

Volume 5: Appendix 12.1 – Ornithology Technical Report

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LIST OF ABBREVIATIONS

Agl:	Above Ground Level
BBS:	Breeding Bird Survey
BoCC:	Birds of Conservation Concern
BTO:	British Trust for Ornithology
EIA:	Environmental Impact Assessment
EIAR:	Environmental Impact Assessment Report
FA:	Flight Activity
FLS:	Forestry and Land Scotland
GIS:	Geographical Information System
IBA:	Important Bird Area
LBAP:	Local Biodiversity Action Plan
LNCS:	Local Nature Conservation Site
LNR:	Local Nature Reserve
LOD:	Limit of Deviation
NBN:	National Biodiversity network
NCI:	Nature Conservation Importance
NHZ:	Natural Heritage Zone
NNR:	National Nature Reserves
OHL:	Overhead Line
pch:	Potential Collision Height
RSPB:	Royal Society for the Protection of Birds
SBL:	Scottish Biodiversity List
SPA:	Special Protection Area
SPEC:	Species of European Conservation Concern
SSSI:	Site of Special Scientific Interest
SWT:	Scottish Wildlife Trust
UK BAP:	UK Biodiversity Action Plan
VP:	Vantage watch point
WCA:	<i>Wildlife and Countryside Act, 1981 (as amended)</i>
WeBS:	Wetland Bird Survey

12. ORNITHOLOGY TECHNICAL REPORT

12.1 The Proposals

12.1.1 This appendix presents information relevant to the Kintore to Tealing 400 kV Overhead Line (OHL). It should be read in conjunction with **Volume 2, Chapter 12: Ornithology** and **Volume 1, Chapter 3: Project Description** of the Environmental Impact Assessment Report (EIAR) for full details of the Proposed Development.

12.1.2 This appendix is supported by the following figures of the EIAR (**Volume 3**):

- **Figures 12.1.1 to 12.1.2: The Proposed Development and Ornithology Survey Area;**
- **Figures 12.2.1 to 12.2.2: Ornithological Designated Sites within 20 km and 5 km;**
- **Figures 12.3.1 to 12.3.8: Breeding Bird Surveys;**
- **Figures 12.4.1 to 12.4.5: Flight Activity Surveys;**
- **Figures 12.5.1 to 12.5.6: Winter Goose Foraging Surveys; and**
- **Figures A12.7.1 to A12.7.5: Bird Flight Diverter Placement.**

12.1.3 This appendix is also supported by the following additional appendices and figures in the EIAR (**Volume 5 and 6**):

- Volume 5:
 - **Appendix 12.3: Shadow Habitats Regulations Appraisal (HRA);**
- Volume 6:
 - **Appendix 12.2: Confidential Ornithology Report; and**
 - **Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species and Black Grouse.**

12.2 Requirement for the Report

12.2.1 LUC was commissioned by Scottish and Southern Energy Networks (SSEN Transmission), hereafter referred to as ‘the Applicant’ to undertake an ornithological desk study together with bird surveys to inform the design process and assessment of the bird resource present. This included determining the presence or likely absence of Special Protection Area (SPA) qualifying species, species of conservation concern and Schedule1/Annex 1 species that may be adversely affected by the Proposed Development.

12.3 Terminology and Survey Area

12.3.1 The following terminology will be used throughout this report:

- **Site:** Defined as the area bounded by the Limit of Deviation (LOD) for the proposed OHL and access tracks; refer to **Volume 3, Figures 3.1.1 to 3.1.29: Proposed Development for which Section 37 Consent (*Electricity Act, 1989*) is sought;**
- **Proposed Development:** Defined as the infrastructure including towers, overhead line (OHL) conductors, access tracks, and temporary working areas within the LOD (**Volume 3, Figures 3.1.1 to 3.1.29: Proposed Development for which Section 37 Consent (*Electricity Act, 1989*) is sought;** also refer to **Volume 1, Chapter 3: Project Description**).
- **Proposed Alignment:** Defined as the centreline of the OHL (see **Volume 3, Figure 1.1: Overview of the Proposed Development**).
- **Limit of Deviation (LOD):** The area either side of the Proposed Alignment and ancillary works within which micro-siting may take place in accordance with the conditions of the Section 37 Consent.
- **Breeding Bird Survey Area (BBS Area):** The Site plus at least a 500 m buffer boundary where suitable habitat is present.
- **Flight Activity Area:** Survey Area to 10 km distance from SPAs which coincide with the Proposed Development.
- **Study Area:** as defined by best practice (detailed in **Volume 5, Appendix 12.1: Ornithology Technical Report and in Volume 5, Appendix 3.2: General Environmental Management Plans (GEMPs) and Species Protected Plans (SPPs)**, TG-NET-ENV-524 *Ornithology Methods for Transmission Projects*) as the area within which data collection is completed i.e. up to 20 km from the Site, as shown in **Volume 3, Figures 12.2.1 to 12.2.2: Ornithological Designated Sites within 20 km and 5 km.**
- **Section:** The Proposed Development has been divided into six sections (as defined fully in **Volume 1, Chapter 3: Project Description**);

- Section A: Emmock 400 kV substation to Forfar, Towers S206 to S163;
- Section B: Forfar to Brechin, Towers S162 to S106;
- Section C: Brechin to Laurencekirk, Towers S105 to S52;
- Section D: Laurencekirk to Hurlie 400 kV substation, Towers S51 to S1;
- Section E: Hurlie 400 kV substation to River Dee, Towers N96 to N61; and
- Section F: North of the River Dee to Kintore Substation, Towers N60 to N1.

12.4 Relevant Legislation and Policy summary

12.4.1 Relevant legislation and guidance documents have been reviewed and considered as part of this ornithology assessment. Of relevance are:

- *The European Council Directive on the Conservation of Wild Birds 2009/147/EC* (the Birds Directive)¹;
- *The Wildlife and Countryside Act 1981* (as amended)²;
- *The Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit)*³;
- *The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019*⁴
- *The Convention on Wetlands of International Importance especially as Water-fowl Habitat (Ramsar Convention)*⁵;
- *The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)*⁶;
- *The Nature Conservation (Scotland) Act 2004* (as amended)⁷;
- *The National Planning Framework 4 (NPF4)*⁸;
- *The Scottish Biodiversity Strategy to 2045*⁹; and
- Local Biodiversity Action Plans

The European Council Directive on the Conservation of Wild Birds 2009/147/EC (the Birds Directive)

12.4.2 The Birds Directive aims to protect all naturally occurring wild bird species present in the EU and their most important habitats. In addition to halting the decline or disappearance of bird species, the Directive aims to allow bird species to recover and thrive over the long-term. Through the protection and restoration of bird habitats, Member States (which up until 31 January 2020 included the UK) were obliged to ensure sufficient habitat diversity and protected areas to support all wild bird species.

12.4.3 By way of background, Member States were required to classify Special Protection Areas (SPAs), formerly known as ‘Natura’ Sites, for species listed in Annex 1 of the Birds Directive. In addition to threatened bird species, SPAs include other regularly occurring migratory birds.

12.4.4 The ‘Natura 2000’ network extended to a Europe-wide system of sites, which were designated for their ecological value. Sites which have been designated for the protection of birds were, and are, designated as SPAs. SPAs support bird assemblages and/or qualifying bird species where >1% of a population uses the area for breeding, roosting and/or migration. The term “European Site” is used to refer to what were previously known as “Natura” sites¹⁰. These sites were originally designated as

¹ UK Government, 2009. *Directive 2009/147/EC of the European Parliament and of the Council*. [Online] Available at: <https://www.legislation.gov.uk/eudr/2009/147/contents>.

² UK Government, 1981. *Wildlife and Countryside Act 1981*. [Online] Available at: <https://www.legislation.gov.uk/ukpga/1981/69>.

³ *The Conservation of Habitats and Species Regulations 2019 (Amendment) (EU Exit)*. [Online] Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111176573>

⁴ *The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019*. [Online] Available at: <https://www.legislation.gov.uk/sdsi/2019/9780111041062>

⁵ UNESCO, 2024. *Convention on Wetlands of International Importance especially as Waterfowl Habitat*. [Online] Available at: <https://www.unesco.org/en/biodiversity/wetlands>.

⁶ CMS, n.d. *Convention on the Conservation of Migratory Species of Wild Animals*. [Online] Available at: <https://www.cms.int/>.

⁷ UK Government, 2004. *Nature Conservation (Scotland) Act 2004*. [Online] Available at: <https://www.legislation.gov.uk/asp/2004/6/contents>.

⁸ Scottish Government, 2023. *National Planning Framework 4*. [Online] Available at: <https://www.gov.scot/publications/national-planning-framework-4/>

⁹ Scottish Government, 2024. *Scottish Biodiversity Strategy to 2045*. [Online] Available at: <https://www.gov.scot/publications/scottish-biodiversity-strategy-2045/>

¹⁰ Defined in this context by Regulation 8 of The Conservation of Habitats and Species Regulations 2017.

part of the “Natura 2000” protected areas network. Since “exit day”¹¹, references to Natura 2000 should now be construed as references to the “national site network”, in terms of regulation 3(10) of *The Conservation of Habitats and Species Regulations 2017* (“the Habitats Regulations”). National site network is defined in terms of regulation 3(1) of the Habitats Regulations.

12.4.5 Ramsar sites, which support internationally important wetland habitats, are listed under the *Convention on Wetlands of International Importance as ‘Waterfowl Habitat’ (Ramsar Convention, 1971, as amended 1982)*¹². All Ramsar sites in Scotland are also European Sites and are protected under the relevant statutory regimes.

12.4.6 Considerable protection is given to SPAs through the Habitats Regulations and these protections are normally reflected in national and local planning policy and decision-making processes. Where developments have the potential to adversely affect SPAs, an assessment process known as a Habitats Regulations Appraisal (HRA) must first be undertaken.

12.4.7 In order that potential effects on the national site network can be fully understood, it is important that they are considered fully in EIAR desk studies.

12.4.8 There is no change to the protection of SPAs, as identified under the ‘Natura 2000’ network, because of the United Kingdom’s exit from the European Union¹³.

Requirement for HRA

12.4.9 Since 31 January 2020, in Scotland¹⁴ the 2017 Habitats Regulations have continued to provide the highest level of legal protection available to ornithological and ecological features. The requirements of the Habitats Regulations apply to specific reserved and devolved activities on land in Scotland, including determinations by the Scottish Ministers of applications for development consent under sections 36 and 37 of the Electricity Act 1989, and for the requisite deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997.

