



Trecelyn Wind Farm

Appendix 9A: Ornithology Baseline

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On behalf of:
Pennant Walters

November 2023

Report Reference
edp6366_r007a

Document Control

DOCUMENT INFORMATION

Client	Pennant Walters
Report Title	Appendix 9A: Ornithology Baseline
Document Reference	edp6366_r007a

VERSION INFORMATION

	Author	Formatted	Peer Review	Proofed by/Date
007_DRAFT	MCa	SCh	RFo	-
007a	MCa	-	-	NHa 301023

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Section 1

Introduction, Purpose and Context

- 1.1 This Ornithology Baseline Report has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Pennant Walters (hereafter referred to as 'the Applicant') in relation to a proposed wind farm development on land near Newbridge, Caerphilly (hereafter referred to as 'the Site'). This Baseline Report contains the technical detail pertinent to the Ornithology Impact Assessment (OIA) provided in Chapter 9 of the proposed Trecelyn Wind Farm development Environmental Statement.
- 1.2 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained from its website (www.edp-uk.co.uk).

SURVEY BOUNDARY CONTEXT

- 1.3 For the purposes of this baseline and the OIA, the 'Survey Boundary' encompasses the planning application boundary and the surrounding core Study Area as shown in **Plan EDP 9.1**. The Survey Boundary was originally designed to collate sufficient data to allow flexibility in the final design and layout of the Proposed Development.
- 1.4 The Survey Boundary is centred approximately at Ordnance Survey Grid Reference (OSGR) ST 233 970 and lies between Mynydd Maen Common to the east, and the towns of Newbridge and Crumlin to the west. The Survey Boundary lies entirely within Caerphilly County Borough Council (CCBC), although the borders of Torfaen County Borough Council (TCBC) and Blaenau Gwent County Borough Council (BGCBC) lie roughly 300m to the north and 400m to the north-west, respectively.
- 1.5 The location and extents of the Survey Boundary were initially subject to ecological survey during 2020, with additional survey during 2021, 2022, and 2023, and are illustrated on **Plan EDP 9.1**. The Survey Boundary measures approximately 86 hectares (ha).
- 1.6 The Survey Boundary lies in the centre of a large, north-south trending ridge of high land between the Ebbw Afon valley (Crumlin, Newbridge etc.) to the west, and the Nant Gwyddon Fach valley to the south-east. Mynydd Maen Common lies further to the east, consisting of another north-south ridge. The ridge that the Survey Boundary lies on rises from south to north, lying between 300m and 400m above sea level.
- 1.7 The Survey Boundary consists of three parcels of land, and from north to south are referred to as the northern, central and southern parcels. A minor road connects the three land parcels, passing through the northern and southern parcels, and running adjacent to the central parcel. The parcels are characterised by enclosed land grazed by sheep, and to a lesser extent cattle. Areas of plantation forestry border parts of all Parcels B and C and are present elsewhere in scattered segments. Dry-stone walls, post and wire fencing, treelines, and hedgerows demarcate the fields within the enclosed areas, which are intensively

managed and species-poor. Within the southern parcel there is a small waterbody, which is a designated Site of Importance for Nature Conservation (SINC), known as “Pwllgwinau, east of Newbridge”. Immediately to the west of the southern parcel, there is a former quarry site, which is now mostly infilled.

- 1.8 The area enclosed by the Survey Boundary is dominated by areas of improved grassland (52%), along with areas of poor semi-improved grassland (37%). The remaining areas include patches of arable grassland, bare ground, and semi-improved neutral grassland. There is also a small area of shallow quarry within the northern parcel.
- 1.9 The principal ecological features within the Survey Boundary are detailed within **Appendix 8A: Ecology Baseline**.

DEVELOPMENT PROPOSALS

- 1.10 The Proposed Development is described in further detail within the Environmental Statement (ES) supporting the planning application. In brief, it comprises the application for four wind turbines, each with a three-bladed rotor with a diameter of up to 117m, a hub height of up to 84m and maximum height to blade tip of 145m.
- 1.11 The Proposed Development also includes: improvements to the existing access together with new and improved internal wind farm tracks off the main internal access road; crane pads at each turbine location; turbine foundations; underground power cables linking the turbines and the on-site substation; temporary construction compounds, laydown, and storage areas; and grid connection infrastructure, including the on-site substation, control building and underground cables linking the Site to the distribution network, together with construction enabling works. The wind farm will be designed with an operational life of 30 years.
- 1.12 The design of the proposals has been informed by the ornithological sensitivities of the Survey Boundary, as detailed in this Baseline Report, through an iterative design evolution. The development proposals assessed within the **ES Chapter 9: Ornithology**, to which this appraisal is appended, therefore incorporates ‘inherent’ mitigation to avoid or reduce the severity of potential ornithology impacts.

SCOPE OF THE BASELINE REPORT

- 1.13 This Baseline Report describes the current ornithology interest within and around the Survey Boundary, including details of the desk-based and field-based investigations employed. It then evaluates the value of the Ornithology Baseline within a geographic context.
- 1.14 The principal purpose of this report is to support the OIA of the proposals provided within **Chapter 9** of the ES accompanying the DNS application set out above. It therefore does not directly appraise the ornithological impacts of the final design but instead identifies those Important Ornithological Features (IOF) that require assessment.

1.15 The remainder of this report is structured as follows:

- **Section 2** provides details of the methodologies employed during the preparation of this Baseline Report. Full details pertaining to the surveys can be found in the Annexes and on Plans as referenced;
- **Section 3** details the baseline ecological conditions recorded by the baseline desk and field investigations (with further details also provided within Annexes and on Plans where appropriate); and
- **Section 4** summarises and evaluates the value of the pertinent ornithological features subject to the OIA of the proposals.

Section 2

Methodology

- 2.1 This section summarises the methodologies employed in determining the baseline ornithological interests within and around the Survey Boundary, in between 2020 and 2023. These investigations have been undertaken by appropriately qualified ornithologists using relevant best practice methodologies wherever possible. Reasons for any departure from best practice methodology or limitations in the survey work are presented and typically relate to the availability of access to parts of the Survey Boundary or wider Study Area. Further details of the methodologies adopted are, where appropriate, provided within Annexes and on Plans to the rear of this report.

DESK STUDY

- 2.2 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, enabling the initial collation and review of contextual information such as designated sites, together with known records of protected and Priority Species.
- 2.3 The desk study was initially undertaken in March 2020. The desk study involved requesting designated site and/or notable species records from the following groups:
- South East Wales Biodiversity Records Centre (SEWBRc) (up to 30km radius from the Survey Boundary);
 - Aderyn (the Biodiversity Information and Reporting Database of Local Environmental Records Centres Wales) (up to 30km radius from the Survey Boundary);
 - Multi-Agency Geographic Information for the Countryside (MAGIC)¹;
 - RSPB (2km) – no data received;
 - British Trust for Ornithology (2km) – confirmed all data is passed to SEWBRc; and
 - Gwent Ornithological Society (2km) – no data received.
- 2.4 Update data requests were made to SEWBRc and Aderyn in April 2022 and August 2023.
- 2.5 The search areas used are considered sufficient to cover the potential zones of influence of the Proposed Development in relation to ornithological interests.
- 2.6 In addition, the desk study was also expanded to include a review of extant planning applications within the vicinity of the Survey Boundary, including quarry workings and other wind farm proposals, where the ornithology information is publicly available from the planning portal. Of note, this included the Environmental Statement for the Mynydd Carn y Cefn and Mynydd Llanhilleth Wind Farm proposals, approximately 5km north-west

¹ www.magic.gov.uk

and 2.5km north of the Survey Boundary respectively. This information is referenced in **Section 3** where relevant.

CONSULTATION

- 2.7 Consultation via letter was undertaken with Natural Resources Wales (NRW) in February 2021, regarding the scope of the ornithology survey work completed to date and that proposed over the course of 2021, in respect of identifying important ornithology receptors, including target species, necessary to inform a subsequent planning application.
- 2.8 The views of Planning and Environment Decisions Wales (PEDW) and statutory consultees including CCBC, TCBC, BGCBC, and NRW were subsequently sought through a formal scoping request submitted in August 2022. This included presenting the impact assessment methodology, the target species, survey scope and likely ornithological sensitivities pertaining to the Survey Boundary.
- 2.9 The EIA scoping direction included a response received from CCBC, which confirmed their agreement with the scope of survey work, assessment methodology and designated sites that were scoped into the assessment. However, they recommended that passerine species such as skylark (*Alauda arvensis*) be scoped into the Ornithology Impact Assessment, as there was considerable potential for negative impact on these species during the construction phase. No response was received from the TCBC or BGCBC ecology officers.
- 2.10 The EIA scoping direction also included a response from NRW, which broadly agreed with the assessment methodology and scope of survey work, including the need to consider potential impacts on lesser black-backed gulls associated with the Severn Estuary SPA/Ramsar. However, NRW considered that Llangdegfedd Reservoir SSSI, and the population of overwintering birds that the SSSI is designated for, should be scoped in as an IOF.
- 2.11 The EIA scoping direction received from the PEDW confirmed its agreement with the general ornithology scoping approach proposed and concurred with the recommendations of the CCBC Ecology Officer and NRW. PEDW raised no other matters relating to ornithology.

INITIAL SCOPING EXERCISE

- 2.12 Initial bird scoping exercises of the Site were completed during March 2020 to identify the suitability of the Study Area and surrounding landscape for potential target bird species and to ground-truth Vantage Point locations following some initial desk-based data collation and Viewshed analysis.

TARGET SPECIES

- 2.13 The Survey Boundary and surrounding landscape comprise a mixture of upland pastoral farmland/moorland and coniferous woodland dissected by small watercourses and more intensively farmed valleys, villages, and towns. These habitats provide breeding and foraging opportunities for a number of bird species of conservation concern and/or species

that are potentially sensitive to a development of this nature, including raptors, waders and waterfowl.

2.14 In accordance with best practice guidance, the surveys and subsequent assessment will focus on species drawn from the following important lists:

- *EU Birds Directive* (79/409/EEC);
- *Wildlife and Countryside Act* (1981, as amended) (WCA);
- Species at risk of collision with turbines, as included in the SNH 2017 guidelines²;
- Red and Amber-listed birds contained within *Birds of Conservation Concern in Wales* 4³ (BoCCW4); and
- Priority Species listed under Section 7 of the *Environment (Wales) Act* 2016.

2.15 Species contained within these lists that, by virtue of their breeding, roosting, feeding, or migrating behaviour may be sensitive to the Proposed Development, will be identified as target species for assessment purposes. Consideration is also be given to species identified locally as of conservation concern within the Gwent Bird Report⁴.

2.16 For the purposes of this baseline report, further consideration has also been given to all waterfowl and Red listed passerine species within the species evaluation provided in **Section 3**. However, best practice guidelines state that passerine species are generally not negatively impacted by turbines and will therefore be excluded from the OIA, except where significant habitat loss/disturbance impacts could potentially arise. CCBC, NRW and the PEDW have agreed with this approach, as set out within the EIA scoping direction received.

ORNITHOLOGY SURVEYS

2.17 The initial bird scoping exercises of the Site, completed in March 2020 alongside the desk study, were used to identify the potential target species and the appropriate scope of survey work. This was subsequently refined according to the ongoing survey findings and consultation responses.

2.18 The ornithology surveys commenced in April 2020 and, with reference to best practice guidance⁵, continued for two years to account for yearly and seasonal variation and collate a robust dataset to inform the Proposed Development. The surveys 'scoped in' are summarised in turn below and a brief explanation of those surveys 'scoped out' is provided thereafter.

² Scottish Natural Heritage (2017) *Recommended bird survey methods to inform impact assessment of onshore wind farms* (Version 2)

³ Johnstone, I., Hughes, J., Balmer, D., Brenchley, A., Facey, R., Lindley, P., Noble, G., and Taylor, R. (2022). *Birds of Conservation Concern Wales 4: the population status of birds in Wales*. Milvus 1(2)

⁴ Gwent Ornithological Society (2019). *Gwent Bird Report 2019*, Vol. 55

⁵ Scottish Natural Heritage (SNH) *for the Assessment of Likely Impact of Onshore Wind Farms on Bird Communities – Version 2* (2017)

2.19 The scope of ornithology surveys was confirmed with NRW, PEDW and CCBC via the EIA scoping direction, and comprised two years of the following:

- Vantage Point Surveys;
- Moorland Breeding Bird Surveys;
- Raptor Surveys;
- Nightjar and Breeding Owl Surveys;
- Winter Bird Transects;

2.20 The Study Area buffers applied to the ornithology surveys varied according to the species/species groups, extending up to 2km from the Survey Boundary for breeding raptors, as illustrated in **Plan EDP 9.1**. The dates, times and weather conditions for all of the surveys detailed below are provided in **Annex EDP 9.1**.

Vantage Point Surveys

2.21 Vantage Point surveys were completed with reference to best practice guidelines published by Scottish Natural Heritage (SNH; 2017). Two Vantage Points were selected, that afford the most comprehensive views of the Survey Boundary and 500m from potential turbine locations, following desk-based Viewshed analysis and a scoping site visit in March 2020.

2.22 The location of the Vantage Points and Viewsheds (including parameters used to calculate these) is provided on **Plan EDP 9.2**.

2.23 A total of 36 hours observation were completed at each Vantage Point during the 2020 and 2021 breeding bird seasons (April–August). A total of 36 hours were also completed at each Vantage Point during the winter (September to March) 2020–2021 survey season. Additional survey effort was undertaken during the 2021–2022 surveys within the passage/migratory periods, to provide greater coverage at this time given the potential for Severn Estuary SPA/Ramsar qualifying species to move over the Survey Boundary. As such, between September 2021 and April 2022 a total of 54 hours per Vantage Point was completed. A summary of the hours completed at each Vantage Point position is provided in **Table EDP 2.1**.

Table EDP 2.1: Vantage Point (VP) hours across Non-breeding and Breeding Seasons 2020-2022

Month and Year	Number of Survey Hours	
	VP 1	VP 2
Non-breeding/Passage Season		
September 2020	6	6
October 2020	6	6
November 2020	6	6
December 2020	3	3
January 2021	3	3

Month and Year	Number of Survey Hours	
	VP 1	VP 2
February 2021	6	6
March 2021	6	6
Total Non-breeding Season Hours 2020/2021	36	36
September 2021	6	6
October 2021	6	6
November 2021	6	6
December 2021	6	6
January 2022	6	6
February 2022	6	6
March 2022	9	6
April 2022	9	12
Total Non-breeding/Passage Season Hours 2021/2022	54	54
Breeding Season		
April 2020	3	3
May 2020	12	12
June 2020	9	9
July 2020	9	9
August 2020	3	3
Total Breeding Season Hours 2020	36	36
April 2021	9	9
May 2021	6	6
June 2021	6	6
July 2021	12	12
August 2021	3	3
Total Breeding Season Hours 2021	36	36

- 2.24 Watches were spread over the course of the months, generally entailing six hours per month with the exception of a reduced survey effort of three hours at each Vantage Point adopted in some months and an increased effort of 12 hours per Vantage Point during certain months, reflecting changes in the perceived ornithological sensitivities during these periods and/or owing to the timing of instruction. In summary, a total of approximately 162 hours (minus hours lost due to inclement weather detailed under limitations) of Vantage Point observations were undertaken from each Vantage Point between April 2020 and April 2022.
- 2.25 With reference to best practice guidance, each Vantage Point was surveyed for a maximum three-hour observation period, after which the observer would take a break and move to a different Vantage Point or leave site. The start and finish times of the Vantage Point surveys

were varied to obtain a range of information on bird movements during different times of the day. This was to account for diurnal movements and crepuscular species such as owls. Where surveys were completed simultaneously and Viewsheds overlapped, surveyors remained in contact to prevent duplicate recordings and share movement information.

2.26 All target species observed flying through the Survey Boundary and surroundings were recorded on a tablet with the following information;

- Species;
- Age and sex (if known);
- Time of registration;
- Direction of flight;
- Flight height (recorded in bands);
- Time spent in the wind farm area (seconds); and
- Notes on behaviour.

2.27 Target species flight heights were recorded at 15-second intervals. Based on the worst-case turbine specifications, the following core height bands were used:

- < 30m;
- 30–180m (Collision Risk Zone; CRZ); and
- > 180m.

2.28 Additional height band increments were recorded to allow some flexibility should the turbine specification change. However, for the purposes of the assessment they have been combined under the three core categories provided to account for the worst-case scenario. Further details are provided in **Technical Appendix 9B Collision Risk Analysis**.

2.29 In addition, the number and activity of ‘secondary’ species was summarised every five minutes.

Moorland Breeding Bird Survey

2.30 The Study Area surrounding the Survey Boundary contains suitable habitat for moorland birds. Four visits were therefore undertaken in each of the 2020, 2021, and 2022 breeding seasons (mid-April to early July), using an adapted Brown and Shepherd (1993) methodology⁶ as per SNH guidance (2017) to map the breeding territories of upland waders within an 800m radius of the Survey Boundary, where access allowed.

⁶ Brown, A.F. & Shepherd, K.B. (1993) *A Method for Censusing Upland Breeding Wader*. Bird Study, 40, 189–195.

- 2.31 With reference to best practice guidance the surveys were timed between 08.30 and 18:00 and undertaken during suitable weather conditions. Days/periods with strong winds and heavy or persistent rain were generally avoided.
- 2.32 All areas of suitable wader habitat within the Survey Boundary and surrounding 800m were accessed to within approximately 100m. Any wader activity was noted in full. In addition, any conservation concern species, including passerines, were also recorded, with any breeding activity noted in line with Common Bird Census (CBC) survey methodologies.
- 2.33 Owing to an absence of moorland bird interests in 2020, survey times in 2021 were moved closer to dawn to be more in accordance with common breeding bird census methodologies and better suited to recording other species. The 2021 and 2022 surveys were also expanded to include some additional non-moorland improved grassland habitats and increase more general breeding bird survey coverage. The moorland breeding bird survey area was also reduced during the year 2 and 3 surveys to reflect a reduction in the Survey Boundary, including removal of an area of moorland habitat to the north-east.
- 2.34 The approximate breeding bird transect routes are illustrated on **Plan EDP 9.3** and the timing and weather conditions during the surveys provided in **Annex EDP 9.1**.

Breeding Raptor Survey

- 2.35 The raptor survey comprised an initial desk-based assessment of aerial photography to identify potential raptor nesting habitat (by target species) within 2km of the Survey Boundary, and collation of breeding records as part of the desk study. This was followed by three surveys of potentially suitable habitat in 2020, and four surveys in 2021, to record breeding activity with reference to best practice guidance⁷.
- 2.36 Owing to the size of area requiring consideration, a combination of walked transects and stationary watches was used. The surveys were undertaken during suitable weather conditions and timed to coincide with key periods in the breeding season between March and July. If a nesting territory appeared to be unoccupied on the basis of the first two or three visits, then further visits to that territory were generally omitted.
- 2.37 The raptor survey transects and vantage point locations are approximately illustrated on **Plan EDP 9.4**. The timing and weather conditions during the surveys is provided in **Annex EDP 9.1**.

Nightjar and Breeding Owl Survey

- 2.38 Given the occurrence of some suitable habitat for nightjar (felled/young woodland/-heathland) adjacent to the Survey Boundary, as well as owls (large, wooded areas and open moorland), the presence of these species could not be ruled out and therefore specific surveys were completed.

⁷ Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. (2013) *Raptors: a field guide to survey and monitoring, 3rd Edition*. TSO Edinburgh.

- 2.39 The surveys comprised three dusk or dawn nocturnal visits in 2020, 2021 and 2023, spread between June and July, targeting suitable woodland habitat within 500m of the Survey Boundary to listen for churring nightjars, calling owls and any visible foraging activity over woodland and adjacent habitat. An additional visit was made in March 2021 to listen for calling owls only.
- 2.40 With reference to best practice guidance⁸ the surveys either commenced at dusk and continued for three hours after dusk, or commenced three hours before dawn and continued until dawn. The transect routes were walked/driven by two pairs of surveyors and incorporated regular listening stops.
- 2.41 Any incidental owl or nightjar records were also recorded by bat surveyors over the course of the summer survey seasons.
- 2.42 The nightjar and owl transect routes are approximately illustrated on **Plan EDP 9.5.** and the timing and weather conditions provided in **Annex EDP 9.1.**

Winter Transect Survey

- 2.43 Moorland habitat within 800m of the Survey Boundary has potential to support over-wintering or passage birds, including waders, short-eared owls and hen harriers. Six winter transect surveys were therefore completed at monthly intervals between October 2020 and March 2021 and repeated between October 2021 and March 2022. These surveys consisted of walking to within approximately 100m of all areas of moorland and grassland habitat within the Study Area. The transect was walked by two surveyors, over the course of a day on each occasion. Surveyors stayed in communication to prevent duplicate recordings and any observations of conservation concern species were recorded on a tablet.
- 2.44 The approximate winter transect routes are illustrated on **Plan EDP 9.3** and the timing and weather conditions provided in **Annex EDP 9.1.**

Barn Owl Survey

- 2.45 Records and locations of barn owl nest sites were obtained from SEWBRcC for a 2km radius around the Survey Boundary. Where access was allowed, buildings and trees within 200m of the Survey Boundary were checked by a licensed ornithologist, alongside bat roost inspections, to identify breeding or roosting activity, with reference to best practice guidance⁹.
- 2.46 In addition, local farmers were approached, where possible, for any information they might have on the presence of barn owls across their land. Vantage Point survey timings were also varied during the survey season with some three-hour sessions timed to include crepuscular periods to record foraging on-site, which, in addition to the dawn breeding bird surveys, should assist in recording any on-site foraging activity. Any incidental sightings of this species were also recorded whilst completing nightjar, great crested newt and bat surveys.

⁸ Gilbert, G., Gibbons, D.W., and Evans, J. (1998). *Bird Monitoring Methods: A manual of techniques for key UK species*. RSPB, Bedfordshire.

⁹ Barn Owl Trust (2012) *Barn Owl Conservation Handbook*, Pelagic Publishing, Exeter.

Survey Limitations

- 2.47 Over the duration of the survey period (April 2020 to April 2022), 23 hours of Vantage Point observation out of 324 (7.1%) (not including raptor Vantage Point watches) were undertaken during relatively poor visibility. This included short periods of low cloud and mist moving in and out of the survey area during surveys in October 2020, January, September, October and March 2021, and April 2022. No surveys were completely conducted in unsuitable weather.
- 2.48 Periods of prolonged heavy rain were avoided, with only a few heavy showers recorded throughout the survey period. Where surveys had to be abandoned, they were rescheduled to achieve the necessary survey effort.
- 2.49 The data from the January 2022 winter transect survey was lost due to an equipment failure. However, although the specific numbers and locations of target species cannot be included in the analysis, the surveyor confirmed that no additional target species were recorded on these surveys.
- 2.50 During the 2020 breeding bird surveys, a full survey of passerine species was not completed, in line with best practice guidance for wind farm proposals. In 2021 and 2022, comprehensive breeding bird surveys were completed as a precaution to increase the robustness of the survey effort and ensure there was sufficient information to also consider the passerine assemblage.
- 2.51 During one survey in May 2021, mixed flocks of herring gull (*Larus argentatus*) and lesser black-backed gull (*Larus fuscus*) were recorded as a collective. For the purposes of flight data collation and collision risk analysis, these flock numbers have been evenly split between these species. It is not considered that a small variance in favour of either species would significantly alter the Collision Risk Modelling (CRM).
- 2.52 While some of the survey data is between two and three years old at the time of submission, this is not considered to be a limitation to the assessment in the context of the scale of historic survey effort and absence of notable changes in land management practices, as set out in **Chapter 8 Biodiversity**. In addition, ongoing surveys relating to adjacent wind farms (including those which EDP are involved in), provide further current information suggesting that the assemblage is unchanged and these have been reviewed as part of the desk study.
- 2.53 In light of the survey effort and level of activity recorded, the limitations highlighted above are not considered to significantly affect the robustness of the baseline against which the OIA is evaluated.

Surveys Scoped Out

- 2.54 Species-specific surveys for black grouse (*Lyrurus tetrix*) were scoped out based on a lack of records and absence of suitable breeding and foraging habitat for this species within the Survey Boundary or wider Study Area. Despite not completing specific surveys for this species, it is considered that given the number of hours spent surveying within the Survey Boundary, this species would have been recorded if present.

- 2.55 On the basis of the survey results, best practice guidance and consultation, woodland point counts were scoped out. This is considered to be justified given the lack of potential woodland impacts from the Proposed Development.

CRITERIA FOR EVALUATING THE VALUE OF SPECIES/ASSEMBLAGES

- 2.56 A number of criteria are available to determine the conservation status of those bird species recorded. These criteria aid in evaluating the value of the species and combined assemblage present within the Study Area during the winter and breeding seasons. The most appropriate of these are:
- Schedule 1 of the WCA – The WCA affords greater protection to certain breeding species that are considered appropriately at risk nationally and as such are listed as specially protected under Schedule 1;
 - *Birds of Conservation Concern Wales 4* (2022) - Under this approach Welsh bird populations are assessed, using quantitative criteria, to determine the population status of each species and then placed on one of three lists: Red, Amber or Green. These criteria include:
 - Red list species are of high conservation concern, being either globally threatened, having historical Welsh population declines between 1800 and 1995, or a rapid population decline or breeding range contraction by 50% or more in the last 25 years;
 - Amber list species are of medium conservation concern due to a number of factors, for example having suffered between 25% and 49% contraction of UK breeding range or a 25-49% reduction in breeding or non-breeding populations over the last 25 years. Species which have a five year mean of fewer than 30 breeding pairs or an unfavourable European conservation status, or for which the breeding or wintering population in Wales represents 50% or more of the UK population, are also listed on the Amber list; and
 - Green list species are those that don't fit into either of the previous two categories;
 - Priority Species listed under Section 7 of the *Environment (Wales) Act* 2016;
 - Species status as defined in the 2019 Gwent Bird Report; and
 - Criteria for the Selection of Sites of Importance for Nature Conservation in the County Boroughs of Blaenau Gwent, Caerphilly, Merthyr Tydfil and Rhondda Cynon Taf (the 'Mid-Valleys Area')
- 2.57 A summary of the approach taken to valuing ornithological receptors at different geographic scales is provided in **Table EDP 2.2**.

Table EDP 2.2: Summary of the Approach to Valuing Ornithological Receptors at Different Geographics Scales.

Level of Value	Examples
International	<ul style="list-style-type: none"> • International nature conservation areas including any SPA, proposed SPA or Ramsar; • Populations of internationally designated site qualifying species that depend on the Development Site (i.e. functionally linked to the designation); • Species present in internationally important numbers (>1% of European populations); and • Species listed on Annex I of the <i>EC Birds Directive</i> if present in qualifying numbers/proportions of international population.
National (Wales/UK)	<ul style="list-style-type: none"> • National nature conservation areas, including any SSSI or NNR designated for ornithology features; • Populations of national nature conservation area qualifying species that depend on the Development Site (i.e. functionally linked to the designation); • Breeding or overwintering populations of ecologically sensitive rare bird species (<300 breeding pairs in the UK); • Species present in nationally important numbers (>1% Welsh/UK population); and • Regularly occurring relevant migratory species, which are of rare and/or of significant conservation concern that warrant special consideration on account of the proximity of migration routes, breeding, wintering and staging areas in relation to the Development Site.
County (Torfaen and Blaenau Gwent)	<ul style="list-style-type: none"> • Local nature conservation areas designated for ornithology, including any LNR or SINC; • Populations of species for which a locally designated site has been designated that depend on the Development Site; • County-scale important population/assemblage of bird species listed on Schedule 1 of the WCA or Section 7 of the <i>Environment Act (Wales) 2016</i>; • Species present in regionally important numbers (>1% regional population); • Significant breeding or overwintering populations of species on the Red List for Birds of Conservation Concern within the county context; and • Significant species, populations or assemblage that would meet the criteria set for SINC designation.
Local	<ul style="list-style-type: none"> • Breeding or overwintering populations of bird species listed on Schedule 1 of the WCA or Section 7 of the <i>Environment Act (Wales) 2016</i>, where not captured in higher scale categories; and • Other species of conservation interest where a notable population is present, e.g. breeding populations of red- or amber-listed species of <i>Birds of Conservation Concern</i>.

Level of Value	Examples
Less than Local/Site	<ul style="list-style-type: none"> All other species not included in the above categories, such as populations of green-listed species or smaller populations of certain conservation concern species that are otherwise common and widespread. Such species are normally scoped out of the assessment process.

INTERPRETATION OF THE BREEDING BIRD SURVEY RESULTS

2.58 Breeding status is defined using the European Bird Census Council (EBCC) *Criteria for Categorisation of Breeding Status*, as devised by the European Ornithological Atlas Committee (EOAC). The results of the breeding bird surveys are assessed against the EBCC criteria for breeding bird status¹⁰. These are shown below:

Confirmed Breeding

- Distraction-display or injury feigning;
- Used nest or eggshells found (occupied or laid within period of survey);
- Recently fledged young (nidicolous species) or downy young (nidifugous species);
- Adults entering or leaving nest-site in circumstances indicating occupied nest (including high nest or nest-holes, the contents of which cannot be seen) or adult seen incubating;
- Adult carrying faecal sac or food for young;
- Nest containing eggs; and
- Nest with young seen or heard.

Probable Breeding

- Pair observed in suitable nesting habitat in breeding season;
- Permanent territory presumed through registration of territorial behaviour (song, etc.) on at least two different days a week or more apart at the same place;
- Courtship and display;
- Visiting a probable nest site;
- Agitated behaviour or anxiety calls from adults;
- Brood patch on adult examined in the hand; and

¹⁰ Hagemeijer, E.J.M., and Blair, M.J. (editors). 1997. *The EBCC Atlas of European Breeding Birds; Their Distribution and Abundance*. T & A D Poyser, London

- Nest building or excavating nest-hole.

Possible Breeding

- Species observed in breeding season in possible nesting habitat; and
- Singing male(s) present (or breeding calls heard) in breeding season.

Non-Breeding

- A species found present during the survey but considered to be not breeding within the survey area; and
- Recorded simply as a bird flying over the Survey Boundary or a species that is present but considered to be non-breeding, due to a lack of suitable breeding habitat or lack of behaviour characteristic of breeding.

