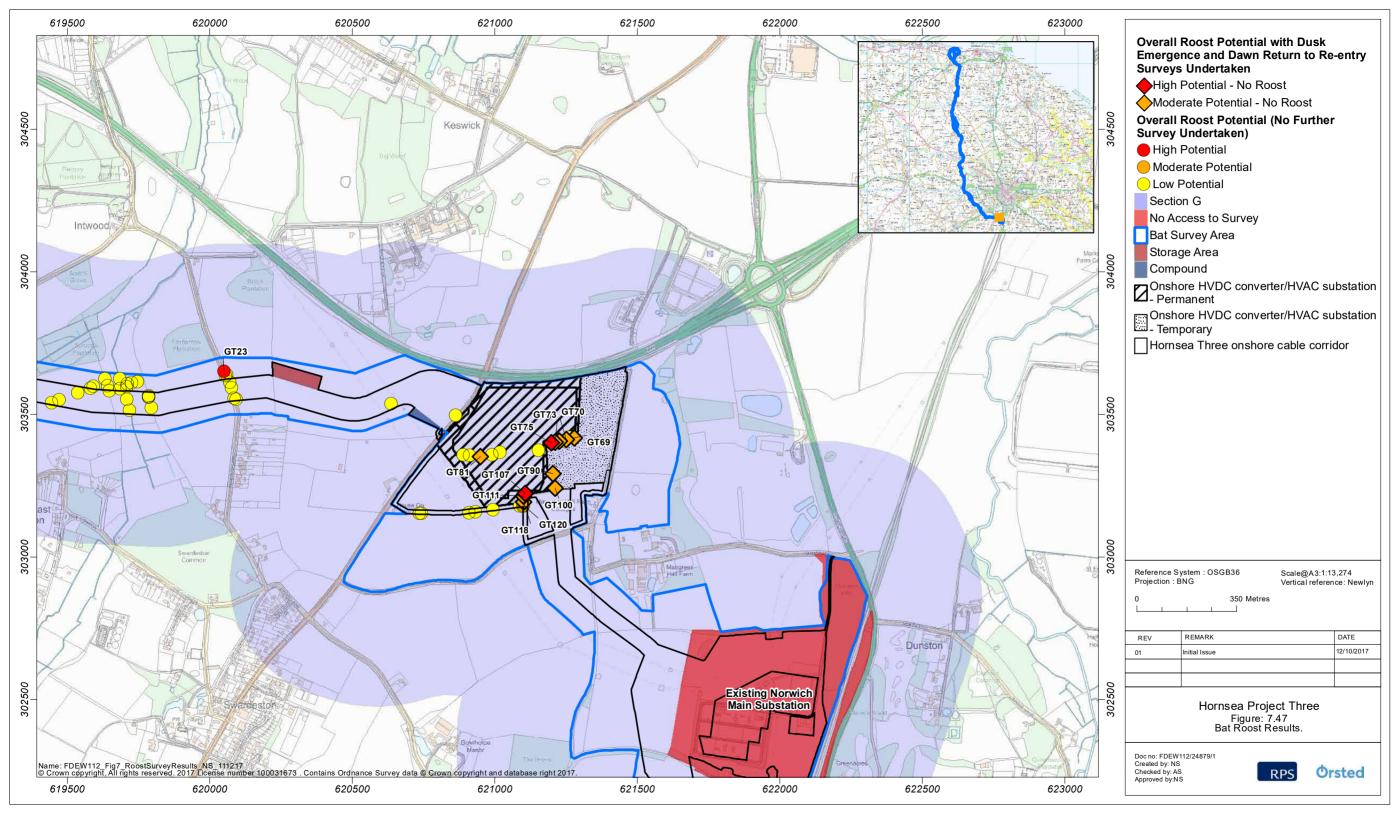


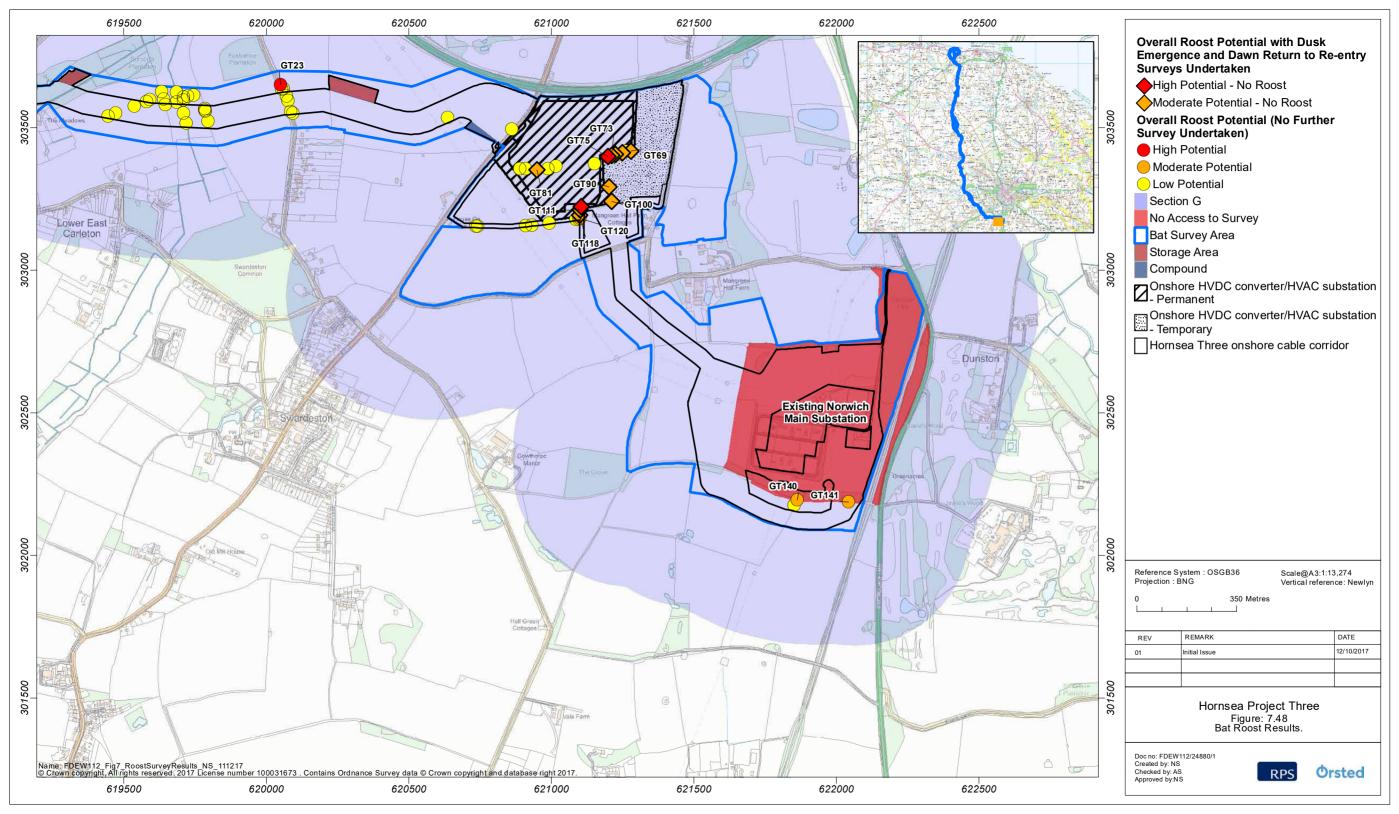


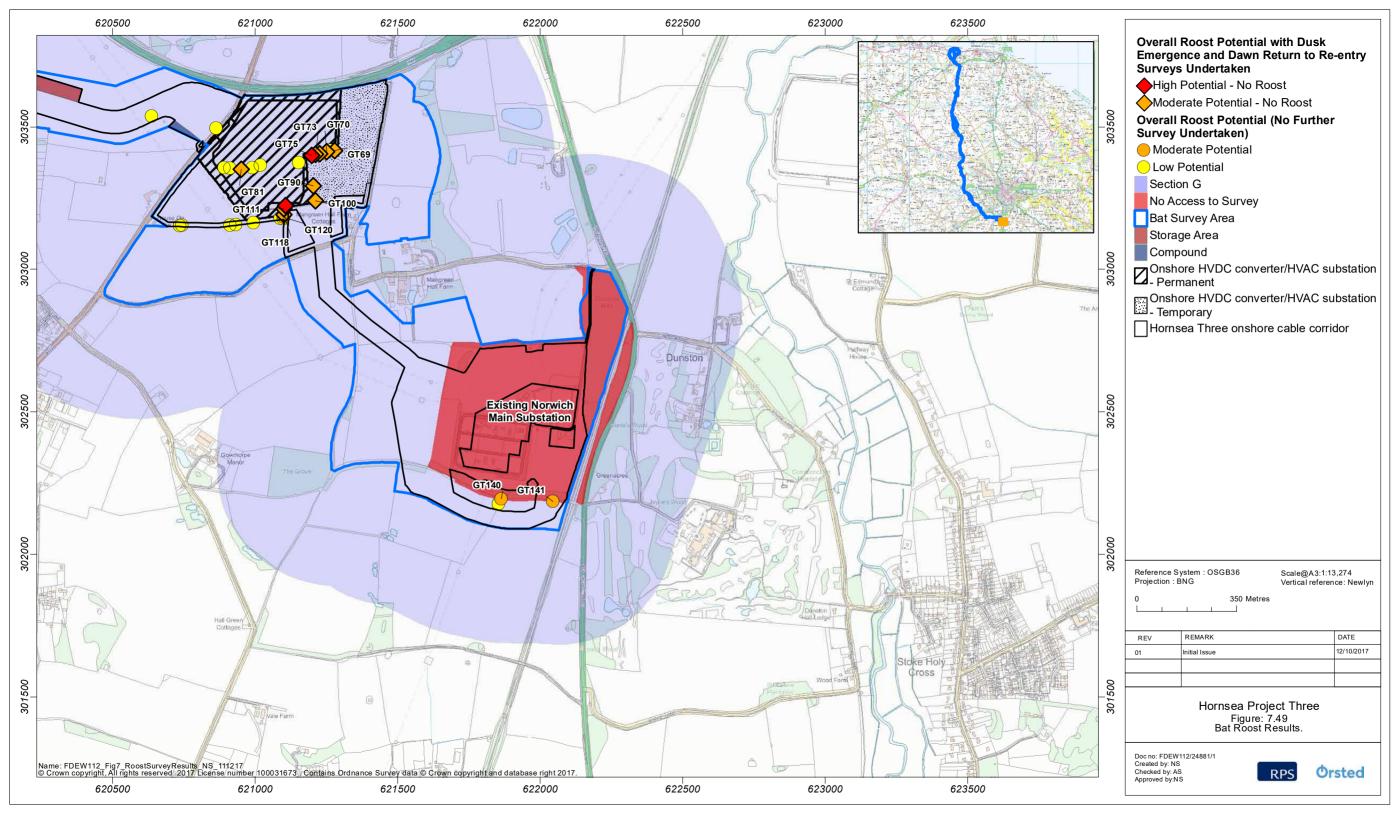














A.8 Photographs of confirmed roosts





Photograph 1: Tree BA1CT71. 1 x soprano pipistrelle recorded entering feature highlighted in red on 22nd August 2017. This roost is within the Hornsea Three onshore cable corridor.



Photograph 3:
Tree BA1FT23. 3 x soprano pipistrelle bats recorded entering feature highlighted in red on 4th October 2017 and 1 x soprano pipistrelle bat recorded emerging from the feature on the 25th of October2017. This roost is outside of the Hornsea Three onshore cable corridor.



Photograph 2: Tree BA1ET122. 4 x common pipistrelle bats recorded emerging from the feature highlighted in red on 10th August 2017. This roost is outside of the Hornsea Three onshore cable corridor.



Photograph 4: Tree BA1FT110. 17 x noctule bats recorded entering features highlighted in red on 20th July 2017. This roost is outside of the Hornsea Three onshore cable corridor.

Reference System : N/A Projection : N/A Scale@A3: N/A Vertical reference: N/A

REV	REMARK	DATE
01	Initial Issue	13/12/2017

Hornsea Project Three Figure 8.1: Photographs of Confirmed Roosts

Doc no: FDEW112/25200/1 Created by: DJ Checked by: NS Approved by:NS







Appendix B British bats

B.1 Introduction

B.1.1.1. A summary of the biology of British bats and the legislation and policy that protects them is provided below

B.2 Biology

B.2.1.1. There are 18 British species of bats, belonging to two families; the horseshoe bats (*Rhinolophidae*) and vesper bats (*Vespertilionidae*). Of the 18 species, two species are horseshoe bats and belong to the genus *Rhinolophus*, the remaining 16 species are vesper bats and are sub-divided between six genera; *Myotis, Eptesicus, Nyctalus, Pipistrellus, Plecotus* and *Barbastella*. Whilst there are many differences in the biology of the different species, all share certain characteristics and these are described below.

B.2.2 Roosting

- B.2.2.1. Bat species utilise roost sites of varying character; some preferring tree roosts whilst others are thought to be almost entirely dependent on built structures. Most bats will have a number of available roosting sites within their range, which they move between throughout the year. They are generally faithful to their roosts and a colony of bats may use the same roost site(s) year after year.
- B.2.2.2. Bats hibernate during the winter and will often gather to hibernate communally, remaining in the same hibernation roost from November to February/March. Hibernation roost sites typically have a constant low temperature and high humidity levels. Sites include caves, mines, thick walled buildings and hollow trees. With the arrival of spring, the ambient temperature and day length increase and bats begin to leave their hibernation roosts, either moving immediately to summer roost sites or occasionally, to a transitional roost.
- B.2.2.3. By June, breeding females will begin to congregate in maternity roost sites where they will give birth to, and nurture their young. Male bats are also occasionally found roosting in maternity roosts but during this period they mostly roost alone. Maternity roost sites include hollowed out trees, buildings and bridges. Male bats may use similar sites but also cracks and crevices in trees, under loose tiles or even amongst dense ivy growth during the summer period. Similar sites may be used by bats for brief periods during the night when they are resting or feeding on recently caught prey. In autumn, male bats establish mating roosts and are visited by females. A variety of roost sites may be used until the bats return to their hibernation roosts.

B.2.3 Foraging

B.2.3.1. All British bat species feed on invertebrates, with flies, beetles, moths and other insects making up much of their diet. Areas with an abundance of insect prey, such as woodlands, scrub, wetlands, river corridors and flower rich grasslands are therefore favoured foraging sites for bats. Habitats such as intensively farmed arable land, and amenity grassland support a much lower invertebrate abundance and are therefore less favoured foraging habitats for bats.

B.2.4 Commuting

- B.2.4.1. Bats favour roost sites in close proximity to suitable foraging habitat, however, given variation in prey availability, land-use change, and competition with other bats, for at least part of the year bats must commute between their roosts and foraging habitat.
- B.2.4.2. Commuting routes tend to follow linear features in the landscape such as hedgerows, woodland edges, rivers and other watercourses, particularly when crossing areas of less favourable habitat. The distance that bats commute between roost sites and foraging areas is dependent on local geography and also the species of bat. Some species will travel up to 18 km, though shorter distances are more typical.

B.3 Site designation

- B.3.1.1. All bat roosts in the UK receive protection under the following legislation:
 - Conservation of Habitats and Species (Amendment) Regulations 2012 (which replaces the Conservation (Habitats &c) Regulations 1994 as amended);
 - Wildlife and Countryside Act 1981, as amended;
 - The Countryside and Rights of Way Act 2000 (which amends the Wildlife and Countryside Act); and
 - Natural Environment and Rural Communities Act 2006 (which amends the Wildlife and Countryside Act).
- B.3.1.2. This is described in more detail under 'Species Protection' below. In addition, the most important sites for certain bat species in the UK receive further statutory protection through designation of Special Areas of Conservation (SACs) and/or Sites of Special Scientific Interest (SSSIs).







- B.3.1.3. Four UK bat species, the greater and lesser horseshoe, barbastelle and Bechstein's bats, are included on Annex II of the European Community Directive of the Conservation of Natural Habitats and of Wild Fauna and Flora, referred to as the Habitats Directive. The Habitats Directive is transposed into UK law by the Conservation of Habitats and Species (Amendment) Regulations 2012. This legislation requires that areas are designated as Special Areas of Conservation (SACs) to protect populations of these 4 bat species. To date, 26 SACs have been designated specifically to protect these species, and these sites are of international importance for the populations of bats that they support. A further 5 SACs have been designated, where the presence of at least one of the 4 bat species is a qualifying feature but not the primary reason for the statutory designation.
- B.3.1.4. Sites designated under the Wildlife and Countryside Act 1981 (WCA) are known as Sites of Special Scientific Interest (SSSIs). SSSIs received further protection under the Countryside and Rights of Way Act 2000 (CRoW) and the Natural Environment and Rural Communities (NERC) Act 2006.
- B.3.1.5. Some SSSIs are designated for the population(s) of bats that they support. The criteria for selecting SSSIs on the basis of their bat populations are provided in Guidelines for the Selection of Biological SSSIs (NCC, 1989):
 - Greater horseshoe bat all main breeding roosts and all winter roosts with 50 or more adult bats;
 - Lesser horseshoe bat all main breeding roosts containing 100 or more adult bats and all winter roosts containing 50 or more bats;
 - Barbastelle, Bechstein's and grey long-eared bats any traditional breeding roosts;
 - Natterer's, Daubenton's whiskered, Brandt's, serotine, noctule and Leisler's bats only exceptionally large breeding roosts or those with a long history of use; and
 - Mixed Roost sites all hibernacula containing four or more species and more than 50 individuals or three species and 100 or more individuals or two species and 150 or more individuals, though these criteria may be lower in some parts of the UK.
- B.3.1.6. Sites that qualify as SSSIs for the bat populations they support are considered to be of at least national importance.
- B.3.1.7. Sites designated for nature conservation at the county level may also include bat populations as part of the site qualifying criteria, although the criteria used may vary from county to county. Such sites are protected through the planning system and there is generally a presumption against development that affects such sites in local authority development plans.

B.3.2 Planning Policy

B.3.2.1. The National Planning Policy Framework (NPPF), 2012, gives further direction with respect to biodiversity conservation and land use change / development. The NPPF encourages local planning authorities to identify, conserve and restore, ecological networks, which should benefit amphibians, and it also states that planning permission should be refused if significant harm to biodiversity cannot be avoided, mitigated or compensated. In addition, the Government Circular 06/05, which relates to biodiversity conservation, states that all protected species, such as otters, are a material consideration for the planning authority when considering proposed developments.

B.4 Species protection

B.4.1 Legislation

- B.4.1.1. All bat species are protected by the Conservation of Habitats and Species (Amendment) Regulations 2012. The Regulations make it an offence, with very few exceptions, to:
 - Deliberately capture, injure or kill a bat;
 - Deliberately disturb a bat in such a way as to be likely:
 - o To impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
 - To impair its ability to hibernate or migrate; or
 - To affect significantly the local distribution or abundance of the species to which they belong.
 - Damage or destroy a breeding site or resting place of a bat; or
 - Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.
- B.4.1.2. In addition to the protection given to bats under the Conservation of Habitats and Species (Amendment) Regulations 2012 already described, bats are also partially protected in England under the WAC, which adds the following offences (with certain exceptions):
 - Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
 - Obstructing access to any structure or place used for shelter or protection.
- B.4.1.3. A roost is any structure or place used by bats for shelter or protection. As bats tend to re-use the same roosts year after year, the roost is protected whether bats are present or not, at the time.







- B.4.1.4. In this context of the legislation, 'damage' would include such operations as treatment of wood with toxic preservatives or use of rodenticides near roosting bats while 'disturbance' includes any work in or affecting a bat roost.
- B.4.1.5. If proposed actions, such as redevelopment of an existing building may lead to an offence under the above legislation, appropriate mitigation which seeks to avoid these impacts should be devised and implemented under licence from Natural England to allow the activity to proceed legally.
- B.4.1.6. In addition to the above legislation, all bats are protected under the Bonn Convention, within which the Agreement on the Conservation of Bats in Europe (1991) or EUROBAT, establishes a mechanism for international collaboration to conserve bats and their habitats, including foraging habitats. All European bat species are covered under Appendix II of the Conservation of Migratory Species of Wild Animals (CMS).
- B.4.1.7. The Hedgerow Regulations 1997 provide for the conservation of 'important' hedgerows and their constituent trees. The presence of a protected species such as bats is included in the assessment of whether a hedgerow is considered 'important' and applications to remove such hedgerows must be made to the planning authority.

B.5 UK Post-2010 Biodiversity Framework and Species of Principal Importance

- B.5.1.1. Published by the Joint Nature Conservation Committee (JNCC) and the Department for Environment, Farming and Rural Affairs (Defra) in July 2012, the UK Post-2010 Biodiversity Framework identifies UK-scale activities and priority works that are required to deliver the EU Biodiversity Strategy. Following a process of devolution, the framework is underpinned by country level strategies which are now largely responsible for continuing the work carried out under the former UK Biodiversity Action Plans (UK BAP). JNCC guidance dictates that UK BAP background information on priority species and habitats still remains relevant and it now forms the basis of country specific priority lists, which for England, are specified under Section 41 of the NERC Act 2006. Targets for England's biodiversity strategy 'Biodiversity 2020': A strategy for England's wildlife and ecosystem services, are informed by this list.
- B.5.1.2. Seven species of bats (Barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared, noctule and soprano pipistrelle) have been adopted as Species of Principal Importance for the Conservation of Biodiversity in England. This places a duty on all government departments to have regard for the conservation of these species and on the Secretary of State to further, or promote others to further, the conservation of these species. Furthermore, the NPPF states that local planning authorities should promote the protection and recovery of priority species populations linked to national and local targets, which presumably means those listed under the Section 41 of the NERC Act, the former UK BAP and on Local or Regional priorities species lists.

B.6 References

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Appendix C Bat habitat suitability assessment results

Table C.1 Full habitat suitability assessment results.

Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1A1	Monoculture	Connected	Continuous	<200 m from Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Low	Low	Low
BA1A10	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1A11	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1A12	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1A13	Hedgerow	Connected	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1A14	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1A15	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1A16	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Low	High	High
BA1A17	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1A18	Woodland	Moderate (distance 4-10 m)	Continuous	200-400 m from Habitat	In Habitat	200-400 m from Habitat	Rural	Low	Moderate	Low	Moderate
BA1A19	Heathland	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Low	Moderate
BA1A2	Monoculture	Connected	Continuous	<200 m from Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Low	Low
BA1A20	Heathland	High (distance <3 m)	Gappy	<200 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Low	Moderate
BA1A21	Woodland	Connected	Continuous	In Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1A22	No access										
BA1A23	Hedgerow	High (distance <3 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1A24	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1A25	Woodland	Connected	Continuous	In Habitat	In Habitat	<200 m from Habitat	Sub-Urban	Low	Moderate	Moderate	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1A26	Woodland	Connected	Continuous	In Habitat	In Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1A27	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Low	Low
BA1A28	No access		1						1		
BA1A29	No access										
BA1A3	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1A30	No access										
BA1A31	No access										
BA1A32	No access										
BA1A33	No access										
BA1A34	No access										
BA1A35	No access										
BA1A36	No access										
BA1A37	No access										
BA1A38	No access										
BA1A39	No access										
BA1A4	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1A40	No access						•		•	•	
BA1A41	No access										
BA1A42	No access										
BA1A43	No access										
BA1A44	No access										
BA1A45	No access										
BA1A46	No access										
BA1A47	No access										
BA1A48	No access										
BA1A49	No access										
BA1A5	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1A50	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Sub-Urban	Low	Low	Low	Low
BA1A58	Hedgerow	Moderate (distance 4- 10m)	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	High	Moderate	Moderate
BA1A59	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	High	Moderate	Moderate
	1	l	ı	i .	i .	1	1		1	1	1







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1A6	Hedgerow	Connected	Gappy	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1A60	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1A61	Woodland	Connected	Gappy	<200 m from Habitat	In Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1A62	Diverse Grassland	Low (distance >10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1A7	Hedgerow	Connected	Gappy	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1A71	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1A72	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1A73	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1A74	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	>400 m from Habitat	Sub-Urban	Moderate	Low	Moderate	Moderate
BA1A8	Hedgerow	Connected	Gappy	In Habitat	>400 m from Habitat	>400 m from Habitat	Urban	Low	Moderate	High	High
BA1A9	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1B1	Hedgerow	Connected	Continuous	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B13	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B14	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B15	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B16	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B17	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B18	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	High	Moderate	High
BA1B19	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Low	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1B2	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1B20	Monoculture	Moderate (distance 4-10 m)	Continuous	<200 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1B21	Hedgerow	Connected	Continuous	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1B22	Hedgerow	Connected	Continuous	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1B23	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1B24	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B25	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B26	Hedgerow	Connected	Continuous	In Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B3	Hedgerow	High (distance <3 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1B33	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B34	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B35	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B36	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1B37	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B38	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B39	Hedgerow	Connected	Gappy	In Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B4	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	High	High	High
BA1B40	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B41	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1B42	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1B43	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B44	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B45	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B46	Hedgerow	High (distance <3 m)	Gappy	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Negligible	High	High	High
BA1B47	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Negligible	High	High	High
BA1B48	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Negligible	High	Moderate	High
BA1B49	Hedgerow	Moderate (distance 4-10m)	Gappy	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Negligible	Low	Low	Low
BA1B5	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B50	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Negligible	Low	Low	Low
BA1B51	Hedgerow	High (distance <3 m)	Gappy	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1B52	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	High	High
BA1B53	No access		•						•		
BA1B54	No access										
BA1B55	No access										
BA1B56	No access										
BA1B57	No access										
BA1B58	No access										
BA1B59	No access										
BA1B61	No access										
BA1B62 BA1B63	No access										
BA1B63	No access										
BA1B65	No access										
BA1B67	No access										
BA1B68	No access										
BA1B69	No access										
PAIDOS	110 000000										







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1B7	Hedgerow	Connected	Continuous	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	High	High
BA1B70	No access										
BA1B71	No access										
BA1B72	No access										
BA1B74	No access										
BA1B75	No access										
BA1B76	No access										
BA1B77	No access										
BA1B78	No access										
BA1B79	No access		1				T			T	
BA1B8	Hedgerow	Connected	Continuous	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1B80	No access		•						•		
BA1B81	No access										
BA1B82	No access										
BA1B83	No access										
BA1B84	No access										
BA1B85	No access										
BA1B86	No access										
BA1B87	No access										
BA1B88	No access										
BA1B89	No access										
BA1B90	No access										
BA1B91	No access										
BA1B92	No access										
BA1B93	No access										
BA1B94	No access	1	1	Т	T		T	Т	1	T	1
BA1C1	Hedgerow	Connected	Gappy	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Moderate	Moderate
BA1C10	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	>400 m from Habitat	In Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1C100	No access										
BA1C101	No access										
BA1C102	No access										
BA1C103	No access										
BA1C104	No access										
BA1C105	No access										
BA1C106	No access										
BA1C107	No access										







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1C108	No access										
BA1C109	No access										
BA1C11	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	>400 m from Habitat	In Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1C110	No access								•		
BA1C111	No access										
BA1C112	No access										
BA1C12	Hedgerow	Moderate (distance 4-10 m)	Gарру	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C123	Hedgerow	High (distance <3 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1C13	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C130	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1C131	Hedgerow	High (distance <3 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1C133	Diverse Grassland	Connected	Continuous	In Habitat	200-400 m from Habitat	In Habitat	Rural	Low	High	High	High
BA1C14	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	Moderate	High
BA1C15	Monoculture	Moderate (distance 4-10 m)	Continuous	<200 m from Habitat	<200 m from Habitat	In Habitat	Rural	Moderate	Moderate	Low	Moderate
BA1C16	Woodland	Moderate (distance 4-10 m)	Gappy	<200 m from Habitat	In Habitat	In Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C17	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1C18	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C19	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	200 -400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C20	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C21	Monoculture	Low (distance >10 m)	Gappy	<200 m from Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Low	Low







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1C22	Monoculture	Low (distance >10 m)	Gappy	<200 m from Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Low	Low
BA1C23	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C24	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1C25	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1C26	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1C27	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C28	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1C3	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C30	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Low	Moderate
BA1C31	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Low	Low	Low
BA1C33	Hedgerow	High (distance <3 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1C34	Hedgerow	High (distance <3 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1C35	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C36	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C37	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C38	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C39	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C4	Monoculture	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	In Habitat	Rural	Low	Low	Low	Low







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1C40	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C41	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1C42	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1C43	No access										
BA1C44	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	In Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C45	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Low	Low	Low
BA1C46	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C47	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C48	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C49	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C5	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C50	Woodland	Moderate (distance 4- 10 m)	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1C51	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C52	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Low	Moderate	Moderate
BA1C53	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Low	Moderate	Moderate
BA1C54	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Low	Moderate	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1C55	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1C56	Woodland	Moderate (distance 4-10 m)	Continuous	In Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1C57	Woodland	Moderate (distance 4- 10 m)	Continuous	In Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1C61	No access										
BA1C62	No access										
BA1C63	No access										
BA1C64	No access										
BA1C65	No access										
BA1C66	No access										
BA1C67	No access										
BA1C68	No access										
BA1C69	No access										
BA1C70	No access										
BA1C71	No access										
BA1C72	No access										
BA1C73	No access										
BA1C74	No access										
BA1C75	No access										
BA1C76	No access										
BA1C77	No access										
BA1C78	No access										
BA1C79	No access										
BA1C80	No access										
BA1C81	No access										
BA1C82	No access										
BA1C83	No access										
BA1C84	No access										
BA1C85	No access										
BA1C86	No access										
BA1C87	No access										
BA1C88	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	In Habitat	Rural	Low	Moderate	High	High
BA1C89	No access		l .							l .	