12.4.10 Reference is made to Section 1.5 of the Shadow Habitats Regulations Appraisal (**Volume 5: Appendix 12.3**) that addresses the “Project requirement for HRA”, in relation to both SPAs and Special Areas of Conservation (“SACs”). It has been identified that there is the potential for the Proposed Development to have likely significant effects on SPAs and therefore the Applicant proposes to provide a “shadow” HRA with the EIA Report and section 37 application for the necessary statutory consents.

The Convention on Wetlands of International Importance especially as Water-fowl Habitat (Ramsar Convention)

12.4.11 The Convention's Contracting Parties (including the UK) have assumed a wide range of related obligations covering all aspects of wetland conservation. The fulfilment of those obligations is facilitated under three main branches of activity: the designation of wetlands of international importance as Ramsar sites; the promotion of the wise-use of all wetlands in the territory of each country; and international co-operation with other countries to further the wise-use of wetlands and their resources.

The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)

12.4.12 The *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention or CMS) came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix 1 of the Convention). They also work together in concluding multilateral agreements for the conservation and management of migratory species, which require or would benefit, from international cooperation (listed in Appendix 2 of the Convention).

The Nature Conservation (Scotland) Act 2004 (as amended)

12.4.13 *The Nature Conservation (Scotland) Act 2004* places a specific duty on all public bodies to further the conservation of biodiversity and to consider Scotland’s biodiversity¹⁵. The 2004 strategy aims to achieve by 2030 a landscape where

¹¹ 31 January 2020 at 11pm: cf Section 20(1) of the European Union (Withdrawal) Act 2018.

¹² UNESCO, 1971. *Convention on Wetlands of International Importance especially as Waterfowl Habitat*. [Online] Available at: https://www.ramsar.org/sites/default/files/documents/library/scan_certified_e.pdf

¹³ Scottish Government, 2020. *EU Exit: habitats regulations in Scotland*. [Online] Available at: <https://www.gov.scot/publications/eu-exit-habitats-regulations-scotland-2/pages/2/>.

¹⁴ Including in Scottish inshore waters.

¹⁵ Scottish Executive, 2024. *Scotland’s Biodiversity*. [Online] Available at: <https://webarchive.nrscotland.gov.uk/3000/https://www.gov.scot/Resource/Doc/25954/0014583.pdf>.

“Organisms can move, feed, reproduce and disperse effectively, and are better able to adapt to changing circumstances of land use and climate change”.

The Wildlife and Countryside Act 1981 (as amended)

- 12.4.14 *The Wildlife and Countryside Act 1981 (as amended)* (WCA) is UK wide legislation that gives rise to Designated Sites (Sites of Special Scientific Interest (SSSI)), regulates the management of invasive species and provides protections for species of national conservation importance. Important features of the legislation in relation to birds are set out below.
- 12.4.15 All wild birds are protected by law under the WCA. It is an offence to:
- kill or injure any wild bird;
 - capture or keep (dead or alive) any wild bird;
 - destroy or take the eggs of any wild bird;
 - sell or advertise for sale any wild bird or its eggs; and
 - destroy, damage, interfere with, take or obstruct the use of the nest of any wild birds while it is in use or being built.
- 12.4.16 This legislation means that birds are fully protected in Scotland, and that any planned activity which may affect them requires careful consideration to ensure both legal compliance and no significant ecological impact.
- 12.4.17 In addition, certain species listed on Schedule 1 of the WCA are offered further protection whereby it is an offence to intentionally or recklessly cause disturbance during the breeding season without a licence. This includes whilst Schedule 1 birds are building a nest, whilst in, on, or near a nest with eggs or young, and includes the disturbance of dependent young of such species.

National Planning Framework 4

- 12.4.18 On 13 February 2023, the Scottish Ministers adopted National Planning Framework (NPF) 4. This forms part of the statutory development plan and its supplementary guidance. NPF4 supersedes National Planning Framework 3 and Scottish Planning Policy (SPP) (2014).
- 12.4.19 The document sets out the following key policies:
- **Policy 1** is relevant to all developments: “When considering all development proposals significant weight will be given to the global climate and nature crises”. This policy marks a considerable shift to previous nationally planning policy. It clearly denotes that when considering proposed developments, tackling climate change should be at the forefront for decision makers.
 - **Policy 3 Biodiversity** seeks to “protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks”. Development proposals, wherever feasible, are required to provide nature-based solutions to be integrated into the design of development to ensure significant biodiversity enhancements are provided to sites. Biodiversity enhancements should be proportionate to the nature and scale of the development using best practice methods and in accordance with national and local guidance.
 - **Policy 4 Natural Places** seeks to “protect, restore and enhance natural assets making best use of nature-based solutions”. Policy 4 adopts a precautionary principle when evaluating potential significant effects, a proposed development may have on national or local designated landscapes. It states that a development will not be supported if it will have a significant effect on the integrity of a designated area or the qualities for which it has been identified for; this is unless any significant effects are clearly outweighed by social, environmental or economic benefits. Furthermore, it states that where adverse effects on species protected by legislation may occur, development proposals will only be supported where the relevant statutory tests are met.

Scottish Biodiversity Strategy to 2045

- 12.4.20 The Scottish Biodiversity Strategy to 2045 and the National Planning Framework 4 (NPF4) are interconnected strategies aimed at addressing the nature crisis in Scotland. The Scottish Biodiversity Strategy to 2045 sets the overall direction and ambitions for biodiversity in Scotland with NPF4 providing the spatial planning framework to turn these into actions.
- 12.4.21 In summary, The Scottish Biodiversity Strategy to 2045 has the following ambitions:
- **Vision:** To have restored and regenerated biodiversity across Scotland's land, freshwater, and seas by 2045.

- Goal: To become "Nature Positive" by 2030, meaning reversing the decline of biodiversity and ensuring it is increasing.
- Key Elements: The strategy focuses on healthy ecosystems, diverse and thriving habitats, and resilient species adapting to climate change. It also emphasizes the role of people in stewarding nature and supporting a sustainable economy.
- Milestones: The strategy includes milestones for halting biodiversity loss by 2030 and achieving the overall vision by 2045.
- Specific Areas: The strategy covers rural environments, marine, freshwater, coastal, and urban environments, as well as overall ecosystem health and connectivity across Scotland.

12.4.22 The Biodiversity Strategy sets the overarching vision and goals for Scotland to be "Nature Positive" by 2030 and to restore and regenerate biodiversity by 2045. The following outlines the Strategy objectives that are implemented in the planning framework by NPF4:

- accelerate restoration and regeneration;
- protect nature on land and at sea, across and beyond protected areas;
- embed nature-positive farming, fishing and forestry;
- protect and support the recovery of vulnerable and important species and habitats;
- invest in nature; and,
- take action on the indirect drivers of biodiversity loss.

Local Biodiversity Action Plans

12.4.23 The Tayside Local Biodiversity Action Plan¹⁶ and the North East Scotland Biodiversity Partnership¹⁷, like other Local Biodiversity Action Plans (LBAP), have been designed to help translate national and regional targets for biodiversity and sustainability into local action. These LBAPs contribute to national targets, wherever these are relevant in Tayside or Grampian region and also set local targets through the preparation of local action plans.

12.5 Methods

Overview of Ornithology Scope

Target Species

12.5.1 The ornithology scope of works was agreed with NatureScot prior to commencement (refer to **Volume 5, Chapter 12: Ornithology, Table 12.1: Summary of Consultation of relevance to Ornithology**). A range of Target Species was identified for which desk study and field surveys were implemented. This was defined to include those species groups that NatureScot has identified as priority species which are potentially at risk from onshore wind farms. This list also pertains to the construction and operation of OHLs. Target Species include Schedule 1/Annex 1 birds, species comprising qualifying features of SPAs whose core foraging ranges have potential overlap with the Proposed Development and non-passerine Birds of Conservation Concern (BoCC).

12.5.2 NatureScot has identified a list of priority species which are potentially at risk from onshore wind farms (*Assessing the significance of impacts on bird populations from onshore windfarms that do not affect protected areas*, Table A1 and Table A2¹⁸).

12.5.3 Target Species encountered during field surveys and for which desk records were obtained include:

- Whooper Swan (*Cygnus cygnus*);
- Greylag Goose (*Anser anser*);

¹⁶ Tayside Biodiversity Partnership, 2016. *Action Plan – New LBAP 2016-2026*. [Online] Available at: <https://www.taysidebiodiversity.co.uk/action-plan/action-plan-new-lbap-2015/>.

¹⁷ North East Scotland Biodiversity Partnership, n.d. *Important Habitats for Biodiversity – our Local Biodiversity Action Plan*. [Online] Available at: <https://www.nesbiodiversity.org.uk/biodiversity-information-for-developers/important-habitats-for-biodiversity-in-the-north-east-of-scotland/>.

¹⁸ NatureScot 2025. *Guidance note – Assessing the significance of impacts on bird populations from onshore wind farms that do not affect protected areas*. [Online] Available at: <https://www.nature.scot/doc/guidance-note-assessing-significance-impacts-bird-populations-onshore-wind-farms-do-not-affect>

- Pink footed Goose (*Anser brachyrhynchos*);
- Red Kite (*Milvus milvus*);
- Merlin (*Falco columbarius*);
- Peregrine (*Falco peregrinus*);
- Goshawk (*Accipiter gentilis*);
- Short-eared Owl (*Asio flammeus*);
- Black Grouse (*Lyrurus tetrix*);
- Herring Gull (*Larus argentatus*);
- Curlew (*Numenius arquata*);
- Lapwing (*Vanellus vanellus*);
- Golden Plover (*Pluvialis apricaria*); and
- Nightjar (*Caprimulgus europaeus*).

12.5.4 All species listed within Table A1 and Table A2¹⁸ and that were present within the Study Area were recorded and mapped as appropriate.

12.5.5 Desk and field studies were undertaken to provide a representative and opportune baseline, to inform the assessment of effects as follows.

Baseline Data Collection: Desk Study

12.5.6 The following resources and guidance were used to inform the desk study:

- The NatureScot SiteLink website¹⁹;
- National Biodiversity Network (NBN)²⁰;
- Royal Society for the Protection of Birds (RSPB): bird records within 2 km of the Site including Schedule 1 and Annex 1 bird species, together with breeding waders and Black Grouse²¹;
- Data on Schedule 1 and Annex 1 raptors was requested from the local Raptor Study Groups and obtained from Forestry and Land Scotland (FLS);
- British Trust for Ornithology (BTO) breeding waders publication²², together with the associated publicly available dataset, showing the ‘sensitivity’ of 1 km squares of wader habitat was used to determine potential breeding wader receptors; and
- BTO Wetland Bird Survey (WeBS) data²³ was also referenced.

