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Sandy Acre
Shore Road
Drigg
Holmrook
Cumbria

Ecological Constraints Study

VERSION 2

Final

19 July 2024

AVISON YOUNG

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Contents

Executive Summary

BiOME Consulting Ltd was commissioned to undertake a Preliminary Ecological Appraisal (PEA) and subsequent nocturnal bat surveys of a site proposed for redevelopment; Sandy Acre. The site, located in Drigg, Cumbria, included a two-storey brick-built, rendered unoccupied dwelling, various outbuildings and gardens.

The ecology surveys detailed within this report were completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species.

The ecological issues identified during the PEA were:

Designated Sites: One internationally (Special Area of Conservation), three nationally designated sites (Sites of Special Scientific Interest) and one non-statutory site (a County Wildlife Site) were present within the 2km buffer zone. Impacts to any designated sites are considered unlikely. However, once the scope of works is confirmed a full appraisal of potential impacts/effects will be required.

Habitats: The site comprised a dwelling surrounded by hardstanding, with a yard area and outbuildings and well managed landscaped gardens. The potential requirement for Biodiversity Net Gain assessment will need to be considered when the scope of works are determined.

Ground Dwelling Fauna: The presence of foraging/commuting Badger and Hedgehog (and other small mammals) within the site is possible. During the construction phase, if excavation is required, holes/trenches should either be covered at the conclusion of each workday, or a means of escape provided.

Herptiles: Great Crested Newt (GCN) presence in the vicinity of the site has been identified though desk study. One pond was present on mapping within 0.25km of the site, although this was dry throughout the survey period. GCN are considered likely absent from the site. However, it would be prudent to employ precautionary working methods during construction in the highly unlikely event that GCN do occur within the impact area. Reptiles are considered likely absent. In the apparently unlikely event that any GCN, significant numbers of common

amphibian species or reptiles are disturbed during works, works must cease and the advice of a SQE should be sought.

Bats: The site surveys (Preliminary Roost Assessment and two nocturnal surveys) and desk study did not find any evidence of roosting bats within the site. Bat roosts are therefore assessed to be likely absent, and works can continue without limitation.

In the apparently unlikely event that bats are encountered during the redevelopment works, works must cease, and the advice of a Suitably Qualified Ecologist (SQE) obtained.

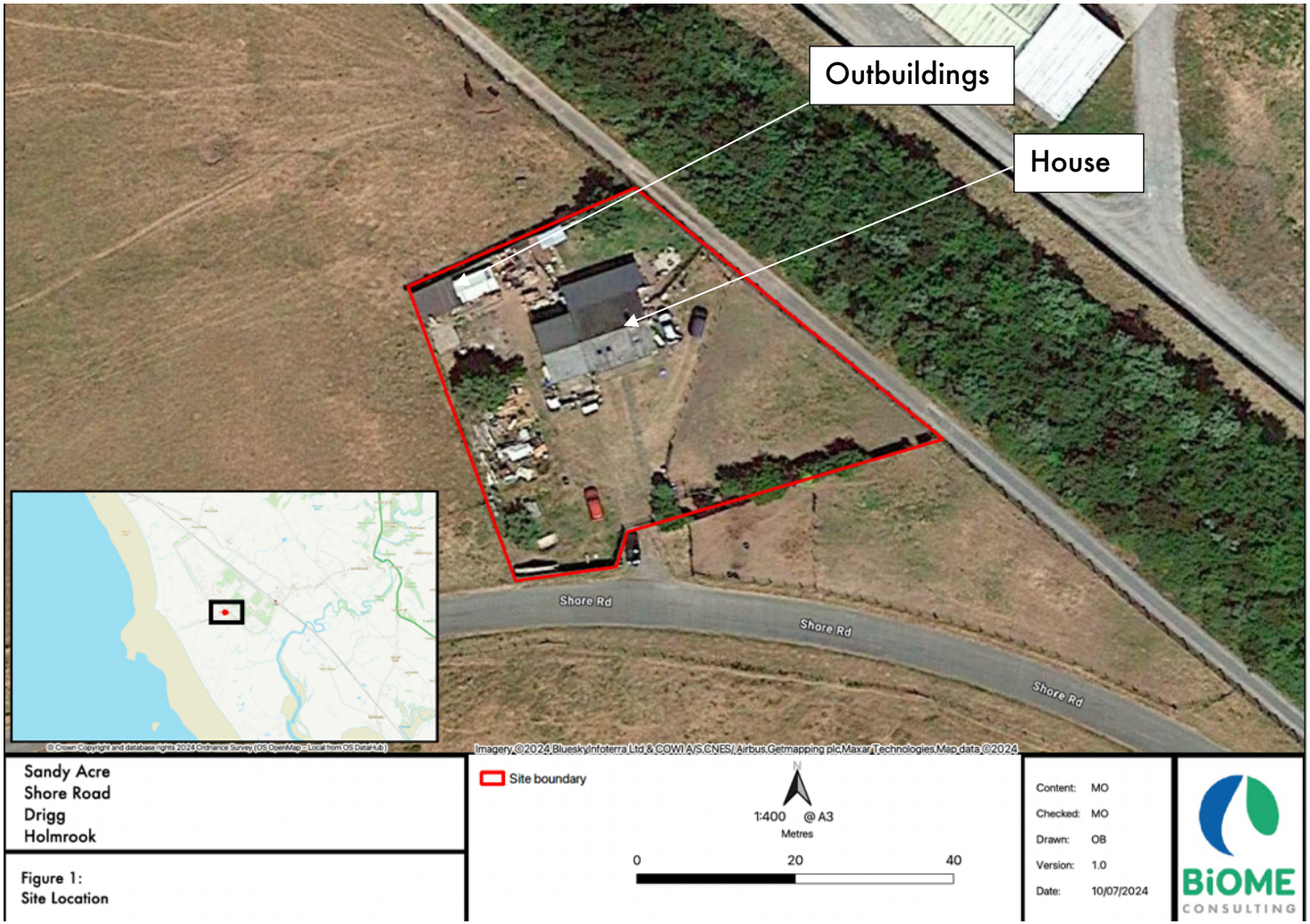
Nesting Birds: Active Swallow and House Sparrow nests were found within buildings on site. The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Therefore, if re-development works are proposed for the bird nesting season (March-August inclusive), it will be necessary to appoint SQE to complete a check for active birds' nests. Should any active nests be found then it would be necessary to delay works until the nesting attempt has reached a natural conclusion. If works are planned for outside of the bird nesting period, then no such check is necessary.

Report Validity: The findings of this report are considered valid until July 2024. If the project is delayed beyond this period, an updated assessment of potential impacts will be required.

