

February 2025

# Technical Report

## Scout Moor 2 - Meteorological Mast

Preliminary Ecological Appraisal

Cubico Sustainable Investments

your project our expertise

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## 1. Introduction

### 1.1 Terms of Reference

In February 2025, Atmos Consulting Ltd (Atmos) were commissioned by Cubico Sustainable Investments to provide a Preliminary Ecological Appraisal (PEA) to support a planning application for the erection of a meteorological mast (met mast) within the proposed Scout Moor 2 site in Rochdale, Greater Manchester. This is hereafter referred to as the 'Site'.

### 1.2 Site Location and Description

The proposed met mast is to be located west of the Rooley Moor Road bridleway that spans the length of the Rooley Moor. The Site is to be accessed via the existing Rooley Moor Road which is comprised of large stone cobbles and smaller stone gravel track. The Site is to be located at a central grid reference of SD 85258 19369 and is proposed to be small in size as it will comprise of a temporary met mast to be on Site for two years and small unloading area adjacent to the Site. A small welfare unit is to be sited adjacent to the met mast location for approximately five days during the initial construction.

The met mast Site itself is comprised of degraded blanket bog, which makes up for a large portion of the developable area.

### 1.3 Objectives

The objectives of this report are:

- To describe the baseline ecological status of the Site in respect of habitats and protected species;
- To consider the potential for effects on these features in the context of the development of the Site; and
- To set out mitigation measures to minimise these effects to an acceptable level;

As the Site is considered to be less than 25m<sup>2</sup> in size, the Site is exempt from requiring any Biodiversity Net Gain (BNG) calculations to be completed. Thus, no BNG calculations are included as part of this PEA.

## 2. Relevant Legislation

### 2.1 Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017, (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments including upon the UK leaving the EU. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites ('Natura 2000 Sites termed Special Areas of Conservation SACs or Special Protection Areas (SPAs). The Regulations designate these sites as being important for either habitats or species (listed in Annexes I and II of the Habitats Directive respectively).

## 2.2 Wildlife and Countryside Act 1981

National legislation for the special protection of selected species is provided in the Wildlife and Countryside Act 1981, as amended (WCA) and the Habitats Regulations.

Under Section 1(1) and 1(2) of the WCA, all British bird species, their nests and eggs (excluding some pest and game species) are protected from intentional killing, injury or damage. Under Sections 1(4) and 1(5), special penalties are applied to bird species included in Schedule 1 of the WCA and protection is extended for these species to disturbance to birds whilst building, in or near a nest and disturbance to dependant young. Schedule 5 provides special protection to selected animal species other than birds, through Section 9(4) of the WCA, against damage to “any structure or place which any [wild animal included in the schedule] uses for shelter and protection” and against disturbance whilst in such places.

Non-native invasive plants are listed in Schedule 9 of the WCA which makes it an offence to spread or enable them to be spread in the wild. The list includes species such as Japanese knotweed *Reynoutria japonica* and Himalayan balsam *Impatiens glandulifera*.

A number of animals, known as European protected species (EPS), are provided full protection through inclusion in Schedule 2 of The Habitats Regulations. The Habitats Regulations provide protection against deliberate disturbance to those animals wherever they are present and provides tests against which the permission for a development (that may have an effect on a Schedule 2 protected species) must be assessed before permission can be given.

In addition to species protection, the WCA and Habitats Regulations also set out requirements/procedures for the notification, designation and protection of a range of statutory site designations in order to preserve important nature conservation resources.

All public authorities in England have a requirement to pay due regard to the conservation and enhancement of habitats and species through The Natural Environment and Rural Communities (NERC) Act, 2006. To this end, Section 41 provides a list of habitat and species that are considered to be of “principal importance for the conservation of biological diversity in England”.

## 2.3 Protected Species

### 2.3.1 Bats

All bat species in the England and Wales are protected through the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006) Environment (Wales) Act (2016); and by the Conservation of Habitats and Species Regulations (2017). Bats are commonly referred to as European Protected Species (EPS).

It is an offence to deliberately or recklessly:

- capture, injure or kill a bat;
- harass an individual or group of bats;
- disturb a bat while it is occupying a structure or place used for shelter or protection;
- disturb a bat while it is rearing or otherwise caring for its young;
- obstruct access to a breeding Site or resting place, or otherwise deny the animal use of the breeding Site or resting place;
- disturb a bat in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs;

- disturb a bat in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- disturb a bat while it is migrating or hibernating;

It is also an offence of strict liability to:

- Damage or destroy a breeding Site or resting place of a bat even if they are not in use at the time (i.e. a summer roost during the winter period).

### 2.3.2 Great Crested Newt

Great crested newt *Triturus cristatus* are afforded full statutory protection as a European protected species listed on Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 2017 (1994, as amended), which transpose into British law the European Community's Habitats Directive (92/43/EEC).

Under the terms of Regulation 39(1), with certain exceptions, a person commits an offence if he/she:

*“(a) deliberately captures, injures or kills any [a great crested newt];*

*(b) deliberately disturbs wild [great crested newts].*

*(1A) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely —*

*(a) to impair their ability –*

*(i) to survive, to breed or reproduce, or rear or nurture their young; or*

*(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or*

*(b) to affect significantly the local distribution or abundance of [great crested newts];*

*(c) deliberately takes or destroys the eggs of [a great crested newt]; or*

*(d) damages or destroys a breeding site or resting place of [a great crested newt].”*

It is also an offence under Regulation 39 to keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild Great crested newt, or any part of, or anything derived from one.

All of the above protections apply regardless of the stage of the life of the animal in question.

Protection of great crested newts' is also provided for in the Wildlife and Countryside Act 1981, as amended. The great crested newt is listed on Schedule 5 of the Act, and is afforded partial protection under the terms of section 9(4)(b) and (c) and (5). This makes it an offence if any person:

9(4) *“... intentionally or recklessly ... (b) ... disturbs any [great crested newt] while it is occupying a structure or place which it uses for shelter or protection; or (c) ... obstructs access to any structure or place which any [great crested newt] uses for shelter or protection.”*

9(5) *“... (a) sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead [great crested newt], or any part of, or anything derived from, such an animal; or (b) publishes or causes to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things”.*

There are provisions in the above legislation for the licensing of activities to facilitate development that would otherwise constitute an offence. However, the statutory agency Natural England (NE) advises that the requirement for licensing should be carefully considered by developers, on a site/activity-specific basis, and recommends consideration of non-licensed mitigation such as

reasonable avoidance measures relating to timing of works and sensitive site clearance to minimise potential for adverse impacts to this species where this can be achieved.