Designated Sites

12.5.7 A desktop search for statutory designated nature conservation sites was conducted with 20 km and 5 km of the Site, including for sites of international importance such as SPA and Ramsar sites, and sites of national importance, such as SSSIs and National Nature Reserves (NNRs) using the NatureScot SiteLink website¹⁹. A search for non-statutory Designated Sites within 2 km of the Site was also conducted: these included RSPB reserves and Scottish Wildlife Trust (SWT) reserves with ornithological resource. Refer below to **Table 12.1.4: Statutory Designated Sites Study Area Descriptions: Desk-Based Studies**.

¹⁹ NatureScot, n.d. *SiteLink*. [Online] Available at: <https://sitelink.nature.scot/home>.

²⁰ National Biodiversity Network, 2024. *NBN Atlas*. [Online] Available at: <https://data.nbn.org.uk/>.

²¹ Provided by RSPB through a data request.

²² O’Connell, P., Wilson, M., Wetherhill, A. & Calladine, J., 2021. *Sensitivity mapping for breeding waders in Britain: towards producing zonal maps to guide wader conservation, forest expansion and other land-use changes. Report with specific data for Northumberland and north-east Cumbria*. [Online] British Trust for Ornithology, p. 80. Available at: <https://www.bto.org/our-science/publications/research-reports/sensitivity-mapping-breeding-waders-britain-towards>. A report to the Forestry Commission, England BTO Research Report 740.

²³ British Trust for Ornithology, n.d., Wetland Bird Survey Data. [Online] Available at: <https://www.bto.org/get-involved/volunteer/projects/wetland-bird-survey/data>.

Target Species

- 12.5.8 A desktop search for Target Species was conducted using publicly available biological records (post-2000), within 5 km of the Site. Records were requested from the NBN Atlas²⁰ as well as the resources outlined below.
- 12.5.9 A data request was raised with the RSPB in March 2023 with data received on 13 April 2023 for bird records of Target Species within 2 km of the Site. Due to the sensitivity around records of the Schedule 1 and Annex 1 species for which data were sought, desk study results pertaining to these species are presented separately in **Volume 6, Appendix 12.2: Confidential Ornithology Report**.
- 12.5.10 A data request to the Scottish Raptor Study Group was raised on 11 March 2023 and subsequently on 13 December 2023. At the time of writing (March 2025) no data have been received.
- 12.5.11 A recent BTO publication²⁴ (hereafter referred to as the Bird Habitat Appraisal), together with the associated publicly available dataset²⁵, showing the 'sensitivity' of 1 km squares with regards to wader habitat (based on previous breeding bird survey work), was used to help determine potential breeding wader receptors across the Site and to inform the focus areas for breeding bird surveys (see below). In brief, those areas through which the Proposed Development intersects that were predicted as being Curlew breeding habitat of good quality (2 and above on a scale of 1-5 of sensitivity for the species), were selected for Breeding Bird Surveys. Changes in alignment as the Proposed Development evolved has meant that some areas surveyed in 2023 now lie out with the BBS Area; however, data from these areas remains relevant, by providing a good 'control' for representation of bird populations in the local area.
- 12.5.12 The BTO also coordinates the monitoring and collection of survey data of the UK's internationally important non-breeding waterbirds. Wetland sites are counted once per month, providing data for population and trends in abundance and distribution of wintering waterbirds, including for geese and swans at SPA and Ramsar sites. Data were obtained from the publicly available summaries for count sites²³ that were associated with the Designated Sites identified using the NatureScot SiteLink¹⁹ (refer below to **Table 12.1.4: Statutory Designated Sites Study Area Descriptions: Desk-Based Studies**).

Baseline Data Collection: Field surveys

- 12.5.13 Ornithological field survey was carried out in 2023 and 2024 using published guidance^{28,29} and professional judgement, informed by consultation with NatureScot (refer, **Volume 2, Chapter 12: Ornithology, Table 12.1: Summary of Consultation**). The following surveys were used to obtain relevant and timely baseline ornithology data, to inform assessment of the Proposed Development:
- Breeding Bird Surveys: BBS were carried out in 2023 and 2024 within the BBS Areas (refer to **Volume 3, Figures 12.3.1 to 12.3.8: Breeding Bird Surveys**);
 - Black Grouse surveys: Black Grouse survey was carried out in Section A only, in April and May 2024, following BBS results in 2023 that recorded Black Grouse in this Section, only (refer to **Volume 6, Appendix 12.2: Confidential Ornithology Report**);
 - Winter Goose Foraging Surveys: Surveys for foraging geese were carried out from January to March 2023, to inform the assessment of SPA foraging birds occurring within 5 km of the Proposed Development;
 - Flight activity surveys: Flight activity surveys of Target Species were carried out from September 2023 to March 2024, across the Proposed Development and beyond to 2 km, to determine bird use of the air space associated with the OHL infrastructure. These flight activity surveys were undertaken to inform the potential for collision risk to bird populations using these habitats and to identify and target appropriate mitigation (flight activity surveys gave particular reference to foraging SPA species, namely Pink-footed Geese and Greylag Geese); and
 - Schedule 1/Annex 1 bird Surveys: Surveys for Target Species were carried out in 2023 and 2024 across the Proposed Development and beyond to 1 km, to determine the potential for breeding Schedule 1/Annex 1 species (refer **Volume 6, Appendix 12.2: Confidential Ornithology Report**).

²⁴ O'Connell, P., Wilson, M., Wetherhill, A. and Calladine, J., 2021. *Sensitivity mapping for breeding waders in Britain: towards producing zonal maps to guide wader conservation, forest expansion and other land-use changes*. Report with specific data for Northumberland and north-east Cumbria. BTO Research Report, 740, BTO, Thetford, UK.

²⁵ BTO data available online: <https://app.bto.org/wader-map/>

- 12.5.14 Bird species can range over wide areas, therefore surveys to characterise the Proposed Development's baseline extended to appropriate distances to include all relevant habitats. Survey distances are species-specific and take account of the likely distances over which individuals may be affected by the presence of the Proposed Development.
- 12.5.15 The ornithology Study Areas were defined as follows (also refer to **Volume 3, Figures 12.1.1 to 12.1.2: The Proposed Development and Ornithology Survey Area**):
- BBS Area - suitable open-ground habitats up to 500 m from the Proposed Development;
 - Raptor Study Area - suitable habitats up to 2 km from the Proposed Development;
 - Black Grouse Study Area - suitable habitats up to 1 km of the Proposed Development;
 - Flight Activity (FA) area - airspace to 2 km from the Proposed Development and within 10 km of SPAs with qualifying features showing potential connectivity (refer to **Table 12.1.4: Statutory Designated Sites Study Area Descriptions: Desk-Based Studies**); and
 - Foraging geese – suitable habitats within 2 km of the Proposed Development.

Survey Personnel

- 12.5.16 Surveys were undertaken by Jonathan Daisley (JND), Andrew McDonald (AM), Michal Ostalowski (MO), Bryce Thomson (BT), Sean Kerr (SK), Darren Wilson (DW), Megan Collie (MC) and Victoria Curley (VC). All are experienced surveyors with appropriate training in the field survey methods used.

Breeding Bird Surveys (BBS)

- 12.5.17 BBS focussed on areas of suitable habitat for wading bird species within 1 km of the Proposed Development and was informed by Desk Study historical records and the Bird Habitat Appraisal²⁴ data²⁵.
- 12.5.18 Wader surveys were conducted using BTO sensitivity mapping with regards to Curlew²⁴. Predicted abundance of Curlew are provided on a level of 1 to 5, with 1 the lowest density of breeding Curlew and 5 with the highest density. Those BBS Areas across the Proposed Development were predicated on BTO-modelled habitat sensitivity described as good quality Curlew breeding habitat (*i.e.*, level 2 or above on the scale 1-5)²⁴. Only those parts of the Study Area in which the modelled data was 2 or greater were surveyed.
- 12.5.19 Areas of unenclosed and enclosed land within and up to 500 m beyond the LOD were surveyed for breeding waders based on the Brown and Shepherd (1993)²⁶ method for censusing breeding wader populations, as updated in Calladine *et al.*²⁷. Three separate survey visits were carried out in May and June in both 2023 and 2024, with survey visits more than seven days apart. A systematic search of the BBS Area (see definition above) was completed for each survey visit. All surveys were completed in suitable conditions *i.e.* in wind of Beaufort force less than 4 and in dry and good visibility weather conditions. It is considered that these surveys provide a robust assessment of the breeding wader assemblage present throughout the Study Area, including the distribution and numbers of breeding waders potentially present within moorland and farmland.
- 12.5.20 A total of 14 separate BBS Areas were surveyed across the two years of surveys (2023-2024). Due to refinement of the alignment of the Proposed Development, only nine of the surveyed areas remained within 500 m of the LOD at the time of project commitment (refer to **Volume 3, Figures 12.3.1 to 12.3.8: Breeding Bird Surveys**). As such, the following BBS Areas are included in establishment of the ornithological baseline:
- Section A: BBS Areas 6, 7, 8, 9 and 10 – all surveyed in 2023, only;
 - Section B: BBS Area 6 (surveyed in 2023 only);
 - Section C: no part of this Section of the Proposed Development supported Bird Habitat Appraisal areas suitable for breeding Curlew, therefore specific BBS was not carried out;
 - Section D: BBS Area 15 (surveyed in 2024 only);
 - Section E: BBS Areas 2, 3, 4 and 5 were all surveyed in 2023 only, with all areas more than 500 m beyond the final LOD; and

²⁶ Brown, A.F & Shepherd, K.B., 1993. *A method for censusing upland breeding waders*. Bird Study 40: 189–195.

²⁷ Calladine, J., Garner, G., Wernham, C. & Thiel, A. (2009) *The influence of survey frequency on population estimates of moorland breeding birds*. Bird Study, 56: 3, 381-388

- Section F: BBS Area 1 (surveyed in 2023 only and located out with the Proposed Development), BBS Areas 13 and 14 (surveyed in 2024).

12.5.21 All survey data were collected on Geographic Information System (GIS)-enabled field tablets to increase accuracy and facilitate robust interpretation. The BBS methods are outlined below.