COLLISION RISK ANALYSIS

- 2.59 Ornithologists carrying out the Vantage Point surveys recorded bird flights (flightlines), their duration and an estimate of flight height. Species selected as target species were raptors (e.g. red kite (*Milvus milvus*) and hen harrier (*Circus cyaneus*), waterfowl (e.g. geese and ducks) and wading birds (e.g. golden plover (*Pluvialis apricaria*) and lapwing (*Vanellus vanellus*)). The data was then used to assess collision risk using the standard Collision Risk Model developed by SNH¹¹. The model uses data from the Vantage Point surveys in conjunction with species-specific biometric information and turbine specifications, such as the number of turbines, and the radius of the hub, the height, and the rotor. The output from the model is an assessment of the likely number of collisions for each species, per given period, through direct collisions with the turbine blades.
- 2.60 The model gives the number of likely collisions in the absence of birds using avoidance measures to prevent collision with the turbines. Further analysis can use species specific avoidance measure rates¹² to calculate the likely number of casualties should these avoidance measures be applied.
- 2.61 Further information on collision risk analysis methodology and the results are provided in **Technical Appendix 9B**.

¹¹ Scottish Natural Heritage (SNH) (2020). *Guidance Note: Windfarms and Birds: Calculating a Theoretical Collision Risk assuming No Avoiding Action*. (online) Accessed July 2022. Available at: <https://www.nature.scot/doc/wind-farm-impacts-birds-calculating-theoretical-collision-risk-assuming-no-avoiding-action>

¹² Scottish Natural Heritage (SNH) (2018). *Use of Avoidance Rates in the SNH Wind Farm Collision Risk Model*. (online) Accessed July 2022. Available at: <https://www.nature.scot/wind-farm-impacts-birds-use-avoidance-rates-snh-wind-farm-collision-risk-model>

Section 3

Results – Baseline Conditions

- 3.1 This section of the Baseline report summarises the baseline ornithology features determined through the course of desk-based and field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those avian populations which lie within the Survey Boundary's potential zone of influence (Zol) and are considered to be pertinent in the context of the Proposed Development. It seeks to identify potentially valuable ornithology receptors within the Survey Boundary, which would require full consideration within an OIA.
- 3.2 Further technical details are, where appropriate, provided within Annexes and on Plans to the rear of this report.

DESIGNATED SITES

- 3.3 Information regarding designated sites was obtained during the desk study from the MAGIC website, Aderyn and SEWBRc. International and national statutory designations (those receiving legal protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below and illustrated on **Plans EDP 9.6, 9.7, and 9.8** respectively.

STATUTORY DESIGNATIONS

- 3.4 Statutory designations represent the most significant ecological receptors, being of recognised importance at an international and/or national level. International designations include SPAs, Special Areas of Conservation (SACs) and Ramsar sites. National designations include SSSI and National Nature Reserves (NNRs).
- 3.5 No part of the Survey Boundary is covered by any statutory designations. However, there are several such designations within the Survey Boundary's potential Zol, as summarised in **Table EDP 3.1** and illustrated on **Plans EDP 9.6 and 9.7**.

Table EDP 3.1: Statutory Ornithology Designations within the Survey Boundary's Potential Zol

Designation	Distance from Survey Boundary (approx.)	Brief Description
International (30km)		
Severn Estuary SPA/Ramsar	14km south-east	The Severn Estuary is important for migratory birds, with its tidal flats and associated wetlands regularly supporting over 20,000 wintering waterfowl. Internationally important populations of five species of waterfowl are regularly supported by the estuary. These include European white-fronted goose (<i>Answer albifrons albifrons</i>), shelduck (<i>Tadorna tadorna</i>), gadwall

Designation	Distance from Survey Boundary (approx.)	Brief Description
		(<i>Mareca strepera</i>), dunlin (<i>Calidris alpina</i>) and redshank (<i>Tringa tetanus</i>). In addition, the islands of Flat Holm and Steep Holm support a nationally important breeding population of lesser black-backed gulls. The Severn Estuary also regularly supports an internationally important population of Bewick's swan (<i>Cygnus columbianus bewickii</i>), an Annex I species.
National (15km)		
Llandegfedd Reservoir SSSI	7km east	Llandegfedd Reservoir is the largest inland open water habitat in the county and a regionally important area for overwintering wildfowl in Wales. The site is particularly important for the overall numbers and variety of wintering wildfowl, with large numbers of wigeon (<i>Mareca penelope</i>), pochard (<i>Aythya ferina</i>) and mallard (<i>Anas platyrhynchos</i>).
Blorengel SSSI	10km north	A large upland site supporting sub-montane heath with large areas of <i>Calluna</i> – <i>Empetrum</i> - <i>Vaccinium vitis-idaea</i> , a community which is of local distribution in south Wales. Supports a locally important population of red grouse (<i>Lagopus lagopus scotica</i>).
Nelson Bog SSSI	10km west	Nelson Bog is of interest for its range and diversity of mire communities. The SSSI is also an important ornithological site with over 90 species recorded.
River Usk (Lower Usk) SSSI	12km north-east (closest section)	The River Usk (Lower Usk) is particularly important as a rare example of a large mesotrophic lowland river, which has not been subject to significant manmade modification. The site is also important for its invertebrate assemblage, otter (<i>Lutra lutra</i>) population, diverse flora, breeding bird assemblage and diverse and high-quality riparian habitats. Part of the River Usk SAC.
Lisvane Reservoir SSSI	14km south-west	A reservoir providing habitat to wildfowl species including mallard, teal (<i>Anas crecca</i>), tufted duck (<i>Aythya fuligula</i>), pochard, and coot (<i>Fulica atra</i>). Occasionally also divers and grebes.
Severn Estuary SSSI (Flat Holm and Steep Holm)	31km and 35km south	Notified for its internationally important populations of wintering and wading birds of passage, supporting estuarine habitats of ornithological significance. The estuary, as a whole, is the single most important wintering ground of dunlin in Britain, supporting about 10.5% of the British wintering population. Nationally important lesser black-backed gull populations.

Non-statutory Designations

- 3.6 Non-statutory designations are also commonly referred to in planning policies as ‘local sites’ and are typically considered to be of importance at a County level. In Caerphilly, such designations are named Sites of Importance for Nature Conservation (SINC). Additional designated sites, which should be considered at this level include Local Nature Reserves (LNR), where these are not covered by other designations.
- 3.7 Four SINCs partially designated for their bird interests are partly present within the Survey Boundary itself, or immediately adjacent, as summarised in **Table EDP 3.2** and illustrated on **Plan EDP 9.8**.

Table EDP 3.2: Non-statutory SINC Designations with Birds in their Citation that are Located Partly within or Adjacent to the Survey Boundary

Designation	Location	Brief Description
Coed Cil-Lonydd, East of Newbridge	Borders the south-west boundary of the northern parcel (ref C8)	This SINC contains an area of broad-leaved woodland with an assemblage of semi-natural indicator species, as well as a stream and scrub patches. Notable bird species observed included buzzard (<i>Buteo buteo</i>), raven (<i>Corvus corax</i>) and song thrush (<i>Turdus philomelos</i>).
Cwm Hafod-Fach Woodlands, North of Abercarn	Located on the western border of the southern parcel (ref C5)	Mixed woodland on the slopes surrounding a quarry. Notable bird species observed included buzzard, skylark, wood warbler (<i>Phylloscopus sibilatrix</i>), willow warbler (<i>P. trochilus</i>), song thrush, and meadow pipit (<i>Anthus pratensis</i>).
Gwydon Valley Woodlands, Abercarn	Borders the eastern boundary of the central and southern parcels, and the road connecting them to the northern parcel (ref C73)	A large area of forestry plantation on the site of former ancient woodland. A few large beech trees remain, plus semi-natural indicator species as ground flora. Notable bird species observed included curlew (<i>Numenius arquata</i>), sparrowhawk (<i>Accipiter nisus</i>), buzzard, raven, skylark, willow warbler, goldcrest (<i>Regulus regulus</i>), and meadow pipit.
Mynydd Maen, East of Newbridge	Borders the south and east of the northern parcel, and includes part of the road that connects all three parcels (ref C72)	A large area of open countryside containing semi-natural upland features, including acid grassland/heath and locally significant bryophyte species. It has the potential to support breeding waders such as curlew and lapwing.

DESK STUDY

- 3.8 The pertinent results for target species (excluding passerines) returned from the desk study are provided in **Table EDP 3.3**, and from extant wind farm applications in the surrounding landscape, where available, in **Table EDP 3.4**.

Table EDP 3.3: Summary of the Desk Study Results Relating to Focal Target Species

Bird Species	Conservation Status				Desk Study Records within 2km
	Schedule 1 WCA	Priority Species	BoCC Wales 4	Local BAP	
Mallard (<i>Anas platyrhynchos</i>)			Green		There was a total of 88 records of mallard within the last 10 years, the closest of which was located 80m to the west of the road connecting the three land parcels in 2016.
Nightjar (<i>Caprimulgus europaeus</i>)		✓	Green	✓	Within the last 10 years, there were two records of nightjar: two males caught by bird ringers, in a valley 660m to the south-east of the Survey Boundary, and a group of six recorded 280m in the same direction.
Cuckoo (<i>Cuculus canorus</i>)		✓	Red		There was a total of seven records of Cuckoo in the past 10 years, including several records of calling males. The closest record was located 250m to the east of the Survey Boundary in 2020.
Lapwing (<i>Vanellus vanellus</i>)		✓	Red	✓	Within the last 10 years, a single record was returned from the hill to the north-west of Newbridge, in 2015, but this was located 2.1km to the east of the Survey Boundary. Looking further back, there were another three records: one from Mynydd Maen in 2010 and two from 1.9km to the north in 2004.
Golden Plover (<i>Pluvialis apricaria</i>)		✓	Red		A single record was returned from Mynydd Maen, 670m to the east of the Survey Boundary, in 2016.
Curlew (<i>Numenius arquata</i>)		✓	Red	✓	No records from the last 10 years, but five older records. Two records were of a displaying pair in 2011, located 1.0km to the north. The other three records were from 2007: one on Mynydd Maen, and two from the valley immediately to the south of it.
Snipe (<i>Gallinago gallinago</i>)			Amber		Nine snipe records, seven of which were from Mynydd Maen, and two on the hills to the north of Crumlin. The closest record was 140m to the east of the Survey Boundary.
Woodcock (<i>Scolopax rusticola</i>)			Red		There was a single record of woodcock, which was located in a valley 660m to the south-east of the Survey Boundary.
Common Gull (<i>Larus canus</i>)			Amber		There was a total of 206 records of common gull within the past ten years. These records were all associated with the Ebbw River valley to the west of the Survey Boundary.

Bird Species	Conservation Status				Desk Study Records within 2km
	Schedule 1 WCA	Priority Species	BoCC Wales 4	Local BAP	
Great Black-backed Gull (<i>Larus marinus</i>)			Amber		There was a total of 39 records of great black-backed gull from the last 10 years. These records were all associated with the Ebbw River valley to the west of the Survey Boundary.
Herring Gull (<i>Larus argentatus</i>)		✓	Red		There was a total of 25 records of herring gull, nearly all of which were associated with the Ebbw River valley to the west of the Survey Boundary.
Lesser Black-backed Gull (<i>Larus fuscus</i>)			Red		There was a total of 175 records of lesser black-backed gull from the past 10 years. These records were all associated with the Ebbw River valley to the west of the Survey Boundary.
Cormorant (<i>Phalacrocorax carbo</i>)			Green		There were two cormorant recorded, both located near to the river Ebbw, 1.2km to the west of the Survey Boundary.
Grey Heron (<i>Ardea cinerea</i>)			Amber		There was a total of six records of grey heron, all associated with the Ebbw River valley to the west of the Survey Boundary. One of these was a probable breeding record, located approximately 1.0 km to the west of the Survey Boundary.
Goshawk (<i>Accipiter gentilis</i>)	✓		Amber	✓	Five records of goshawk were returned within 2km, the closest of which was located 660m to the south-east of the Survey Boundary. There was also a confirmed breeding record located just beyond the 2km buffer to the south, near Twmbarlwm.
Hen Harrier (<i>Circus cyaneus</i>)	✓	✓	Red		The desk study returned two records of hen harrier within 2km, both located 1.6km to the north-east, although both these records were from 2004 and 2005. In addition, the Gwent Bird Report ¹³ 2019 has a record of one in December 2019, on Mynydd Maen.
Red Kite (<i>Milvus milvus</i>)	✓		Green		A total of 13 records of red kite were returned by the desk study, the closest of which was located 80m to the west of the road connecting the three land parcels in 2016.
Barn Owl (<i>Tyto alba</i>)	✓		Green	✓	Three records, including a nest site. This was located 1.27 km to the west of the Survey Boundary in 2019. The other records were also similar distances to the west.

¹³ Gwent Ornithological Society (2019). *Gwent Bird Report 2019*, Vol. 55

Bird Species	Conservation Status				Desk Study Records within 2km
	Schedule 1 WCA	Priority Species	BoCC Wales 4	Local BAP	
Kestrel (<i>Falco tinnunculus</i>)		✓	Red	✓	29 records of kestrel were returned, the closest of which was located 670m to the east, on Mynydd Maen Common.
Merlin (<i>Falco columbarius</i>)	✓		Red		There was a single record of merlin, located 1.65km to the north-west, in 2016.
Hobby (<i>Falco subbuteo</i>)	✓		Green		There was a single record of hobby, located 250m to the east of the Survey Boundary, in 2020.
Peregrine (<i>Falco peregrinus</i>)	✓		Green	✓	Four records were returned, which ranged from sightings of pairs to two confirmed breeding records. The closest confirmed breeding record was located 1.10km to the north of the Survey Boundary.

Table EDP 3.4: Summary of the Important Ornithology Features Identified by Wind Farm Proposals in the Wider Landscape

Development	Proximity to the Survey Boundary	Important Ornithology Features
Mynydd Maen DNS/3276725	0.5km north-east	Scoping reports identifies hobby, red kite, kestrel, hen harrier (5 flights), goshawk, peregrine, red grouse and nightjar as the key ornithology receptors. Of note is a maximum count of 13 nightjar territories and frequent kestrel activity over the Site. Goshawk, peregrine and red kite are all believed to breed locally to the Site. While herring and lesser black-backed gull were frequently recorded flying over the Site, they are not identified as receptors for further assessment and nor are they associated with designated sites in the wider landscape.
Mynydd Llanhilleth DNS/3273368	2.5km north	ES Chapter identifies red grouse (1-2 pairs), lesser black-backed gull (regular flights over Site), herring gull (regular flights over Site), goshawk (1 pair), peregrine (1 pair), red kite (1-2 pairs), kestrel (0-1 pair), hen harrier (passage migrant), nightjar (2-3 pairs), cuckoo (1-2 pairs), long-eared owl (3 pairs), and snipe (1 pair and winter population) as IOFs of Local to County value that are subject to further assessment, where relevant. No significant effects are identified.

Development	Proximity to the Survey Boundary	Important Ornithology Features
Mynydd Carn y Cefn Wind Farm DNS/3270299	5.0km north-west	Important ornithology features scoped into the further assessment include goshawk, red kite, peregrine, barn owl, nightjar, and moorland and woodland breeding bird assemblage. No significant effects identified.
Abertillery Wind Farm DNS/3278009	6.3km north	Scoping report identifies the presence of red kite, goshawk, hobby, hen harrier, and peregrine. To note, hobby were recorded fairly regularly, though these are believed to be associated with breeding birds located in the Cwmsychan Valley.
Manmoel Wind Farm DNS/3239181	6.7km north-west	Scoping report identifies the presence of red kite, goshawk, hen harrier, merlin, and peregrine. Due to low numbers of flights, impacts on goshawk, hen harrier, merlin, and peregrine have sought to be scoped out of the assessment. Impacts of collision on red kite will be provided as part of the EIA but are not available at this stage. No raptor nests recorded within 1km.
Twyn Hywel Wind Farm DNS/3272053	9.8km south-west	Six schedule 1 species – goshawk, merlin, peregrine, red kite, hen harrier, and hobby all recorded - in addition to three species of wader - golden plover, lapwing, and snipe. Large numbers of gulls were also recorded flying across the site in a north-south corridor in the early and late hours of the day. Nightjar information is redacted. List of designations and species scoped in is not provided.

FIELD SURVEY RESULTS

- 3.9 Field surveys have been completed between April 2020 and July 2023, with a total of 68 species recorded. A full species list is included in **Annex EDP 9.2**, which also summarises these species' conservation status. Detailed species accounts for all Target Species recorded within the survey area, during all surveys, are presented below following a summary of the breeding and winter season records.

Breeding/Summer

- 3.10 During the 2020 to 2022 breeding survey seasons, a total of 70 species were recorded, as presented in **Annex EDP 9.2**, including 12 target species listed in **Table EDP 3.5**. These species were recorded during Vantage Point surveys and specific Breeding Bird, Raptor and Nightjar/Owl Surveys undertaken between April and August 2020, 2021 and 2022, in addition to nightjar surveys in June and July 2023. Known nest locations and indicative locations of raptor, nightjar, and moorland bird species breeding activity are shown on the confidential **Plan EDP 9.9**. For a more detailed summary of the 2021 and 2022 breeding bird survey results, including non-target species, see **Annex EDP 9.3**.
- 3.11 Of the 12 target/notable species recorded, four (goshawk, kestrel, nightjar and long-eared owl) were confirmed as breeding within the Survey Boundary and/or within the Study Area; two species as probably breeding (peregrine and cuckoo), and one as possibly breeding (red kite).
- 3.12 One Schedule 1 species (goshawk) was confirmed to have bred in or within 2km of the Survey Boundary. Three other Schedule 1 target species (red kite, hobby, and osprey) were also recorded within the Survey Boundary. **Table EDP 3.5** below presents the results of the breeding bird surveys for all target species.

Table EDP 3.5: Target Species Recorded During the 2020-2022 Breeding/Summer Seasons¹⁴ and their Distribution Within the Wider Study Area

Species	Annex 1 Birds Directive/- Schedule 1 WCA	BoCC Wales 4 Status	Priority Species	Wales Population Estimate ¹⁵	County Status ¹⁶	Breeding Status ¹⁷ and Estimated Breeding Population within	Study Area Status
Mallard		Green		4,600–11,000 pairs	Common resident, fairly common breeder. 1,570 reports, > 80 breeding records.	Non-breeder	A total of 12 birds sighted in 2020- 2022, all of which were in March-May. All were flyovers, apart from a group of three which landed in a small pond on-site, before immediately taking off again. This pond was not suitable for breeding by mallard.
Nightjar	Annex 1	Green	✓	500+ territorial males	Uncommon breeding summer visitor. Recorded in 13 locations, thought to be many more undetected pairs.	CB – 6-8 pairs	Multiple males singing from multiple locations, mainly concentrated on clear fell and scrub habitats to the south-east of the northern parcel and the valley to the east of the southern parcel. Four likely territories identified in both 2020 and 2021, with six to eight identified in 2023 following tree felling creating more suitable habitat.
Cuckoo		Red	✓	1,900 pairs (1,000–2,750)	Fairly common breeding summer visitor. Widespread.	PR – 1-2 pairs	Males heard calling on three different surveys around the northern parcel.

¹⁴ Nightjar were also surveyed for in 2023

¹⁵ See Target Species Accounts section for references. Ranges are 95% confidence intervals

¹⁶ Gwent Ornithological Society (2019) *Gwent Bird Report 2019*, Vol. 55

¹⁷ CB – confirmed breeding, PR – probable breeding, PO – possible breeding and NB – non-breeding

Species	Annex 1 Birds Directive/- Schedule 1 WCA	BoCC Wales 4 Status	Priority Species	Wales Population Estimate ¹⁵	County Status ¹⁶	Breeding Status ¹⁷ and Estimated Breeding Population within	Study Area Status
Herring Gull		Red	✓	7,988+ apparently occupied nests	Fairly common all year, distinct spring passage, moderate numbers bred. 895 records from all months of year, breeding sites under-recorded.	Non-breeder	178 herring gull recorded, limited to flyovers only. Almost all of these were from four surveys across late May and early June 2020, and early June 2021. Mostly sighted over the eastern half of the northern parcel, over the quarry, and the northern part of the southern parcel.
Lesser Black-backed Gull		Red		13,500+ apparently occupied nests	Fairly common all year, distinct spring passage, moderate numbers bred. 755 records from all months of year, breeding sites under-recorded.	Non-breeder	96 lesser black-backed gull recorded, limited to flyovers only. Almost all of these were from three surveys across early June 2020 and early June 2021. Mostly sighted over the eastern half of the northern parcel, over the adjacent moorland, and the northern part of the southern parcel.
Grey Heron		Amber		797 occupied nests	Fairly common breeding resident. 781 records from 125 locations, 57 nests.	Non-breeder	Small numbers recorded flying past, plus one landed in a tree, and one standing at a pond.
Goshawk	Sch. 1	Amber		310 pairs (260–350)	Uncommon breeding resident. 60 records, 29 nests.	CB – 1 pair	Bred in 2021 approximately 850m east of the Survey Boundary.
Red Kite	Annex 1 Sch. 1	Green		2,500 pairs	Rare breeding resident, scarce visitor and passage migrant. 290 records throughout year. Six nest records, likely to be under-recorded.	PO – 0-1 pair	No direct breeding evidence was recorded, but regularly recorded near breeding habitat during the breeding season.

Species	Annex 1 Birds Directive/- Schedule 1 WCA	BoCC Wales 4 Status	Priority Species	Wales Population Estimate ¹⁵	County Status ¹⁶	Breeding Status ¹⁷ and Estimated Breeding Population within	Study Area Status
Long-eared Owl		Amber		32 pairs (likely underest-imate)	Scarce breeding resident and winter visitor. Only four records in 2019, one of which was a nest of five eggs in the north of the county.	CB – 1 pair	The only record of this species was of calling juveniles during a nightjar survey in June 2023.
Kestrel		Red	✓	265–475 pairs	Fairly common (though declining) breeding resident. 340 records. Breeding confirmed at only two locations, with another eight potential sites located.	CB – 1 pair	Small numbers of sightings throughout the year. Seen with five juveniles on moorland to the east of the northern parcel.
Hobby	Sch. 1	Green		205 pairs (160–265)	Breeding summer visitor. 44 records from across the county, with eight of these being confirmed breeding records.	Non-breeder	Registrations limited to two flyovers only.
Peregrine	Annex 1 Sch. 1	Green		280 pairs (262–301)	Resident and winter visitor. 214 records, with ‘several’ records of pairs at suspected or confirmed breeding locations.	PR – 1 pair	Probable nest located within the quarry immediately to the west of the Survey Boundary.

- 3.13 A number of Red listed passerine species were recorded within the Study Area, including willow warbler, goldcrest, starling, spotted flycatcher (*Muscicapa striata*), meadow pipit, tree pipit (*Anthus trivialis*), and linnet (*Linaria cannabina*) (see **Annex EDP 9.3** for further details). With the exception of starling, tree pipit, and linnet, all of these species are confirmed or probable breeding species. All of these species bar willow warbler, goldcrest, and meadow pipit were uncommon across the Study Area, restricted to areas of suitable habitat. Meadow pipit was abundant across the Study Area, with willow warbler and goldcrest abundant among wooded areas.
- 3.14 The remaining breeding bird assemblage is made up of fairly widespread and ubiquitous species typical of the Study Area's geographical location and habitats present. This includes species on the Amber List of conservation concern such as skylark, which were abundant across the Study Area.
- 3.15 The Study Area supports a breeding bird assemblage that reflects the location and habitats present, including a number of species of local and national conservation concern breeding in small numbers. Given the size of the Survey Boundary and wider Study Area, historic records, and SINC citations, it is likely that the area formerly supported a greater diversity and abundance of species. This is indicative of a wider decline in species associated with moorland habitats, as reflected by the target species conservation status, and is likely a result of habitat degradation and relatively high levels of recreational disturbance. Non-target conservation concern passerine species, such as skylark and meadow pipit, were recorded in greater abundances.
- 3.16 Owing to the relatively limited diversity and abundance of priority and conservation concern species recorded, as set out in more detail under the species accounts, the breeding bird assemblage is considered to be of Local importance, with the exception of nightjar and long-eared owl populations of up to County value.
- 3.17 Summer flight lines recorded of target species (excluding passerines) during the Vantage Point surveys are illustrated in **Plans EDP 9.10a to 9.11b**.

Migratory and Winter

- 3.18 During the migratory and winter 2020–2021 and 2021–2022 survey seasons, a total of 53 species were recorded, including 12 target species. These species were recorded during Vantage Point surveys and winter transect surveys, as summarised within **Table EDP 3.6** below and detailed in the subsequent species accounts.

Table EDP 3.6: Target Species Recorded During the Migratory and Winter Bird Surveys Between 2020 and 2022 and their Local, National and Study Area Status

Species	Annex 1 / Schedule 1 WCA	BoCC Wales 4 Status	Priority Species	Wales Population Estimate ¹⁸	County Status ¹⁹	Study Area Status
Red Grouse		Red	✓	835 (490–1,450)	Uncommon resident. Maximum count 20, all from north-east of county.	Four seen on the moorland to the north-east, on a winter bird transect in November 2020, with another one in a similar location in January 2021.
Mallard		Green		4,600–11,000 pairs	Common resident.	Five birds recorded on two Vantage Point surveys, plus a pair seen on a small pond on the moorland to the east of the Site.
Snipe		Amber		1,100 pairs (820–1,400)	Fairly common winter visitor.	Seven recorded across the moorland to the east of the Site across the winter of 2020-21, and another five seen in the same area on a survey in March 2022.
Herring Gull		Red	✓	7,988+ apparently occupied nests	Fairly common all year.	Four seen flying over the town of Newbridge to the west.
Lesser Black- backed Gull		Red		13,500+ apparently occupied nests	Fairly common all year.	A total of 18 birds seen flying over the Site and along the Abercarn valley.
Grey Heron		Amber		797 occupied nests	Fairly common resident.	Individuals seen on five occasions, always around Ty Oakley Farm at the northern parcel.
Osprey	Annex 1 Sch. 1	Amber		Five breeding pairs (11 chicks raised)	Scarce passage migrant.	A single bird flew overhead during a Vantage Point survey in April 2022.
Goshawk	Sch. 1	Amber		310 pairs (260–350)	Uncommon resident.	One bird observed flying around the northern half of the northern parcel and the woodland immediately to the north-east of it, in February 2022.

¹⁸ See Target Species Accounts section for references. Ranges are 95% confidence intervals

¹⁹ Gwent Ornithological Society (2019). *Gwent Bird Report 2019*, Vol. 55

Species	Annex 1 / Schedule 1 WCA	BoCC Wales 4 Status	Priority Species	Wales Population Estimate ¹⁸	County Status ¹⁹	Study Area Status
Hen Harrier	Annex 1 Sch. 1	Red	✓	35 pairs	Scarce passage migrant and winter visitor.	One bird observed being mobbed by a raven to the east of the northern parcel in November 2020.
Red Kite	Annex 1 Sch. 1	Green		2,500 pairs	Scarce visitor and passage migrant.	17 records, mostly in the 2021-22 winter period. Most sightings were across the northern parcel and the moorland to the north- east of it.
Kestrel		Red	✓	265–475 pairs	Fairly common resident.	21 sightings, mostly seen over the moorland to the north-east of the northern parcel.
Peregrine	Annex 1 Sch. 1	Green		280 pairs (262–301)	Resident and winter visitor.	27 sightings, almost all of which were related to birds entering, leaving, or perching in the quarry to the west of the southern parcel.

- 3.19 Winter flight lines recorded during the Vantage Point surveys are illustrated in **Plans EDP 9.12a to 9.13b**.
- 3.20 Other Red list passerine species recorded across the Study Area over winter included goldcrest, starling, meadow pipit, greenfinch, and linnet. However, none of these species were regularly recorded in significant numbers, with registrations predominantly limited to single birds or small flocks. The presence of these species in low numbers is considered to reflect the habitats present and is not significant in terms of the value of the wintering bird assemblage.
- 3.21 Overall, the winter and migratory bird assemblage supported by the Survey Boundary and surrounding Study Area appears to be relatively limited in abundance with only modest species diversity, given the extent of area and range of habitats. This may be a reflection of the degraded nature of the moorland habitats present and/or recreational disturbance, which remained relatively high even over the winter. Whilst conservation concern species such as red kite, hen harrier, peregrine, goshawk, and kestrel were recorded, activity of all species was low and did not indicate the presence of any notable populations. Hen harrier was not confirmed as roosting within the Study Area and a single sighting of this species is not unusual for upland sites in mid-Wales during the migration and winter season.
- 3.22 No species population present in the winter or migratory bird season is valued at above local value and the combined wintering bird assemblage is therefore considered to be of Local importance.

Target Species Accounts

- 3.23 The species status provided in the following accounts is based on recorded activity within the Study Area. In addition, their local status in Gwent is given, as taken from the Gwent Bird Report 2019²⁰, and an estimated population size in Wales from various referenced sources. Where a range is shown, this indicates the 95% confidence interval.

Mallard

- 3.24 Classified in Gwent as a common resident and a fairly common breeder. There was estimated to be a breeding population of between 4,600-11,000 pairs in Wales in 2018²¹.
- 3.25 During the winter bird transects, there was a record of a pair of mallard on a pond on Mynydd Maen Common, just to the east of the Survey Boundary, in March 2022. There was also a record of a pair flying over the Survey Boundary during the breeding bird survey in May 2021.
- 3.26 Small numbers of mallard were also recorded on the Vantage Point surveys, as summarised in **Table EDP 3.7** below:

²⁰ Gwent Ornithological Society (2019). *Gwent Bird Report 2019*, Vol. 55

²¹ Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the size of breeding populations of birds in Wales*. Birds in Wales 17(1) pp. 56-67

Table EDP 3.7: Vantage Point Survey Summary for Mallard

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	1	1	30	0	0	0 (0)
2020–2021 non-breeding season	0	–	–	–	–	–
2021 breeding season	1	2	30	0	0	0 (0)
2021–2022 non-breeding/passage season	3	8	30	75	15	2 (5)

3.27 The low number of sightings plus the lack of quality breeding habitat suggest that this species does not breed or overwinter regularly within the Survey Boundary. The population is therefore considered to be of less than Local importance.

Red Grouse

3.28 Red listed and a Priority Species, classified as an uncommon breeding resident with apparent decline in recent years in Gwent. There were estimated to be 835 (490–1,450) pairs of breeding red grouse across Wales in 2016²².

3.29 There were no sightings of red grouse during the breeding bird surveys.

3.30 Red grouse were recorded on two occasions during the winter transects, in November and December 2020. Both records were of a pair on the moorland to the east of the northern parcel. There was also a sighting of three red grouse in a similar location during a January 2021 Vantage Point survey, the details of which are summarised in **Table EDP 3.8** below.

²² Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the size of Breeding Populations of Birds in Wales*. Birds in Wales 17(1) pp. 56-67

Table EDP 3.8: Vantage Point Survey Summary for Red Grouse

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	0	–	–	–	–	–
2020–2021 non-breeding season	1	3	15	0	0	0 (0)
2021 breeding season	0	–	–	–	–	–
2021–2022 non-breeding/passage season	0	–	–	–	–	–

3.31 As red grouse are a Priority Species and Red listed, the potential presence of this species within the Study Area over winter is of Local importance.

Herring Gull

3.32 Listed as a Priority Species on Section 7 of the *Environment Act (Wales) 2016* and Red listed on BoCCW4. Classified in Gwent as fairly common all year, distinct spring passage, moderate numbers and mainly breeding in industrial areas.

3.33 A provisional total from the national Seabirds Count estimated the number of apparently occupied nests in Wales across 2015–19 to be 7,988, although this is thought to be an underestimate as urban sites, an important breeding habitat, were not covered comprehensively²³. Around half of the total Welsh population of herring gulls could now consist of roof-nesting birds²⁴.

3.34 Herring gull were not recorded on any winter bird transects or breeding bird surveys.

3.35 On the Vantage Point surveys, herring gull were fairly regularly recorded flying over the Survey Boundary during the breeding season, particularly during May and June, in variable size flocks, with much lower numbers recorded over winter. Flightline activity is summarised in **Table EDP 3.9**, with an additional table (**Table EDP 3.10**) summarising the Vantage Point survey data for two surveys that included large flocks of intermingled gull species, where the numbers of each species weren't able to be determined.

²³ JNCC *Seabirds Monitoring Programme* (online) <https://jncc.gov.uk/our-work/seabird-monitoring/> (Accessed July 2022)

²⁴ Pritchard, R., Hughes, J., Spence, I.M., Haycock, B., and Brenchley, A. (editors) (2021). *The Birds of Wales – Adar Cymru*. Liverpool University Press, Liverpool

Table EDP 3.9: Vantage Point Survey Summary for Herring Gull

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	17	72	225	690	75	14 (47)
2020–2021 non-breeding season	2	4	0	0	90	0 (0)
2021 breeding season	26	106	495	1440	60	22 (97)
2021–2022 non-breeding/passage season	0	–	–	–	–	–

Table EDP 3.10: Vantage Point Survey Summary for Mixed *Larus* sp. Flocks

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	0	–	–	–	–	–
2020–2021 non-breeding season	0	–	–	–	–	–
2021 breeding season	7	532	1005	390	0	3 (150)
2021–2022 non-breeding/passage season	0	–	–	–	–	–

- 3.36 No breeding, was observed within the Study Area and there is not considered to be any suitable breeding habitat.
- 3.37 In terms of foraging, a high proportion of the recordings are from the 2021 breeding season, and these almost entirely relate to foraging mixed flocks of herring and lesser black-backed gulls on three occasions (01 and 06 June and 03 August 2021). The August recordings were in association with a tractor cutting the north-eastern field within the Survey Boundary.
- 3.38 Herring gull are common year-round in Gwent though also noted as spring migrants, and this is reflected by the results. The small populations of this species commuting over the Survey Boundary, and occasionally foraging within it, are of no more than Local importance.

Lesser Black-backed Gull

- 3.39 Red listed and classified in Gwent as fairly common, distinct spring passage, modest but growing numbers, with most breeding in industrial areas.
- 3.40 A provisional total from the national Seabirds Count estimated the number of apparently occupied nests in Wales across 2015–19 to be around 13,500, although this is thought to be an underestimate as urban sites, an important breeding habitat, were not covered comprehensively²⁵.
- 3.41 Lesser black-backed gull were recorded on three winter bird surveys, in February and March 2021, flying over the Study Area in small numbers (maximum flock size of three).
- 3.42 Lesser black-backed gulls were recorded on a single occasion during the breeding bird surveys, flying east over the Survey Boundary.
- 3.43 **Table EDP 3.11** provides a summary of the lesser black-backed gulls recorded during the Vantage Point surveys, with an additional table (**Table EDP 3.10**) summarising the Vantage Point survey data for flocks of mixed gull species where these weren't differentiated.

Table EDP 3.11: Vantage Point Survey Summary for Lesser Black-backed Gull

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	13	48	90	525	165	10 (33)
2020–2021 non-breeding season	1	2	0	45	0	1 (2)
2021 breeding season	25	66	1485	1320	0	20 (53)
2021–2022 non-breeding/passage season	4	16	0	120	45	3 (6)

- 3.44 During Vantage Point surveys, lesser black-backed gulls were infrequently recorded flying over the Survey Boundary in variable flock sizes, particularly during spring passage. The majority of the recordings are from the 2021 breeding season, and these almost entirely relate to foraging mixed flocks of herring and lesser black-backed gulls on three occasions (01 and 06 June and 03 August 2021). The August recordings were in association with a tractor cutting the north-eastern field within the Survey Boundary and this accounted for 840 seconds in height band 1. These occasional foraging episodes account for >90% of the

²⁵ JNCC Seabirds Monitoring Programme (online) <https://jncc.gov.uk/our-work/seabird-monitoring/> (Accessed July 2022)

2021 breeding season flights within the CRZ. Lower numbers were recorded over winter in both years.

- 3.45 No breeding or regular foraging behaviour was observed within the Study Area and there is not considered to be any suitable breeding habitat.
- 3.46 Lesser black-backed gull are common year-round in Gwent and also noted as spring migrants, and this is reflected by the results. The small populations of these species commuting over the Survey Boundary, and occasionally foraging, are considered to be of no more than Local importance.

Grey Heron

- 3.47 Amber listed and classified as a fairly common breeding resident in Gwent. There were an estimated 797 occupied nests across Wales in 2019²⁶.
- 3.48 Across the winter bird transects, there was a total of three grey heron records, two of which were in the pond immediately to the north of the northern parcel in February of 2021 and 2022. The other sighting was immediately to the east of the northern parcel in March 2021.
- 3.49 Grey heron were recorded on five occasions during the breeding bird surveys across the Survey Boundary, four of which were in 2022.
- 3.50 Grey heron were also rarely recorded during the Vantage Point surveys throughout the year, as summarised in **Table EDP 3.12**.

Table EDP 3.12: Vantage Point Survey Summary for Grey Heron

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	1	1	15	15	0	1 (1)
2020-2021 non-breeding season	0	-	-	-	-	-
2021 breeding season	1	1	45	0	0	0 (0)
2021-2022 non-breeding/- passage season	3	3	0	150	0	3 (3)

²⁶ Woodward, I.D., Massimino, D., Hammond, M.J., Barber, L., Barimore, C., Harris, S.J., Leech, D.I., Noble, D.G., Walker, R.H., Baillie, S.R. & Robinson, R.A. (2020). *BirdTrends 2020: Trends in Numbers, Breeding Success and Survival for UK Breeding Birds*. BTO Research Report 732. BTO, Thetford. www.bto.org/birdtrends

- 3.51 The Survey Boundary does not afford notable feeding or breeding opportunities for this species, as reflected by the limited number of grey heron recordings. The population recorded is considered to be of less than Local value.

Goshawk

- 3.52 Listed on Schedule 1, Amber listed, and classified as an uncommon breeding resident in Gwent. There were estimated to be 310 breeding pairs of goshawk (260–350) across Wales in 2018²⁷.
- 3.53 There were three records of goshawk on the raptor surveys. These were all records in 2021, in the valley to the south-east of the southern parcel, including a record of a nest with at least one chick calling, in June 2021, located approximately 0.95km from the Survey Boundary and 1.2km from the nearest turbine location. This species is therefore confirmed to be breeding within the Study Area.
- 3.54 There were no records of goshawk on the winter bird transects or the breeding bird surveys.
- 3.55 During Vantage Point surveys, goshawk were twice recorded flying over the Study Area, once briefly in July 2021 and then for longer in February 2022, as shown in the summary of flight data presented in **Table EDP 3.13**.

Table EDP 3.13: Vantage Point Survey Summary for Goshawk

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	0	–	–	–	–	–
2020–2021 non-breeding season	0	–	–	–	–	–
2021 breeding season	1	1	0	45	0	1 (1)
2021–2022 non-breeding/passag e season	1	1	0	300	0	1 (1)

- 3.56 Goshawk are not listed on either of the Red or Amber lists and are not included as a Priority Species. The latest BTO Breeding Bird Atlas²⁸ states that “*the relative abundance maps highlight Wales as a major stronghold for this species*”.
- 3.57 One pair of resident breeding goshawk adjacent to the Survey Boundary is less than 1% of the national (Wales) breeding population, which is estimated at approximately 300 pairs,

²⁷ Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the Size of Breeding Populations of Birds in Wales*. Birds in Wales 17(1) pp. 56-67

²⁸ BTO (2013). Bird Atlas 2007 – 2011. *The Breeding and Wintering Birds of Britain and Ireland*. BTO Books

and they are considered to be widespread in Gwent. While additional pairs may be present in the wider Study Area, in light of their favourable conservation status, the small resident population is valued at the Local level.

Hen Harrier

- 3.58 Listed as a Priority Species, Red listed, and on Schedule 1. Classified as a scarce passage migrant and winter visitor in Gwent. There were 35 territorial pairs of hen harrier recorded in Wales in 2016²⁹.
- 3.59 A ring-tailed (i.e. female or juvenile) bird was recorded being mobbed by a raven during the November 2020 winter transect, immediately to the east of the northern parcel. Hen harrier were not recorded during the breeding bird surveys or Vantage Point surveys.
- 3.60 Hen harrier is not considered to breed within the Study Area; despite the presence of suitable nesting moorland habitat to the north-east of the northern parcel there were no sightings within the breeding period. Should breeding have occurred within the Survey Boundary or wider Study Area, observations would have been made given the survey effort.
- 3.61 Owing to the species conservation status, a single passage migrant recording outside of the Survey Boundary within the wider Study Area, alongside desk study records, mean that hen harrier is considered to be of Local importance.

Red Kite

- 3.62 Listed on Schedule 1 and classified as a scarce visitor and passage migrant and a rare breeding resident in Gwent.
- 3.63 There were two records of red kite during the winter bird transects, both of which were during the March 2021 survey: one near the northern parcel and one near the central parcel, so it is possible that both sightings were of the same bird.
- 3.64 This species was recorded on three occasions during the breeding bird surveys, single birds to the immediate east and west of the northern parcel.
- 3.65 One sighting of red kite was recorded during both the 2020 raptor surveys and five during the 2021 surveys, which were mostly of the same bird.
- 3.66 Red kites were recorded during all Vantage Point survey periods, apart from the 2020-21 non-breeding season, as summarised in **Table EDP 3.14**.

²⁹ Wotton, S.R., Bladwell, S., Mattingley, W., Morris, N.G., Raw, D., Ruddock, M., Stevenson, A., and Eaton, M.A. (2018). *Status of the Hen Harrier Circus cyaneus in the UK and Isle of Man in 2016*. Bird Study 65(2) pp. 145-160

Table EDP 3.14: Vantage Point Survey Summary for Red Kite

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	12	12	60	660	270	12 (12)
2020–2021 non-breeding season	0	–	–	–	–	–
2021 breeding season	6	6	180	255	60	4 (4)
2021–2022 non-breeding/-passage season	13	13	270	1395	165	11 (11)

3.67 Red kite was seen on multiple occasions in the immediate vicinity of suitable nesting habitat. Although no direct observations of breeding behaviour were made, the regularity of sightings means that it is possible, if not probable, that this species bred nearby.

3.68 The Welsh population is estimated at 2,500 pairs (2019)³⁰. Red kite is expanding in range and numbers in Wales, although is still considered a rare breeding resident within the county. The presence of small numbers of red kite occasionally foraging throughout the year within the Survey Boundary, and possibly breeding, is considered to be of up to Local importance.

Long-eared Owl

3.69 An Amber listed species, classified as a rare breeding resident and winter visitor in Gwent.

3.70 During a nightjar survey in June 2023, juvenile long-eared owls were heard calling in a valley 1.4km to the east of the central parcel. Long-eared owl is therefore a confirmed breeder within the Study Area.

3.71 By combining Welsh Bird Reports and Rare Breeding Bird Panel data, it was estimated that the Welsh breeding population between 2014-2018 was 32 pairs, although this is almost certainly an underestimate. During this same time period, the Gwent population was estimated to be 11 pairs³¹. The presence of at least one pair of long-eared owl within the Study Area is therefore considered to be of County importance.

³⁰ Welsh Kite Trust (2019) *How Many Kites are there in Wales?* www.welshkitetrust.wales (accessed June 2022)

Kestrel

- 3.72 Listed as a Priority and Red listed species and classified as a fairly common (though declining) breeding resident in Gwent. Due to large recent declines across the UK, the Welsh breeding population was estimated to be 265–475 pairs in 2020³¹.
- 3.73 Kestrels were recorded flying across/hunting within the Survey Boundary and wider Study Area on three occasions during the winter bird surveys. All sightings were on the moorland to the east of the northern parcel.
- 3.74 A single kestrel was recorded hunting immediately to the east of the northern parcel during the breeding bird survey in June 2021. There was also a sighting of a minimum of seven kestrel together on the moorland, which was considered to be a pair with five juveniles. This sighting was made to the east of the northern parcel within the 2km buffer, during a non-bird related survey. Kestrel is therefore a confirmed breeder within the Survey Boundary or wider Study Area.
- 3.75 A single kestrel was recorded during the raptor survey in July 2021. This species was not recorded on any of the other raptor surveys in 2020 or 2021.
- 3.76 Kestrels were recorded on six occasions during the Vantage Point surveys undertaken within the breeding bird seasons in 2020 and 2021. Kestrel were more frequently recorded during the winter/migratory seasons, as summarised in **Table EDP 3.15**:

Table EDP 3.15: Vantage Point Survey Summary for Kestrel

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	4	4	90	60	0	3 (3)
2020–2021 non-breeding season	10	10	270	570	30	8 (8)
2021 breeding season	2	3	120	30	0	1 (1)
2021–2022 non-breeding/passage season	7	9	120	585	0	5 (7)

- 3.77 Kestrel is considered to be a fairly common, although declining, breeder in the county. The presence of a single pair breeding within the Study Area and occasional year-round foraging within the Survey Boundary is therefore considered to be of Local importance.

³¹ Pritchard, R., Hughes, J., Spence, I.M., Haycock, B., and Brenchley, A. (editors) (2021). *The Birds of Wales – Adar Cymru*. Liverpool University Press, Liverpool

Hobby

- 3.78 Listed on Schedule 1 and classified as a breeding summer visitor in Gwent. There were estimated to be 205 (160–265) pairs of hobby breeding across Wales in 2018³².
- 3.79 During the Vantage Point surveys, a single hobby was recorded flying across the Survey Boundary in April 2021, as set out in **Table EDP 3.16**. Another was seen on a raptor survey during June 2021. These were the only sightings of this species throughout the surveys and as such, it is considered that these birds were passing through only.

Table EDP 3.16: Vantage Point Survey Summary for Hobby

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2021 breeding season	1	1	30	0	0	0 (0)

- 3.80 Hobby is not considered to use the Survey Boundary and wider Study Area at any time of year.

Peregrine

- 3.81 Listed on Schedule 1 and classified as a resident and winter visitor in Gwent. A national survey in 2014 estimated the Welsh breeding population to be 280 pairs (262-301)³³.
- 3.82 Single peregrines were recorded flying over or perched within the Survey Boundary, or the wider Study Area, on five occasions during the winter bird surveys. Four of these sightings were in the vicinity around the quarry to the west of the southern parcel.
- 3.83 There were no direct sightings of peregrine during the breeding bird surveys, but one was heard calling from the direction of the quarry adjacent to the southern parcel during the June 2021 survey.
- 3.84 A total of five peregrines were recorded during the 2020 and 2021 raptor surveys, all but one of which were located near the quarry. During the Vantage Point surveys, peregrines were seen perching in the quarry or heard calling from that direction a total of 18 times, seven of which were during the breeding season. During a February 2021 Vantage Point survey, a peregrine was seen to aggressively drive off a buzzard, before dropping down into

³² Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the Size of Breeding Populations of Birds in Wales*. Birds in Wales 17(1) pp. 56-67

³³ Wilson, M. W., Balmer D. E., Jones, K., King, V. A., Raw, D., Rollie, C. J., Rooney, E., Ruddock, M., Smith, G. D., Stevenson, A., Stirling-Aird, P. K., Wernham, C. V., Weston, J. M., and Noble, D. G. (2018). *The breeding population of Peregrine Falcon Falco peregrinus in the United Kingdom, Isle of Man and Channel Islands in 2014*. Bird Study (65)1, pp1-19

the quarry. A pair of peregrine was seen displaying together directly over the quarry during an April 2022 Vantage Point survey.

- 3.85 Although there was a lot of peregrine activity in an area of suitable nesting habitat, no recently fledged juveniles or adults carrying food were seen during the surveys. However, the presence of a pair in suitable habitat, as well as exhibiting territorial behaviour, suggests that peregrine is a probable breeder within the Survey Boundary.
- 3.86 Peregrine were recorded throughout the year and across all Vantage Point survey seasons, as summarised in **Table EDP 3.17**.

Table EDP 3.17: Vantage Point Survey Summary for Peregrine

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	7	7	135	210	195	5 (5)
2020–2021 non-breeding season	7	8	60	105	15	3 (4)
2021 breeding season	11	11	60	450	240	9 (9)
2021–2022 non-breeding/-passage season	12	13	60	390	105	11 (12)

- 3.87 Peregrine are resident and winter visitors in Gwent and the presence of a single resident pair of peregrine, probably breeding adjacent to the Survey Boundary, is considered to be of Local importance.

Osprey

- 3.88 Schedule 1 and Amber listed, classified as a scarce passage migrant in Gwent, where a few may linger in summer. There were five breeding pairs of Osprey in Wales in 2019, raising a total of 11 chicks. These breeding sites were located in mid- and north Wales³⁴.
- 3.89 Osprey was recorded on a single occasion during a Vantage Point survey in April 2022, as summarised in **Table EDP 3.18** below:

³⁴ Pritchard, R., Hughes, J., Spence, I.M., Haycock, B., and Brenchley, A. (editors) (2021). *The Birds of Wales – Adar Cymru*. Liverpool University Press, Liverpool

Table EDP 3.18: Vantage Point Survey Summary for Osprey

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2021–2022 non-breeding/-passage season	1	1	0	60	120	1 (1)

- 3.90 A single osprey was recorded flying across the Survey Boundary in April 2022. This was the only sighting of this species throughout the surveys and as such, it is considered that this bird was passing through only.

Nightjar

- 3.91 Priority species, classified as an uncommon breeding summer visitor in Gwent. The Welsh breeding population is estimated to be in excess of 500 territorial males³⁵.
- 3.92 There was a total of 32 nightjar records over the eight nightjar and owl surveys undertaken across 2020 and 2021. This corresponded to four likely breeding territories in both 2020 and 2021. Locations were considered to be breeding territories if males were recorded singing there on more than one survey. These territories were mainly located in clear felled and scrubby areas in a valley to the east of the southern parcel and along the treeline located on the northern edge of the moorland to the east of the northern parcel. The 2023 nightjar surveys found a total of 43 records, which corresponds to between six and eight potential breeding territories.
- 3.93 In light of this, nightjar are considered to be a confirmed breeder. Indicative nightjar nest site territories have been provided on confidential **Plan EDP 9.9**.
- 3.94 This species is of national and local conservation concern, although they have a widespread distribution across Wales. As they are assessed as being an uncommon breeding summer visitor in Gwent, six to eight pairs of breeding nightjar are therefore of County importance.

Cuckoo

- 3.95 Priority and Red listed species, classified as a fairly common breeding summer visitor in Gwent. There are estimated to be 1,900 (1,000–2,750) pairs of cuckoo across Wales³⁶.
- 3.96 A total of seven records of calling male cuckoos were made during the breeding bird surveys. In 2021, three of these were recorded in the vicinity of the northern parcel, with another in the treeline to the north-east of the northern parcel. On one survey in 2022, two more were

³⁵ Pritchard, R., Hughes, J., Spence, I.M., Haycock, B., and Brenchley, A. (editors) (2021). *The Birds of Wales – Adar Cymru*. Liverpool University Press, Liverpool

³⁶ Hughes, J., Spence, I.M., and Gillings, S. (2020) *Estimating the size of breeding populations of birds in Wales*. Birds in Wales 17(1) pp. 56-67

heard around the northern parcel, with another in the valley to the south-east of the southern parcel. There was also a brief sighting on a Vantage Point survey in 2020, as shown below in **Table EDP 3.19**. Two of the 2021 records around the northern parcel were heard on different surveys, suggesting the presence of a breeding territory. As such, cuckoo is considered a probable breeder either within or very close to the edge of the Survey Boundary.

Table EDP 3.19: Vantage Point Survey Summary for October

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	1	1	30	0	0	0 (0)

3.97 Taking into consideration the conservation status of this species as well as population numbers, the presence of one to two pairs of breeding cuckoo is considered to be of Local importance.

Snipe

3.98 Amber listed species, classified as a fairly common winter visitor; uncommon breeder in Gwent. There are estimated to be 1,100 (820–1,400) breeding snipe pairs across Wales³⁶.

3.99 Snipe were recorded on 11 occasions during the winter bird transects, relating to 13 individuals. All these records were of birds flushed from the moorland to the east of the northern parcel.

3.100 No snipe were recorded on the breeding bird surveys or Vantage Point surveys.

3.101 The presence of small numbers of overwintering snipe is considered to be of up to Local importance.

Other Species

Buzzard

3.102 Classified as a common breeding resident in Gwent. There were estimated to be between 9,850 and 13,500 pairs of buzzard across Wales in 2018³⁷.

3.103 Buzzards were recorded on most winter bird surveys, with a peak count of two recorded on multiple occasions.

³⁷ Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the size of breeding populations of birds in Wales*. Birds in Wales 17(1) pp. 56-67

- 3.104 Buzzards were recorded on all of the breeding bird surveys, with numbers between one and eight birds recorded on each of these occasions. All records were for birds flying over, circling over, or feeding within or near to the Survey Boundary.
- 3.105 During the raptor surveys in 2020 and 2021, a total of 52 sightings of buzzard were recorded. Buzzards were also frequently recorded throughout the year and across the Study Area during the Vantage Point surveys, as summarised in **Table EDP 3.20**.

Table EDP 3.20: Vantage Point Survey Summary for Buzzard

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	49	55	435	1950	2265	34 (39)
2020–2021 non-breeding season	34	36	180	1890	765	28 (30)
2021 breeding season	32	39	120	3105	195	29 (34)
2021–2022 non-breeding/-passage season	41	52	420	2535	930	33 (44)

- 3.106 Buzzard was the most recorded species of raptor within the Study Area and was recorded throughout the survey period. Activity was fairly constant, and birds were recorded from all Vantage Points.
- 3.107 Buzzards were regularly seen displaying and flying in pairs – from April 2021 to April 2022, such behaviours were seen 17 times on the Vantage Point surveys.
- 3.108 During a raptor survey in June 2020, a buzzard pair was seen displaying together 2.5 km to the south-east, and a nest was subsequently found there. A juvenile buzzard was seen in the same area during the next month's raptor survey. In March 2021, a buzzard nest was found 2.9km to the south, with three juveniles seen in the same area during a June 2021 raptor survey. The same month, a family group of six buzzards was seen together 0.5km to the east of the northern parcel. Later that month, a group of eight buzzards was seen circling nearby at the same time as a pair of adults was seen perched in a tree. An adult with a juvenile was seen in the same area a month later.
- 3.109 Although no nest locations were identified within the Study Area, it is clear that at least one pair of buzzards are breeding somewhere in the vicinity and so this species can be considered a confirmed breeder.

3.110 Owing to their common and widespread status, the buzzard population present is of less than Local importance.

Sparrowhawk

3.111 Classified as a common breeding resident in Gwent. In 2018, there were estimated to be 2,950 (2,700–3,200) pairs of sparrowhawk breeding across Wales³⁸.

3.112 Individual sparrowhawks were recorded on three occasions during the winter bird surveys, in 2020, 2021, and 2022. Two sightings were made during the raptor surveys, but none were recorded during the breeding bird surveys.

3.113 Several sightings of sparrowhawk were also made during the Vantage Point surveys, as summarised in **Table EDP 3.21**.

Table EDP 3.21: Vantage Point Survey Summary for Sparrowhawk

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	2	2	30	0	0	0 (0)
2020–2021 non-breeding season	2	2	0	15	45	1 (1)
2021 breeding season	0	–	–	–	–	–
2021–2022 non-breeding/-passage season	3	5	45	105	0	3 (8)

3.114 No breeding evidence for this species was seen and therefore Sparrowhawk is considered to be a non-breeding species.

3.115 Due to the low numbers recorded on survey and their common and widespread status, the sparrowhawk population present is only considered to be of less than Local importance.

³⁸ Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the Size of Breeding Populations of Birds in Wales*. Birds in Wales 17(1) pp. 56-67

Raven

- 3.116 Classified as fairly common breeding resident in Gwent. There were estimated to be 2,150 breeding pairs of raven in Wales in 2018³⁹.
- 3.117 Raven were recorded on all of the winter bird transects, with a peak count of 20 birds moving across the Survey Boundary in October 2021.
- 3.118 Raven were also recorded on all breeding bird surveys in singles and pairs.
- 3.119 A family group of seven was recorded on a raptor survey during July 2020, approximately 1.2km to the east of the Survey Boundary. In the same year, a possible nest was found in the woodland to the north of the northern parcel. Raven were seen on nine occasions during the raptor surveys in 2021, and six of these sightings were of pairs of birds. On four occasions, two each in April 2021 and April 2022, ravens were seen carrying food towards the woodland east of the southern parcel.
- 3.120 Although not a target species due to their favourable conservation status, raven was the most recorded species throughout the Vantage Point surveys, with 40% of all flight records being of this species. A summary of flightlines is provided in **Table EDP 3.22**.

Table EDP 3.22: Vantage Point Survey Summary for Raven

Season	Number of Flights	Total Number of Birds	Height Band 1: 0-30m (seconds)	Height Band 2: 30-180m CRZ (seconds)	Height Band 3: >180m (seconds)	Number of Flights (Birds) within the CRZ
2020 breeding season	36	56	510	1110	150	27 (37)
2020-2021 non-breeding season	46	69	330	1665	270	33 (50)
2021 breeding season	60	146	1050	2115	225	34 (101)
2021-2022 non-breeding/passage season	111	236	1050	2715	465	64 (119)

- 3.121 As a family party was seen near the edge of the Survey Boundary, this species is a confirmed breeder in this area. Due to the large number of raven seen throughout these surveys, it is likely that more than two pairs bred.
- 3.122 Owing to their common and widespread status, the raven population present is of less than Local importance.

³⁹ Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the Size of Breeding Populations of Birds in Wales*. Birds in Wales 17(1) pp. 56-67

Tawny Owl

- 3.123 Classified as a common breeding resident in Gwent. Due to its nocturnal nature, this species is difficult to survey and therefore it is difficult to provide accurate population estimates. By combining survey counts in optimal habitat with assessments of habitat quality across the wider landscape, there were estimated to be 2,550–3,800 breeding pairs in Wales in 2016⁴⁰.
- 3.124 During the nightjar and owl surveys in 2020 and 2021, a total of 20 tawny owls were recorded within or adjacent to the Survey Boundary across the eight surveys. Counts of four tawny owls were recorded on both the early June and the late July 2020 surveys. The early June 2020 survey recorded three juveniles calling from a nest in the valley directly to the east of the central parcel. There was a peak count of five calling adults on the late July 2021 survey, which included a pair. In 2023, there were a further three tawny owl records, including two of juveniles, located either side of the southern parcel. Tawny owl is therefore confirmed to have bred within the Study Area.
- 3.125 This species is widespread across the county and the presence of a small breeding population is therefore considered to be of less than Local importance.

Common Crossbill

- 3.126 Listed on Schedule 1 and classified as an uncommon breeder and winter visitor in highly variable numbers. The Welsh breeding population is unstable, so it is difficult to estimate its size⁴⁰.
- 3.127 Common crossbill were recorded across the Survey Boundary on several of the winter bird surveys, with a peak count of nine recorded on the survey in November 2021.
- 3.128 Common crossbill were recorded on three occasions during the 2022 breeding bird surveys, relating to a total of five individual birds. Three birds were seen in the southern parcel, and the other two were seen on the edge of the woodland to the east of the road connecting the Parcels.
- 3.129 This species is fairly widespread and ubiquitous in coniferous plantations throughout the winter, and the presence of this species in small numbers over winter is therefore considered to be of less than Local importance.

Brambling

- 3.130 Listed on Schedule 1, classified as a fairly common winter visitor and passage migrant in Gwent. The most recent winter population estimate came from national surveys over the winters of 1981-84, which gave an estimate of between 45,000 – 1.8 million⁴¹.

⁴⁰ Pritchard, R., Hughes, J., Spence, I.M., Haycock, B., and Brenchley, A. (editors) (2021). *The Birds of Wales – Adar Cymru*. Liverpool University Press, Liverpool

⁴¹ Woodward, I., Aebischer, N., Burnell, D., Eaton, M., Frost, T., Hall, C., Stroud, S. and Noble, D. (2020). *APEP 4 - Population Estimates of Birds in Great Britain and the United Kingdom*. (online) Accessed December 2022. Available at: <https://www.bto.org/our-science/publications/peer-reviewed-papers/>

- 3.131 Brambling were recorded on four occasions: twice in December 2021 and twice in March 2022. The first survey included a flock of 40 birds and the second included a count of approximately 200 birds.
- 3.132 The occasional presence of small to medium size overwintering flocks of brambling is considered to be of less than Local importance, given the species fairly common winter/migratory status and national population size.

Starling

- 3.133 Red listed and classified as a common breeding resident, passage migrant and winter visitor in Gwent. There were estimated to be 90,000 (79,000–100,000) pairs of starling breeding across Wales in 2018⁴².
- 3.134 Small flocks of starling were recorded during most of the winter bird surveys and were mostly observed in the fields in the northern parcel. The peak count was one larger flock of 250 during the January 2021 survey.
- 3.135 Small numbers of starling were recorded foraging during the breeding bird survey, with a peak count of 12. Most of these sightings were made in the northern parcel. Juveniles were also recorded within the Survey Boundary, though notable breeding opportunities are not considered to be present.
- 3.136 No pre-roosting behaviour (murmuration) was recorded within the Survey Boundary or beyond during any of the surveys. Small flocks of birds were noted feeding on short sheep grazed grasslands within the Survey Boundary. The Study Area is not used as a winter roosting site and feeding flocks of up to 250 birds are not considered significant in the context of the wider Welsh or UK wintering starling population. The Starling population is therefore considered to be of less than Local importance.