### 2.3.3 Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended) and by Section 11 (Schedule 6) of the Wildlife and Countryside Act 1981 (as amended). It is illegal to kill, injure, take, possess or cruelly ill-treat a badger or attempt to do so. Badger setts are protected from interference, and it is an offence to obstruct access to, or any entrance of, a badger sett. In addition, it is illegal to disturb a badger when it is occupying a sett.

### 2.3.4 Birds of Conservation Concern 5 (BoCC)

The leading government (Joint Nature Conservation Committee (JNCC)) and non-government conservation organisations in the UK jointly reviewed the population status of the 247 bird species that are regularly found within the United Kingdom using data from national monitoring schemes. This was most recently reviewed in 2015 (Eaton et al. 2015) and was an update to the earlier 2009 BoCC report.

On the basis of seven quantitative criteria, each species has been placed on one of three lists, these being:

- Red – red list species are those that are globally threatened, have had an historical population decline in the UK from 1800 -1995, a rapid (> or = 50%) decline in UK breeding population over the past 25 years, or a rapid (> or = 50%) contraction of UK breeding range over the past 25 years;
- Amber – amber listed species are those that have had a historical population decline from 1800-1995 but are recovering (population size has more than doubled over the past 25 years), a moderate (25-49%) decline in UK breeding population over the past 25 years, a moderate (25-49%) contraction of UK breeding range over the past 25 years, a moderate (25-49%) decline in UK non-breeding population over the past 25 years, or species with unfavourable conservation status in Europe also known as Species of European Conservation Concern (SPEC); and
- Green – green listed species are those that have no identified threat to their population status.

## 2.4 Planning Policy and Guidance

### 2.4.1 National Planning Policy

The National Planning Policy Framework (NPPF) was first published by the government on 27<sup>th</sup> March 2012. It provided new guidance for local authorities, replacing the existing planning policy guidance, including that relating to biodiversity in Planning Policy Statement 9 (PPS9): Biological and Geological Conservation. In December 2024 an updated version of the NPPF was published.

The Government Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and their impact within the Planning System, which was originally accompanied PPS9, remains valid at the time of writing. The Circular states that its purpose is to provide 'administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.'

Section 15 of the NPPF specifies the requirements for conserving and enhancing the natural environment. While a key aim of the NPPF is to assist plan-makers, it also provides advice for the determination of planning applications, much of which reaffirms the protection previously afforded by PPS9 to designated sites, priority habitats and species and ancient woodland. The NPPF places a greater emphasis on ecological networks and states that the planning system should provide net

gains for biodiversity, by “minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures” (Paragraph 187).

The Environment Act (2021) provides a framework for environmental protection. Measures to halt environmental decline include a requirement for all applicable planning permissions to deliver a compulsory minimum of 10% biodiversity net gain from 12<sup>th</sup> February 2024 onwards, and from 2<sup>nd</sup> April 2024 onwards for sites qualifying as ‘small sites’.

## 2.4.2 Local Planning Policy

The Site is served by two local councils: Lancashire County Council (LCC) and Rossendale Borough Council (RBC). The following policies from RBC are considered to be relevant to development.

### Rossendale Borough Council

The Rossendale Local Plan 2019 to 2036 was adopted by the Council on 15 December 2021 and has replaced the Core Strategy: The Way Forward (2011 - 2026).

#### Policy ENV4: Biodiversity, Geodiversity and Ecological Networks

Development proposals that have potential to affect a national or locally-designated site, as shown on the Policies Map and its immediate environs, or on protected habitats or species, will be expected to be accompanied by relevant surveys and assessments detailing likely impacts. A sequential approach should be followed to avoid harm and where possible enhance biodiversity, and where not possible, provide appropriate mitigation and, as a last resort, on and off-site compensatory measures to offset the impact of development. Any development that adversely affects or damages a Site of Special Scientific Interest (SSSI) will not normally be granted permission.

Development proposals should protect areas of biodiversity and protected species; areas of geodiversity and ecological networks, and where possible enhance sites and linkages. Any adverse effects should be first of all avoided; if this is not possible, minimised and mitigated against, and where this cannot be achieved, compensated for. All development proposals should seek to protect and enhance biodiversity, and will be requested to quantify any net gains.

Key components of Ecological Networks have been identified on the Policies Map. As well as designated ecological areas these include “Greenlands” which are areas of open space including parks, cemeteries and open land, many of which were previously included in the Core Strategy. Opportunities to enhance components of the Ecological Network, particularly the defined “core areas” and “Stepping Stones” and the linkages between them, will be supported, with development proposals affecting them expected to identify how this is being addressed. An SPD will be produced setting out more fully the elements within and the role of Ecological Networks.

The design and layout of new development should retain and enhance existing features of biodiversity or geodiversity value within and immediately adjacent to the site. Ecological networks should be conserved, enhanced and expanded. Development proposals will be expected to demonstrate how ecological networks are incorporated within the scheme.

Where appropriate, development should incorporate habitat features of value to wildlife, especially priority species, within the development (including within building design). Development proposals should demonstrate they will not adversely affect the integrity of any European site of nature conservation. The Appropriate Assessment should identify measures necessary to avoid, minimise or mitigate against harm.

The Council will work with other authorities and partner organisations in the South Pennines to develop a Visitor Management Plan for the South Pennine Moors Phase 2 Special Protection Area (SPA).

#### **Policy ENV5: Green Infrastructure networks**

Development proposals will be expected to support the protection, management, enhancement and connection of the green infrastructure network, as identified on the Policies Map. Proposals which enhance the integrity and connectivity of the green infrastructure network will be supported. Development proposals should seek first to avoid or, if not feasible, mitigate biodiversity impacts on-site. Schemes which would result in a net loss of green infrastructure on-site will only be permitted if:

- The function and connectivity of green infrastructure networks are retained or replaced; or
- The development scheme integrates new or enhanced green infrastructure where appropriate, such as natural greenspace and trees; and in all cases
- The proposal would not have an unacceptable impact on amenity, surface water or nature conservation.

Where practicable and appropriate, new green infrastructure assets incorporated into development proposals should be designed and located to integrate into the existing green Infrastructure network and should maximise the range of green infrastructure functions and benefits achieved.

