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Technical Appendix 10-2

Scout Moor II Wind Farm

Year 2 Ornithology Report

Cubico UK Development (Wind 1) Ltd

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Executive Summary

This report presents updated findings from ornithological survey work undertaken at Scout Moor to inform an understanding of the ornithological conservation interest of the site, and potential constraints to the siting of a wind farm. The proposed wind farm is located approximately 0.65km North-West of Rochdale, Greater Manchester.

The report presents the results of the second year of ornithological surveys at the site, comprising standard vantage point (VP) surveys and also breeding bird and raptor walkover surveys. VP survey data has been presented in a way which seeks to incorporate the two VPs that were added 11 months after the initial commencement of VPs, following alterations and extension to the Northern boundary in early 2023.

During the second year of breeding season vantage point surveys, ten primary and seven secondary target species were recorded. Primary target species were Merlin *Falco columbarius*, Black-tailed godwit *Limosa limosa*, Lapwing *Vanellus vanellus*, Curlew *Numenius arquata*, Hobby *Falco Subbuteo*, Redshank *Tringa totanus*, Gadwall *Anas strepera*, Shoveler *Anas clypeata*, Tufted duck *Aythya fuligula* and Pink-footed goose *Anser brachyrhynchus*.

Of these, Lapwing was the most frequently encountered species with 11 flights and 292 seconds at risk height, the majority of which were in the summer months. Curlew (4 flights) was the next frequently encountered species and was observed only in the summer months. Tufted duck (3 flights) had 158 seconds at risk height, with all flights recorded in July. Shoveler (2 flights) had 80 seconds at risk height and was recorded in summer and winter. Pink-footed goose had 1 flight with a flock of 34 individuals in September. Black-tailed godwit had 1 flight with 6 individuals also in September. Merlin had one flight recorded with one individual in the risk height band for 47 seconds in March. Hobby had one flight recorded in August with no seconds at risk height. Redshank had one flight recorded in August with 20 seconds at risk height and Gadwall also had only one flight recorded in July with 39 seconds at risk height. Of these species, Merlin, Lapwing, and Curlew have been recorded in the previous years' surveys. The secondary species were Buzzard *Buteo buteo*, Raven *Corvus corax*, Cormorant *Phalacrocorax carbo* and Kestrel *Falco tinnunculus* which also were all recorded in year one.

Breeding bird and raptor surveys undertaken in spring and summer of 2023 (April- July) identified the presence of 47 species, 13 BoCC red list, 7 Amber BoCC list and one schedule 1 species, Curlew forming the likely breeding assemblage onsite; 10 of these species were confirmed breeding onsite including Starling *Sturnus vulgaris*, Linnet *Linaria cannabina* and Skylark *Alauda arvensis*, a species which features in the Lancashire Biodiversity action Plan. Notable species such as Ring ouzel *Turdus torquatus*, Grasshopper warbler *Locustella naevia* and Reed bunting *Emberiza schoeniclus* were recorded onsite in low numbers and/or infrequently. Fewer notable species were recorded compared to the first year breeding season, which could be a result of differences in conditions between years.

1. Introduction

1.1 Terms of Reference

Atmos Consulting Ltd. were commissioned by Cubico UK Development Limited to commence ornithological surveys in April 2022 to inform a planning application for a potential wind energy development on Scout Moor (hereafter referred to as the “Site”).

This interim report presents the results of the second year of breeding bird and raptor surveys, (April 2023 to July 2023), as well as the VP data covering the second breeding season (March 2023-August 2023) and the non-breeding season (September 2023 to January 2024). A full summary is also given presenting a collation of 18 months of VP data for VPs 1-4, 10 months for VP5 (discontinued) and 12 months for VPs 5b and 6, which were introduced in February 2023 to accommodate alterations and extension to the Northern boundary.

1.2 Site Description

The proposed wind farm pertains to approximately 1,024 ha of upland habitat located approximately 0.65km North-West of Rochdale, Greater Manchester, extending across both sides of the county line between Lancashire and Greater Manchester. The Site has an approximate central national grid reference of SD 85795 18585.

The Site is an upland habitat, predominately open moorland with fields to the South of the Site that are often in agricultural use. An existing operational wind farm lies adjacent west of the Site with some present in the North-Western extent of the Site itself. The environment surrounding the Site is mostly urban, with Rochdale to the South of the Site and further housing developments being undertaken to the East of the Site.

1.3 Objectives

The objective of the survey work was to collect information on the usage of the Site by bird species and identify the potential ecological constraints that could arise in relation to the proposed installation of wind turbines.

The specific objectives of this Year 2 Bird Report are:

- Document species present on the Site during the breeding season.
- Compare results to the previous breeding season.
- Present a summary of VP data inclusive of flight activity for the first 12 months of VPs 5b and 6 which were added in February 2023.

2. Ornithological Legislation & Conservation Status

Legislation, non-statutory conservation designations, and NatureScot (NS), formerly Scottish Natural Heritage (SNH) guidance pertaining to the ornithological interests discussed within this report are presented below.

2.1 Legislation

Wildlife and Countryside Act 1981 (as amended) & Conservation (Natural Habitats & c.) Regulations 2017 (as amended)

The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principal mechanism for the legislative protection of wildlife in Great Britain. All wild birds and their active nests, eggs and young are protected from damage, destruction or capture under the WCA. Bird species listed on Schedule 1 gain additional protection particularly around their nests, with disturbance listed as an offence, with special penalties for breaches of the law related to those Schedule 1 species. The WCA also provides the mechanism by which the Conservation of Wild Birds (Directive 2009/147/EC, the 'Birds Directive') is transposed into UK law, allowing for the designation of Special Protection Areas (SPAs). Because the Birds Directive has been transposed into law, its provisions still have effect despite the withdrawal of the UK from the EU.

The Birds Directive lays out special measures to conserve wild birds, their eggs, nests and habitats, and applies special protection to those species as listed under Annex 1 of the Directive. This is to apply special protection, in particular, to those species which are migratory and are considered to be of a shared heritage and conservation responsibility across all European Union member states.

The Conservation of Habitats and Species Regulations (2017) (as amended), or 'Habitat Regulations', are the method by which the relevant European Directives are translated into law. Specifically, the Habitat Regulations transpose the Convention on the Conservation of European Wildlife and Natural Habitats (the 'Bern Convention') and Natural Habitats and Wild Fauna and Flora (92/43/EEC, the 'Habitats Directive') into an English and Welsh context.

2.2 Conservation Plans

Biodiversity Action Plans

The UK Biodiversity Action Plan (UK BAP) was the UK's response to the commitments of the Rio Convention on Biological Diversity. The plan outlines action for 59 UK species of birds of conservation importance/concern; 53 of which are priority species in England (2007).

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 2021 (Stanbury *et al.*, 2021)¹ 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:

¹ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747.

- Red - red list species are those that are globally threatened, have had an historical population decline in the UK from 1800 -1995, a rapid ($> \text{ or } = 50\%$) decline in UK breeding population over the past 25 years, or a rapid ($> \text{ or } = 50\%$) 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.

2.3 Ornithological Guidance

NS has produced several guidance documents in relation to the assessment of impacts of wind farm developments on bird populations. The following guidance informed the survey work and any subsequent assessments. This is the accepted guidance for use in England, with consequent analysis required in the English context:

- Assessing the Cumulative Impacts of Onshore Wind Energy Developments (2025a)²;
- Assessing connectivity with Special Protection Areas (SPAs) (2016a)³;
- Environmental Statements and Annexes of Environmentally Sensitive Bird information (2016b)⁴;
- Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Wind Farms (2025b)⁵; and
- Assessing the Significance of Impacts from Onshore Wind Farms on Birds at Sites that do not Affect Protected Areas (2025c)⁶.

² NatureScot (2025a). Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments. [online] Available at: <https://www.nature.scot/doc/guidance-assessing-cumulative-impacts-onshore-wind-farms-birds>.

³ SNH (2016a). *Assessing Connectivity with Special Protection Areas (SPAs) Guidance*. [online] Available at: <https://www.nature.scot/sites/default/files/2022-12/Assessing%20connectivity%20with%20special%20protection%20areas.pdf>.

⁴ NatureScot (2016b). Environmental Statements and Annexes of Environmentally Sensitive Bird Information. [online] Available at: <https://www.nature.scot/doc/environmental-statements-and-annexes-environmentally-sensitive-bird-information>.

⁵ NatureScot (2025b). *Recommended bird survey methods to inform impact assessment of onshore windfarms*. [online] Available at: <https://www.nature.scot/doc/recommended-bird-survey-methods-inform-impact-assessment-onshore-windfarms>.

⁶ NatureScot (2025c). Guidance note - Assessing the significance of impacts on bird populations from onshore wind farms that do not affect protected areas. [online] NatureScot. Available at: <https://www.nature.scot/doc/guidance-note-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect>.

3. Methodology

3.1 Target Species

Target avian species were identified as those that are either afforded specific legislative protection (i.e. of high conservation interest) or represent qualifying interests in designated sites in the wider area. The final list of target species was determined using these criteria along with the likelihood of each species being present at the Site and in the environs (based upon available habitat, experience of working in this region and geographical location).

Target species are considered to be those:

- Identified as potentially at risk from impacts of onshore wind farms (NatureScot 2025c);
- Species listed in Annex 1 of the EC Wild Birds Directive (2009/147/EC); and
- Non-passerines listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

The target species were differentiated between primary and secondary target species, with ornithological features of nearby designated sites are highlighted in **Bold**. These are as follows:

Primary Target Species

Raptors: All Schedule 1 and Annex 1 species including **Merlin** *Falco columbarius*, **Peregrine** *Falco peregrinus*, Hen harrier *Circus cyaneus* Hobby *Falco subbuteo*, Barn owl *Tyto alba*, **Short-eared owl** *Asio flammeus* and Red kite *Milvus milvus*.

Waders: all including **Little ringed plover** *Charadrius dubius* **Curlew** *Numenius arquata* **Golden plover** *Pluvialis apricaria*, **Common sandpiper** *Actitis hypoleucos*, **Dunlin** *Calidris alpina*, **Snipe** *Gallinago Gallinago*, Little egret *Egretta garzetta*, Oystercatcher *Haematopus ostralegus* and **Lapwing** *Vanellus vanellus*.