1. Introduction

BiOME Consulting Ltd was commissioned by Avison Young (in April 2024) to undertake a Preliminary Ecological Appraisal (PEA) in relation to the redevelopment at Sandy Acre, the 'site', located at Shore Road, Drigg, Holmrook, Cumbria, CA19 1XL (**Figure 1**), (National Grid Reference SD 05519 98740). This survey identified the requirement for subsequent nocturnal bat surveys, which have also been completed.

The ecology surveys detailed within this report were completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species. The results have been used to identify further ecological work/mitigation/licencing required to enable the proposed works at the site to proceed lawfully.


Outbuildings
House
Shore Rd
Shore Rd
Shore Rd
Imagery ©2024 Bluesky, Infoterra Ltd & COWI A/S, CNES / Airbus, Getmapping plc, Maxar Technologies, Map data ©2024
Sandy Acre
Shore Road
Drigg
Holmrook
Figure 1:
Site Location
Site boundary
N
1:400 @ A3
Metres
0
20
40
Content: MO
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Version: 1.0
Date: 10/07/2024
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1.1. Site Description

The site included a two-storey brick-built, rendered unoccupied dwelling (**Photograph 1**) with various outbuildings and gardens. The surrounding area was rural in character, dominated by grazing pasture to the south with Drigg Low Level Waste Repository to the north.

Photograph 1. Sandy Acre, viewed from the south

1.2. Development Proposal

The scope of works had not been determined at the time of writing.

2. Relevant Legislation

Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Habitats Regulations convey special protection to a number of species, which are listed in Schedule 2 of the Regulations and are referred to as European Protected Species (EPS). These species are listed below, with those of potential relevance to this project (based on known distribution and habitat requirements) emboldened:

- **Horseshoe bats (all species)**
- **Typical bats (all species)**
- Large Blue butterfly *Maculinea arion*
- Wild Cat *Felis silvestris*
- Dolphins, porpoises and whales (all species)
- Hazel Dormouse *Muscardinus avellanarius*
- Sand Lizard *Lacerta agilis*
- **Great Crested Newt *Triturus cristatus* (GCN)**
- **Otter *Lutra lutra***
- Smooth Snake *Coronella austriaca*
- Sturgeon *Acipenser sturio*
- **Natterjack Toad *Bufo calamita***
- Marine turtles (*Caretta caretta, Chelonia mydas, Lepidochelys kempii, Eretmochelys imbricate, Dermochelys coriacea*)
- Shore Dock *Rumex rupestris*
- Killarney Fern *Trichomanes speciosum*
- Early Gentian *Gentianella angelica*
- Lady's Slipper *Cypripedium calceolus*
- Creeping Marshwort *Apium repens*
- Slender Naiad *Najas flexilis*
- Fen Orchid *Liparis loeselii*
- Floating-leaved Water Plantain *Luronium natans*
- Yellow Marsh Saxifrage *Saxifraga hirculus*

Regulation 43 makes it an offence to:

- Deliberately capture, injure or kill any wild animal of a EPS;
- Deliberately disturb wild animals of such a species;
- Deliberately take or destroy the eggs of such a species;
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance in the context of the offences above is disturbance which is likely to impair the ability of the animals to survive, to breed or reproduce, to nurture their young, to hibernate, to migrate; or to affect significantly the local distribution of the species.

Licences can be granted by the relevant Statutory Nature Conservation Organisation (SNCO) for developments (sometime referred to as EPS Licences or Derogation Licences) providing the purpose of the licence is for "*preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*".

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) provides protection to both EPS and other species including wild birds, Water Voles *Arvicola amphibius* and reptiles.

All wild birds, their nests and eggs are protected, with some rare species afforded extra protection from disturbance during the breeding season (these species are listed in Schedule 1 of the Act). It is illegal to take any wild bird or damage or destroy the nests and eggs of breeding birds. There are certain exceptions to this in respect of wildfowl, game birds and certain species that may cause damage.

In England (and Wales) Water Voles are listed on Schedule 5 of the Act, receiving full protection since 2008. The Wildlife and Countryside Act 1981 together with amending legislation, lists the following offences:

- Intentionally killing, injuring, or taking a Water Vole by any method.
- Intentionally or recklessly damaging or destroying a Water Vole's place of shelter or protection.

- Intentionally or recklessly disturbing a Water Vole whilst it is occupying such a structure or place it uses for shelter or protection.
- Intentionally or recklessly obstructing access to a Water Vole's place of shelter or protection.
- Selling, offering for sale, or possessing or transporting for the purposes of sale, any live or dead water vole, or any part or derivative, or advertising any of these for buying or selling.

All native reptilian species in the UK are subject to partial protection, from intentional or reckless killing or injury only.

The Act also includes provisions for the control of invasive non-native species (INNS). Under these provisions it is an offence to:

- Release or allow to escape into the wild any animal which is not ordinarily resident or a regular visitor to Great Britain or is included in Schedule 9 of the Act.
- Plant or otherwise cause to grow in the wild any plant which is included in Schedule 9 of the Act.

People undertaking works in proximity to invasive non-native plant species should take all reasonable steps and exercise all due diligence to avoid committing an offence.

The Invasive Alien Species (Enforcement and Permitting) Order 2019

The order came into effect on the 1 December 2019 to allow for enforcement of EU Regulations (Regulation (EU) No. 1143/2014 on the prevention and management of the introduction and spread of invasive alien species in England and Wales) also known as the IAS Regulations.

There are currently 19 species listed in the Order:

- Chinese Mitten Crab *Eriocheir sinensis*
- Red Swamp Crayfish *Procambarus clarkii*
- Signal Crayfish *Pacifastacus leniusculus*
- Spiny Cheek Crayfish *Orconectes limosus*
- Muntjac Deer *Muntiacus reevesi*

- Ruddy Duck *Oxyura jamaicensis*
- Egyptian Goose *Alopochen aegyptiacus*
- Grey Squirrel *Sciurus carolinensis*
- Himalayan Balsam *Impatiens glandulifera*
- Fanwort (otherwise known as Carolina Water Shield) *Cabomba caroliniana*
- Giant Hogweed *Heracleum mantegazzianum*
- Water Hyacinth *Eichhornia crassipes*
- Parrots Feather *Myriophyllum aquaticum*
- Floating Pennywort *Hydrocotyle ranunculoides*
- Floating Water Primrose *Ludwigia peploides*
- Water Primrose *Ludwigia grandiflora*
- Giant Rhubarb *Gunnera tinctoria*
- Curly Waterweed *Lagarosiphon major*
- Nuttall's Waterweed *Elodea nuttallii*

Natural Environment and Rural Communities (NERC) Act 2006

The UK Biodiversity Action Plan (BAP) was a programme designed to help conserve the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that met the BAP criteria at UK level.

Currently 56 Habitats of Principal Importance and 943 Species of Principal Importance are included within Section 41 of the NERC Act 2006 and these include species and habitats which were identified in the UK BAP and which continue to be considered to represent the conservation priorities of England in the UK Post-2010 Biodiversity Framework.