#### **Policy ENV6: Environmental Protection**

Development which has the potential, either individually or cumulatively, to result in pollution that has an unacceptable impact on health, amenity, biodiversity (including designated sites), air or water quality, will only be permitted if the risk of pollution is effectively prevented or reduced and mitigated to an acceptable level by:

- Undertaking assessments and/or detailed site investigations of land which is or may be affected by contamination and implementing appropriate remediation measures to ensure the site is suitable for the proposed use, and that there is no unacceptable risk of pollution within the site or in the surrounding area;
- Ensuring developments are sensitively designed, managed and operated to reduce exposure of sensitive uses and wildlife to noise and noise generation having regard to the location of the proposed development, existing levels of background noise and the hours of operation;
- Assessing the impacts of new development on surface water and groundwater quality and implementing suitable measures to control the risk of these being adversely affected;
- Incorporating appropriate measures to prevent light pollution through the design and siting of the development and by controlling the level of illumination, glare, and spillage of light, including through the use of developing technologies such as LED; and
- Undertaking Air Quality Assessments to the satisfaction of the Council for proposals which have the potential to have a significant adverse impact on air quality, particularly within or adjacent to an Air Quality Management Area (AQMA) shown on the Policies Map, and implementing measures such as Travel Plans, dust suppression techniques and the incorporation of electric car charging points to both mitigate the effects of the development on air quality and to ensure that the users of the development are not significantly adversely affected by the air quality within that AQMA.

Development will not be permitted if the risk of pollution cannot be prevented or if mitigation cannot be provided to an appropriate standard with an acceptable design.

New development proposals for sensitive uses, such as housing or schools, located near to existing noise, odour or light generating uses, will be expected to demonstrate that the proposal is compatible with the surrounding uses and that an acceptable standard of amenity would be provided for the occupiers of the development, for example through the use of mitigation measures to reduce the exposure of the occupants to pollution, the design of the building and its orientation and layout.

### **Policy ENV7: Wind Turbines**

There are a number of points associated with this policy, and the following extracts would be relevant to the proposed met mast:

- The impact on recreational assets is assessed and impacts on key routes such as the Pennine Bridleway and Rossendale Way are avoided or if this is not possible, mitigated;
- The scale, siting and design of any ancillary structures and access tracks are appropriate to the character of the area and the landscape setting;

## **3. Methodology**

### **3.1 Desk Study**

A review of online data was undertaken in February 2025 to gather details of statutory nature conservation designations within 2 km of the Site, e.g. Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar Sites, Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs).

Greater Manchester Ecological Records Centre (GMERC) and Lancashire Environmental Record Network (LERN) were contacted in July 2023 to obtain the following ecological data for the central developable area point:

- Details of non-statutory designated sites of nature conservation importance within 2 km of the Site, e.g. areas included on the Ancient Woodland Inventory (AWI), Sites of Nature Conservation Interest (SNCIs) and Local Wildlife Sites (LWSs); and
- Details of legally protected species or otherwise notable species within 2 km of the Site..

Data included relates to the last 20 years generally (between 2003 and 2023, when the data was requested), with historical data generally excluded.

A review of Ordnance Survey maps and aerial images was undertaken to identify the presence of waterbodies within 500 m of the Site. Great crested newts, which are protected together with their habitats, can travel relatively large distances between breeding ponds and terrestrial habitat. Following guidance issued by Natural England (English Nature, 2001), land within 500 m of a great crested newt breeding pond should be treated as potential great crested newt terrestrial habitat and evaluated accordingly.

### **3.2 Extended UKHab Survey**

A UK Habitat (UKHab) survey was conducted across the wider developable area during 2024 and comprised a standardised method of recording habitat types and characteristic vegetation, as set out in The UK Habitat Classification Version 2.0 (2023). This has been completed alongside condition assessments of all habitats within the developable area.

Descriptive 'target notes' have been recorded for characteristic habitats, features too small to map, or any other features of ecological interest including field signs of protected species.

The habitats found within the proposed met mast location and any field signs of protected species are detailed below in Section 4.

Additionally, based on the site size, we have assumed that there will be under 25m<sup>2</sup> of habitat loss during the works. Thus, the area would be exempt from requiring BNG calculations.

### 3.3 Protected Species

Alongside mapping habitats and their conditions and recording field signs of protected species as part of the Extended UKHab surveys completed, further surveys pertaining to specific protected species have also been completed. These are detailed below:

#### 3.3.1 Bats

The results from the initial habitats assessment above will be utilised to assess if any suitable bat roosting habitats are in close proximity to or within the met mast site area. Additionally, static detectors were deployed across the developable area recording bat calls at each location across three seasons (i.e. April – May, June – August, August – October). The results of the bat static data from 2023 and 2024 was utilised to give context to the bat use in the area. For example, if areas in close proximity to the mast proposed location have high call numbers, this may indicate a roost nearby or a well-used flight route.

#### 3.3.2 Birds

Breeding Bird Surveys (BBS) were completed for the developable area, based upon a four visit Brown and Sheppard methodology, based upon NatureScot 2018 guidance. Alongside this, Breeding Raptor Surveys (BRS) were also completed following the Hardey *et al* 2013 (3rd ed) methodology, with four visits carried out between April and July.

Vantage Point Surveys (VPs) were also completed across the developable area during 2023 and 2024, following the methods within SNH guidance (2017a). Six hours of watches were undertaken per VP per month.

The results from these surveys were utilised to ascertain the usage of the proposed met mast location and surrounding area by breeding birds/raptors, and are summarised within this report. Breeding bird territories within 500m of the met mast location, breeding bird records within 200m of the met mast location and the nearest breeding raptor records are included below in Section 4. The VP flightlines from VP6, which is located adjacent to the Site, and VP3 which viewshed looks toward the met mast location, have been analysed in order to inform requirements for bird line markers on the proposed met mast.

#### 3.3.3 Great Crested Newt

eDNA surveys have been carried out across the developable area during summer 2024, on suitable and accessible waterbodies. The waterbodies were surveyed by two ecologists using the standard methodology, which has been tested by DEFRA research and approved for use by the nature conservation agencies. The laboratory testing was undertaken by SureScreen Scientifics using the following methodology.

The laboratory testing was conducted in two phases; first the sample goes through an extraction process where all 6 tubes are pooled together to acquire as much eDNA as possible. The pooled sample is then tested through real time Polymerase Chain Reaction (q-PCR). This process amplifies selected parts of DNA allowing it to be detected and measured.

QPCR combines PCR amplification and detection into a single step. This eliminates the need to detect products using gel electrophoresis. With qPCR, fluorescent dyes specific to the target sequence are used to label PCR products during thermal cycling. The accumulation of fluorescent signal during the exponential phase of the reaction is measured for fast and objective data analysis.

The primers used in this process are specific to a part of mitochondrial DNA only found in GCN ensuring no other DNA is amplified. Samples are tested in a clean laboratory and the different phases of testing are kept separate to reduce any risk of cross contamination. Each pooled sample is replicated 12 times to ensure results are accurate. If one of the twelve replicates test positive the sample is declared positive. The sample is only declared negative if no replicates show amplification.