Skylark

- 3.137 A Priority and Amber listed species, classified as a fairly common to common breeding resident and passage migrant in Gwent. There were estimated to be 115,000 skylark territories across Wales in 2018⁴⁰.
- 3.138 Skylark were recorded on the majority of the winter bird surveys, predominantly on the moorland to the east of the northern parcel. There was a peak count of 56 recorded during the March 2021 survey.
- 3.139 Skylark were recorded across the Study Area during the breeding bird season, including large numbers of singing males associated with open moorland and grassland habitat. Between 10-20 pairs are estimated to breed across the Study Area.
- 3.140 Owing to the abundance and distribution of overwintering and breeding skylark in the Study Area, the population is important at up to a Local level.

⁴² Hughes, J., Spence, I.M., and Gillings, S. (2020). *Estimating the Size of Breeding Populations of Birds in Wales*. Birds in Wales 17(1) pp. 56-67

Meadow Pipit

- 3.141 Red listed, classified as a common breeding resident and passage migrant in Gwent. There were estimated to be 170,000 (150,000–195,000) breeding pairs of meadow pipit across Wales in 2018⁴².
- 3.142 Meadow pipit were recorded on all almost all of the winter bird transects, with a peak count of 55 on the March 2022 survey. The majority of these sightings were on the moorland to the east of the northern parcel.
- 3.143 Meadow pipit were frequently recorded associated with open moorland and grassland habitat during the breeding bird surveys in 2021 and 2022, particularly the area to the east of the northern parcel. Approximately four to five pairs are estimated to breed within the Study Area.
- 3.144 The overwintering and breeding meadow pipit population is important at up to a Local level.

Tree Pipit

- 3.145 A Priority and Red listed species, classified as a common passage migrant and breeding summer visitor in Gwent. There were estimated to be 16,500 (10,500–22,500) breeding pairs of tree pipit in Wales in 2018⁴⁰.
- 3.146 A total of five tree pipit were recorded on three dates during the breeding bird surveys, located in and around the northern and southern parcels. Three of these sightings were of singing males in May 2021, with a non-singing bird seen nearby in June 2021. However, these singing males weren't seen on subsequent surveys, so the breeding status of this species is limited to possible breeding. Up to two pairs are considered to possibly breed within the Survey Boundary. This small, possible breeding population is considered to be of up to Local importance.

Spotted Flycatcher

- 3.147 A Priority and Red listed species, classified as an uncommon breeding summer visitor in Gwent.
- 3.148 A pair were seen carrying food in the east of the northern parcel but not recorded on any other occasions. A confirmed breeding pair of spotted flycatcher is considered to be of up to Local importance.

Redwing

- 3.149 Listed on Schedule 1, classified as a common winter visitor in Gwent. National surveys over the winters of 2012–13 and 2013–14 gave an estimate of a winter population of 8.6 million redwings⁴³.

⁴³ Hayhow D.B., Bond A.L., Douse A., Eaton M.A., Frost T., Grice P.V., Hall C., Harris, S.J., Havery S., Hearn R.D., Noble D.G., Oppel S., Williams J., Win I., and Wotton S. (2017). *The State of the UK's Birds 2016*. Sandy: RSPB, BTO, WWT, DAERA, JNCC, NE, NRW, and SNH

3.150 Redwing were recorded roosting and foraging in moderate numbers within the Study Area throughout both 2021/2021 and 2021/2022 winter and passage seasons. A peak count of 200 redwing was recorded during the winter bird survey in December 2021.

3.151 As a common winter visitor in Gwent, the overwintering population recorded within the Survey Boundary is of less than Local importance.

Fieldfare

3.152 Schedule 1 and Amber listed, classified as a common winter visitor in Gwent. National surveys over the winters of 2012–13 and 2013–14 gave an estimate of a winter population of 15.1 million fieldfares⁴³.

3.153 Fieldfare were recorded roosting and foraging in moderate numbers within the Study Area throughout both 2021/2021 and 2021/2022 winter and passage seasons. A peak count of 250 fieldfare was recorded during the winter bird survey in March 2022.

3.154 As a common winter visitor in Gwent, the overwintering population recorded within the Study Area is considered to be of less than Local importance.

Section 4

Summary of Important Ornithological Features

- 4.1 The IOFs recorded by the baseline investigations, including individual species and combined assemblages recorded within the Survey Boundary and wider Study Area, where applicable, is summarised in **Table EDP 4.1**. Those species where the population has been assessed to be of less than Local importance due to its small size, limited use of the Study Area and/or species favourable conservation status, have been omitted and do not require specific assessment in the OIA.

Table EDP 4.1: Summary of Important Ornithological Features within the Study Area

Receptor	Geographic Value	Reason for Consideration/Status in Study Area
Severn Estuary SPA/Ramsar	International	Within Zol, designated species (gulls) recorded during surveys. Consideration requested in EIA scoping direction.
Flat Holm and Steep Holm SSSI	National	Part of Severn Estuary SPA/Ramsar, with designated species (gulls) recorded during surveys. Consideration requested in EIA scoping direction.
Llandegfedd Reservoir SSSI	National	Llandegfedd Reservoir is the largest inland open water habitat in the county and a regionally important area for overwintering wildfowl in Wales. The site is particularly important for the overall numbers and variety of wintering wildfowl, with large numbers of wigeon (<i>Mareca penelope</i>), pochard (<i>Aythya ferina</i>) and mallard (<i>Anas platyrhynchos</i>).

Receptor	Geographic Value	Reason for Consideration/Status in Study Area
SINCs partially within or adjacent to the Survey Boundary	County	Coed Cil-Lonydd, East of Newbridge SINC, Cwm Hafod-Fach Woodlands, North of Abercarn SINC, Gwydon Valley Woodlands, Abercarn SINC, Mynydd Maen, East of Newbridge SINC. Partially cover or lie adjacent to the Proposed Development and, while primarily designated for habitats, include in their citations bird species also identified through the survey work.
Red Grouse	Local	Winter visitor to moorland habitat in small numbers.
Lesser Black-backed and Herring Gull	Local	Regularly recorded flying over the Study Area throughout the year, with peak activity during the spring. Occasional opportunistic foraging and no notable resting or breeding.
Goshawk	Local	Confirmed breeder (1 pair) and resident all year.
Peregrine	Local	Probable breeder (1 pair) and resident all year.
Kestrel	Local	Confirmed breeder (1 pair) and resident all year.
Long-eared Owl	County	Confirmed breeder (1 pair) and resident all year.
Nightjar	County	Summer visitor and confirmed breeder (6 pairs).
Cuckoo	Local	Summer visitor and probable breeder (1-2 pairs).
Snipe	Local	Winter visitor to moorland habitat in small numbers.

Receptor	Geographic Value	Reason for Consideration/Status in Study Area
Breeding Bird Assemblage	Local	Reflects the location and habitats present, including a number of species of local and national conservation concern. Small breeding populations of up to Local importance (excluding nightjar and long-eared owl). Locally valuable populations of non-target passerine species such as skylark, meadow pipit and tree pipit recorded.
Winter Bird Assemblage	Local	Relatively limited in species diversity and abundance given the extent of area and range of habitats. No populations noted of value beyond a Local context, including non-target passerines such as common crossbill, redwing, and fieldfare.

Annex EDP 9.1

Date, Timing and Weather During Bird Surveys

Table EDP A9.1.1: Date, Timing and Weather During Breeding Bird Surveys 2020

Visit No	Date	Start Time	Finish Time	Sunrise Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	27/04/2020	08:30	13:30	05:48	3	NE	0	20-40	Good
2	21/05/2020	08:30	13:30	05:11	2	NW-SW	0	5-10	Good
3	22/06/2020	08:30	13:30	04:54	2-3	SW-W	0	50-60	Good
4	01/07/2020	08:30	13:30	04:59	4	W	0	60-80	Good

Table EDP A9.1.2: Date, Timing and Weather During Breeding Bird Surveys 2021

Visit No	Date	Start Time	Finish Time	Sunrise Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	14/04/2021	06:20	16:00	06:18	2	NE-SE	0	50	Good
2	17/05/2021	06:00	15:30	05:17	2-4	W	A few light showers, lasting 10 mins at a time	60-90	Good
3	23/06/2021	06:00	12:00	04:54	1	N	0	10-20	Good
4	22/07/2021	06:15	12:30	05:21	2	E	0	10	Good

Table EDP A9.1.3: Date, Timing and Weather During Breeding Bird Surveys 2022

Visit No	Date	Start Time	Finish Time	Sunrise Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	28/04/2022	07:00	12:30	05:49	3	NE	0	100	Good
2	20/05/2022	07:00	13:15	05:13	3-5	SW	Light rain showers from 07:30-09:30	80-100	Good
3	16/06/2022	07:30	14:30	04:53	3	SW	0	80	Good
4	07/07/2022	08:15	13:45	05:03	3	W	0	90	Good

Table EDP A9.1.4: Date, Timing and Weather During Nightjar/Owl Surveys 2020

Visit No	Date	Start Time	Finish Time	Sunrise/Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	09/06/2020	21:30	01:00	04:55/21:28	1-2	NW	0	20	Good
2	25/06/2020	01:45	04:30	04:55/21:34	2	SW	0	5	Good
3	06/07/2020	21:45	01:30	05:03/21:30	2	NW	0	30-40	Good
4	14/07/2020	01:45	05:00	05:12/21:24	1	NW	0	70-90	Mod-Good

Table EDP A9.1.5: Date, Timing and Weather During Nightjar/Owl Surveys 2021

Visit No	Date	Start Time	Finish Time	Sunrise/Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	17/03/2021	18:20	21:30	06:21/18:20	2	NE	0	30	Good
2	14/06/2021	21:15	00:30	04:54/21:31	2	W	0	40	Good
3	29/06/2021	01:30	04:45	04:57/21:34	2	NE	0	20	Good
4	13/07/2021	21:30	00:30	05:10/21:25	3	NW	0	30	Good

Table EDP A9.1.6: Date, Timing and Weather During Nightjar Surveys 2023

Visit No	Date	Start Time	Finish Time	Sunrise/Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	06/06/2023	21:25	00:25	04:57/21:25	2-4	NE	0	75-90	Good
2	26/06/2023	21:30	00:30	04:55/21:34	0-3	SW	0	90-100	Good
3	11/07/2023	02:35	05:20	05:07/21:28	4-5	W	Light rain began at 04:15, heavy by end.	100	Good

Table EDP A9.1.7: Date, Timing and Weather During Raptor Surveys 2020

Visit No	Date	Start Time	Finish Time	Sunrise/Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	23/04/2020	06:30	16:00	05:59/20:23	2	NE	0	10-20	Good
2	24/06/2020	05:30	16:00	04:55/21:34	1	E	0	5	Good
3	24/07/2020	06:00	16:30	05:24/21:12	2	W	0	30-40	Good

Table EDP A9.1.8: Date, Timing and Weather During Raptor Surveys 2021

Visit No	Date	Start Time	Finish Time	Sunrise/Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	18/03/2021	06:30	17:00	06:19/18:22	2-3	W	0	40	Good
2	21/04/2021	06:00	17:00	06:03/20:19	3-4	NE	0	50-90	Good
3	14/06/2021	06:15	17:45	04:54/21:31	3	W	0	50	Good
4	15/07/2021	08:00	18:00	05:12/21:23	2	NW	0	10	Good

Table EDP A9.1.9: Date, Timing and Weather During Winter Bird Surveys 2020-2021

Visit No	Date	Start Time	Finish Time	Sunrise/Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	05/11/2020	09:00	16:30	07:14/16:37	1-2	N	0	40-60	Good
2	24/11/2020	08:30	16:00	07:46/16:11	2-3	S	0	80-100	Moderate-Good
3	24/12/2020	08:20	16:00	08:17/16:06	2-3	NW	0	20-30	Good

Visit No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
4	22/01/2021	08:00	15:00	08:04/16:44	2	W	Showers from 13:40-14:00, 14:45-15:00	30-80	Good
5	23/02/2021	07:00	15:15	07:10/17:42	5-6	S	0	30-80	Good
6	23/03/2021	06:45	14:00	06:08/18:31	3	S	0	70	Good

Table EDP A9.1.10: Date, Timing and Weather During Winter Bird Surveys 2021-2022

Visit No	Date	Start Time	Finish Time	Sunrise /Sunset Time	Wind Speed	Wind Direction	Rain	Cloud Cover	Visibility
1	22/10/2021	08:15	12:30	07:49/18:04	4	NW	0	70	Good
2	24/11/2021	09:00	14:30	07:46/16:11	2	N	0	100	Moderate
3	21/12/2021	09:15	14:30	08:16/16:04	3	E	0	100	Good
4	January 2022	Technical error - data lost							
5	25/02/2022	12:00	17:50	07:06/17:45	3-5	W	0	10-20	Good
6	17/03/2022	11:15	15:30	06:08/18:30	3	SW	0	100	Good

Table EDP A9.1.11: Date, Timing, and Weather During Winter/Passage Vantage Point (VP) Surveys 2020–2021

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
1	VP1	09/09/2020	14:30	17:30	06:39/19:40	Start	3	NW	0	10	2	2	0	0
						Hour 1	3	W	0	5	2	2	0	0
						Hour 2	2	W	0	0	2	2	0	0
						Hour 3	4	W	0	0	2	2	0	0
	VP2	09/09/2020	14:30	17:30	06:39/19:40	Start	3	NW	0	5	2	2	0	0
						Hour 1	3	NW	0	5	2	2	0	0
						Hour 2	2	NW	0	5	2	2	0	0
						Hour 3	2	NW	0	5	2	2	0	0
2	VP1	21/09/2020	14:50	17:50	06:58/19:12	Start	2	S	0	0	-	2	0	0
						Hour 1	3	SW	0	10	2	2	0	0
						Hour 2	2	SW	0	10	2	2	0	0
						Hour 3	2	SW	0	5	2	2	0	0
	VP2	21/09/2020	15:30	18:30	06:58/19:12	Start	1	SW	0	0	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
3						Hour 1	1	SW	0	0	2	2	0	0
						Hour 2	1	SW	0	0	2	2	0	0
						Hour 3	1	SW	0	0	2	2	0	0
	VP1	06/10/2020	09:15	12:15	07:22/18:37	Start	5	W	2	90	0	1	0	0
						Hour 1	5	W	2	95	0	1	0	0
						Hour 2	5	W	0	80	0	2	0	0
						Hour 3	5	W	0	95	0	2	0	0
		06/10/2020	09:30	12:30	07:22/18:37	Start	3	W	2	90	0	2	0	0
						Hour 1	2	W	2	90	0	1	0	0
						Hour 2	3	W	0	80	0	2	0	0
4	VP1	23/10/2020	14:00	17:00	07:52/18:01	Hour 3	3	W	0	80	0	2	0	0
						Start	2	W	0	50	2	2	0	0
						Hour 1	2	W	0	50	2	2	0	0
						Hour 2	1	W	0	40	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
	VP2	23/10/2020	14:15	17:15	07:52/18:01	Hour 3	1	SW	0	30	2	2	0	0
						Start	4	W	0	50	2	2	0	0
						Hour 1	3	W	0	60	2	2	0	0
						Hour 2	4	SW	0	60	2	2	0	0
						Hour 3	4	SW	0	30	2	2	0	0
5	VP1	10/11/2020	09:40	12:40	07:23/16:29	Start	2	SW	0	90	2	2	0	0
						Hour 1	3	SW	0	80	2	2	0	0
						Hour 2	3	SW	0	70	2	2	0	0
						Hour 3	3	SW	0	80	2	2	0	0
	VP2	13/11/2020	13:00	16:00	07:27/16:24	Start	4	SW	0	100	2	2	0	0
						Hour 1	4	SW	0	100	1	2	0	0
						Hour 2	3	SW	0	100	1	2	0	0
						Hour 3	4	SW	0	100	1	2	0	0
6	VP1	27/11/2020	08:50	11:50	07:52/16:09	Start	3	SE	0	20	2	2	1	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
						Hour 1	4	SE	0	20	2	2	1	0
						Hour 2	3	SE	0	20	2	2	0	0
						Hour 3	4	SE	0	10	2	2	0	0
	VP2	27/11/2020	08:20	11:20	07:52/16:09	Start	1	NE	0	10	2	2	1	0
						Hour 1	1	NE	0	10	2	2	1	0
						Hour 2	1	NE	0	10	2	2	1	0
						Hour 3	1	NE	0	10	2	2	1	0
7	VP1	08/12/2020	09:20	12:20	08:06/16:03	Start	2	W	0	60	2	2	0	0
						Hour 1	2	W	0	60	2	2	0	0
						Hour 2	3	W	0	70	2	2	0	0
						Hour 3	2	W	0	50	2	2	0	0
	VP2	08/12/2020	12:50	15:50	08:06/16:03	Start	2	W	0	50	2	2	0	0
						Hour 1	2	W	0	50	2	2	0	0
						Hour 2	1	W	1	80	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
						Hour 3	1	W	2	80	2	2	0	0
8	VP1	06/01/2021	11:00	14:00	08:18/16:19	Start	3	NE	0	70	2	2	2	1
						Hour 1	2	NE	0	90	2	2	2	1
						Hour 2	2	NE	0	100	2	1	2	1
						Hour 3	3	NE	0	100	2	1	2	1
	VP2	06/01/2021	11:10	14:10	08:18/16:19	Start	4	N	0	100	1	1	0	1
						Hour 1	4	N	0	100	1	2	0	0
						Hour 2	3	N	0	100	1	2	0	0
						Hour 3	3	N	0	100	1	1	0	0
9	VP1	08/02/2021	12:00	15:00	07:38/17:14	Start	5	NE	0	95	1	2	0	2
						Hour 1	5	NE	0	100	1	2	0	1
						Hour 2	5	NE	0	95	1	2	0	2
						Hour 3	5	NE	0	95	1	1	0	1
	VP2	03/02/2021	14:00	17:00	07:48/17:06	Start	5	W	0	90	1	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
10						Hour 1	5	W	0	70	1	2	0	0
						Hour 2	5	SW	0	30	1	2	0	0
						Hour 3	4	SW	0	70	1	2	0	0
	VP1	10/02/2021	09:00	12:00	07:37/17:18	Start	5	NE	0	60	2	2	1	0
						Hour 1	4	NE	0	50	2	2	1	0
						Hour 2	5	NE	0	50	2	2	0	0
						Hour 3	4	NE	0	40	2	2	0	0
		10/02/2021	12:15	15:15	07:37/17:18	Start	4	NE	0	50	2	2	0	0
						Hour 1	4	NE	0	40	2	2	0	0
						Hour 2	4	NE	0	40	2	2	0	0
						Hour 3	4	NE	0	40	2	2	0	0
11	VP1	01/03/2021	10:30	13:30	06:57/17:52	Start	5	SW	0	100	0	0	0	0
						Hour 1	4	SW	0	100	0	0	0	0
						Hour 2	4	SW	0	100	0	1	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
	VP2	01/03/2021	10:30	13:30	06:57/17:52	Hour 3	4	SW	0	100	0	1	0	0
						Start	4	SW	0	100	0	0	0	0
						Hour 1	3	SW	0	100	0	0	0	0
						Hour 2	4	SW	0	100	0	1	0	0
						Hour 3	4	SW	0	100	0	1	0	0
12	VP1	17/03/2021	15:10	18:10	06:23/18:20	Start	3	NE	0	50	1	2	0	0
						Hour 1	2	NE	0	50	1	2	0	0
						Hour 2	2	NE	0	40	1	2	0	0
						Hour 3	2	NE	0	10	2	2	0	0
	VP2	17/03/2021	15:00	18:00	06:23/18:20	Start	3	N	0	70	2	2	0	0
						Hour 1	3	NE	0	70	2	2	0	0
						Hour 2	2	NE	0	50	2	2	0	0
						Hour 3	2	NE	0	10	2	2	0	0

Table EDP A9.1.12: Date, Timing, and Weather During Breeding Season Vantage Point (VP) Surveys 2021

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
1	VP1	08/04/2021	13:20	16:20	06:32/19:58	Start	5	SW	0	95	1	2	0	0
						Hour 1	5	SW	0	95	1	2	0	0
						Hour 2	5	SW	0	95	1	2	0	0
						Hour 3	5	SW	0	95	1	2	0	0
	VP2	08/04/2021	10:00	13:00	06:32/19:58	Start	4	SW	0	100	1	2	0	0
						Hour 1	5	SW	0	95	1	2	0	0
						Hour 2	4	SW	0	100	1	2	0	0
						Hour 3	5	SW	0	100	1	2	0	0
2	VP1	15/04/2021	11:00	14:00	06:17/20:09	Start	4	E	0	10	2	2	0	0
						Hour 1	4	E	0	10	2	2	0	0
						Hour 2	4	E	0	10	2	2	0	0
						Hour 3	4	E	0	10	2	2	0	0
	VP2	15/04/2021	11:20	14:20	06:17/20:09	Start	2	E	0	20	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
3						Hour 1	3	E	0	10	2	2	0	0
						Hour 2	3	E	0	10	2	2	0	0
						Hour 3	2	E	0	30	2	2	0	0
	VP1	22/04/2021	13:15	16:15	06:03/20:21	Start	5	NE	0	0	-	2	0	0
						Hour 1	4	NE	0	0	-	2	0	0
						Hour 2	4	E	0	0	-	2	0	0
						Hour 3	4	E	0	0	-	2	0	0
	VP2	23/04/2021	11:00	14:00	06:00/20:22	Start	6	SE	0	10	2	2	0	0
						Hour 1	6	SE	0	10	2	2	0	0
						Hour 2	6	SE	0	10	2	2	0	0
						Hour 3	6	SE	0	10	2	2	0	0
4	VP1	06/05/2021	06:30	09:30	05:35/20:44	Start	2	NW	0	60	2	2	0	0
						Hour 1	2	NW	0	60	2	2	0	0
						Hour 2	3	NW	0	70	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
	VP2	11/05/2021	14:15	17:15	05:27/20:52	Hour 3	3	NW	0	70	2	2	0	0
						Start	4	SE	0	70	2	2	0	0
						Hour 1	4	SE	0	80	2	2	0	0
						Hour 2	5	SE	2	100	2	2	0	0
						Hour 3	5	SE	4	100	2	1	0	0
5	VP1	28/05/2021	15:30	18:30	05:04/21:17	Start	3	E	0	100	2	2	0	0
						Hour 1	0	-	0	100	2	2	0	0
						Hour 2	1	SW	0	100	2	2	0	0
						Hour 3	3	SE	0	95	2	2	0	0
	VP2	24/05/2021	16:00	19:00	05:09/21:11	Start	5	NW	2	90	2	1	0	0
						Hour 1	5	NW	2	90	2	1	0	0
						Hour 2	5	NW	0	60	2	2	0	0
						Hour 3	4	NW	0	60	2	2	0	0
6	VP1	01/06/2021	13:30	16:30	06:01/21:21	Start	5	SE	0	20	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
						Hour 1	5	SE	0	20	2	2	0	0
						Hour 2	5	SE	0	20	2	2	0	0
						Hour 3	5	SE	0	20	2	2	0	0
	VP2	01/06/2021	13:30	16:30	06:01/21:21	Start	2	E	0	30	2	2	0	0
						Hour 1	4	NE	0	50	2	2	0	0
						Hour 2	3	NE	0	50	2	2	0	0
						Hour 3	3	NE	0	50	2	2	0	0
7	VP1	08/06/2021	06:20	09:20	04:56/21:27	Start	1	E	0	20	2	2	0	0
						Hour 1	1	E	0	10	2	2	0	0
						Hour 2	0	-	0	10	2	2	0	0
						Hour 3	2	SW	0	30	2	2	0	0
	VP2	08/06/2021	06:00	09:00	04:56/21:27	Start	1	SW	0	10	2	2	0	0
						Hour 1	1	SW	0	10	2	2	0	0
						Hour 2	2	SW	0	10	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
						Hour 3	1	SW	0	10	2	2	0	0
8	VP1	13/07/2021	18:25	21:25	05:10/21:25	Start	3	NW	0	80	2	2	0	0
						Hour 1	3	NW	0	80	2	2	0	0
						Hour 2	3	NW	3	70	2	2	0	0
						Hour 3	3	NW	0	50	2	2	0	0
	VP2	13/07/2021	18:30	21:30	05:10/21:25	Start	3	NW	0	70	2	2	0	0
						Hour 1	4	NW	0	70	2	2	0	0
						Hour 2	3	NW	2	90	2	2	0	0
						Hour 3	4	NW	0	80	2	2	0	0
9	VP1	14/07/2021	14:00	17:00	05:11/21:25	Start	4	NW	0	40	2	2	0	0
						Hour 1	4	NW	0	50	2	2	0	0
						Hour 2	4	NW	0	50	2	2	0	0
						Hour 3	4	NW	0	50	2	2	0	0
	VP2	14/07/2021	15:15	18:15	05:11/21:25	Start	2	NW	0	50	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
						Hour 1	3	NW	0	30	2	2	0	0
						Hour 2	2	NW	0	20	2	2	0	0
						Hour 3	2	N	0	10	2	2	0	0
10	VP1	23/07/2021	12:15	15:15	05:23/21:14	Start	4	E	0	100	2	2	0	0
						Hour 1	4	E	0	95	2	2	0	0
						Hour 2	4	E	0	50	2	2	0	0
						Hour 3	4	E	0	50	2	2	0	0
	VP2	23/07/2021	08:35	11:35	05:23/21:14	Start	3	E	0	40	2	2	0	0
						Hour 1	3	SE	0	20	2	2	0	0
						Hour 2	3	SE	0	30	2	2	0	0
						Hour 3	4	SE	0	70	2	2	0	0
11	VP1	29/07/2021	10:50	13:50	05:31/21:07	Start	4	W	0	80	1	2	0	0
						Hour 1	5	W	0	90	1	2	0	0
						Hour 2	4	SW	0	90	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud Height	Visibility	Frost	Snow
	VP2	29/07/2021	11:30	14:30	05:31/21:07	Hour 3	4	SW	0	90	2	2	0	0
						Start	5	W	0	80	2	2	0	0
						Hour 1	5	W	0	70	2	2	0	0
						Hour 2	5	SW	0	60	2	2	0	0
						Hour 3	5	SW	0	70	2	2	0	0
12	VP1	03/08/2021	10:45	13:45	05:38/20:58	Start	2	E	0	50	2	2	0	0
						Hour 1	1	E	0	60	2	2	0	0
						Hour 2	3	E	0	70	2	2	0	0
						Hour 3	2	E	0	60	2	2	0	0
	VP2	03/08/2021	18:00	21:00	05:38/20:58	Start	2	SW	0	10	2	2	0	0
						Hour 1	2	SW	0	10	2	2	0	0
						Hour 2	1	SW	0	20	2	2	0	0
						Hour 3	1	N	0	20	2	2	0	0

Table EDP A9.1.13: Date, Timing, and Weather During Winter/Passage Vantage Point (VP) Surveys 2021–2022

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
1	VP1	02/09/2021	08:30	11:30	06:26/19:58	Start	5	NE	1	100	0	1	0	0
						Hour 1	5	NE	0	100	0	1	0	0
						Hour 2	5	NE	0	100	0	2	0	0
						Hour 3	5	NE	0	100	1	2	0	0
	VP2	02/09/2021	11:50	14:50	06:26/19:58	Start	4	NE	0	100	1	2	0	0
						Hour 1	5	NE	0	40	1	2	0	0
						Hour 2	4	NE	0	80	1	2	0	0
						Hour 3	5	NE	0	100	1	2	0	0
2	VP1	21/09/2021	14:15	17:15	06:57/19:13	Start	1	W	0	20	2	2	0	0
						Hour 1	2	W	0	20	2	2	0	0
						Hour 2	3	SW	0	20	2	2	0	0
						Hour 3	3	SW	0	20	2	2	0	0
	VP2	21/09/2021	09:10	12:10	06:57/19:13	Start	1	SW	0	60	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
3						Hour 1	0	-	0	60	2	2	0	0
						Hour 2	2	S	0	40	2	2	0	0
						Hour 3	2	S	0	40	2	2	0	0
	VP1	08/10/2021	13:50	16:50	07:25/18:34	Start	3	S	0	100	1	2	0	0
						Hour 1	1	SE	0	100	1	2	0	0
						Hour 2	1	SE	0	100	1	2	0	0
						Hour 3	1	SE	0	100	1	2	0	0
	VP2	08/10/2021	10:30	13:30	07:25/18:34	Start	2	S	0	100	0	1	0	0
						Hour 1	3	S	0	100	1	2	0	0
						Hour 2	2	S	0	100	1	2	0	0
						Hour 3	2	S	0	100	1	2	0	0
4	VP1	19/10/2021	07:45	10:45	07:45/10:45	Start	3	SW	1	80	1	1	0	0
						Hour 1	4	SW	2	100	2	1	0	0
						Hour 2	4	SW	0	100	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
						Hour 3	4	SW	1	100	2	2	0	0
	VP2	23/10/2021	08:00	11:00	07:50/18:02	Start	3	SW	0	60	2	2	0	0
						Hour 1	3	SW	0	40	2	2	0	0
						Hour 2	3	S	0	60	2	2	0	0
						Hour 3	3	S	0	80	2	2	0	0
5	VP1	17/11/2021	11:30	14:30	07:35/16:20	Start	3	W	0	30	2	2	0	0
						Hour 1	4	W	0	80	2	2	0	0
						Hour 2	4	W	0	50	2	2	0	0
						Hour 3	4	W	0	70	2	2	0	0
	VP2	17/11/2021	08:15	11:15	07:35/16:20	Start	3	W	0	20	2	2	0	0
						Hour 1	2	W	0	60	2	2	0	0
						Hour 2	2	W	0	80	2	2	0	0
						Hour 3	2	W	0	30	2	2	0	0
6	VP1	Data lost – technical error												