Wildfowl: all Ducks, including **Teal** *Anas crecca* and Goosander *Mergus merganser*.

Geese: all excluding Canada goose *Branta canadensis*

Secondary Target Species

- Raptors: **Buzzard** *Buteo buteo*, **Kestrel** *Falco tinnunculus*, Sparrowhawk *Accipiter nisus*.
- Cormorant *Phalacrocorax carbo*, **Moorhen** *Gallinula chloropus* and **Grey heron** *Ardea cinerea*
- **Red grouse** *Lagopus lagopus*;
- **Raven** *Corvus corax*
- Gulls: **Lesser black-backed** *Larus fuscus*, **Mediterranean** *Larus melanocapalus*, and **Black-headed** *Chroicocephalus ridibundus*, Herring *Larus argentatus* and Common *Larus canus*.

3.2 Survey Methodologies

Survey methodologies were in accordance with NatureScot (2025b) guidance.

All surveys were carried out by experienced ornithological surveyors.

3.2.1 Diurnal Vantage Point Survey

Vantage point (VP) watches have been undertaken since April 2022 and are currently ongoing, following the methods within NatureScot guidance (2025b). This report details the species flight activity between March and August 2023 to cover the second breeding season in the series of surveys. Each VP watch was undertaken by a suitably experienced single observer in conditions of good visibility. The surveyor positioned themselves as inconspicuously as possible to minimise their

effect on the birds' natural behaviour. 6 hours of watches were undertaken per VP per month, totalling 36 hours per VP per season.

Table 1 below presents the details of the six VP locations along with the original VP5 which was replaced by 5b in February 2023. Figure 10.14 in within the ES chapter presents all VP locations and viewsheds.

Table 1: Details of Vantage Point Locations

VP Number	Grid Reference		View Bearing
	Easting	Northing	
VP1	-385102	416674	060°
VP2	-383254	418773	030°
VP3	-385860	418175	315°
VP4	-387337	418326	245°
VP5	-384927	420044	240°
VP5b	-384927	420044	270°
VP6	-385240	419585	010°

Surveys at each VP location were undertaken in watches of no longer than 3 hours duration, for two watches per VP location per month where conditions allowed. If weather conditions were such that the 3-hour watches were curtailed, these were re-commenced again in suitable conditions. When multiple surveyors were undertaking VPs on Site, care was taken to ensure the survey areas did not overlap. Other survey work and activity on the Site was considered, to minimise the potential for disturbance of baseline conditions and issues compromising data integrity. Diurnal VPs were completed in order to cover all daylight hours (between dawn and dusk) in any given survey year.

Flight lines were recorded within the following three height bands:

- A - < 20m.
- B - 20m – 180m
- C - >180m.

Details of the date, timing, and surveyors for all VP surveys are provided in Appendix B.

3.2.2 Breeding Raptor Surveys

Surveys for breeding raptors were undertaken between April and July 2023, with four visits following Hardey et al. (2013). Table 2 below provides a summary of the timing and aim of each visit.

Table 2: Timing of Raptor Survey Visits

Visit No.	Purpose	Timing
1	Detection of possible territories	End March – mid-April
2	Location of nests	Late April – mid May
3	Detection of young birds	June
4	Detection of fledging	Mid July – late July

The survey area extended up to 2 km from the Site boundary due to raptor territory sizes. It was carried out in conjunction with the upland breeding bird survey (see below). Table 3 below summarises the breeding raptor survey effort in the 2023 season.

Table 3: Breeding Raptor Survey Effort 2023

Visit No.	Dates	Observer(s)
1	April – 10 th 11 th 12 th 13 th 14 th	MS
2	May – 2 nd 3 rd 4 th 5 th 6 th	EF
3	June – 26 th 27 th 28 th 29 th 30 th	MS
4	July – 24 th 25 th 26 th 27 th 28 th	MS

3.2.3 Upland Breeding Bird Surveys

A modified Common Bird Census approach (Gilbert, 1998) was used, which involved four visits to the Site, each comprising a Site walkover by an experienced ornithologist in which all parts of the assumed development area plus a 500m buffer were walked over to a minimum distance of 50 m (where accessible). Visits were carried out between the end of April and July and all birds seen or heard were recorded on site maps using British Trust for Ornithology (BTO) survey nomenclature. Due to the size of the Site, surveys took place over several days.

Table 4 below details the survey dates and surveyors.

Table 4: Breeding Bird Survey Visits

Visit	Dates	Surveyor
1	April – 11 th , 13 th 14 th	MS
2	May – 2 nd , 3 rd , 4 th , 5 th	EF
3	June – 26 th , 27 th , 28 th	MS
4	July – 24 th 25 th 28 th	MS

Once all surveys were complete, analysis of territories was undertaken. This involved an assessment of bird records across all four survey visits. However, only species which are listed on Birds of Conservation Concern as amber or red, Annex 1 or Schedule 1 species were included.

Four categories were recognised:

- Confirmed territory – a nest was found, or adults were seen carrying food (except raptors) or nesting materials or the presence of juvenile birds;
- Probable territory – bird(s) were seen in the same location on more than one location and breeding behaviour was observed on at least one occasion (e.g. courtship, display or singing, pairs in suitable habitat, territorial disputes);
- Possible territory – birds observed only once in one location, but evidence of breeding was observed, or birds recorded repeatedly (i.e. across several visits) in suitable habitat although no evidence of breeding observed; and
- Non-breeding – bird was recorded with no breeding behaviour observed and on no other visit was a bird observed in the same location.

Limitations

Due to the upland nature of the Site, some surveys have been affected by adverse weather conditions. However, to minimise these impacts, where wind, rain or fog significantly affected the ability to undertake surveys or detect birds, the VP watches were stopped and rescheduled to a later date when conditions were more favourable. Surveys were successfully completed within the relevant months for the full survey period and therefore this dataset is considered robust and representative of bird activity on Site in all seasons.

The breeding bird survey areas in 2023 excludes Site extensions that were added in late April 2025. However, as survey buffers were able to be surveyed in detail in all years, this provides confidence that all receptors have been accounted for within the current Assessment Boundary, as of May 2025.

4. Results

4.1 Vantage Point Surveys

Table 5 below summarises the VP survey effort across all VP locations for the 22 month period up to January 2024, following 18 months of survey at VPs 1-4, 10 months at VP5 (discontinued) and 12 months of surveys at VPs 5b and 6 which were added later in the project. Figures 10-2-2 to 10-2-4 present the flight activity for target species over the second year of survey for waders, raptors and waterfowl, for the period between April 2023 and January 2024.

The results of the full survey period from April 2022 are presented in section 4.1.2. The specific details of each VP survey visit can be found in Appendix B. Section 3.2.1 provides an explanation of the number of hours that were surveyed from each location.

Table 5: Vantage Point Survey Effort over 22 months

VP Number	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Hours
1	2022				6	6	6	6	6	6	6	6	6	54
	2023	6	6	6	3	9	6	6	6	6				54
2	2022				6	6	6	6	6	6	6	6	6	54
	2023	6	6	6	6	3	9	6	6	3	3			54
3	2022				6	6	6	6	6	6	6	6	6	54
	2023	6	6	6	3	9	6	6	6	6				54
4	2022				6	6	6	6	6	6	6	6	6	54
	2023	6	6	6	6	3	9	6	6	3	3			54
5	2022				6	6	6	6	6	6	6	6	6	54
	2023	6												6
5b	2023		6	6	6	6	6	6	6	6	3	6	9	66
	2024	6												6
6	2023		6	6	6	6	6	6	6	6	3	6	9	66
	2024	6												6

4.1.1 Year 2 Breeding Season VPs (March – August 2023)

Table 6 summarises the breeding season VP survey effort across the VP locations for a six-month period between March 2023 to August 2023, inclusive. Whilst March 2023 data falls within the first year of VP surveys, due to seasonal differences in bird assemblages, it has been included in the year 2 suite of breeding season VPs for analysis. Figure 10-2-1 presents the flightlines for Target species for the 2023 breeding season. Results from breeding and wintering periods in year 1 are presented separately in the year 1 ornithological report (Appendix 10-1), however they have been referred to within this report for comparison.

Table 6: Year 2 Breeding Vantage Point Survey Effort

VP No.	March	April	May	June	July	August	September	Total Hours
1	6	3	9	6	6	6		36
2	6	6	3	9	6	6		36
3	6	3	9	6	6	6		36
4	6	6	3	9	6	6		36
5b	6	3	6	6	6	6	3	36
6	6	3	6	6	6	6	3	36

During the 2nd year of breeding season VP surveys, 8 primary target species were recorded in flight over the site. The assemblage included ducks, waders and falcons, although only three of these species were also observed in the first year: Curlew, Lapwing and Merlin (see Appendix 10-1).

Of these species, Lapwing was the most frequently recorded bird with 11 flights from between 1 and 3 birds; this is a reduction from the first year (19 flights, peak of 5 birds), despite having an extra month of breeding season VPs. This species consequently also spent less time in the at risk height band (292 seconds), compared to the first year (1,210 at-risk seconds). Conversely, Curlew were recorded more often than the previous season and in small groups (peak count = 3), rather than individually. They were recorded in flight 4 times totalling 268 at risk seconds, compared to 178 seconds the year before. Activity observed during VP surveys has been low overall in both years, and consistently occurred to the North-West of the Site where this species were confirmed breeding in year 1.

Merlin was only observed once during this breeding period, spending 47 seconds in the at risk height band, a minor reduction on the year before where 3 flights were observed from a peak count of 2 birds totalling 246 seconds in the at risk height band. Aside from these three species, ducks such as Gadwall, Shoveler and Tufted duck were observed over the breeding season for the first time, the latter of which was observed on more than one occasion, spending 518 seconds in the at risk height band. Redshank and Hobby which also are newly recorded species were also observed briefly on single occasions, with Redshank spending 20 seconds at risk height.

Additionally, Kestrel, a secondary target species were recorded in flight 46 times over the breeding season, from a peak count of 2 birds, totalling 5400 seconds, 4692 of which were at risk height.