National Planning Policy Framework (NPPF) 2023

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

174 b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

174 c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

174 d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

174 e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

174 f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

3. Methodologies

3.1. Suitably Qualified Ecologists

Survey work was managed and completed by Martyn Owen MCIEEM who holds survey licences in relation to bats (NE bat licence number: 2022-10620-CL18-BAT, Natural Resources Wales (NRW) bat licence number: SO89604-1), a variety of Schedule 1 birds (including Barn Owl *Tyto alba*) and GCN (2016-19752-CLS-CLS).

The nocturnal bat surveys were completed by Martyn Owen MCIEEM and Stephen Forrester. Both are experienced bat surveyors and have completed many similar surveys in the past.

3.2. Desk Study

Details in relation to internationally designated sites within 5km and nationally designated sites with 2km were obtained from www.magic.gov.uk. A search was also completed using the same database for the following, within 2km of the site:

- Granted EPS development licences.
- GCN Class Survey Licence returns
- Pond surveys 2017-2019.

Habitats and Species of Principal Importance included within Section 41 of the Natural Environment and Rural Communities (NERC) Act and Local Biodiversity Action Plan (LBAP) priority habitats and species were also reviewed to compare to those habitats and species recorded within the site during the survey or recorded as having potential to be present due to habitat suitability.

Ecological records were obtained from Cumbria Biodiversity Data Centre (CBDC) on 8 May 2024. These records included details of non-statutorily designated sites and species records within the site and a 2km radius of the approximate central point of the site, as follows:

- non-statutory nature conservation sites: Local Wildlife Site (LWS), County Wildlife Sites (CWS), Wildlife Trust Reserve (WTR) and/or Potential Wildlife Site (PWS); and

- all legally protected species, species of conservation significance and notable species records.

3.3. Preliminary Ecological Appraisal Survey

A PEA site survey[1],[2] was undertaken on 29 April 2024 by Martyn Owen MCIEEM. The survey was completed during suitable weather conditions (overcast and dry). Prior to the completion of the site survey, aerial imagery was reviewed[3] to provide an indication of habitat types present in the area.

During the survey all areas within the site and adjacent areas were walked and habitat types assessed. Signs of protected species, invasive plants (*i.e.* those included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) and other notable species were also searched for, as well as noting habitats considered to have the potential to support protected species.

The ultimate purpose of this PEA was to identify potentially valuable habitats and plant species assemblages, and to identify the presence and/or potential for protected/controlled species. This report presents an assessment of the ecological significance of the features present and discusses the potential for the site to support legally protected species and/or species of conservation interest which may be impacted by the project.

3.4. Bats

3.4.1. Preliminary Roost Assessment – Buildings/Structures

A Preliminary Roost Assessment (PRA) survey of any buildings/structures within the site and in areas where disturbance impacts may occur was completed during the PEA, in line with appropriate survey guidance[4].

The survey involved a systematic search of the buildings/structures within the site to identify potential or actual bat access points and roosting sites, and to locate

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

2 CIEEM (2017) *Guidelines for preliminary ecological appraisal* [online] available at: https://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea- (accessed 29 April 2024)

3 Google Maps [online] available at: https://www.google.co.uk/maps (accessed 29 April 2024)

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

any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises. It should be noted that sometimes bats leave no visible sign of their presence on the outside of a building (and even when they do wet weather can wash away evidence).

The inspection of buildings and built structures for evidence of bats, which can be conducted at all times of year, was facilitated by the use of ladders, a high-powered torch, endoscope and small dental mirrors to inspect accessible crevices considered likely to support bats.

The potential suitability of the building for roosting bats was assessed in line with relevant guidelines and allocated to one of the categories detailed within **Table 1**.

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels)
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (*i.e.* unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the categorisation in this table are made irrespective of species conservation status, which is established after presence is confirmed).

Suitability	Description of Roosting Habitats
High	A structure with one or more potential roost sites 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, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
Confirmed Roost	Definitive evidence of roosting bats, i.e. live animals or accumulation of droppings associated with a Potential Roost Feature (PRF).

In addition, all areas where impacts were possible were inspected/assessed for hibernation potential as well as evidence of bats and categorised in line with the criteria detailed within **Table 2**.

Table 2. Guidelines for assessing the hibernation potential of proposed development sites for bats

Suitability	Description
None/ Very Limited	A structure unlikely to support hibernating bats.
Classic Site	Often underground (e.g. tunnels, caves, mines, cellars) but may also be above ground. (e.g. some ice houses and lie kilns) and they provide cool, stable and damp conditions favoured by some species for winter torpor and hibernations.
Non-Classic Site	Void dwelling species (notably Brown Long-eared bat and Serotine) can linger in buildings into the winter but may not be visible to surveyors during inspection. Pipistrelles are often found roosting individually in more exposed/thermally unstable conditions.

3.4.1. Emergence/Re-entry Surveys

To ensure coverage of all areas of the site which could support roosting bats the emergence surveys were completed from two survey locations (situated to the southeast and northwest), supervised by two surveyors.

At each a survey location electronic bat detectors (EM Touch Pro 2) and Infra-Red (IR) cameras (Canon XA60) with additional infrared lighting (Nightfox XB5 IR and flood lamps) were deployed. Sound files were analysed with appropriate bat analysis software (Kaleidoscope) once the surveys were completed (if required).

All recorded IR footage was analysed. Views from each IR camera at the survey end are included as **Plate 1**.

Plate 1. View from each infrared camera at survey end

The nocturnal bat surveys were undertaken in weather conditions considered appropriate for surveys of this kind (**Table 3**).

Table 3. Nocturnal bat activity survey information

Date	Surveyors	Sunset / rise	Time		Cloud (octets)	Wind (Beaufort/ Direction)	Min. Temp (°C)	Precip.
			Start	Finish				
04/06/24	MO/SF	21:42	21:27	23:25	2	NNW 2-3	11	Nil
09/07/24	MO/SF	21:45	21:30	23:30	2	SSW 1	16	Nil

3.5. Limitations

The findings presented in this report represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys can be limited by factors affecting the presence of plants and animals, such as the time of year, migration patterns and behaviour.

Whilst not a full protected species or botanical survey, a PEA allows an experienced ecologist to obtain a sufficient understanding of the ecology of a site in order to either evaluate the conservation importance of the site and assess the potential for impacts on habitats and species likely to represent a material consideration in planning terms, or to ascertain that further surveys will be required before such an evaluation can be made.

The absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

4. Results

The results of the desk study (**Section 4.1**) and site surveys (**Section 4.2**) are presented below.

4.1. Desk Study

4.1.1. Statutorily Designated Sites

One internationally (Special Area of Conservation (SAC) designated site was present within the 2km of the site. Three nationally designated sites (Sites of Special Scientific Interest (SSSI)) were present within the 2km buffer zone (**Table 4**).