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow	
	VP2	Data lost – technical error													
7	VP1	10/12/2021	12:30	15:30	08:08/16:03	Start	5	NW	0	20	1	2	0	2	
						Hour 1	5	NW	0	30	1	2	0	2	
						Hour 2	5	NW	0	20	1	2	0	2	
						Hour 3	4	NW	0	80	1	2	0	2	
	VP2	10/12/2021	09:15	12:15	08:08/16:03	Start	5	NW	0	5	2	2	0	2	
						Hour 1	5	NW	0	10	1	2	0	2	
						Hour 2	5	NW	0	50	1	2	0	2	
						Hour 3	5	NW	0	70	1	2	0	2	
8	VP1	Data lost – technical error													
		VP2	22/12/2021	10:30	13:30	08:17/16:05	Start	3	SE	0	100	2	2	0	0
							Hour 1	3	SE	0	100	2	2	0	0
							Hour 2	3	SE	0	100	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
						Hour 3	3	SE	0	100	2	2	0	0
9	VP1	13/01/2022	09:30	12:30	08:14/16:29	Start	1	N	0	0	-	2	1	0
						Hour 1	1	W	0	0	-	2	1	0
						Hour 2	1	W	0	0	-	2	0	0
						Hour 3	1	W	0	0	-	2	0	0
	VP2	07/01/2022	09:00	12:00	08:17/16:21	Start	2	SW	0	20	2	2	0	2
						Hour 1	3	SW	0	100	2	2	0	2
						Hour 2	4	SW	0	100	2	2	0	2
						Hour 3	3	SW	0	100	2	2	0	2
10	VP1	19/01/2022	13:40	16:40	08:08/16:39	Start	4	NW	0	50	2	2	0	0
						Hour 1	4	NW	0	80	2	2	0	0
						Hour 2	4	NW	0	80	2	2	0	0
						Hour 3	3	NW	0	90	2	2	0	0
	VP2	Data lost – technical error												

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
11	VP1	01/02/2022	10:10	13:10	07:51/17:01	Start	3	NW	0	100	0	2	0	0
						Hour 1	4	NW	0	90	1	2	0	0
						Hour 2	4	NW	0	70	1	2	0	0
						Hour 3	4	NW	0	90	1	2	0	0
	VP2	01/02/2022	13:30	16:30	07:51/17:01	Start	4	W	0	100	1	2	0	0
						Hour 1	5	W	0	100	1	2	0	0
						Hour 2	5	NW	0	100	1	2	0	0
						Hour 3	5	NW	0	100	1	2	0	0
12	VP1	11/02/2022	09:45	12:45	07:36/17:19	Start	2	W	0	5	2	2	1	0
						Hour 1	1	SW	0	10	2	2	0	0
						Hour 2	1	SW	0	20	2	2	0	0
						Hour 3	3	SW	0	100	2	2	0	0
	VP2	11/02/2022	13:00	16:00	07:36/17:19	Start	2	SW	0	100	2	2	0	0
						Hour 1	2	SW	0	100	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
13	VP1	21/03/2022	13:00	16:00	06:14/18:27	Hour 2	3	SW	0	95	2	2	0	0
						Hour 3	2	SW	0	100	2	2	0	0
						Start	2	SW	0	80	2	2	0	0
						Hour 1	1	SW	0	50	2	2	0	0
	VP2	21/03/2022	09:45	12:45	06:14/18:27	Hour 2	3	E	0	60	2	2	0	0
						Hour 3	4	E	0	60	2	2	0	0
						Start	1	S	0	100	2	2	0	0
						Hour 1	3	S	0	95	2	2	0	0
14	VP1	28/03/2022	13:30	16:30	06:57/19:39	Hour 2	3	SW	0	90	2	2	0	0
						Hour 3	4	SW	0	90	2	2	0	0
						Start	3	E	0	20	2	2	0	0
						Hour 1	3	E	0	80	2	2	0	0
						Hour 2	3	E	0	90	2	2	0	0
						Hour 3	2	E	0	100	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
	VP2	28/03/2022	10:00	13:00	06:57/19:39	Start	2	SE	0	100	2	2	0	0
						Hour 1	0	-	0	60	2	2	0	0
						Hour 2	2	E	0	40	2	2	0	0
						Hour 3	2	SE	0	40	2	2	0	0
15	VP1	31/03/2022	10:15	13:15	06:50/19:44	Start	4	NE	0	40	1	2	0	1
						Hour 1	4	NE	0	50	1	2	0	1
						Hour 2	5	NE	0	50	1	2	0	1
						Hour 3	5	NE	0	60	1	2	0	1
	VP2	04/04/2022	09:45	12:45	06:41	Start	4	W	1	100	0	1	0	0
						Hour 1	3	W	0	100	1	2	0	0
						Hour 2	4	W	0	100	1	2	0	0
						Hour 3	4	W	0	100	1	2	0	0
16	VP1	04/04/2022	13:10	16:10	06:41/19:51	Start	4	W	0	100	1	2	0	0
						Hour 1	4	W	0	100	1	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
	VP2	13/04/2022	10:00	13:00	06:20/20:05	Hour 2	4	W	0	100	1	2	0	0
						Hour 3	4	W	0	100	1	2	0	0
						Start	3	SW	0	100	0	2	0	0
						Hour 1	3	SW	3	100	0	0	0	0
						Hour 2	3	SW	0	90	1	2	0	0
						Hour 3	3	SW	0	90	1	2	0	0
17	VP1	13/04/2022	13:30	16:30	06:20/20:05	Start	3	SW	2	100	1	2	0	0
						Hour 1	3	SW	0	90	1	2	0	0
						Hour 2	2	SW	0	90	2	2	0	0
						Hour 3	2	SW	0	80	2	2	0	0
	VP2	14/04/2022	10:40	13:40	06:18/20:07	Start	1	SW	0	100	2	2	0	0
						Hour 1	1	SW	0	100	2	2	0	0
						Hour 2	1	SW	0	100	2	2	0	0
						Hour 3	2	SW	0	100	2	2	0	0

Survey No	VP No	Date	Start Time	Finish Time	Sunrise/ Sunset Time	Timing	Wind Speed	Wind Dir.	Rain	Cloud Cover	Cloud height	Visibility	Frost	Snow
18	VP1	27/04/2022	10:00	13:00	05:51/20:28	Start	4	NE	0	100	2	2	0	0
						Hour 1	4	NE	0	100	2	2	0	0
						Hour 2	5	NE	0	100	2	2	0	0
						Hour 3	4	NE	0	100	2	2	0	0
	VP2	27/04/2022	13:30	16:30	05:51/20:28	Start	3	NE	0	95	2	2	0	0
						Hour 1	3	NE	0	80	2	2	0	0
						Hour 2	3	NE	0	90	2	2	0	0
						Hour 3	3	NE	0	95	2	2	0	0

Annex EDP 9.2 Complete Species List

Table EDP A9.2.1: List of Species Recorded Throughout the Bird Surveys 2020-2023

Common Name	Scientific Name
Blackbird	<i>Turdus merula</i>
Blackcap	<i>Sylvia atricapilla</i>
Black-headed Gull	<i>Chroicocephalus ridibundus</i>
Blue Tit	<i>Cyanistes caeruleus</i>
Brambling	<i>Fringilla montifringilla</i>
Bullfinch	<i>Pyrrhula pyrrhula</i>
Buzzard	<i>Buteo buteo</i>
Carrion Crow	<i>Corvus corone</i>
Chaffinch	<i>Fringilla coelebs</i>
Chiffchaff	<i>Phylloscopus collybita</i>
Coal Tit	<i>Periparus ater</i>
Crossbill	<i>Loxia curvirostra</i>
Cuckoo	<i>Cuculus canorus</i>
Dunnock	<i>Prunella modularis</i>
Fieldfare	<i>Turdus pilaris</i>
Goldcrest	<i>Regulus regulus</i>
Goldfinch	<i>Carduelis carduelis</i>
Goshawk	<i>Accipiter gentilis</i>
Great Spotted Woodpecker	<i>Dendrocopos major</i>
Great Tit	<i>Parus major</i>
Green Woodpecker	<i>Picus viridis</i>
Greenfinch	<i>Chloris chloris</i>
Grey Heron	<i>Ardea cinerea</i>
Hen Harrier	<i>Circus cyaneus</i>
Herring Gull	<i>Larus argentatus</i>
Hobby	<i>Falco subbuteo</i>
Jackdaw	<i>Corvus monedula</i>
Jay	<i>Garrulus glandarius</i>
Kestrel	<i>Falco tinnunculus</i>
Lesser Black-backed Gull	<i>Larus fuscus</i>
Lesser Redpoll	<i>Acanthis cabaret</i>
Linnet	<i>Linaria cannabina</i>
Long-eared Owl	<i>Asio otus</i>

Common Name	Scientific Name
Long-tailed Tit	<i>Aegithalos caudatus</i>
Magpie	<i>Pica pica</i>
Mallard	<i>Anas platyrhynchos</i>
Meadow Pipit	<i>Anthus pratensis</i>
Mistle Thrush	<i>Turdus viscivorus</i>
Nightjar	<i>Caprimulgus europaeus</i>
Nuthatch	<i>Sitta europaea</i>
Osprey	<i>Pandion haliaetus</i>
Peregrine	<i>Falco peregrinus</i>
Pheasant	<i>Phasianus colchicus</i>
Pied Wagtail	<i>Motacilla alba</i>
Raven	<i>Corvus corax</i>
Red Grouse	<i>Lagopus lagopus</i>
Red Kite	<i>Milvus milvus</i>
Redstart	<i>Phoenicurus phoenicurus</i>
Redwing	<i>Turdus iliacus</i>
Reed Bunting	<i>Emberiza schoeniclus</i>
Robin	<i>Erithacus rubecula</i>
Siskin	<i>Spinus spinus</i>
Skylark	<i>Alauda arvensis</i>
Snipe	<i>Gallinago gallinago</i>
Song Thrush	<i>Turdus philomelos</i>
Sparrowhawk	<i>Accipiter nisus</i>
Spotted Flycatcher	<i>Muscicapa striata</i>
Starling	<i>Sturnus vulgaris</i>
Stock Dove	<i>Columba oenas</i>
Stonechat	<i>Saxicola rubicola</i>
Swallow	<i>Hirundo rustica</i>
Swift	<i>Apus apus</i>
Tawny Owl	<i>Strix aluco</i>
Tree Pipit	<i>Anthus trivialis</i>
Treecreeper	<i>Certhia familiaris</i>
Wheatear	<i>Oenanthe oenanthe</i>
Whinchat	<i>Saxicola rubetra</i>
Willow Warbler	<i>Phylloscopus trochilus</i>
Woodpigeon	<i>Columba palumbus</i>
Wren	<i>Troglodytes troglodytes</i>

Annex EDP 9.3

Results of Breeding Bird Surveys 2021-22

Table EDP A9.3.1: Summary of Activity During Breeding Bird Surveys in 2021 and 2022

Common Name	Scientific Name	Sch 1	BoCCW Status	Priority Species 44	EOAC Status 45	Est. Breeding Pop/Pop Status	Study Area Status
Mallard	<i>Anas platyrhynchos</i>		Green		NB	-	A pair flew over in May 2021.
Swift	<i>Apus apus</i>		Red		NB	-	Three birds flew over in July 2021.
Cuckoo	<i>Cuculus canorus</i>		Red	✓	PR	1-2 pairs	Seven records of males calling on three different surveys around the northern parcel, across 2021 and 2022 breeding seasons.
Stock Dove	<i>Columba oenas</i>		Green		PO	0-1 pair	One seen in a tree on a survey in June 2022.
Woodpigeon	<i>Columba palumbus</i>		Green		PR	10-20 pairs	A total of 54 birds recorded across the breeding bird surveys in individuals and small groups.
Lesser Black-backed Gull	<i>Larus fuscus</i>		Red		NB	-	One flew over in April 2021.
Grey Heron	<i>Ardea cinerea</i>		Amber		NB	-	Seen at the pond in the southern parcel, and one or two individuals seen around the northern parcel over the two seasons.

⁴⁴ Section 7 of *Environment (Wales) Act 2016*

⁴⁵ CB – confirmed breeding, PR – probable breeding, PO – possible breeding & NB – non-breeding

Common Name	Scientific Name	Sch 1	BoCCW Status	Priority Species 44	EOAC Status 45	Est. Breeding Pop/Pop Status	Study Area Status
Red Kite	<i>Milvus milvus</i>	✓	Green		PO	0-1 pair	Seen flying overhead in May 2021 and June 2022. Considered a possible breeder due to the number of sightings across other surveys.
Buzzard	<i>Buteo buteo</i>		Green		CB	1 pair	Recorded on nearly every breeding bird survey with juveniles recorded within and adjacent to the Survey Boundary.
Great Spotted Woodpecker	<i>Dendrocopos major</i>		Green		PO	0-3 pairs	Recorded in woodland edge areas across both years.
Green Woodpecker	<i>Picus viridis</i>		Amber		PO	0-3 pairs	Recorded in woodland edge areas across both years.
Kestrel	<i>Falco tinnunculus</i>		Red	✓	CB	1 pair	Only one recorded during the breeding bird surveys but small numbers of sightings throughout the year on other surveys. Seen with five juveniles on moorland to the east of the northern parcel.
Jay	<i>Garrulus glandarius</i>		Green		PR	1-3 pairs	Mainly in the southern parcel.
Magpie	<i>Pica pica</i>		Amber		PR	1-2 pair	Seen across the extent of the Survey Boundary.
Carrion Crow	<i>Corvus corone</i>		Green		PR	2-4 pairs	Seen across the extent of the Survey Boundary, particularly in the northern parcel.
Raven	<i>Corvus corax</i>		Green		CB	2-5 pairs	During the breeding bird surveys, pairs were seen on five occasions. On the raptor surveys, a possible nest was found in the woodland to the north of the northern parcel, plus a family group of seven was recorded in the east. On four occasions, ravens were seen carrying food into the woodlands to the east of the southern parcel.

Common Name	Scientific Name	Sch 1	BoCCW Status	Priority Species 44	EOAC Status 45	Est. Breeding Pop/Pop Status	Study Area Status
Coal Tit	<i>Periparus ater</i>		Amber		PR	2-4 pairs	Individuals and pairs in plantations and treelines across the Study Area.
Blue Tit	<i>Cyanistes caeruleus</i>		Green		CB	3-6 pairs	Three family groups seen. Individuals and pairs in plantations and treelines across the Study Area.
Great Tit	<i>Parus major</i>		Green		CB	4-8 pairs	One family group seen. Individuals and pairs in plantations and treelines across the Study Area.
Skylark	<i>Alauda arvensis</i>		Amber	✓	PR	10-20 pairs	All recorded singing on the moorland to the immediate east and south of the northern parcel.
Swallow	<i>Hirundo rustica</i>		Green		PO	0-4 pairs	Regularly seen foraging, particularly across the northern parcel. Two farm sites and two houses located in this area are the only possible locations for breeding, though this was not directly seen.
Willow Warbler	<i>Phylloscopus trochilus</i>		Red		PR	6-10 pairs	Recorded regularly, particularly in the northern part of the northern parcel, central parcel, and the treeline to the north-east of the southern parcel.
Chiffchaff	<i>Phylloscopus collybita</i>		Green		PR	2-4 pairs	Recorded in small numbers, particularly in the west of the southern parcel.
Blackcap	<i>Sylvia atricapilla</i>		Green		CB	2-3 pairs	Recorded in small numbers, particularly in the west of the southern parcel.
Goldcrest	<i>Regulus regulus</i>		Red		PR	4-7 pairs	Recorded in plantation and woodland edge habitats.
Wren	<i>Troglodytes troglodytes</i>		Green		PR	10-15 pairs	Recorded across the entirety of the Study Area.
Nuthatch	<i>Sitta europaea</i>		Green		PR	3-6 pairs	Present in tree lines and plantation edges.

Common Name	Scientific Name	Sch 1	BoCCW Status	Priority Species 44	EOAC Status 45	Est. Breeding Pop/Pop Status	Study Area Status
Treecreeper	<i>Certhia familiaris</i>		Green		PO	0-1 pair	One recorded in each year in the southern parcel.
Starling	<i>Sturnus vulgaris</i>		Red	✓	PO	0-5 pairs	Small groups recorded throughout survey period, but no observations made that suggested breeding occurred.
Blackbird	<i>Turdus merula</i>		Green		CB	15-20 pairs	Recorded across the entirety of the Study Area.
Song Thrush	<i>Turdus philomelos</i>		Green	✓	CB	7-10 pairs	Recorded singing from scattered trees and plantation edge habitats across the Study Area.
Mistle Thrush	<i>Turdus viscivorus</i>		Amber		CB	6-8 pairs	Recorded across the Survey Boundary, including post-breeding groups of 7, 10, and 11 birds seen together.
Spotted Flycatcher	<i>Muscicapa striata</i>		Red	✓	CB	1 pair	A pair seen carrying food in the east of the northern parcel.
Robin	<i>Erithacus rubecula</i>		Green		CB	10-12 pairs	Recorded across the entirety of the Study Area in treelines and plantation edges.
Redstart	<i>Phoenicurus phoenicurus</i>		Green		CB	2-5 pairs	Two family groups seen, in the northern and southern parcels, with other sightings scattered.
Stonechat	<i>Saxicola rubicola</i>		Green		CB	2-4 pairs	Several records, all associated with the moorland around the northern parcel. Two family groups seen.
Wheatear	<i>Oenanthe oenanthe</i>		Amber		PR	2-4 pairs	Several records, all associated with the northern parcel and the surrounding moorland.
Dunnock	<i>Prunella modularis</i>		Amber	✓	CB	4-8 pairs	Recorded across the Study Area, particularly in the northern parcel. Nestlings heard calling in the west of the northern parcel.
Pied Wagtail	<i>Motacilla alba</i>		Green		CB	3-8 pairs	Pairs and juveniles recorded within grassland habitats.

Common Name	Scientific Name	Sch 1	BoCCW Status	Priority Species 44	EOAC Status 45	Est. Breeding Pop/Pop Status	Study Area Status
Meadow Pipit	<i>Anthus pratensis</i>		Red		PR	4-5 pairs	Mostly recorded on the moorland to the immediate east of the northern parcel.
Tree Pipit	<i>Anthus trivialis</i>		Red	✓	PO	0-2 pairs	Recorded in small numbers in and around the northern and southern parcels.
Chaffinch	<i>Fringilla coelebs</i>		Amber		CB	15-20 pairs	Recorded across the entirety of the Study Area.
Bullfinch	<i>Pyrrhula pyrrhula</i>		Amber	✓	PO	0-2 pairs	Three records – two, including a pair, in the southern parcel and one singing in the trees to the north-east of the northern parcel.
Linnet	<i>Linaria cannabina</i>		Red	✓	PO	0-1 pairs	Limited opportunity for breeding on-site, and no birds recorded singing, but post-breeding flock of 20 seen foraging together on the June 2022 survey.
Crossbill	<i>Loxia curvirostra</i>	✓	Green		PO	0-2 pairs	Seen in the southern parcel and in the plantation to the south-east of the northern parcel.
Goldfinch	<i>Carduelis carduelis</i>		Green		CB	7-11 pairs	Recorded throughout the northern and southern parcels.
Siskin	<i>Spinus spinus</i>		Green		PR	5-8 pairs	Recorded throughout the northern and southern parcels.

Annex EDP 9.4

Vantage Point Survey Flightline Data

Table EDP A9.4.1: Key to Target Species Codes

Species Code/Description	Species
GI	Goshawk (<i>Accipiter gentilis</i>)
H.	Grey Heron (<i>Ardea cinerea</i>)
HG	Herring Gull (<i>Larus argentatus</i>)
HH	Hen Harrier (<i>Circus cyaneus</i>)
HO	Hobby (<i>Falco subbuteo</i>)
K.	Kestrel (<i>Falco tinnunculus</i>)
KT	Red Kite (<i>Milvus milvus</i>)
LB	Lesser Black-backed Gull (<i>Larus fuscus</i>)
'Mixed Larus species'	Mixed flock of herring and lesser black-backed gull
OP	Osprey (<i>Pandion haliaetus</i>)
PE	Peregrine (<i>Falco peregrinus</i>)
RG	Red Grouse (<i>Lagopus lagopus</i>)

Table EDP A 9.4.2: Vantage Point (VP) Data for Target Species During Breeding Season 2020 (HB = height band)

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
23/04/2020	4	BZ	1	09:18	20	15	0	0
23/04/2020	4	RN	1	09:57	30	15	15	0
23/04/2020	4	RN	1	10:33	50	0	45	0
23/04/2020	4	LB	2	10:39	120	30	90	0
23/04/2020	4	KT	1	10:42	210	0	45	165
23/04/2020	5	RN	1	10:36	120	0	120	0
23/04/2020	5	BZ	1	11:11	75	0	75	0
23/04/2020	5	BZ	1	11:48	150	0	75	75
01/05/2020	4	BZ	1	11:04	90	75	15	0
01/05/2020	4	BZ	1	11:04	60	0	45	15
01/05/2020	4	RN	1	12:25	15	15	0	0
01/05/2020	5	BZ	1	10:30	45	0	45	0
01/05/2020	5	BZ	2	10:39	225	0	30	195
01/05/2020	5	BZ	2	10:40	165	0	60	105
01/05/2020	5	BZ	2	10:58	345	0	45	300
01/05/2020	5	PE	1	11:19	225	30	30	165

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
01/05/2020	5	KT	1	11:44	165	0	165	0
01/05/2020	5	BZ	1	12:02	120	0	0	120
01/05/2020	5	RN	1	12:09	50	0	45	0
01/05/2020	5	BZ	1	12:31	90	0	90	0
01/05/2020	5	RN	2	12:36	45	0	45	0
01/05/2020	5	HG	1	12:41	30	15	15	0
01/05/2020	5	KT	1	12:53	150	0	75	75
07/05/2020	4	RN	1	13:04	60	0	60	0
07/05/2020	4	MA	1	13:39	30	30	0	0
07/05/2020	4	RN	1	13:53	60	30	30	0
07/05/2020	4	RN	1	15:01	105	90	15	0
07/05/2020	4	RN	1	15:20	120	0	120	0
07/05/2020	4	RN	1	15:26	75	15	60	0
07/05/2020	4	RN	1	15:43	45	15	30	0
07/05/2020	5	RN	2	12:56	60	0	60	0
07/05/2020	5	CK	1	13:30	30	30	0	0
07/05/2020	5	KT	1	14:24	90	0	90	0
07/05/2020	5	BZ	1	14:44	120	15	75	30
15/05/2020	5	RN	1	14:41	30	0	30	0
29/05/2020	4	BZ	1	12:44	240	0	0	240
29/05/2020	4	HG	1	12:59	75	75	0	0
29/05/2020	4	HG	2	13:15	150	0	75	75
29/05/2020	4	BZ	1	13:40	30	0	30	0
29/05/2020	4	HG	2	13:58	45	0	45	0
29/05/2020	5	BZ	1	09:17	90	15	75	0
29/05/2020	5	HG	2	09:33	60	0	60	0
29/05/2020	5	HG	22	10:35	60	60	0	0
29/05/2020	5	HG	22	10:44	180	0	180	0
29/05/2020	5	KT	1	10:44	60	0	60	0
05/06/2020	4	K.	1	08:30	50	15	30	0
05/06/2020	4	LB	1	08:33	30	0	15	15
05/06/2020	4	LB	3	08:35	45	0	45	0
05/06/2020	4	LB	2	08:59	35	0	30	0
05/06/2020	4	HG	2	09:10	20	0	15	0
05/06/2020	4	HG	2	09:19	25	0	15	0
05/06/2020	4	HG	2	09:25	15	0	15	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
05/06/2020	4	K.	1	09:27	55	45	0	0
05/06/2020	4	HG	2	09:30	30	30	0	0
05/06/2020	4	BZ	1	09:39	75	0	0	75
05/06/2020	4	HG	3	09:48	30	0	30	0
05/06/2020	4	HG	1	09:58	38	0	30	0
05/06/2020	4	LB	2	10:01	90	0	60	30
05/06/2020	4	K.	1	10:04	30	30	0	0
05/06/2020	4	LB	2	10:04	40	30	0	0
05/06/2020	4	BZ	1	10:34	42	0	30	0
05/06/2020	5	LB	9	08:51	120	0	0	120
05/06/2020	5	BZ	1	08:53	60	0	0	60
05/06/2020	5	LB	1	09:21	30	0	30	0
05/06/2020	5	HG	2	09:21	30	15	15	0
05/06/2020	5	HG	2	09:34	30	15	15	0
05/06/2020	5	LB	3	09:34	30	15	15	0
05/06/2020	5	LB	8	09:38	150	0	150	0
05/06/2020	5	HG	2	09:38	150	0	150	0
05/06/2020	5	BZ	1	09:45	120	45	45	30
05/06/2020	5	LB	4	09:56	15	15	0	0
05/06/2020	5	PE	1	09:59	15	15	0	0
05/06/2020	5	PE	1	10:02	30	30	0	0
05/06/2020	5	BZ	1	10:06	180	30	90	60
05/06/2020	5	BZ	1	10:26	90	0	60	30
05/06/2020	5	BZ	1	10:30	30	0	15	15
05/06/2020	5	LB	10	10:36	60	0	60	0
05/06/2020	5	BZ	1	10:41	30	30	0	0
05/06/2020	5	HG	2	10:47	45	15	30	0
05/06/2020	5	BZ	1	10:54	15	15	0	0
05/06/2020	5	PE	1	11:11	150	30	120	0
23/06/2020	4	LB	1	11:39	30	0	30	0
23/06/2020	4	BZ	1	11:57	60	0	0	60
23/06/2020	4	RN	1	12:58	45	15	30	0
23/06/2020	4	BZ	1	13:25	105	0	0	105
23/06/2020	4	RN	1	14:11	45	0	0	45
19/06/2020	5	KT	1	15:25	30	0	30	0
19/06/2020	5	RN	1	15:33	15	15	0	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
19/06/2020	5	BZ	1	15:59	60	15	45	0
19/06/2020	5	PE	1	16:07	30	0	15	15
26/06/2020	4	KT	1	12:45	45	0	45	0
26/06/2020	4	BZ	1	12:46	30	30	0	0
26/06/2020	4	BZ	3	12:47	60	0	60	0
26/06/2020	4	KT	1	12:57	30	0	30	0
26/06/2020	4	BZ	1	13:00	15	0	15	0
26/06/2020	4	RN	2	13:49	30	30	0	0
26/06/2020	4	RN	1	15:15	15	15	0	0
26/06/2020	4	BZ	1	15:33	15	0	0	15
26/06/2020	5	BZ	1	12:59	60	0	30	30
26/06/2020	5	RN	1	13:32	30	0	30	0
26/06/2020	5	BZ	1	14:51	105	0	30	75
02/07/2020	4	RN	8	18:40	120	120	0	0
02/07/2020	4	BZ	1	18:42	30	0	30	0
02/07/2020	4	SH	1	18:43	15	15	0	0
02/07/2020	4	BZ	1	19:39	180	0	180	0
02/07/2020	4	BZ	1	19:47	120	0	120	0
02/07/2020	5	BZ	2	15:05	240	0	0	240
02/07/2020	5	BZ	1	15:39	240	60	120	60
02/07/2020	5	RN	2	15:51	15	0	15	0
02/07/2020	5	RN	2	16:24	120	0	75	45
02/07/2020	5	BZ	1	17:06	120	0	120	0
02/07/2020	5	RN	1	17:13	45	0	45	0
02/07/2020	5	RN	1	17:30	15	15	0	0
16/07/2020	4	KT	1	07:46	90	30	60	0
16/07/2020	4	RN	1	07:51	30	0	30	0
16/07/2020	4	BZ	1	07:59	105	0	105	0
16/07/2020	4	KT	1	08:31	15	15	0	0
16/07/2020	4	PE	1	09:24	45	15	15	15
16/07/2020	4	KT	1	09:29	30	15	15	0
16/07/2020	4	KT	1	09:43	75	0	45	30
16/07/2020	4	BZ	1	09:57	165	0	0	165
16/07/2020	4	BZ	1	10:05	30	0	30	0
16/07/2020	4	RN	2	10:39	30	0	0	30
16/07/2020	5	RN	1	11:45	10	15	0	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
16/07/2020	5	RN	4	12:10	30	0	30	0
16/07/2020	5	BZ	1	12:37	165	0	30	135
16/07/2020	5	RN	1	13:46	45	0	30	15
31/07/2020	4	BZ	1	11:50	30	30	0	0
31/07/2020	4	BZ	1	12:06	15	15	0	0
31/07/2020	4	RN	2	13:01	45	30	15	0
31/07/2020	4	RN	2	13:24	45	45	0	0
31/07/2020	4	BZ	1	13:26	105	15	90	0
31/07/2020	4	RN	1	13:29	45	30	15	0
31/07/2020	4	RN	1	13:29	60	0	45	15
31/07/2020	5	H.	1	08:14	30	15	15	0
31/07/2020	5	BZ	1	08:41	30	30	0	0
11/08/2020	4	RN	2	06:52	60	0	60	0
11/08/2020	4	PE	1	08:38	45	15	30	0
11/08/2020	4	K.	1	08:39	30	0	30	0
11/08/2020	5	BZ	1	06:03	30	0	0	30
11/08/2020	5	RN	2	06:29	15	0	15	0
11/08/2020	5	SH	1	06:42	5	15	0	0
11/08/2020	5	BZ	1	08:13	45	0	45	0

Table EDP A9.4.3: Vantage Point (VP) Data for Target Species During Non-breeding Season 2020-2021 (HB=height band)

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
09/09/2020	4	BZ	1	14:45	30	0	30	0
09/09/2020	4	K.	1	14:50	30	0	30	0
09/09/2020	4	RN	4	15:26	30	0	30	0
09/09/2020	4	BZ	1	15:43	60	0	60	0
09/09/2020	4	BZ	1	16:01	180	0	30	150
09/09/2020	4	RN	2	16:08	30	30	0	0
09/09/2020	4	BZ	1	16:56	60	0	60	0
09/09/2020	4	RN	1	17:14	150	15	135	0
09/09/2020	5	BZ	1	14:41	75	0	0	75
09/09/2020	5	RN	1	15:15	30	0	30	0
21/09/2020	4	BZ	1	15:39	150	30	120	0
21/09/2020	5	RN	2	15:57	30	0	0	30