Table 7: Summary Flight Data for Target Species Recorded during Year 2 breeding season VP Surveys (March - August 2023)

Species	Minimum No. of Birds	Maximum No. of Birds	Average No. of Birds	No. of Flights	Total Bird Seconds	At Risk Bird Seconds
Curlew	1	3	1.75	4	451	368
Gadwall	1	1	1	1	39	39
Hobby	1	1	1	1	28	0
Lapwing	1	3	1.27	11	568	292
Merlin	1	1	1	1	47	47
Redshank	1	1	1	1	20	20
Shoveler	2	2	2	1	78	0
Tufted duck	2	2	2	3	518	518

4.1.2 Year 2 Non-Breeding Season VPs (September 2023 – January 2024)

Three primary target species were recorded in flight during non-breeding VPs between September 2023 and January 2024: Black-tailed godwit, Pink-footed goose and Shoveler. These flights are presented on Figures 10-2-2 and 10-2-4. During this period 84 hours of VP watches were conducted: 24 hours between VPs 1-4, and 60 hours between 5b and 6. Similar to the previous year, activity was overall low with only single records for each species over a 5 month period. Of note, were 27 Pink-footed geese in September from VP5b totalling 1,020 bird seconds at risk height and 6 Black-tailed godwits in October at VP2 totalling 294 bird seconds at risk height; both of which have not previously been recorded. A pair of Shoveler were also recorded flying for 40 seconds at risk height. No primary target species were recorded in the months of December and January at VPs 5b and 6. Additionally Snipe and Woodcock were incidentally recorded on the ground in November 2023 and a secondary target species Kestrel, was recorded 28 times in flight totalling 2780 seconds, 1421

seconds of which were at risk height. This species was recorded year round and Figure 10-2-3b shows flight activity over the second year of surveys between April 2023- January 2024.

Table 8: Summary Flight Data for Target Species Recorded during Year 2 non-breeding season VP Surveys (September 2023 - January 2024)

Species	Minimum No. of Birds	Maximum No. of Birds	No. of Flights	Total Bird Seconds	At Risk Bird Seconds
Black-tailed godwit	6	6	1	294	294
Pink-footed goose	27	27	1	1,620	1,620
Shoveler	2	2	1	80	80

4.1.3 All months (April 2022 – January 2023)

During the 22 months of VP surveys between April 2022 and January 2024 each VP location underwent 6 hours of surveys per VP per month as per guidance. VPs 1-4 have each undergone 108 hours of survey over an 18 month period between April 2022 and September 2023, VP5 which was replaced by 5b in February 2023, had 60 hours over a 10 month period between April 2022 and January 2023, and VPs 5b and 6 which were added in February 2023, have had 72 hours of surveys over a 12 month period. A total of 636 hours of vantage point surveys have now been completed at the site, which have recorded a total of 18 primary target species. This period covers two breeding seasons, one full non-breeding season and one partial non-breeding season (5 months).

Lapwing were the most frequently observed primary target species and had both the highest total number of birds seconds and 'at risk' seconds. Overall, 32 flights, totalling 2,893 total bird seconds and 1,677 at risk flight seconds were recorded for this species over the two breeding seasons, whereby a peak count of 7 birds were recorded together. Merlin was the second most frequently recorded species over the surveys, whereby 11 flights were observed from a maximum of two birds, totalling 1,075 at risk seconds. Pink-footed goose had the second highest at risk seconds after Lapwing, although this pertained to a single flight by a flock of 27 birds in September 2023.

Other activity of note is 6 flights of Curlew (546 at risk seconds) and 8 flights of Greylag geese (1279 at risk seconds). Very occasional flights from Shoveler, Goosander, Gadwall, and Tufted duck were observed, with all but Goosander recorded flying at risk height. Finally single records from Hobby, Peregrine, Little egret, Black-tailed godwit, Mute swan, Redshank, Snipe and Oystercatcher were also recorded, with all but Mute swan and Hobby observed at- risk height. Snipe, Mute swan, Pink-footed goose and Black-tailed godwit were winter-only species, with all other species in Table 9 at least observed in one or both breeding seasons.

Table 9: Summary Flight Data for Target Species Recorded during VPs over a 22 month period.

Species	Minimum No. of Birds	Maximum No. of Birds	Average No. of Birds	No. of Flights	Total Bird Seconds	At Risk Bird Seconds
Black-tailed godwit	6	6	6	1	294	294
Curlew	1	3	1.50	6	629	546
Gadwall	1	1	1	1	39	39
Goosander	2	2	2	1	94	0
Greylag goose	2	8	4.13	8	1,399	1,279
Hobby	1	1	1	1	28	0
Lapwing	1	7	1.69	32	2,893	1,677
Little egret	1	1	1	1	41	41

Species	Minimum No. of Birds	Maximum No. of Birds	Average No. of Birds	No. of Flights	Total Bird Seconds	At Risk Bird Seconds
Merlin	1	2	1.27	11	1,286	1,075
Mute swan	3	3	3	1	156	0
Oystercatcher	1	1	1	1	47	47
Peregrine	1	1	1	1	80	60
Pink-footed goose	27	27	27	1	1,620	1,620
Red kite	1	1	1	1	20	20
Redshank	1	1	1	1	20	20
Shoveler	2	2	2	2	158	80
Snipe	1	1	1	1	23	23
Tufted duck	2	2	2	3	518	518

4.2 Breeding Bird Surveys

4.2.1 Breeding Raptors

Raptor activity is shown in a Confidential Figure (Figure 10.8) within the main ES chapter. Two raptor species were observed within the red line boundary and 2km buffer during dedicated breeding raptor surveys. Kestrel, an Amber BoCC list species, was confirmed as a breeding in the North-West of the Site and a second possible breeding territory in the central West part of the Site. Surveyors regularly encountered Buzzards in flight across the much of the survey area, which resulted in 4 non-breeding territories being identified.

4.2.2 Upland Breeding Birds

The Site supported a variety of breeding bird species, shown on Figure 10.3 within the main ES chapter, with ten of these confirmed breeding within the survey boundary, an additional 13 probable species and 17 possible breeding species; among these were notable ground nesting waders which have high conservation importance. These were Curlew which was identified as probably breeding in the East of the Site and similar to year 1, there were three possible territories in the North-West and Western regions of the Site and a further three possible breeding and one non-breeding territories in the survey buffer. A single possible Lapwing territory was also present in the central Western region of the buffer.

Habitats

The matrix of acid grassland, marshy grassland and bog habitat which comprise the majority of the survey area, supported upland passerines such as Stonechat *Saxicola rubicola*, Wheatear *Oenanthe oenanthe*, Linnet *Linaria cannabina*, along with an abundance of Skylark *Alauda arvensis* (Figure 10.5 in chapter) and Meadow pipit *Anthus pratensis* (Figure 10-2-5). Bogs, ditches and ponds supported Grasshopper warbler *Locustella naevia*, Reed bunting, *Emberiza schoeniclus*, and Snipe *Gallinago gallinago*. Small areas of woodland and treelines that feature occasionally across the survey area supported Willow warbler *Phylloscopus trochilus*, Siskin *Spinus spinus* and Lesser redpoll *Acanthis cabaret*. Open areas adjacent to woodland edges supported Green woodpecker *Picus viridis*.

Open waterbodies such as reservoirs and lakes which feature regularly throughout the survey area supported species such as Oystercatcher *Haematopus ostralegus*, *hypoleucos*, Grey wagtail *Motacilla cinerea*, Cormorant *Phalacrocorax carbo*, Grey heron *Ardea cinerea*, Pied wagtail *Motacilla alba*, Mallard *Anas platyrhynchos*, and Canada goose. Buildings present with the survey area

presented breeding opportunities for Barn swallow *Hirundo rustica*, House sparrow, House martin *Delichon urbicum* and Swift *Apus apus*.

Breeding Species

Confirmed breeding species within the red line boundary and 250m buffer were Stonechat, Starling, Skylark, Meadow pipit, Pied wagtail, Linnet, Wheatear, Pheasant, Mallard and Canada goose. Additional *probable breeding territories* were apparent due to territorial behaviour, repeated singing or pairs observed on multiple visits, species included Curlew, Reed bunting, Swallow and Snipe along with common species such as Wren, Magpie, Woodpigeon, Carrion crow, and Blackbird. *Possible breeding species* where there were singing individuals or a pair observed on one occasion in suitable breeding habitat, included Grasshopper warbler, Ring ouzel, Lapwing, Oystercatcher, Willow warbler, Grey wagtail, House sparrow, Green woodpecker, and Greenfinch.

Several species were identified as *non-breeding* or *unknown*, where no breeding behaviours were exhibited and were simply observed, usually on one occasion in unsuitable breeding habitat or commuting in flight. Non-breeding species were Grey heron, Cormorant, House martin, Swift, Lesser redpoll, Goldfinch, Siskin, Raven, Rook, Lesser-black-backed gull, Black-headed gull, and Herring gull. Whilst suitable breeding habitat may be available elsewhere on Site for some of these species, breeding status was unable to be confirmed.

Locally Important Species

Knowl Moor SBI which falls partially within the Site boundary is designated for supporting breeding assemblages of Curlew, Lapwing, Golden plover, and Red grouse, and was previously known for supporting increasingly scarce moorland breeding species such as Redshank, Dunlin, Twite and Ring ouzel. Of these species, Curlew was probably breeding and Lapwing possibly breeding; both of which were previously confirmed breeding on site in the first year. A female Ring ouzel was observed this year again, but in the North-West buffer in suitable breeding habitat, neither territories were within the SBI itself, but they appear to be using the areas adjacent to Knowl Moor SBI during the breeding season.

Species featured on the Lancashire BAP which were observed onsite were Skylark, Linnet, Lapwing, and Reed bunting. Skylark and Linnet were confirmed breeding, with Reed bunting determined as probably breeding and Lapwing as a possibly breeding. Black redstart and Twite were not observed this year.

BoCC and Schedule 1 Species

In contrast to the first year, no Schedule 1 species were observed onsite in the second year of breeding bird walkover surveys. Three species, Linnet, Starling, and Skylark which have red BoCC status were both confirmed breeding on Site with Curlew also identified as a probable breeder and Grasshopper warbler and House sparrow as possible breeders. In the first year, the Site was identified as being important for breeding Skylark. The second year of breeding surveys showed more widespread activity observed throughout the survey area rather than in concentrated areas (Figure 10.3 within the main ES chapter). A total of 153 territories were identified within the survey area, with 2 of these confirmed, 43 of these determined as probable and 83 further as possible breeding territories.