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1C9	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Moderate	Moderate
BA1C90	No access	<u> </u>	1			1	l	l	1	1	1
BA1C91	No access										
BA1C92	No access										
BA1C93	No access										
BA1C94	No access										
BA1C95	No access										
BA1C96	No access										
BA1C97	No access										
BA1C98	No access										
BA1C99	No access			<u> </u>							
BA1D1	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1D10	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1D11	Woodland	Low (distance >10 m)	Continuous	In Habitat	In Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1D12	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1D13	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1D14	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	In Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1D15	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1D16	No access										
BA1D17	Hedgerow	Low (distance >10 m)	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1D18	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1D19	No access		•	•		•			•	•	•
BA1D2	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1D20	No access	<u>I</u>	1	<u> </u>	<u>I</u>	1	<u> </u>	<u>I</u>	1	1	I.
BA1D21	No access										
BA1D22	No access										
BA1D23	No access										







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1D24	No access										
BA1D25	No access										
BA1D26	No access										
BA1D27	No access										
BA1D28 BA1D29	No access										
BATD29	No access									T	
BA1D3	Hedgerow	Low (distance >10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1D30	No access										
BA1D31	No access										
BA1D32	No access										
BA1D33	No access										
BA1D34	No access										
BA1D35	No access										
BA1D36	No access										
BA1D37 BA1D38	No access										
BA1D36	No access										
BA1D4	Woodland	Low (distance >10 m)	Continuous	<200 m from Habitat	In Habitat	200-400 m from Habitat	Rural	Moderate	High	High	High
BA1D40	No access										
BA1D41	No access										
BA1D5	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1D6	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	<200m from Habitat	<200m from Habitat	Rural	Low	Moderate	High	High
BA1D7	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1D8	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1D9	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1E1	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1E10	No access										
BA1E11	No access										
BA1E12	No access										
BA1E13	Woodland	Low (distance >10 m)	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1E14	Woodland	High (distance <3 m)	Continuous	200-400 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1E15	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1E16	Woodland	Moderate (distance 4-10 m)	Gappy	<200 m from Habitat	In Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1E17	Woodland	Low (distance >10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1E18	Woodland	Low (distance >10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1E19	Woodland	Low (distance >10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1E2	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1E20	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Negligible	High	High	High
BA1E21	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1E23	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1E25	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	N/A	Rural	Low	High	High	High
BA1E26	Monoculture	Low (distance >10 m)	Gappy	>400 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Low	Low
BA1E27	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1E28	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1E29	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1E3	Diverse Grassland	Low (distance >10 m)	Continuous	<200 m from Habitat	<200 m from Habitat	In Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1E30	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1E31	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1E32	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1E35	No access						L				
BA1E36	No access										
BA1E38	Hedgerow	Moderate (distance 4-10 m)	Continuous	>400 m from Habitat	<200 m from Habitat	<200 m from Habitat	Sub-Urban	Moderate	Low	Moderate	Moderate
BA1E39	No access		_							_	
BA1E4	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	In Habitat	Rural	Low	High	High	High
BA1E40	No access	L	1	I	I		l		1	<u> </u>	
BA1E41	No access										
BA1E42	No access										
BA1E43	No access										
BA1E44	No access										
BA1E45	No access										
BA1E46	No access										
BA1E47	No access										
BA1E48	No access										
BA1E49	No access										
BA1E5	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1E50	No access		1	1						•	
BA1E51	No access										
BA1E52	No access										
BA1E53	No access										
BA1E54	No access										
BA1E55	No access										
BA1E56	No access										
BA1E57	No access										
BA1E58	No access										
BA1E59	No access										
BA1E6	Woodland	Connected	Gappy	<200 m from Habitat	In Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1E60	No access	ı		ı	ı	ı	ı		1	- I	1
BA1E61	No access										
BA1E63	No access										
BA1E64	No access										
BA1E65	No access										
BA1E66	No access										







Habitat Parcel	Dominant Habitat	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
Number	Present										
BA1E67	No access										
BA1E68	No access										
BA1E69	No access	1		T	1	1	1	T	1	1	1
BA1E7	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1E70	No access										
BA1E71	No access										
BA1E72	No access										
BA1E73	No access										
BA1E74	No access										
BA1E75	No access										
BA1E76	No access										
BA1E77	No access										
BA1E78	No access										
BA1E79	No access										
BA1E8	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1E80	No access	•	•			•	•		•	•	•
BA1E81	No access										
BA1E82	No access										
BA1E83	No access										
BA1E84	No access										
BA1E85	No access										
BA1E86	No access										
BA1E87	No access										
BA1E88	No access										
BA1E88	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1E89	No access										
BA1E89	Monoculture	Low (distance >10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Low	Moderate
BA1E9	Diverse Grassland	Moderate (distance 4-10 m)	Gappy	<200 m from Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1E90	No access	•		•	•	•	•	•	•	•	•
BA1E90	Hedgerow	Moderate (distance 4-10 m)	Gappy	<200 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1F1	Woodland	Moderate (distance 4- 10 m)	Gappy	>400 m from Habitat	In Habitat	>400 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1F10	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F10	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F100	No access										
BA1F101	No access										
BA1F102	No access										
BA1F103	No access										
BA1F104	No access										
BA1F105	No access										
BA1F106	No access										
BA1F107	No access										
BA1F108	No access										
BA1F109	No access										
BA1F11	Hedgerow	High (distance <3 m)	Continuous	In Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	High	High
BA1F110	No access										
BA1F111	No access										
BA1F112	No access										
BA1F113	No access										
BA1F114	No access										
BA1F115	No access										
BA1F115 BA1F116	No access										
BA1F116											
BA1F116	No access										
BA1F116 BA1F117	No access No access	Moderate (distance 4-10 m)	Gappy	<200 m from Habitat	200-400 m from Habitat	<200 m from Habitat	Rural	Low	Low	Low	Low
BA1F116 BA1F117 BA1F118	No access No access Diverse		Gарру Gарру	<200 m from Habitat 200-400 m from Habitat	200-400 m from Habitat >400 m from Habitat	<200 m from Habitat In Habitat	Rural Rural	Low	Low	Low	Low
BA1F116 BA1F117 BA1F118 BA1F12	No access No access Diverse Grassland	10 m)									
BA1F116 BA1F117 BA1F118 BA1F12 BA1F120	No access No access Diverse Grassland Aquatic	10 m) Low (distance >10 m)	Gарру	200-400 m from Habitat	>400 m from Habitat	In Habitat	Rural	Low	High	Moderate	High
BA1F116 BA1F117 BA1F118 BA1F12 BA1F120 BA1F121	No access No access No access Diverse Grassland Aquatic Hedgerow	Low (distance >10 m) High (distance <3 m)	Gappy Continuous	200-400 m from Habitat <200 m from Habitat	>400 m from Habitat 200-400 m from Habitat	In Habitat <200m from Habitat	Rural	Low	High Moderate	Moderate High	High High







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1F132	No access		1						1		
BA1F138	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1F14	Diverse Grassland	Moderate (distance 4- 10 m)	Gappy	<200 m from Habitat	>400 m from Habitat	In Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1F15	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1F16	Hedgerow	High (distance <3 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F17	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1F18	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F19	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1F2	Woodland	Moderate (distance 4- 10 m)	Continuous	>400 m from Habitat	In Habitat	>400 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1F20	No access	I	1			I	I	I	1	1	
BA1F21	Hedgerow	Moderate (distance 4-10 m)	Gарру	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F22	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F23	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1F24	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1F25	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F26	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F27	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1F28	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Sub-Urban	Low	Moderate	High	High
BA1F29	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1F3	Hedgerow	Low (distance <3 m)	Continuous	<200 m from Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Low	Low
BA1F30	Heathland	Moderate (distance 4-10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1F31	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400m from Habitat	<200 m from Habitat	Sub-Urban	Moderate	Moderate	Moderate	Moderate
BA1F32	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F33	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F34	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F35	Hedgerow	Moderate (distance 4- 10 m)	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F36	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F37	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1F38	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	In Habitat	Rural	Low	Moderate	High	High
BA1F39	Hedgerow	Low (distance >10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Moderate	Low	Moderate	Moderate
BA1F4	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1F40	No access		1						1		
BA1F41	Hedgerow	Low (distance >10 m)	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1F42	No access										
BA1F43	Monoculture	Moderate (distance 4-10 m)	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Sub-Urban	Low	High	Moderate	High







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1F44	Monoculture	Moderate (distance 4-10 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Sub-Urban	Moderate	Low	Moderate	Moderate
BA1F45	No access								•		•
BA1F46	Hedgerow	Low (distance >10 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	High	Low	Moderate	Moderate
BA1F47	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1F48	Hedgerow	High (distance <3 m)	Gappy	200-400 m from Habitat	<200 m from Habitat	<200 m from Habitat	Rural	High	Moderate	Moderate	Moderate
BA1F49	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1F5	No access										
BA1F50	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1F51	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1F52	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1F53	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1F54	Woodland	Moderate (distance 4-10 m)	Gарру	In Habitat	In Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1F55	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	High	High
BA1F56	Woodland	Moderate (distance 4-10 m)	Gappy	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1F57	Woodland	Connected	Continuous	N/A	In Habitat	>400 m from Habitat	Rural	Moderate	Moderate	High	High
BA1F58	No access										
BA1F59	No access										
BA1F6	No access										
BA1F60	No access										
BA1F61	No access										
BA1F62	No access										
BA1F63	No access										
BA1F64 BA1F65	No access No access										
BA1F65 BA1F66	No access										
DA I FOO	110 000633										







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1F67	No access										
BA1F68	No access										
BA1F69	No access										
BA1F7	No access										
BA1F70	No access										
BA1F71	No access										
BA1F72	No access										
BA1F73	No access										
BA1F74	No access										
BA1F75	No access										
BA1F76	No access										
BA1F77	No access										
BA1F78											
BA1F79	No access		T					T	T	Γ	
BA1F8	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Negligible	High	High	High
BA1F80	No access										
BA1F81	No access										
BA1F82	No access										
BA1F83	No access										
BA1F84	No access										
BA1F85	No access										
BA1F86	No access										
BA1F87	No access										
BA1F88	No access										
BA1F89	No access		1		T	<u>, </u>		T	1		
BA1F9	Diverse Grassland	High (distance <3 m)	Continuous	<200 m from Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Low	Moderate
BA1F90	No access										
BA1F91	No access										
BA1F92	No access										
BA1F93	No access										
BA1F94	No access										
BA1F95	No access										
BA1F96	No access										
BA1F97	No access										
BA1F98	No access										
BA1F99	No access										
BA1G1	Hedgerow	High (distance <3 m)	Gappy	<200 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Moderate	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1G10	Woodland	High (distance <3 m)	Continuous	In Habitat	In Habitat	>400 m from Habitat	Rural	Negligible	High	High	High
BA1G100	No access						L		L		
BA1G101	No access										
BA1G102	No access										
BA1G103	No access										
BA1G104	No access										
BA1G105	No access										
BA1G106	No access										
BA1G107	No access										
BA1G108	No access										
BA1G109	No access										
BA1G11	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1G110	No access		1				1		1	1	
BA1G111	No access										
BA1G112	No access										
BA1G113	No access										
BA1G114	No access										
BA1G116	No access										
BA1G118	No access										
BA1G119	No access										
BA1G12	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Negligible	High	High	High
BA1G120	No access										
BA1G121	No access										
BA1G122	No access										
BA1G123	No access										
BA1G124	No access										
BA1G125	No access										
BA1G126	No access										
BA1G127	No access										
BA1G128	No access	T	1	T	T	T	T		1	1	T
BA1G13	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1G130	No access										
BA1G131	No access										
BA1G132	No access										,
BA1G133	No access										,
BA1G134	No access										







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1G139	No access		0 "			000 400 6 11 17 1				<u> </u>	1.
BA1G14	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Low	Low
BA1G140	No access										
BA1G141	No access										
BA1G142	No access										
BA1G143	No access										
BA1G144	No access										
BA1G146	No access										
BA1G147	No access										
BA1G149	No access	T	1	T	T	T	T		ī	1	
BA1G15	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Negligible	High	High	High
BA1G150	No access										
BA1G153	No access										
BA1G154	No access										
BA1G156	No access										
BA1G158	No access										
BA1G159	No access										
BA1G16	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G160	No access	1		1	1		1		1	1	1
BA1G17	Hedgerow	High (distance <3 m)	Continuous	In Habitat	In Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1G176	Woodland	Connected	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1G18	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1G19	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1G2	Diverse Grassland	Moderate (distance 4- 10 m)	Continuous	>400 m from Habitat	>400 m from Habitat	N/A	Rural	High	Moderate	Moderate	Moderate
BA1G20	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Moderate	High	High	High
BA1G21	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1G22	Monoculture	High (distance <3 m)	Gарру	<200 m from Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Low	Moderate







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1G23	Woodland	Connected	Continuous	In Habitat	In Habitat	<200 m from Habitat	Rural	Moderate	High	High	High
BA1G24	Woodland	Connected	Continuous	In Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1G25	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1G26	Woodland	Connected	Continuous	<200 m from Habitat	<200 m from Habitat	In Habitat	Rural	Negligible	High	High	High
BA1G27	Monoculture	High (distance <3 m)	Gappy	<200 m from Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1G28	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1G29	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Negligible	Moderate	High	High
BA1G3	Hedgerow	High (distance <3 m)	Gappy	<200 m from Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1G30	Hedgerow	Connected	Gappy	In Habitat	<200 m from Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1G31	Hedgerow	Connected	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1G32	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	200-400 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G33	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	<200 m from Habitat	200-400 m from Habitat	Rural	Moderate	Moderate	Moderate	Moderate
BA1G34	Hedgerow	Moderate (distance 4- 10 m)	Continuous	In Habitat	200-400 m from Habitat	200-400 m from Habitat	Rural	High	Moderate	Moderate	Moderate
BA1G35	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	High	High	High
BA1G36	Hedgerow	Low (distance >10 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	High	High
BA1G37	No access								1	T	
BA1G38	Hedgerow	Connected	Gappy	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Moderate	High	High
BA1G39	Hedgerow	Low (distance >10 m)	Continuous	In Habitat	>400 m from Habitat	200-400 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1G4	Hedgerow	Moderate (distance 4- 10 m)	Gарру	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Moderate	Low	Low	Low







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1G40	Hedgerow	Connected	Continuous	In Habitat	>400 m from Habitat	>400 m from Habitat	Rural	Low	Low	Low	Low
BA1G41	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G42	Hedgerow	Moderate (distance 4-10 m)	Gappy	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G43	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	In Habitat	Rural	Low	High	High	High
BA1G44	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	In Habitat	Rural	Low	High	High	High
BA1G45	Hedgerow	High (distance <3 m)	Continuous	In Habitat	>400 m from Habitat	<200 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G46	No access	1		1		1		-		1	
BA1G47	No access										
BA1G48	No access										
BA1G49	Woodland	High (distance <3 m)	Gappy	200-400 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	Low	Moderate	Moderate
BA1G5	Hedgerow	High (distance <3 m)	Continuous	In Habitat	<200 m from Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G6	Woodland	High (distance <3 m)	Continuous	<200 m from Habitat	In Habitat	<200 m from Habitat	Rural	Low	High	High	High
BA1G6	Woodland	Moderate (distance 4-10 m)	Continuous	<200 m from Habitat	In Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G7	Hedgerow	Moderate (distance 4-10 m)	Continuous	In Habitat	In Habitat	>400 m from Habitat	Rural	Low	Moderate	Moderate	Moderate
BA1G8	Woodland	Connected	Continuous	In Habitat	In Habitat	>400 m from Habitat	Rural	Low	High	High	High
BA1G87	No access	•	•			•	•	•	•	•	
BA1G88	No access										
BA1G89	No access										
BA1G9	No access										
BA1G90	No access										
BA1G91	No access										
BA1G92	No access										
BA1G93	No access										
BA1G94	No access										
BA1G95	No access										
BA1G96	No access										







Habitat Parcel Number	Dominant Habitat Present	Connectivity to Other Habitat	Continuity of Habitat	Distance to nearest Hedge	Distance to nearest Woodland	Distance to nearest Water	Setting	Level of Disturbance	Foraging Potential	Commuting Potential	Overall Potential
BA1G97	No access										
BA1G98	No access										
BA1G99	No access										







Appendix D Weather data recorded during the static monitoring surveys

D.1.1.1. Due to the large number of static monitoring locations at which weather conditions were recorded, weather data are only given for two representative points located along the route. These were Wood Dalling (Groups 1-46, 104-109 & 110-113) and Taverham (Groups 47-101, 102-103 & 114), Norfolk. The data were obtained from Weather Underground (Weather Underground, undated).

Table D.2: Weather data recorded during static monitoring surveys.

Visit 1

Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability			
Wood Dalling (North)									
03-04/05/2017	11	8	None	4	66	Suitable			
04-05/05/2017	8	6	None	5	66	Suitable			
05-06/05/2017	10	7	None	4	66	Suitable			
06-07/05/2017	9	8	None	3	100	Suitable			
07-08/05/2017	8	8	None	5	66	Suitable			
08-09/05/2017	9	8	None - light showers/drizzle	3	100	Sub-optimal			
09-10/05/2017	8	2	None	2	66	Suitable			
10-11/05/2017	7	5	None	3	100	Suitable			
11-12/05/2017	10	9	None	3	66	Suitable			
12-13/05/2017	16	10	None/Unknown	3	66	Suitable			
13-14/05/2017	13	11	None	3	66	Suitable			
14-15/05/2017	17	10	None	3	0	Suitable			
16-17/05/2017	16	15	Light rain	3	100	Sub-optimal			
17-18/05/2017	12	10	Persistent rain	2	100	Unsuitable			
18-19/05/2017	11	10	Persistent rain	5	100	Unsuitable			
19-20/05/2017	10	9	Persistent light showers	2	100	Unsuitable			
20-21/05/2017	10	9	None- light showers/drizzle	3	66	Sub-optimal			







Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
21-22/05/2017	16	10	None	4	33	Suitable
24-25/05/2017	17	13	None	4	33	Suitable
25-26/05/2017	19	14	None	3	0	Suitable
26-27/05/2017	16	15	None	4	0	Suitable
27-28/05/2017	21	14	None	4	33	Suitable
28-29/05/2017	18	13	None-light showers/drizzle	3	66	Sub-optimal
29-30/05/2017	15	13	Intermittent rain showers	2	100	Suitable
Taverham (South)						
25-26/05/2017	18	11	None	1	0	Optimal
27-28/05/2017	20	13	None	3	0	Suitable
29-30/05/2017	16	14	None-light showers/drizzle	2	100	Suitable
31/05/2017-01/06/2017	14	11	None	2	33	Optimal
01-02/06/2017	18	12	None	2	33	Optimal
02-03/06/2017	16	14	None	2	66	Optimal
03-04/06/2017	17	11	None-light showers/drizzle	3	33	Sub-optimal
04-05/06/2017	17	12	None	3	33	Suitable
05-06/06/2017	14	13	None-light showers/drizzle	4	100	Sub-optimal
06-07/06/2017	12	11	None-light showers/drizzle	5	33	Sub-optimal







Visit 2

Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
Wood Dalling (North)						
12-13/06/2017	16	12	None	3	33	Suitable
13-14/06/2017	20	13	None-light rain/drizzle	3	66	Sub-optimal
14-15/06/2017	19	15	None	4	33	Suitable
15-16/06/2017	19	12	None	4	66	Suitable
16-17/06/2017	19	16	None	3	100	Suitable
17-18/06/2017	24	17	None	3	33	Suitable
18-19/06/2017	25	19	None	4	0	Suitable
19-20/06/2017	23	16	None	3	33	Suitable
21-22/06/2017	21	20	None	4	66	Suitable
23-24/06/2017	19	17	None-light rain/drizzle	4	100	Sub-optimal
25-26/06/2017	17	13	None-light rain/drizzle	5	66	Sub-optimal
26-27/06/2017	14	11	None	3	66	Suitable
28-29/06/2017	14	11	None-light rain/drizzle	5	100	Sub-optimal
30/06/2017-01/07/2017	15	14	None-light rain/drizzle	5	100	Sub-optimal
02-03/07/2017	19	14	None	4	66	Suitable
03-04/07/2017	18	13	None	2	100	Optimal
04-05/07/2017	17	12	None	3	66	Suitable
05-06/07/2017	16	15	None	2	66	Optimal
06-07/07/2017	21	17	None	2	66	Optimal
07-08/07/2017	22	16	None- Rain	3	66	Sub-optimal
08-09/07/2017	15	13	None	4	33	Suitable
22-23/08/2017	19	17	None -Rain	3	66	Sub-optimal
23-24/08/2017	20	13	None	3	33	Suitable
24-25/08/2017	18	10	None	3	33	Suitable
25-26/08/2017	18	15	None	4	66	Suitable
26-27/08/2017	19	12	None	3	100	Suitable
27-28/08/2017	17	14	None	4	66	Suitable







Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
20-21/09/2017	16	13	None	5	66	Suitable
22-23/09/2017	14	11	None	3	33	Suitable
24-25/09/2017	15	14	None	4	33	Suitable
03-04/10/2017	13	10	None	5	66	Suitable
05-06/10/2017	13	11	None-Rain	6	66	Unsuitable
07-08/10/2017	12	11	Persistant rain	4	66	Unsuitable
Taverham (South)						
28-29/06/2017	13	11	None-light rain/drizzle	4	100	Sub-optimal
29-30/06/2017	16	10	None	1	33	Optimal
30/06/2017 - 01/07/2017	15	13	None-light rain/drizzle	4	100	Sub-optimal
01-02/07/2017	18	15	None	3	100	Suitable
02-03/07/2017	16	13	None	3	0	Suitable
03-04/07/2017	17	12	None	1	33	Optimal
05-06/07/2017	18	13	None	1	100	Optimal
06-07/07/2017	20	14	None	1	0	Optimal
07-08/07/2017	19	17	None	1	33	Optimal
08-09/07/2017	15	11	None	2	33	Optimal
09-10/07/2017	20	15	None	2	0	Optimal
10-11/07/2017	17	13	Rain	3	33	Unsuitable
12-13/07/2017	17	8	None	1	33	Optimal
14-15/07/2017	17	13	None	2	33	Optimal
31/07/2017-01/08/2017	20	11	None	2	33	Optimal
02-03/08/2017	18	16	None-Rain	4	100	Sub-optimal
04-05/08/2017	19	14	None	2	33	Optimal
14-15/08/2017	19	13	None	2	0	Optimal
15-16/08/2017	21	9	None	2	0	Optimal
16-17/08/2017	20	15	None-rain 3		33	Sub-optimal
17-18/08/2017	21	15	None	3	33	Suitable
18-19/08/2017	16	8	None-light rain/drizzle	3	33	Suitable







Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
19-20/08/2017	15	10	None	4	0	Suitable
22-23/08/2017	20	15	None-light rain/drizzle	2	33	Suitable
24-25/08/2017	19	10	None	2	0	Optimal
26-27/08/2017	18	12	None	1	0	Optimal
28-29/08/2017	22	14	None	3	0	Suitable
29-30/08/2017	16	14	None	3	100	Suitable
30-31/08/2017	12	8	None-light rain/drizzle	2	100	Sub-optimal
31/08/2017-01/09/2017	15	8	None-light rain/drizzle	2	66	Sub-optimal
01-02/09/2017	15	10	None	2	66	Optimal
02-03/09/2017	12	9	None	2	0	Suitable
03-04/09/2017	18	14	None	2	33	Suitable
04-05/09/2017	19	17	None	3	66	Suitable
05-06/09/2017	20	11	None-light rain/drizzle	3	66	Sub-optimal
06-07/09/2017	15	11	None	3	100	Suitable
07-08/09/2017	17	14	Persistant rain	3	100	Unsuitable
08-09/09/2017	12	8	None	2	33	Optimal
09-10/09/2017	11	7	None	2	66	Optimal
10-11/09/2017	15	11	None	4	66	Suitable
11-12/09/2017	14	10	None	4	33	Suitable
12-13/09/2017	15	12	Scattered rain	5	66	Sub-optimal
15-16/09/2017	12	7	None	3	33	Suitable
20-21/09/2017	16	13	None	2	66	Optimal
21-22/09/2017	18	6	None-light rain/drizzle	3	66	Sub-optimal
22-23/09/2017	14	10	None	2	33	Optimal
23-24/09/2017	16	11	None	2	33	Optimal
24-25/09/2017	15	12	None	2	33	Optimal
28-29/09/2017	16	11	None	2	33	Optimal
30/09/2017-01/10/2017	14	13	None-light rain/drizzle	3	66	Sub-optimal
02-03/10/2017	14	9	None	4	0	Suitable







Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
04-05/10/2017	15	11	None- light rain/drizzle	6	33	Unsuitable
06-07/10/2017	12	8	None-light rain/drizzle	4	33	Sub-optimal
09-10/10/2017	13	11	None-light rain/drizzle	3	33	Sub-optimal
10-11/10/2017	16	13	None	4	66	Suitable
11-12/10/2017	16	10	None-light rain/drizzle	5	33	Sub-optimal
12-13/10/2017	13	10	None	3	33	Suitable
13-14/10/2017	19	15	None	4	100	Suitable
14-15/10/2017	17	13	None	3	33	Suitable

Visit 3

Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
Wood Dalling (North)						
13-14/09/2017	14	8	None	4	33	Suitable
14-15/09/2017	13	7	None-Rain	4	66	Unsuitable
15-16/09/2017	13	10	None-Rain	5	66	Unsuitable
16-17/09/2017	13	8	None-light rain/drizzle	3	66	Sub-optimal
17-18/09/2017	14	13	None-light rain/drizzle	5	33	Sub-optimal
18-19/09/2017	13	12	None-Rain	5	66	Unsuitable
21-22/09/2017	18	8	None-Rain	4	66	Suitable?
23-24/09/2017	16	12	None	3	66	Suitable
25-26/09/2017	16	14	None-Rain	3	33	Suitable?
27-28/09/2017	16	14	None-Rain	2-4	0	Sub-Optimal
28-29/09/2017	16	12	None-light rain/drizzle	2-5	66	Suitable
29-30/09/2017	14	11	None	2-3	100	Suitable
30/09/2017-1/10/2017	15	10	None-Rain	2-4	100	Sub-Optimal
02-03/10/2017	14	8	Showers	4-5	100	Sub-Optimal
05-06/10/2017	13	11	None-Rain	6	66	Unsuitable







Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
averham (South)						
14-15/09/2017	11	5	None-Light rain	1-3	33	Sub-Optimal
6-17/09/2017	12	7	None-Rain	1-2	66	Suitable
18-19/09/2017	13	10	None-Heavy Rain	3	66	Suitable
21-22/09/2017	18	6	None-Light rain	1-3	66	Suitable
23-24/09/2017	16	11	None	0-3	0	Suitable
25-26/09/2017	16	13	None	1-2	66	Suitable
28-29/09/2017	16	11	None-Light rain	1-2	66	Suitable
30/09/2017-1/10/2017	14	13	None-Light rain	2-3	66	Suitable
02-03/10/2017	14	9	None	3-4	0	Suitable
05-06/10/2017	12	6	None	5	30	Suitable
07-08/10/2017	12	9	Light Rain	5	100	Sub-Optimal
09-10/10/2017	13	11	None-light rain/drizzle	3	33	Sub-optimal
11-12/10/2017	18	13	None-LightRain	4	80	Sub-Optimal
13-14/10/2017	19	15	None	4	100	Suitable
17-18/10/2017	15	11	None-Light Rain	4	10	Suitable
19-20/10/2017	18	14	None	2	90	Suitable
21-22/10/2017	16	12	None-Light Rain	4	60	Suitable







Appendix E Summary of static monitoring survey results

Table E.3: A summary of the static monitoring results.

Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					B.bar	1				
					Msp.	5				
					N.noc	3				
1	Complete	Complete	Complete	3	NspEser	1	934	5442	17.16	Low
					P.pip	814				
					P.pyg	107				
					Pipsp.	3				
					B.bar	1				
					E.ser	2				
					Msp.	31				
0	0	Commiste	O a manufact a		N.noc	6	0000	5440	52.00	1 E als
2	Complete	Complete	Complete	3	NspEser	1	2932	5442	53.88	High
					P.pip	2575				
					P.pyg	98				
					Pipsp.	218				
					Msp.	2				
					N.lei	1				
					N.noc	3				
3	Complete	Complete	Complete	2	Nsp.	1	385	5133	7.50	Low
S	Complete	Complete	Complete	3	P.aur	9	300	5133	7.50	Low
					P.pyg	260				
					P.pip	108				
					Pipsp.	1				
					B.bar	1				
					Msp.	7				
4	Complete	Complete	Complete	3	N.noc	4	512	5442	9.41	Low
4	Complete	Complete	Complete	3	P.aur	2	312)44Z	3.41	Low
					P.pip	296				
					P.pyg	202				
5	Complete	Complete	Complete	3	Msp.	10	59	5442	1.08	Very low
5	Complete	Complete	Complete	J	N.noc	1	J9	J442	1.00	very low







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.pip	38				
					P.pyg	6				
					Pipsp.	4				
					B.bar	4				
					Msp.	4				
					N.noc	2				
6	Complete	Complete	No access	2	NspEser	3	1087	3228	33.67	Medium
					P.pip	895				
					P.pyg	174				
					Pipsp.	5				
					B.bar	2				
					Msp.	2				
					N.noc	8				
7	Complete	Complete	No access	2	NspEser	2	261	4981	5.24	Low
·			. To doose	_	P.aur	14			5.24	
					P.pip	129				
					P.pyg	102				
					Pipsp.	2				
					Msp.	11				
					N.noc	4				
8	Complete	Failed	Complete	2	NspEser	4	243	3960	6.14	Low
, and the second	Complete	T dillod	o simple to	_	P.pip	163		5555	0	20
					P.pyg	60				
					Pipsp.	1				
					B.bar	55				
					Msp.	3				
					Nsp.	3				
					NspEser	2				
9	Complete	Complete	Complete	3	P.aur	5	802	5376	14.92	Low
					P.nat	16				
					P.pip	623				
					P.pyg	85				
					Pipsp.	10				
10	Complete	Failed	Complete	2	B.bar	2	152	3969	3.83	Very low
10	Complete	1 unou	Complete		N.noc	1	102	0303	0.00	VOLY 1044







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.aur	3				
					P.pip	101				
					P.pyg	45				
					B.bar	64				
					E.ser	1				
					Msp.	7				
					N.noc	19				
11	Complete	Complete	Complete	3	Nsp.	1	2558	5850	43.73	Medium
					NspEser	16				
					P.pip	1904				
					P.pyg	477				
					Pipsp.	69				
					B.bar	8				
					Msp.	14				
					N.noc	5				
12	Complete	Complete	Complete	3	NspEser	2	386	5850	6.60	Low
					P.aur	4				
					P.pip	277				
					P.pyg	76				
					B.bar	1				
					E.ser	2				
					Msp.	7				
					N.noc	22				
13	Complete	Complete	No access	2	NspEser	3	962	3171	30.34	Low
					P.aur	3				
					P.pip	587				
					P.pyg	290				
					Pipsp.	47				
14	Complete	Complete	Complete	3	No bats	0	0	6258	0.00	No bats
					B.bar	1				
					Msp.	8				
15	Complete	Complete	Complete	2	N.noc	1	296	6003	6003	Vonctow
15	Complete	Complete	Complete	3	P.aur	11	290	6003	4.93	Very low
					P.nat	1				
					P.pip	241				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.pyg	29				
					Pipsp.	4				
					B.bar	17				
					E.ser	4				
					Msp.	25				
					NspEser	16				
16	Complete	Complete	Complete	3	P.aur	2	4048	5496	73.65	High
					P.nat	247				
					P.pip	3408				
					P.pyg	324				
					Pipsp.	5				
					B.bar	3				
					E.ser	1				
					Msp.	7				
					N.noc	1				
17	Complete	Complete	Not collected	2	NspEser	1	627	3159	19.85	Low
					P.aur	13				
					P.pip	517				
					P.pyg	73				
					Pipsp.	11				
					Msp.	1				
					P.aur	3				
18	Complete	No access	No access	1	P.pip	174	261	1641	15.90	Low
					P.pyg	5				
					Pipsp.	78				
					E.ser	4				
					Msp.	4				
					NspEser	6				
19	Complete	Complete	Complete	3	P.aur	9	1884	5085	37.05	Medium
					P.pip	1655				
					P.pyg	97				
					Pipsp.	109				
					B.bar	3				
20	Complete	Complete	Complete	3	Msp.	8	698	5406	12.91	Low
					N.noc	1				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					NspEser	4				
					P.pip	555				
					P.pyg	124				
					Pipsp.	3				
					B.bar	7				
					E.ser	3				
					Msp.	8				
					N.noc	1				
21	Complete	Complete	Complete	3	Nsp.	2	2757	5868	46.98	Medium
					NspEser	6				
					P.pip	188				
					P.pyg	2498				
					Pipsp.	44			21.69 L	
					B.bar	11				
					Msp.	Msp. 1				
					N.noc	2				
22	Complete	Complete	Complete	3	P.aur	1	1171	5400	21.69	Low
					P.pip	582			21.69 L	
					P.pyg	520				
					Pipsp.	54				
					B.bar	59				
					E.ser	2				
					Msp.	14				
					N.noc	7				
23	Complete	Complete	Complete	3	Nsp.	1	2970	5859	21.69	Medium
20	Complete	Compicio	Complete		NspEser	12	2010	3033	00.00	Wediam
					P.aur	16				
					P.pip	1453				
					P.pyg	1295				
			Pipsp.	111						
			Msp.	2						
					N.noc	14				
24	Complete	Complete	Complete	3	NspEser	1	639	5391	11.85	Low
		P.aur	3							
					P.pip	167				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.pyg	382				
					Pipsp.	70				
					Msp.	6				
					N.noc	52				
					NspEser	5				
25	Complete	Complete	Complete	3	P.aur	6	248	4742	5.23	Low
					P.pip	134				
					P.pyg	39				
					Pipsp.	6				
					B.bar	4				
					Msp.	30				
					N.noc	116				
					Nsp.	2				
26	Complete	Complete	Complete	3	NspEser	33	3366	5406	62.26	High
					P.aur	7				
					P.pip	2442				
					P.pyg	684				
					Pipsp.	48				
					B.bar	4				
					Msp.	23				
					N.noc	328				
					NspEser	5				
27	Complete	Complete	Complete	3	P.aur	5	1154	5484	21.04	Low
					P.nat	38				
					P.pip	661				
					P.pyg	75				
					Pipsp.	15				
					Nsp.	1				
28	Complete	Complete	Complete	3	P.nat	60	1457	5406	26.95	Low
20	Complete	Complete	Complete		P.pip	1322	1701	3400	25.55	Low
					P.pyg	74				
					B.bar	3				
29	Complete	Complete	Complete	3	Msp.	6	661	5880	11.24	Low
23	Complete	Outipiete	Complete		N.noc	4	001	3000	11.27	LOW
					Nsp.	4				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					NspEser	1				
					P.aur	1				
					P.pip	549				
					P.pyg	91				
					Pipsp.	2				
					B.bar	1				
					Msp.	5				
					N.lei	1				
					N.noc	12				
30	Complete	Complete	Complete	3	NspEser	13	913	5421	16.84	Low
					P.aur	1				
					P.pip	760				
					P.pyg	114				
					Pipsp.	6				
					Msp.	1				
31	Complete	Complete	Complete	3	P.aur	1	443	5403	8.20	Low
31	Complete	Complete	Complete	3	P.pip	436	170	3403	0.20	Low
					P.pyg	5				
					B.bar	3				
					Msp.	4				
					N.noc	4				
32	Complete	Complete	Complete	3	P.aur	11	2469	5415	45.60	Medium
					P.pip	2094				
					P.pyg	350				
					Pipsp.	3				
					B.bar	4				
					N.noc	11				
					NspEser	2				
33	Complete	Complete	Complete	3	P.aur	21	441	5421	8.14	Low
					P.pip	374				
					P.pyg	28				
					Pipsp.	1				
					B.bar	5				
34	Complete	Complete	No access	2	E.ser	1	305	3117	9.79	Low
					Msp.	4				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					N.noc	13				
					NspEser	17				
					P.aur	1				
					P.nat	1				
					P.pip	181				
					P.pyg	80				
					Pipsp.	2				
					Msp.	6				
					N.noc	38				
					Nsp.	1				
35	Complete	Complete	No access	2	P.aur	5	2659	3120	85.22	High
00	Complete	Complete	140 00000	_	P.nat	1	2000	0.20	00.22	l ngn
					P.pip	2436				
					P.pyg	170				
					Pipsp.	2				
					B.bar	1				
					N.noc	45				
36	Complete	Complete	No access	2	NspEser	6	342	3063	11.17	Low
•	o o p. o to		110 40000	_	P.nat	6	, · · · ·	-		
					P.pip	206				
					P.pyg	78				
					B.bar	2				
					Msp.	5				
37	Complete	Complete	No access	2	N.noc	60	264	3132	8.43	Low
			1.00	_	P.aur	19		3.02		
					P.pip	127				
					P.pyg	51				
					B.bar	3				
					E.ser	1				
					Msp.	4				
39	Complete	Complete	No access	2	N.noc	190	688	3066	22.44	Low
				_	NspEser	22				
					P.aur	4				
					P.nat	2				
					P.pip	384				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.pyg	73				
					Pipsp.	5				
					Msp.	5				
					Nsp.	1				
40	Complete	No access	No access	1	P.nat	1	291	1572	18.51	Low
	Complete	110 00000	110 00000		P.pip	48		10.2	10.01	
					P.pyg	228				
					Pipsp.	8				
					B.bar	3				
					E.ser	12				
					Msp.	51				
					N.lei	60				
					N.noc	8				
41	Complete	Complete	No access	2	Nsp.	1	1317	3063	43.00	Medium
					NspEser	9				
					P.aur	7				
					P.pip	725				
					P.pyg	438				
					Pipsp.	3				
					E.ser	2				
					N.noc	1				
42	Complete	Complete	No access	2	Nsp.	1	403	3063	13.16	Low
12	Complete	Complete	110 00000		P.aur	6	100	0000	10.10	2011
					P.pip	332				
					P.pyg	61				
					B.bar	3				
					E.ser	1				
					Msp.	7				
43	Complete	Complete	No access	2	N.noc	3	363	3066	11.84	Low
40	Complete	Complete	140 00000		P.aur	2	000	0000	11.04	Low
					P.nat	46				
					P.pip	272				
					P.pyg	29				
44	Complete	Complete	No access	2	B.bar	13	1142	3516	32.48	Medium
77	Complete	Jonipioto	140 000033		Msp.	10	1172	5510	02.70	Modium







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					N.noc	1				
					NspEser	1				
					P.aur	1				
					P.pip	863				
					P.pyg	240				
					Pipsp.	13				
45	Failed	No access	Not collected	1	n/a	n/a	n/a	n/a	n/a	No access
					P.pip	7				
46	Complete	No access	No access	1	P.pyg	19	28	1572	1.78	Very low
					Pipsp.	2				
47	Failed	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
48	Failed	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					E.ser	1				
					Msp.	3				
					N.noc	1				
					NspEser	4				
49	Complete	Complete	Complete	3	P.aur	1	999	6324	15.80	Low
					P.nat	15				
					P.pip	755				
					P.pyg	182				
					Pipsp.	37				
					B.bar	7				
					Msp.	4				
					N.noc	1				
					NspEser	1				
50	Complete	Complete	No access	2	P.aur	1	697	3072	22.69	Low
					P.nat	1				
					P.pip	441				
					P.pyg	237				
					Pipsp.	4				
51	Failed	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					B.bar	1				
52	Complete	Complete	Complete	3	E.ser	2	882	5808	15.19	Low
					Msp.	9				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					N.lei	1				
					N.noc	20				
					NspEser	4				
					P.aur	1				
					P.nat	1				
					P.pip	636				
					P.pyg	160				
					Pipsp.	47				
53	Failed	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					Msp.	1				
					N.lei	1				
					N.noc	1				
54	Complete	No access	No access	1	NspEser	1	508	1572	32.32	Medium
					P.pip	443				
					P.pyg	56				
					Pipsp.	5				
					N.noc	15				
55	Failed	Complete	Complete	2	P.pip	52	103	4314	2.39	Very low
30	Tanoa	Complete	Complete	_	P.pyg	32			2.00	l voly low
					Pipsp.	4				
					B.bar	6				
					E.ser	3				
					Msp.	9				
					N.lei	2				
56	Complete	Complete	No access	2	N.noc	45	2452	3030	80.92	High
00	Complete	Complete	140 000000		NspEser	5	2402	0000	00.32	Tilgii
					P.aur	6				
					P.pip	1836				
					P.pyg	515				
					Pipsp.	25				
					E.ser	10				
					Msp.	12				
58	Failed	Complete	No access	1	N.lei	3	337	1500	22.47	Low
					N.noc	260				
					Nsp.	2				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					NspEser	3				
					P.pip	17				
					P.pyg	24				
					Pipsp.	6				
					B.bar	6				
					Msp.	2				
					N.noc	8				
59	Complete	Complete	Complete	3	Nsp.	1	383	5838	6.56	Low
39	Complete	Complete	Complete	3	NspEser	4	300	3030	0.50	LOW
					P.pip	242				
					P.pyg	119				
					Pipsp.	1				
					B.bar	1				
					E.ser	1				
					Msp.	5				
60	Complete	Complete	Complete	3	N.noc	82	221	5841	3.78	Very low
00	Complete	Complete	Complete	3	Nsp.	11	221	3041	3.70	very low
					P.aur	1				
					P.pip	59				
					P.pyg	61				
					B.bar	3				
					Msp.	10				
					N.noc	10				
					Nsp.	1				
61	Failed	Complete	Complete	2	NspEser	9	330	4317	7.64	Low
					P.nat	2				
					P.pip	236				
					P.pyg	54				
					Pipsp.	5				
					B.bar	4				
					E.ser	1				
62	Complete	Complete	Complete	3	Msp.	4	1322	5937	22.27	Low
UZ	Complete	Complete	Complete	3	Nsp.	1	1922	5931	22.21	Low
					NspEser	5				
					P.aur	7				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.pip	762				
					P.pyg	537				
					Pipsp.	1				
					E.ser	3				
					Msp.	6				
					N.lei	1				
63	Complete	No access	No access	1	N.noc	1	644	1524	42.26	Medium
					NspEser	29				
					P.pip	547				
					P.pyg	57				
					B.bar	5				
					E.ser	6				
					Msp.	8				
					N.noc	13				
64	Complete	Complete	Complete	3	NspEser	18	2201	6081	36.19	Medium
					P.aur	2				
					P.pip	1450				
					P.pyg	661				
					Pipsp.	38				
65	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
66	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					N.noc	1				
					NspEser	1				
67	Complete	No access	Complete	2	P.pip	60	205	3906	5.25	Low
					P.pyg	139				
					Pipsp.	4				
					Nsp.	1				
68	Complete	Complete	No access	2	NspEser	5	398	3558	11.19	Low
00	Complete	Complete	No access	2	P.pip	22	330	3330	11.13	LOW
					P.pyg	370				
					Msp.	1				
69	Complete	Not collected	No access	1	N.noc	1	14	1530	0.92	Very low
09	Complete	NOT CONFEREN	INU aucess	1	P.pip	5	1 4	1550	0.32	very low
					P.pyg	7				
					E.ser	1				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					Msp.	8				
					N.noc	100				
					Nsp.	2				
					NspEser	9				
72	Failed	Complete	Complete	2	P.aur	10	1412	3909	36.12	Medium
					P.nat	1				
					P.pip	839				
					P.pyg	434				
					Pipsp.	8				
					Msp.	7				
					N.noc	53				
					Nsp.	3				
73	Complete	Complete	Complete	3	NspEser	6	1444	5502	26.25	Low
10	Complete	Complete	Complete		P.aur	1		0002	20.20	2011
					P.pip	1055				
					P.pyg	315				
					Pipsp.	4				
					B.bar	1				
					Msp.	9				
					N.noc	5				
					Nsp.	1				
75	No access	Complete	No access	1	NspEser	1	1559	2529	61.64	High
					P.nat	1				
					P.pip	90				
					P.pyg	1423				
					Pipsp.	28				
					B.bar	2				
					Msp.	7				
					Nsp.	2				
76	Complete	Complete	Complete	3	P.aur	8	522	6519	8.01	Low
					P.pip	264				
					P.pyg	238				
					Pipsp.	1				
77	Complete	No access	Complete	2	B.bar	4	1943	4134	47	Medium
		110 00000			E.ser	1	.510			







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					Msp.	5				
					N.noc	2				
					NspEser	1				
					P.aur	5				
					P.nat	1				
					P.pip	1293				
					P.pyg	627				
					Pipsp.	4				
					Msp.	5				
78	Complete	Failed	Complete	2	NspEser	2	143	3906	3.66	Very low
70	Complete	Talled	Complete	2	P.pip	103	140	3300	3.00	Very low
					P.pyg	33				
					B.bar	3				
					Msp.	1				
79	No access	Failed	Complete	1	NspEser	1	1183	2382	49.66	Medium
					P.pip	1012				
					P.pyg	166				
					B.bar	9				
					Msp.	5				
					N.noc	15				
					Nsp.	3				
80	Complete	Complete	Complete	3	NspEser	2	5223	5997	87.09	High
					P.aur	2				
					P.pip	4504				
					P.pyg	660				
					Pipsp.	23				
					Msp.	4				
					NspEser	4				
					P.aur	3				
81	Complete	Complete	Complete	3	P.nat	1	251	6018	4.17	Very low
					P.pip	96				
					P.pyg	142				
					Pipsp.	1				
82	No access	Not collected	No access	0	n/a	n/a	n/a	n/a	n/a	No access







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					B.bar	6				
					Msp.	7				
					N.noc	8				
83	No access	Complete	No access	1	Nsp.	3	260	1488	17.47	Low
					NspEser	1				
					P.pip	213				
					P.pyg	22				
					N.lei	2				
					N.noc	1				
					Nsp.	2				
					NspEser	3				
84	No access	Complete	Complete	2	P.aur	2	260	3993	6.51	Low
					P.nat	1				
					P.pip	171				
					P.pyg	63				
					Pipsp.	15				
					E.ser	3				
					N.noc	9				
					Nsp.	1				
85	No access	Failed	Complete	1	NspEser	4	119	2295	5.19	Low
					P.aur	2				
					P.pip	43				
					P.pyg	37				
					Pipsp.	20				
					B.bar	7				
					E.ser	19				
					Msp.	36				
					N.lei	4				
86	No access	Complete	Complete	2	N.noc	25	1999	3690	54.17	High
					NspEser	7				
					P.pip	1621				
					P.pyg	278				
					Pipsp.	2				
					B.bar	1				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					Msp.	4				
					N.lei	2				
					N.noc	13				
87	No access	Complete	Complete	2	Nsp.	4	472	4140	11.40	Low
O1	140 000033	Complete	Complete		NspEser	9	712	4140	11.40	Low
					P.pip	372				
					P.pyg	57				
					Pipsp.	10				
					B.bar	2				
					Msp.	8				
					N.noc	6				
88	No access	Complete	Complete	2	P.aur	1	261	4896	5.33	Low
					P.pip	221				
					P.pyg	22				
					Pipsp.	1				
89	No access	Complete	No access	1	No Bats	0	0	1479	0.00	No bats
90	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
91	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
92	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
93	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
94	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					B.bar	7				
					E.ser	1				
					Msp.	2				
					N.noc	8				
95	No access	Complete	Complete	2	NspEser	3	55	4302	1.28	Very low
					P.aur	1				
					P.pip	15				
					P.pyg	17				
					Pipsp.	1				
					B.bar	23				
					E.ser	1				
96	No access	Complete	Complete	2	Msp.	16	412	4302	9.58	Low
					N.noc	1				
					NspEser	2				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					P.aur	3				
					P.nat	1				
					P.pip	179				
					P.pyg	186				
					B.bar	12				
					Msp.	2				
					N.noc	2				
97	No access	Complete	Complete	2	NspEser	2	75	3909	1.92	Very low
					P.aur	1				
					P.pip	42				
					P.pyg	14				
98	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
99	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
100	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
101	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					B.bar	2	5142			
					Msp.	2				Very high
				plete 2	N.noc	13				
102	No access	Complete	Complete		P.nat	3		4803	107.06	
					P.pip	3674				
					P.pyg	1441				
					Pipsp.	7				
					B.bar	1				
					Msp.	2				
400					N.noc	67	400	0544	4.40	
103	No access	Complete	No access	1	P.pip	8	103	2514	4.10	Very low
					P.pyg	24				
					Pipsp.	1				
104	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
105	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
106	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
107	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					B.bar	6				
108	No access	Complete	Complete	2	Msp.	3	333	4752	7.01	Low
					N.noc	6				







Habitat parcel group	Visit 1	Visit 2	Visit 3	Number of visits	Bat spp	Cumulative passes	Number passes overall	Cumulative survey effort (minutes)	Overall activity score	Overall activity level
					NspEser	1				
					P.aur	16				
					P.pip	211				
					P.pyg	85				
					Pipsp.	5				
109	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
					B.bar	3				
			Msp. 1							
			N.noc 7							
110	No access	Complete	Complete	2	Nsp.	1	261	4752	5.49	Very low
110	140 000000		Complete		NspEser	5				
					P.aur	1				
					P.pip	218				
					P.pyg	25				
					B.bar	9				
					Msp.	5				
111	No access	Complete	Complete	2	N.noc	5	1905	4752	40.09	Medium
	110 00000	Complete	Complete	_	P.aur	7		02	10.00	
					P.pip	957				
					P.pyg	922				
112	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
113	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access
114	No access	No access	No access	0	n/a	n/a	n/a	n/a	n/a	No access

Species codes: B.bar – barbastelle; E.ser – serotine; Msp – unidentified bats belonging to the Myotis genus; N.lei – Leisler's bat; N.noc – common noctule; Nsp – unidentified bat belonging to the Nyctalus genus; NspEser – unidentified bat belonging to the noctule, Leisler's and serotine guild; P.aur – brown long-eared bat; Pipsp – unidentified bats belonging to the pipistrelle genus; P.nat – Nathusius' pipistrelle; P.pyg – soprano pipistrelle.







Appendix F Weather data recorded during transect surveys

F.1.1.1. Due to the large number of transect survey locations at which weather conditions were recorded, weather data are only given for two representative points located along the route. These were Wood Dalling (Groups 1-46, 104-109 & 110-113) and Taverham (Groups 47-101, 102-103 & 114), Norfolk. The data were obtained from Weather Underground (Weather Underground, undated).

Table F.4: Weather data recorded during transect surveys.

Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
Wood Dalling (Nort	h)					
13/06/2017	20	13	Light rain part	2	66	Suitable
14/06/2017	21	17	None	2	33	Suitable
15/06/2017	16	15	None	4	33	Suitable
19/06/2017	23	22	None	2	33	Suitable
20/06/2017	18	16	None	2	33	Suitable
27/06/2017	15	11	Light rain part	3	100	Suitable
28/06/2017	14	13	Light rain part	3	100	Suitable
29/06/2017	12	12	None	3	100	Suitable
04/07/2017	18	17	None	2	100	Suitable
05/07/2017	14	12	None	1	0	Suitable
22/08/2017	20	16	None	2	66	Suitable
23/08/2017	20	16	None	1	33	Suitable
24/08/2017	13	12	None	2	0	Suitable
20/09/2017	15	14	None	1	0	Suitable
03/10/2017	13	12	None	3	100	Suitable
04/10/2017	10	10	None	3	100	Suitable
Taverham (South)						
06/07/2017	20	13	None	1	33	Suitable
11/07/2017	15	15	Light rain part	1	100	Suitable
12/07/2017	14	11	None	1	33	Suitable
19/07/2017	21	17	None	2	66	Suitable







Date	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Windspeed (Beaufort Scale)	Cloud cover %	Suitability
01/08/2017	18	16	Light rain part	1	100	Suitable
02/08/2017	14	14	None	1	33	Suitable
15/08/2017	18	14	None	1	0	Suitable
16/08/2017	11	10	None	1	0	Suitable
22/08/2017	17	14	None	1	100	Suitable
30/08/2017	12	11	None	1	100	Suitable
31/08/2017	9	9	None	1	33	Suitable
05/09/2017	17	16	None	1	66	Suitable
06/09/2017	15	14	None	2	100	Suitable
07/09/2017	11	9	None	1	0	Suitable
12/09/2017	15	10	Rain dusk end	1	100	Suitable
21/09/2017	14	14	None	1	100	Suitable
27/09/2017	16	16	None	1	100	Suitable
28/09/2017	15	14	Light rain part	2	100	Suitable
02/10/2017	13	12	None	3	0	Suitable
03/10/2017	10	9	None	3	0	Suitable
10/10/2017	14	12	None	3	66	Suitable
11/10/2017	16	14	None	4	33	Suitable
12/10/2017	10	10	None	3	0	Suitable







Appendix G Summary of Transect Survey Results

Table G.5: A summary of the transect survey results.

Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Down	13/06/2017	P.pip	26
							Dawn	13/00/2017	P.pyg	2
									B.bar	4
1	41.1	Medium	1	120	41.3	Medium			Msp	1
							Dusk	13/06/2017	P.pip	33
									P.pyg	27
									Pipsp	6
									Pipsp	16
			1	24	150.2	Very high	Dawn	14/06/2017	P.pip	50
			1	24	158.3				P.pyg	8
							Dusk	14/06/2017	P.pyg	2
			2	24	20.8	Low	Dawn 14	14/06/2017	P.pyg	8
			2	24	20.0	LOW	Dusk	14/06/2017	P.pyg	2
							Dawn	14/06/2017	P.pip	18
2	80.8	High	3	24	70.8	High	Dawii	14/00/2017	Msp	1
			3	24	70.0	Tilgii	Dusk	14/06/2017	P.pyg	14
							Dusk	14/00/2017	P.pip	1
							Dawn	14/06/2017	P.pip	36
			4	24	164.6	Very high	Dawii	14/00/2017	P.pyg	42
							Dusk	14/06/2017	P.pyg	1
			5	24	0.0	Very low	Dawn	14/06/2017	None	0
			5	24	0.0	VELY IOW	Dusk	14/06/2017	None	0







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	15/06/2017	P.pyg	2
				Dawn: 20	35.0				B.bar	8
			1	Dusk: 40		Medium	Dusk	15/06/2017	N.noc	3
							Dusk	15/06/2017	P.pip	4
								P.pyg	4	
					60.0	High	Dawn	15/06/2017	P.pip	1
			2	Dawn: 20			Dawii	13/00/2017	P.pyg	13
3	48.8	Medium	2	Dusk: 40			Dusk	15/06/2017	B.bar	1
							Dusk	13/00/2017	P.pyg	21
							Dawn	15/06/2017	P.pip	1
			3	Dawn: 20 Dusk: 40	50.0	Medium	Dusk	15/06/2017	P.pyg	14
							Dusk	13/00/2017	P.pip	15
		4	20	50.0	Medium	Dawn	15/06/2017	P.pip	2	
		5	20	50.0	Medium	Dawn	15/06/2017	P.pip	8	
		J	20	50.0	iviculuiii	Dawn	15/06/2017	P.pyg	18	
			6	20	50.0	Medium	Dawn	15/06/2017	P.pip	2







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									B.bar	15
							Dawn	13/06/2017	NspEser	1
							Dawn	13/00/2017	P.pip	4
			1	24	58.3	High			P.pyg	1
									B.bar	1
							Dusk	13/06/2017	P.pip	1
									P.pip	5
								Msp	2	
					106.3	Very high	Dawn	13/06/2017	P.pip	33
			2	24					P.pyg	1
4	38.0	Medium		21			Dusk		N.noc	2
								13/06/2017	P.pip	11
									P.pyg	2
							Dawn	13/06/2017	P.pip	1
			3	24	10.4	Low			P.pyg	2
							Dusk	13/06/2017	P.pip	1
									P.pyg	1
		4	24	10.4	Low	Dawn	13/06/2017	None	0	
			24			Dusk	13/06/2017	P.pip	5	
			5	24	0.0	Very low	Dawn	13/06/2017	None	0
						,	Dusk	13/06/2017	None	0







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
			1	24	25.0	Low	Dawn	14/06/2017	P.pip	3
			I	24	25.0	LOW	Dusk	14/06/2017	P.pip	9
			2	24	22.9	Low	Dawn	14/06/2017	P.pip	8
			2	24	22.9	LOW	Dusk	14/06/2017	P.pyg	3
			3	24	14.6	Low	Dawn	14/06/2017	P.pip	2
			3	24	14.0	LOW	Dusk	14/06/2017	P.pip	5
5	14.0	Low					Dawn	14/06/2017	P.pip	1
			4	24	6.3	Low	Dusk	14/06/2017	P.pip	1
							Dusk	14/00/2017	P.pyg	1
			5	24	2.1	Very low	Dawn	14/06/2017	P.pip	1
			J	24	Z. I	very low	Dusk	14/06/2017	None	0
			6 (No access)	n/a	n/a	n/a	Dawn	14/06/2017	n/a	n/a
			0 (140 access)	11/4	Tiva	11/4	Dusk	14/06/2017	11/4	II/a
			1	24	18.8	Low	Dawn	15/06/2017	P.pip	7
			'	27	10.0	LOW	Dusk	15/06/2017	P.pip	2
							Dawn	15/06/2017	P.pip	15
			2	24	75.0	High	Buwii	10/00/2017	P.pyg	14
			2	27	75.0	i ligii	Dusk	15/06/2017	P.aur	1
							Dusk	15/00/2017	P.pip	6
									B.bar	3
6	75.8	High	3	24	164.6	Very high	Dawn	15/06/2017	P.pip	55
O .	75.5	Tilgii	3	27	104.0	very mgm			P.pyg	11
							Dusk	15/06/2017	P.pip	10
			4	24	118.8	Very high	Dawn	15/06/2017	P.pip	56
			7	۷٦	110.0	vory mgn	Dusk	15/06/2017	P.pip	1
			5	24	2.1	Very low	Dawn	15/06/2017	None	0
				24	2.1	VOLY TOW	Dusk	15/06/2017	P.pip	1
			6 (No access)	n/a	n/a	Very high	Dawn	15/06/2017	- n/a	n/a
			0 (110 000633)	11/4	TIVA	vory mgn	Dusk	15/06/2017	11/4	11/4







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									B.bar	1
							Dawn	20/06/2017	P.aur	1
			1	30	15.0	Low			P.pip	5
							Dusk	19/06/2017	Msp	1
							Dusk	19/06/2017	Pipsp	1
							Dawn	20/06/2017	P.pip	11
			2	30	43.3	Medium	Dusk	19/06/2017	N.noc	1
						Dusk	19/00/2017	P.pip	14	
									B.bar	1
								P.pip	51	
7	84.6	High					Dawn	20/06/2017	P.pyg	12
,	04.0	riigii							Pipsp	6
			3	50	139.0	Very high			E.ser	1
									N.noc	1
							Dusk	19/06/2017	P.pip	43
							Buok	10/00/2017	P.pyg	23
									Pipsp	1
							Dawn	20/06/2017	P.pip	21
								P.aur	2	
		4	10	145.0	Very high	Dusk	19/06/2017	P.pip	1	
							Duon	10/00/2011	P.pyg	3
								Pipsp	2	







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	3
			1	40	70.0	High	Dawn	21/06/2017	P.pyg	4
			'	40	70.0	Tilgii			Pipsp	1
							Dusk	20/06/2017	P.pip	48
									B.bar	1
		66.8 High		40		Medium	Dawn	21/06/2017	P.pip	21
8	66 Q		2		48.8				P.pyg	7
0	00.0						Dusk	20/06/2017	N.noc	1
							Dusk	20/06/2017	P.pip	9
							Dawn		N.noc	2
								21/06/2017	P.pip	8
			3	40	63.8	High	Dawii	21/00/2017	P.nat	1
									Pipsp	23
							Dusk	20/06/2017	P.pip	17
							Dawn	22/06/2017	P.pip	45
	9 77.1 High					Dawii	22/00/2017	P.pyg	1	
9		1	120	77.1	High			N.noc	3	
							Dusk	21/06/2017	P.pip	119
								P.pyg	17	







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	22/08/2017	P.pip	20
			1			Very high	Dawii	22/00/2017	P.pyg	11
		Very high		24	154.2				P.pip	29
							Dusk	22/08/2017	P.pyg	8
									Pipsp	6
									P.pip	4
10	100.0						Dawn	22/08/2017	P.pyg	5
									Pipsp	2
			2	24	89.6	High			B.bar	1
			2	24	03.0	riigii			N.noc	1
							Dusk	22/08/2017	P.pip	24
									P.pyg	3
									Pipsp	3







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	17
							Dawn	22/08/2017	P.pyg	8
			3	24	168.8	Very high			Pipsp	13
			S	24	100.0				N.noc	1
							Dusk	22/08/2017	P.pip	24
									P.pyg	18
						Medium			P.aur	2
							Dawn	22/08/2017	P.pip	4
							Dawii	22/00/2011	P.pyg	1
			4	24	35.4				Pipsp	1
11	100.0	Very high					Dusk		P.pip	6
								22/08/2017	P.pyg	2
									Pipsp	1
									P.aur	1
							Dawn	22/08/2017	P.pyg	7
									Pipsp	1
			5	24	52.1	High			P.aur	1
			-		-				N.noc	1
						Dusk	22/08/2017	P.pip	8	
									P.pyg	4
									Pipsp	2







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
12	40.4	Medium	1	90	37.8	Medium	Dawn	22/08/2017	P.pip	11
									P.pyg	13
									Pipsp	4
							Dusk	22/08/2017	B.bar	1
									P.pip	27
									P.pyg	11
									Pipsp	1
			2	30	48.3	Medium	Dawn	22/08/2017	P.pip	6
									P.pyg	7
									Pipsp	2
							Dusk	22/08/2017	P.aur	1
									P.pip	1
									P.pyg	10
									Pipsp	2







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
			1	20	30.0	Low	Dawn	20/06/2017	P.pyg	9
			1	20	30.0	LOW	Dusk	19/06/2017	P.pyg	3
							Dawn	20/06/2017	B.bar	2
			2	20	12.5	Low	Dusk	19/06/2017	P.pip	2
							Dusk	19/00/2017	P.pyg	1
							Dawn	20/06/2017	P.pyg	11
			3	20	70.0	High	Dawii	20/00/2017	Pipsp	11
							Dusk	19/06/2017	P.pyg	6
							Dawn	20/06/2017	P.pyg	5
			4	20	52.5	High	Dusk	19/06/2017	P.pip	8
							Dusk	19/00/2017	P.pyg	8
13	49.2	Medium					Dawn	20/06/2017	P.pip	3
10	43.2	Wediam					Dawii	20/00/2017	P.pyg	2
			5	20	30.0	Low			N.noc	2
			o o	20	00.0	2011	Dusk	19/06/2017	P.pip	3
							Buok	10/00/2017	P.pyg	1
									Pipsp	1
									P.pip	24
							Dawn	20/06/2017	P.pyg	2
									Pipsp	4
			6	20	100.0	Very high			P.aur	1
							Dusk	19/06/2017	N.noc	2
									P.pip	4
									P.pyg	3
							Dawn	23/08/2017	P.pip	92
							-		P.pyg	64
14	88.3	High	1	120	88.3	High			P.pip	23
							Dusk	23/08/2017	P.pyg	29
									Pipsp	4







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	23/08/2017	P.pip	3
			1	20	22.5	Low	Dusk	23/08/2017	P.pip	3
							Dusk	23/06/2017	P.pyg	3
									B.bar	1
							Dawn	23/08/2017	P.pip	12
			2	20	50.0	Medium			P.pyg	3
							Dusk	23/08/2017	P.pip	3
							Dusk	23/00/2017	P.pyg	1
							Dawn	23/08/2017	P.pip	11
			3	20	107.5	Very high			B.bar	1
15	67.1	High	3	20	107.5	very mgm	Dusk	23/08/2017	P.pip	25
10	07.1	i ligii							P.pyg	6
									P.pip	56
							Dawn	23/08/2017	P.pyg	8
			4	20	205.0	Very high			Pipsp	3
							Dusk	23/08/2017	P.pip	13
							Buok	20/00/2011	P.pyg	2
							Dawn	23/08/2017	P.pip	1
			5	20	17.5	Low	Dusk	23/08/2017	P.pip	5
							Duoit	2010012011	Pipsp	1
			6	20	0.0	Very low	Dawn	23/08/2017	None	0
			5	20	0.0	VOIY IOW	Dusk	23/08/2017	None	0







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
			1	40	10.0	Low	Dawn	20/06/2017	None	0
			ı	40	10.0	Low	Dusk	19/06/2017	P.pip	8
							Down	20/06/2017	P.pip	42
			2	40	78.8	High	Dawn	20/00/2017	Pipsp	8
16	58.8	High					Dusk	19/06/2017	P.pip	13
10	36.6	підіі					Down	20/06/2017	P.pip	23
							Dawn	20/00/2017	P.pyg	6
			3	40	87.5	High			B.bar	1
							Dusk	19/06/2017	P.pip	34
									P.pyg	6







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	21/06/2017	P.pip	46
			1	Dawn: 60	98.9	Very high	Dawii	21/00/2017	P.pyg	9
			ı	Dusk: 30	90.9	very mgm	Dusk	20/06/2017	P.pip	33
							Dusk	20/00/2017	P.aur	1
									Msp	1
							Dawn	21/06/2017	P.pip	6
									Pipsp	4
			2	30	50.0	Medium			B.bar	1
							Dusk	20/06/2017	Msp	1
17	125.0	Very high					Dusk	20/00/2017	P.pip	16
17	123.0	very mgn							P.pyg	1
									B.bar	3
							Dawn	21/06/2017	P.pip	5
							Dawii	21/00/2017	P.pyg	11
			3	30	301.7	Very high			Pipsp	14
									P.pip	1
							Dusk	20/06/2017	P.pyg	2
									Pipsp	145
			4 (No access)	n/a	n/a	n/a	Dawn	21/06/2017	n/a	n/a
			1 (110 00000)	11/4	11/4	11/4	Dusk	20/06/2017	11/4	11/4
18	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
10	140 00000	11/4	11/4	11/4	11/4	11/4	Dusk	11/4	11/4	11/4
									P.aur	6
							Dawn	27/06/2017	P.pip	55
			1	60	84.2	High	Dawii	2110012011	P.nat	2
19	50.0	Medium							P.pyg	1
							Dusk	28/06/2017	P.pip	37
			2	60	15.8	Low	Dawn	27/06/2017	P.pip	18
				- 50	10.0	2011	Dusk	28/06/2017	P.pip	1







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	29/06/2017	None	0
									P.aur	1
			1	60	7.5	Low	Duals	20/06/2017	Msp	1
							Dusk	28/06/2017	P.pip	6
20	65.0	High							P.pyg	1
20	05.0	підіі					Down	29/06/2017	P.pip	72
							Dawn	29/00/2017	P.pyg	5
			2	60	122.5	Very high			P.pip	57
							Dusk	28/06/2017	P.pyg	8
									Pipsp	5







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	23/08/2017	P.pip	4
							Dawii	23/00/2011	P.pyg	25
			1	40	73.8	High			P.aur	2
			'	40	70.0	i iigii	Dusk	23/08/2017	N.noc	4
							Buok	20/00/2017	P.pip	6
									P.pyg	18
									P.pip	7
							Dawn	23/08/2017	P.pyg	17
									Pipsp	4
			2	40	80.0	High			P.aur	1
21	121.5	Very high					Dusk	23/08/2017	P.pip	13
									P.pyg	20
									Pipsp	2
									P.pip	21
							Dawn	23/08/2017	P.pyg	66
									Pipsp	9
			3	40	210.0	Very high			Msp	1
									N.noc	1
						Dusk	23/08/2017	P.pip	35	
									P.pyg	27
									Pipsp	8







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Down	27/06/2017	P.pip	3
			1	40	13.8	Low	Dawn	27/00/2017	P.pyg	6
							Dusk	28/06/2017	Pipsp	2
							Dawn	27/06/2017	P.pyg	4
			2	40	48.8	Medium	Dawii	27/00/2017	Pipsp	24
			2	40	40.0	Mediam	Dusk	28/06/2017	P.pyg	1
22	26.2	Low					Dusk	20/00/2017	Pipsp	10
									N.noc	1
			3	40	16.3	Low	Dawn	27/06/2017	P.pip	11
			J	40	10.3	LOW			P.pyg	1
							Dusk	28/06/2017	None	0
			4	10	0.0	Very low	Dawn	27/06/2017	None	0
			4	10	0.0	very low	Dusk	28/06/2017	None	0







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.aur	1
							Dawn	23/08/2017	P.pip	55
							Dawii	23/00/2017	P.pyg	66
			1	45	171.1	Very high			Msp	1
									N.noc	1
							Dusk	23/08/2017	P.pip	6
									P.pyg	24
							Dawn	23/08/2017	P.pip	10
							Dawii	20/00/2011	P.pyg	6
			2	30	66.7	High		23/08/2017	P.pip	17
23	135.4	Very high	_	00	56.7	Tilgii	Dusk		P.pyg	5
20	100.1	vory mgm					Buok	20/00/2011	Lei	1
									Msp	1
									N.noc	2
							Dawn	23/08/2017	P.pip	7
									P.pyg	9
									P.pyg	55
			3	45	145.6	Very high			Msp	8
							Dusk	23/08/2017	P.aur	1
								23/08/2017	Lei	3
									N.noc	6
									P.pip	40







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
			1	30	1.7	Very low	Dawn	29/06/2017	None	0
			ı	30	1.7	very low	Dusk	29/06/2017	P.pyg	1
							Dawn	29/06/2017	None	0
			2	30	50.0	Medium	Dusk	29/06/2017	N.noc	1
24	29.6	Low					Dusk	29/00/2017	P.pyg	29
							Dawn	29/06/2017	None	0
			3	60	33.3	Medium			P.aur	1
			3	00	33.3	iviedium	Dusk	29/06/2017	P.pyg	37
									Pipsp	2
									P.pip	13
							Dawn	04/10/2017	P.aur	1
			1	30	88.3	High			P.pyg	1
							Dusk	03/10/2017	P.pyg	33
							Dusk	03/10/2017	P.pip	5
									P.pip	16
							Dawn	04/10/2017	P.pyg	2
			2	30	78.3	High			P.aur	1
							Dusk	03/10/2017	P.pip	24
25	59.2	High					Dusk	03/10/2017	P.pyg	4
							Dawn	04/10/2017	P.pip	14
			3	30	56.7	High	Dawn	04/10/2017	P.pyg	18
			3	30	30.7	Tilgit	Dusk	03/10/2017	P.pip	1
							Dusk	03/10/2017	B.bar	1
							Dawn	04/10/2017	None	0
									P.pyg	2
			4	30	13.3	Low	Dusk	03/10/2017	P.pip	4
							Dusk	00/10/2017	N.noc	1
									Msp	1







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	43
							Dawn	29/06/2017	P.pyg	2
			4	60	336.7	Manuhimb			Pipsp	103
			ı	60	330.7	Very high			N.noc	180
							Dusk	29/06/2017	P.pip	51
									Pipsp	25
26	273.4	Very high					Davin	29/06/2017	P.pip	22
							Dawn	29/06/2017	Pipsp	94
									P.aur	3
			2	60	210.0	Very high			N.noc	4
							Dusk	29/06/2017	P.pip	88
									P.pyg	4
									Pipsp	37
27	76.3	High	1	35	132.9	Vory high	Dawn	29/06/2017	P.pip	28
21	70.3	підп	-	55	132.9	Very high	Dusk	29/06/2017	N.noc	65
							Dawn	29/06/2017	P.pip	41
			2	55	80.0	High			N.noc	1
28	76.3	High	2	55	60.0	Tilgit	Dusk	29/06/2017	P.pip	38
20	70.3	Tilgii							P.pyg	8
			3	20	7.5	Low	Dawn	29/06/2017	None	0
			3	20	7.5	Low	Dusk	29/06/2017	P.pyg	3
							Dawn	24/08/2017	None	0
			1	90	63.9	High	Dusk	24/08/2017	P.pip	96
							Dusk	Z 1 /00/2017	P.pyg	19
29	57.5	High					Dawn	24/08/2017	None	0
			2	30	38.3	Medium			Lei	1
				JU	30.3	IVIGUIUIII	Dusk	24/08/2017	P.pip	11
									P.pyg	11







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Davis	04/07/0047	P.aur	5
			1	40	82.5	High	Dawn	04/07/2017	P.pip	22
							Dusk	04/07/2017	P.pip	39
									N.noc	1
							Dawn	04/07/2017	P.pip	96
									P.pyg	5
30	96.3	Very high	2	40	183.8	Very high			P.pip	30
			2	40	103.0	very mgn			P.pyg	7
							Dusk	04/07/2017	N.noc	1
									P.aur	5
									B.bar	2
			3	40	22.5	Low	Dawn	04/07/2017	P.pip	6
			J	40	22.3	LOW	Dusk	04/07/2017	P.pip	12
							Dawn	04/07/2017	P.pip	41
			1	40	112.5	Very high	Dawii	04/07/2017	P.pyg	7
			'	40	112.5	very mgn	Dusk	04/07/2017	P.pip	41
							Dusk	04/01/2011	P.pyg	1
							Dawn	04/07/2017	P.pip	21
			2	40	70.0	High	Dawii	04/01/2011	P.pyg	13
31	83.3	High	2	40	70.0	riigii	Dusk	04/07/2017	P.pip	14
							Dusk	04/01/2011	P.pyg	8
							Dawn	04/07/2017	N.noc	1
							Dawii	V7/01/2011	P.pip	2
			3	40	67.5	High			N.noc	2
							Dusk	04/07/2017	P.pip	39
									P.pyg	10







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	04/07/2017	P.pip	7
			2	15	146.7	Very high	Dawii	04/07/2017	P.pyg	6
			2	15	140.7	very mgn	Dusk	04/07/2017	P.pip	30
32	126.7	Very high					Dusk	04/07/2017	P.pyg	1
32	120.7	very mgn					Dawn	04/07/2017	P.pip	27
			3	15	106.7	Very high	Dawii	04/07/2017	P.pyg	2
			J	15	100.7	very mgn	Dusk	04/07/2017	P.pip	2
							Dusk	04/07/2017	P.pip	1
							Dawn	04/07/2017	P.pip	17
			4	40	71.3	High			P.pip	28
			4	40	71.5	riigii	Dusk	04/07/2017	P.pyg	11
33	90.0	High							P.aur	1
33	90.0	riigii					Dawn	04/07/2017	None	0
			5	10	45.0	Medium			Msp	1
			J	10	45.0	iviculuiii	Dusk	04/07/2017	P.pip	5
									Pipsp	3







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									Msp	1
	27.5	Low	1				Dawn	04/07/2017	NspEser	1
	21.3	LOW	1						P.pyg	3
				30	28.3	Low			Msp	1
				00	20.0	LOW			NspEser	1
							Dusk	04/07/2017	P.pip	6
									P.pyg	3
									Pipsp	1
34							Dawn	04/07/2017	P.pyg	1
			2	30	25.0	Low	Dusk	04/07/2017	N.noc	1
							Buok	04/01/2011	P.pyg	13
							Dawn	04/07/2017	None	0
			3	30	18.3	Low	Dusk	04/07/2017	P.pip	9
									Pipsp	2
							Dawn	04/07/2017	None	0
			4	30	38.3	Medium	Dusk	04/07/2017	P.pip	19
									P.pyg	4
							Dawn	05/07/2017	P.pip	89
			4	Dawn: 60	445.0	W I. L.			P.pyg	7
			1	Dusk: 40	145.0	Very high			N.noc	1
							Dusk	05/07/2017	P.pip	45
									P.pyg	3
35	60.8	High	2	Dawn: 30	24.3	Low	Dawn	05/07/2017	P.pip	17
				Dusk: 40			Dusk	05/07/2017	None	0
							Dawn	05/07/2017	P.pip	6
			3	Dawn: 30	12.9 Lc	Low			P.pyg	1
			_	Dusk: 40			Dusk	05/07/2017	P.pip	1
									P.pyg	1
			4		38.3	Medium	Dawn	05/07/2017	N.noc	1







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pyg	10
				Dawn: 40					P.pip	5
				Dusk: 20			Dusk	05/07/2017	P.pyg	1
									N.noc	6
							Dawn	05/07/2017	None	0
36	70.0	High	1	20	47.5	Medium	Dusk	05/07/2017	P.pip	18
							Dusk	03/07/2017	P.pyg	1
			3	13	0.0	Very low	Dawn	05/07/2017	None	0
			J	10	0.0	very low	Dusk	05/07/2017	None	0
							Dawn	05/07/2017	N.noc	2
			4	13	101.3	Very high	Dawii	03/01/2011	P.pyg	4
37	70.0	High					Dusk	05/07/2017	P.pip	21
									P.pip	4
			7	13	105.0	Very high	Dawn	05/07/2017	P.pyg	1
			,	10	100.0	very mgm			N.noc	2
							Dusk	05/07/2017	P.pyg	21
							Dawn	05/07/2017	None	0
			5	20	65.0	High			P.pip	21
					00.0	9	Dusk	05/07/2017	P.pyg	1
									N.noc	4
									N.noc	2
39	70.0	High					Dawn	05/07/2017	P.pip	9
									P.pyg	12
			6	20	112.5	Very high			B.bar	2
							Dusk	05/07/2017	P.pip	3
									P.pyg	15
									N.noc	2
40	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
.0	110 00000		1.70	117 04			Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									B.bar	1
									P.aur	3
							Dawn	05/07/2017	P.pip	7
			1	20	47.5	Medium	Dawii	05/07/2017	P.pyg	5
									Pipsp	2
									E.ser	1
							Dusk	05/07/2017	None	0
									B.bar	3
									Msp	3
							Dawn	05/07/2017	N.noc	1
			2	35	70.0	High	Bawn	00/01/2011	P.pip	7
			-		70.0	i iigii			P.pyg	15
41	59.2	High							Pipsp	2
		9					Dusk	05/07/2017	P.pip	12
									P.pyg	6
									Msp	1
							Dawn	05/07/2017	P.pip	19
									P.pyg	7
			3	30	93.3	Very high			Pipsp	1
									P.aur	1
							Dusk	05/07/2017	P.pip	26
									P.pyg	1
							Dawn	05/07/2017	P.pyg	13
			4	35	25.7	Low			Msp	1
							Dusk	05/07/2017	P.pip	3
									P.pyg	1







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	05/07/2017	P.pip	1
			2	30	18.3	Low	Dawii	03/01/2011	P.pyg	1
			2	30	10.5	LOW	Dusk	05/07/2017	P.pip	5
42	88.4	High					Dusk	05/01/2011	E.ser	4
72	00.4	Tilgii					Dawn	05/07/2017	None	0
			3	30	111.7	Very high			Lei	3
			3	30	111.7	very mgn	Dusk	05/07/2017	P.pip	29
									P.pyg	35
									Msp	1
							Dawn	05/07/2017	P.pip	96
43	88.4	High	1	60	111.7	Very high			P.pyg	5
							Dusk	05/07/2017	P.pip	31
							Buok	00/01/2011	P.pyg	1
									P.pip	79
							Dawn	24/08/2017	P.pyg	30
									Pipsp	16
									B.bar	16
44	106.0	Very high	1	120	106.3	Very high			Msp	3
							Dusk	24/08/2017	N.noc	2
							2.0.1	_ ,, , , , , , , , , , , , , , , , , ,	P.pip	69
									P.pyg	32
									Pipsp	8
45	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			· ·				Dusk	n/a	n/a	n/a
46	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
47	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
48	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
40	NO access	TI/a	II/a	II/a	II/a	11/a	Dusk	n/a	n/a	n/a
									P.pip	37
							Dawn	28/09/2017	P.pyg	1
			1	60	122.5	Very high			Msp	1
							Dusk	27/09/2017	P.pip	55
49	88.8	High					Dusk	21/03/2011	P.pyg	53
40	00.0	Tilgii					Dawn	28/09/2017	P.pip	24
			2	60	55.0	High	Buwii	20/00/2017	P.pyg	8
							Dusk	27/09/2017	P.pip	34
			3 (No access)	n/a	n/a	n/a	Dawn	28/09/2017	n/a	n/a
			o (110 doodoo)	TH G	11/4	11/4	Dusk	27/09/2017	n/a	n/a
							Dawn	06/07/2017	P.pip	7
							- Jumi	00/01/2011	P.pyg	2
			1	30	56.7	High			Msp	1
							Dusk	06/07/2017	P.pip	18
									P.pyg	6
							Dawn	06/07/2017	P.pip	4
			2	30	43.3	Medium	Dusk	06/07/2017	P.pip	7
50	92.9	Very high							P.pyg	15
							Dawn	06/07/2017	P.pip	1
			3	30	20.0	Low	Dusk	06/07/2017	P.pip	1
									P.pyg	10
							Dawn	06/07/2017	P.pip	2
			4	30	25.0	Low			Msp	1
							Dusk	06/07/2017	P.pip	10
									P.pyg	2
51	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	16/08/2017	None	0
			1	30	6.7	Low	Dusk	16/08/2017	P.pip	2
							Dusk	10/00/2017	P.pyg	2
							Dawn	16/08/2017	P.pyg	3
			2	30	43.3	Medium	Dawii	10/00/2017	Pipsp	4
			2	00	40.0	Wediam	Dusk	16/08/2017	P.pip	11
52	15.4	Low					Dusk	10/00/2017	P.pyg	8
							Dawn	16/08/2017	Msp	1
			3	30	10.0	Low			Msp	1
			U	00	10.0	Low	Dusk	16/08/2017	P.pip	1
									P.pyg	3
			4	30	20.0	Low	Dawn	16/08/2017	Msp	2
				00	20.0	Low	Dusk	16/08/2017	P.pip	10
53	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
	140 00000	11/4	11/4	11/4	170	11/4	Dusk	n/a	n/a	n/a
54	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
	110 00000	170	11/0	1,10	.,,	1,10	Dusk	n/a	n/a	n/a
									Msp	3
							Dawn	30/08/2017	P.pip	41
									P.pyg	17
			1	60	99.2	Very high			B.bar	5
55	31.7	Medium					Dusk	30/08/2017	P.pip	17
	· · · · · · · · · · · · · · · · · · ·						2301	30,00,2011	P.pyg	37
									Pipsp	4
							Dawn	30/08/2017	P.pip	2
			2	60	5.8	Very low	Dawii	30/00/2011	P.pyg	3
							Dusk	30/08/2017	P.pip	2