12.5.22 The following criteria were used to establish whether birds were breeding:

12.5.23 For all birds:

- presence of nest, eggs and/or chicks;
- alarm calling indicative of nest, young or territory;
- displaying or in song-flight;
- performing a distraction display;
- birds aggressively defending territories; and
- birds seen carrying food to nest or young.

12.5.24 For all raptors:

- if a pair was attached to a territory.

12.5.25 For waders:

- birds singing or alarm calling.

12.5.26 All other behaviour was considered as being indicative of non-breeding activities.

12.5.27 Survey dates across the areas, together with weather conditions and surveyor are outlined below in **Table 12.1.1: Breeding bird surveys – dates and weather data**.

Table 12.1.1: Breeding bird surveys – dates and weather data

BBS Area	Visit number	Survey Date (w/c or date)	Surveyor	Wind Force	Visibility (km)	Precipitation/Notes
1	1	03 May 2023	JND	2	>2	-
1	2	23 May 2023	JND	3	>2	-
1	3	15 June 2023	JND	2	>2	-
2	1	03 May 2023	AM	2	>2	-
2	2	24 May 2023	AM	3	>2	-
2	3	13 June 2023	DW/AM	3	>2	-
3	1	03 May 2023	DW	1	>2	-
3	2	23 May 2023	AM	3	>2	-
3	3	13 June 2023	DW/AM	2	>2	-
4	1	04 May 2023	AM	2	>2	-
4	2	23 May 2023	SK	2	>2	-
4	3	14 June 2023	DW/AM	2	>2	-
5	1	04 May 2023	DW	2	>2	-
5	2	24 May 2023	AM	3	1-2	Low cloud
5	3	14 June 2023	DW/AM	1	>2	-
6	1	04 May 2023	JND	3	>2	-
6	2	25 May 2023	JND	1	>2	-
6	3	17 June 2023	JND	3	>2	-

BBS Area	Visit number	Survey Date (w/c or date)	Surveyor	Wind Force	Visibility (km)	Precipitation/Notes
7	1	10 May 2023	AM	2	>2	-
7	2	24 May 2023	AM	2	1-2	-
7	3	16 June 2023	SK	2	>2	-
8	1	09 May 2023	SK	3	>2	-
8	2	30 May 2023	DW/AM	2	>2	-
8	3	16 June 2023	SK	2	>2	-
9	1	10 May 2023	SK	3	>2	-
9	2	31 May 2023	AM/LC	4	>2	-
9	3	27 June 2023	DW	2	>2	-
10	1	10 May 2023	MO	2	>2	-
10	2	30 May 2023	DW/AM	2	>2	-
10	3	16 June 2023	DW/AM	3	>2	-
12	1	13 May 2024	DW	3	>2	-
12	2	27 May 2024	AM	2	>2	Light rain
12	3	11 June 2024	AM	1	>2	-
13	1	13 May 2024	SK	3	>2	-
13	2	27 May 2024	MC	2	>2	-
13	3	18 June 2024	JND	2	>2	-
14	1	13 May 2024	DW	2	>2	-
14	2	27 May 2024	JND	3	>2	Light rain
14	3	19 June 2024	JND	2	>2	-
15	1	14 May 2024	AM	3	>2	-
15	2	27 May 2024	BT	2	>2	-
15	3	11 June 2024	SK	2	>2	-

Raptor Surveys

- 12.5.28 Raptor surveys were undertaken from April to July in 2023 and between March and August 2024, including focal areas of suitable habitat within 1 km of the Proposed Development and as informed by Desk Study records. Based on guidance given in ‘*Raptors: a field guide to survey and monitoring*³²’ and ‘*Bird monitoring methods*²⁸’, the approach allowed for identifying the presence and location of breeding diurnal raptors within the Study Area. Based on NatureScot guidance²⁹ for those species that may be present, the distance beyond the Proposed Development for identification of nest sites extended to 1 km. Target Species included all Schedule 1/Annex 1 raptor species. Where appropriate, Raptor surveys focussed on and within habitats where increased flight activity was recorded during the non-breeding flight activity surveys, suggested the possibility of these habitats being used for breeding. In addition, where desk records were available, survey was also focussed on where breeding behaviours or nesting had previously occurred (refer to **Volume 6, Appendix 12.2: Confidential Ornithology Report**).

Black Grouse

- 12.5.29 Black Grouse were recorded within the Study Area during BBS in 2023, only within Section A of the Proposed Development. Targeted survey was carried out in this area in 2024 to determine whether lekking and/or breeding was present.

²⁸ Gilbert, G., Gibbons, D.W. and Evans, J., 1998. *Bird monitoring methods – a manual of techniques for key UK species*. RSPB, Sandy.

- 12.5.30 The presence of Black Grouse lek sites was determined according to the methods outlined in NatureScot guidance ²⁹ and Gilbert *et al.*²⁸. A systematic walkover of all suitable lekking habitat within the Study Area was completed on two occasions, on 17 April 2024 and 9 May 2024, in suitable weather conditions (*i.e.* wind less than Beaufort force 3 and no precipitation). Each visit comprised a systematic walkover survey within 1 km of all suitable habitat within the Study Area at dawn, and no more than two hours after, to confirm the presence and exact location of any leks.

Flight activity surveys

- 12.5.31 Information on bird flight activity was collected during systematic watches from Vantage Points (VPs). These were situated within the Study Area to provide good views of the airspace within and surrounding the Proposed Development, to assess potential collision and displacement effects.
- 12.5.32 VP locations were selected using a mixture of GIS analyses and field surveys, with the aim of maximising visibility of the Proposed Development using the minimum number of points. VP watches were of between one to three hours in duration. The survey effort aimed for 18 hours of watches per VP during daylight hours, although this was dependent on access. Viewsheds from each VP were defined by an arc of 180 degrees centred on a fixed viewing angle and extending to 2.5 km from the VP location.
- 12.5.33 A total of 32 vantage points were initially used to describe flight activity across the Proposed Development, to identify areas of potential high collision risk in relation to the qualifying features of the identified SPAs. This was subsequently reduced as the Proposed Development was refined. As such, a total of 16 VPs covered the Proposed Development (refer to **Volume 3, Figures 12.4.1 to 12.4.5: Flight Activity Surveys** and **Table 12.1.2: Vantage Point locations (following refinement of the Proposed Development) and survey dates** for VP coverage).

Table 12.1.2: Vantage Point locations (following refinement of the Proposed Development) and survey dates

VP	Grid Position	SPA coverage	Survey Dates					
1	NJ 75559 13795	Loch of Skene	26 October 2023	15 November 2023	19 December 2023	16 January 2024	06 February 2024	27 February 2024
10	NO 62629 67773	Montrose Basin	26 October 2023	27 November 2023	19 December 2023	26 January 2024	08 February 2024	19 March 2024
11	NO 59381 66736	Montrose Basin	26 October 2023	16 November 2023	18 December 2023	17 January 2024	29 February 2024	14 March 2024
12	NO 56931 63535	Montrose Basin	05 October 2023	01 November 2023	19 December 2023	N/S	08 February 2024	19 March 2024
20	NO 42597 53548	Loch of Lintrathen; Kinnordy	26 October 2023	01 November 2023	18 December 2023	11 January 2023	15 February 2024	07 March 2024
21	NO 40583 49644	Loch of Lintrathen; Loch of Kinnordy	31 October 2023	09 November 2023	18 December 2023	11 January 2023	15 February 2024	14 March 2024
22	NO 43005 47480	Loch of Lintrathen; Loch of Kinnordy	09 November 2024	No watch	11 December 2023	09 January 2024	15 February 2024	19 March 2024
25	NO 39369 37474	Firth of Tay and Eden Estuary; Outer firth of Forth & St. Andrews Bay	27 September 2023	01 November 2023	05 December 2023	17 January 2024	12 February 2024	19 March 2024

²⁹ NatureScot Guidance, 2017. *Recommended bird survey methods to inform impact assessment of onshore wind farms*.

VP	Grid Position	SPA coverage	Survey Dates					
26	NJ 74189 11026	Loch of Skene	24 October 2023	08 November 2023	N/S	16 January 2023	07 February 2024	27 March 2024
27	NJ 74716 08994	Loch of Skene	24 October 2023	08 November 2023	30 November 2023	17 January 2023	06 February 2024	28 February 2024
28	NJ 73796 06268	Loch of Skene	24 October 2023	08 November 2023	30 November 2023	17 January 2023	28 February 2024	No watch
29	NJ 75897 02941	Loch of Skene	31 October 2023	08 November 2023	01 December 2023	17 January 2023	07 February 2024	07 March 2024
30	NJ 76669 01086	Loch of Skene	25 October 2023	09 November 2023	16 January 2024	27 February 2024	07 March 2024	No watch
31	NJ 78956 00124	Loch of Skene	25 October 2023	09 November 2023	01 December 2023	16 January 2023	06 February 2024	27 February 2024
32	NO 80747 98785	Loch of Skene	24 October 2023	15 November 2023	30 November 2023	17 January 2024	N/S	27 March 2024
35	NO 54805 61313	Montrose Basin	11 October 2023	01 November 2023	No watch	26 January 2023	07 February 2024	07 March 2024

- 12.5.34 The VPs were placed along the length of the route of the Proposed Development to provide coverage of qualifying species' flight activity up to 10 km from the SPAs where the qualifying feature included wildfowl species. The main aim of the VPs was to identify the main flight lines of wildfowl species from roosts (bodies of water) to foraging grounds (often comprising arable fields, although this does change across the season and between years, according to food source and availability).
- 12.5.35 VP watches were undertaken by scanning airspace in front of the observer and 90 degrees either side to 2 km. The front viewing direction was fixed, meaning that each watch from a particular VP scanned a consistent 180-degree arc in front of the observer. Bespoke GIS field-mapping was used by surveyors for each VP with the viewing area indicated.
- 12.5.36 Watches lasted between one and three hours. Watches were undertaken from sunrise to sunset to provide coverage of Target Species and potential wildfowl movements from the identified SPAs (as detailed below in **Table 12.1.4: Statutory Designated Sites Study Area Descriptions: Desk-Based Studies**). Watches were undertaken in a range of weather conditions, but observers aimed to ensure that visibility allowed the detection of flight activity within the viewshed being observed. If conditions deteriorated during a watch, the session was suspended until conditions improved (refer to **Table 12.1.20: Vantage Point survey times and weather conditions in Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results**).
- 12.5.37 During each VP watch the area in view was scanned constantly by eye and using binoculars/telescope until a Target Species was detected in flight. Once detected, the bird/flock was visually followed until it ceased flying or was lost from view. The direction of the flight and height was recorded and the route followed by the bird or flock mapped on a GIS using a field tablet. In order to characterise the flights, the following flight height bands were used to reflect the collision risk posed by the Proposed Development:
- less than 10 m above ground level (agl);
 - between 10 and 75 m agl; and
 - greater than 75 m agl.