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
21/09/2020	5	SH	1	16:27	45	0	0	45
21/09/2020	5	RN	1	16:31	15	0	15	0
21/09/2020	5	BZ	1	17:11	105	0	0	105
21/09/2020	5	PE	1	17:53	30	15	15	0
06/10/2020	4	RN	1	09:17	90	45	45	0
06/10/2020	4	BZ	1	10:13	120	15	105	0
06/10/2020	4	RN	2	11:21	180	75	105	0
06/10/2020	4	K.	1	12:01	90	90	0	0
06/10/2020	5	K.	1	10:02	15	15	0	0
06/10/2020	5	RN	2	10:16	15	0	15	0
06/10/2020	5	RN	1	10:35	30	0	0	30
06/10/2020	5	RN	1	11:23	15	0	15	0
06/10/2020	5	PE	1	11:53	15	0	0	15
23/10/2020	4	K.	1	14:17	105	30	75	0
23/10/2020	4	RN	1	15:23	30	0	30	0
23/10/2020	4	RN	2	15:31	45	0	0	45
23/10/2020	4	RN	4	15:57	30	0	15	15
23/10/2020	4	K.	1	16:34	135	45	60	30
23/10/2020	5	BZ	1	14:40	240	0	240	0
23/10/2020	5	RN	1	14:51	45	0	45	0
23/10/2020	5	RN	2	15:01	30	15	15	0
23/10/2020	5	BZ	1	15:09	150	0	150	0
23/10/2020	5	RN	2	15:48	75	0	75	0
23/10/2020	5	BZ	2	17:08	300	60	240	0
10/11/2020	4	BZ	1	09:46	30	0	30	0
10/11/2020	4	RN	1	10:34	30	0	30	0
10/11/2020	4	RN	1	11:02	30	0	30	0
10/11/2020	4	K.	1	11:21	120	45	75	0
10/11/2020	4	RN	1	12:12	30	15	15	0
13/11/2020	5	BZ	1	13:35	150	0	0	150
13/11/2020	5	RN	2	14:20	15	15	0	0
13/11/2020	5	BZ	1	14:23	15	0	15	0
13/11/2020	5	RN	1	14:30	60	60	0	0
13/11/2020	5	BZ	1	14:39	30	15	15	0
13/11/2020	5	K.	1	14:58	150	30	120	0
13/11/2020	5	RN	2	15:09	120	0	120	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
13/11/2020	5	BZ	1	15:10	15	15	0	0
13/11/2020	5	RN	1	15:15	45	0	45	0
13/11/2020	5	BZ	2	15:32	90	0	90	0
13/11/2020	5	BZ	1	15:58	30	15	15	0
27/11/2020	4	RN	1	09:43	30	0	30	0
27/11/2020	4	K.	1	11:50	30	15	15	0
27/11/2020	5	BZ	1	10:18	135	0	0	135
27/11/2020	5	RN	1	10:22	30	0	0	30
08/12/2020	4	RN	2	09:26	30	0	15	15
08/12/2020	4	BZ	1	10:50	105	0	15	90
08/12/2020	4	K.	1	12:08	60	0	60	0
08/12/2020	4	K.	1	12:16	135	0	135	0
08/12/2020	4	HG	1	12:20	60	0	0	60
08/12/2020	5	RN	1	13:09	30	0	30	0
08/12/2020	5	SH	1	14:41	15	0	15	0
08/12/2020	5	RN	2	15:02	30	0	30	0
06/01/2021	4	RN	1	11:30	30	0	30	0
06/01/2021	4	RN	1	11:41	45	0	0	45
06/01/2021	4	RG	3	12:03	10	15	0	0
06/01/2021	4	HG	3	13:34	30	0	0	30
06/01/2021	5	RN	1	11:33	45	0	45	0
06/01/2021	5	BZ	1	12:12	15	15	0	0
08/02/2021	4	RN	1	13:12	120	0	120	0
03/02/2021	5	PE	1	14:39	15	15	0	0
03/02/2021	5	BZ	1	14:39	15	0	15	0
03/02/2021	5	BZ	1	14:43	30	0	30	0
03/02/2021	5	BZ	1	14:43	30	0	30	0
03/02/2021	5	BZ	1	14:51	60	0	60	0
03/02/2021	5	RN	1	15:10	15	0	0	15
03/02/2021	5	BZ	1	15:15	60	0	60	0
03/02/2021	5	RN	2	15:23	90	0	90	0
03/02/2021	5	BZ	1	15:23	30	0	30	0
03/02/2021	5	BZ	1	15:31	75	0	75	0
03/02/2021	5	BZ	1	15:42	180	15	165	0
03/02/2021	5	BZ	1	15:50	120	0	120	0
03/02/2021	5	RN	2	16:37	120	0	120	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB3 (s)
03/02/2021	5	RN	2	16:54	180	0	180	0
10/02/2021	4	RN	1	09:19	30	0	30	0
10/02/2021	4	BZ	1	10:41	60	0	30	30
10/02/2021	4	RN	1	11:02	30	30	0	0
10/02/2021	5	PE	1	13:33	30	0	30	0
10/02/2021	5	RN	1	14:02	45	0	30	15
10/02/2021	5	BZ	1	14:21	45	0	15	30
10/02/2021	5	RN	2	15:00	30	0	30	0
01/03/2021	4	RN	1	12:41	45	0	45	0
01/03/2021	5	PE	1	11:13	15	15	0	0
01/03/2021	5	RN	1	12:08	30	0	30	0
01/03/2021	5	PE	1	12:35	15	15	0	0
17/03/2021	4	RN	2	15:47	15	15	0	0
17/03/2021	4	BZ	1	16:35	30	0	30	0
17/03/2021	5	LB	2	17:39	45	0	45	0

Table EDP A9.4.4: Vantage Point (VP) Data for Target Species During Breeding Season 2021 (HB = height band)

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB 3 (s)
08/04/2021	4	RN	1	14:05	15	15	0	0
08/04/2021	4	RN	1	14:13	15	15	0	0
08/04/2021	4	BZ	2	14:25	210	0	210	0
08/04/2021	4	RN	1	14:46	15	15	0	0
08/04/2021	4	RN	1	15:00	15	15	0	0
08/04/2021	5	PE	1	10:15	30	0	30	0
08/04/2021	5	BZ	1	10:22	45	0	45	0
08/04/2021	5	RN	3	10:22	30	0	30	0
08/04/2021	5	BZ	1	10:25	15	0	15	0
08/04/2021	5	RN	1	10:41	15	0	15	0
08/04/2021	5	RN	1	10:58	15	15	0	0
08/04/2021	5	BZ	1	11:05	15	0	15	0
08/04/2021	5	RN	1	11:42	90	15	75	0
08/04/2021	5	RN	1	12:12	15	15	0	0
08/04/2021	5	BZ	1	12:29	360	15	345	0
08/04/2021	5	RN	2	12:56	15	0	15	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB 3 (s)
15/04/2021	4	RN	2	11:33	45	15	30	0
15/04/2021	4	PE	1	12:28	60	45	15	0
15/04/2021	5	RN	32	12:42	90	30	60	0
15/04/2021	5	RN	1	13:00	180	0	30	150
15/04/2021	5	BZ	1	13:29	240	30	180	30
15/04/2021	5	RN	2	13:29	240	30	180	30
15/04/2021	5	RN	1	13:37	120	45	60	15
15/04/2021	5	BZ	1	14:11	15	15	0	0
15/04/2021	5	RN	8	14:15	15	0	15	0
15/04/2021	5	BZ	1	14:17	15	0	15	0
22/04/2021	4	BZ	2	13:45	360	0	360	0
22/04/2021	4	HY	1	13:52	30	30	0	0
22/04/2021	4	BZ	1	14:23	30	0	30	0
22/04/2021	4	PE	1	14:50	30	0	30	0
22/04/2021	4	BZ	1	15:00	300	0	300	0
22/04/2021	4	BZ	1	15:05	60	0	60	0
22/04/2021	4	BZ	1	15:27	30	15	15	0
22/04/2021	4	RN	1	15:32	15	15	0	0
22/04/2021	4	BZ	3	15:34	30	0	30	0
22/04/2021	4	RN	1	15:42	30	30	0	0
22/04/2021	4	RN	2	16:11	30	0	30	0
23/04/2021	5	HG	1	11:14	45	0	45	0
23/04/2021	5	RN	2	11:41	45	45	0	0
23/04/2021	5	PE	1	12:27	105	0	60	45
23/04/2021	5	RN	1	13:20	30	30	0	0
06/05/2021	4	RN	2	06:32	45	45	0	0
06/05/2021	4	RN	3	06:53	30	0	30	0
06/05/2021	4	RN	1	07:06	45	0	45	0
06/05/2021	4	RN	2	07:28	60	0	60	0
06/05/2021	4	RN	1	07:46	30	0	30	0
06/05/2021	4	RN	2	08:22	15	15	0	0
06/05/2021	4	KT	1	08:41	120	120	0	0
06/05/2021	4	RN	1	08:48	45	45	0	0
11/05/2021	5	PE	1	14:52	45	0	45	0
11/05/2021	5	RN	1	15:19	30	30	0	0
11/05/2021	5	MA	2	16:38	30	30	0	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB 3 (s)
28/05/2021	4	LB	1	16:11	30	30	0	0
28/05/2021	4	LB	2	16:31	60	0	60	0
28/05/2021	4	HG	2	16:31	60	0	60	0
28/05/2021	4	LB	1	16:41	45	0	45	0
28/05/2021	4	HG	1	16:53	15	15	0	0
28/05/2021	4	LB	2	17:20	30	0	30	0
28/05/2021	4	HG	1	17:42	30	0	30	0
24/05/2021	5	RN	3	16:19	60	0	60	0
24/05/2021	5	RN	2	16:26	30	30	0	0
24/05/2021	5	PE	1	18:03	75	0	75	0
24/05/2021	5	BZ	1	18:55	195	0	195	0
01/06/2021	4	Mixed Larus flock	220	13:30	240	240	0	0
01/06/2021	4	LB	8	13:36	135	105	30	0
01/06/2021	4	HG	13	13:39	165	75	90	0
01/06/2021	4	Mixed Larus flock	37	13:44	150	150	0	0
01/06/2021	4	RN	1	13:47	45	45	0	0
01/06/2021	4	Mixed Larus flock	63	13:51	225	75	150	0
01/06/2021	4	Mixed Larus flock	49	13:55	240	135	105	0
01/06/2021	4	HG	9	14:02	210	0	210	0
01/06/2021	4	LB	2	14:02	210	0	210	0
01/06/2021	4	HG	3	14:08	120	0	120	0
01/06/2021	4	LB	2	14:11	90	90	0	0
01/06/2021	4	LB	1	14:15	60	0	60	0
01/06/2021	4	HG	1	14:19	75	0	75	0
01/06/2021	4	Mixed Larus flock	57	14:31	105	105	0	0
01/06/2021	4	Mixed Larus flock	38	14:35	195	60	135	0
01/06/2021	4	HG	2	14:37	150	0	150	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB 3 (s)
01/06/2021	4	LB	2	14:37	150	0	150	0
01/06/2021	4	BZ	1	14:41	165	15	150	0
01/06/2021	4	HG	4	14:48	45	0	45	0
01/06/2021	4	LB	5	14:53	120	120	0	0
01/06/2021	4	HG	2	14:59	90	90	0	0
01/06/2021	4	LB	1	15:05	75	60	15	0
01/06/2021	4	LB	2	15:11	90	90	0	0
01/06/2021	4	HG	6	15:23	135	15	120	0
01/06/2021	4	HG	13	15:30	60	0	60	0
01/06/2021	4	RN	1	15:34	60	0	60	0
01/06/2021	4	LB	2	15:39	165	60	105	0
01/06/2021	4	Mixed Larus flock	68	15:42	240	240	0	0
01/06/2021	4	HG	10	15:47	120	75	45	0
01/06/2021	4	HG	8	15:56	120	90	30	0
01/06/2021	4	LB	5	15:56	120	90	30	0
01/06/2021	4	HG	2	16:09	60	60	0	0
01/06/2021	4	HG	5	16:14	105	75	30	0
01/06/2021	4	RN	1	16:25	75	15	60	0
01/06/2021	5	BZ	1	14:11	30	0	30	0
01/06/2021	5	BZ	1	15:05	180	0	180	0
01/06/2021	5	LB	1	15:08	30	0	30	0
01/06/2021	5	HG	1	15:25	15	0	15	0
01/06/2021	5	HG	1	15:42	15	0	15	0
01/06/2021	5	LB	1	15:58	15	0	15	0
01/06/2021	5	BZ	2	16:30	30	0	30	0
08/06/2021	4	HG	7	06:56	120	0	120	0
08/06/2021	4	LB	3	06:56	120	0	120	0
08/06/2021	4	LB	1	07:15	60	0	60	0
08/06/2021	4	HG	3	07:27	60	0	60	0
08/06/2021	4	LB	4	07:28	30	0	30	0
08/06/2021	4	HG	1	07:33	15	0	15	0
08/06/2021	4	LB	4	08:03	180	0	180	0
08/06/2021	4	HG	1	08:17	45	0	45	0
08/06/2021	4	LB	4	08:17	45	0	45	0
08/06/2021	4	LB	5	08:30	30	0	30	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB 3 (s)
08/06/2021	4	HG	4	08:30	30	0	30	0
08/06/2021	4	LB	2	08:32	30	0	30	0
08/06/2021	4	HG	1	08:32	30	0	30	0
08/06/2021	4	RN	2	09:12	120	15	105	0
08/06/2021	4	BZ	1	09:17	60	0	60	0
08/06/2021	5	RN	1	06:07	30	0	30	0
08/06/2021	5	RN	2	06:54	60	60	0	0
08/06/2021	5	RN	4	08:01	105	0	105	0
08/06/2021	5	HG	4	08:07	60	0	0	60
08/06/2021	5	LB	2	08:20	45	0	45	0
08/06/2021	5	RN	1	08:43	45	45	0	0
08/06/2021	5	PE	1	08:56	105	0	0	105
13/07/2021	4	BZ	1	18:54	15	15	0	0
13/07/2021	4	RN	2	19:03	15	15	0	0
13/07/2021	4	RN	7	19:10	15	15	0	0
13/07/2021	4	RN	1	19:49	30	30	0	0
13/07/2021	4	RN	5	21:21	15	15	0	0
13/07/2021	5	PE	1	19:04	45	0	45	0
13/07/2021	5	PE	1	19:27	90	0	15	75
13/07/2021	5	RN	3	20:40	60	45	15	0
13/07/2021	5	BZ	1	21:16	150	0	75	75
14/07/2021	4	RN	3	15:02	75	75	0	0
14/07/2021	4	KT	1	15:29	180	30	150	0
14/07/2021	4	RN	1	16:19	120	120	0	0
14/07/2021	5	KT	1	15:17	30	0	30	0
14/07/2021	5	BZ	1	15:35	15	0	15	0
14/07/2021	5	BZ	1	16:28	45	0	45	0
14/07/2021	5	BZ	1	16:31	15	0	15	0
14/07/2021	5	BZ	1	16:49	420	0	420	0
14/07/2021	5	BZ	1	16:51	30	0	30	0
14/07/2021	5	KT	1	16:55	15	0	15	0
23/07/2021	4	RN	2	13:04	120	0	120	0
23/07/2021	4	RN	1	13:24	15	0	15	0
23/07/2021	5	BZ	1	08:44	45	0	45	0
23/07/2021	5	RN	1	11:25	30	0	30	0
29/07/2021	4	K.	1	10:53	120	90	30	0

Date	VP	Species	Count	Start Time	Total duration (s)	HB 1 (s)	HB2 (CRZ) (s)	HB 3 (s)
29/07/2021	4	BZ	1	11:02	60	0	60	0
29/07/2021	4	RN	1	11:04	15	15	0	0
29/07/2021	4	RN	2	11:23	15	15	0	0
29/07/2021	4	RN	1	11:49	15	0	15	0
29/07/2021	4	RN	2	12:12	60	0	60	0
29/07/2021	4	RN	5	12:13	30	0	30	0
29/07/2021	4	PE	1	13:09	15	15	0	0
29/07/2021	5	GI	1	11:47	45	0	45	0
29/07/2021	5	BZ	1	12:20	135	0	135	0
29/07/2021	5	RN	3	12:41	75	0	75	0
29/07/2021	5	RN	2	13:17	45	0	45	0
29/07/2021	5	RN	1	14:19	30	15	15	0
29/07/2021	5	PE	1	14:23	150	0	135	15
03/08/2021	4	KT	1	10:45	90	30	60	0
03/08/2021	4	RN	2	10:48	120	0	120	0
03/08/2021	4	BZ	1	11:14	15	15	0	0
03/08/2021	4	RN	3	11:41	180	0	150	30
03/08/2021	4	K.	2	12:05	30	30	0	0
03/08/2021	4	BZ	3	12:22	90	0	0	90
03/08/2021	4	KT	1	12:25	60	0	0	60
03/08/2021	4	RN	1	12:44	300	0	300	0
03/08/2021	4	LB	3	13:23	840	840	0	0
03/08/2021	5	H.	1	19:27	45	45	0	0

Plans

Plan EDP 9.1: Survey Boundary and Study Areas
(edp6366_d044a 31 October 2023 MCa/KHe)

Plan EDP 9.2: Vantage Point Locations, Viewshed Extents, and Proposed Wind Turbine Locations
(edp6366_d047a 31 October 2023 MCa/RFo)

Plan EDP 9.3: Breeding and Winter Bird Transect Route
(edp6366_d012c 31 October 2023 MCa/KHe)

Plan EDP 9.4: Raptor Survey Route with Vantage Points
(edp6366_d011c 31 October 2023 MCa/KHe)

Plan EDP 9.5: Nightjar and Owl Transect Route
(edp6366_d010d 31 October 2023 MCa/KHe)

Plan EDP 9.6: Internationally Designated Sites
(edp6366_d013b 11 August 2022 MCa/KHe)

Plan EDP 9.7: Nationally Designated Sites
(edp6366_d014b 11 August 2022 MCa/KHe)

Plan EDP 9.8: Non-statutory Designated Sites
(edp6366_d015b 11 August 2022 MCa/KHe)

Plan EDP 9.9: Raptor, Moorland, and Nightjar Breeding Bird Survey Results 2020–2023
(Confidential)
(edp6366_d048a 31 October 2023 MCa/RFo)

Plan EDP 9.10a: Raptor Summer Flight Activity – April to August 2020
(edp6366_d035a 31 October 2023 MCa/KHe)

Plan EDP 9.10b: Raptor Summer Flight Activity – April to August 2021
(edp6366_d036a 31 October 2023 MCa/KHe)

Plan EDP 9.11a: Gulls and Other Notable Species Summer Flight Activity – April to August 2020
(edp6366_d037a 31 October 2023 MCa/KHe)

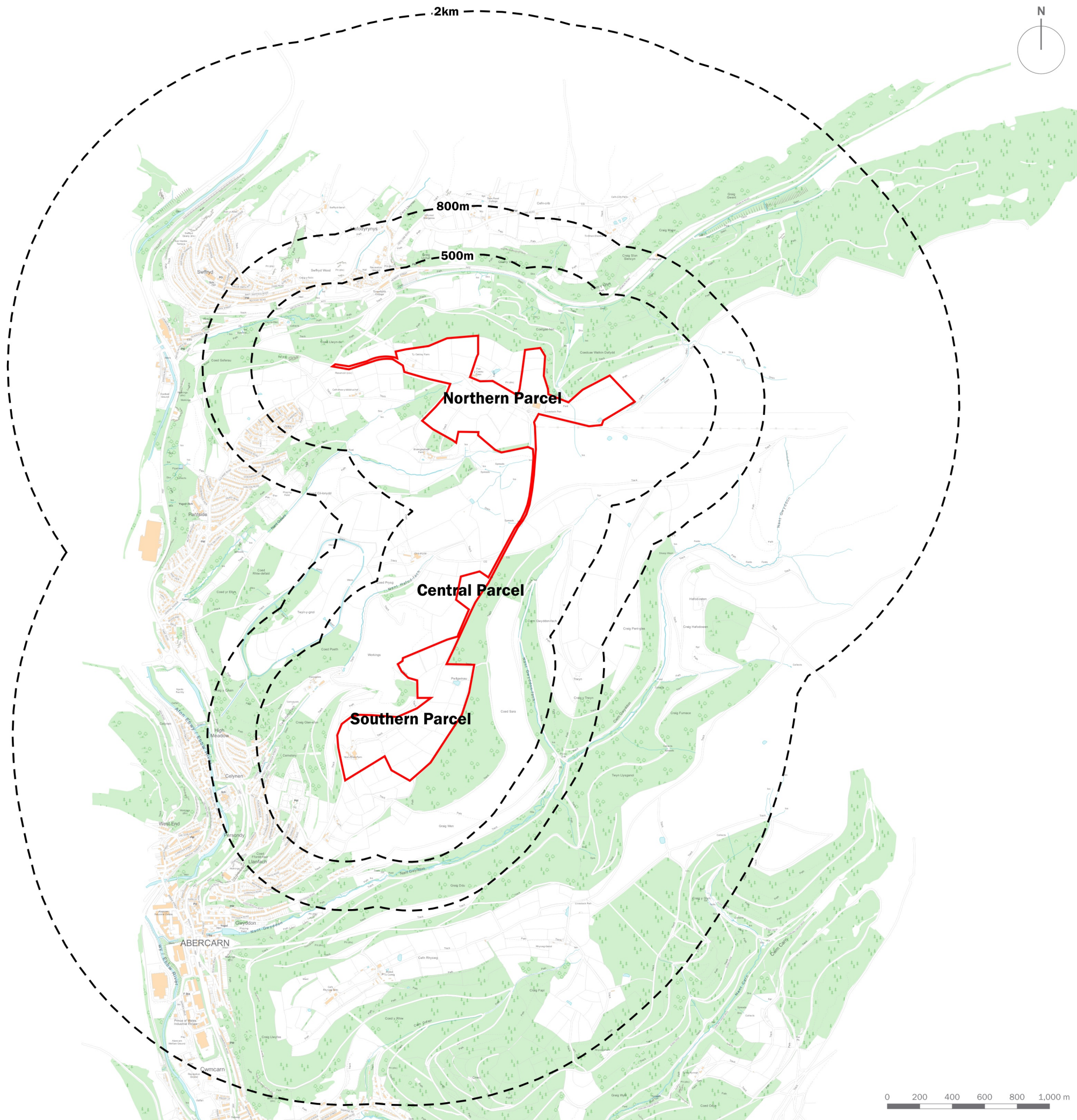
Plan EDP 9.11b: Gulls and Other Notable Species Summer Flight Activity – April to August 2021
(edp6366_d038a 31 October 2023 MCa/KHe)

Plan EDP 9.12a: Raptor Winter Flight Activity – September 2020 to March 2021
(edp6366_d039a 31 October 2023 MCa/KHe)

Plan EDP 9.12b: Raptor Winter Flight Activity – September 2021 to April 2022
(edp6366_d040a 31 October 2023 MCa/KHe)

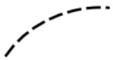
Plan EDP 9.13a: Gulls and Other Notable Species Winter Flight Activity – September 2020 to March 2021
(edp6366_d041a 31 October 2023 MCa/KHe)

Plan EDP 9.13b: Gulls and Other Notable Species Winter Flight Activity – September 2021 to April 2022
(edp6366_d042a 31 October 2023 MCa/KHe)

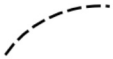


Site Boundary

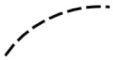
Study Area Buffers



500m Buffer - Nightjar and Owl Survey



800m Buffer - Breeding Bird Survey



2km - Raptor Survey

Parcel	Ordnance Survey Grid Reference
Northern Parcel	ST 2337 9811
Central Parcel	ST 2323 9697
Southern Parcel	ST 2292 9615

client

Pennant Walters

project title

Trecelyn Wind Farm

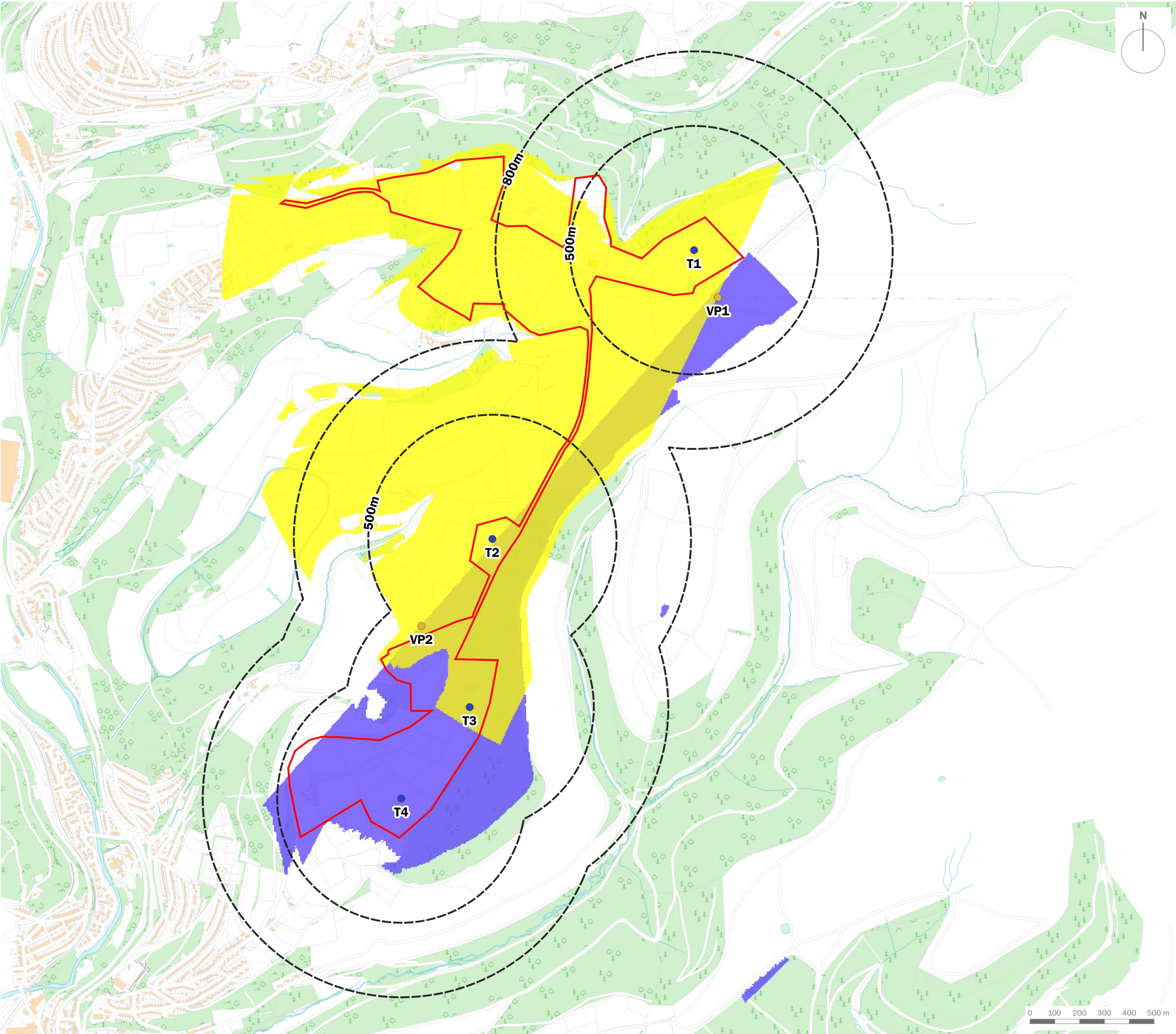
drawing title

Survey Boundary and Study Areas

date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d044a	checked	KHe
scale	1:25,000 @ A3	QA	JFr



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Survey Boundary

Proposed Turbine Locations

Vantage Point Locations

Turbine Buffers - 500m and 800m

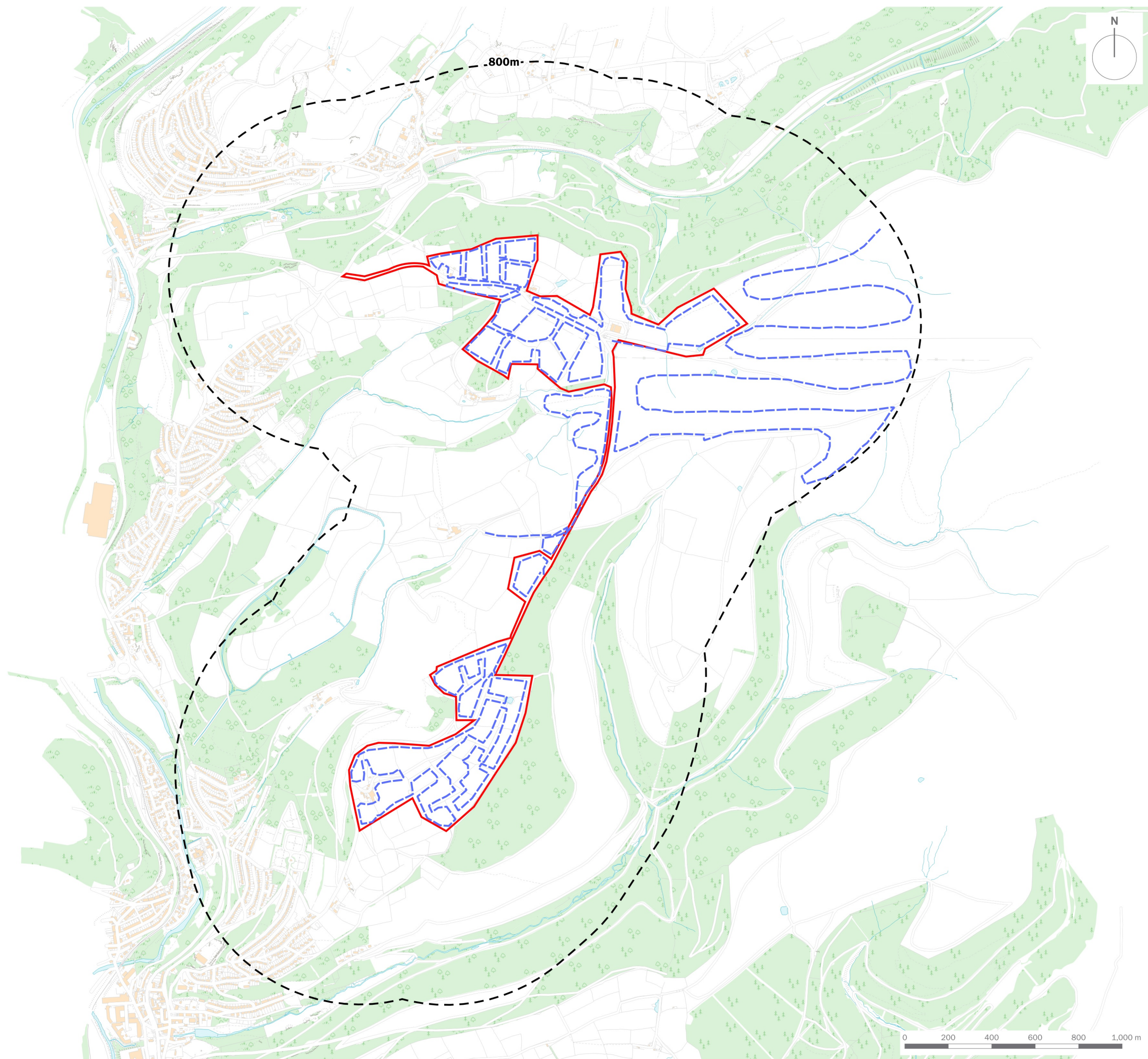
Area Covered by Vantage Point 1

Area Covered by Vantage Point 2

Area Covered by Both Vantage Points

- VP Viewshed Input Criteria:**
- Visibility at 25m above ground
 - 180 degree view arc
 - 2km range ring
 - Observer height 1.75m
 - Woodland height 18m
 - DTM 5m data