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	37
							Dawn	06/07/2017	P.pyg	58
			1	45	148.9	Very high			Pipsp	5
			'	43	140.9	very mgn			N.noc	7
							Dusk	06/07/2017	P.pip	16
									P.pyg	11
									N.noc	1
							Dawn	06/07/2017	P.pip	5
									P.pyg	3
			2	45	60.0	High			B.bar	1
									Msp	1
							Dusk	06/07/2017	N.noc	4
									P.pip	36
56	128.8	Very high							P.pyg	3
							Dawn	06/07/2017	P.pip	10
									P.pyg	11
			3	10	255.0	Very high		00/07/00/17	N.noc	6
							Dusk	06/07/2017	P.pip	4
							5	00/07/0047	P.pyg	20
							Dawn	06/07/2017	N.noc	2
			4	40	45.0	Madium			P.aur	2
			4	10	45.0	Medium	Dusk	06/07/2017	N.noc	'
									P.pip	3
							Dawn	06/07/2017	P.pyg None	0
			5	10	80.0	High	Dawii	00/01/2017	Msp	14
			J	10	00.0	Tiigii	Dusk	06/07/2017	N.noc	2
									IN.HOC	2







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	06/07/2017	P.pip	7
			4	40	30.0	Law	Dawn	06/07/2017	P.pyg	3
			1	40	30.0	Low	Dusk	06/07/2017	N.noc	1
							Dusk	06/07/2017	P.pip	13
									N.noc	2
							Dawn	06/07/2017	P.pip	30
58	34.2	Medium							P.pyg	6
30	34.2	Medium	2	50	106.0	Very high			N.noc	7
			2	30	100.0	very mgm			P.pip	13
							Dusk	06/07/2017	P.pyg	38
									Pipsp	9
									E.ser	1
			3	30	58.3	High	Dawn	06/07/2017	None	0
			J	30	30.3	riigii	Dusk	06/07/2017	N.noc	35
									Msp	1
			1	45	8.9	Low	Dawn	30/08/2017	P.pip	3
			'	45	0.9	Low			P.pyg	3
							Dusk	30/08/2017	P.pip	1
59	45.8	Medium	2	45	7.8	Low	Dawn	30/08/2017	P.pip	1
			۷	40	1.0	LOW	Dusk	30/08/2017	P.pip	6
							Dawn	30/08/2017	None	0
			3	30	3.3	Very low	Dusk	30/08/2017	P.pip	1
							Dugy	30/00/2017	P.pyg	1







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	02/10/2017	P.pyg	1
									P.pyg	1
			1	60	5.8	Very low	Dusk	02/10/2017	P.pip	2
							Dusk	02/10/2017	B.bar	2
									P.aur	1
			2	30	26.7	Low	Dawn	02/10/2017	None	0
60	13.8	Low	2	30	20.7	LOW	Dusk	02/10/2017	P.pip	16
00	13.0	LOW					Dawn	02/10/2017	None	0
									P.pip	4
									N.noc	2
			3	30	38.3	Medium	Dusk	02/10/2017	B.bar	2
							Dusk	02/10/2017	P.pyg	7
									P.aur	3
									Pipsp	5







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									B.bar	4
							Davis	00/00/0047	P.aur	5
			1	60	62.5	High	Dawn	22/08/2017	P.pip	3
									P.pyg	4
							Dusk	22/08/2017	P.pip	59
							Dawn	22/08/2017	B.bar	1
							Dawii	22/00/2017	P.pip	4
			2	30	26.7	Low			N.noc	1
							Dusk	22/08/2017	P.pip	9
61	28.8	Low							P.pyg	1
									B.bar	2
							Dawn	22/08/2017	P.pip	7
							Dawii	22/00/2017	P.pyg	3
			3	30	40.0	Medium			E.ser	1
									B.bar	4
							Dusk	22/08/2017	P.pip	5
									P.pyg	2
			4 (No access)	n/a	n/a	n/a	Dawn	22/08/2017	n/a	n/a
			4 (NO access)	11/a	II/a	11/a	Dusk	22/08/2017	n/a	n/a
							Dawn	06/09/2017	None	0
			1	60	43.3	Medium			P.aur	1
			1	00	45.5	iviedium	Dusk	06/09/2017	P.pip	12
									P.pyg	39
62	8.8	Low					Dawn	06/09/2017	P.pip	1
			2	60	12.5	Low	Dusk	06/09/2017	B.bar	1
							Dugy	00/03/2017	P.pip	13
			3 (No access)	n/a	n/a	n/a	Dawn	06/09/2017	n/a	n/a
			o (110 access)	11/Q	11/4	11/4	Dusk	06/09/2017	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
63	No occore	7/2	7/2	- l-	7/2	7/2	Dawn	n/a	n/a	n/a
63	No access	n/a	n/a	n/a	n/a	n/a	Dusk	n/a	n/a	n/a
							Dawn	12/09/2017	Msp	1
							Dawii	12/09/2017	P.pyg	17
			1	120	47.5	Medium			Msp	1
64	26.7	Low					Dusk	12/09/2017	P.pip	62
									P.pyg	33
			2 (No access)	n/a	n/a	n/a	Dawn	12/09/2017	n/a	n/a
			2 (NO access)	11/4	Tiva	11/4	Dusk	12/09/2017	n/a	n/a
65	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
	140 00000	11/4	11/4	11/0	11/4	11/4	Dusk	n/a	n/a	n/a
66	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
	110 00000	11/4	11/4	1110	11/4	11/4	Dusk	n/a	n/a	n/a
67	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
		170	11/0				Dusk	n/a	n/a	n/a
							Dawn	31/08/2017	None	0
68	7.1	Low	1	120	7.1	Low	Dusk	31/08/2017	P.pip	9
							240.0		P.pyg	8
									P.pip	1
							Dawn	05/09/2017	P.pyg	1
			1	120	2.5	Very low			Pipsp	1
69	7.5	Low					Dusk	05/09/2017	P.pip	1
									P.pyg	2
			2 (No access)	n/a	n/a	n/a	Dawn	31/08/2017	n/a	n/a
			()	-			Dusk	31/08/2017	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	7
							Dawn	11/07/2017	P.pyg	45
			1	30	96.7	Very high			Pipsp	1
							Dusk	12/07/2017	N.noc	2
							Dusk	12/01/2011	P.pyg	3
							Dawn	11/07/2017	P.pip	8
			2	30	128.3	Very high	Dawii	11/01/2011	P.pyg	25
			2	00	120.0	very mgn	Dusk	12/07/2017	P.pip	6
							Buok	12/01/2011	P.pyg	38
72	55.0	High					Dawn	11/07/2017	P.pip	4
							Dawii	11/01/2011	P.pyg	16
			3	30	80.0	High			N.noc	1
							Dusk	12/07/2017	P.pip	8
									P.pyg	19
							Dawn	11/07/2017	P.pyg	17
			4	30	125.0	Very high	Dusk	12/07/2017	P.pip	14
							Such	.2,01,2011	P.pyg	44
		5 (No access)	lo access) n/a	n/a n,	n/a	Dawn	n/a	n/a	n/a	
			o (110 00000)	1110	1170	100	Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	17
							Dawn	11/07/2017	P.pyg	22
									Pipsp	3
			1	30	136.7	Very high			Msp	1
							Dusk	12/07/2017	P.pip	12
							Dusk	12/07/2017	P.pyg	12
									Pipsp	15
							Dawn	11/07/2017	P.pyg	14
			2	30	35.0	Medium			P.aur	1
			2	00	35.0	Wicdiam	Dusk	12/07/2017	N.noc	3
73	51.7	High							P.pyg	3
10	01.7	i ligii							N.noc	1
							Dawn	11/07/2017	P.pip	8
			3	30	26.7	Low			P.pyg	3
			3	00	20.1	LOW			P.aur	1
							Dusk	12/07/2017	N.noc	1
									P.pyg	2
							Dawn	11/07/2017	P.pyg	1
			4	30	8.3	Low	Dusk	12/07/2017	P.pip	3
							Duon	12/01/2011	P.pyg	1
			5 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			J (110 000003)	11/0	11/4	1110	Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Down	11/10/2017	P.pyg	48
			1	120	85.0	High	Dawn	11/10/2017	N.noc	1
			I	120	65.0	nigii	Dusk	10/10/2017	P.pyg	130
							Dusk	10/10/2017	P.pip	25
75	85.0	High					Dawn	11/10/2017	n/a	n/a
							Dawn	10/10/2017	n/a	n/a
			2 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	10/10/2017	n/a	n/a
							Dusk	n/a	n/a	n/a
							Dawn	12/10/2017	P.pyg	44
							Dawii	12/10/2011	P.pip	2
			1	120	45.0	Medium			P.pyg	50
			1	120	40.0	Wediam	Dusk	11/10/2017	P.pip	6
76	45.0	Medium					Dusk	11/10/2017	P.aur	2
70	43.0	Mediam							Pipsp	4
							Dawn	n/a	n/a	n/a
			2 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			2 (140 access)	II/a	i va	11/a	Dusk	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
							Dawn	n/a	n/a	n/a
77	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
11	INU access	ΙΙΙα	II/a	II/a	II/a	i iva	Dusk	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	19/07/2017	P.pyg	10
			1	40	28.8	Low			N.noc	1
			1	40	20.0	Low	Dusk	19/07/2017	P.pip	5
									P.pyg	7
							Down	19/07/2017	P.pip	19
							Dawn	19/07/2017	P.pyg	28
			2	40	97.5	Vonchish			Lei	1
			2	40	97.5	Very high	Dusk	19/07/2017	N.noc	1
78	52.9	High					Dusk	19/07/2017	P.pip	15
									P.pyg	14
							Down	19/07/2017	P.pip	2
							Dawn	19/07/2017	P.pyg	7
			3	40	32.5	Medium			N.noc	1
							Dusk	19/07/2017	P.pip	4
									P.pyg	12
			4 (No access)	nla	n/a	n/a	Dawn	n/a	n/a	n/a
			4 (NO access)	n/a	IVa	II/a	Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	12/09/2017	None	0
			1	20	7.5	Low	Dusk	12/09/2017	P.pip	2
							Dusk	12/09/2017	P.pyg	1
							Dawn	12/09/2017	None	0
			2	10	20.0	Low	Dusk	12/09/2017	P.pip	2
							Dusk	12/09/2017	P.pyg	2
							Dawn	12/09/2017	None	0
79	11.0	Low	3	25	30.0	Low	Dusk	12/09/2017	P.pip	6
							Dusk	12/09/2017	P.pyg	9
			4	30	0.0	Very low	Dawn	12/09/2017	None	0
			4	30	0.0	very low	Dusk	12/09/2017	None	0
			5	Dawn: 30 Dusk: 23	0.0	Very low	Dawn	12/09/2017	None	0
				Dusk. 23			Dusk	12/09/2017	None	0
			6 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			0 (110 000033)	11/4	11/4	11/4	Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	07/09/2017	P.pyg	2
			1	30	51.7	High	Duals	06/00/2017	P.pip	23
							Dusk	06/09/2017	P.pyg	6
							Dawn	07/09/2017	P.aur	2
			2	30	40.0	Medium			P.aur	1
			2	30	40.0	iviedium	Dusk	06/09/2017	P.pip	14
									P.pyg	7
							Dawn	07/09/2017	P.pyg	2
80	45.0	Medium							B.bar	1
			3	30	81.7	High	Dusk	06/09/2017	Msp	3
							Dusk	00/09/2017	P.pip	34
									P.pyg	9
							Dawn	07/09/2017	P.pyg	1
			4	30	6.7	Low	Dusk	06/09/2017	P.pip	1
							Dusk	00/03/2011	P.pyg	2
			5 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			3 (NO docc33)	11/4	1774	11/4	Dusk	n/a	n/a	n/a
							Dawn	07/09/2017	Msp	1
			1	40	94.3	Very high	Dusk	07/09/2017	P.pip	21
							Buok	01700/2011	P.pyg	44
							Dawn	07/09/2017	P.pip	1
04	50.8	Madium	2	Dawn: 80	43.6	Medium	- Dawn	01700/2011	P.pyg	6
81	50.6	Medium	-	Dusk: 30	10.0	Woodan	Dusk	07/09/2017	P.pip	15
							2 3011	51,00,2011	P.pyg	26
			3	30	20.0	Low	Dusk	07/09/2017	P.pip	6
			4	30	6.7	Low	Dusk	07/09/2017	P.pyg	2
			5 (No access)	n/a	n/a	n/a	n/a	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									Msp	6
							Dawn	05/09/2017	P.pip	33
									P.pyg	22
			1	120	43.8	Medium			Msp	1
							Dusk	05/09/2017	P.pip	19
82	43.7	Medium					Dusk	05/09/2017	P.pyg	21
									Pipsp	3
							Dawn	n/a	n/a	n/a
			2 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			2 (140 access)	II/a	II/a	11/a	Dusk	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
83	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
00	140 000033	11/4	11/4	Π/α	11/4	11/4	Dusk	n/a	n/a	n/a
									P.aur	3
							Dawn	01/08/2017	P.pip	3
			1	24	20.8	Low			P.pyg	1
							Dusk	02/08/2017	N.noc	1
							Dusk	02/00/2011	P.pip	2
84	42.9	Medium	2	24	6.3	Low	Dawn	01/08/2017	P.pyg	1
	12.0	Wodam			0.0	2011	Dusk	02/08/2017	Pipsp	2
							Dawn	01/08/2017	P.pyg	22
			3	24	125.0	Very high	Dusk	02/08/2017	P.pip	22
							2300	52,00,2011	Pipsp	16
			6 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			3 (300000)				Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
			4	24	60.4	High	Dawn	01/08/2017	P.pyg	29
			4	24	00.4	nigii	Dusk	01/08/2017	None	0
85	42.9	Medium	5	24	2.1	Very low	Dawn	01/08/2017	None	0
00	42.5	Mediaili	J	24	Z. 1	very low	Dusk	02/08/2017	P.pip	1
			7 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			7 (140 000033)	11/4	1774	11/4	Dusk	n/a	n/a	n/a
									B.bar	1
			1	15	123.3	Very high	Dawn	15/08/2017	P.pip	6
			'	10	120.0	vory mgm			P.pyg	20
							Dusk	15/08/2017	P.pip	10
							Dawn	15/08/2017	P.pip	38
			2	25	96.0	Very high	- Dawn	10/00/2011	P.pyg	8
							Dusk	15/08/2017	Pipsp	2
							Dawn	15/08/2017	P.pip	10
									B.bar	1
			3	Dawn: 30	40.0	Medium			N.noc	2
				Dusk: 25	.5.0		Dusk	15/08/2017	P.pip	2
86	97.1	Very high							P.pyg	3
									Pipsp	4
									N.noc	2
							Dawn	15/08/2017	P.pip	12
			4	Dawn: 25	89.1	High			P.pyg	18
			·	Dusk: 30		9			N.noc	1
							Dusk	15/08/2017	P.pip	12
									P.pyg	4
									P.aur	15
			5	25	154.0	Very high	Dawn	15/08/2017	N.noc	15
				20	101.0				P.pyg	1
							Dusk	15/08/2017	P.pip	40







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pyg	6
							Dawn	15/08/2017	Msp	1
			1	45	18.9	Low	Dawn	15/06/2017	P.pip	2
			1	45	10.9	LOW	Dusk	15/08/2017	P.pip	7
							Dusk	13/00/2017	P.pyg	7
87	11.7	Low					Dawn	15/08/2017	P.pyg	1
			2	45	12.2	Low	Dusk	15/08/2017	P.pyg	9
							Buok	10/00/2017	E.ser	1
			3	30	0.0	Very low	Dawn	15/08/2017	None	0
			-			,	Dusk	15/08/2017	None	0
88	0.0	Very low	1	120	0.0	Very low	Dawn	10/10/2017	None	0
		tory ion	•		6.0	very len	Dusk	10/10/2017	None	0
89	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			.,			1.00	Dusk	n/a	n/a	n/a
90	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
91	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
92	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
93	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
94	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
				Daving 42			Dawn	05/09/2017	P.pip	42
			1	Dawn: 43 Dusk: 42	56.5	High	Dusk	05/09/2017	P.pip	2
							Dusk	03/03/2017	P.pyg	4
0.5	27.0	Mar Paris					Dawn	05/09/2017	P.pyg	5
95	37.8	Medium	2	Dawn: 58	24.4	Low			P.pip	20
				Dusk: 61			Dusk	05/09/2017	P.pyg	1
									E.ser	3
			3 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			o (140 docc33)	11/4	1774	11/4	Dusk	n/a	n/a	n/a
				Dawn: 55			Dawn	05/09/2017	P.pip	6
			1	Dusk: 60	7.0	Low	Dusk	05/09/2017	P.pip	1
							Dusk	03/03/2017	P.pyg	1
96	37.9	Medium					Dawn	05/09/2017	B.bar	1
			2	Dawn: 70 Dusk: 60	63.8	High			P.pip	44
				Dusk. 00			Dusk	05/09/2017	P.pip	37
							Duon	00/03/2011	P.pyg	1







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Davis	04/09/9047	P.pip	10
			1	20	40.0	Medium	Dawn	01/08/2017	Pipsp	1
							Dusk	02/08/2017	P.pip	5
							Dawn	01/08/2017	P.pip	3
			2	20	30.0	Low	Dawii	01/00/2017	P.pyg	1
			2	20	30.0	Low	Dusk	02/08/2017	P.pip	7
							Buok	02/00/2017	P.pyg	1
			3	20	5.0	Very low	Dawn	01/08/2017	P.pip	1
					0.0	voly low	Dusk	02/08/2017	P.pip	1
97	69.9	High					Dawn	01/08/2017	P.pip	13
			4	20	232.5	Very high	Dusk	02/08/2017	P.pip	68
									P.pyg	12
							Dawn	01/08/2017	P.pip	9
			5	20	112.5	Very high	Dusk	02/08/2017	P.pip	22
									P.pyg	14
			6	20	0.0	Very low	Dawn	01/08/2017	None	0
							Dusk	02/08/2017	None	0
			7 (No access)	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
			,				Dusk	n/a	n/a	n/a
98	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
99	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
100	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a
101	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
							Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
							Dawn	03/10/2017	P.pyg	3
							Dawn	03/10/2017	P.aur	1
			1	60	287.5	Very high			P.pip	64
							Dusk	02/10/2017	P.pyg	276
									Msp	1
102	164.2	Very high					Dawn	03/10/2017	P.pip	2
							Dawii	03/10/2017	P.pyg	28
			2	60	40.8	Medium			P.pip	3
			2	00	40.0	Medium	Dusk	02/10/2017	P.pyg	14
							Dusk	02/10/2017	Pipsp	1
									Msp	1
							Dawn	10/10/2017	P.pyg	1
			1	40	56.3	High			P.pyg	38
			1	40	30.3	i iigii	Dusk	10/10/2017	P.pip	5
									B.bar	1
402	00.7	1					Dawn	10/10/2017	None	0
103	26.7	Low	2	40	2.5	Very low	Dusk	10/10/2017	N.noc	1
							Dusk	10/10/2011	P.pyg	1
			3	40	21.3	Low	Dawn	10/10/2017	None	0
				40	21.0	Low	Dusk	10/10/2017	P.pyg	17
			4 (No access)	n/a	n/a	n/a	Dusk	10/10/2017	n/a	n/a
104	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
104	NO access	TI/a	II/a	11/4	11/a	11/a	Dusk	n/a	n/a	n/a
105	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
103	140 000000	11/0	11/4	11/ Q	11/0	TIVA	Dusk	n/a	n/a	n/a
106	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
100	110 000000	11/4	11/α	II/G	11/4	ina	Dusk	n/a	n/a	n/a
107	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
101	110 00000	1.70	11,0	11/ (4	1170	1,74	Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
			4	40	40.0	1	Dawn	21/09/2017	None	0
			1	10	10.0	Low	Dusk	20/09/2017	N.noc	2
							Dawn	21/09/2017	None	0
			2	15	36.7	Medium	Dusk	20/09/2017	P.pip	6
							Dusk	20/09/2017	P.pyg	5
							Dawn	21/09/2017	P.aur	1
			3	25	14.0	Low	Dusk	20/09/2017	P.pip	1
							Dusk	20/09/2017	P.pyg	5
			4	5	60.0	High	Dawn	21/09/2017	P.pip	4
108	48.3	Medium	7	3	00.0	riigii	Dusk	20/09/2017	P.pyg	2
100	40.3	Medium					Dawn	21/09/2017	P.pyg	6
							Dawii	21/09/2017	P.pip	10
			5	40	46.3	Medium			P.pip	13
			3	40	40.5	Medium	Dusk	20/09/2017	P.pyg	4
							Dusk	20/03/2017	N.noc	2
									Msp	2
			6	15	20.0	Low	Dawn	21/09/2017	P.pip	1
			O	10	20.0	LOW	Dusk	20/09/2017	P.pip	5
			7 (No access)	n/a	n/a	n/a	Dawn	21/09/2017	n/a	n/a
			7 (140 000033)	11/4	11/4	11/4	Dusk	20/09/2017	n/a	n/a
109	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
100	140 000000	11/4	Π/α	11/0	ıπα	11/4	Dusk	n/a	n/a	n/a







Habitat parcel group	Activity score overall	Activity Level	Transect Leg	Time spent on leg / minutes	Activity score per leg	Activity level per leg	Dusk/Dawn transect	Transect date	Bat species	Cumulative passes (per species)
									P.pip	36
									P.pyg	10
							Dawn	21/09/2017	Msp	1
									N.noc	1
110	57.1	High	1	120	57.1	High			Pipsp	8
110	57.1	riigii	'	120	37.1	riigii			Pipsp	7
									P.pip	48
							Dusk	20/09/2017	P.pyg	23
									N.noc	2
									Msp	1
									B.bar	3
			1		50.0		Dawn	21/09/2017	P.pyg	9
				80		Medium	Jan	21/00/2011	P.pip	17
									E.ser	1
							Dusk	20/09/2017	P.pip	45
111	82.5	High					D don	20/00/2011	P.pyg	5
							Dawn	21/09/2017	P.pyg	14
							Dawn	21/00/2011	P.pip	19
			2	40	147.5	Very high			P.pip	81
							Dusk	20/09/2017	P.pyg	3
									B.bar	1
112	No access	n/a	n/a	n/a	n/a	n/a	Dawn	n/a	n/a	n/a
112	No access n/a n/a No access n/a n/a	11/0	11/4	1,70	Dusk	n/a	n/a	n/a		
113		n/a	n/a	n/a	Dawn	n/a	n/a	n/a		
110	110 00000	11/4	11/4	n/a	11/4	1774	Dusk	n/a	n/a	n/a
114	No access	No access n/a n/a	n/a	n/a r	n/a	Dawn	n/a	n/a	n/a	
, 114	110 00000	11/4	n/a	II/U	11/4	1,1,0	Dusk	n/a	n/a	n/a







Appendix H Bat roost survey weather data

H.1.1.1. Due to the large number of bat emergence and re-entry survey locations, weather data obtained from Weather Underground (Weather Underground, undated) are given for two representative points located along the route. These were Wood Dalling and Taverham, Norfolk.

Table G.6: Weather data for all dusk emergence and dawn return to roost surveys.

	Date	Max temp (°C) during the survey	Min temp (°C) during the survey	Rainfall	Windspeed (Beaufort Scale)	Cloud cover %	Suitability of weather conditions for bat emergence / re-entry surveys
DUSK							
	02/08/2017	18	16	None	4-5	66	Suitable
	08/08/2017	15	13	Showers	2	100	Suitable
	09/08/2017	15	15	None	5-6	0	Suitable
	22/08/2018	19	16	None	2-3	100	Suitable
	23/08/2017	20	17	None	2-3	33	Suitable
Wood Dalling (north of	24/08/2017	18	12	None	2	33	Suitable
Hornsea Three onshore cable corridor)	31/08/2017	15	13	None	2-3	33	Suitable
	06/09/2017	12	11	Showers	2-3	33	Suitable
	12/09/2017	16	14	Showers	3-4	66	Suitable
	13/09/2017	14	10	None	4	33	Suitable
	14/09/2017	13	10	Rain	3-4	100	Suitable
	18/09/2017	14	12	None	4-5	66	Suitable
	17/07/2017	18	15	None	1-2	0	Suitable
	18/07/2017	17	17	None	3-4	0	Suitable
	19/07/2017	21	19	None	3-4	100	Suitable
Taverham (south of Hornsea	26/07/2017	20	17	None	4	33	Suitable
Three onshore cable corridor)	27/07/2017	18	13	Showers	0-3	66	Suitable
	31/07/2017	19	15	None	2	33	Suitable
	01/08/2017	19	16	Drizzle	1-2	33	Suitable
_	02/08/2017	18	17	Light Rain	3-4	100	Suitable







	Date	Max temp (°C) during the survey	Min temp (°C) during the survey	Rainfall	Windspeed (Beaufort Scale)	Cloud cover %	Suitability of weather conditions for bat emergence / re-entry surveys
	07/08/2017	18	16	Rain	2	66	Suitable
	08/08/2017	15	14	None	1-2	33	Suitable
	09/08/2017	15	15	Light Rain	4	100	Suitable
	10/08/2017	16	11	None	1-2	0	Suitable
	14/08/2017	19	18	None	2	0	Suitable
	15/08/2017	20	15	None	1-2	0	Suitable
	16/08/2017	19	17	None	2-3	0	Suitable
	17/08/2017	20	17	None	2-4	0	Suitable
	24/08/2017	18	14	None	2	0	Suitable
	29/08/2017	16	16	None	2-3	100	Suitable
	30/08/2017	12	11	Light Rain	2	100	Suitable
	31/08/2017	15	13	None	1-2	33	Suitable
	06/09/2017	16	15	None	2-3	66	Suitable
	07/09/2017	17	15	Light Rain	2-3	100	Suitable
	11/09/2017	15	13	None	3-4	33	Suitable
	12/09/2017	15	14	None	2-4	0	Suitable
	13/09/2017	12	10	Showers	3	66	Suitable
	14/09/2017	14	10	None	1-3	66	Suitable
	18/09/2017	13	11	None	2-3	33	Suitable
	25/09/2017	16	15	None	1-2	66	Suitable
	26/09/2017	15	13	None	2	33	Suitable
	03/10/2017	14	12	None	3-4	33	Suitable
	04/10/2017	13	12	Showers	4	33	Suitable
	05/10/2017	14	10	None	2-4	33	Suitable
	25/10/2017	12	10	None	0	66	Suitable
DAWN							
Wood Dalling (porth)	03/08/2017	18	16	Showers	4	66	Suitable
Wood Dalling (north)	08/08/2017	16	16	Showers	1-3	100	Suitable





	Date	Max temp (°C) during the survey	Min temp (°C) during the survey	Rainfall	Windspeed (Beaufort Scale)	Cloud cover %	Suitability of weather conditions for bat emergence / re-entry surveys
	16/08/2017	10	9	None	1-2	0	Suitable
	22/08/2017	16	16	None	3-4	100	Suitable
	23/08/2017	17	17	Rain (partially)	3	100	Sub-optimal*
	24/08/2017	13	12	None	3	0	Suitable
	31/08/2017	10	10	None	3	66	Suitable
	06/09/2017	13	11	None	4	66	Suitable
	07/09/2017	12	12	None	3-4	100	Suitable
	13/09/2017	14	12	Showers	5-8	100	Sub-optimal*
	26/09/2017	15	14	Showers	3	100	Suitable
	18/07/2017	12	12	None	1	33	Suitable
	20/07/2017	18	17	None	2	0	Suitable
	27/07/2017	13	13	None	3	0	Suitable
	01/08/2017	12	11	None	2	0	Suitable
	02/08/2017	15	14	None	2	0	Suitable
	03/08/2017	18	16	Showers	3-4	66	Suitable
	08/08/2017	15	14	Showers	1-2	66	Suitable
	09/08/2017	14	13	None	2-3	100	Suitable
	10/08/2017	16	11	None	1-2	0	Suitable
Taverham (south)	15/08/2017	15	14	None	2	0	Suitable
	16/08/2017	11	10	None	1	0	Suitable
	23/08/2017	17	16	Showers	1-3	100	Suitable
	24/08/2017	12	11	None	2-3	0	Suitable
	30/08/2017	14	14	None	1-2	100	Suitable
	31/08/2017	9	8	None	2	0	Suitable
	07/09/2017	12	9	None	2	0	Suitable
	12/09/2017	10	10	None	4	0	Suitable
	14/09/2017	9	8	None	3	33	Suitable
	20/09/2017	8	6	None	2	0	Suitable







Date	Max temp (°C) during the survey	Min temp (°C) during the survey	Rainfall	Windspeed (Beaufort Scale)	Cloud cover %	Suitability of weather conditions for bat emergence / re-entry surveys
25/09/2017	14	13	None	2-3	33	Suitable
26/09/2017	14	13	None	1-2	33	Suitable
04/10/2017	10	9	None	3	0	Suitable
10/10/2017	12	12	None	3	33	Suitable
11/10/2017	16	15	None	4	100	Suitable

^{*}Survey conducted in sub-optimal conditions, however, active bats were recorded.