### 3.4 Limitations

The UKHab surveys and protected species surveys were undertaken during the optimum season for surveys of these types and the Site was entirely accessible, therefore there are no limitations considered.

## 4. Results

### 4.1 Desk Study

The results of the desk study are as follows.

#### 4.1.1 Statutory Designated Nature Conservation Sites

There is one statutory designated site identified within 2 km of the Site during the data search. This consists of a Site of Special Scientific Interest (SSSI) designated primarily for its geological interest. Details of this site can be found below.

The Rochdale Canal SAC and SSSI are also located 6.15km south east of the developable area, however this has been scoped out due to lack of connectivity and impact pathways. Additionally, the South Pennine Moors SAC and SSSI are also located 8.24km east of the developable area, and have been scoped out due to lack of direct or hydrological connectivity.

#### Lee Quarry SSSI

This site consists of a large disused quarry on the south side of the Rossendale Valley, just south of Bacup, and is located approximately 1.3km north east of the met mast Site. Lee Quarry shows one of the best available exposures in the Upper Carboniferous Haslingden Flags Formation, a unique development within the Millstone Grit of central England, probably of Yeadonian age. The Quarry is also a Biological Heritage Site (BHS), a non-statutory designation in Lancashire, afforded for its value to a number of breeding Schedule 1 birds and birds of conservation concern it supports including little ringed plover *Charadrius dubius*, skylark *Alauda arvensis* and ring ouzel *Turdus torquatus*.

#### 4.1.2 Non-statutory Designated Nature Conservation Sites

There are twenty-one non-statutory designated sites found within 2 km of the central developable area point, including six Sites of Biological Importance (SBI), eleven Biological Heritage Sites (BHS) and four Local Wildlife Sites (LWS). These included designations for acid grassland, heathland, bog, blanket bog, swamp and fen, lowland meadow, quarries, ponds and also broadleaved, mixed and wet woodlands. Species cited as part of the designations included invertebrates, white-clawed crayfish *Austropotamobius pallipes*, birds, and fungi. Knowl Moor, an SBI, is located within the

developable area itself and is located approximately 0.2km away from the met mast Site, and is detailed below.

### Knowl Moor SBI

An extensive area of moorland which supports important upland breeding birds. The main habitats are acid grassland and blanket bog, which occur in a mosaic with localised ericaceous heath and wet flushes. The majority of these habitats are UK Biodiversity Priority Habitats. Acid grassland dominates much of the site especially in the north and east. Purple moor-grass *Molinia caerulea* is the most abundant species with mat-grass *Nardus stricta* and wavy hair-grass *Deschampsia flexuosa* occurring less commonly. The blanket bog, a UK Biodiversity Priority Habitat, is most extensive in the south of the site. Although the bog is degraded and, in most areas, could not be described as 'active' bog.

The SBI includes the breeding territories of specialist moorland birds, which require extensive tracts of suitable habitat. Characteristic moorland breeding birds include red grouse *Lagopus lagopus* and waders such as lapwing *Vanellus vanellus*, curlew *Numenius arquata* and golden plover *Pluvialis apricaria*. Other breeding birds include kestrel *Falco Tinnunculus*, wheatear *Oenanthe oenanthe*, skylark and a number of birds of prey. Redshank *Tringa totanus*, dunlin *Calidris alpina*, ring ouzel and twite *Linaria flavirostris* have previously been recorded as breeding in the area.

## 4.1.3 Species of Conservation Interest

### Amphibians

No great crested newt *Triturus cristatus* records were returned by either local record centres, with GMELC data specifying that surveys have been conducted within 2 km Site buffer however, this species was recorded as absent.

There are records of three amphibian species from within 2 km of the central developable area point: common frog *Rana temporaria*, common toad *Bufo bufo* and palmate newt *Lissotriton helveticus*. The most recent record is of common frog in 2019.

### Bats

There were records of six bat species identified during the data search, along with further records of *Pipistrellus* spp. and *Myotis* spp. bats that were not identified down to species level and records of unidentified bats. There have been multiple recordings of bat roosts within 2 km of the developable area, mostly around residential areas in Rochdale such as Healey Dell and Norden. These are shown below in Table 1.

**Table 1: Bat records within 2km of the central developable area point**

| Species                                             | Number of records | Dates     | Roost records within 2 km of the site centre |
|-----------------------------------------------------|-------------------|-----------|----------------------------------------------|
| Daubenton's <i>Myotis daubentonii</i>               | 17                | 2004-2019 | 0                                            |
| Natterer's <i>Myotis nattereri</i>                  | 1                 | 2015      | 1                                            |
| Whiskered <i>Myotis mystacinus</i>                  | 1                 | 2005      | 0                                            |
| Common pipistrelle <i>Pipistrellus pipistrellus</i> | 133               | 2003-2021 | 11                                           |

| Species                                          | Number of records | Dates     | Roost records within 2 km of the site centre |
|--------------------------------------------------|-------------------|-----------|----------------------------------------------|
| Soprano pipistrelle <i>Pipistrellus pygmaeus</i> | 9                 | 2005-2019 | 4                                            |
| Noctule <i>Nyctalus noctula</i>                  | 10                | 2006-2013 | 0                                            |
| <i>Pipistrelle</i> sp.                           | 141               | 2003-2019 | 6                                            |
| Unidentified <i>Myotis</i> sp.                   | 2                 | 2015      | 0                                            |
| Unidentified <i>bat</i> sp.                      | 1                 | 2014      | 1                                            |

### Badger

There were 19 badger *Meles meles* field records between 2005 and 2022 within 2 km of the developable area. Additionally, there were 25 badger setts recorded. Records are primarily in gardens in Rochdale and nature reserves south of the site, however there is one record of a field sighting in woodland northeast of the site.

### Birds

A number of bird records were returned within 2km of the developable area central point, including 11 species protected under Schedule 1 of the Wildlife and Countryside Act, 1981. These were barn owl *Tyto alba*, black redstart *Phoenicurus ochruros*, common scoter *Melanitta nigra*, goldeneye *Bucephala clangula*, hen harrier *Circus cyaneus*, hobby *Falco subbuteo*, Kingfisher *Alcedo atthis*, Little ringed plover *Charadrius dubius*, peregrine *Falco peregrinus*, red kite *Milvus milvus* and whooper swan *Cygnus cygnus*.