Winter Goose Foraging Surveys

- 12.5.38 As agreed with NatureScot (refer to **Volume 2, Chapter 12: Ornithology, Table 12.1: Summary of Consultation**), surveys to explore the foraging distribution of wintering goose species were undertaken at an early stage in the refinement of the design of the Proposed Development. Winter Goose Foraging Survey was carried out within an area where the LOD intersected a buffer of 15 km of each of the SPAs i.e. the core foraging range of goose species. Survey involved systematic searches using the

road network to count and map feeding birds, to describe the food sources being used and to plot flight lines of birds moving between feeding sites.

12.5.39 A total of ten visits were carried out across the length of the Proposed Development. Surveys to determine the foraging distribution of wintering goose species were undertaken from 26 January until 23 March 2023. In addition to noting field use by geese, opportunity was taken to monitor dawn flights of geese from the Loch of Skene SPA.

12.5.40 Winter Goose Foraging Survey visits are detailed below in **Table 12.1.3: Winter Goose Foraging Surveys – dates and SPA areas covered**.

Table 12.1.3: Winter Goose Foraging Surveys – dates and SPA areas covered

Winter Goose Foraging Survey Date	Statutory Designated Area	Surveyor
26 January 2023	Loch of Lintrathen SPA Loch of Kinnordy SPA Firth of Tay and Eden Estuary SPA	JND
27 January 2023	Loch of Skene SPA	AM
01 February 2023	Montrose Basin SPA	AM
02 February 2023	Loch of Skene SPA	AM
14 February 2023	Loch of Lintrathen SPA Loch of Kinnordy SPA Firth of Tay and Eden Estuary SPA	JND
02 March 2023	Loch of Skene SPA	AM
03 March 2023	Loch of Skene SPA	AM
14 March 2023	Loch of Lintrathen SPA Loch of Kinnordy SPA Firth of Tay and Eden Estuary SPA	MO
22 March 2023	Montrose Basin SPA	JND
23 March 2023	Loch of Skene SPA	JND

12.5.41 Further Winter Goose Foraging Surveys were carried out between September 2023 and March 2024, as surveyors drove between VPs for flight activity surveys.

Field Survey Limitations

12.5.42 Access to both Fetteresso and Durrus Forests was restricted between 20 June and 16 September 2024. Given that NatureScot does not consider survey of woodland passerines a requirement for commercial developments²⁹, this is not considered a limitation to the collection of baseline ornithology data for the Proposed Development.

12.5.43 From 16 May 2024, FLS requested that no access be granted to areas where sensitive species were breeding in Fetteresso Forest. This was subsequently confirmed by FLS as Nightjar with Nightjar breeding data obtained from Aberdeenshire Council incorporated into the assessment (refer to **Volume 6, Appendix 12.2: Confidential Ornithology Report**).

12.6 Baseline Ornithology Conditions: Desk Study Results

Designated Sites

12.6.1 Designated Sites include SPAs and Ramsar sites of international importance, SSSIs and NNRs of national importance. The statutory Designated Sites that coincide with, or where their qualifying features show connectivity (for example where core ranges of the qualifying species coincide with the Proposed Development) are set out below in **Table 12.1.4: Statutory Designated Sites Study Area Descriptions: Desk-Based Studies** and is shown in **Volume 3, Figures 12.2.1 to 12.2.2: Ornithological Designated Sites within 20 km and 5 km**. The Proposed Development Sections which show connectivity to the Designated Sites are also noted.

12.6.2 For Designated Sites with ecological interests located within 2 km, 5 km and 10 km of the Proposed Development, please refer to **Volume 5, Appendix 11.1: Desk Study and Legal/Policy Context**.

Table 12.1.4: Statutory Designated Sites Study Area Descriptions: Desk-Based Studies

Site Name	Qualifying Features	Distance from Proposed Development at its Closest	Connectivity with Proposed Development	Interaction with Sections A-F
International Designated Sites within 20 km				
Firth of Tay and Eden Estuary Ramsar & SPA (also Important Bird Area (IBA))	SPA/Ramsar: - Bar-tailed Godwit (<i>Limosa lapponica</i>; non-breeding); - Common Scoter (<i>Melanitta nigra</i>; non-breeding); - Cormorant (<i>Phalacrocorax carbo</i>; non-breeding); - Dunlin (<i>Calidris alpina</i>; non-breeding); - Eider (<i>Somateria mollissima</i>; non-breeding); - Goldeneye (<i>Bucephala clangula</i>; non-breeding); - Goosander (<i>Mergus merganser</i>; non-breeding); - Grey Plover (<i>Pluvialis squatarola</i>; non-breeding); - Greylag Goose (non-breeding); - Icelandic black-tailed Godwit (<i>Limosa limosa islandica</i>; non-breeding); - Little Tern (<i>Sternula albifrons</i>; breeding); - Long-tailed Duck (<i>Clangula hyemalis</i>; non-breeding); - Marsh Harrier (<i>Circus aeruginosus</i>; breeding); - Oystercatcher (<i>Haematopus ostralegus</i>; non-breeding); - Pink footed Goose (non-breeding); - Red-breasted Merganser (<i>Mergus serrator</i>; non-breeding); - Redshank (<i>Tringa totanus</i>; non-breeding); - Sanderling (<i>Calidris alba</i>; non-breeding); - Shelduck (<i>Tadorna tadorna</i>; non-breeding); - Velvet Scoter (<i>Melanitta fusca</i>; non-breeding); and - Waterfowl assemblage (non-breeding).	7.5 km (south of Section A)	Potential connectivity with Greylag and Pink-footed Geese, as within core foraging range (20 km).	Section A only
Outer Firth of Forth and St. Andrews Bay SPA	SPA: - Arctic Tern (<i>Sterna paradisaea</i>; breeding); - Black-headed Gull (<i>Chroicocephalus ridibundus</i>; non-breeding); - Common Gull (<i>Larus canus</i>; non-breeding); - Common Scoter (non-breeding); - Common Tern (<i>Sterna hirundo</i>; breeding); - Eider (non-breeding); - Gannet (<i>Morus bassanus</i>; breeding); - Goldeneye (non-breeding);	7.5 km (southeast of Section A)	Outer Firth of Forth and St. Andrews Bay SPA is designated for breeding seabirds including Herring Gull that may forage inland. There is potential connectivity with the	Section A only

Site Name	Qualifying Features	Distance from Proposed Development at its Closest	Connectivity with Proposed Development	Interaction with Sections A-F
	- Common Guillemot (<i>Uria aalge</i>; breeding & non-breeding); - Herring Gull (<i>Larus argentatus</i>; breeding & non-breeding); - Kittiwake (<i>Rissa tridactyla</i>; breeding & non-breeding); - Little Gull (<i>Hydrocoloeus minutus</i>; non-breeding); - Long-tailed Duck (non-breeding); - Manx Shearwater (<i>Puffinus puffinus</i>; breeding); - Puffin (<i>Fratercula arctica</i>; breeding); - Razorbill (<i>Alca torda</i>; non-breeding); - Red-breasted Merganser (non-breeding); - Red-throated Diver (<i>Gavia stellata</i>; non-breeding); - Seabird assemblage (breeding and non-breeding); - Shag (<i>Gulosus aristotelis</i>; breeding & non-breeding); - Slavonian Grebe (<i>Podiceps auritus</i>; non-breeding); - Velvet Scoter (non-breeding); and - Waterfowl assemblage (non-breeding).		Proposed Development and the SPA.	
Loch of Lintrathen SPA, Ramsar and SSSI	SPA/Ramsar/SSSI: Greylag Goose (non-breeding).	13.3 km (west of Section B)	Potential connectivity with Greylag Geese as within core foraging range (20 km).	Sections A and B
Loch of Kinnordy SPA, Ramsar and SSSI (also IBA)	SPA: - Greylag Goose (non-breeding); and - Pink footed Goose (non-breeding). SSSI/Ramsar: - Additionally – breeding bird assemblage.	4.4 km (west of Section B)	Potential connectivity with Greylag and Pink-footed Geese as within core foraging range (20 km).	Sections A, B and C
Montrose Basin Ramsar, SPA, SSSI and Local Nature Reserve (LNR) (also IBA)	SPA/Ramsar: - Dunlin (non-breeding); - Eider (non-breeding); - Greylag Goose (non-breeding); - Knot (<i>Calidris canutus</i>; non-breeding); - Oystercatcher (non-breeding); - Pink footed Goose (non-breeding); - Redshank (non-breeding); - Shelduck (non-breeding); - Wigeon (<i>Mareca penelope</i>; non-breeding); and - Waterfowl assemblage (non-breeding). SSSI:	6.7 km (east of Section C)	Potential connectivity with Greylag and Pink-footed Geese as within core foraging range (20 km).	Sections C and D

Site Name	Qualifying Features	Distance from Proposed Development at its Closest	Connectivity with Proposed Development	Interaction with Sections A-F
	Additionally – Mute Swan (<i>Cygnus olor</i>; non-breeding); and			
Fowlsheugh SPA and SSSI (also IBA)	SPA: - Northern Fulmar (<i>Fulmarus glacialis</i>; breeding); - Common Guillemot (breeding); - Herring Gull (breeding); - Kittiwake (breeding); - Razorbill (breeding); and - Seabird assemblage (breeding). SSSI: - Additionally – Puffin (breeding); - Seabird colony (breeding); and	8.8 km (east of Section D)	Fowlsheugh SPA is designated for breeding seabirds including Herring Gull that may forage inland. There is potential connectivity with the Proposed Development and the SPA.	Sections D and E
Loch of Skene SPA, Ramsar and SSSI (also IBA)	SPA/Ramsar: - Goldeneye (non-breeding); - Goosander (non-breeding); and - Greylag Goose (non-breeding). SSSI: - Additionally – Common Gull (non-breeding); and - Pink footed Goose (non-breeding).	3.1 km (east of Section F)	Potential connectivity with Greylag Geese, Goldeneye and Goosander as within 20 km of Loch of Skene SPA.	Sections E and F
National and Local Statutory Sites within 5 km				
There were no national or local statutory sites within 5 km of the Proposed Development with ornithological features – the following LNR/RSPB reserves underpin Statutory Designated Sites as follows:				
Inner Tay Estuary LNR	LNR bird resource listed under Firth of Tay and Eden Estuary Ramsar & SPA (also Important Bird Area (IBA))	8.5 km	Potential connectivity with Greylag and Pink-footed Geese as within core foraging range (20 km).	Section A
Montrose Basin LNR	SWT Reserve/LNR Features as per Montrose Basin SPA/Ramsar/SSSI	6.7 km	Potential connectivity with Greylag and Pink-footed Geese as within core foraging range (20 km)	Sections C and D
Loch of Kinnordy RSPB Nature Reserve	Bird resource as for Loch of Kinnordy SPA, Ramsar and SSSI (also IBA)	4.4 km (west of Section B)	Potential connectivity with Greylag and Pink-footed Geese as within core foraging range (20 km).	Sections A, B and C
Non-Statutory Sites within 2 km				
No non-statutory sites with ornithological features were identified within 2 km of the Proposed Development				

12.6.3 There are no non-statutory designations, eg nature reserves, with ornithological interest/designation occurring within 2 km of the Proposed Development.