Appendix I Preliminary ground level roost assessment results

Table I.7: Preliminary Ground Level Roost Assessment Results.

Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1AT12	Low	14/03/2017	Sycamore	9	500	Semi-Mature	Negligible	Negligible	Low
BA1AT20	Low	27/04/2017	Ash	12	350	Mature	Negligible	Negligible	Low
BA1AT21	Low	27/04/2017	Sycamore	12	300	Young	Negligible	Negligible	Low
BA1AT23	Low	14/03/2017	Sycamore	9	400	Semi-Mature	Negligible	Negligible	Low
BA1AT25	Low	14/03/2017	Alder	5	400	Young	Negligible	Negligible	Low
BA1AT26	Low	14/03/2017	Sycamore	5	400	Young	Negligible	Negligible	Low
BA1AT28	Low	27/04/2017	Sycamore	12	300	Semi-Mature	Negligible	Negligible	Low
BA1AT29	Low	27/04/2017	Ash	12	300	Semi-Mature	Negligible	Negligible	Low
BA1AT37	Low	28/06/2017	Silver birch	10	400	Semi-Mature	Negligible	Negligible	Low
BA1AT38	Low	28/06/2017	Silver birch	2.5	200	Unknown	Negligible	Negligible	Low
BA1AT39	Low	27/04/2017	Pedunculate oak	17	500	Mature	Negligible	Negligible	Low
BA1AT41	Low	27/04/2017	Ash	17	400	Mature	Negligible	Negligible	Low
BA1AT42	Low	14/03/2017	Pedunculate oak	8	500	Semi-Mature	Negligible	Negligible	Low
BA1AT43	Low	14/03/2017	Pedunculate oak	15	300	Semi-Mature	Negligible	Negligible	Low
BA1AT45	Low	14/03/2017	Pedunculate oak	13	600	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1AT47	Low	25/10/2017	Pedunculate oak	18	800	Veteran	Negligible	Negligible	Low
BA1AT48	Low	25/10/2017	Pedunculate oak	20	500	Veteran	Negligible	Negligible	Low
BA1AT49	Low	25/10/2017	Pedunculate oak	12	600	Mature	Negligible	Negligible	Low
BA1AT5	Low	14/03/2017	Unknown	8	600	Semi-Mature	Negligible	Negligible	Low
BA1BT1	Low	21/03/2017	Pedunculate oak	10	1000	Mature	Negligible	Negligible	Low
BA1BT10	Low	14/03/2017	Alder	7	350	Mature	Negligible	Negligible	Low
BA1BT100	Low	21/03/2017	Hybrid black poplar	20	600	Mature	Negligible	Negligible	Low
BA1BT101	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT102	Low	21/03/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT103	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT104	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT105	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT106	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT107	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT108	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT109	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT11	Low	14/03/2017	Field maple	6	300	Young	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1BT110	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT111	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT112	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT113	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT117	Low	21/03/2017	Pedunculate oak	6	350	Semi-Mature	Negligible	Negligible	Low
BA1BT12	Low	14/03/2017	Field maple	9	400	Mature	Negligible	Negligible	Low
BA1BT120	Low	21/03/2017	Ash	15	400	Mature	Negligible	Negligible	Low
BA1BT121	Low	21/03/2017	Ash	18	400	Mature	Negligible	Negligible	Low
BA1BT123	Low	21/03/2017	Pedunculate oak	20	350	Mature	Negligible	Negligible	Low
BA1BT125	Low	21/03/2017	Pedunculate oak	20	400	Semi-Mature	Negligible	Negligible	Low
BA1BT126	Low	21/03/2017	Ash	20	400	Mature	Negligible	Negligible	Low
BA1BT133	Low	21/03/2017	Pedunculate oak	25	700	Mature	Negligible	Negligible	Low
BA1BT134	Low	21/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low
BA1BT135	Low	21/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low
BA1BT14	Low	14/03/2017	Field maple	6	300	Young	Negligible	Negligible	Low
BA1BT140	Low	21/03/2017	Pedunculate oak	12	800	Mature	Negligible	Negligible	Low
BA1BT141	Low	21/03/2017	Unknown	3	400	Unknown	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1BT143	Low	21/03/2017	Pedunculate oak	8	1000	Mature	Negligible	Negligible	Low
BA1BT144	Low	21/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low
BA1BT145	Low	21/03/2017	Pedunculate oak	10	1500	Mature	Negligible	Negligible	Low
BA1BT147	Low	21/03/2017	Pedunculate oak	10	300	Semi-Mature	Negligible	Negligible	Low
BA1BT148	Low	21/03/2017	Pedunculate oak	10	300	Semi-Mature	Negligible	Negligible	Low
BA1BT149	Low	21/03/2017	Pedunculate oak	10	300	Semi-Mature	Negligible	Negligible	Low
BA1BT15	Low	14/03/2017	Field maple	7	200	Semi-Mature	Negligible	Negligible	Low
BA1BT150	Low	21/03/2017	Pedunculate oak	12	400	Semi-Mature	Negligible	Negligible	Low
BA1BT151	Low	21/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low
BA1BT154	Low	21/03/2017	Pedunculate oak	8	800	Mature	Negligible	Negligible	Low
BA1BT155	Low	21/03/2017	Ash	10	300	Mature	Negligible	Negligible	Low
BA1BT16	Low	27/04/2017	Pedunculate oak	15	700	Mature	Negligible	Negligible	Low
BA1BT17	Low	15/03/2017	Field maple	8	300	Semi-Mature	Negligible	Negligible	Low
BA1BT18	Low	15/03/2017	Field maple	6	300	Young	Negligible	Negligible	Low
BA1BT2	Low	21/03/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Low
BA1BT20	Low	15/03/2017	Ash	18	600	Mature	Negligible	Negligible	Low
BA1BT21	Low	15/03/2017	Field maple	8	600	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1BT22	Low	15/03/2017	Field maple	8	600	Mature	Negligible	Negligible	Low
BA1BT24	Low	27/04/2017	Pedunculate oak	22	1200	Mature	Negligible	Negligible	Low
BA1BT25	Low	15/03/2017	Ash	9	350	Mature	Negligible	Negligible	Low
BA1BT29	Low	15/03/2017	Field maple	8	400	Semi-Mature	Negligible	Negligible	Low
BA1BT3	Low	21/03/2017	Pedunculate oak	10	500	Mature	Negligible	Negligible	Low
BA1BT33	Low	15/03/2017	Field maple	10	600	Mature	Negligible	Negligible	Low
BA1BT35	Low	15/03/2017	Field maple	5	400	Young	Negligible	Negligible	Low
BA1BT36	Low	15/03/2017	Field maple	9	600	Semi-Mature	Negligible	Negligible	Low
BA1BT4	Low	21/03/2017	Pedunculate oak	10	600	Mature	Negligible	Negligible	Low
BA1BT5	Low	21/03/2017	Pedunculate oak	10	1000	Mature	Negligible	Negligible	Low
BA1BT6	Low	21/03/2017	Pedunculate oak	7	400	Semi-Mature	Negligible	Negligible	Low
BA1BT7	Low	21/03/2017	Pedunculate oak	7	400	Semi-Mature	Negligible	Negligible	Low
BA1BT76	Low	26/04/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1BT77	Low	26/04/2017	Pedunculate oak	14	300	Mature	Negligible	Negligible	Low
BA1BT83	Low	21/03/2017	Ash	15	400	Mature	Negligible	Negligible	Low
BA1BT84	Low	26/04/2017	Pedunculate oak	16	500	Mature	Negligible	Negligible	Low
BA1BT85	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1BT86	Low	21/03/2017	Ash	13	400	Mature	Negligible	Negligible	Low
BA1BT88	Low	26/04/2017	Silver birch	15	200	Semi-Mature	Negligible	Negligible	Low
BA1BT89	Low	26/04/2017	Hybrid black poplar	20	400	Mature	Negligible	Negligible	Low
BA1BT9	Low	14/03/2017	Alder	7	500	Young	Negligible	Negligible	Low
BA1BT90	Low	26/04/2017	Pedunculate oak	16	700	Mature	Negligible	Negligible	Low
BA1BT91	Low	21/03/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT92	Low	26/04/2017	Hybrid black poplar	20	400	Mature	Negligible	Negligible	Low
BA1BT93	Low	21/03/2017	Hybrid black poplar	20	600	Mature	Negligible	Negligible	Low
BA1BT94	Low	26/04/2017	Hybrid black poplar	20	400	Mature	Negligible	Negligible	Low
BA1BT95	Low	26/04/2017	Crack willow	20	900	Mature	Negligible	Negligible	Low
BA1BT96	Low	21/03/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT98	Low	26/04/2017	Hybrid black poplar	20	600	Unknown	Negligible	Negligible	Low
BA1BT99	Low	21/03/2017	Hybrid black poplar	20	600	Mature	Negligible	Negligible	Low
BA1CT1	Low	22/03/2017	Pedunculate oak	20	800	Mature	Negligible	Negligible	Low
BA1CT10	Low	22/03/2017	Pedunculate oak	25	800	Mature	Negligible	Negligible	Low
BA1CT100	Low	02/03/2017	Ash	15	500	Mature	Negligible	Negligible	Low
BA1CT103	Low	02/03/2017	Field maple	8	500	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT104	Low	02/03/2017	Field maple	8	500	Mature	Negligible	Negligible	Low
BA1CT106	Low	02/03/2017	Field maple	18	300	Mature	Negligible	Negligible	Low
BA1CT107	Low	02/03/2017	Ash	10	150	Semi-Mature	Negligible	Negligible	Low
BA1CT112	Low	02/03/2017	Hawthorn	12	200	Mature	Negligible	Negligible	Low
BA1CT113	Low	02/03/2017	Ash	18	300	Mature	Negligible	Negligible	Low
BA1CT115	Low	02/03/2017	Ash	18	700	Mature	Negligible	Negligible	Low
BA1CT119	Low	27/04/2017	Pedunculate oak	20	600	Veteran	Low	Low	Low
BA1CT122	Low	02/03/2017	Ash	15	400	Mature	Negligible	Negligible	Low
BA1CT126	Low	02/03/2017	Scots pine	15	300	Young	Negligible	Negligible	Low
BA1CT13	Low	22/03/2017	Pedunculate oak	17	800	Mature	Negligible	Negligible	Low
BA1CT132	Low	22/02/2017	Field maple	15	200	Semi-Mature	Negligible	Negligible	Low
BA1CT133	Low	18/10/2017	Ash	15	400	Semi-Mature	Negligible	Negligible	Low
BA1CT134	Low	18/10/2017	Pedunculate oak	15	800	Mature	Negligible	Negligible	Low
BA1CT135	Low	18/10/2017	Sycamore	12	200	Mature	Negligible	Negligible	Low
BA1CT138	Low	18/10/2017	Ash	20	300	Mature	Negligible	Negligible	Low
BA1CT139	Low	18/10/2017	Pedunculate oak	20	1500	Veteran	Negligible	Negligible	Low
BA1CT2	Low	22/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT20	Low	22/03/2017	Ash	4	300	Semi-Mature	Negligible	Negligible	Low
BA1CT24	Low	23/03/2017	Alder	6	1100	Mature	Negligible	Negligible	Low
BA1CT25	Low	23/03/2017	Hawthorn	8	300	Mature	Negligible	Negligible	Low
BA1CT28	Low	23/03/2017	Alder	6	400	Mature	Negligible	Negligible	Low
BA1CT29	Low	23/03/2017	Alder	10	300	Unknown	Negligible	Negligible	Low
BA1CT3	Low	22/03/2017	Pedunculate oak	3	1000	Mature	Negligible	Negligible	Low
BA1CT30	Low	23/03/2017	Alder	8	400	Mature	Negligible	Negligible	Low
BA1CT31	Low	23/03/2017	Alder	10	400	Mature	Negligible	Negligible	Low
BA1CT32	Low	23/03/2017	Alder	8	400	Semi-Mature	Negligible	Negligible	Low
BA1CT33	Low	23/03/2017	Alder	10	400	Mature	Negligible	Negligible	Low
BA1CT34	Low	23/03/2017	Alder	6	300	Semi-Mature	Negligible	Negligible	Low
BA1CT36	Low	23/03/2017	Alder	20	500	Mature	Negligible	Negligible	Low
BA1CT37	Low	23/03/2017	Alder	25	1000	Mature	Negligible	Negligible	Low
BA1CT38	Low	23/03/2017	Alder	8	300	Semi-Mature	Negligible	Negligible	Low
BA1CT39	Low	23/03/2017	Alder	10	500	Mature	Negligible	Negligible	Low
BA1CT4	Low	22/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low
BA1CT41	Low	23/03/2017	Alder	20	200	Semi-Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT42	Low	23/03/2017	Alder	14	600	Mature	Negligible	Negligible	Low
BA1CT43	Low	23/03/2017	Alder	15	800	Mature	Negligible	Negligible	Low
BA1CT44	Low	23/03/2017	Ash	12	450	Mature	Negligible	Negligible	Low
BA1CT45	Low	23/03/2017	Ash	12	300	Semi-Mature	Negligible	Negligible	Low
BA1CT46	Low	23/03/2017	Pedunculate oak	11	500	Mature	Negligible	Negligible	Low
BA1CT47	Low	23/03/2017	Ash	12	300	Mature	Negligible	Negligible	Low
BA1CT48	Low	23/03/2017	Ash	9	300	Semi-Mature	Negligible	Negligible	Low
BA1CT49	Low	23/03/2017	Ash	12	500	Mature	Negligible	Negligible	Low
BA1CT5	Low	22/03/2017	Pedunculate oak	4	500	Mature	Negligible	Negligible	Low
BA1CT50	Low	23/03/2017	Ash	8	300	Semi-Mature	Negligible	Negligible	Low
BA1CT51	Low	23/03/2017	Ash	12	500	Mature	Negligible	Negligible	Low
BA1CT52	Low	23/03/2017	Ash	12	500	Mature	Negligible	Negligible	Low
BA1CT53	Low	23/03/2017	Ash	9	400	Semi-Mature	Negligible	Negligible	Low
BA1CT54	Low	23/03/2017	Ash	12	300	Semi-Mature	Negligible	Negligible	Low
BA1CT55	Low	23/03/2017	Ash	12	500	Mature	Negligible	Negligible	Low
BA1CT56	Low	23/03/2017	Pedunculate oak	5	350	Semi-Mature	Negligible	Negligible	Low
BA1CT57	Low	14/03/2017	Pedunculate oak	6	1000	Semi-Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT58	Low	14/03/2017	Pedunculate oak	11	1000	Mature	Negligible	Negligible	Low
BA1CT59	Low	14/03/2017	Pedunculate oak	11	700	Semi-Mature	Negligible	Negligible	Low
BA1CT6	Low	22/03/2017	Pedunculate oak	12	1000	Mature	Negligible	Negligible	Low
BA1CT60	Low	14/03/2017	Pedunculate oak	10	700	Semi-Mature	Negligible	Negligible	Low
BA1CT61	Low	14/03/2017	Pedunculate oak	9	1000	Mature	Negligible	Negligible	Low
BA1CT63	Low	14/03/2017	Pedunculate oak	11	800	Mature	Negligible	Negligible	Low
BA1CT64	Low	14/03/2017	Pedunculate oak	10	1200	Mature	Negligible	Negligible	Low
BA1CT65	Low	14/03/2017	Pedunculate oak	10	1200	Mature	Negligible	Negligible	Low
BA1CT69	Low	22/03/2017	Wild cherry	7	350	Mature	Negligible	Negligible	Low
BA1CT72	Low	22/03/2017	Pedunculate oak	10	500	Mature	Negligible	Negligible	Low
BA1CT74	Low	22/03/2017	Pedunculate oak	10	500	Mature	Negligible	Negligible	Low
BA1CT75	Low	22/03/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Low
BA1CT77	Low	22/03/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Low
BA1CT82	Low	22/02/2017	Pedunculate oak	18	700	Mature	Low	Negligible	Low
BA1CT83	Low	22/02/2017	Sycamore	18	700	Mature	Low	Negligible	Moderate
BA1CT84	Low	22/02/2017	Pedunculate oak	15	700	Mature	Negligible	Negligible	Low
BA1CT86	Low	22/02/2017	Sycamore	15	600	Mature	Negligible	Low	Negligible