Table 4. Statutorily Designated site details

Site	Approx. Distance from site/Direction	Description
Drigg Coast SAC/Site of Special Scientific Interest (SSSI)	0.32km/S	Estuaries for which this is considered to be one of the best areas in the United Kingdom. Mudflats and sandflats not covered by seawater at low tide for which the area is considered to support a significant presence. *Salicornia* and other annuals colonising mud and sand for which the area is considered to support a significant presence. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) for which the area is considered to support a significant presence. Embryonic shifting dunes for which the area is considered to support a significant presence which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) for which the area is considered to support a significant presence. Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) for which this is considered to be one of the best areas in the United Kingdom which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Dunes with *Salix repens* ssp. *argentea* (*Salicion arenaria*) for which this is considered to be one of the best areas in the United Kingdom which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares. Humid dune slacks for which the area is considered to support a significant presence. Fixed dunes with herbaceous vegetation (grey dunes) for which the area is considered to support a significant presence.
Drigg Holme SSSI	1.80km/E	Drigg Holme is located on the flood plain of the River Irt approximately 1 km east of Drigg and 4g km south of Gosforth. Much of the land lies on alluvial soils at less than 10 metres O.D., sloping southwards gently to the river. Drigg Holme comprises a suite of neutral and acidic grasslands with a rich and varied hay meadow flora. In West Cumbria the site is one of only two known flood meadow systems under a 'traditional' management regime, where the grasslands are in shared ownership. In terms of species diversity the grasslands are the second richest series known in West Cumbria with records for 150 different flowering plants. The site shows the full range of gradation from unimproved through semi-improved to improved grassland according to variation in management across the faintly visible ridge and furrow strip system.

Site	Approx. Distance from site/Direction	Description
Hallsenna Moor SSSI/National Nature Reserve (NNR)	1.72km/NE	Hallsenna Moor is situated on the West Cumbria coastal plain approximately 1.5 km north of Drigg and 3 km south-east of Seascale. The site is one of the few lowland heath and peatland complexes remaining in the county and is the largest in West Cumbria. It contains a wide range of habitats developed on peat which form a mosaic including wet and dry heath, nutrient poor fen, basin mire and woodland.

Taking into account the nature of the proposals, the site and the location/qualifying features of the identified designated site, no impacts in relation to statutorily designated sites are anticipated and no further works are required. Designated sites are not considered further within this report.

4.1.2. Non-statutorily Designated Sites

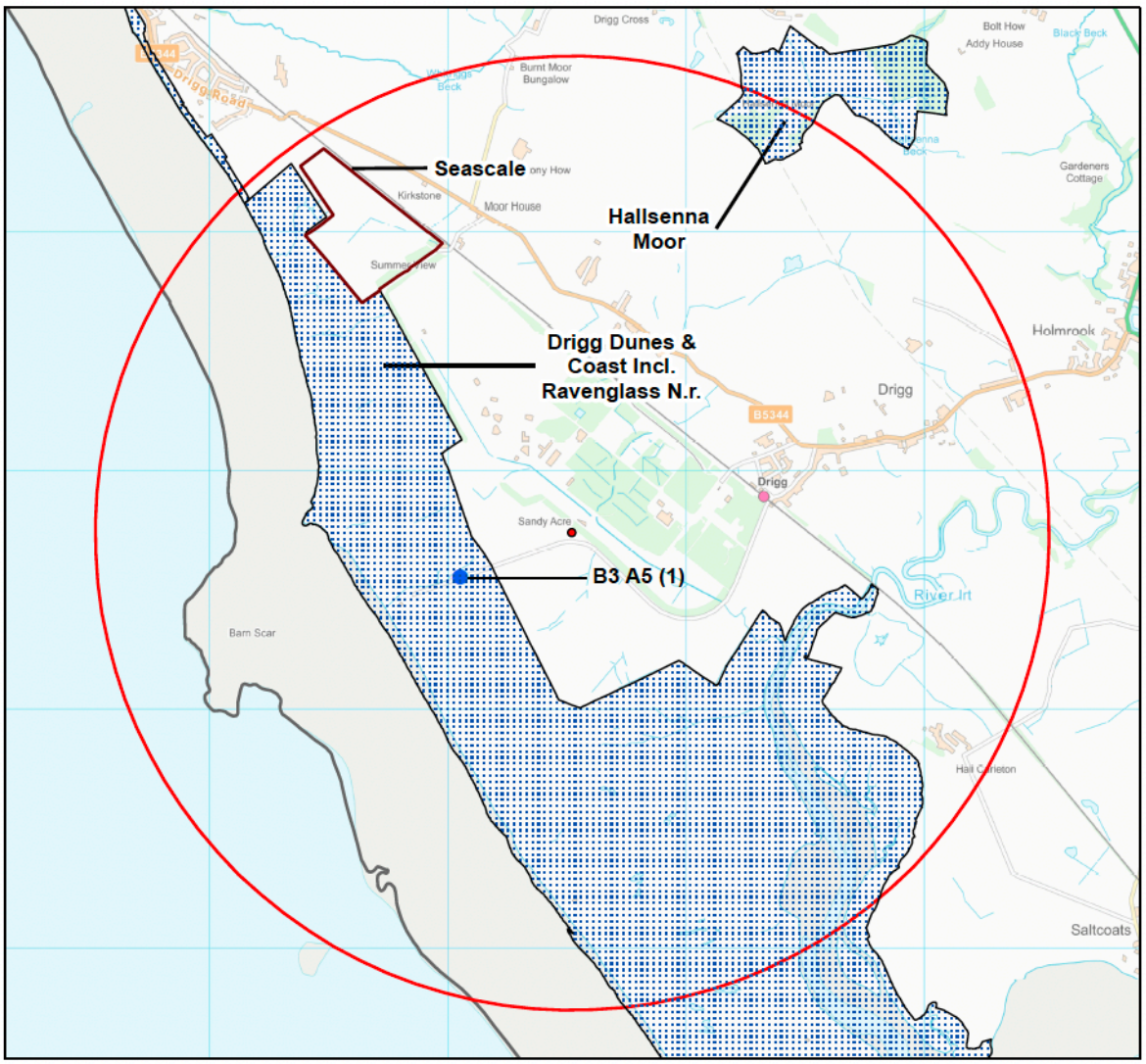
Details regarding non-statutorily designated sites (**Plate 1**) within 2 km of the site were obtained from Cumbria Biodiversity Data Centre (CBDC) and are summarised in the below **Table 5**.

Table 5. Non-statutorily Designated site details

Site	Approx. Distance from site/Direction	Description
Seascale County Wildlife Site (CWS)	1.25km/NW	No details provided.