Historical Records

- 12.6.4 A search for publicly available ornithological records was undertaken within the Survey Area within 2 km of the Proposed Development (including NBN³⁰). This identified a range of Schedule 1/Annex 1 and BoCC species which are discussed below in Section 12.7 in combination with survey data obtained from the field studies (carried out as outlined above in Section 12.5 of this Appendix.
- 12.6.5 The RSPB data request returned records of Schedule 1/Annex 1 species (refer to **Volume 6, Appendix 12.2: Ornithology Confidential Report** for further details). Notable among these records were the number of Red Kite nests towards the north of the Proposed Development, especially in Section F (between the River Dee and Kintore). This area was the site of a Red Kite release project from 2007, with 101 young birds reintroduced across a three-year period³¹. Associated with Red Kite breeding success is the presence of roost sites within local forestry³². Red Kite is a Schedule 1A species, offered protection from disturbance throughout the year at both nesting and roosting sites.
- 12.6.6 In addition, breeding records were obtained for Osprey (*Pandion haliaetus*), Peregrine (*Falco peregrinus*) and several waders; including Curlew, Oystercatcher, Lapwing (*Vanellus vanellus*), Little Ringed Plover (*Charadrius dubius*) and Snipe (*Gallinago gallinago*). Locations of calling Corncrake (*Crex crex*) were also supplied.

12.7 Baseline Ornithology Conditions: Survey Results

- 12.7.1 The summary flight activity of SPA/Ramsar wildfowl from VP watches are noted below in **Table 12.1.5: Goose species flight activity across sections and associated statutory Designated Sites**. Due to the distance of the SPAs/Ramsar sites from Sections D and E (i.e. beyond the core foraging range of qualifying species), flight activity surveys were not carried out in these Sections.
- 12.7.2 Flight activity survey results are presented in **Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results, Table 12.1.22: Vantage Point survey results – Target Species flights recorded** for all Target Species. Flight activity is illustrated in **Volume 3, Figures 12.4.1 to 12.4.5: Flight Activity Surveys** for all non-Schedule 1 Target Species.

Table 12.1.5: Goose species flight activity across sections and associated statutory Designated Sites

Section	Length of OHL Section (m)	Hours watched	SPA/Ramsar sites with connectivity	Greylag Geese crossing (no. flights)	Pink-footed Geese crossing (no. flights)
A	14,400	51	Firth of Tay & Eden Estuary Loch of Lintrathen Loch of Kinnordy	0	528 (5)
B	21,800	33	Loch of Lintrathen Loch of Kinnordy	21 (1)	8,046 (24)
C	16,250	51	Montrose Basin	12 (1)	3,028 (26)
F	20,045	132	Loch of Skene	104 (9)	20,361 (116)

Loch of Skene SPA/Ramsar

Greylag Geese

- 12.7.3 Greylag Geese were recorded at Loch of Skene from the mid-sixties onwards. Numbers increased into the 1990s, with up to 15,000 birds recorded. The SPA citation (classified 1986, updated 2018³³) is of 5,500 individuals. There have been fewer records

³⁰ National Biodiversity Network, n.d. *NBN Atlas Scotland website*. [Online] Available at: <https://scotland.nbnatlas.org/>

³¹ Roos, S., Dobson, A., Noble, D., Haworth, P., Fielding, A., Carrington-Cotton, A., Etheridge, B. & Wernham, C. 2015. *Raptors in Scotland – a methodology for developing trends and indicators*. Scottish Natural Heritage Commissioned Report No. 542.

³² Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. 2009. *Raptors: A field guide for surveys and monitoring*. Stationery Office Books.

³³ NatureScot. Loch of Skene SPA. [Online] Available at: <https://sitelink.nature.scot/site/8536>.

more recently, due to there being far fewer birds roosting at Loch of Skene³⁴. Recent WeBS data have a mean of 43 birds across the last five years' surveys (2018/19-2022/23³⁵).

12.7.4 Most Greylags fed to the north and northwest of the loch, with the feeding distribution of geese patchily distributed due to the presence of woodland largely reducing foraging opportunities. The median distance of feeding Greylag Geese from the loch was 5.8 km³⁶.

12.7.5 A total of 23 flights of Greylag Geese were recorded from VPs within 10 km of the Loch of Skene SPA (refer below to **Table 12.1.6: Loch of Skene SPA Greylag Goose flights recorded as crossing the Proposed Development** and refer to **Volume 3, Figure 12.4.5: Flight Activity Surveys**). Nine flights totalling 104 birds were recorded as crossing the Proposed Development within Section F, as detailed further below in **Table 12.1.7: Loch of Skene summary flight data**. Of these, three flights, totalling 18 birds, were of birds flying at Potential Collision Height (pch; *i.e.*, flight activity in the height range 10 to 75 m agl where there is potential for collision with the Proposed Development OHL), with the other six flights above pch. These were recorded across the 132 hours of VP watches undertaken along the 20 km of the Proposed Development within Section F (refer to **Table 12.1.6: Loch of Skene SPA Greylag Goose flights recorded as crossing the Proposed Development**).

Table 12.1.6: Loch of Skene SPA Greylag Goose flights recorded as crossing the Proposed Development

Session	Date	Number	Flight Number	VP	Crossing	At pch	North span	South span
231024_VP26_DW	24 October 2023	45	7	26	Yes	No	N16	N17
231201_VP29_DW	01 December 2023	12	178	29	Yes	No	N39	N40
240207_VP26_DW	07 February 2024	23	359	26	Yes	No	N15	N16
240207_VP26_DW	07 February 2024	3	370	26	Yes	Yes	N14	N15
240207_VP29_DW	07 February 2024	14	372	29	Yes	Yes	N40	N41
240207_VP29_DW	07 February 2024	1	376	29	Yes	No	N41	N42
240228_VP27_DW	28 February 2024	2	415	27	Yes	No	N19	N20
240228_VP28_DW	28 February 2024	2	426	28	Yes	Yes	N29	N30
240228_VP28_DW	28 February 2024	2	429	28	Yes	No	N29	N30

12.7.6 Winter Goose Foraging Surveys in 2023 and 2023/2024 found Greylags foraging up to 10 km from the roost site at Loch of Skene (refer to **Volume 3, Figures 12.5.5 and 12.5.6: Winter Goose Foraging Surveys** and **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys)** in **Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results**). Small groups were noted near Kemnay in the presence of Pink-footed Geese, and in fields to the south of the loch itself. However, the largest-sized groups were noted near Landberry, near Marketmuir wood to the southwest of the loch, with up to 105 Greylags recorded and with birds noted here on at least four survey visits.

³⁴ Mitchell, C. & Hall, C., 2012. Priority site coverage by the Icelandic-breeding Goose Census 2000/01 to 2009/10. WWT report to JNCC/SNH, 24pp.

³⁵ Woodward, I.D., Calbrade, N.A., Birtles, A., Feather, G.A., Peck, K., Wotton, S.R., Shaw, J.M., Balmer, D.E. and Frost, T.M., 2024. Waterbirds in the UK 2022/23: The Wetland Bird Survey and Goose & Swan Monitoring Programme. BTO/RSPB/JNCC/NatureScot. Thetford. [Online] Available at: <https://app.bto.org/webs-reporting/numbers.jsp>.

³⁶ Bell, M.V., 1988. Feeding behaviour of wintering Pink-footed and Greylag Geese in north-east Scotland. Wildfowl 39: 43-53.

Goosander

12.7.7 Loch of Skene SPA qualifies under the 2019 amendment to the Habitats Regulations³ by supporting populations of European importance of Goosander (110 individuals, over 2% of the GB population³³). The SPA population appears to have fallen, however, with Loch of Skene WeBS surveys recording a mean of just two birds over the last five years²³.

12.7.8 The species was not recorded during flight activity surveys undertaken in 2023 and 2024.

Goldeneye

12.7.9 The Loch of Skene SPA qualifies under the 2019 amendment to the Habitats Regulations³ by regularly supporting populations of European importance of Goldeneye (150 individuals, 1% of the GB population³³). WeBS counts over the last 5 years show a potential increase in site use by the species, with a mean of 320 birds between 2018/19-2022/23²³.

12.7.10 No flights of Goldeneye were recorded across VP watches undertaken in 2023 and 2024.

Pink-footed Geese (Loch of Skene SSSI)

12.7.11 Pink footed Goose is part of the SSSI citation only. As part of that citation, Pink-footed Geese numbers are noted as being regularly of international importance at the loch³⁷. As such, the species was recorded as a Target Species from VPs up to 10 km from the Proposed Development. WeBS surveys recorded an annual 5-year mean of 31,736 Pink-footed Geese using the Loch of Skene between 2018/19 and 2022/23²³.

12.7.12 Over 24,000 Pink-footed Geese were recorded in flight from the VPs covering the Loch of Skene SPA/SSSI, with 162 flights recorded (refer to **Table 12.1.7: Loch of Skene summary flight data** and to **Volume 3, Figure 12.4.5: Flight Activity Surveys**). The majority of these birds (estimated at 20,157 geese) were recorded as flying to and from the roost site with flight activity that would have the potential to intercept the Proposed Development. An estimated 12,800 of these birds (from 44 flights) were recorded as flying at pch.