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Vantage Point Locations, Viewshed Extents, and Proposed Wind Turbine Locations			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d047a	checked	RFo
scale	1:15,000 @ A3	QA	JFr

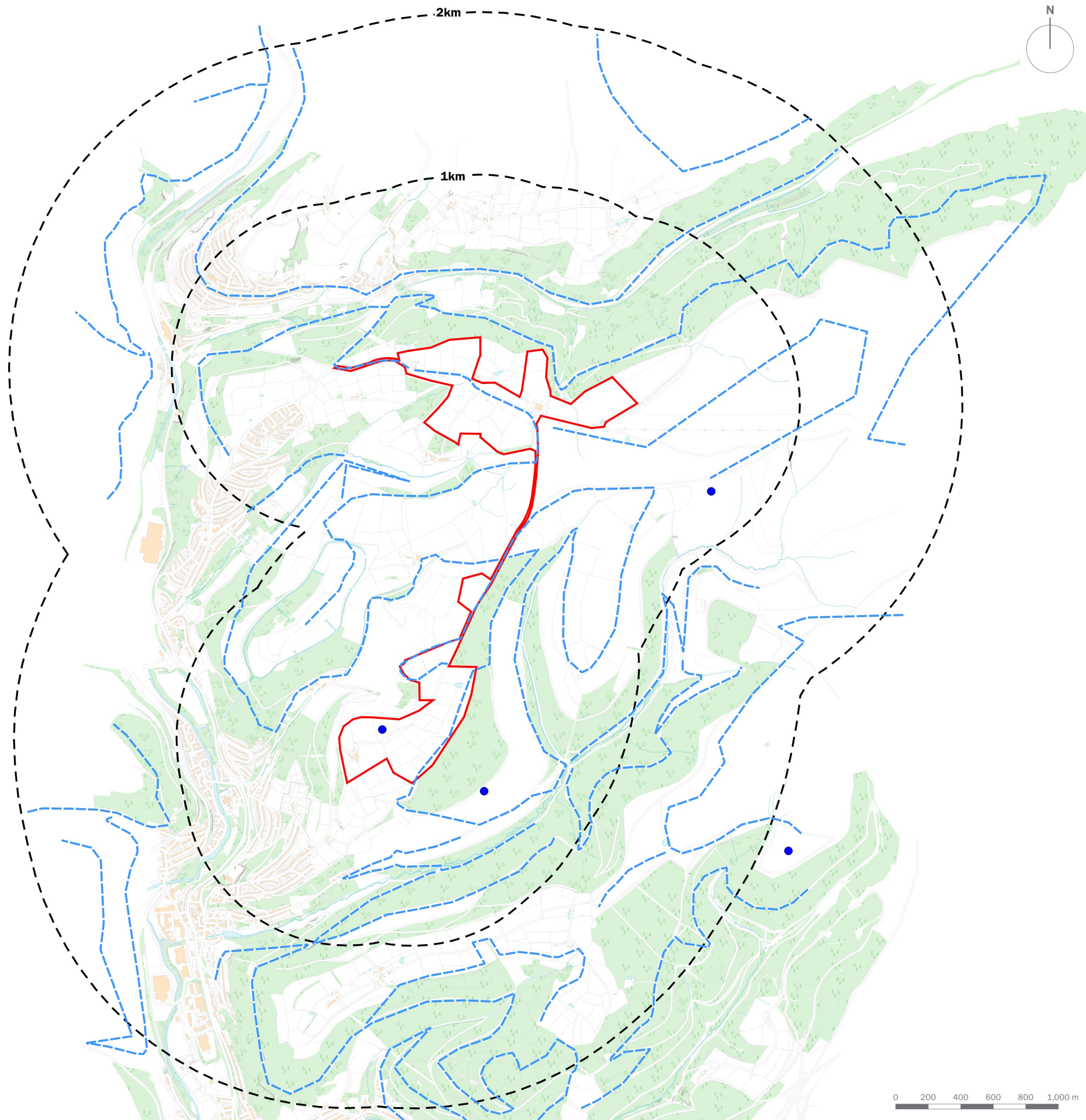



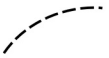


-  Site Boundary
-  800m Buffer
-  Breeding and Winter Bird Survey Walkover Route

client	Pennant Walters		
project title	Trecelyn Wind Farm		
drawing title	Breeding and Winter Bird Transect Route		
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d012c	checked	KHe
scale	1:17,500 @ A3	QA	GYo



Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



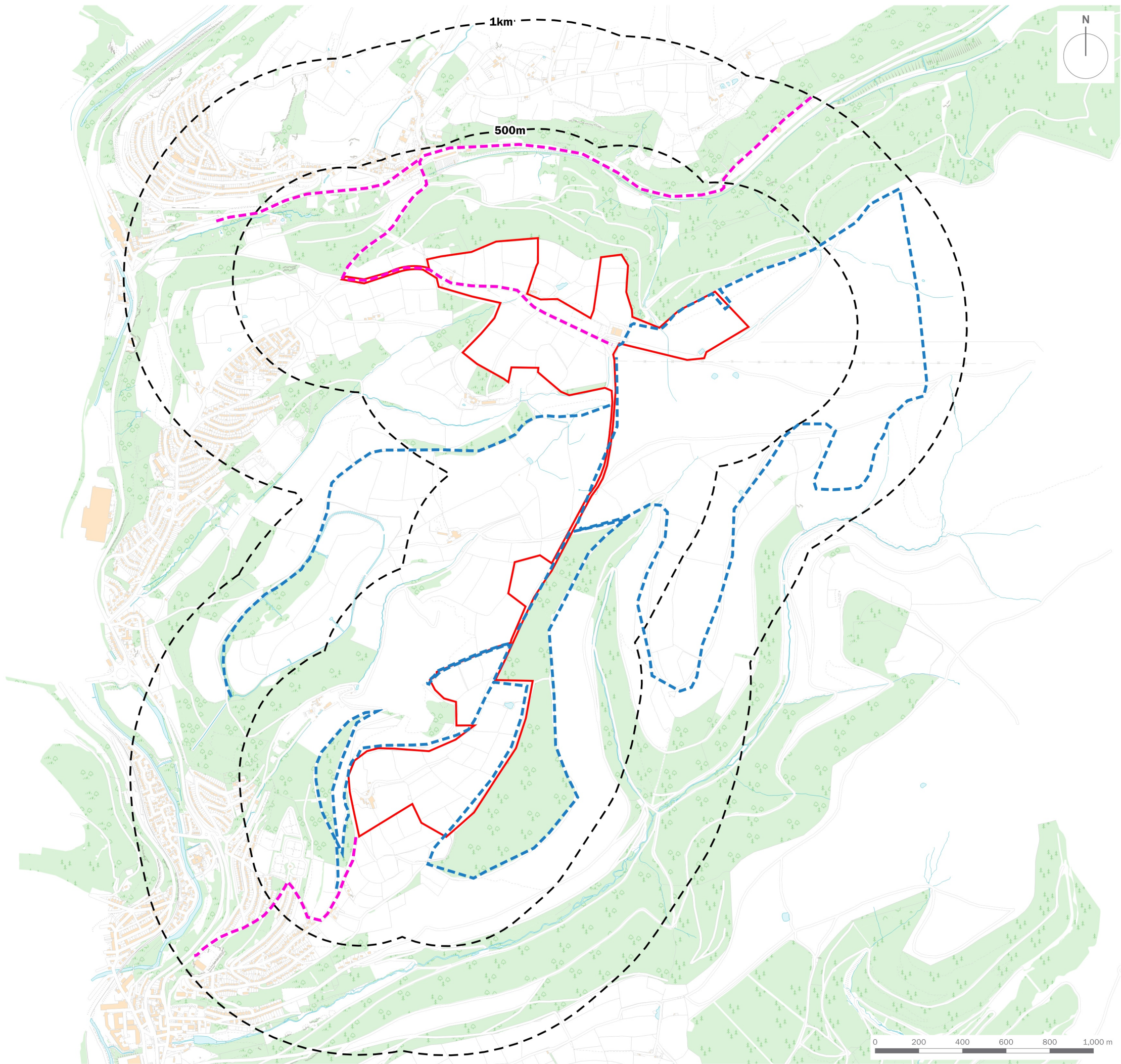
-  Site Boundary
-  Range Rings (at 1km intervals)
-  Walked Transect Route
-  Vantage Points

Walked routes illustrate the indicative core/main transect routes surveyed. Additional coverage was also provided through driven routes to potential nesting sites in the survey area, as identified through the preliminary investigations and using professional judgement.

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Raptor Survey Route with Vantage Points			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d011c	checked	KHe
scale	1:25,000 @ A3	QA	GYo



Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



Site Boundary

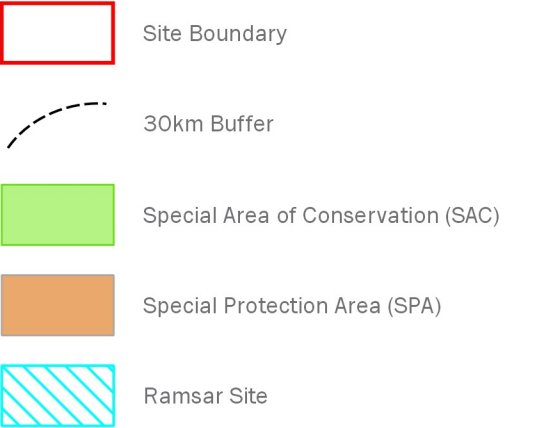
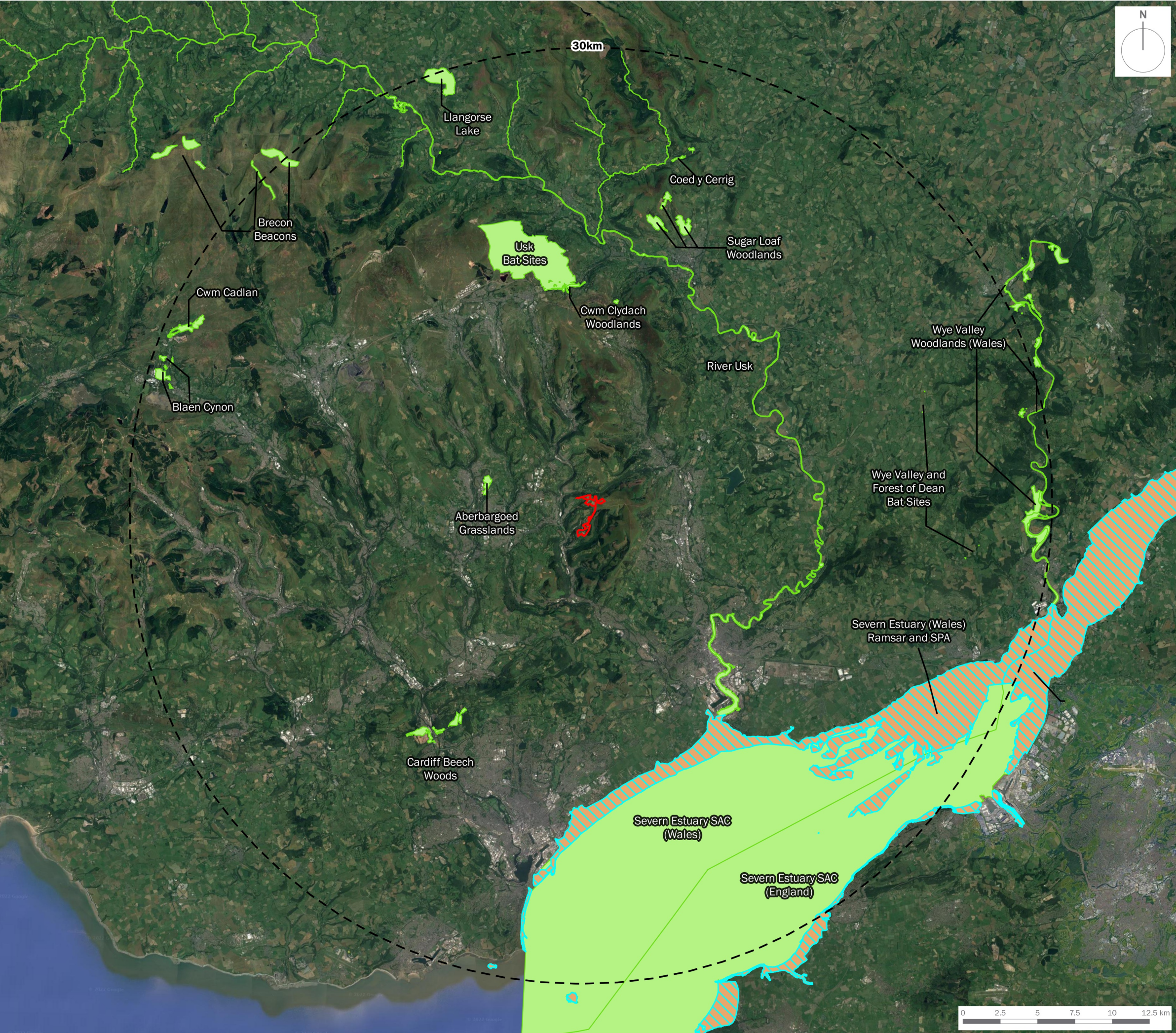
Range Rings (at 500m intervals)

Nightjar/Owl Survey Routes

Walked

Driven

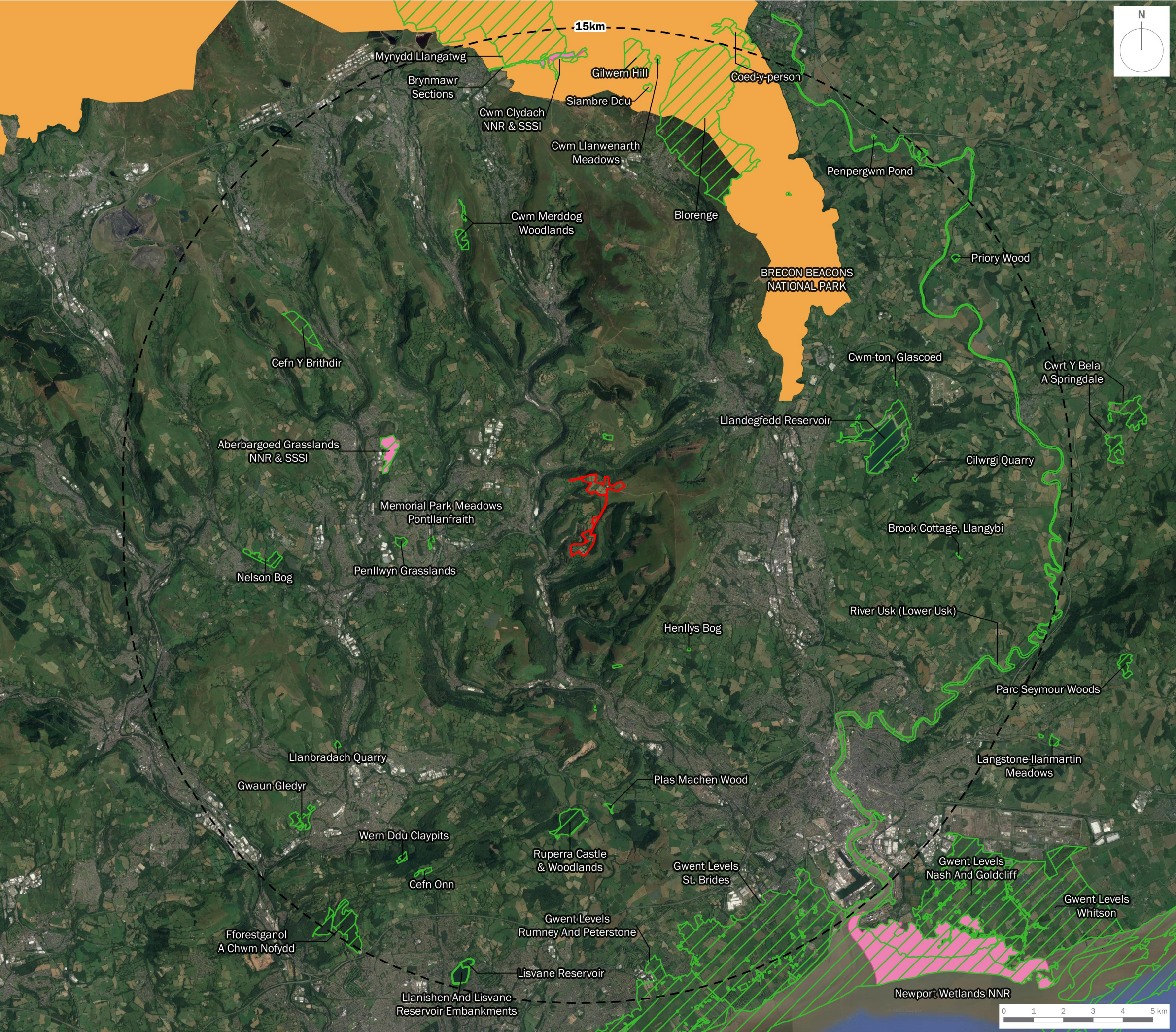
client	Pennant Walters		
project title	Trecelyn Wind Farm		
drawing title	Nightjar and Owl Transect Route		
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d010d	checked	KHe
scale	1:22,500 @ A3	QA	GYo



client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Internationally Designated Sites			
date	11 AUGUST 2022	drawn by	MCa
drawing number	edp6366_d013b	checked	KHe
scale	1:250,000 @ A3	QA	GYo



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Site Boundary

15km Buffer

Site of Special Scientific Interest (SSSI)

National Nature Reserve (NNR)

National Park

client

Pennant Walters

project title

Trecelyn Wind Farm

drawing title

Nationally Designated Sites

date

11 AUGUST 2022

drawn by

MCa

drawing number

edp6366_d014b

checked

KHe

scale

1:125,000 @ A3

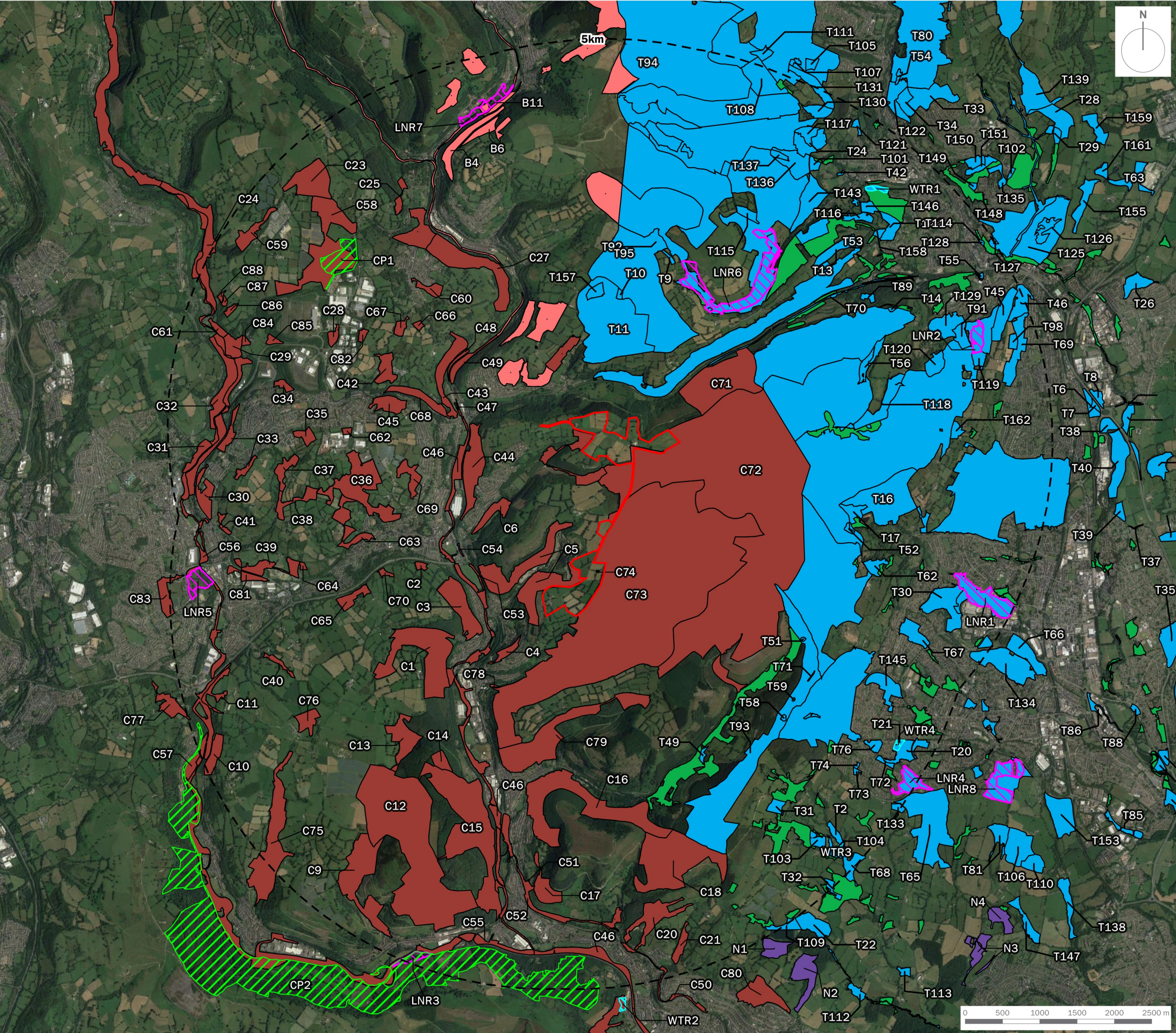
QA

GYo

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Site Boundary

5km Buffer

Country Park

Local Nature Reserve (LNR)

Wildlife Trust Reserve

Ancient Semi-natural Woodland

Sites of Importance for Nature Conservation (SINC)
(by local authority)

Blaenau Gwent

Caerphilly

Newport

Torfaen

Key to Labels:

- B - Blaenau Gwent SINC
- C - Caerphilly SINC
- CP - Country Park
- LNR - Local Nature Reserve
- N - Newport SINC
- T - Torfaen SINC
- WTR - Wildlife Trust Reserve

See appendix for list of site names

client

Pennant Walters

project title

Trecelyn Wind Farm

drawing title

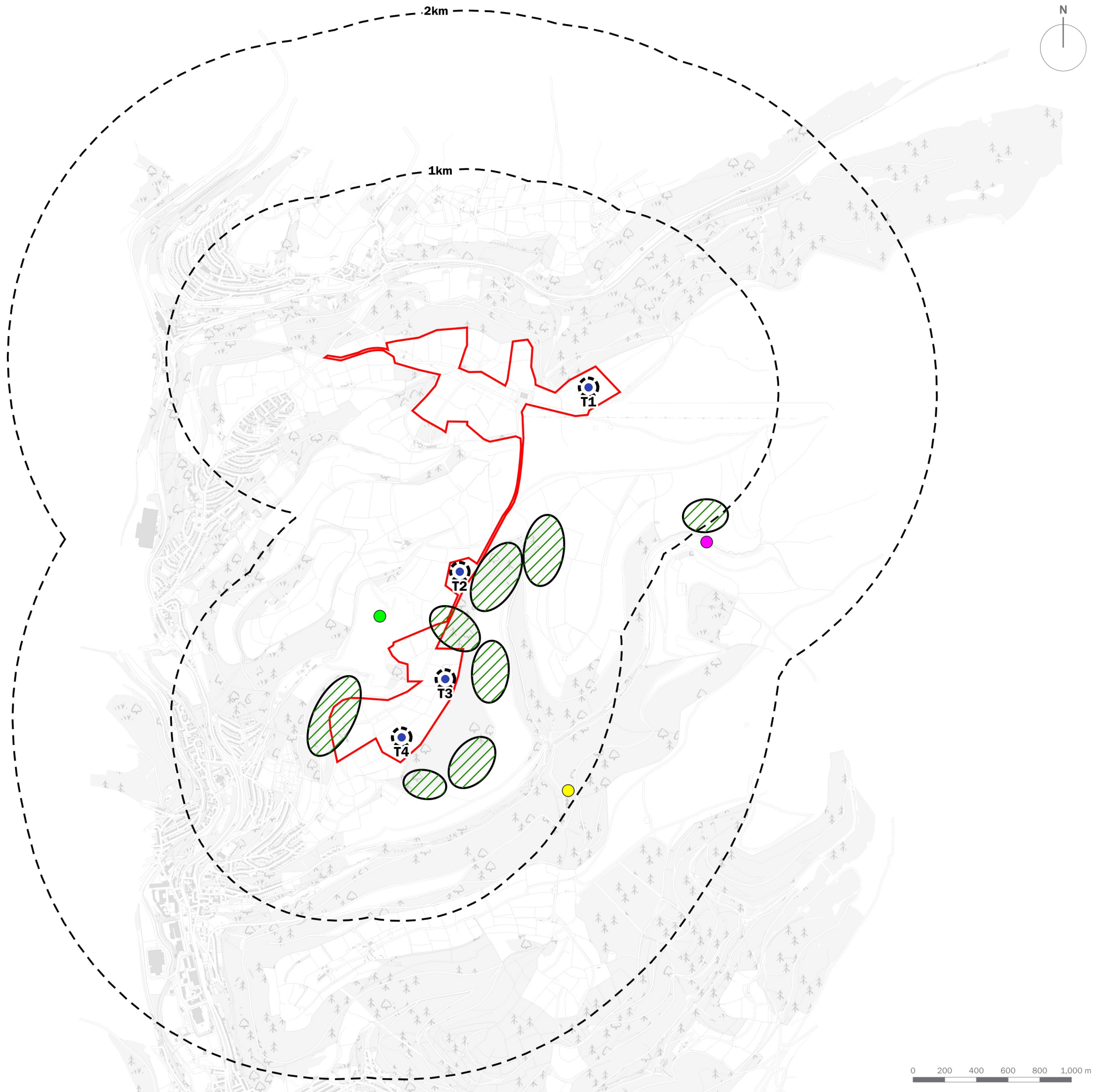
Non-statutory Designated Sites




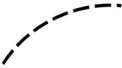




date	11 AUGUST 2022	drawn by	MCa
drawing number	edp6366_d015b	checked	KHe
scale	1:50,000 @ A3	QA	GYo

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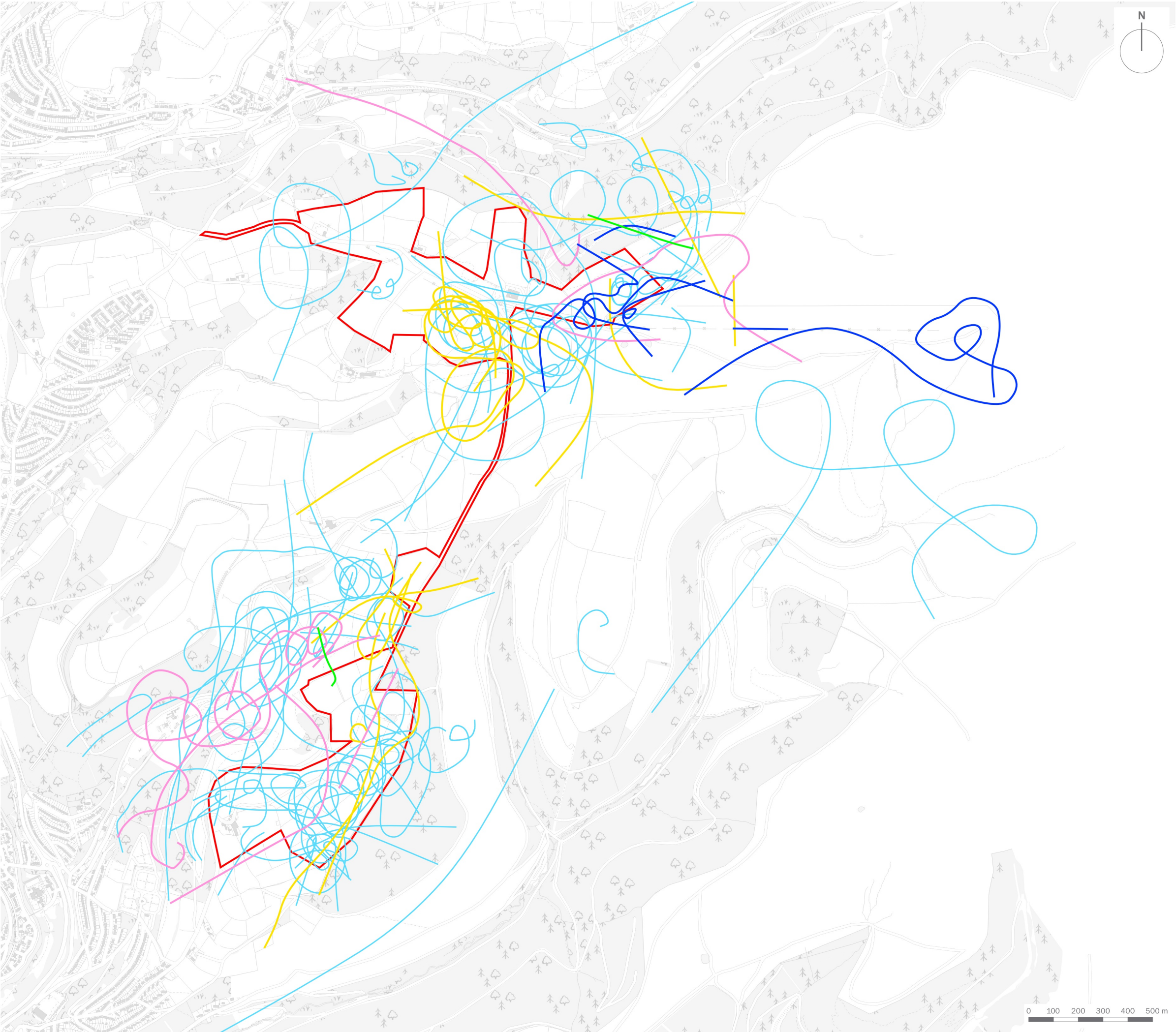
-  Survey Boundary
 -  Proposed Turbine Locations
 -  Proposed Turbine Locations - 58.5m Buffer
 -  Range Rings (at 1km intervals)
 -  Indicative Nightjar Territories
- Raptor Breeding Evidence
-  Goshawk (nest found)
 -  Peregrine (frequent activity observed during breeding season)
 -  Long-eared Owl (young heard calling)