Mallard, Meadow pipit, and Wheatear which have amber BoCC status were also confirmed breeding on Site, with Reed bunting, Snipe, Wren and Woodpigeon identified as probable breeders and Willow warbler, Oystercatcher and Grey wagtail as possible breeders. Territory analysis results for breeding Meadow pipit are shown on Figure 10-2-5. Swift, House martin and Herring gull, were also observed on Site, but no indication of breeding activity was observed and are not considered to be breeding

within the application boundary. In total 7 species with red BoCC status and 10 with amber BoCC status form part of the likely breeding assemblage on Site.

4.3 Development Provisions

The primary value of the Site is in its breeding assemblage which means the focal consideration will be on breeding habitats that could be affected by the development. As such the following species will need provisions developing during the planning process to ensure works are compliant with legislation:

Curlew- SBI and BoCC Red list species breeding on site;

Lapwing- SBI and BoCC Red list species breeding on site;

Merlin- Annex 1 species possible breeders on site and frequently observed in winter;

Skylark- BoCC Red List species breeding in abundance on site;

Golden plover- SBI species Breeding on site;

Dunlin- SBI species Breeding on site;

Barn owl – Probable breeding schedule 1 raptor;

Peregrine- Confirmed locally breeding schedule 1 raptor; and

Black redstart- Local BAP and Schedule 1 species possible breeder on site.

Appendices



Appendix A. Figures

- Figure 10-2-1 - Vantage Point Flightlines Target Species: March - August 2023
- Figure 10-2-2 - Vantage Point Flightlines Waders: April 2023- January 2024
- Figure 10-2-3a - Vantage Point Flightlines Raptors: April 2023- January 2024
- Figure 10-2-3b - Vantage Point Flightlines Kestrel: April 2023- January 2024
- Figure 10-2-4 - Vantage Point Flightlines Waterfowl: April 2023- January 2024
- Figure 10-2-5 - Breeding Meadow Pipit Territory Results 2023

Appendix B. Vantage Point Survey Details

Table 10: Vantage Point Survey Visit Details

Survey Date	Start Time	Finish Time	Duration	Surveyor	VP Type	VP Number
01/03/2023	08:15	11:15	03:00:00	EF	Diurnal	1
01/03/2023	12:30	15:30	03:00:00	EF	Diurnal	3
02/03/2023	08:30	11:30	03:00:00	EF	Diurnal	4
02/03/2023	12:30	15:30	03:00:00	EF	Diurnal	2
13/03/2023	07:50	10:50	03:00:00	EF	Diurnal	5b
13/03/2023	11:20	14:20	03:00:00	EF	Diurnal	6
14/03/2023	07:45	10:45	03:00:00	EF	Diurnal	3
16/03/2023	07:55	10:55	03:00:00	EF	Diurnal	2
16/03/2023	12:00	15:00	03:00:00	EF	Diurnal	4
28/03/2023	08:00	11:00	03:00:00	EF	Diurnal	6
28/03/2023	11:30	14:30	03:00:00	EF	Diurnal	5b
29/03/2023	11:00	14:00	03:00:00	EF	Diurnal	1
03/04/2023	09:45	12:45	03:00:00	RB	Diurnal	2
03/04/2023	14:00	17:00	03:00:00	RB	Diurnal	4
04/04/2023	09:00	12:00	03:00:00	RB	Diurnal	5b
04/04/2023	12:10	15:10	03:00:00	RB	Diurnal	6
15/04/2023	12:30	15:30	03:00:00	MS	Diurnal	5b
15/04/2023	09:15	12:15	03:00:00	MS	Diurnal	6
25/04/2023	09:35	12:35	03:00:00	EP	Diurnal	3
25/04/2023	09:45	12:45	03:00:00	RB	Diurnal	4
25/04/2023	14:00	17:00	03:00:00	RB	Diurnal	2
25/04/2023	14:48	17:48	03:00:00	EP	Diurnal	1
02/05/2023	09:15	12:15	03:00:00	MS	Diurnal	1
09/05/2023	05:30	08:30	03:00:00	TB	Diurnal	1
09/05/2023	09:45	12:45	03:00:00	TB	Diurnal	2
09/05/2023	14:00	17:00	03:00:00	TB	Diurnal	3
10/05/2023	08:00	11:00	03:00:00	TB	Diurnal	5b
10/05/2023	12:00	15:00	03:00:00	TB	Diurnal	4
11/05/2023	12:30	15:30	03:00:00	TB	Diurnal	6
12/05/2023	08:00	11:00	03:00:00	MS	Diurnal	3
12/05/2023	12:15	15:15	03:00:00	MS	Diurnal	1

Survey Date	Start Time	Finish Time	Duration	Surveyor	VP Type	VP Number
16/05/2023	09:15	12:15	03:00:00	MS	Diurnal	6
16/05/2023	12:30	15:30	03:00:00	MS	Diurnal	5b
01/06/2023	08:45	11:45	03:00:00	Rbu	Diurnal	4
01/06/2023	15:50	18:50	03:00:00	NR	Diurnal	2
07/06/2023	08:00	11:00	03:00:00	TB	Diurnal	1
07/06/2023	12:00	15:00	03:00:00	TB	Diurnal	3
08/06/2023	08:00	11:00	03:00:00	TB	Diurnal	2
08/06/2023	12:00	15:00	03:00:00	TB	Diurnal	4
19/06/2023	08:00	11:00	03:00:00	TB	Diurnal	5b
19/06/2023	12:30	15:30	03:00:00	TB	Diurnal	6
20/06/2023	08:00	11:00	03:00:00	TB	Diurnal	3
20/06/2023	12:30	15:30	03:00:00	TB	Diurnal	1
21/06/2023	08:30	11:30	03:00:00	TB	Diurnal	4
21/06/2023	13:00	16:00	03:00:00	TB	Diurnal	2
22/06/2023	09:00	12:00	03:00:00	TB	Diurnal	6
10/07/2023	08:00	11:00	03:00:00	TB	Diurnal	5b
10/07/2023	12:00	15:00	03:00:00	TB	Diurnal	6
11/07/2023	08:00	11:00	03:00:00	TB	Diurnal	3
11/07/2023	12:00	15:00	03:00:00	TB	Diurnal	1
12/07/2023	08:00	11:00	03:00:00	TB	Diurnal	4
12/07/2023	12:00	15:00	03:00:00	TB	Diurnal	2
13/07/2023	08:00	11:00	03:00:00	MS	Diurnal	2
13/07/2023	14:15	17:15	03:00:00	MS	Diurnal	4
24/07/2023	08:00	11:00	03:00:00	TB	Diurnal	1
24/07/2023	13:00	16:00	03:00:00	TB	Diurnal	3
28/07/2023	08:45	11:45	03:00:00	MS	Diurnal	6
28/07/2023	12:15	15:15	03:00:00	MS	Diurnal	5b
09/08/2023	09:30	12:30	03:00:00	MS	Diurnal	2
09/08/2023	13:30	16:30	03:00:00	MS	Diurnal	4
10/08/2023	07:30	10:30	03:00:00	MS	Diurnal	1
10/08/2023	11:40	14:40	03:00:00	MS	Diurnal	3
16/08/2023	10:00	13:00	03:00:00	RP	Diurnal	5b
16/08/2023	13:15	16:15	03:00:00	RP	Diurnal	6
18/08/2023	10:15	13:15	03:00:00	RP	Diurnal	1
18/08/2023	15:00	18:00	03:00:00	RP	Diurnal	3
24/08/2023	08:30	11:30	03:00:00	TB	Diurnal	4
24/08/2023	12:30	15:30	03:00:00	TB	Diurnal	2
29/08/2023	09:15	12:15	03:00:00	RP	Diurnal	6
29/08/2023	12:20	15:20	03:00:00	RP	Diurnal	5
10/09/2023	08:30	11:30	03:00:00	MS	Diurnal	6
10/09/2023	11:45	14:45	03:00:00	MS	Diurnal	5b
12/09/2023	10:00	13:00	03:00:00	RP	Diurnal	6
12/09/2023	13:00	16:00	03:00:00	RP	Diurnal	5b
14/09/2023	10:00	13:00	03:00:00	RP	Diurnal	2
14/09/2023	15:00	18:00	03:00:00	RP	Diurnal	4
14/09/2023	09:30	12:30	03:00:00	MS	Diurnal	3
14/09/2023	13:30	16:30	03:00:00	MS	Diurnal	1

Survey Date	Start Time	Finish Time	Duration	Surveyor	VP Type	VP Number
22/09/2023	08:30	11:30	03:00:00	TB	Diurnal	1
22/09/2023	13:00	16:00	03:00:00	TB	Diurnal	3
23/09/2023	08:00	11:00	03:00:00	TB	Diurnal	4
23/09/2023	12:45	15:45	03:00:00	TB	Diurnal	2
12/10/2023	11:00	14:00	03:00:00	RP	Diurnal	6
12/10/2023	14:15	17:15	03:00:00	RP	Diurnal	5b
07/11/2023	09:00	12:00	03:00:00	MS	Diurnal	6
07/11/2023	12:15	15:15	03:00:00	MS	Diurnal	5b
17/11/2023	09:00	12:00	03:00:00	RP	Diurnal	5b
17/11/2023	12:15	15:15	03:00:00	RP	Diurnal	6
05/12/2023	09:15	12:15	03:00:00	MS	Diurnal	5b
05/12/2023	12:30	15:30	03:00:00	MS	Diurnal	6
08/12/2023	08:30	11:30	03:00:00	EF	Diurnal	5b
08/12/2023	12:00	15:00	03:00:00	EF	Diurnal	6
13/12/2023	08:45	11:45	03:00:00	MS	Diurnal	6
13/12/2023	12:00	15:00	03:00:00	MS	Diurnal	5b
04/01/2024	08:45	11:45	03:00:00	EF	Diurnal	5b
04/01/2024	12:15	15:15	03:00:00	EF	Diurnal	6
19/01/2024	08:30	11:30	03:00:00	MS	Diurnal	6
19/01/2024	11:45	14:45	03:00:00	MS	Diurnal	5b

Appendix C. Vantage Point Survey Summary of Weather Conditions

Table 11: Vantage Point Weather Summary (March 2023 - January 2024)