The additional bird species mentioned in Appendix A are either listed on the Greater Manchester or the Lancashire Biodiversity Action Plan, are listed as Species of Principal Importance in England on the NERC Act (2006) or are on the IUCN Red List of Threatened Species. Three species of note, lapwing, curlew and golden plover are listed as breeders in the Knowl Moor SBI. Lee Quarry located northeast of the met mast Site is cited as supporting Schedule 1 species with many of the bird records in the data search from this area.

### Otter

There was one otter *Lutra lutra* territory record from 2022 in Caldershaw. The territory is noted as long standing and aerial mapping shows the territory is situated along the River Spoddon, which runs north through Healey Dell Nature Reserve which lies east of the Site.

### Water vole

There were two records of water vole *Arvicola amphibius* within the 2km of the developable area. These records were located at Caldershaw in 2015, as well as at Healey Dell LNR in 2006.

### Reptiles

The eight reptile records obtained during the data search were of common lizard *Zootoca vivipara* dating from 2012 to 2021. These were present in Knowl Moor SBI, as well as the Naden valley and Greenbooth Reservoirs which lie west of the Site.

### Other Mammals

There were nine record locations within Rochdale for West European hedgehog *Erinaceus europaeus* between 2011 and 2021.

### Invertebrates

There were a number of records of invertebrates within 2km of the developable, including a number of species listed on the Greater Manchester or Lancashire Biodiversity Action Plans, IUCN Red List and Species of Principal Importance in England (NERC Act, 2006). These include small heath butterfly *Coenonympha pamphilus*, wall butterfly *Lasioommata megera* and cinnabar moth *Tyria jacobaeae*.

#### 4.1.4 Non-native Invasive Species

No non-native invasive plant species were returned by the data search within 2 km of the developable area.

### 4.2 Extended UKHab Survey

#### 4.2.1 On Site Habitats

The habitats recorded on Site at the proposed met mast location and welfare unit are as follows:

- f1a6 - Degraded blanket bog

##### **f1a6 Degraded blanket bog**

The met mast Site comprises of degraded blanket bog that was recorded as being in poor condition. The species recorded within the surrounding degraded bog area include predominantly purple moor grass *Molinia caerulea* with occasional common cotton grass *Eriophorum angustifolium* and *juncus* species.

#### 4.2.2 Off Site Habitats

The habitats recorded off Site in proximity to the met mast location and on the access route are as follows:

- u1b6 – Other developed land – track
- f1a6 – Degraded blanket bog
- g1b6 – Other upland acid grassland

##### **u1b6 Other developed land – track**

A stone and cobbled track (Rooley Moor Road) is located off Site to the east. This track is proposed to be the access route from the base of the moor to the met mast proposed location.

##### **f1a6 Degraded blanket bog**

Areas of degraded blanket bog surround the proposed met mast location, with an area in poor condition to the east and an area in moderate condition to the west. The species composition is largely similar to the above mentioned degraded bog on Site.

### g1b6 Other upland acid grassland

Other upland acid grassland is located along the western side of the track and north of the met mast location. This habitat comprises mostly of sweet vernal *Anthoxanthum odoratum*, mat grass *Nardus stricta*, common bent *Agrostis capillaris*, heath rush *Juncus squarrosus*, fescue species *Festuca sp* and scattered soft rush *Juncus effusus*. These areas were recorded as being in moderate condition.

## 4.3 Protected Species

### 4.3.1 Amphibians

There are no ponds or waterbodies situated within the proposed Site location.

There are a large number of ponds and waterbodies located across the developable area. The waterbodies which were accessible were assessed as to their suitability for GCN during 2023 and 2024 and were eDNA sampled in order to conclusively determine presence of GCN. The closest pond to the met mast Site is 'pond 58', located 0.27km northeast of the Site.

All ponds within 0.5km of the proposed met mast location, including pond 58, returned **negative** eDNA results.

### 4.3.2 Bats

#### Preliminary Bat Roost Assessment

The met mast proposed Site is open in nature, comprising of degraded bog and areas of acid grassland nearby to the north and east. There were no trees recorded on Site, and no nearby buildings that may offer potential bat roosting habitat. Thus, the Site offers **negligible** bat roosting potential.

The nearest areas of woodland are located off Site within an area of planted coniferous woodland, approximately 0.9km north of the Site. This area was not noted to contain any potential bat roosting features and is largely isolated in an open environment.

Connectivity between the Site and any areas of trees or watercourses is limited, due to the open and exposed nature of the habitats on Site and in the wider area. Similarly, foraging opportunities are considered to be low on Site due to the lack of suitable waterbodies and/or trees and hedgerows.

#### Bat Statics

A total of three bat statics were deployed in 2023 across an extension area to the developable site, north of the met mast location. The closest static to the proposed met mast location (static 14) was located 0.4km northeast of the Site.

Static 14 recorded a total of 1,257 calls out of a combined total of 2,900 calls across the three statics, accounting for 43% of calls. Static 14 was the most active static in the October deployment, and the second most active for May and July out of the three statics.

Static 14 recorded predominantly common pipistrelle *Pipistrellus pipistrellus* with a smaller number of soprano pipistrelle *Pipistrellus pygmaeus*, myotis sp *Myotis sp* and Leisler *Nyctalus leisleri*.

Additionally, in 2024, a total of 15 statics were deployed across the developable area. The closest of these statics (static 8) was located 0.2km west of the proposed met mast location.

Static 8 recorded a total of 509 calls out of a combined total of 21,143 calls across 15 statics, accounting for 2.4% of calls. Static 8 had the seventh lowest activity during the spring deployment, second lowest activity for the summer deployment, and ninth lowest activity for autumn deployment in comparison to the 15 statics across the wider site.

Static 8 recorded predominantly common pipistrelle, with lower numbers of non-identified pipistrelle, brown long eared *Plecotus auritus* and myotis species.

### 4.3.3 Badgers

No signs of badger were recorded directly on Site within the met mast location. The habitats on Site are largely considered unsuitable for badgers to utilise for sett creation, and the area is exposed in nature, with little vegetation cover for commuting.

During protected species surveys in 2023, an active badger sett comprising of two holes was identified located approximately 1.0km north of the met mast Site. A potential small, old latrine was found a short distance from the sett.

During the UKHab extended surveys in 2024, an additional active badger sett comprising of nine holes located on a bank approximately 2.5km southeast of the met mast Site.

### 4.3.4 Birds

#### Breeding Birds

The following breeding bird territories were recorded within 500m of the proposed Site location, shown below in Table 2.