12.7.13 In addition, there were a number of Pink-footed Geese foraging sites recorded within 2 km of Section F during the survey work of early 2023 and over the Winter 2023/2024. Pink-footed Geese were recorded as foraging in areas surrounding the loch. In particular, flocks were recorded to the south of Kemnay, south of the A96 near Blackburn and near Milton of Cullerlie; the latter with flocks of more than 1,000 birds on two occasions. Birds were also recorded foraging adjacent to the B9126 to the north of Loch of Skene and also near Baads Moss. The majority of birds recorded were located within 10 km of the Loch of Skene; however, flocks were also recorded near Netherley airstrip over 13 km south of the loch (refer to **Volume 3, Figure 12.5.5 and 12.5.6: Winter Goose Foraging Surveys** and **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys)** in **Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results**

Loch of Skene SPA/Ramsar Summary

12.7.14 A summary of flight activity recorded from the VPs within 10 km of Loch of Skene SPA is presented below in **Table 12.1.7: Loch of Skene summary flight data**.

Table 12.1.7: Loch of Skene summary flight data

Qualifying species	Citation population	Overall Flight Activity		Flights over Proposed Development		Flights at pch		% SPA citation @ pch
		Flights	Number birds	Flights	Number birds	Flights	Number birds	%
Greylag Goose	5,500	23	352	9	104	3	18	0.3%
Goosander	110	0	0	0	0	0	0	0
Goldeneye	150	0	0	0	0	0	0	0
Pink footed Goose (SSSI only)	N/A	162	24,843	116	20,157	44	12,800	N/A

³⁷ NatureScot, n.d. *Loch of Skene SSSI*. [Online] Available at: <https://sitelink.nature.scot/site/1038>.

Montrose Basin SPA/Ramsar

Greylag Geese

- 12.7.15 Since the 1960s, Montrose Basin supported variable numbers of Icelandic Greylag Geese with a notable increase occurring after 1981, when the site became a Local Nature Reserve³⁸. Notably, numbers of Greylag Geese did not continue to increase like those of its congener, the Pink footed Goose (see below). The maximum count was of 2,100 in February 1991 and numbers using the roost have since decreased³⁸. Recent WeBs counts (2018/19-2022/23³⁵) give an annual 5-year mean of 157 Greylag Geese at the basin. Dun's Dish SSSI, also part of the SPA, averages one bird using the site²³. Related feeding areas are not well documented, although these are thought to comprise farmland to the south and west of the estuary³⁸.
- 12.7.16 It was noted in Mitchell (2012³⁸) that the few recent feeding records of Greylag Geese from Montrose Basin SPA reflect a decline in the number of Icelandic Greylag Geese using the site.
- 12.7.17 The SPA citation population is of 1,080 individuals, 1% of the Iceland/UK/Ireland biogeographic population³⁹.
- 12.7.18 Three flights only of Greylag Geese were recorded from VPs that incorporated the 10 km buffer of the Montrose Basin SPA site, within Section C (refer to **Volume 3, Figure 12.4.3: Flight Activity Surveys**). Of these, only one flock of geese was noted as flying over the Proposed Development and this flock of 12 birds was above pch *i.e.*, not considered as at collision risk (refer to **Table 12.1.8: Montrose Basin SPA Greylag Goose flights recorded as crossing the Proposed Development** below).

Table 12.1.8: Montrose Basin SPA Greylag Goose flights recorded as crossing the Proposed Development

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch	South span	North span
231101_VP12_DW	01 November 2023	12	76	12	Yes	No	S101	S102

- 12.7.19 Across the Winter Goose Foraging Surveys of 2023 and 2024, few Greylag Geese were recorded within 20 km of the Montrose Basin SPA and within the area of survey for Proposed Development. Birds were recorded on two occasions near the Brechin bypass (A90) with a maximum count of just two birds in this area (refer to **Volume 3, Figure 12.5.3: Winter Goose Foraging Surveys** and to in **Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results**).

Pink-footed Geese

- 12.7.20 Montrose Basin SPA and Ramsar site is one of the most important Pink footed Goose roosts in the UK³⁸. After the designation of the site, numbers steadily rose from the low thousands to a peak of 35,000 birds in November 1987. Numbers declined somewhat in the early 1990s, although increased again subsequently³⁸. Recent WeBS data show this increased use with an annual 5-year mean of 68,825 birds from 2018/19-2022/23 with a maximum of 84,400 Pink-footed Geese using the basin as a roost in 2022/21²³. None are recorded using Dun's Dish SSSI. The SPA citation is of 21,800 individuals (9% of the Eastern Greenland/Iceland/UK biogeographic population³⁹).
- 12.7.21 Birds feed on farmland close to the basin, to the south and southwest towards Chapleton/Inverkeilor and to the north in NO76. Pink-footed Geese also seek stubbles in the Autumn to the west of the basin in NO67 and NO56³⁸. There are far fewer recent feeding records despite the numbers of Pink-footed Geese using the basin having increased in recent years, with 65,060 counted in October 2010³⁸ and the core feeding areas are not thought to have altered much.
- 12.7.22 Winter Goose Foraging Surveys recorded Pink-footed Geese near Edzell and Inchbare (both NO66) and also to the north of Laurencekirk (NO67; refer to **Volume 3, Figure 12.5.3 and 12.5.4: Winter Goose Foraging Surveys** and **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys)** in **Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results**).

³⁸ Mitchell, C. 2012. *Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland*. Wildfowl & Wetlands Trust/Scottish Natural Heritage Report, Slimbridge. 108pp.

³⁹ NatureScot, n.d. *Montrose Basin SPA*. [Online] Available at: <https://sitelink.nature.scot/site/8548>.

- 12.7.23 In addition, birds were seen near Haulkerton (NO77). Relatively few large flocks were recorded; however, a group of 1,200 Pink-footed Geese was seen in rough pasture ground adjacent to the River North Esk and adjacent to the Proposed Development. Birds recorded at Tannadice, ca. 18 km from the Montrose Basin SPA were equidistant from the Loch of Kinnordy SPA.
- 12.7.24 Flight activity surveys recorded 74 flights totalling 7,501 Pink-footed Geese (refer to **Table 12.1.9: Montrose Basin SPA Pink-footed Goose flights recorded as crossing the Proposed Development** and **Volume 3, Figure 12.4.3: Flight Activity Surveys**). Of these, 29 flights (3,208 geese) were over the Proposed Development (within Section C); and 13 flights (794 birds) were recorded at pch.

Table 12.1.9: Montrose Basin SPA Pink-footed Goose flights recorded as crossing the Proposed Development

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch	South span	North span
231026_VP11_DW	26 October 2023	1	54	11	Yes	Yes	S93	S94
231026_VP11_DW	26 October 2023	180	55	11	Yes	Yes	S88	S89
231026_VP11_DW	26 October 2023	60	56	11	Yes	Yes	S88	S89
231116_VP11_DW	16 November 2023	45	156	11	Yes	Yes	S91	S92
231116_VP11_DW	16 November 2023	60	158	11	Yes	Yes	S89	S90
231116_VP11_DW	16 November 2023	80	159	11	Yes	No	S91	S92
231116_VP11_DW	16 November 2023	190	162	11	Yes	No	S94	S95
231218_VP11_AM	18 December 2023	180	203	11	Yes	No	S87	S88
231218_VP11_AM	18 December 2023	180	203	11	Yes	No	S91	S92
231218_VP11_AM	18 December 2023	96	206	11	Yes	Yes	S90	S91
231218_VP11_AM	18 December 2023	96	206	11	Yes	Yes	S96	S97
231218_VP11_AM	18 December 2023	45	208	11	Yes	Yes	S95	S96
231218_VP11_AM	18 December 2023	12	209	11	Yes	Yes	S91	S92
231218_VP11_AM	18 December 2023	5	218	11	Yes	Yes	S97	S98
231219_VP10_JND	19 December 2023	88	240	10	Yes	No	S83	S84
231219_VP10_JND	19 December 2023	20	244	10	Yes	No	S80	S81
231219_VP12_AM	19 December 2023	1	247	12	Yes	Yes	S101	S102
231219_VP10a_JND	19 December 2023	1050	249	10	Yes	No	S69	S70
231219_VP10a_JND	19 December 2023	420	251	10	Yes	No	S70	S71

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch	South span	North span
231219_VP10a_JND	19 December 2023	44	256	10	Yes	No	S70	S71
231219_VP12_AM	19 December 2023	1	247	12	Yes	No	S103	S104
231219_VP12_AM	19 December 2023	2	258	12	Yes	No	S99	S100
240109_WWO_AM	09 January 2024	105	276	Non-VP	Yes	Yes	S61	S62
240126_VP10_JND	26 January 2024	88	348	10	Yes	Yes	S83	S84
240126_VP10_JND	26 January 2024	19	352	10	Yes	No	S82	S83
240208_VP12_JND	08 February 2024	25	380	12	Yes	No	S103	S104
240307_VP35_DW	07 March 2024	38	439	35	Yes	No	S112	S113
240319_VP10_DW	19 March 2024	3	457	10	Yes	No	S86	S87

Montrose Basin SPA/Ramsar Summary

- 12.7.25 A summary of flight activity recorded from the Vantage points within 10 km of Montrose Basin SPA is provided below in **Table 12.1.10: Montrose Basin SPA summary flight data**.

Table 12.1.10: Montrose Basin SPA summary flight data

Qualifying species	Citation population	Overall Flight Activity		Flights over Proposed Development		Flights at pch		% SPA citation @ pch
		Flights	Number birds	Flights	Number birds	Flights	Number birds	%
Pink- footed Goose	21,800	78	7,937	29	3,208	13	794	3.6%
Greylag Goose	1,080	3	18	1	12	0	0	0%

Loch of Kinnordy SPA/Ramsar

Greylag Geese

- 12.7.26 Loch of Kinnordy SPA/Ramsar site was an important roost for Greylag Geese from the 1960s to the late 1980s, typically supporting up to 5,000 birds each Autumn³⁸. There was always much interchange with the nearby Loch of Lintrathen SPA. The foraging areas for Loch of Kinnordy SPA Greylag Geese point to feeding areas in Strathmore, especially to the south and southwest of the loch³⁸. Foraging was recorded to c. 5 km of the Proposed Development; however, it appears not to be a preferred area or direction of roost flighting³⁸. Few Iceland Greylag Geese now roost at the site³⁴ with an annual 5-year mean of 133 Greylag Geese recorded across the last five years' BTO WeBS counts²³; the SPA citation is of 910 individuals⁴⁰
- 12.7.27 Given the above, it is considered likely that the Greylag Geese recorded during field surveys are Loch of Lintrathen SPA individuals.
- 12.7.28 A single flock of 220 Greylag Geese were recorded foraging on ground near Milton of Ogilvie, 11 km from the roost (refer to **Table 12.1.11: Loch of Kinnordy SPA Greylag Goose flights recorded as crossing the Proposed Development and Volume 3**,

⁴⁰ NatureScot, n.d. *Loch of Kinnordy SPA*. [Online] Available at: <https://sitelink.nature.scot/site/8534>.