Survey Date	VP Number	VP Type	Mean Cloud Cover (eighths)	Modal Visibility	Modal Precipitation	Mean Temperature (°C)	Mean Wind Speed (Beaufort Scale)	Modal Wind Direction
01/03/2023	1	Diurnal	7	> 2km	Light Intermittent	4	6	NE
	3	Diurnal	7	> 2km	Light Persistent	5	6	NE
02/03/2023	2	Diurnal	8	> 2km	None	6	2	ENE
	4	Diurnal	8	> 2km	None	4	2	ENE
13/03/2023	5b	Diurnal	8	> 2km	Light Intermittent	6	8	SW
	6	Diurnal	8	1km - 2km	Heavy Persistent	7	8	SW
14/03/2023	3	Diurnal	6	> 2km	Light Intermittent	2	2	WNW
16/03/2023	2	Diurnal	8	1km - 2km	Light Intermittent	8	5	SSW
	4	Diurnal	8	1km - 2km	Light Persistent	9	4	SSW
28/03/2023	5b	Diurnal	8	1km - 2km	Heavy Persistent	3	6	S
	6	Diurnal	8	1km - 2km	Light Persistent	3	5	SSE
29/03/2023	1	Diurnal	8	> 2km	Light Persistent	11	5	S
03/04/2023	2	Diurnal	1	> 2km	None	5	2	SE
	4	Diurnal	1	> 2km	None	10	2	SE
04/04/2023	5b	Diurnal	1	> 2km	None	5	3	SE
	6	Diurnal	1	> 2km	None	9	2	SE
15/04/2023	5b	Diurnal	7	> 2km	None	17	3	S
	6	Diurnal	7	> 2km	None	15	2	S
25/04/2023	1	Diurnal	4	> 2km	None	8	1	NW

Survey Date	VP Number	VP Type	Mean Cloud Cover (eighths)	Modal Visibility	Modal Precipitation	Mean Temperature (°C)	Mean Wind Speed (Beaufort Scale)	Modal Wind Direction
	2	Diurnal	3	> 2km	None	8	1	NE
	3	Diurnal	2	> 2km	None	5	2	NNW
	4	Diurnal	2	> 2km	None	6	0	S
02/05/2023	1	Diurnal	8	> 2km	None	10	2	SE
	3	Unknown	7	> 2km	None	16	2	S
09/05/2023	1	Diurnal	6	> 2km	None	8	3	SSW
	2	Diurnal	6	> 2km	None	11	3	SSW
	3	Diurnal	6	> 2km	None	13	4	SSW
10/05/2023	4	Diurnal	6	> 2km	None	14	4	SSE
	5b	Diurnal	6	> 2km	None	13	5	SSE
11/05/2023	6	Diurnal	6	> 2km	None	12	3	W
12/05/2023	1	Diurnal	3	> 2km	None	14	4	NE
	3	Diurnal	4	> 2km	None	10	4	NE
16/05/2023	5b	Diurnal	6	> 2km	None	12	4	WNW
	6	Diurnal	7	> 2km	None	11	5	WNW
01/06/2023	4	Diurnal	7	> 2km	None	11	2	E
	2	Diurnal	4	> 2km	None	11	5	NE
07/06/2023	1	Diurnal	8	> 2km	None	12	2	N
	3	Diurnal	6	> 2km	None	13	3	E
08/06/2023	2	Diurnal	4	> 2km	None	12	3	E
	4	Diurnal	4	> 2km	None	15	3	E
19/06/2023	5b	Diurnal	3	> 2km	None	15	3	SSW
	6	Diurnal	4	> 2km	None	21	4	W
20/06/2023	1	Diurnal	7	> 2km	None	15	3	N
	3	Diurnal	8	> 2km	Light Intermittent	13	3	N
21/06/2023	2	Diurnal	6	> 2km	Light Intermittent		3	S
	4	Diurnal	2	> 2km	None	16	3	SSW
22/06/2023	5b	Unknown	2	> 2km	None	22	4	NW
	6	Diurnal	2	> 2km	None	18	2	N
10/07/2023	5b	Diurnal	3	> 2km	None	14	3	S
	6	Diurnal	7	> 2km	Light Intermittent	16	4	S
11/07/2023	1	Diurnal	7	> 2km	Light Intermittent	16	3	S
	3	Diurnal	6	> 2km	None	14	4	SW
12/07/2023	2	Diurnal	3	> 2km	None	17	5	WSW
	4	Diurnal	6	> 2km	None	14	4	SSW
13/07/2023	2	Diurnal	8	> 2km	None	13	3	SW
	4	Diurnal	7	> 2km	None	16	4	W
24/07/2023	1	Diurnal	6	> 2km	None	13	4	N
	3	Diurnal	3	> 2km	None	17	4	NW
28/07/2023	5b	Diurnal	6	> 2km	None	17	4	WSW
	6	Diurnal	8	> 2km	None	16	3	SSW
09/08/2023	2	Diurnal	7	> 2km	None	14	3	SW

Survey Date	VP Number	VP Type	Mean Cloud Cover (eighths)	Modal Visibility	Modal Precipitation	Mean Temperature (°C)	Mean Wind Speed (Beaufort Scale)	Modal Wind Direction
	4	Diurnal	8	> 2km	None	14	4	WSW
10/08/2023	1	Diurnal	4	> 2km	None	18	3	S
	3	Diurnal	4	> 2km	None	21	4	S
16/08/2023	5b	Diurnal	3	> 2km	None	18	1	NW
	6	Diurnal	7	> 2km	None	18	1	NW
18/08/2023	1	Diurnal	8	1km - 2km	None	15	6	E
	3	Diurnal	8	1km - 2km	None	18	4	E
24/08/2023	2	Diurnal	6	> 2km	Light Intermittent	17	4	W
	4	Diurnal	6	> 2km	Light Intermittent	15	4	W
29/08/2023	5b	Diurnal	5	> 2km	None	16	1	SW
	6	Diurnal	8	> 2km	Light Intermittent	13	1	SW
10/09/2023	5b	Diurnal	5	> 2km	None	16	3	SSW
	6	Diurnal	6	> 2km	None	11	3	SSW
12/09/2023	5b	Diurnal	8	> 2km	None	14	3	NE
	6	Diurnal	8	> 2km	None	13	3	NE
14/09/2023	2	Diurnal	6	> 2km	None	16	3	SW
	4	Diurnal	6	> 2km	None	18	3	SW
14/09/2023	1	Diurnal	6	> 2km	None	18	3	SSW
	3	Diurnal	7	> 2km	None	17	3	SW
22/09/2023	1	Diurnal	7	> 2km	Light Intermittent	12	4	S
	3	Diurnal	8	> 2km	Light Intermittent	11	4	W
12/10/2023	5b	Diurnal	1	> 2km	None	12	1	SW
	6	Diurnal	1	> 2km	None	10	1	SE
23/10/2023	4	Diurnal	4	> 2km	None	13	2	E
	2	Diurnal	4	> 2km	None	13	2	ENE
07/11/2023	5b	Diurnal	7	> 2km	None	9	4	W
	6	Diurnal	7	> 2km	Light Intermittent	8	4	WSW
17/11/2023	5b	Diurnal	2	1km - 2km	None	6	2	E
	6	Diurnal	6	1km - 2km	None	7	1	SW
05/12/2023	5b	Diurnal	7	> 2km	Light Intermittent	4	4	NE
	6	Diurnal	4	> 2km	None	3	4	NE
08/12/2023	5b	Diurnal	8	> 2km	Light Intermittent	5	5	S
	6	Diurnal	8	1km - 2km	Heavy Intermittent	7	3	SSW
13/12/2023	5b	Diurnal	5	> 2km	None	4	4	NNE
	6	Diurnal	7	> 2km	None	5	5	NNE
04/01/2024	5b	Diurnal	7	> 2km	None	5	5	SW
	6	Diurnal	7	> 2km	None	5	2	SSW
19/01/2024	5b	Diurnal	3	> 2km	None	-1	5	WSW
	6	Diurnal	5	> 2km	None	-2	5	WSW

Appendix D. Vantage Point Survey Target Species Flights

Table 12: Vantage Point Survey Target Species Flights

Date	Species	VP No.	Time First Observed	Number of Birds	Height Band	Time in Height Band (s)	No. of Bird Seconds at Risk Height	Average Height (m)	Record Type*
01/03/2023	Merlin	1	10:06	1	B	47	47	80	Standard
02/03/2023	Canada goose	4	08:50	2	A	6	0	8	Standard
02/03/2023	Lapwing	4	08:42	3	A	32	0	10	Standard
02/03/2023	Lapwing	4	09:08	1	A	11	0	2	Standard
16/03/2023	Lapwing	4	11:53	2	A	16	0	8	Incidental
28/03/2023	Curlew	6	10:11	1	B	8	8	32	Standard
03/04/2023	Lapwing	4	14:30	1	B	33	33	25	Standard
03/04/2023	Lapwing	4	15:15	2	B	49	98	30	Standard
03/04/2023	Lapwing	4	15:55	1	B	106	106	120	Standard
04/04/2023	Curlew	5b	11:15	3	A	20	0	10	Standard
04/04/2023	Curlew	5b	11:15	3	B	100	300	50	Standard
04/04/2023	Curlew	5b	11:15	2	B	30	60	30	Standard
02/05/2023	Canada goose	1	10:53	3	B	48	144	150	Standard
09/05/2023	Shoveler	1	07:17	2	A	39	0	10	Standard
12/05/2023	Canada goose	1	14:07	4	B	39	156	100	Standard
16/05/2023	Curlew	6	11:48	1	A	23	0	15	Standard
01/06/2023	Lapwing	4	08:48	1	A	36	0	15	Standard
01/06/2023	Lapwing	4	08:50	1	A	42	0	20	Standard
01/06/2023	Lapwing	4	08:56	1	A	48	0	10	Standard
01/06/2023	Lapwing	4	09:00	1	A	20	0	10	Standard
01/06/2023	Lapwing	4	09:41	1	B	55	55	40	Standard
01/06/2023	Lapwing	4	11:21	1	A	23	0	10	Standard
01/06/2023	Lapwing	2	15:00	1	A	20	0	10	Incidental
12/07/2023	Tufted duck	2	13:12	2	B	49	98	50	Standard
12/07/2023	Tufted duck	4	10:12	2	B	136	272	70	Standard
24/07/2023	Gadwall	1	09:25	1	B	39	39	65	Standard
24/07/2023	Tufted duck	3	14:10	2	B	74	148	50	Standard
10/08/2023	Hobby	3	13:23	1	A	28	0	1	Standard
18/08/2023	Redshank	1	10:45	1	B	20	20	90	Standard
12/09/2023	Pink-footed goose	5b	14:15	27	B	60	1620	150	Standard
23/10/2023	Black-tailed godwit	2	13:34	6	B	49	294	65	Standard
23/10/2023	Shoveler	2	14:55	2	B	40	80	50	Standard
17/11/2023	Canada goose	5b	10:00	34	B	30	1020	30	Standard

* Standard record type means that the bird was observed during the duration of the vantage point watch and was within the viewshed of the VP (formed from a 180° arc centred on a predetermined view bearing out to a distance of 2km).