Two further notable sites were present within 2km of the site boundary; Drigg Dunes & Coast including Ravenglass Nature Reserve (NR). (0.32km/S), and B3 A5 (0.41km/SW). B3 A5 is a Special Roadside Verge, and Drigg Dunes & Coast including Ravenglass NR is a local site of invertebrate significance, which is not formally designated but meet the broad criteria for selection as a CWS.

Plate 1. Non-statutorily designated sites within 2 km of the site boundary.



4.1.3. Protected Species Records

The desk study identified two granted EPS development licences within the search area, detail is provided within **Table 6**.

Table 6. Granted EPS development licences (2km)

Species	Distance/Direction	Details
Amphibian: GCN	0.54km/NE	**2015:** Damage of a resting place and destruction of a resting place
Amphibian: GCN	0.54km/NE	**2019:** Damage of a resting place and destruction of a resting place

Details in relation to GCN class licence returns or pond survey data (to inform GCN district licencing) were available within 2km of the site, provided in **Table 7**.

Table 7. GCN Class Survey Licence Returns and Pond Surveys 2017 – 2019 (2km)

Species	Distance/Direction	Presence
Amphibian: GCN	0.45km/N	**2015:** Present
Amphibian: GCN	0.27km/NE	**2017:** Present
Amphibian: GCN	0.38km/E	**2016:** Present
Amphibian: GCN	0.38km/E	**2017:** Present
Amphibian: GCN	0.48km/E	**2015:** Present
Amphibian: GCN	0.50km/SE	**2015:** Present
Amphibian: GCN	0.51km/SW	**2019:** Absent
Amphibian: GCN	0.86km/W	**2019:** Absent
Amphibian: GCN	1.75km/NE	**2016:** Present
Amphibian: GCN	1.85km/NE	**2016:** Present
Amphibian: GCN	2.00km/N	**2016:** Present

4.1.4. Flora and Fauna records

Results returned from CBDC are summarised, when relevant in **Section 4.2.**

4.2.1 Habitats and Flora

The site comprised a dwelling surrounded by hardstanding, with a yard area and outbuildings and well managed landscaped gardens.

4.2.2 Species

4.2.2.1 Bats

CBDC returned 14 records of bats across three species within 2km of the site. Those records included:

- Common Pipistrelle *Pipistrellus pipistrellus* – one record in 2010.
- Noctule Bat *Nyctalus noctula* – two records in 2017.
- Natterer's Bat *Myotis nattereri* – one record in 2010.

Preliminary Roost Assessment

House

Sandy Acre (**Photograph 1**) was an unoccupied dwelling, with a rendered brick wall and slated roof. Wooden bargeboards were present on various elevations with uPVC windows present. Various PRFs were present:

- Gaps behind bargeboards.
- Mossing mortar at eaves.
- Minor gaps at ridge.

Much of the roof space had been converted to living space although a roof void was present (**Photograph 2**) above the western section, which was fully inspected. The roof was lined with bitumen felt (in perfect condition).

No evidence of bats was encountered internally or externally. However, the presence of potential roost features indicated that the building was of **MODERATE** suitability (**Table 1**) for roosting bats.

The house was assessed to be of **NON-CLASSIC** hibernation potential (**Table 2**) due to the absence of optimal features to support hibernating bats, although it is possible that individual bats may be present. Further survey work is not deemed necessary as any surveys would be unlikely to return results[4].

Photograph 2. Roof void

Outbuildings

A small cluster of sheds were present in the north of the site. These were of various construction with metal and wooden walls and roofs. All were in fairly dilapidated condition with much internal illumination due to open frontages and/or windows/doors.

The outbuildings were assessed to be of **NO** potential value to roosting (**Table 1**) or hibernating bats (**Table 2**).

Photograph 3. Outbuildings

4.1.4.1.1. Emergence/Re-entry Surveys

In line with good practice guidance, two nocturnal bat surveys were completed of the house. No further survey work was deemed necessary in relation to the outbuildings.

4 June 2024 (dusk)

No bats roosted within the house and no bats were logged by either surveyor during the survey.

9 July 2024 (dusk)

No bats roosted within the house.

A distant Noctule was logged infrequently from 22:12. A single pass of a Common Pipistrelle was logged at 22:46

4.1.4.2. Badger

Biological records from CBDC returned eight records of Eurasian Badger *Meles meles* within 2km of the site, most recently in 2009.

No evidence of Badger was present within the site/adjacent areas and the site was considered unsuitable for setts. No further survey work is considered necessary although mitigation during any site works is recommended (**Section 5**).

4.1.4.3. Other Section 41 Mammals

CBDC returned ten records of section 41 mammals[5] of three species within 2km of the site:

- Eurasian Otter *Lutra lutra* – three records (most recently in 2022, closest record 0.70km from site).
- European Hedgehog *Erinaceus europaeus* - one record in 1991.
- Brown Hare *Lepus europaeus* – six records (most recently in 2016).

It is possible that the site could support Hedgehog. No further survey work is considered necessary although mitigation during any site works is recommended (**Section 5**).

4.1.4.4. Amphibians

Biological records from CBDC returned 520 records of amphibians across all six UK native species within 2km of the site. Those records included:

- Common Frog *Rana temporaria* – 233 records (most recently in 2016)
- Common Toad *Bufo bufo* – 49 records (most recently in 2016).
- Palmate Newt *Lissotriton helveticus* – 24 records (most recently in 1999).
- Smooth Newt *Lissotriton vulgaris* – 15 records (most recently in 1999).
- Great Crested Newt *Triturus cristatus* – 24 records (most recently in 1999, closest record 0.60km from site).

5 A list of all section 41 mammals is available at: (https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england).

- Natterjack Toad *Epidalea calamita* – 413 records (most recently in 2021).

One pond was shown as present on Ordnance Survey mapping within 0.25km of the site. 0.25km is considered to be the typical maximum ranging distance from a breeding pond of the majority of a population of GCN[6] with another study[7] finding that 95% of newt summer refuges are within 63m of breeding ponds. However, this pond was dry throughout the period of surveys detailed within this report.

Taking into account the results of the desk study and site survey the presence of legally protected amphibian species or significant populations of amphibians within the site is considered highly unlikely due to the terrestrial habitats present.

No further work in relation to amphibians is considered necessary, and amphibians are not considered further within this report.

4.1.4.5. Reptiles

CBDC returned 39 records of reptiles within 2km of the site. Those records included:

- Common Lizard *Zootoca vivipara* – 13 records (most recently in 2017).
- Slow-worm *Anguis fragilis* – two records in 1990 and 1991.
- Adder *Vipera berus* – 24 records (most recently in 2013).