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT87	Low	22/02/2017	Pedunculate oak	16	900	Mature	Negligible	Negligible	Low
BA1CT88	Low	22/02/2017	Pedunculate oak	18	700	Mature	Negligible	Negligible	Low
BA1CT89	Low	02/03/2017	Ash	15	300	Mature	Negligible	Negligible	Low
BA1CT90	Low	02/03/2017	Sycamore	15	300	Mature	Negligible	Negligible	Low
BA1CT91	Low	02/03/2017	Ash	15	300	Mature	Negligible	Negligible	Low
BA1CT93	Low	28/06/2017	Pedunculate oak	16	1000	Mature	Negligible	Negligible	Low
BA1CT96	Low	02/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1CT97	Low	02/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1CT99	Low	02/03/2017	Pedunculate oak	15	800	Mature	Negligible	Negligible	Low
BA1DT1	Low	22/02/2017	Wild cherry	15	1000	Mature	Negligible	Negligible	Low
BA1DT10	Low	02/03/2017	Pedunculate oak	18	500	Mature	Negligible	Negligible	Low
BA1DT19	Low	02/03/2017	Sycamore	20	800	Mature	Negligible	Negligible	Low
BA1DT2	Low	02/03/2017	Ash	25	800	Mature	Negligible	Negligible	Low
BA1DT20	Low	02/03/2017	Pedunculate oak	20	600	Mature	Negligible	Negligible	Low
BA1DT21	Low	23/03/2017	Turkey oak	12	700	Mature	Negligible	Negligible	Low
BA1DT25	Low	23/03/2017	Pedunculate oak	10	300	Semi-Mature	Negligible	Negligible	Low
BA1DT27	Low	23/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1DT28	Low	23/03/2017	Pedunculate oak	14	300	Mature	Negligible	Negligible	Low
BA1DT29	Low	23/03/2017	Ash	10	600	Mature	Negligible	Negligible	Low
BA1DT3	Low	02/03/2017	Pedunculate oak	20	600	Mature	Negligible	Negligible	Low
BA1DT30	Low	23/03/2017	Ash	5	300	Semi-Mature	Negligible	Negligible	Low
BA1DT33	Low	07/06/2017	Wild cherry	12	300	Semi-Mature	Negligible	Negligible	Low
BA1DT34	Low	07/06/2017	Sycamore	10	300	Semi-Mature	Negligible	Negligible	Low
BA1DT37	Low	07/06/2017	Silver birch	13	300	Semi-Mature	Negligible	Negligible	Low
BA1DT39	Low	07/06/2017	English elm	9	150	Semi-Mature	Negligible	Negligible	Low
BA1DT4	Low	02/03/2017	Pedunculate oak	20	400	Mature	Negligible	Negligible	Low
BA1DT9	Low	22/03/2017	Pedunculate oak	14	700	Mature	Negligible	Negligible	Low
BA1ET10	Low	08/06/2017	Ash	17	350	Semi-Mature	Negligible	Negligible	Low
BA1ET101	Low	22/02/2017	Pedunculate oak	25	800	Mature	Negligible	Negligible	Low
BA1ET104	Low	28/04/2017	Pedunculate oak	25	1200	Mature	Negligible	Negligible	Low
BA1ET107	Low	28/04/2017	Pedunculate oak	30	800	Mature	Negligible	Negligible	Low
BA1ET108	Low	28/04/2017	Pedunculate oak	30	800	Mature	Negligible	Negligible	Low
BA1ET109	Low	22/02/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1ET11	Low	08/06/2017	Ash	17	400	Semi-Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET117	Low	28/04/2017	Pedunculate oak	25	300	Mature	Negligible	Negligible	Low
BA1ET118	Low	28/04/2017	Pedunculate oak	25	1200	Mature	Negligible	Negligible	Low
BA1ET119	Low	28/04/2017	Sycamore	30	400	Mature	Negligible	Negligible	Low
BA1ET12	Low	08/06/2017	Ash	18	700	Mature	Negligible	Negligible	Low
BA1ET123	Low	28/04/2017	Beech	19	500	Mature	Negligible	Negligible	Low
BA1ET125	Low	28/04/2017	Pedunculate oak	20	700	Mature	Negligible	Negligible	Low
BA1ET137	Low	22/03/2017	Sycamore	20	400	Semi-Mature	Negligible	Negligible	Low
BA1ET138	Low	22/03/2017	Pedunculate oak	18	800	Mature	Negligible	Negligible	Low
BA1ET139	Low	22/03/2017	Hawthorn	12	250	Mature	Negligible	Negligible	Low
BA1ET14	Low	08/06/2017	Ash	22	550	Mature	Negligible	Negligible	Low
BA1ET140	Low	22/03/2017	Sycamore	24	600	Mature	Negligible	Negligible	Low
BA1ET141	Low	22/03/2017	Pedunculate oak	20	700	Mature	Negligible	Negligible	Low
BA1ET142	Low	22/03/2017	Pedunculate oak	20	700	Mature	Negligible	Negligible	Low
BA1ET143	Low	22/03/2017	Pedunculate oak	20	800	Mature	Negligible	Negligible	Low
BA1ET144	Low	22/03/2017	Sycamore	17	400	Semi-Mature	Negligible	Negligible	Low
BA1ET145	Low	22/03/2017	Sycamore	15	400	Young	Negligible	Negligible	Low
BA1ET146	Low	22/03/2017	Unknown	12	300	Young	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET147	Low	23/03/2017	Sycamore	25	1000	Mature	Negligible	Negligible	Low
BA1ET15	Low	08/06/2017	Ash	22	600	Mature	Negligible	Negligible	Low
BA1ET150	Low	23/03/2017	Wild cherry	10	200	Mature	Negligible	Negligible	Low
BA1ET151	Low	22/03/2017	Unknown	12	300	Young	Negligible	Negligible	Low
BA1ET152	Low	23/03/2017	Wild cherry	18	350	Mature	Negligible	Negligible	Low
BA1ET153	Low	23/03/2017	Sycamore	25	800	Mature	Negligible	Negligible	Low
BA1ET155	Low	22/03/2017	Wild cherry	20	450	Mature	Negligible	Negligible	Low
BA1ET156	Low	23/03/2017	Wild cherry	16	350	Mature	Negligible	Negligible	Low
BA1ET157	Low	23/03/2017	Sycamore	16	250	Young	Negligible	Negligible	Low
BA1ET158	Low	23/03/2017	Pedunculate oak	22	600	Mature	Negligible	Negligible	Low
BA1ET159	Low	23/03/2017	Sycamore	12	150	Young	Negligible	Negligible	Low
BA1ET16	Low	08/06/2017	Ash	22	400	Mature	Negligible	Negligible	Low
BA1ET160	Low	23/03/2017	Wild cherry	18	300	Mature	Negligible	Negligible	Low
BA1ET161	Low	23/03/2017	Sycamore	16	350	Mature	Negligible	Negligible	Low
BA1ET162	Low	23/03/2017	Sycamore	3	150	Unknown	Low	Negligible	Low
BA1ET163	Low	23/03/2017	Pedunculate oak	20	1600	Mature	Negligible	Negligible	Low
BA1ET165	Low	23/03/2017	Sycamore	20	700	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET166	Low	23/03/2017	Sycamore	24	600	Mature	Negligible	Negligible	Low
BA1ET167	Low	23/03/2017	Wild cherry	6	300	Young	Low	Negligible	Low
BA1ET17	Low	08/06/2017	Ash	18	400	Semi-Mature	Negligible	Negligible	Low
BA1ET170	Low	23/03/2017	Sweet chestnut	15	850	Mature	Low	Negligible	Low
BA1ET171	Low	23/03/2017	Sweet chestnut	15	700	Mature	Low	Negligible	Low
BA1ET172	Low	23/03/2017	Pedunculate oak	10	500	Semi-Mature	Negligible	Negligible	Low
BA1ET18	Low	08/06/2017	Ash	12	350	Semi-Mature	Negligible	Negligible	Low
BA1ET19	Low	08/06/2017	Ash	18	350	Semi-Mature	Negligible	Negligible	Low
BA1ET2	Low	08/06/2017	Ash	20	400	Mature	Negligible	Negligible	Low
BA1ET20	Low	08/06/2017	Hawthorn	8	350	Mature	Negligible	Negligible	Low
BA1ET21	Low	08/06/2017	Douglas fir	18	400	Mature	Negligible	Negligible	Low
BA1ET22	Low	08/06/2017	Ash	14	350	Semi-Mature	Negligible	Negligible	Low
BA1ET23	Low	08/06/2017	Field maple	22	450	Mature	Negligible	Negligible	Low
BA1ET24	Low	08/06/2017	Ash	22	300	Mature	Negligible	Negligible	Low
BA1ET25	Low	08/06/2017	Ash	19	450	Mature	Negligible	Negligible	Low
BA1ET26	Low	08/06/2017	Ash	22	300	Mature	Negligible	Negligible	Low
BA1ET27	Low	08/06/2017	Hawthorn	18	300	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET28	Low	08/06/2017	Ash	18	450	Mature	Negligible	Negligible	Low
BA1ET29	Low	08/06/2017	Ash	18	450	Mature	Negligible	Negligible	Low
BA1ET3	Low	08/06/2017	Ash	18	250	Mature	Negligible	Negligible	Low
BA1ET30	Low	08/06/2017	Ash	21	650	Mature	Negligible	Negligible	Low
BA1ET44	Low	07/06/2017	Pedunculate oak	6	250	Semi-Mature	Negligible	Negligible	Low
BA1ET45	Low	07/06/2017	Pedunculate oak	12	400	Semi-Mature	Negligible	Negligible	Low
BA1ET46	Low	26/04/2017	Pedunculate oak	30	1200	Veteran	Low	Low	Low
BA1ET48	Low	07/06/2017	Pedunculate oak	10	300	Semi-Mature	Negligible	Negligible	Negligible
BA1ET49	Low	07/06/2017	Unknown	5	120	Unknown	Low	Negligible	Low
BA1ET5	Low	08/06/2017	Ash	18	400	Mature	Negligible	Negligible	Low
BA1ET50	Low	07/06/2017	Pedunculate oak	8	150	Semi-Mature	Negligible	Negligible	Low
BA1ET51	Low	21/03/2017	Unknown	20	400	Semi-Mature	Negligible	Negligible	Low
BA1ET52	Low	15/03/2017	Pedunculate oak	15	800	Mature	Negligible	Negligible	Low
BA1ET53	Low	21/03/2017	Pedunculate oak	15	400	Mature	Negligible	Negligible	Low
BA1ET54	Low	21/03/2017	Pedunculate oak	12	400	Semi-Mature	Negligible	Negligible	Low
BA1ET55	Low	21/03/2017	Pedunculate oak	20	500	Mature	Negligible	Negligible	Low
BA1ET56	Low	21/03/2017	Pedunculate oak	20	400	Semi-Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET57	Low	15/03/2017	Pedunculate oak	16	500	Mature	Negligible	Negligible	Low
BA1ET58	Low	21/03/2017	Ash	22	400	Semi-Mature	Negligible	Negligible	Low
BA1ET59	Low	15/03/2017	Pedunculate oak	14	1000	Mature	Negligible	Negligible	Low
BA1ET60	Low	26/04/2017	Silver birch	25	400	Mature	Low	Low	Low
BA1ET62	Low	26/04/2017	Downy birch	30	600	Mature	Low	Low	Low
BA1ET64	Low	21/03/2017	Goat willow	12	450	Semi-Mature	Negligible	Negligible	Low
BA1ET65	Low	21/03/2017	Goat willow	10	350	Semi-Mature	Low	Low	Low
BA1ET67	Low	26/04/2017	Ash	25	700	Mature	Low	Low	Low
BA1ET68	Low	21/03/2017	White poplar	17	400	Semi-Mature	Negligible	Negligible	Low
BA1ET69	Low	21/03/2017	Alder	15	500	Mature	Negligible	Negligible	Low
BA1ET7	Low	08/06/2017	Ash	18	300	Semi-Mature	Negligible	Negligible	Low
BA1ET71	Low	21/03/2017	Wild cherry	10	400	Semi-Mature	Negligible	Negligible	Low
BA1ET72	Low	21/03/2017	Wild cherry	10	400	Semi-Mature	Negligible	Negligible	Low
BA1ET73	Low	21/03/2017	Wild cherry	10	400	Semi-Mature	Negligible	Negligible	Low
BA1ET74	Low	04/05/2017	English elm	5	400	Semi-Mature	Negligible	Negligible	Low
BA1ET75	Low	04/05/2017	English elm	5	400	Semi-Mature	Negligible	Negligible	Low
BA1ET76	Low	05/05/2017	Pedunculate oak	10	500	Semi-Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET77	Low	07/06/2017	Pedunculate oak	8	350	Semi-Mature	Negligible	Negligible	Low
BA1ET78	Low	07/06/2017	Pedunculate oak	8	350	Semi-Mature	Negligible	Negligible	Low
BA1ET79	Low	27/04/2017	Pedunculate oak	20	1100	Mature	Low	Low	Low
BA1ET8	Low	08/06/2017	Ash	17	400	Semi-Mature	Negligible	Negligible	Low
BA1ET80	Low	21/02/2017	Pedunculate oak	22	650	Mature	Negligible	Negligible	Low
BA1ET81	Low	21/02/2017	Pedunculate oak	20	800	Mature	Low	Negligible	Low
BA1ET82	Low	21/02/2017	Pedunculate oak	22	1400	Veteran	Negligible	Negligible	Low
BA1ET85	Low	21/02/2017	Pedunculate oak	22	800	Mature	Low	Negligible	Low
BA1ET87	Low	07/06/2017	Pedunculate oak	14	900	Mature	Negligible	Negligible	Low
BA1ET88	Low	22/02/2017	Pedunculate oak	25	1000	Mature	Low	Negligible	Low
BA1ET89	Low	27/04/2017	Scots pine	30	400	Mature	Negligible	Negligible	Low
BA1ET90	Low	22/02/2017	Pedunculate oak	25	1000	Mature	Negligible	Negligible	Low
BA1ET91	Low	22/02/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1ET94	Low	22/02/2017	Pedunculate oak	24	700	Mature	Negligible	Negligible	Low
BA1ET98	Low	22/02/2017	Pedunculate oak	12	300	Semi-Mature	Negligible	Negligible	Low
BA1ET99	Low	22/02/2017	Pedunculate oak	25	700	Mature	Negligible	Negligible	Low
BA1FT1	Low	22/03/2017	Pedunculate oak	18	1000	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT100	Low	23/02/2017	Pedunculate oak	10	600	Mature	Negligible	Negligible	Low
BA1FT103	Low	21/02/2017	Pedunculate oak	10	600	Mature	Negligible	Negligible	Low
BA1FT105	Low	02/03/2017	Pedunculate oak	10	400	Mature	Negligible	Negligible	Low
BA1FT111	Low	08/06/2017	Sessile oak	25	1000	Veteran	Negligible	Negligible	Low
BA1FT120	Low	08/06/2017	Sessile oak	15	500	Semi-Mature	Negligible	Negligible	Low
BA1FT121	Low	02/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1FT122	Low	02/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1FT124	Low	08/06/2017	Pedunculate oak	35	1100	Veteran	Negligible	Negligible	Low
BA1FT127	Low	08/06/2017	Sycamore	10	200	Young	Negligible	Negligible	Low
BA1FT128	Low	02/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Low
BA1FT129	Low	08/06/2017	Pedunculate oak	30	750	Veteran	Negligible	Negligible	Low
BA1FT130	Low	08/06/2017	Sycamore	15	300	Semi-Mature	Negligible	Negligible	Low
BA1FT131	Low	08/06/2017	Pedunculate oak	20	700	Mature	Negligible	Negligible	Low
BA1FT132	Low	08/06/2017	Ash	12	600	Mature	Negligible	Negligible	Low
BA1FT133	Low	08/06/2017	Ash	15	500	Mature	Negligible	Negligible	Low
BA1FT14	Low	21/02/2017	Crack willow	14	1000	Mature	Low	Low	Low
BA1FT144	Low	19/10/2017	Pedunculate oak	16	800	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT146	Low	19/10/2017	Pedunculate oak	24	1300	Veteran	Negligible	Negligible	Low
BA1FT148	Low	19/10/2017	Pedunculate oak	20	600	Veteran	Negligible	Negligible	Low
BA1FT149	Low	19/10/2017	Pedunculate oak	20	600	Semi-Mature	Negligible	Negligible	Low
BA1FT153	Low	19/10/2017	Pedunculate oak	30	1200	Mature	Negligible	Low	Low
BA1FT154	Low	19/10/2017	Pedunculate oak	20	1200	Mature	Negligible	Negligible	Low
BA1FT155	Low	19/10/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1FT156	Low	19/10/2017	Pedunculate oak	16	400	Mature	Negligible	Negligible	Low
BA1FT158	Low	19/10/2017	Pedunculate oak	16	600	Mature	Negligible	Negligible	Low
BA1FT160	Low	19/10/2017	Pedunculate oak	24	1000	Veteran	Negligible	Negligible	Low
BA1FT163	Low	19/10/2017	Pedunculate oak	18	500	Mature	Negligible	Negligible	Low
BA1FT165	Low	19/10/2017	Pedunculate oak	20	1200	Veteran	Negligible	Negligible	Low
BA1FT166	Low	19/10/2017	Pedunculate oak	16	500	Mature	Negligible	Negligible	Low
BA1FT168	Low	19/10/2017	Pedunculate oak	18	900	Mature	Negligible	Negligible	Low
BA1FT170	Low	19/10/2017	Pedunculate oak	25	1200	Mature	Negligible	Negligible	Low
BA1FT171	Low	19/10/2017	Pedunculate oak	20	1400	Mature	Negligible	Negligible	Low
BA1FT172	Low	19/10/2017	Ash	18	500	Mature	Negligible	Negligible	Low
BA1FT175	Low	19/10/2017	Pedunculate oak	20	1000	Veteran	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT177	Low	19/10/2017	Pedunculate oak	18	1100	N/A	Negligible	Negligible	Low
BA1FT18	Low	28/04/2017	Pedunculate oak	18	1000	Mature	Negligible	Low	Low
BA1FT20	Low	21/02/2017	Pedunculate oak	16	1800	Mature	Negligible	Negligible	Low
BA1FT21	Low	21/02/2017	Pedunculate oak	18	2000	Veteran	Low	Low	Low
BA1FT24	Low	07/06/2017	Lime	15	1000	Mature	Negligible	Negligible	Low
BA1FT25	Low	07/06/2017	Ash	15	400	Mature	Negligible	Negligible	Low
BA1FT26	Low	07/06/2017	Ash	12	1000	Mature	Negligible	Low	Low
BA1FT29	Low	07/06/2017	Ash	10	1000	Mature	Negligible	Negligible	Low
BA1FT32	Low	21/02/2017	Pedunculate oak	12	700	Semi-Mature	Negligible	Negligible	Low
BA1FT34	Low	21/03/2017	Pedunculate oak	12	400	Semi-Mature	Negligible	Negligible	Low
BA1FT38	Low	03/03/2017	Pedunculate oak	12	1000	Mature	Negligible	Negligible	Low
BA1FT39	Low	03/03/2017	Pedunculate oak	14	1000	Mature	Negligible	Negligible	Low
BA1FT41	Low	07/06/2017	Ash	12	300	Semi-Mature	Negligible	Negligible	Low
BA1FT42	Low	07/06/2017	Field maple	13	350	Mature	Negligible	Negligible	Low
BA1FT43	Low	07/06/2017	Field maple	15	500	Mature	Negligible	Negligible	Low
BA1FT44	Low	07/06/2017	Field maple	9	400	Semi-Mature	Negligible	Negligible	Low
BA1FT45	Low	28/02/2017	Small-leaved lime	20	1000	Veteran	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT48	Low	07/06/2017	Ash	10	600	Semi-Mature	Low	Low	Low
BA1FT49	Low	07/06/2017	Unknown	4	500	Unknown	Negligible	Low	Low
BA1FT50	Low	07/06/2017	Unknown	4	500	Unknown	Negligible	Low	Low
BA1FT52	Low	07/06/2017	Field maple	8	400	Semi-Mature	Negligible	Negligible	Low
BA1FT53	Low	21/03/2017	Field maple	6	300	Mature	Negligible	Negligible	Low
BA1FT54	Low	21/03/2017	Field maple	6	200	Semi-Mature	Negligible	Negligible	Low
BA1FT55	Low	07/06/2017	Unknown	10	300	Semi-Mature	Negligible	Negligible	Low
BA1FT56	Low	21/03/2017	Field maple	5	300	Semi-Mature	Negligible	Negligible	Low
BA1FT57	Low	21/03/2017	Field maple	5	300	Semi-Mature	Negligible	Negligible	Low
BA1FT58	Low	21/03/2017	Unknown	5	300	Semi-Mature	Negligible	Negligible	Low
BA1FT59	Low	21/03/2017	Field maple	5	300	Semi-Mature	Negligible	Negligible	Low
BA1FT60	Low	21/03/2017	Field maple	5	300	Semi-Mature	Negligible	Negligible	Low
BA1FT61	Low	21/03/2017	Field maple	3	180	Semi-Mature	Negligible	Negligible	Low
BA1FT65	Low	07/06/2017	Ash	15	450	Mature	Negligible	Negligible	Low
BA1FT66	Low	07/06/2017	Ash	18	500	Mature	Negligible	Negligible	Low
BA1FT73	Low	27/04/2017	Unknown	15	300	Semi-Mature	Negligible	Negligible	Low
BA1FT74	Low	21/03/2017	Pedunculate oak	17	600	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT75	Low	21/03/2017	Pedunculate oak	17	600	Mature	Negligible	Negligible	Low
BA1FT76	Low	21/03/2017	Pedunculate oak	17	600	Mature	Negligible	Negligible	Low
BA1FT77	Low	21/03/2017	Pedunculate oak	17	600	Mature	Negligible	Negligible	Low
BA1FT78	Low	21/03/2017	Pedunculate oak	15	600	Mature	Negligible	Negligible	Low
BA1FT79	Low	21/03/2017	Pedunculate oak	18	700	Mature	Negligible	Negligible	Low
BA1FT8	Low	21/02/2017	Alder	12	1000	Mature	Negligible	Negligible	Low
BA1FT80	Low	21/03/2017	Pedunculate oak	18	700	Mature	Negligible	Negligible	Low
BA1FT83	Low	27/04/2017	Pedunculate oak	20	600	Semi-Mature	Negligible	Negligible	Low
BA1FT84	Low	27/04/2017	Pedunculate oak	8	300	Semi-Mature	Negligible	Negligible	Low
BA1FT85	Low	27/04/2017	Pedunculate oak	8	300	Semi-Mature	Negligible	Negligible	Low
BA1FT87	Low	27/04/2017	Ash	20	300	Semi-Mature	Negligible	Negligible	Low
BA1FT88	Low	27/04/2017	Pedunculate oak	8	300	Semi-Mature	Negligible	Negligible	Low
BA1FT89	Low	27/04/2017	Ash	12	500	Semi-Mature	Negligible	Negligible	Low
BA1FT90	Low	27/04/2017	Pedunculate oak	12	400	Semi-Mature	Negligible	Negligible	Low
BA1FT91	Low	27/04/2017	Ash	12	300	Semi-Mature	Negligible	Negligible	Low
BA1FT96	Low	23/02/2017	Pedunculate oak	16	600	Mature	Negligible	Negligible	Low
BA1FT98	Low	23/02/2017	Pedunculate oak	10	600	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT114	Low	21/02/2017	Pedunculate oak	3	800	Veteran	Negligible	Negligible	Low
BA1GT121	Low	21/02/2017	Pedunculate oak	16	700	Mature	Negligible	Negligible	Low
BA1GT122	Low	21/02/2017	Pedunculate oak	12	1300	Veteran	Negligible	Negligible	Low
BA1GT124	Low	21/02/2017	Pedunculate oak	12	700	Mature	Negligible	Negligible	Low
BA1GT125	Low	21/07/2015	Pedunculate oak	18	800	Mature	Negligible	Negligible	Low
BA1GT126	Low	21/02/2017	Pedunculate oak	16	800	Mature	Negligible	Negligible	Low
BA1GT127	Low	21/02/2017	Pedunculate oak	8	650	Mature	Negligible	Negligible	Low
BA1GT128	Low	21/02/2017	Pedunculate oak	15	700	Mature	Negligible	Negligible	Low
BA1GT142	Low	20/02/2017	Pedunculate oak	15	900	Mature	Low	Negligible	Low
BA1GT15	Low	08/06/2017	Ash	15	300	Semi-Mature	Negligible	Negligible	Low
BA1GT17	Low	08/06/2017	Ash	17	400	Mature	Negligible	Negligible	Low
BA1GT18	Low	08/06/2017	Ash	15	400	Mature	Negligible	Negligible	Low
BA1GT24	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT25	Low	01/03/2017	Pedunculate oak	15	500	Mature	Negligible	Negligible	Low
BA1GT27	Low	02/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT29	Low	02/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT31	Low	26/04/2017	Pedunculate oak	18	900	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT32	Low	26/04/2017	Pedunculate oak	12	1000	Mature	Negligible	Negligible	Low
BA1GT33	Low	26/04/2017	Pedunculate oak	10	600	Semi-Mature	Negligible	Negligible	Low
BA1GT37	Low	02/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT38	Low	26/04/2017	Pedunculate oak	17	700	Semi-Mature	Negligible	Negligible	Low
BA1GT39	Low	26/04/2017	Pedunculate oak	18	600	Semi-Mature	Negligible	Negligible	Low
BA1GT41	Low	26/04/2017	Pedunculate oak	18	700	Mature	Negligible	Negligible	Low
BA1GT42	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT43	Low	02/03/2017	Pedunculate oak	15	800	Mature	Negligible	Negligible	Low
BA1GT44	Low	02/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT45	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT46	Low	28/02/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Low
BA1GT47	Low	02/03/2017	Pedunculate oak	15	800	Mature	Negligible	Negligible	Low
BA1GT48	Low	28/02/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Low
BA1GT49	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT50	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT51	Low	22/03/2017	Unknown	5.5	300	Semi-Mature	Negligible	Negligible	Low
BA1GT52	Low	28/02/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT53	Low	22/03/2017	Unknown	4.5	300	Semi-Mature	Low	Negligible	Low
BA1GT54	Low	22/03/2017	Ash	8	1000	Mature	Negligible	Negligible	Low
BA1GT55	Low	02/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT56	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT57	Low	02/03/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Low
BA1GT58	Low	02/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT6	Low	08/06/2017	Field maple	8	200	Semi-Mature	Negligible	Negligible	Low
BA1GT60	Low	01/03/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Low
BA1GT61	Low	21/02/2017	Blackthorn	7	100	Mature	Low	Negligible	Low
BA1GT62	Low	22/03/2017	Unknown	5	400	Mature	Negligible	Negligible	Low
BA1GT64	Low	02/03/2017	Pedunculate oak	12	850	Mature	Negligible	Negligible	Low
BA1GT67	Low	21/02/2017	Pedunculate oak	18	700	Mature	Low	Negligible	Low
BA1GT68	Low	28/02/2017	Pedunculate oak	16	800	Mature	Low	Negligible	Low
BA1GT72	Low	21/02/2017	Pedunculate oak	15	700	Mature	Low	Negligible	Low
BA1GT76	Low	21/02/2017	Pedunculate oak	15	900	Mature	Low	Negligible	Low
BA1GT77	Low	21/02/2017	Pedunculate oak	5	800	Veteran	Low	Negligible	Low
BA1GT78	Low	21/02/2017	Hornbeam	14	600	Mature	Low	Negligible	Low







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT79	Low	21/02/2017	Pedunculate oak	18	1000	Mature	Low	Negligible	Low
BA1GT80	Low	21/02/2017	Pedunculate oak	15	750	Mature	Low	Negligible	Low
BA1AT27	Moderate	27/04/2017	Ash	18	700	Mature	Low	Low	Moderate
BA1AT40	Moderate	27/04/2017	Ash	17	400	Mature	Negligible	Negligible	Moderate
BA1AT44	Moderate	14/03/2017	Pedunculate oak	15	600	Mature	Negligible	Negligible	Moderate
BA1BT114	Moderate	26/04/2017	Pedunculate oak	18	750	Mature	Low	Low	Moderate
BA1BT115	Moderate	21/03/2017	Pedunculate oak	10	700	Mature	Negligible	Negligible	Moderate
BA1BT116	Moderate	21/03/2017	Pedunculate oak	10	1000	Mature	Negligible	Negligible	Moderate
BA1BT119	Moderate	21/03/2017	Pedunculate oak	12	500	Mature	Negligible	Negligible	Moderate
BA1BT122	Moderate	21/03/2017	Pedunculate oak	12	500	Mature	Negligible	Negligible	Moderate
BA1BT124	Moderate	21/03/2017	Pedunculate oak	12	500	Mature	Negligible	Negligible	Moderate
BA1BT13	Moderate	27/04/2017	Pedunculate oak	13	700	Mature	Low	Low	Moderate
BA1BT142	Moderate	21/03/2017	Pedunculate oak	6	600	Mature	Negligible	Negligible	Moderate
BA1BT23	Moderate	27/04/2017	Pedunculate oak	16	600	Mature	Low	Low	Moderate
BA1BT26	Moderate	27/04/2017	Pedunculate oak	20	1000	Mature	Low	Low	Moderate
BA1BT27	Moderate	27/04/2017	Pedunculate oak	20	1000	Mature	Low	Low	Moderate
BA1BT32	Moderate	27/04/2017	Pedunculate oak	20	1500	Mature	Negligible	Negligible	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1BT37	Moderate	15/03/2017	Field maple	11	700	Mature	Negligible	Negligible	Moderate
BA1BT78	Moderate	26/04/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Moderate
BA1BT79	Moderate	26/04/2017	Pedunculate oak	15	700	Mature	Low	Low	Moderate
BA1BT80	Moderate	26/04/2017	Pedunculate oak	15	1000	Mature	Negligible	Negligible	Moderate
BA1BT81	Moderate	26/04/2017	Ash	15	300	Mature	Negligible	Negligible	Low
BA1BT82	Moderate	26/04/2017	Pedunculate oak	12	500	Mature	Negligible	Negligible	Low
BA1BT97	Moderate	21/03/2017	Hybrid black poplar	20	500	Mature	Negligible	Negligible	Moderate
BA1CT102	Moderate	02/03/2017	Domestic apple	12	500	Mature	Low	Moderate	Moderate
BA1CT105	Moderate	02/03/2017	Pedunculate oak	8	1000	Mature	Negligible	Negligible	Moderate
BA1CT11	Moderate	22/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Moderate
BA1CT110	Moderate	02/03/2017	Ash	15	300	Semi-Mature	Low	Low	Moderate
BA1CT114	Moderate	28/06/2017	Pedunculate oak	15	700	Mature	Negligible	Negligible	Moderate
BA1CT118	Moderate	02/03/2017	Holly	15	700	Mature	Negligible	Negligible	Moderate
BA1CT120	Moderate	28/06/2017	Pedunculate oak	12	500	Mature	Negligible	Negligible	Moderate
BA1CT18	Moderate	22/03/2017	Pedunculate oak	8	800	Mature	Negligible	Negligible	Moderate
BA1CT62	Moderate	14/03/2017	Pedunculate oak	9	1000	Mature	Negligible	Negligible	Moderate
BA1CT66	Moderate	14/03/2017	Pedunculate oak	12	1000	Mature	Low	Negligible	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT7	Moderate	22/03/2017	Pedunculate oak	12	800	Mature	Negligible	Negligible	Moderate
BA1CT73	Moderate	22/03/2017	Pedunculate oak	10	800	Mature	Negligible	Negligible	Moderate
BA1CT79	Moderate	22/03/2017	Pedunculate oak	12	700	Mature	Negligible	Negligible	Moderate
BA1CT81	Moderate	22/02/2017	Pedunculate oak	16	650	Mature	Low	Negligible	Moderate
BA1CT85	Moderate	22/02/2017	Pedunculate oak	15	600	Mature	Low	Negligible	Moderate
ВА1СТ9	Moderate	22/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Moderate
BA1CT92	Moderate	22/02/2017	Sycamore	20	1300	Veteran	Low	Negligible	Moderate
BA1CT95	Moderate	02/03/2017	Ash	18	1000	Veteran	Negligible	Negligible	Moderate
BA1CT98	Moderate	02/03/2017	Pedunculate oak	18	1000	Mature	Negligible	Negligible	Moderate
BA1DT11	Moderate	22/03/2017	Pedunculate oak	14	700	Mature	Negligible	Negligible	Moderate
BA1DT12	Moderate	02/03/2017	Pedunculate oak	15	300	Mature	Negligible	Negligible	Moderate
BA1DT15	Moderate	02/03/2017	Pedunculate oak	20	500	Mature	Negligible	Negligible	Moderate
BA1DT16	Moderate	02/03/2017	Pedunculate oak	18	500	Mature	Negligible	Negligible	Moderate
BA1DT22	Moderate	23/03/2017	Turkey oak	12	700	Mature	Negligible	Negligible	Moderate
BA1DT23	Moderate	23/03/2017	Pedunculate oak	17	600	Mature	Negligible	Negligible	Moderate
BA1DT24	Moderate	23/03/2017	Pedunculate oak	15	500	Mature	Negligible	Negligible	Moderate
BA1DT35	Moderate	07/06/2017	Pedunculate oak	8	1250	Mature	Negligible	Negligible	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET100	Moderate	22/02/2017	Pedunculate oak	20	1000	Mature	Low	Negligible	Moderate
BA1ET102	Moderate	27/04/2017	Sycamore	15	300	Semi-Mature	Negligible	Negligible	Moderate
BA1ET110	Moderate	27/04/2017	Scots pine	25	400	Mature	Low	Low	Moderate
BA1ET111	Moderate	22/02/2017	Pedunculate oak	24	700	Mature	Moderate	Negligible	Moderate
BA1ET115	Moderate	28/04/2017	Pedunculate oak	12	250	Unknown	Low	Low	Moderate
BA1ET116	Moderate	28/04/2017	Unknown	10	150	Unknown	Negligible	Negligible	Moderate
BA1ET121	Moderate	28/04/2017	Pedunculate oak	25	600	Mature	Negligible	Negligible	Moderate
BA1ET122	Moderate	28/04/2017	Scots pine	30	700	Mature	Negligible	Negligible	Moderate
BA1ET124	Moderate	28/04/2017	Beech	20	600	Semi-Mature	Low	Low	Moderate
BA1ET127	Moderate	22/02/2017	Beech	20	1000	Mature	Low	Negligible	Moderate
BA1ET13	Moderate	08/06/2017	Ash	8	250	Semi-Mature	Negligible	Negligible	Moderate
BA1ET135	Moderate	22/03/2017	Wild cherry	15	400	Mature	Low	Low	Moderate
BA1ET136	Moderate	22/03/2017	Wild cherry	18	300	Mature	Negligible	Negligible	Moderate
BA1ET148	Moderate	23/03/2017	Wild cherry	18	400	Mature	Low	Low	Moderate
BA1ET164	Moderate	23/03/2017	Ash	24	500	Mature	Low	Low	Moderate
BA1ET168	Moderate	23/03/2017	Sycamore	6	300	Young	Negligible	Negligible	Low
BA1ET169	Moderate	23/03/2017	Pedunculate oak	12	750	Mature	Moderate	Low	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET31	Moderate	08/06/2017	Unknown	3	200	Unknown	Negligible	Negligible	Moderate
BA1ET34	Moderate	07/06/2017	Pedunculate oak	15	300	Semi-Mature	Negligible	Negligible	Moderate
BA1ET35	Moderate	07/06/2017	Ash	20	700	Mature	Negligible	Negligible	Moderate
BA1ET37	Moderate	07/06/2017	Pedunculate oak	20	650	Mature	Low	Negligible	Moderate
BA1ET38	Moderate	07/06/2017	Pedunculate oak	20	600	Mature	Low	Negligible	Moderate
BA1ET39	Moderate	07/06/2017	Pedunculate oak	22	800	Mature	Negligible	Negligible	Moderate
BA1ET4	Moderate	08/06/2017	Pedunculate oak	25	900	Mature	Negligible	Negligible	Moderate
BA1ET40	Moderate	07/06/2017	Field maple	18	600	Mature	Low	Low	Moderate
BA1ET47	Moderate	07/06/2017	Ash	30	300	Mature	Low	Negligible	Moderate
BA1ET61	Moderate	15/03/2017	Pedunculate oak	15	600	Mature	Low	Negligible	Moderate
BA1ET63	Moderate	26/04/2017	Downy birch	20	700	Mature	Negligible	Negligible	Moderate
BA1ET70	Moderate	21/03/2017	Alder	15	500	Mature	Low	Low	Moderate
BA1ET83	Moderate	07/06/2017	Pedunculate oak	20	1000	Mature	Negligible	Negligible	Moderate
BA1ET84	Moderate	07/06/2017	Pedunculate oak	20	1000	Mature	Negligible	Low	Moderate
BA1ET9	Moderate	08/06/2017	Pedunculate oak	25	750	Mature	Negligible	Negligible	Moderate
BA1FT107	Moderate	08/06/2017	Pedunculate oak	20	450	Mature	Negligible	Negligible	Moderate
BA1FT108	Moderate	08/06/2017	Ash	20	500	Mature	Negligible	Low	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT112	Moderate	02/03/2017	Unknown	15	700	Mature	Negligible	Negligible	Moderate
BA1FT115	Moderate	02/03/2017	Ash	20	1000	Mature	Moderate	Negligible	Moderate
BA1FT117	Moderate	08/06/2017	Ash	15	500	Mature	Negligible	Negligible	Moderate
BA1FT118	Moderate	02/03/2017	Ash	20	700	Mature	Low	Negligible	Moderate
BA1FT126	Moderate	08/06/2017	Ash	25	1000	Veteran	Negligible	Negligible	Moderate
BA1FT142	Moderate	19/10/2017	Pedunculate oak	12	350	Mature	Negligible	Negligible	Moderate
BA1FT147	Moderate	19/10/2017	Pedunculate oak	18	1100	Veteran	Negligible	Negligible	Moderate
BA1FT150	Moderate	19/10/2017	Pedunculate oak	18	1200	Veteran	Low	Low	Moderate
BA1FT151	Moderate	19/10/2017	Pedunculate oak	35	2000	Veteran	Low	Low	Moderate
BA1FT152	Moderate	19/10/2017	Pedunculate oak	22	1400	Mature	Negligible	Negligible	Moderate
BA1FT157	Moderate	19/10/2017	Pedunculate oak	25	1000	Mature	Negligible	Low	Moderate
BA1FT161	Moderate	19/10/2017	Pedunculate oak	15	900	Mature	Low	Low	Moderate
BA1FT167	Moderate	19/10/2017	Pedunculate oak	35	1900	Veteran	Low	Low	Moderate
BA1FT169	Moderate	19/10/2017	Pedunculate oak	36	1800	Veteran	Low	Low	Moderate
BA1FT173	Moderate	19/10/2017	Sweet chestnut	10	300	Semi-Mature	Negligible	Negligible	Moderate
BA1FT174	Moderate	19/10/2017	Pedunculate oak	35	1500	Veteran	Low	Low	Moderate
BA1FT178	Moderate	19/10/2017	Holm oak	20	1000	Veteran	Low	Negligible	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT13	Moderate	21/02/2017	Alder	12	1700	Mature	Moderate	Low	Moderate
BA1FT134	Moderate	08/06/2017	Ash	10	600	Mature	Negligible	Low	Moderate
BA1FT135	Moderate	02/03/2017	Ash	5	700	Mature	Low	Negligible	Moderate
BA1FT15	Moderate	21/02/2017	Alder	12	1000	Mature	Moderate	Moderate	Moderate
BA1FT16	Moderate	21/02/2017	Alder	12	1700	Mature	Low	Low	Moderate
BA1FT19	Moderate	21/02/2017	Pedunculate oak	16	1800	Mature	Moderate	Moderate	Moderate
BA1FT2	Moderate	22/03/2017	Pedunculate oak	28	1700	Veteran	Negligible	Low	Moderate
BA1FT22	Moderate	21/02/2017	Pedunculate oak	18	2000	Veteran	Low	Low	Moderate
BA1FT23	Moderate	07/06/2017	Pedunculate oak	30	2000	Veteran	Low	Moderate	Moderate
BA1FT27	Moderate	07/06/2017	Ash	12	1000	Mature	Low	Low	Moderate
BA1FT28	Moderate	07/06/2017	Ash	10	1000	Mature	Low	Low	Moderate
BA1FT3	Moderate	22/03/2017	Hawthorn	8	400	Mature	Negligible	Low	Moderate
BA1FT30	Moderate	21/02/2017	Pedunculate oak	10	800	Semi-Mature	Negligible	Low	Moderate
BA1FT31	Moderate	21/02/2017	Pedunculate oak	12	1000	Semi-Mature	Negligible	Low	Moderate
BA1FT35	Moderate	28/02/2017	Pedunculate oak	15	800	Mature	Moderate	Moderate	Moderate
BA1FT36	Moderate	28/02/2017	Pedunculate oak	15	1000	Mature	Moderate	Moderate	Moderate
BA1FT4	Moderate	22/03/2017	Pedunculate oak	15	900	Mature	Negligible	Low	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT40	Moderate	03/03/2017	Pedunculate oak	14	1100	Mature	Negligible	Negligible	Moderate
BA1FT46	Moderate	07/06/2017	Lime	20	1500	Veteran	Negligible	Low	Moderate
BA1FT47	Moderate	07/06/2017	Unknown	5	700	Semi-Mature	Negligible	Low	Moderate
BA1FT5	Moderate	22/03/2017	Hawthorn	8	300	Unknown	Negligible	Negligible	Moderate
BA1FT51	Moderate	21/03/2017	Unknown	8	200	Semi-Mature	Negligible	Negligible	Moderate
BA1FT62	Moderate	07/06/2017	Horse chestnut	18	Unknown	Veteran	Low	Low	Moderate
BA1FT63	Moderate	21/03/2017	Field maple	7.5	200	Semi-Mature	Negligible	Negligible	Moderate
BA1FT64	Moderate	07/06/2017	Lime	18	2000	Veteran	Low	Low	Moderate
BA1FT70	Moderate	21/03/2017	Pedunculate oak	12	700	Mature	Negligible	Negligible	Moderate
BA1FT71	Moderate	27/04/2017	Pedunculate oak	15	500	Semi-Mature	Negligible	Negligible	Moderate
BA1FT81	Moderate	21/03/2017	Pedunculate oak	12	400	Semi-Mature	Negligible	Negligible	Moderate
BA1FT82	Moderate	22/03/2017	Pedunculate oak	18	800	Mature	Negligible	Negligible	Moderate
BA1FT86	Moderate	22/03/2017	Pedunculate oak	18	900	Mature	Negligible	Negligible	Moderate
BA1FT92	Moderate	27/04/2017	Pedunculate oak	8	300	Semi-Mature	Negligible	Negligible	Moderate
BA1FT93	Moderate	27/04/2017	Pedunculate oak	15	500	Semi-Mature	Negligible	Negligible	Moderate
BA1FT94	Moderate	27/04/2017	Pedunculate oak	15	500	Semi-Mature	Negligible	Negligible	Moderate
BA1FT95	Moderate	23/02/2017	Pedunculate oak	15	700	Mature	Negligible	Low	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT100	Moderate	21/02/2017	Pedunculate oak	16	1600	Veteran	Moderate	Negligible	Moderate
BA1GT111	Moderate	21/02/2017	Pedunculate oak	16	800	Mature	Moderate	Negligible	Moderate
BA1GT118	Moderate	21/02/2017	Pedunculate oak	25	1200	Veteran	Low	Negligible	Moderate
BA1GT120	Moderate	21/02/2017	Pedunculate oak	15	1500	Veteran	Moderate	Low	Moderate
BA1GT140	Moderate	20/02/2017	Ash	20	700	Mature	Moderate	Negligible	Moderate
BA1GT141	Moderate	20/02/2017	Pedunculate oak	18	800	Mature	Moderate	Negligible	Moderate
BA1GT16	Moderate	08/06/2017	Ash	20	1000	Mature	Negligible	Negligible	Moderate
BA1GT21	Moderate	01/03/2017	Unknown	8	280	Unknown	Low	Negligible	Moderate
BA1GT4	Moderate	08/06/2017	Pedunculate oak	20	800	Mature	Negligible	Negligible	Moderate
BA1GT40	Moderate	01/03/2017	Pedunculate oak	15	1000	Mature	Low	Negligible	Moderate
BA1GT69	Moderate	21/02/2017	Pedunculate oak	20	1000	Mature	Moderate	Negligible	Moderate
BA1GT7	Moderate	08/06/2017	Pedunculate oak	8	700	Mature	Negligible	Moderate	Moderate
BA1GT70	Moderate	21/02/2017	Pedunculate oak	12	700	Mature	Moderate	Negligible	Moderate
BA1GT71	Moderate	21/02/2017	Pedunculate oak	20	700	Mature	Moderate	Low	Moderate
BA1GT73	Moderate	21/02/2017	Pedunculate oak	20	900	Mature	Moderate	Negligible	Moderate
BA1GT8	Moderate	08/06/2017	Pedunculate oak	15	900	Mature	Negligible	Negligible	Moderate
BA1GT81	Moderate	21/02/2017	Crab apple	10	400	Mature	Low	Negligible	Moderate