CONFIDENTIAL

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Raptor, Moorland, and Nightjar Breeding Bird Survey Results 2020–2023 [Confidential]			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d048a	checked	RFo
scale	1:25,000 @ A3	QA	JFr

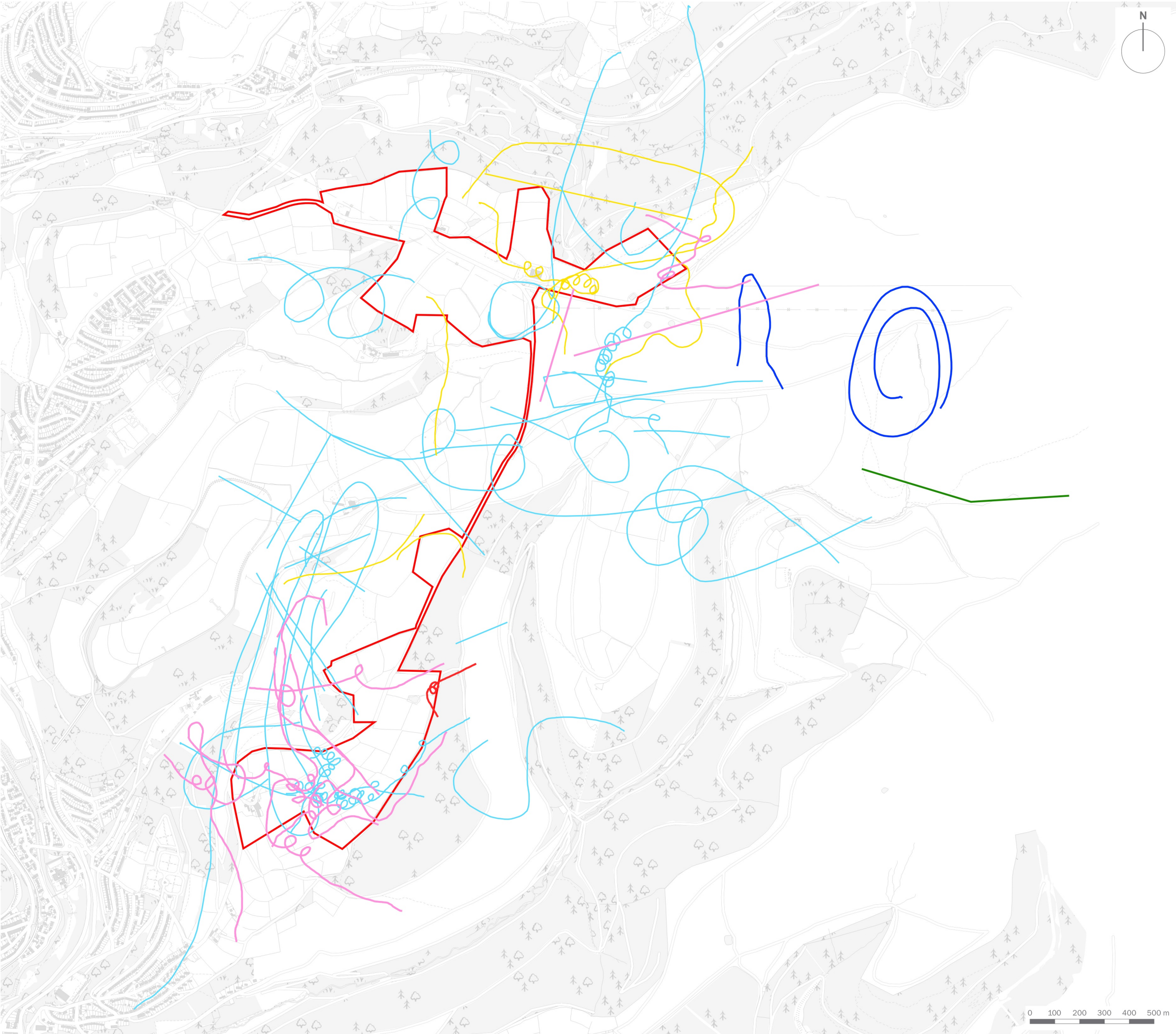


Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk



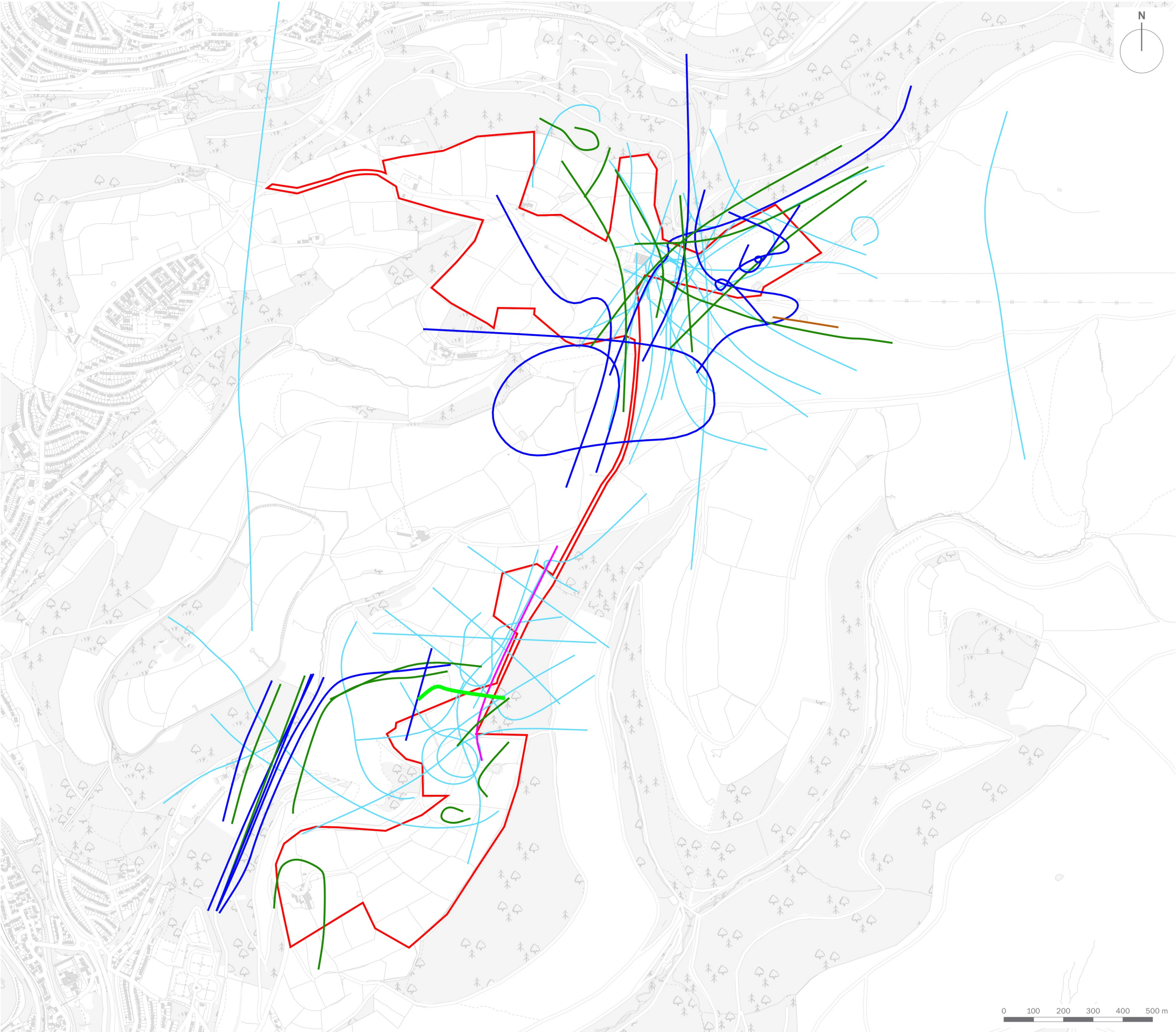
- Survey Boundary
- Buzzard (*Buteo buteo*)
- Kestrel (*Falco tinnunculus*)
- Peregrine (*Falco peregrinus*)
- Red Kite (*Milvus milvus*)
- Sparrowhawk (*Accipiter nisus*)

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Raptor Summer Flight Activity – April to August 2020			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d035a	checked	KHe
scale	1:15,000 @ A3	QA	JFr



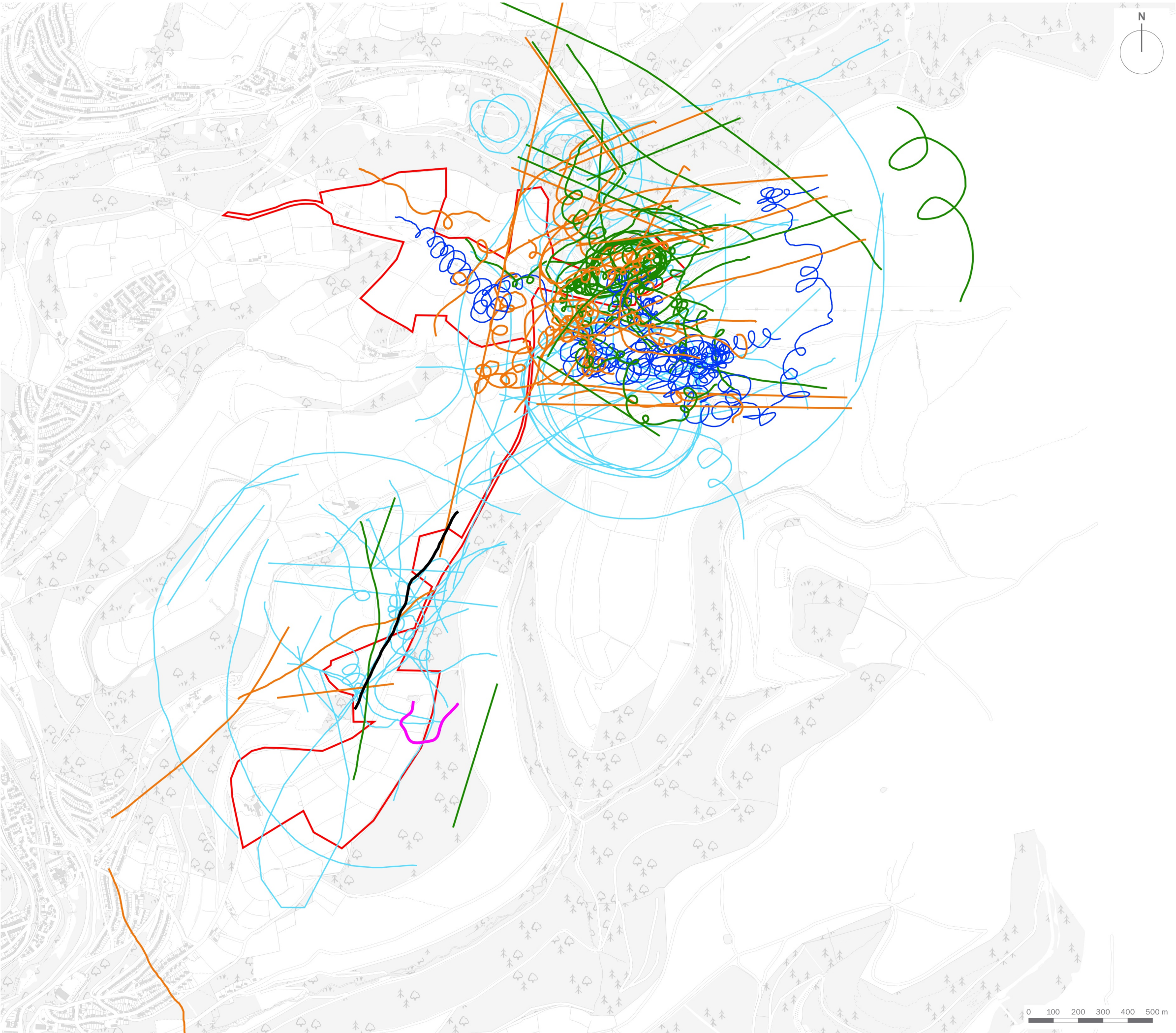
- Survey Boundary
- Buzzard (*Buteo buteo*)
- Goshawk (*Accipiter gentilis*)
- Hobby (*Falco subbuteo*)
- Kestrel (*Falco tinnunculus*)
- Peregrine (*Falco peregrinus*)
- Red Kite (*Milvus milvus*)

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Raptor Summer Flight Activity – April to August 2021			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d036a	checked	KHe
scale	1:15,000 @ A3	QA	JFr



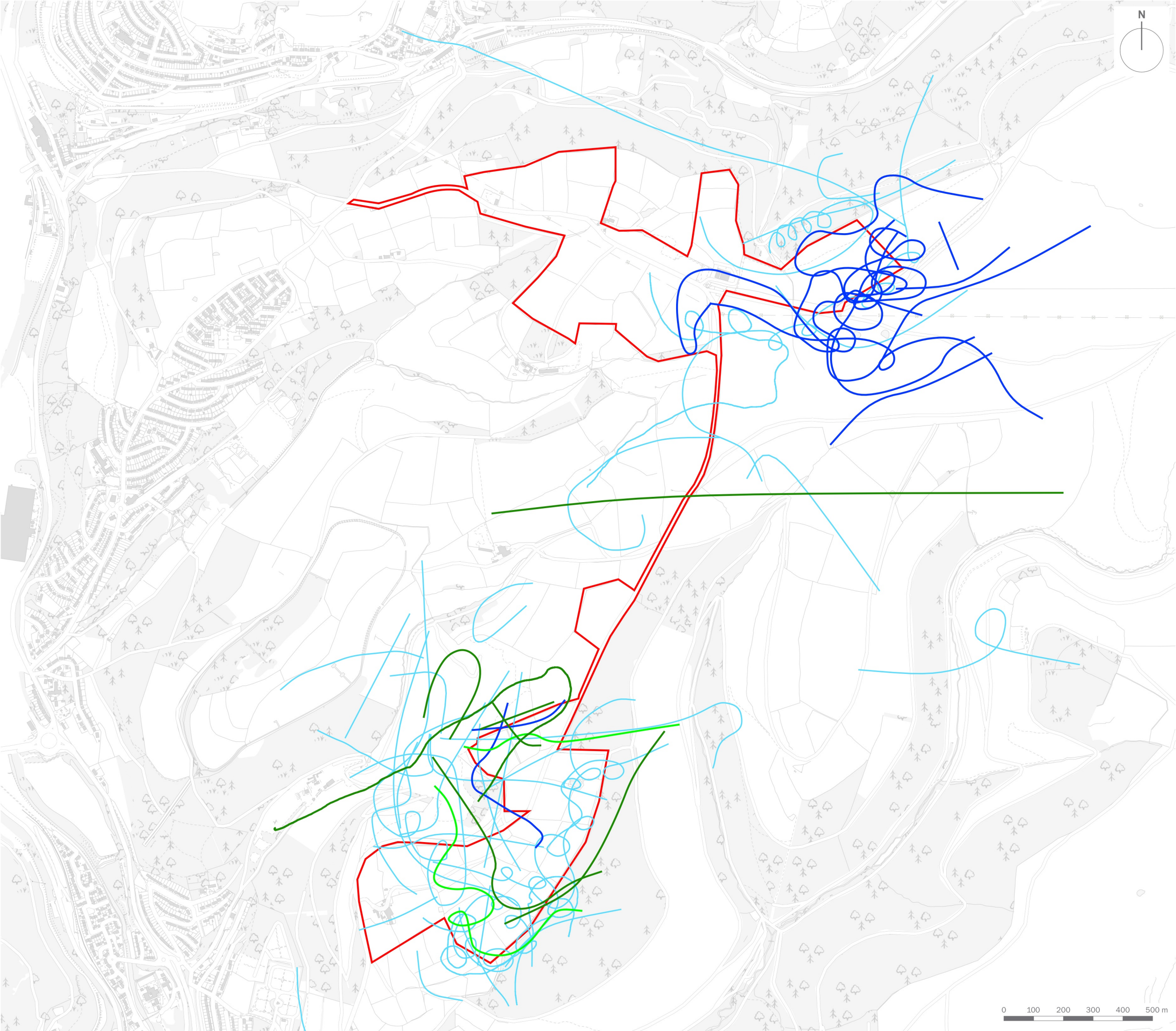
- ▬ Survey Boundary
- ▬ Cuckoo (*Cuculus canorus*)
- ▬ Grey Heron (*Ardea cinerea*)
- ▬ Herring Gull (*Larus argentatus*)
- ▬ Lesser Black-backed Gull (*Larus fuscus*)
- ▬ Mallard (*Anas platyrhynchos*)
- ▬ Raven (*Corvus corax*)






client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Gulls and Other Notable Species Summer Flight Activity – April to August 2020			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d037a	checked	KHe
scale	1:12,500 @ A3	QA	JFr



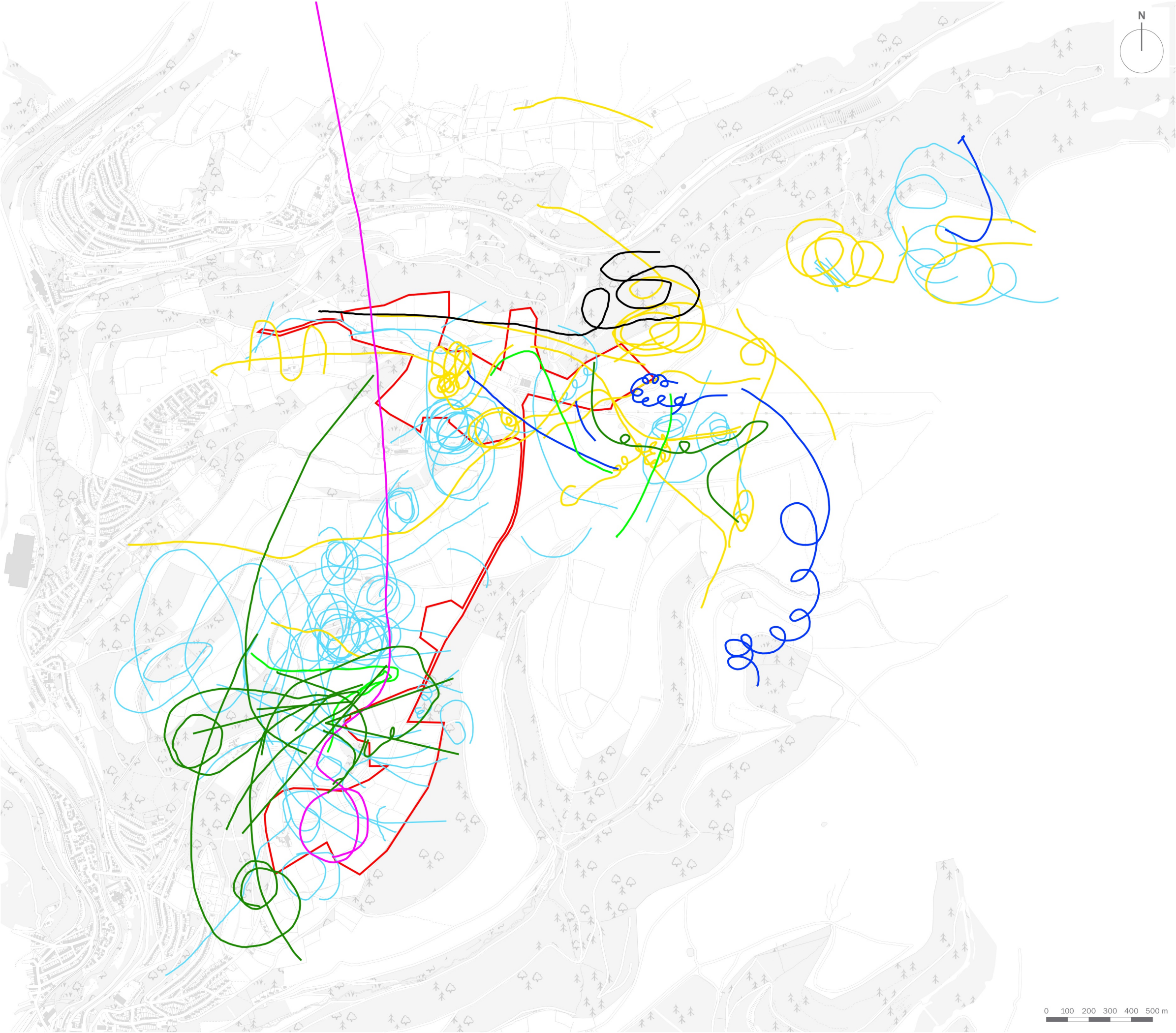
- Survey Boundary
- Grey Heron (*Ardea cinerea*)
- Herring Gull (*Larus argentatus*)
- Lesser Black-backed Gull (*Larus fuscus*)
- Larus* spp.
- Mallard (*Anas platyrhynchos*)
- Raven (*Corvus corax*)

client	Pennant Walters		
project title	Trecelyn Wind Farm		
drawing title	Gulls and Other Notable Species Summer Flight Activity – April to August 2021		
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d038a	checked	KHe
scale	1:15,000 @ A3	QA	JFr



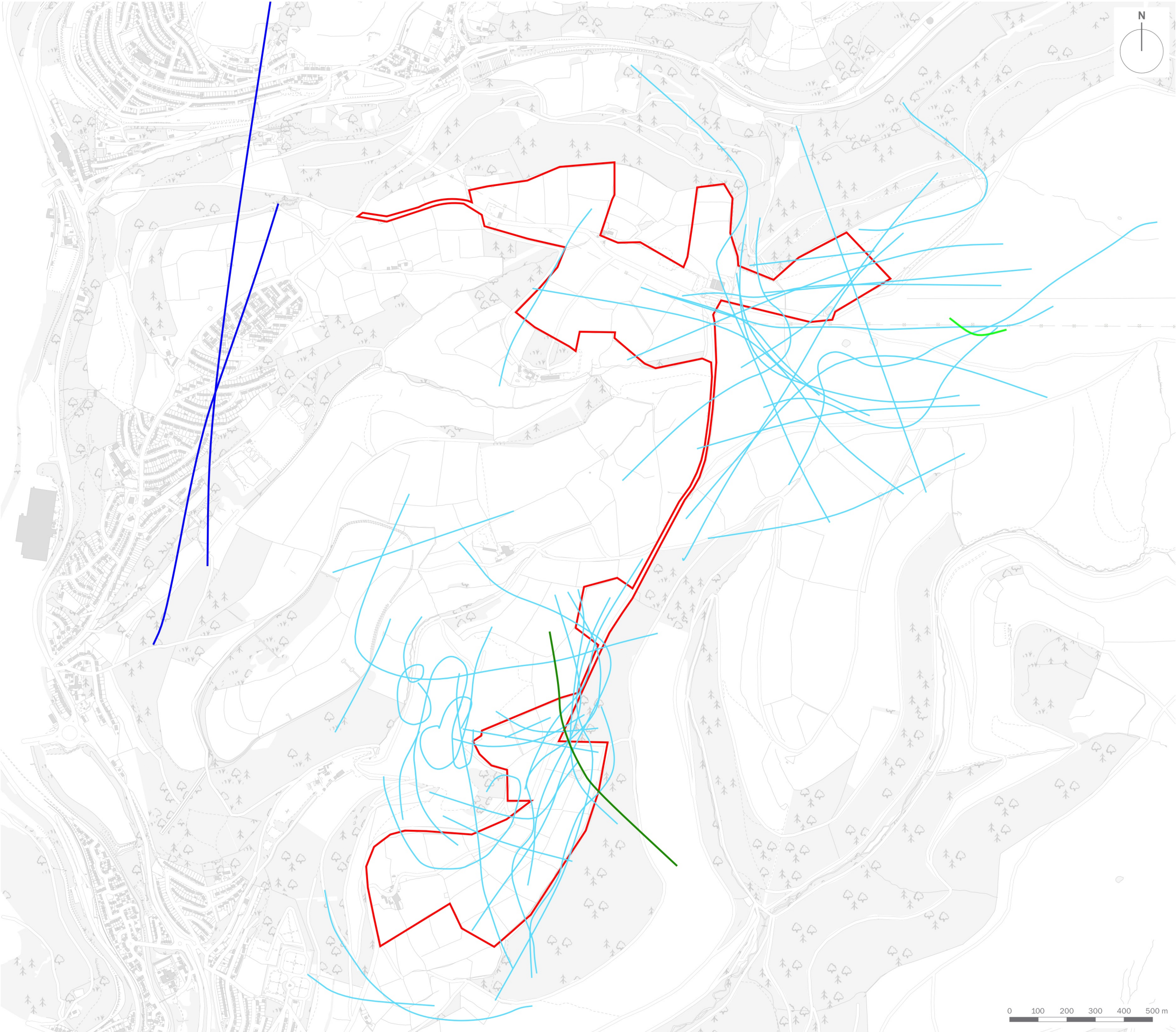
-  Survey Boundary
-  Buzzard (*Buteo buteo*)
-  Kestrel (*Falco tinnunculus*)
-  Peregrine (*Falco peregrinus*)
-  Sparrowhawk (*Accipiter nisus*)






client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Raptor Winter Flight Activity – September 2020 to March 2021			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d039a	checked	KHe
scale	1:12,500 @ A3	QA	JFr



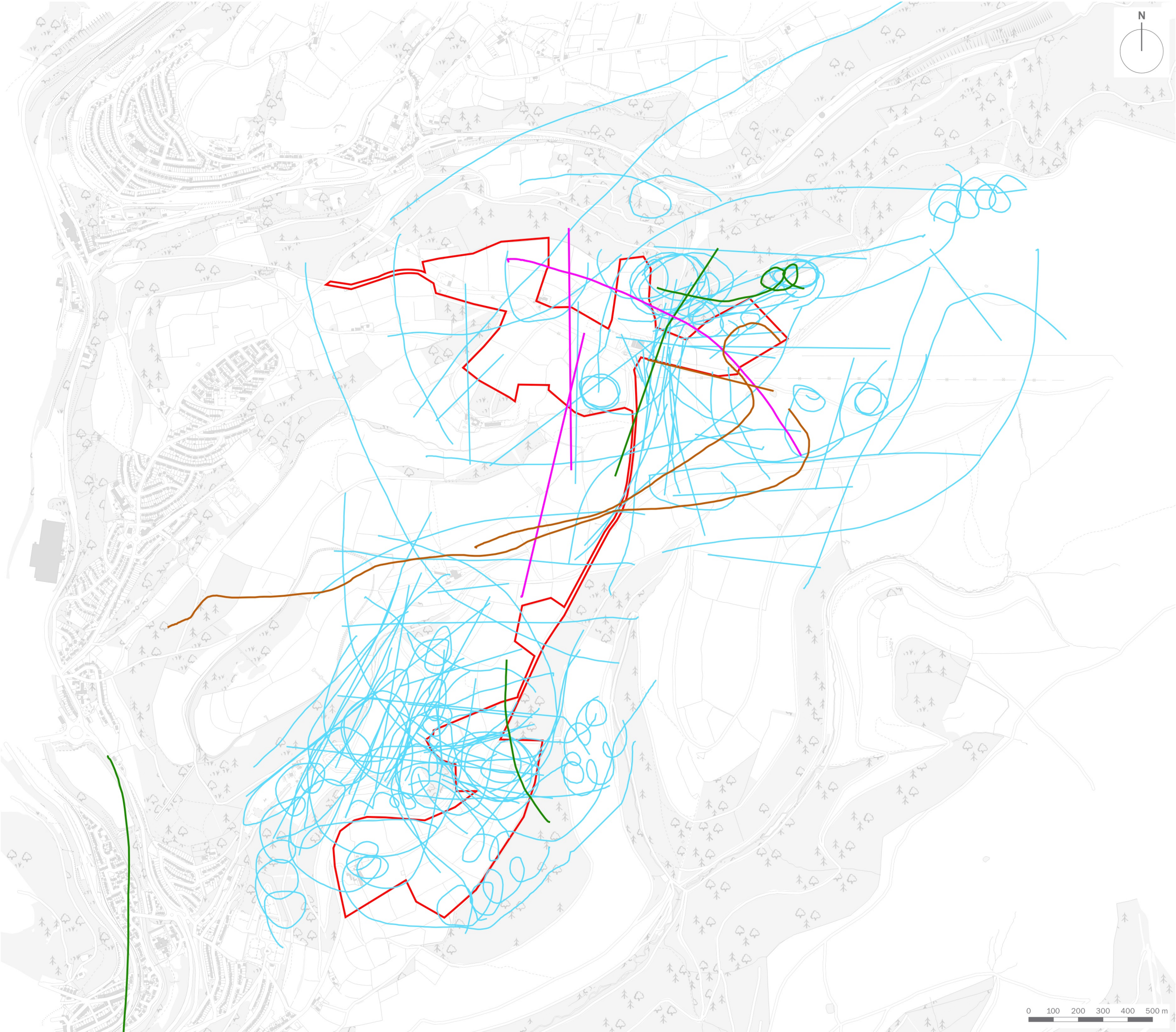
- Survey Boundary
- Buzzard (*Buteo buteo*)
- Goshawk (*Accipiter gentilis*)
- Kestrel (*Falco tinnunculus*)
- Osprey (*Pandion haliaetus*)
- Peregrine (*Falco peregrinus*)
- Red Kite (*Milvus milvus*)
- Sparrowhawk (*Accipiter nisus*)

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Raptor Winter Flight Activity – September 2021 to April 2022			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d040a	checked	KHe
scale	1:17,500 @ A3	QA	JFr



-  Survey Boundary
-  Herring Gull (*Larus argentatus*)
-  Lesser Black-backed Gull (*Larus fuscus*)
-  Raven (*Corvus corax*)
-  Red Grouse (*Lagopus lagopus*)

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Gulls and Other Notable Species Winter Flight Activity – September 2020 to March 2021			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d041a	checked	KHe
scale	1:13,000 @ A3	QA	JFr



- ▬ Survey Boundary
- ▬ Grey Heron (*Ardea cinerea*)
- ▬ Lesser Black-backed Gull (*Larus fuscus*)
- ▬ Raven (*Corvus corax*)
- ▬ Mallard (*Anas platyrhynchos*)

client			
Pennant Walters			
project title			
Trecelyn Wind Farm			
drawing title			
Gulls and Other Notable Species Winter Flight Activity – September 2021 to April 2022			
date	31 OCTOBER 2023	drawn by	MCa
drawing number	edp6366_d042a	checked	KHe
scale	1:15,000 @ A3	QA	JFr



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GROUP** REGISTERED
PRACTICE



**IEMA
CORPORATE
PARTNER**

**Landscape
Institute**
Registered practice