Habitats favoured by reptiles tend to be sunny, well-drained and often south-facing. Typical habitats include grass and heather heathland, chalk downland, coppiced woodland, sand dunes, disused allotments, suburban wasteland, road/railway embankments, golf course roughs, rough grassland, open woodland and woodland edge, immature plantation forestry, sea cliffs, moorland, disused quarries, non-intensive farmland and wild gardens. In addition, Grass Snakes *Natrix helvetica* favour damp habitats[8].

6 English Nature (2001). Great Crested Newt Mitigation Guidelines
7 Jehle, R. (2000). The terrestrial summer habitat of radio-tracked Great Crested Newt and Marbled Newts. Herpetological Journal 10: 137-142.
8 Froglife (1999). *Froglife Advice Sheet 10; Reptile Survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*

Taking into account the nature of the habitats within the site, and the historic levels of anthropogenic influence, the potential for impacts to any reptilian species is considered highly unlikely.

No further works are considered necessary.

4.1.4.6. Birds

CBDC returned 2,720 records of bird species within 2km of the site. The full dataset is present in **Appendix A**.

Those records included 19 species of birds designated as Schedule 1 species:

- Green Sandpiper *Tringa ochropus* – two records in 2010.
- Greenshank *Tringa nebularia* – six records (most recently in 2013).
- Greylag Goose *Anser anser* – 28 records (most recently in 2013).
- Kingfisher *Alcedo atthis* – five records (most recently in 2012).
- Red-throated Diver *Gavia stellata* – one record in 2009.
- Redwing *Turdus iliacus* – nine records (most recently in 2011).
- Tundra Swan *Cygnus columbianus* – one record in 2012.
- Whimbrel *Numenius phaeopus* – 26 records (most recently in 2012).
- Whooper Swan *Cygnus cygnus* – 17 records (most recently in 2012).
- Wood Sandpiper *Tringa glareola* – two records in 2011.

75 further Schedule 1 species were listed as sensitive species and as such their names were not provided.

Active Swallow *Hirundo rustica* nests (within outbuildings) and House Sparrow *Passer domesticus* (within the house) were present.

No further survey work in relation to breeding/nesting birds is considered necessary. However, mitigation is required (**Section 5**).

4.1.4.7. Invertebrates

CBDC returned 485 records of invertebrates of 91 species within 2km of the site. The full dataset is present in **Appendix A**.

Taking into account the nature of the habitats on-site/nearby it is considered highly unlikely that significant populations/species of invertebrates are present and no

further works relating to invertebrates are considered necessary. Invertebrates are not considered further within this report.

4.1.4.8. Invasive Non-Native Plants

CBDC returned records of four Invasive Non-Native Species (INNS) of plants within 2km of the site (**Table 8**).

Table 8. Desk study records of INNS of plant

Common Name	Scientific Name	Number of records	Closest record from site (km)
Japanese Rose	*Rosa rugosa*	1	1.0
Montbretia	*Crocosmia crocosmiiflora*	1	0.2
Japanese Knotweed	*Fallopia japonica*	3	1.0
Rhododendron	*Rhododendron ponticum*	1	1.0

No INNS of plants listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) were observed during the survey.

No further work in relation to INNS of plants is considered necessary. Invasive species are not considered further within this report.

5 Conclusions and Recommendations

A PEA (including PRA) site survey/complimentary desk study and follow-on nocturnal bat surveys have been completed to inform potential works at Sandy Acre, Drigg Cumbria. These surveys identified the below detailed ecological considerations/requirements, along with recommendations to ensure that the works are carried out lawfully and in such a manner to minimise ecological impacts.

5.1 General Mitigation

All works should be undertaken in accordance with Guidance for Pollution Prevention (GPP5) and PPG1 Understanding your Environmental Responsibilities.

If any protected species are encountered during the works, all work in the vicinity should stop immediately and a Suitably Qualified Ecologist (SQE) should be contacted for advice on how to proceed.

4.2. Designated Sites

One internationally (SAC), three nationally designated sites (SSSIs) and one non-statutory site (a CWS) were present within the 2km buffer zone.

Impacts to any designated sites are considered unlikely. However, once the scope of works is conformed a full appraisal of potential impacts/effects should be completed.

5.1 Habitats

The site comprised a dwelling surrounded by hardstanding, with a yard area and outbuildings and well managed landscaped gardens. The potential requirement for Biodiversity Net Gain assessment will need to be considered when the scope of works are determined.

5.2. Bats - Roosts

The site surveys and desk study did not find any evidence of roosting bats within the site. Bat roosts are therefore assessed to be likely absent, and works can continue without limitation.

In the apparently unlikely event that bats are encountered during the redevelopment works, works must cease and the advice of a SQE obtained.

4.3. Ground Dwelling Fauna

The presence of foraging/commuting Badger and Hedgehog (and other small mammals) within the site is possible. During the construction phase if excavation is required, holes/trenches should either be covered at the conclusion of each workday, or a means of escape provided.

4.4. Herptiles

GCN presence in the vicinity of the site has been identified though desk study. One pond was present on mapping within 0.25km of the site, although this dry throughout the survey period.

GCN are considered likely absent from the site. However, it would be prudent to employ precautionary working methods during construction in the highly unlikely event that GCN do occur within the impact area. This should include:

- the removal of all materials and vegetation using hand tools;
- stored/excavated materials should be stored on hardstanding or pallets; and
- cover, or provide a means of escape, any excavations (if required) to ensure that no herptiles become entrapped.

Reptiles are considered likely absent.

In the apparently unlikely event that any GCN, significant numbers of common amphibian species or reptiles are disturbed during works, works must cease and the advice of a SQE should be sought.

5.3. Nesting Birds

The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Active Swallow and House Sparrow nests were found within buildings on site. Consequently, if works are proposed for the bird nesting season (March-August inclusive), it will be necessary to appoint SQE to complete a check for active birds' nests. Should any active nests be found then it would be necessary to delay works until the nesting attempt has reached a

natural conclusion. If works are planned for outside of the bird nesting period, then no such check is necessary.

5.4 Opportunities for Enhancement

The National Planning Policy Framework (NPPF) sets out national planning policies for the protection of biodiversity (and geological) conservation through the planning system. A key principle of NPPF is that, '*Opportunities to incorporate biodiversity in and around developments should be encouraged*'. Taking the requirements of NPPF into account, opportunities should be sought where possible for nature conservation enhancement at this site.

Opportunities may exist to create small habitat areas and to use native species in any landscape planting. Opportunities also exist to enhance the site for bird species through the incorporation of bat/bird boxes into built structures or on retained trees. Species of conservation concern (e.g. Swift *Apus apus*) could potentially benefit from the provision of appropriate boxes. Such measures would therefore be beneficial to nature conservation and show compliance with the policy guidance.

The potential requirement for Biodiversity Net Gain assessment will need to be considered when the scope of works are determined.

5.5 Report Validity

The findings of this report are considered valid until July 2025 from the date of this report[9]. If the project is delayed beyond this period, an updated assessment of potential impacts will be required.