**Table 2: Breeding bird territories within 500m of the proposed Site location**

| Species                  | Territory    | No. of records | Status     |
|--------------------------|--------------|----------------|------------|
| Skylark                  | Possible     | 16             | BoCC Red   |
|                          | Probable     | 7              |            |
| Meadow pipit             | Possible     | 10             | BoCC Amber |
|                          | Probable     | 5              |            |
| Lesser black-backed gull | Non-breeding | 2              | BoCC Amber |
| Wheatear                 | Probable     | 1              | BoCC Amber |
|                          | Non-breeding | 2              |            |
| Carrion Crow             | Non-breeding | 2              | BoCC Green |
|                          | Possible     | 1              |            |
| Pheasant                 | Non-breeding | 1              | BoCC Green |
| Linnet                   | Confirmed    | 1              | BoCC Red   |
| Starling                 | Possible     | 1              | BoCC Red   |
| Swift                    | Non-breeding | 1              | BoCC Red   |

Within the Site area itself, there were three possible meadow pipit territories, one possible skylark territory and two probable skylark territories.

The following breeding bird survey records were returned within 200m of the proposed Site location, shown below in Table 3.

**Table 3: Breeding bird survey species records within 200m of the proposed Site location**

| Species                  | No. of records | Record comments               |
|--------------------------|----------------|-------------------------------|
| Carrion Crow             | 2              | Two birds in flight           |
|                          | 2              | Calling                       |
|                          | 2              | In flight                     |
| Skylark                  | 1              | Calling                       |
|                          | 10             | Singing                       |
| Lesser black-backed gull | 1              | In flight                     |
| Starling                 | 1              | 21 Calling                    |
|                          | 1              | 26 Calling                    |
| Linnet                   | 1              | Four family calling           |
| Meadow pipit             | 1              | In flight                     |
|                          | 3              | Calling                       |
|                          | 2              | Two birds in flight           |
|                          | 1              | Four calling                  |
|                          | 1              | 8 in flight                   |
|                          | 2              | Singing                       |
| Wheatear                 | 1              | Present                       |
|                          | 1              | 2 other territorial behaviour |

Within the Site area itself, there were two singing meadow pipit, four skylark singing, a lesser black-backed gull in flight, meadow pipit in flight and four meadow pipit calling.

### Breeding Raptors

The nearest raptor flight records are of kestrel, located approximately 0.26km north-northwest and 0.32km northwest, and buzzard located approximately 0.5km northwest of the Site. These are the only recorded raptors for a large area around the Site location.

The nearest raptor point records are of a kestrel located 1.15km southeast and a buzzard perched in a tree 1.40km northwest at Cowpe Reservoir.

### Flightlines

#### VP 6

There was one record of **curlew** which is a primary species recorded flying directly over the Site from VP6, at approximately 15m elevation.

There were also records of secondary species comprising of raven flying over the Site itself.

Primary species recorded within the viewshed of VP6 comprised of curlew (BoCC Red), snipe (BoCC Amber) and merlin (Annex I, Schedule I and BoCC Red).

Secondary species recorded within the viewshed of VP6 comprised lesser black-backed gull (BoCC Amber), buzzard, kestrel (BoCC Amber) and raven.

### VP 3

There were **no primary species** flight records recorded flying directly over the Site from VP3. There was an unidentified species record flying over the mast location however.

There was a record of raven, a secondary species, flying over the Site location at approximately 80m elevation, heading north west.

Primary species recorded within the viewshed of VP3 included snipe, which flew toward the Site from over 1km away, but does not appear to cross over the Site location.

Canada goose and mute swans were recorded flying approximately 150-200m away from the mast location, heading away from the Site.

#### 4.3.5 Otter

The Site does not contain any watercourses that would be suitable for otter holt creation, and there were no holts or potential holts noted in the developable area. No signs of otter were recorded on Site or within the developable area.

The nearest watercourse to the met mast Site is located approximately 0.5km south of the Site which may offer some commuting habitat for otter. Some smaller watercourses located 0.7km northeast of the Site may also offer some limited commuting habitat for otter.

#### 4.3.6 Water vole

The Site does not contain any watercourses that would be suitable for water vole. No signs of water vole were recorded on Site or within the wider developable area.

The watercourses located in the developable area were mostly deemed unsuitable for water vole burrow creation. However, the wider landscape does comprise of largely grassy, riparian habitats.

#### 4.3.7 Reptiles

The Site itself and surrounding may offer some limited habitat to support commuting reptiles, as it is comprised of moorland habitat. No reptiles were recorded on Site during the extended habitat surveys however, or within the developable area. No potential hibernacula were recorded on Site or in proximity to the Site.

#### 4.3.8 Invertebrates

No invertebrates have been recorded on Site during the extended habitat surveys. However, the short sward blanket bog habitat on Site and acid grassland in the wider area are likely to support a number of upland species, including the above-mentioned small heath butterfly.

#### 4.3.9 Non-native Invasives

No non-native invasive species under Schedule 9 of the Wildlife and Countryside Act (1981) were recorded on Site or across the developable area.

## 5. Evaluation

### 5.1 The Scheme

The proposed works are to incorporate the erection of a meteorological mast located adjacent to the Rooley Moor Road that will record weather related parameters for the developable area.. The mast will be approximately 81.5m in height, with steel rope guy lines extended out to approximately 50m from the mast base. At the base of the mast, there will be secure boxes containing data logging, telecommunication equipment and batteries, as well as a small photovoltaic module to charge batteries. Additionally, a small mobile welfare unit is proposed to be set up adjacent to the mast, equipped with necessary facilities for the site team and overnight security, for approximately five days.

The equipment and welfare unit associated with the mast is proposed to be tracked up the existing Rooley Moor Road via tractor and trailer, along with a tracked dumper and excavator for bulk material transport and excavation. Four by four vehicles are proposed to be utilised to move personnel. Loading and unloading of equipment and materials will be from designated zones away from sensitive peatland areas, with limited vehicles allowed within these zones.

The installation of the mast will involve the installation of guy line anchors into the ground. This will be completed by an 8 ton excavator, and will involve digging 3m railway sleepers into the ground with the peat placed back on top. Aside from the installation of the anchor points, there will be no digging into the ground on Site.

The small welfare unit is approximately 4m by 2.5m in size and is to be sited adjacent to the mast for approximately five days whilst the works are completed. It will be towed up Rooley Moor Road by a four-by-four vehicle.

The works are proposed to be completed, subject to receiving planning permission, in May 2025 (weather depending).