Incidental record type means that the bird was observed out with the duration of the vantage point watch and / or was beyond the 2km limit. The table does not include ground records.

Appendix E. Conservation Status of Recorded Bird Species – Raptors, Waders, Geese and Gulls

Table 13: List of Species Recorded on Site in Year 2

Species	Scientific Name	Annex I	Schedule 1	English Priority Species	UK Conservation Status	Vantage Point Survey (April 2022 – January 2023)
Blackbird	<i>Turdus merula</i>					
Black-headed gull	<i>Chroicocephalus ridibundus</i>				Amber	Yes
Black-tailed godwit	<i>Limosa limosa</i>		Yes	Yes	Red	Yes
Blue tit	<i>Cyanistes caeruleus</i>					
Buzzard	<i>Buteo buteo</i>					Yes
Canada goose	<i>Branta canadensis</i>					Yes
Carrion crow	<i>Corvus corone</i>					Yes
Chaffinch	<i>Fringilla coelebs</i>					
Coot	<i>Fulica atra</i>					
Cormorant	<i>Phalacrocorax carbo</i>					Yes
Curlew	<i>Numenius arquata</i>			Yes	Red	Yes
Gadwall	<i>Anas strepera</i>				Amber	Yes
Goldfinch	<i>Carduelis carduelis</i>					
Grasshopper warbler	<i>Locustella naevia</i>			Yes	Red	
Great tit	<i>Parus major</i>					
Green woodpecker	<i>Picus viridis</i>					Yes
Greenfinch	<i>Carduelis chloris</i>				Red	
Grey heron	<i>Ardea cinerea</i>					Yes
Grey wagtail	<i>Motacilla cinerea</i>				Amber	
Herring gull	<i>Larus argentatus</i>			Yes	Red	Yes
Hobby	<i>Falco subbuteo</i>		Yes			Yes
House martin	<i>Delichon urbica</i>				Red	
House sparrow	<i>Passer domesticus</i>			Yes	Red	
Jackdaw	<i>Corvus monedula</i>					
Kestrel	<i>Falco tinnunculus</i>				Amber	Yes
Lapwing	<i>Vanellus vanellus</i>			Yes	Red	Yes
Lesser Black-backed gull	<i>Larus fuscus</i>				Amber	Yes
Lesser redpoll	<i>Acanthis cabaret</i>			Yes		
Linnet	<i>Linaria cannabina</i>			Yes	Red	
Magpie	<i>Pica pica</i>					
Mallard	<i>Anas platyrhynchos</i>				Amber	
Meadow pipit	<i>Anthus pratensis</i>				Amber	Yes
Merlin	<i>Falco columbarius</i>	Yes	Yes		Red	Yes
Oystercatcher	<i>Haematopus ostralegus</i>				Amber	Yes
Pheasant	<i>Phasianus colchicus</i>					
Pied wagtail	<i>Motacilla alba</i>					
Pink-footed goose	<i>Anser brachyrhynchus</i>				Amber	Yes
Raven	<i>Corvus corax</i>					Yes

Species	Scientific Name	Annex I	Schedule 1	English Priority Species	UK Conservation Status	Vantage Point Survey (April 2022 – January 2023)
Red kite	<i>Milvus milvus</i>	Yes	Yes			Yes
Redshank	<i>Tringa totanus</i>				Amber	Yes
Reed bunting	<i>Emberiza schoeniclus</i>			Yes	Amber	Yes
Ring ouzel	<i>Turdus torquatus</i>			Yes	Red	
Robin	<i>Erithacus rubecula</i>					
Rook	<i>Corvus frugilegus</i>				Amber	Yes
Shoveler	<i>Anas clypeata</i>				Amber	Yes
Siskin	<i>Spinus spinus</i>					
Skylark	<i>Alauda arvensis</i>			Yes	Red	Yes
Snipe	<i>Gallinago gallinago</i>				Amber	Yes
Starling	<i>Sturnus vulgaris</i>			Yes	Red	Yes
Stonechat	<i>Saxicola rubicola</i>					
Swallow	<i>Hirundo rustica</i>					Yes
Swift	<i>Apus apus</i>				Red	Yes
Tufted duck	<i>Aythya fuligula</i>					Yes
Wheatear	<i>Oenanthe oenanthe</i>				Amber	Yes
Willow warbler	<i>Phylloscopus trochilus</i>				Amber	
Woodcock	<i>Scolopax Rusticola</i>				Red	Yes
Woodpigeon	<i>Columba palumbus</i>				Amber	
Wren	<i>Troglodytes troglodytes</i>				Amber	

Scout Moor 2 Wind Farm



Figure 10-2-1
Vantage Point Activity - Target
Species (March - August 2023)

Key

- Assessment boundary
- Proposed turbine location
- Vantage Point

Target species registrations

- Curlew
- Gadwall
- Hobby
- Lapwing
- Merlin
- Redshank
- Shoveler
- Tufted duck

Height Band

- Below 30m height
- 30 - 180m height
- Above 180m height
- On ground
- Heard only

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Kilometres

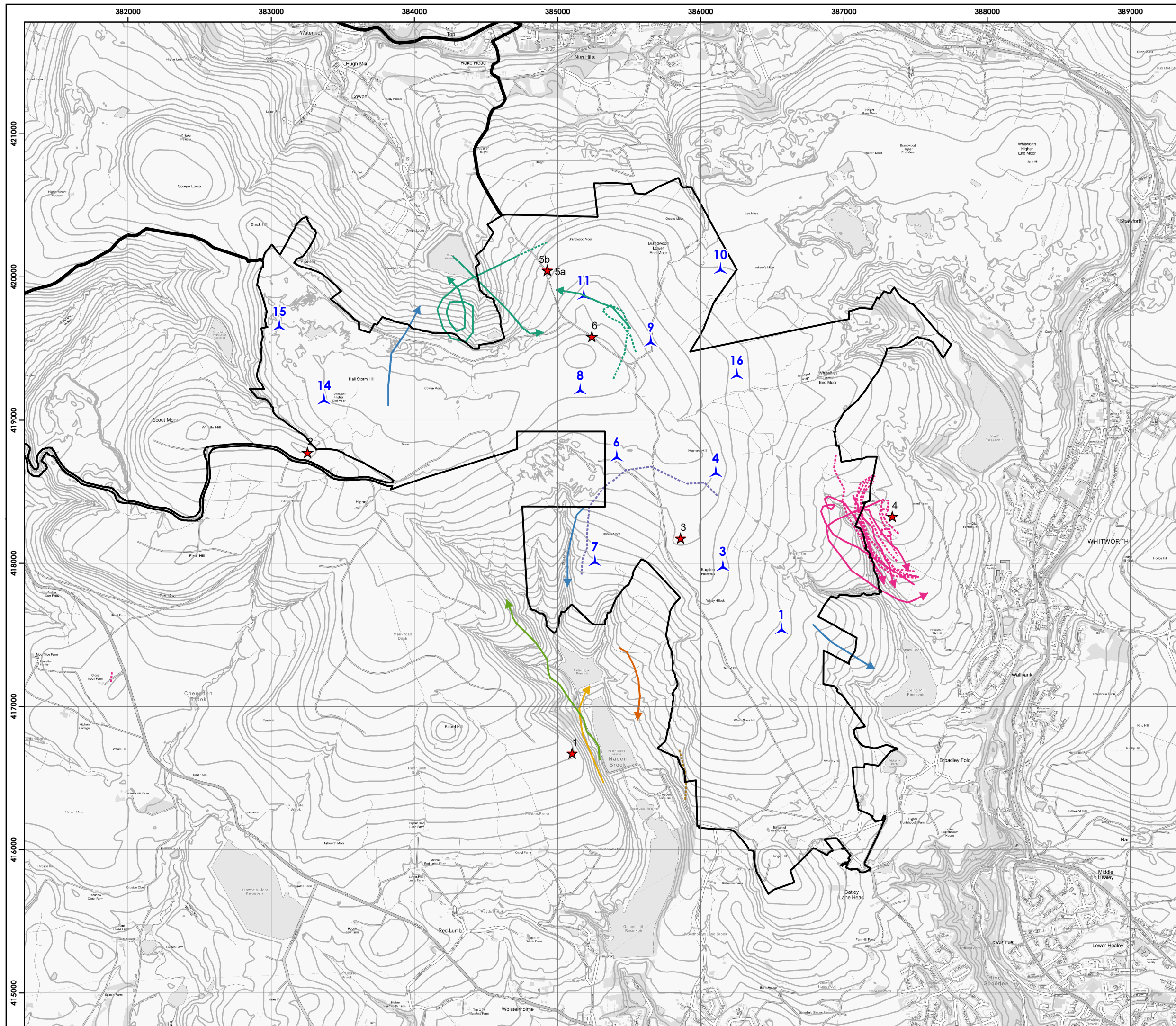


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08/05/2026 TL02f 8706/OR/025c
Drawn by: KM Checked by: TH Approved by: JH

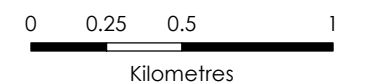


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Figure 10-2-2
Vantage Point Activity - Waders
(April 2023 - January 2024)

- Key**
- Assessment boundary
 - Proposed turbine location
 - Vantage Point
- Target species registrations**
- Lapwing
 - Curlew
 - Redshank
 - Black-tailed godwit
- Height Band**
- Below 30m height
 - 30 - 180m height
 - Above 180m height
 - On ground
 - Heard only