9 CIEEM (2019). *Advice Note on The Lifespan of Ecological Reports and Surveys* [online] available at: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

Appendix A – Desk Study Records

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Grand Total
amphibian																																											
Common Frog				1	1		1		8			1	2				4	2		3										2	179		1	1	10	4	14								234
Common Toad					1				11			1	1	1			2		2	1											21	1		1	2	4	1								50
Great Crested Newt				1	1		1		6					1			5			10																								25
Natterjack Toad	2	5	9	7	7	11	15	10	7	3	11	16	57	18	4	2	1	1	1	1											90		1	2	5	6	26	35	18			43		414
Palmate Newt				1			2		16								2			4																								25
Smooth Newt				1	1		1		3			1					4			4																								15
bird																																											
Bar-tailed Godwit																																	1											1
Black-headed Gull																												4	5	9	15	21	1	1										56
Blackbird																			3	3								1	17	6	29	23	1											83
Blue Tit																			3	3									13	3	19	22												63
Brent Goose																																1												1
Bullfinch																															6	5												11
Buzzard																			3						1			1	1	2	9	9		4										30
Canada Goose																																2	2											4
Carrion Crow																												1	16	5	22	26												70
Chaffinch																			3	3								1	18	4	24	22	1	1										77
Coal Tit																				2											3	11												16
Collared Dove																				3								1	14	5	16	13												52
Common Gull																												2		1	8	5												16
Common Redpoll																			1	2																								3
Common Sandpiper																															4	3	5	3										15
Coot																														2		3												5
Cormorant																			2									2		1	9	9	2		1									26
Cuckoo																			1	1																								2
Curlew																	1		3	3								5	3	2	17	21	1	5										61
Dipper																															1													1
Dunlin																												3		1	7	9	2	3										25
Dunnock																			3	3								1	14	3	20	16												60
Eider																																	2											2
Gannet																																1	1											2
Goldcrest																				1											1	1		1										4
Golden Plover																												2	1	2	3	2	7	3										20
Goldfinch																			3	3								1	14	3	18	16		2										60
Goosander																				1									2		3	6	6	3										21
Grasshopper Warbler																			2											1		3	1											7
Great Black-backed Gull																												3		1	8	5												17
Great Crested Grebe																												1																1
Great Spotted Woodpecker															1					1									1	1	2	5												11
Great Tit																			3	3									10	3	18	18												55

Green Sandpiper																																													2
Greenfinch																			3	3								1	5	2	6	13														33
Greenshank																																1	2	3												6
Grey Heron																			1										4		8	10	1													24
Grey Partridge																			1		1										2	3	1													8
Grey Plover																												1		1		2	2	2												8
Grey Wagtail																				1									1		1															3
Greylag Goose																				3									1	2	11	7		4												28
Herring Gull																			3									3	10	2	16	29														63
House Martin																			1	1									5		5	3														15
House Sparrow																			2	3								1	19	8	23	17														73
Jack Snipe																												2																	2
Jackdaw																			2	3								1	13	4	18	16														57
Jay																				1								1			1															3
Kestrel																			1										1		9	6		1													18
Kingfisher																												1			2	1	1													5
Knot																												1			2	2	1	1												7
Lapwing																				1								3	1	6	8	8	2	2												31
Lesser Black-backed Gull																			1									2	2		10	10														25
Lesser Redpoll																														2	3	8	1												14
Light-bellied Brent Goose																														1															1
Linnet																			3	4									14	5	9	14	1	1												51
Little Egret																											1		1		6	14	4	5												31
Little Grebe																													1	1	3	11	9	5												30
Magpie																			3	3									4	5	17	11														43
Mallard																			3	2											6	13	1													25
Meadow Pipit																			3	4								1	11	4	15	18		1												57
Mistle Thrush																				3										2		6														11
Moorhen																				1										1	4	5	2													13
Mute Swan																				1									1			5	1													8
Nuthatch																				1																										1
Ortolan Bunting																													1																1
Oystercatcher																			1	4								4	4	1	9	13														36
Pheasant																			2	2									4		13	20	1													42
Pied Flycatcher																																		1												1
Pied Wagtail																			3	4								3	7	4	9	8	2	1												41
Pink-footed Goose																															1	1	3	3												8
Razorbill																														2																2
Red-breasted Merganser																				2								2		1	2	6	4													17
Red-throated Diver																														1																1
Redshank																			1	2								3		2	6	7														21
Redstart																														1																1
Redwing																													1	1	4	3													9
Reed Bunting																			1	2								2	2	3	8	11	2	1												32

Ringed Plover																		1	3								1	2	7	4	1	2										21
Robin																		3	3							1	16	4	22	17												66
Rock Dove																			2							1			2												5
Rook																		2	2								8	3	11	13		2										41
Sand Martin																	1	3								1	6	1	12	7												31
Sanderling																												1	5		1	2										9
Sedge Warbler																		3	2								1			6												12
sensitive_species_b									1																																	1
sensitive_species_d																										1	1		4	9	4	4										23
sensitive_species_h																						1									1											2
sensitive_species_i																													1												1
sensitive_species_k																														5											5
sensitive_species_l																													1	1											2
sensitive_species_n																												1	4	3	1	2									11
sensitive_species_p																													1												1
sensitive_species_q																														2	1	2									5
sensitive_species_r																												2	1												3
sensitive_species_t																		1	1					1	1		2		1	1			1								9
sensitive_species_w																										1		2	3	3	1	1									11
sensitive_species_y																			1																							1
Shelduck																			4							1		3	8	15	4	1									36
Siskin																		2											2	1											5
Skylark																	1		3	4							15	5	14	20											62
Snipe																										3			3	5	1										12
Snow Goose																												1	4	2											7
Song Thrush																		2	3							1	5	3	16	15											45
Sparrowhawk																		2	1											4											7
Spotted Flycatcher																											1			3											4
Starling																		3	3							2	17	3	16	16											60
Stock Dove																														2											2
Stonechat									3									1	3	1						6	6	3	10	1		1									35
Swallow																		3	3								12	2	11	16	1	1									49
Swift																		1	2								5		6	2											16
Teal																											1		2	10	3	2									18
Tree Pipit																		1												1											2
Tree Sparrow																		2									3	3	5	11											24
Treecreeper																		1	1											2											4
Tundra Swan																															1										1
Turnstone																										1		2	4	6	1	2									16
Waxwing																													6	2	1										9
Wheatear																		1	2							2	1	2	1	5	2	1									17
Whimbrel																												6	6	10	4										26
Whinchat																			1													1										2
Whitethroat																		3	3							1	5		3	11		1									27