### 5.2 Designated Sites

#### 5.2.1 Statutory Designated Sites

Lee Quarry SSSI is located approximately 1.3km northeast of the Site and is designated for its number of breeding Schedule 1 birds including little ringed plover, and the birds of conservation concern it supports including skylark and ring ouzel. As discussed above in Section 4.3.4, skylark have been recorded singing within the Site boundary and calling within 200m of the Site during breeding bird surveys. Additionally, a number of possible and probable records of skylark breeding territories have been recorded within 500m of the met mast location. The nesting habitat for skylark usually comprises of vegetation between 20-50cm in sward height. Should works be required within potentially suitable habitat for nesting skylark, then further mitigation measures would be required. The sward height and vegetation found on Site is largely associated with bog habitats, and the wider developable area is largely grazed by sheep and cattle. Mitigation measures prior to and after the erection of the met mast should be implemented, as described below in Section 6, to ensure no nesting skylark are affected during the works or afterwards by the met mast. The met mast erection will take approximately five days and so is unlikely to cause large amounts of ongoing noise disturbance or habitat loss. The works are not anticipated to have a negative impact on the ability of the protected sites to expand, as no habitats are proposed to be lost as part of the works.

### 5.2.2 Non-Statutory Designated Sites

The Knowl Moor SBI site is located 0.2km south of the Site and is designated for its Priority Habitats (blanket bog) that support a wide variety of moorland birds, as well as other breeding bird species including birds of prey. These also include skylark, which have been recorded calling and singing on, as well as in close proximity to the Site. As above in Section 5.2.1, mitigation measures prior to and after the erection of the met mast should be implemented, as described below in Section 6, to ensure no skylark or other potentially nesting birds nearby are affected during the works or afterwards by the met mast. The met mast erection will take approximately five days and so is unlikely to cause large amounts of ongoing noise disturbance or habitat loss. The works are not anticipated to have a negative impact on the ability of the protected sites to expand, as no habitats are proposed to be lost as part of the works.

### 5.2.3 Habitats

The habitats on Site are comprised of degraded blanket bog, recorded as being in poor condition. There are no anticipated habitat losses proposed during the works as the works themselves are to be relatively low in intensity, with only minimal digging occurring to install the guy lines for the mast. The area of excavated ground will be approximately 2.5 to 3m deep and 0.8m in width to accommodate railway sleepers that will anchor the guy lines to the main mast structure. This is proposed to be excavated by an eight ton excavator, with any peat dug placed back into the ground on top of the sleepers, in order to avoid any loss of peat. In order to ensure any peat excavated is retained and replaced correct, mitigation measures are described below in Section 6.

During decommissioning of the met mast after two years, there are two options for removing the guy lines. One option is to cut off the guy lines and not excavate the sleepers, and the other involves excavating the sleepers from below the surface. It is preferable to not disturb the land again, and so leaving the wooden sleepers in situ may be the preferred option upon decommissioning.

It is also proposed that in order to reduce the impact on any sensitive habitats, that the existing Rooley Moor Road will be utilised to transport equipment to and from Site, with specific loading and unloading areas identified which will have minimal vehicular access. Similarly, bog mats have been proposed to be used if necessary to further protect the peatland and will be removed off Site as soon as they are no longer required. Further details of proposed mitigation are described below in Section 6.

### 5.2.4 Protected Species

#### Amphibians

The nearest pond to the Site is located approximately 0.27km northeast of the Site, and it returned a negative result for GCN eDNA in 2024. There is limited connecting terrestrial habitats such as scrub or ruderal vegetation to this pond, and other areas of more suitable habitat for GCN, and the area is largely exposed to the elements. It is therefore considered unlikely that GCN or other amphibians would range onto the Site, and there are no proposed losses to any suitable amphibian refuge or terrestrial habitats. Thus, no specific GCN mitigation is proposed for the works. General 'Good Practice Construction Measures' are to be utilised to safeguard all protected species and are detailed below in Section 6.

## Bats

The habitats on Site are not suitable to support roosting bats, and the area is largely open and exposed in nature with no hedgerows or areas of scrub, rendering it very unlikely that bats may use the area for commuting.

The nearest bat static in 2024 to the Site was located 0.2km west and recorded 2.4% of the total bat calls over 15 statics. The static showed relatively low call numbers in comparison to other statics and had the second lowest number of bat calls during the summer deployment. In 2023, the nearest static to the Site was located 0.4km away, within a stone wall. This static was comparatively more active, and recorded 43% of total calls across the three statics. It was located near to stone walls, a small watercourse, and was within approximately 0.4km of a spruce woodland. However, connectivity from this area to the Site is very limited, with no hedgerows or treelines present. Thus, it is unlikely that bats would pass through the Site and thus no flightlines or routes between potential roost will be severed. No further mitigation is required in relation to passing bats, therefore.

## Birds

Within the Site area itself, there were three possible meadow pipit territories, one possible skylark territory and two probable skylark territories. Alongside this, there were two singing meadow pipit, four skylark singing, a lesser black-backed gull in flight, meadow pipit in flight and four meadow pipit calling within the Site area. In order to ensure no breeding birds are disturbed during the erection of the mast, further preliminary checks of the Site prior to works commencing are proposed. There are no proposed losses to habitat suitable for ground nesting birds, only minor disturbance of degraded bog during the initial erection of the met mast for approximately five days. Mitigation measures are detailed below for breeding birds in Section 6.

There were no breeding raptors recorded on Site during breeding raptor surveys, with the nearest record of a kestrel located 0.26km away from the Site. There were records of one primary species: curlew, and secondary species: raven, flying over the met mast location during VP surveys however, with the curlew flying at 15m elevation and the raven noted to be flying at 80m elevation. Thus, line markers are recommended to be utilised on the guy lines to ensure that potential collisions with the mast are avoided. This is detailed below in Section 6.

## Badger

The Site does not have any suitable habitat for sett creation, and the nearest recorded badger setts are located at least 1.0km from the Site, thus it is very unlikely that badger may range through Site. No specific badger mitigation is required, however, general Good Practice Construction Measures are detailed below to ensure the safety of potential protected species ranging through the Site.

## Otter and Water vole

There were no records of otter or water vole within the Site, and the Site offers no suitable holt habitat or burrow creation habitat. The nearest potentially suitable watercourses suitable for otter are located approximately 0.5km away, and potentially suitable commuting habitats located 0.7km north of the Site. Connectivity to the Site from these areas is relatively limited, and so it is deemed unlikely that otter or water vole may range through the Site. No specific mitigation relating to otter or water vole is required, however, 'Good Practice Construction Measures' are detailed below in Section 6 in order to ensure the general safety of protected species that may be ranging through the Site.

## Reptiles

There were no records of reptiles within the Site area, and no reptiles were recorded during the Site surveys. The Site may offer some limited suitability for terrestrially commuting reptiles, and so prior to construction, a check of the area for any reptiles is recommended and detailed below in Section 6.