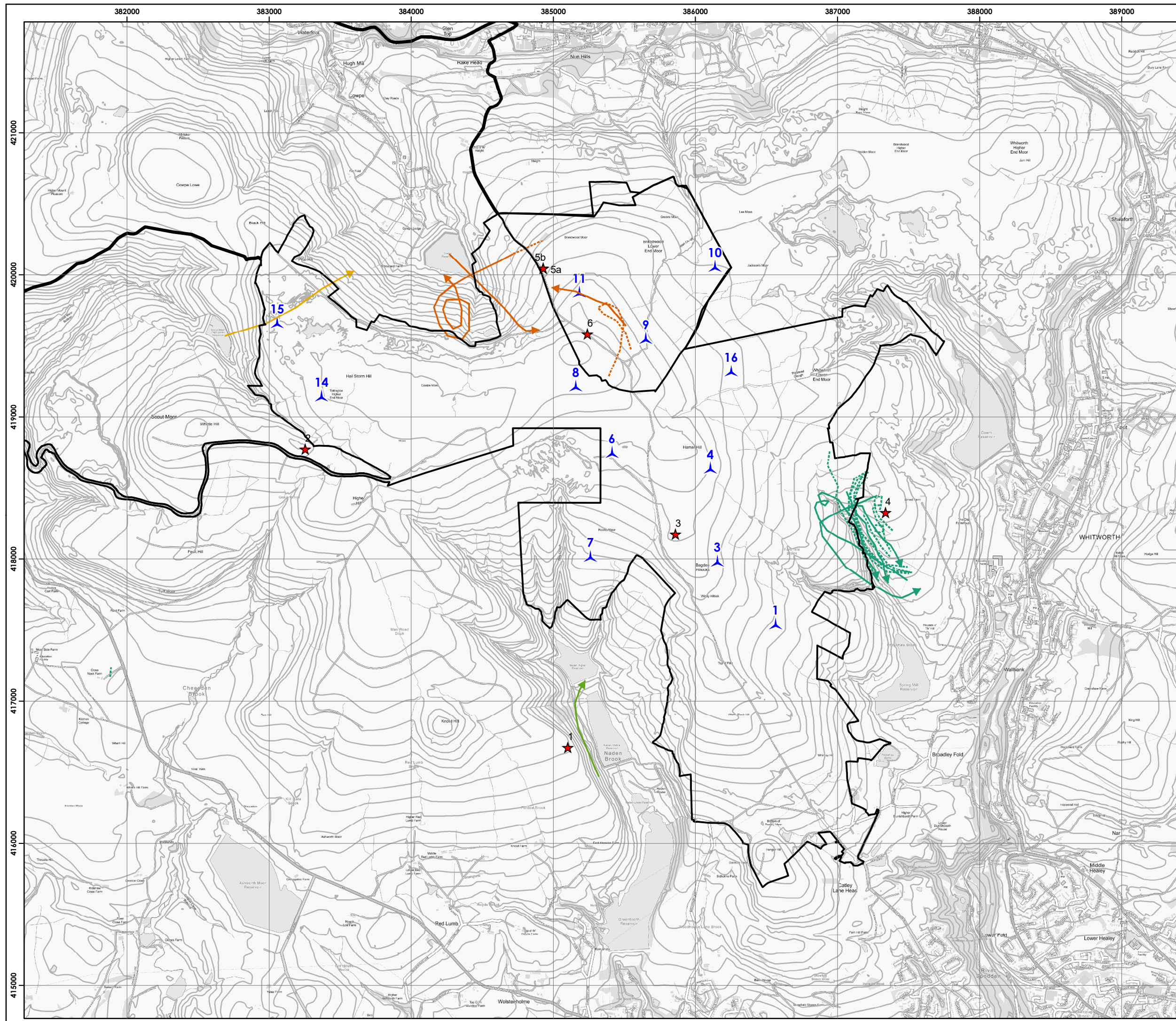


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Figure 10-2-3a
Vantage Point Activity - Raptors
(April 2023 - January 2024)

Key

- Assessment boundary
- Proposed turbine location
- Vantage Point

Target species registrations

- Merlin
- Hobby

Height Band

- Below 30m height
- 30 - 180m height
- Above 180m height
- On ground
- Heard only



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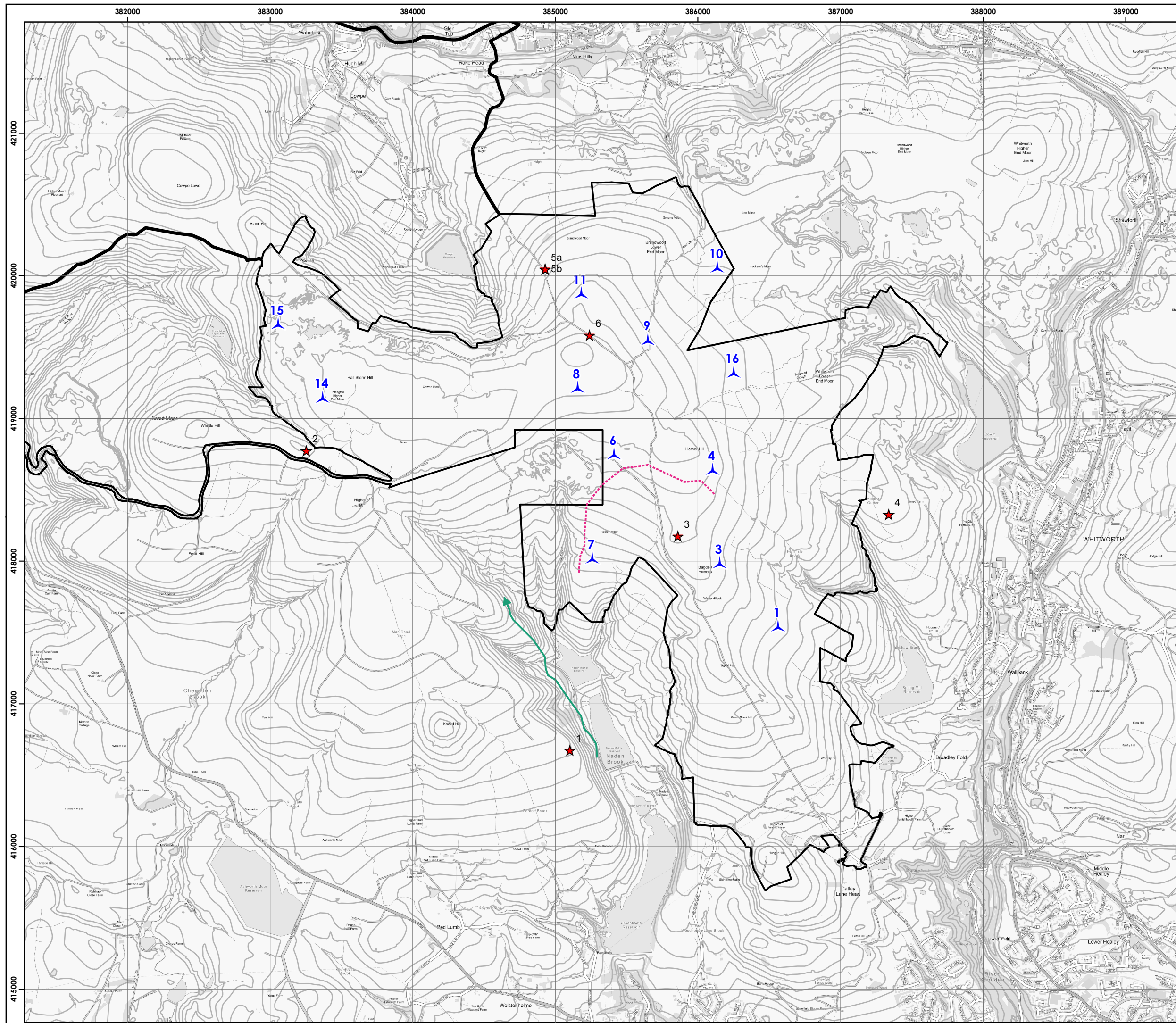


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Figure 10-2-3b
Vantage Point Activity - Kestrel
(April 2023 - January 2024)

Key

- Assessment boundary
- Proposed turbine location
- Vantage Point

Target species registrations

Kestrel

Height Band

- Below 30m height
- 30 - 180m height
- Above 180m height
- On ground
- Heard only