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT90	Moderate	21/02/2017	Pedunculate oak	18	800	Mature	Low	Negligible	Moderate
BA1AT35	High	28/06/2017	Ash	14	800	Mature	Low	Moderate	High
BA1BT146	High	21/03/2017	Pedunculate oak	10	1000	Mature	Low	Low	High
BA1BT28	High	27/04/2017	Pedunculate oak	16	1400	Mature	Low	Low	High
BA1BT87	High	26/04/2017	Pedunculate oak	16	500	Mature	Low	Low	High
BA1CT101	High	02/03/2017	Pedunculate oak	9	800	Veteran	High	High	High
BA1CT108	High	02/03/2017	Ash	18	600	Mature	High	High	High
BA1CT116	High	28/06/2017	Pedunculate oak	15	800	Mature	Low	Low	High
BA1CT117	High	28/06/2017	Ash	10	400	Semi-Mature	Moderate	Moderate	High
BA1CT123	High	02/03/2017	Pedunculate oak	15	800	Veteran	High	High	High
BA1CT136	High	18/10/2017	Pedunculate oak	20	1100	Veteran	Moderate	Moderate	High
BA1CT137	High	18/10/2017	Pedunculate oak	20	900	Veteran	Moderate	Moderate	High
BA1CT14	High	22/03/2017	Pedunculate oak	15	900	Mature	Negligible	Negligible	High
BA1CT15	High	22/03/2017	Pedunculate oak	20	1000	Mature	Negligible	Low	High
BA1CT21	High	22/03/2017	Pedunculate oak	8	1500	Veteran	Negligible	Negligible	High
BA1CT26	High	23/03/2017	Alder	12	500	Mature	Low	Low	High
BA1CT70	High	22/03/2017	Pedunculate oak	8	800	Mature	Negligible	Low	High







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1CT71	High	22/03/2017	Pedunculate oak	9	1000	Mature	Negligible	Low	High
BA1CT94	High	02/03/2017	Pedunculate oak	18	1000	Veteran	High	High	High
BA1DT26	High	23/03/2017	Pedunculate oak	10	400	Mature	Negligible	Negligible	High
BA1DT31	High	23/03/2017	Pedunculate oak	18	600	Mature	Negligible	Low	High
BA1DT36	High	07/06/2017	Pedunculate oak	15	1000	Mature	Moderate	Moderate	High
BA1DT40	High	07/06/2017	Pedunculate oak	15	1200	Mature	High	High	High
BA1DT7	High	22/03/2017	Pedunculate oak	7	1000	Veteran	Low	Moderate	High
BA1DT8	High	22/03/2017	Pedunculate oak	7	1000	Veteran	Low	Moderate	High
BA1ET103	High	27/04/2017	Pedunculate oak	30	1000	Mature	Negligible	Low	High
BA1ET105	High	28/04/2017	Sycamore	18	250	Mature	Moderate	Moderate	High
BA1ET106	High	28/04/2017	Sycamore	18	350	Mature	Moderate	Moderate	High
BA1ET112	High	22/02/2017	Pedunculate oak	25	700	Mature	Moderate	Low	High
BA1ET113	High	28/04/2017	Pedunculate oak	20	600	Mature	Low	Low	High
BA1ET114	High	22/02/2017	Pedunculate oak	23	700	Mature	Moderate	Negligible	High
BA1ET120	High	28/04/2017	Scots pine	30	1000	Mature	Moderate	Moderate	High
BA1ET126	High	22/02/2017	Pedunculate oak	20	2000	Veteran	High	Low	High
BA1ET131	High	22/02/2017	Pedunculate oak	25	2500	Veteran	Moderate	Low	High







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1ET149	High	23/03/2017	Scots pine	23	700	Veteran	Moderate	Low	High
BA1ET154	High	23/03/2017	Rowan	14	600	Mature	High	Moderate	High
BA1ET32	High	08/06/2017	Pedunculate oak	28	1000	Veteran	Moderate	Low	High
BA1ET33	High	08/06/2017	Pedunculate oak	28	1000	Veteran	Moderate	Low	High
BA1ET36	High	07/06/2017	Pedunculate oak	18	800	Mature	Low	Negligible	High
BA1ET41	High	07/06/2017	Pedunculate oak	18	1000	Veteran	High	High	High
BA1ET42	High	07/06/2017	Pedunculate oak	25	1000	Mature	Moderate	Low	High
BA1ET43	High	07/06/2017	Pedunculate oak	28	1200	Veteran	Moderate	Moderate	High
BA1ET6	High	08/06/2017	Pedunculate oak	28	800	Mature	Low	Negligible	High
BA1ET86	High	07/06/2017	Pedunculate oak	20	1000	Mature	Negligible	Moderate	High
BA1ET92	High	22/02/2017	Pedunculate oak	20	1000	Mature	Moderate	Negligible	High
BA1ET93	High	22/02/2017	Pedunculate oak	20	1000	Mature	Moderate	Negligible	High
BA1ET95	High	22/02/2017	Pedunculate oak	25	800	Mature	Moderate	Negligible	High
BA1ET96	High	22/02/2017	Pedunculate oak	20	1000	Mature	Moderate	Negligible	High
BA1ET97	High	27/04/2017	Pedunculate oak	30	500	Mature	Low	Moderate	High
BA1FT106	High	02/03/2017	Pedunculate oak	8	1500	Mature	Low	High	High
BA1FT109	High	02/03/2017	Pedunculate oak	20	350	Mature	Moderate	Moderate	High







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1FT110	High	02/03/2017	Ash	20	700	Mature	Moderate	Negligible	High
BA1FT113	High	02/03/2017	Pedunculate oak	20	2000	Veteran	Moderate	Low	High
BA1FT114	High	08/06/2017	Pedunculate oak	13	800	Unknown	Negligible	Low	High
BA1FT116	High	02/03/2017	Pedunculate oak	20	1000	Mature	Moderate	Negligible	High
BA1FT119	High	02/03/2017	Ash	20	800	Mature	Low	Negligible	High
BA1FT123	High	08/06/2017	Unknown	20	400	Unknown	Low	Low	High
BA1FT125	High	08/06/2017	Sycamore	20	350	Mature	Low	Low	High
BA1FT137	High	02/03/2017	Pedunculate oak	5	2000	Veteran	Moderate	Low	High
BA1FT159	High	19/10/2017	Pedunculate oak	15	900	Mature	Moderate	Moderate	High
BA1FT162	High	19/10/2017	Pedunculate oak	16	750	Mature	Low	Moderate	High
BA1FT164	High	19/10/2017	Pedunculate oak	25	2400	Veteran	Moderate	Moderate	High
BA1FT176	High	19/10/2017	Pedunculate oak	12	1800	Mature	Moderate	Moderate	High
BA1FT37	High	21/03/2017	Unknown	2	1500	Mature	Moderate	Moderate	High
BA1FT72	High	27/04/2017	Pedunculate oak	25	1000	Mature	Negligible	Low	High
BA1GT107	High	21/02/2017	Pedunculate oak	15	1200	Veteran	High	Low	High
BA1GT23	High	02/03/2017	Pedunculate oak	15	1000	Mature	Moderate	Low	High
BA1GT26	High	01/03/2017	Ash	15	350	Mature	Moderate	Negligible	High







Tree Number	Overall Roost Potential	Survey Date	Tree Species	Tree Height (m)	DBH (mm)	Tree Age	Maternity Roost Potential	Hibernation Roost Potential	Transitionary Roost Potential
BA1GT34	High	28/02/2017	Pedunculate oak	12	1000	Mature	Low	Negligible	High
BA1GT75	High	21/02/2017	Pedunculate oak	20	1200	Mature	High	Negligible	High
BA1GT9	High	22/03/2017	Pedunculate oak	10	1300	Veteran	High	Moderate	High







Appendix J Dusk emergence and dawn re-entry survey results

J.1.1.1. Confirmed roosts are shaded in purple. The table is ordered on overall potential of the roost (moderate – high), such trees are shown on Table J.1.

J.1.1.2. Abbreviation key:

- Barbastelle Barb;
- Brown long-eared bat BLE;
- Leisler's bat Lei;
- Common noctule Noc:
- Common pipistrelle Ppip;
- Soprano pipistrelle Ppgy;
- Serotine Ser;
- Unidentified bats belonging to the pipistrelle genus Psp;
- Unidentified bats belonging to the common noctule / serotine / Leisler's bat guild NSL; and
- Unidentified bats belonging to the Myotis genus Msp.

Table J.1: Dusk emergence and dawn re-entry survey results.

Tree Number	Potential to Support Roosting Bats (from PGLRA)	Average Activity Score	Incidental Activity Level	Species Recorded
BA1AT40	Moderate	69.4	High	BLE, Myo, Noc, Ppip, Ppyg, Psp, Sero
BA1AT44	Moderate	68.1	High	Barb, BLE, Myo, Noc Ppip, Ppyg, Psp
BA1BT119	Moderate	127.4	Very high	Noc, Ppip, Ppyg
BA1BT122	Moderate	34.1	Medium	BLE, Ppip, Ppyg, Psp
BA1BT124	Moderate	25.1	Low	Ppip, Ppyg
BA1BT13	Moderate	116.3	Very high	Myo, Noc, Ppip, Ppyg, Sero
BA1BT142	Moderate	38.8	Medium	Barb, BLE, Myo, Ppip, Ppyg, Psp
BA1BT23	Moderate	177.0	Very high	Ppip, Ppyg
BA1BT26	Moderate	441.7	Very high	Ppip, Ppyg, Psp
BA1BT27	Moderate	55.0	High	Ppip, Ppyg
BA1CT11	Moderate	143.0	Very high	Noc, Ppip, Ppyg
BA1CT18	Moderate	23.8	Low	Ppip, Ppyg, Psp







Tree Number	Potential to Support Roosting Bats (from PGLRA)	Average Activity Score	Incidental Activity Level	Species Recorded
BA1CT73	Moderate	53.9	High	Barb, Myo, Noc, Ppip Ppyg, Psp
BA1CT81	Moderate	30.4	Low	BLE, Ppip, Ppyg, Sero
BA1CT9	Moderate	133.7	Very high	BLE, Myo, Noc, Ppip, Ppyg, Psp
BA1CT92	Moderate	29.0	Low	Noc, Ppip, Ppyg
BA1DT23	Moderate	27.2	Low	Noc, Ppip, Ppyg
BA1DT24	Moderate	19.5	Low	Lei, Ppip, Ppyg, Psp, Sero
BA1DT35	Moderate	109.1	Very high	BLE, Lei, Noc, Ppip, Ppyg
BA1ET100	Moderate	26.3	Low	Barb, BLE, Lei, Myo, Noc, Ppip, Ppyg, Psp
BA1ET102	Moderate	11.7	Low	BLE, Myo, Noc, Ppip, Ppyg, Psp
BA1ET110	Moderate	18.2	Low	Myo, Noc, Ppip, Ppyg
BA1ET111	Moderate	28.3	Low	Barb, BLE, Myo, Noc, NSL, Ppip, Ppyg
BA1ET115	Moderate	87.0	High	Barb, BLE, Myo, NSL, Ppip, Ppyg
BA1ET116	Moderate	122.2	Very high	Barb, BLE, Lei, Myo, Noc, NSL, Ppip, Ppyg, Sero
BA1ET121	Moderate	17.2	Low	BLE, Myo, Ppip, Ppyg
BA1ET122 (Confirmed Roost)	Moderate	80.8	High	Barb, BLE, Myo, Noc (17 x Roosting bats), Ppip, Ppyg, Psp
BA1ET124	Moderate	17.3	Low	Barb, Ppip, Ppyg
BA1ET127	Moderate	33.8	Medium	Barb, BLE, Myo, Ppip, Ppyg, Psp
BA1ET47	Moderate	149.8	Very high	Barb, Myo, Ppip, Ppyg
BA1ET61	Moderate	131.6	Very high	Barb, Myo, Noc, Ppip, Ppyg, Psp
BA1ET83	Moderate	7.8	Low	Myo, Ppip, Ppyg
BA1FT108	Moderate	270.0	Very high	BLE, Noc, NSL, Ppip, Ppyg, Psp, Sero
BA1FT112	Moderate	256.6	Very high	BLE, Noc, NSL, Ppip, Ppyg, Sero
BA1FT115	Moderate	27.2	Low	Noc, Ppip, Ppyg, Psp
BA1FT117	Moderate	135.4	Very high	Myo, Noc, NSL, Ppip, Ppyg
BA1FT118	Moderate	245.7	Very high	Myo, Noc, NSL, Ppip, Ppyg, Psp







Tree Number	Potential to Support Roosting Bats (from PGLRA)	Average Activity Score	Incidental Activity Level	Species Recorded
BA1FT126	Moderate	144.8	Very high	BLE, Noc, Ppip, Ppyg, Sero
BA1FT13	Moderate	56.7	High	Ppip, Ppyg
BA1FT134	Moderate	431.9	Very high	Noc, Ppip, Ppyg, Psp
BA1FT135	Moderate	21.8	Low	Barb, BLE, Lei, Myo, Noc, Ppip, Ppyg, Psp
BA1FT15	Moderate	286.7	Very high	Ppyg
BA1FT16	Moderate	121.9	Very high	BLE, Myo, Noc, NSL, Ppip, Ppyg, Psp
BA1FT19	Moderate	148.1	Very high	Noc, Ppip, Ppyg
BA1FT2	Moderate	269.4	Very high	BLE, Noc, Ppip, Ppyg, Psp
BA1FT22	Moderate	153.4	Very high	BLE, Lei, Noc, Ppip, Ppyg, Sero
BA1FT23 (Confirmed Roost)	Moderate	262.1	Very high	Lei, Myo, NSL, Ppip, Ppyg (3 x roosting bats), Psp. P.aur, Noc
BA1FT27	Moderate	205.2	Very high	Ppip, Ppyg, Psp
BA1FT28	Moderate	145.9	Very high	Ppip, Ppyg, Psp, Sero
BA1FT3	Moderate	78.7	High	BLE, Lei, Myo, Noc, Ppip, Ppyg, Sero
BA1FT30	Moderate	77.5	High	Рруд
BA1FT31	Moderate	127.5	Very high	Рруд
BA1FT36	Moderate	115.2	Very high	Noc, Ppip, Ppyg
BA1FT4	Moderate	719.1	Very high	Lei, Noc, Ppip, Ppyg, Psp, Sero
BA1FT5	Moderate	187.7	Very high	Barb, BLE, Myo, Noc, NSL, Ppip, Ppyg, Psp, Sero
BA1FT62	Moderate	3.8	Very low	Ppip, Ppyg
BA1FT63	Moderate	14.6	Low	Lei, Noc, Ppip, Ppyg
BA1FT64	Moderate	10.5	Low	Ppip, Ppyg, Sero
BA1FT70	Moderate	558.1	Very high	BLE, Ppip, Ppyg
BA1FT81	Moderate	63.9	High	Noc, Ppip, Ppyg, Psp
BA1FT95	Moderate	440.0	Very high	Myo, Ppip, Ppyg
BA1GT100	Moderate	21.7	Low	Noc, Ppip, Ppyg, Psp
BA1GT111	Moderate	108.5	Very high	Noc, Ppip, Ppyg







Tree Number	Potential to Support Roosting Bats (from PGLRA)	Average Activity Score	Incidental Activity Level	Species Recorded
BA1GT118	Moderate	116.0	Very high	Noc, Ppip, Ppyg
BA1GT69	Moderate	141.8	Very high	Myo, Ppip,, Ppyg, Psp
BA1GT70	Moderate	62.7	High	BLE, Lei, Ppip, Ppyg, Psp
BA1GT71	Moderate	324.3	Very high	Myo, Ppip, Ppyg
BA1GT73	Moderate	82.4	High	BLE, Ppip, Ppyg, Sero
BA1GT81	Moderate	75.0	High	Ppip, Ppyg, Psp
BA1GT90	Moderate	109.7	Very high	Noc, Ppip, Ppyg
BA1BT146	High	15.0	Low	Myo, Noc, Ppip, Ppyg, Psp
BA1CT14	High	101.9	Very high	Noc, Ppip, Ppyg, Psp
BA1CT15	High	105.5	Very high	Lei, Noc, Ppip, Ppyg
BA1CT21	High	51.3	High	Barb, BLE, Myo, Noc, NSL, Ppip, Ppyg, Sero
BA1CT26	High	47.6	Medium	Barb, Noc, Ppip, Ppyg, Psp
BA1CT70	High	26.8	Low	Barb, Lei, Myo, Ppip, Ppyg, Psp
BA1CT71 (Confirmed Roost)	High	51.5	High	Barb, Myo, Ppip, Ppyg (1 x roosting bat), Psp
BA1DT26	High	41.2	Medium	Lei, Ppip, Ppyg
BA1DT31	High	24.1	Low	Ppip, Ppyg
BA1DT36	High	33.3	Medium	BLE, Myo, Noc, Ppip, Ppyg, Psp
BA1ET103	High	44.2	Medium	Barb, Myo, NSL, Ppip, Ppyg, Psp
BA1ET105	High	21.3	Low	Barb, BLE, Myo, Ppip, Ppyg, Psp
BA1ET106	High	38.9	Medium	Barb, BLE, Myo, Noc, Ppip, Ppyg
BA1ET112	High	14.6	Low	Barb, Myo, Noc, Ppyg, Sero
BA1ET113	High	44.7	Medium	Barb, Myo, NSL, Ppip, Ppyg, Psp
BA1ET114	High	21.4	Low	Barb, BLE, Myo, Noc, Ppip, Ppyg, Psp
BA1ET120	High	26.2	Low	Barb, BLE, Myo, Ppip, Ppyg, Psp
BA1ET126	High	10.9	Low	Barb, BLE, Noc, Ppip, Ppyg
BA1ET43	High	94.6	Very high	Barb, BLE, Lei, Myo, Ppip, Ppyg, Psp
BA1ET92	High	35.6	Medium	Barb, Myo, Noc,, NSL, Ppip, Ppyg, Psp, Sero







Tree Number	Potential to Support Roosting Bats (from PGLRA)	Average Activity Score	Incidental Activity Level	Species Recorded
BA1ET93	High	8.0	Low	Myo, Noc, Ppip, Ppyg, Sero
BA1ET95	High	18.9	Low	Barb, Myo, Noc, NSL, Ppip, Ppyg, Psp
BA1ET96	High	7.0	Low	Lei, Myo, Noc, Ppip
BA1FT106	High	30.8	Low	BLE, Noc, Ppip, Ppyg, Psp, Sero
BA1FT109	High	263.9	Very high	BLE, Myo, Noc, Ppip, Ppyg, Sero
BA1FT110 (Confirmed Roost)	High	198.9	Very high	Barb, BLE, Myo, Noc, Ppip (4 x roosting bats), Ppyg, Sero
BA1FT113	High	299.5	Very high	BLE, Lei, Noc, Ppip, Ppyg, Sero
BA1FT114	High	124.3	Very high	BLE, Noc, NSL, Ppip, Ppyg, Sero
BA1FT116	High	148.7	Very high	BLE, Lei, Myo, Noc, NSL, Ppip, Ppyg, Sero
BA1FT119	High	155.9	Very high	Noc, NSL, Ppip, Ppyg, Psp
BA1FT123	High	191.8	Very high	Lei, Noc, NSL, Ppip, Ppyg, Psp, Sero
BA1FT125	High	155.2	Very high	Noc, NSL, Ppip, Ppyg, Psp, Sero
BA1FT137	High	171.9	Very high	BLE, Lei, Noc, Ppip, Ppyg, Psp, Sero
BA1FT37	High	126.6	Very high	Myo, Noc, Ppip, Ppyg
BA1GT107	High	84.4	High	Myo, Noc, Ppip, Ppyg
BA1GT75	High	54.6	High	Myo, Noc, Ppip, Ppyg, Psp