## Invertebrates

The Site and wider area may be suitable for a number of invertebrates, however no permanent loss of habitats are proposed as part of the works. The works are temporary in nature, and once erected, no management of the Site is required until the mast is decommissioned after two years. Thus, no further mitigation is required going forward.

## 6. Recommendations

### 6.1 Good Practice Construction Measures

As discussed above, general Good Practice Construction Measures are to be implemented so as to safeguard any potentially ranging protected species and reduce noise, avoid pollution and dust production during the works.

Heras fencing is to be installed, as per the provided plans, in order to ensure no encroachment of the works on further habitats.

Any excavations are to be covered overnight or have an exit plank installed so as to avoid any protected species including badger, otter and water vole becoming trapped.

## Habitats

In order to protect the degraded blanket bog habitat on Site and in the surrounding area, a designated unloading area is to be implemented whilst constructing the tower. This area will have limited footfall and vehicular access to avoid damaging the bog habitat. An Ecological Clerks of Work (ECoW) will be present on Site during the construction phase in order to monitor the impact on the peat. Additionally, bog mats are able to be utilised to further prevent damage on the surface and are to be removed once they are no longer needed in order to ensure no lasting damage to the surface level vegetation.

During the installation of the guy lines, the excavated peat is to be removed carefully in turfs approximately 1m in length by an excavator and set aside whilst the sleeper bases are inserted. In order to minimise handling, the excavated material should be placed back into the ground immediately once the sleepers are inserted. These may require watering if there is a gap between excavation and placing back into the ground. This should be avoided where possible. The turf excavation process will be supervised by the ECoW. The turfs are to be placed on impervious material to reduce water losses and are to be placed back into the excavations in situ, vegetation side up, in order to ensure that no peat is lost during the works. Any layers of catotelmic peat is to be placed back in first, with acrotelm turves placed on top, which will be supervised by the ECoW. The areas of excavation are minimal in nature, and will not result in losses of peat habitat, as no peat is to be removed off Site.

Additionally, it is recommended that untreated railway sleepers are utilised for the anchor points, so as to avoid introducing any chemicals into the environment.

## Birds

In order to further ensure the safety of passing bird species, bird line markers are suggested to be implemented along the guy lines of the met mast to prevent bird collisions.

In addition to this, prior to construction commencing within the nesting season (March to August; inclusive), an ecological walkover of the Site completed by an experienced ornithologist each day is proposed in order to check for any signs of nesting birds within the Site area, and within a suitable buffer zone of the mast location.

## Reptiles

As discussed above, a walkover is suggested to be completed by an experienced ecologist to check for any reptiles within the Site area and suitable buffer zone, prior to works commencing.

## 7. References

ARG UK (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index.

Collins J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edition). The Bat Conservation Trust, London.

English Nature (2001). *Great Crested Newt Mitigation Guidelines*. English Nature.

JNCC (2010). Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit. Revised re-print. Joint Nature Conservation Committee.

Magic Maps (2025).

NatureScot. Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance.

# Appendices

## Appendix A. Birds of Conservation Interest within 2km of the developable area central point

| Species                                      | Number of records | Dates     |
|----------------------------------------------|-------------------|-----------|
| Barn owl <i>Tyto alba</i>                    | 16                | 2017-2021 |
| Black redstart <i>Phoenicurus ochruros</i>   | 3                 | 2005-2014 |
| Bullfinch <i>Pyrrhula pyrrhula</i>           | 186               | 2010-2022 |
| Common Scoter <i>Melanitta nigra</i>         | 1                 | 2020      |
| Cuckoo <i>Cuculus canorus</i>                | 3                 | 2011-2020 |
| Curlew <i>Numenius arquata</i>               | 44                | 2003-2021 |
| Dunnoek <i>Prunella modularis</i>            | 340               | 2003-2021 |
| Goldeneye <i>Bucephala clangula</i>          | 2                 | 2015      |
| Grasshopper warbler <i>Locustella naevia</i> | 7                 | 2003-2021 |
| Greenfinch <i>Chloris chloris</i>            | 3                 | 2003-2015 |
| Grey partridge <i>Perdix perdix</i>          | 14                | 2003-2021 |

| Species                                       | Number of records | Dates      |
|-----------------------------------------------|-------------------|------------|
| Hen harrier <i>Circus cyaneus</i>             | 1                 | 2021       |
| Herring gull <i>Larus argentatus</i>          | 6                 | 2018-2021  |
| Hobby <i>Falco subbuteo</i>                   | 2                 | 2007-2021  |
| House martin <i>Delichon urbicum</i>          | 1                 | 2019       |
| House sparrow <i>Passer domesticus</i>        | 251               | 2003-2021  |
| Kingfisher <i>Alcedo atthis</i>               | 21                | 2004-2021  |
| Lapwing <i>Vanellus vanellus</i>              | 37                | 2003-2021  |
| Lesser redpoll <i>Acanthis cabaret</i>        | 67                | 2010-2021  |
| Linnet <i>Linaria cannabina</i>               | 8                 | 2010-2021  |
| Little ringed plover <i>Charadrius dubius</i> | 33                | 2003-2015  |
| Mistle Thrush <i>Turdus viscivorus</i>        | 11                | 2003-2015  |
| Peregrine <i>Falco peregrinus</i>             | 40                | 2003-2021  |
| Red Grouse <i>Lagopus lagopus</i>             | 1                 | 2015       |
| Red Kite <i>Milvus milvus</i>                 | 1                 | 2020       |
| Reed bunting <i>Emberiza schoeniclus</i>      | 64                | 2010-2021  |
| Ring ouzel <i>Turdus torquatus</i>            | 14                | 2003-2021  |
| Skylark <i>Alauda arvensis</i>                | 147               | 2003-2021  |
| Song thrush <i>Turdus philomelos</i>          | 135               | 2003-2021  |
| Spotted Flycatcher <i>Muscicapa striata</i>   | 11                | 2003-2021  |
| Starling <i>Sturnus vulgaris</i>              | 277               | 2003-2021  |
| Swift <i>Apus apus</i>                        | 4                 | 2012-2014  |
| Tree sparrow <i>Passer montanus</i>           | 3                 | 2003-2005  |
| Twite <i>Linaria flavirostris</i>             | 16                | 2003-2015  |
| Whinchat <i>Saxicola rubetra</i>              | 3                 | 2003- 2014 |
| Whooper swan <i>Cygnus cygnus</i>             | 1                 | 2014       |
| Wood warbler <i>Phylloscopus sibilatrix</i>   | 4                 | 2013-2020  |
| Woodcock <i>Scolopax rusticola</i>            | 3                 | 2003-2014  |
| Yellow wagtail <i>Motacilla flava</i>         | 1                 | 2012       |