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Kilometres

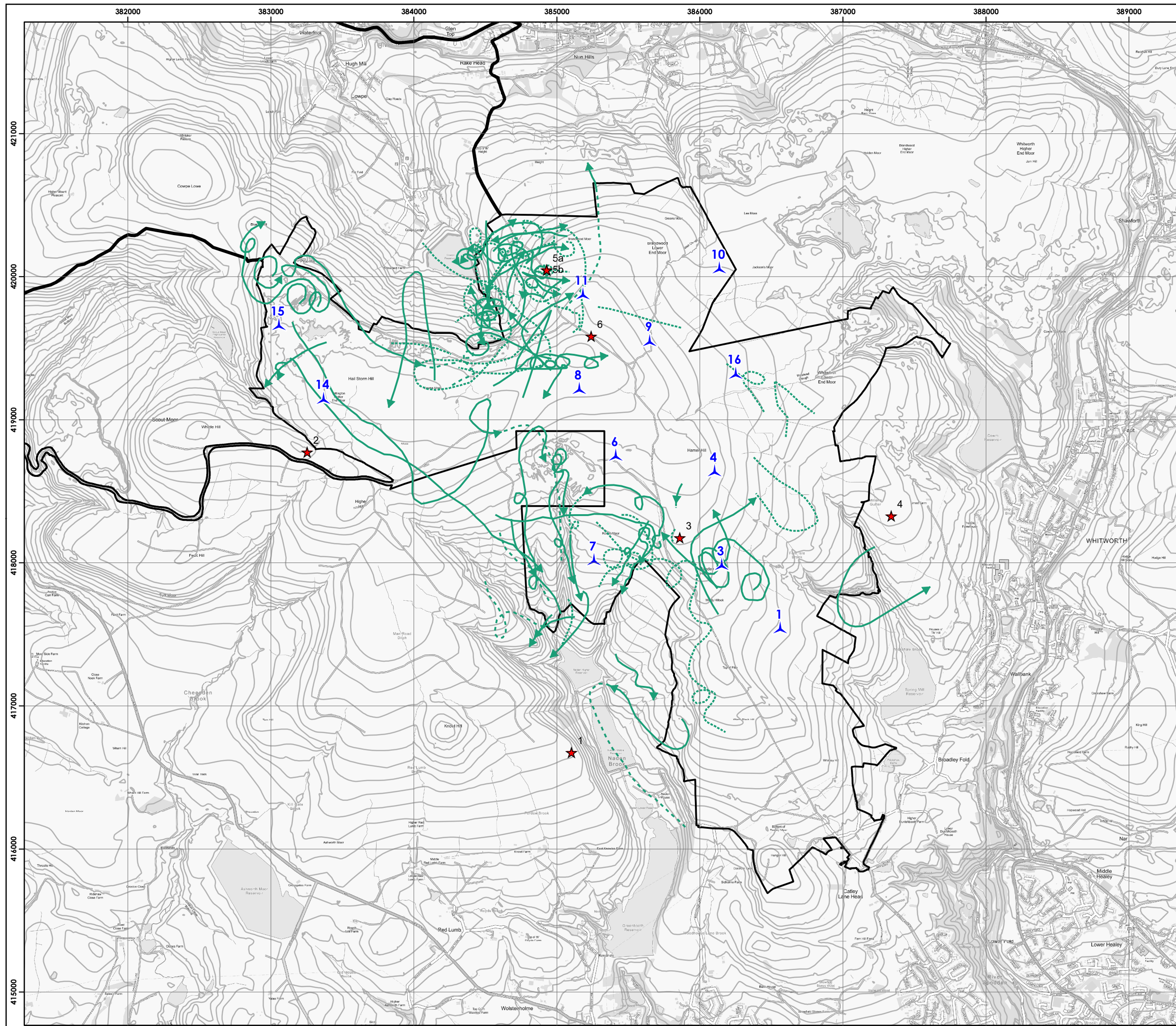


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Figure 10-2-4
Vantage Point Activity - Waterfowl
(April 2023 - January 2024)

Key

- Assessment boundary
- Proposed turbine location
- Vantage Point

Target species registrations

- Pink-footed goose
- Tufted duck
- Shoveler
- Gadwall

Height Band

- Below 30m height
- 30 - 180m height
- Above 180m height
- On ground
- Heard only

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0 0.25 0.5 1
Kilometres

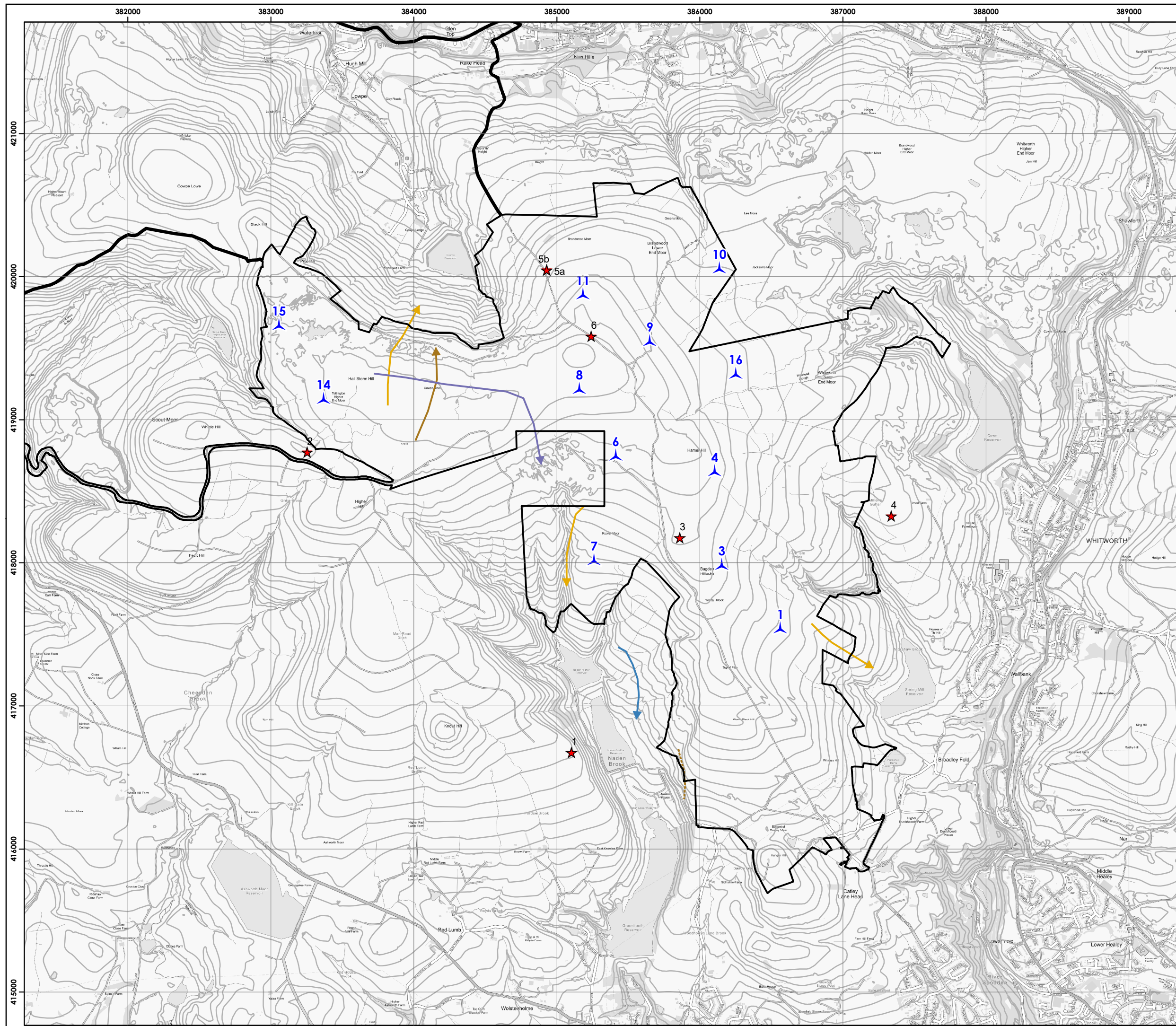


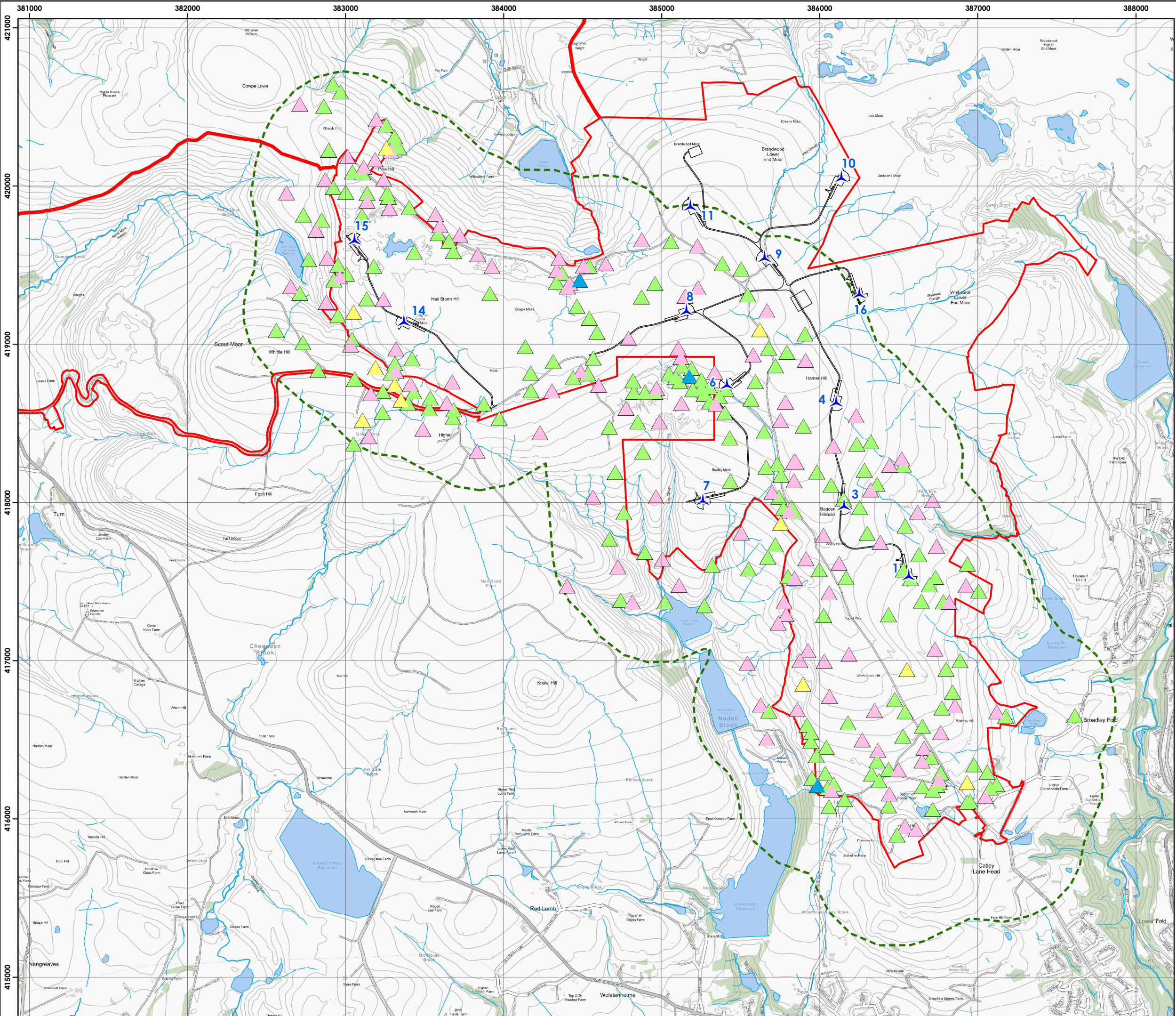
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Figure 10-2-5
Breeding Meadow Pipit
Territory Results 2023

Key

- Assessment boundary
- Proposed turbine location
- Proposed infrastructure
- Survey area

Breeding Birds Species

- Meadow Pipit

Breeding Birds Status

- Confirmed
- Probable
- Possible
- Non-breeding



0 0.5 1
Kilometres

N

Scale @ A3:
1:22,500

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