Whooper Swan																												1	2	10	4											17
Wigeon																	1										2			1	2	2									8
Willow Warbler																		3	3										10	1	7	14		1								39
Wood Sandpiper																															2										2
Wood Warbler																		1																							1
Woodcock																													1											1
Woodpigeon																		3	3									8	2	11	18										45
Wren																		3	3								2	14	1	18	16										57
Yellowhammer																		3									1	4	2	2	6										18
chromist																																								
Wig Wrack or Sea-loch Egg Wrack												1																												1
crustacean																																								
Armadillidium pulchellum																												1											1
flowering plant																																								
Allseed								1																																1
Field Gentian																	1																							1
Heath Dog-violet																																				1				1
Hound's-tongue									1															1						1										3
Japanese Knotweed																																2			1				3
Japanese Rose																																			1				1
Montbretia																																			1				1
Petty Spurge																																			1				1
Portland Spurge																								2					1							1	1			5
Rhododendron ponticum																																				1				1
Saltwort																																				1				1
Sea Spurge																																			1					1
Sea-buckthorn																																				1				1
Sticky Stork's-bill															3																									3
Wild Pansy																																			1					1
fungus																																								
Tiny Earthstar																																4	1							5
horsetail																																								
Variegated Horsetail	1																																							1
insect - beetle (Coleoptera)																																								
Augyles maritimus																										1															1
Cercyon littoralis			1																																					1
Ceutorhynchus atomus								1																																1
Chilothorax paykulli																										2															2
Dryops striatellus			1			1																		1																3
Gabrius bishopi																												1												1
Glocianus punctiger																								1																1
Gyrinus natator																				1																					1
Helochares obscurus																							1		1															2
Helochares punctatus																								2			1		1											4

Helophorus fulgidicollis					1																		1																	2
Heterocerus fossor																			2	1						1															4
Horsetail Weevil																				1					1																2
Hydrochus angustatus			1		1																					1															3
Large Thistle Weevil											2									1																					3
Leiodes furva																			1																						1
Mecinus collaris																				1					1																2
Meligethes exilis																	1						1																		2
Northern Dune Tiger Beetle								1			1			6	1		1			10	1			1		2	2			1	1		1	19	1		3				52
Ochthebius auriculatus																				1																					1
Orthochaetes setiger	1																																								1
Paederus fuscipes						1															2	1																			4
Pelenomus commari																										1															1
Pelenomus zumpti																				1																					1
Perapion affine																	1																									1
Quedius longicornis																										1															1
Quedius nigrocaeruleus														2																											2
Rhopalomesites tardii																																		1							1
Scymnus schmidti																										3															3
Sea-Wormwood Weevil																				1																					1
Stenus carbonarius																							1																		1
Stictonectes lepidus					1	1																																			2
Tournotaris bimaculata																									1								1								2
Welsh Chafer																							1		1																2
Xantholinus tricolor																						1																			1
insect - butterfly																																									
Comma																																			1						1
Dark Green Fritillary						1			1	2		2	3	4	2	2	2		4	2	1			3	5	1		4	1		1	1	3	1	2		1			1	3			53
Dingy Skipper								2																				1													3
Grayling		1			1							2		5	1	2	3		4	2				1	1	1		4				1	2	1	4			1		3	1			41
Small Heath										1		1	4	1		1	5		4	3				3	6	4		9	1	1				1	1			1		2	5			54
Small Pearl-bordered Fritillary	1					1		1				1					1		2					3	8	2		3		1	1				1								26
Wall												2	2	2			2	1	7					4	5	1		10		1		1	1		5			3		4	3			54
insect - dragonfly (Odonata)																																									
Broad-bodied Chaser															1																											1
Emperor Dragonfly																3																										3
Golden-ringed Dragonfly															1																											1
Keeled Skimmer																												1													1
insect - hymenopteran																																									
Buff-tailed Mining Bee																												2													2
Red Legged Spider Wasp														3																											3
Silver Spiny Digger Wasp																												1													1
insect - moth																																									
Autumnal Rustic																																		2							2

Broom Moth								2						1																								1	1					5
Buff Ermine																																				2							2
Cinnabar												1																									2						3
Coast Dart								1																																			1
Crescent																																				2							2
Dark-barred Twin-spot Carpet																																				2							2
Dusky Brocade								2																													1						3
Feathered Gothic																																		2		1							3
Galium Carpet								2																																			2
Garden Tiger								2				1																	1													1	5
Ghost Moth																																				1							1
Hedge Rustic																																				1							1
Knot Grass																																						1					1
Oblique Carpet																																		1		1	1						3
Pinion-streaked Snout																																				1							1
Rosy Minor																																		1		3							4
Rosy Rustic																																		1		2							3
Sallow																																				1							1
Sand Dart								1																																			1
Shaded Broad-bar																																			1	1	1		5	1				9
Shore Wainscot								3																																				3
Shoulder-striped Wainscot																																						1					1
Small Phoenix																																				1							1
Small Square-spot																																				4							4
White Ermine																																				2							2
White-line Dart																																				2							2
insect - true bug (Hemiptera)																																											
Ant Damsel Bug																	1																											1
Chiloxanthus pilosus														2																1													3
Chorosoma schillingi														2		1	2			1																								6
Green Shieldbug																																		1										1
Hairy Shieldbug														2			2		1	2	1			1		14	4	1							2									30
Lamproplax picea																														1														1
Monosynamma sabulicola														1							1																							2
Neides tipularius														2																														2
Pachybrachius fracticollis																								1																				1
Plinthisus brevipennis													2	2			1			1																								6
Scarab Shieldbug																	1																											1
insect - true fly (Diptera)																																											
Chrysogaster virescens														1																														1
Dicranomyia sera																														2														2
Twin-spot Stiletto																			1	2																								3
marine mammal																																											
Common Porpoise											2																														1	1	4	8

Grey Seal															4													1	1									1	7
Harbour Seal																												3												3
Minke Whale																				1						1														2
mollusc																																								
Common Oyster																														1	1									2
sensitive_species_bz															1																									1
moss																																								
Baltic Bryum																					1																			1
Saltmarsh Thread-moss																					1																			1
reptile																																								
Adder		1									5	5						1								1		1		5	3	1	1	1						25
Common Lizard											3	2		1	1				1										2		1	1				1				13
Slow-worm											1	1																												2
terrestrial mammal																																								
Brown Hare												1																	1					1	1					4
Common Pipistrelle																													1											1
Eastern Grey Squirrel																												2		1				3						6
Eurasian Badger												1			1		1	2				1	1						1											8
Eurasian Common Shrew												1					3				1																			5
Eurasian Otter																						1													1					3
Eurasian Pygmy Shrew												1																												1
Eurasian Red Squirrel																								1		2			2											5
Eurasian Water Shrew												1																	1											2
Natterer's Bat																														1										1
Noctule Bat																																			2					2
Roe Deer												1					3			1		1			1					3					1					11
Stoat												1					1																							2
Weasel												1					3																							4
West European Hedgehog												1																												1