Figure 12.5.2: Winter Goose Foraging Surveys and Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys) in Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results.

- 12.7.29 A single flight of Greylag Goose was noted during flight activity surveys: a flight of 21 birds in January 2024. The flight line was also recorded as intersecting the Proposed Development, although birds were not recorded as flying at pch.

Table 12.1.11: Loch of Kinnordy SPA Greylag Goose flights recorded as crossing the Proposed Development

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch	South span	North span
240111_VP21_DW	11 January 2024	21	288	21	Yes	No	S166	S167

Pink-footed Geese

- 12.7.30 Loch of Kinnordy SPA birds, as with Greylags from this SPA and Ramsar site, have preferred foraging grounds to the south and southwest of the loch, with few birds now roosting on the Loch of Kinnordy, having switched to Loch of Lintrathen SPA³⁸. WeBs counts over the last five years average only seven birds roosting at Loch of Kinnordy SPA during the non-breeding period²³ in comparison to the SPA citation of 3,960 individuals⁴⁰ (WeBs counts average 11,909) at Loch of Lintrathen²³. Therefore, the expectation is that Pink-footed Geese encountered during the VP watches are not likely to be from the Loch of Kinnordy SPA, but Loch of Lintrathen SPA birds.
- 12.7.31 Across the Winter Goose Foraging Surveys undertaken in 2023 and 2024, birds considered likely from Loch of Kinnordy and/or Loch of Lintrathen SPAs were recorded foraging in fields to the north of the former glider site at Drumshade (NO35; refer to **Volume 3, Figure 12.5.2: Winter Goose Foraging Surveys and Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys).**
- 12.7.32 **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys) in Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results.** Pink-footed Geese were observed as likely to have landed in fields near Upper Drumgley farm (although birds were not recorded on the ground here; NO45). Additionally, Pink-footed Geese recorded near Tannadice may have been SPA birds (although, these may have been more likely to come from Montrose Basin SPA, given the distance to the SPAs).
- 12.7.33 During the flight activity surveys associated with Loch of Kinnordy SPA and Loch of Lintrathen SPA, 41 flights of Pink-footed Geese were recorded, involving 12,724 birds (refer to **Table 12.1.12: Loch of Kinnordy SPA Pink footed Goose flights recorded as crossing the Proposed Development and Volume 3, Figure 12.4.2: Flight Activity Surveys**). Of these, 25 flights of 8,067 birds were recorded as passing directly over the Proposed Development, although only six flights (403 birds) were at a height where collision risk was present (at pch).

Table 12.1.12: Loch of Kinnordy SPA Pink footed Goose flights recorded as crossing the Proposed Development

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch	South span	North span
231026_VP20_JND	26 October 2023	13	33	20	Yes	No	S157	S158
231026_VP20_JND	26 October 2023	21	34	20	Yes	No	S156	S157
231026_VP20_JND	26 October 2023	670	35	20	Yes	No	S155	S156
231026_VP20_JND	26 October 2023	120	36	20	Yes	No	S155	S156
231109_VP21_SK	09 November 2023	112	138	21	Yes	No	S171	S172
231109_VP21_SK	09 November 2023	45	139	21	Yes	No	S172	S173
231109_VP21_SK	09 November 2023	1	140	21	Yes	Yes	S167	S168

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch	South span	North span
231109_VP21_SK	09 November 2023	34	141	21	Yes	No	S171	S172
231109_VP21_SK	09 November 2023	68	142	21	Yes	Yes	S169	S170
231109_VP21_SK	09 November 2023	2100	144	21	Yes	No	S171	S172
231109_VP21_SK	09 November 2023	93	145	21	Yes	No	S166	S167
231109_VP21_SK	09 November 2023	64	149	21	Yes	Yes	S168	S169
231109_VP21_SK	09 November 2023	2000	153	21	Yes	No	S173	S174
231218_VP20_JND	18 December 2023	234	216	20	Yes	Yes	S161	S162
231218_VP20_JND	18 December 2023	21	217	20	Yes	No	S155	S156
231218_VP21_JND	18 December 2023	650	222	21	Yes	No	S166	S167
231218_VP21_JND	18 December 2023	115	226	21	Yes	No	S164	S165
231218_VP21_JND	18 December 2023	100	234	21	Yes	No	S168	S169
240111_VP20_DW	11 January 2024	34	283	20	Yes	Yes	S152	S153
240111_VP20_DW	11 January 2024	15	284	20	Yes	No	S155	S156
240111_VP20_DW	11 January 2024	1400	285	20	Yes	No	S155	S156
240111_VP21_DW	11 January 2024	2	287	21	Yes	Yes	S167	S168
240215_VP21_JND	15 February 2024	85	388	21	Yes	No	S167	S168
240215_VP21_JND	15 February 2024	49	389	21	Yes	No	S169	S170

Loch of Kinnordy SPA/Ramsar Summary

12.7.34 A summary of flight activity recorded from the VPs within 10 km of Loch of Kinnordy SPA is detailed below in **Table 12.1.13: Loch of Kinnordy SPA summary flight data.**

Table 12.1.13: Loch of Kinnordy SPA summary flight data

Qualifying species	Citation population	Overall Flight Activity		Flights over Proposed Development		Flights at pch		% SPA citation @ pch
		Flights	Number birds	Flights	Number birds	Flights	Number birds	%
Pink- footed Goose	3,960	42	12,789	24	8,046		403	10.2%
Greylag Goose	910	1	21	1	21	0	0	0%

Loch of Lintrathen SPA/Ramsar

Greylag Geese

- 12.7.35 Large numbers of Greylag Geese roosted at Loch of Lintrathen SPA during the 1960s, with a peak count of 12,000 birds in November 1970. Since then, geese numbers were more variable, ranging from several hundred to 7,200 birds counted in November 1997; the SPA citation is of 2,100 individuals⁴¹. The Loch of Lintrathen SPA Greylag Geese have feeding areas in Strathmore to the south and east of the loch, with only limited foraging apparent within 10 km of the Proposed Development. The last five year's WeBS counts averaged 139 Icelandic Greylag Geese roosting at Loch of Lintrathen SPA²³, in comparison to the SPA citation of 2,100 individuals⁴¹.
- 12.7.36 As noted above, the Greylag Geese recorded during survey work associated with Loch of Kinnordy SPA are likely to be from the Loch of Lintrathen SPA, or part of a group of birds that moves between the two sites for roosting.

Pink-footed Geese

- 12.7.37 Pink-footed Geese use the Loch of Lintrathen SPA for roosting with a WeBS count average between 2018/19-2022 of 11,909 geese²³. Pink-footed Goose is not an SPA qualifying species for Loch of Lintrathen SPA; however as referenced for Loch of Kinnordy SPA, the species appears to have changed roosting preference to this loch.

Loch of Lintrathen SPA/Ramsar Summary

- 12.7.38 For summary, see section above with regards to Loch of Kinnordy SPA, given that foraging geese and flights of birds from these two lochs cannot be distinguished from the present data. No Greylag Goose (SPA qualifying species) were recorded as flying at pch during VP watches.

Firth of Tay and Eden Estuary SPA /Ramsar

Greylag Geese

- 12.7.39 Reference to Mitchell³⁸ shows that traditional foraging sites for the qualifying species of geese from the Firth of Tay and Eden Estuary SPA are present within 5 km of the Proposed Development. However, foraging of both Greylag and Pink-footed Goose species at the Firth of Tay and Eden Estuary SPA is predominantly at a greater distance from the roosting site (i.e. the Firth of Tay estuary). The Firth of Tay and Eden Estuary SPA Greylag Geese which roost on the Firth were noted to fly to foraging sites to the north, notably over the Sidlaw hills and onto the Strathmore area. Some foraging sites were recorded 5 km to the southwest of the Proposed Development. A decline in the number of foraging records was apparent from 2007/2008 onwards, with WeBS counts across the five years 2018/19 to 2022/23 averaging 300 birds on the Tay estuary²³, with 1,200 birds as the SPA population citation from 1990/91 to 1994/95⁴².
- 12.7.40 No Greylag Geese were recorded in flight during the VP watches in 2023/2024.
- 12.7.41 A flock of 22 Greylags was recorded foraging in pasture fields approximately 1.5 km to the west of the Tealing Substation in early 2023, during Winter Goose Foraging Surveys (refer to **Volume 3, Figure 12.5.1: Winter Goose Foraging Surveys** and **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys)** in **Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results**).

Pink-footed Geese

- 12.7.42 Pink-footed Geese of the Firth of Tay and Eden Estuary SPA were noted as having largely abandoned the Firth in the middle of the last century, with no notable foraging areas recorded within approximately 10 km of the Proposed Development³⁸. Tay estuary WeBS counts average 3,183 Pink-footed Geese over the last five years; the 2022/23 counts were of 573 birds only²³. This suggests an increase in the population, since the SPA citation is of 2,800 individuals across both the Firth and estuary areas⁴².

⁴¹ NatureScot, n.d. *Loch of Lintrathen SPA*. [Online] Available at: <https://sitelink.nature.scot/site/8535>.

⁴² NatureScot, n.d. *Firth of Tay and Eden Estuary SPA*. [Online] Available at: <https://sitelink.nature.scot/site/8501>.

- 12.7.43 Foraging Pink-footed Geese were recorded in fields to the west of Tealing Substation, adjacent to the Fithie burn during Winter Goose foraging Surveys (refer to **Volume 3, Figure 12.5.1: Winter Goose Foraging Surveys** and **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys)**.
- 12.7.44 **Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys) in Annex 12.1.1: Flight Activity Survey and Winter Goose Foraging Survey Results.** A flock of 950 birds was recorded on 14 March 2023 feeding in the wet pasture fields under the existing OHL here. Another flock of 235 pink-feet was recorded on 19 March 2023 in a field to the south of Fithie burn. Smaller foraging flocks were also noted towards Balkello. All observations were recorded within the 10 km square NO33.
- 12.7.45 Flight activity surveys recorded 12 flights of 3,455 Pink-footed Geese (refer to **Table 12.1.14: Firth of Tay and Eden Estuary SPA Pink-footed Goose flights recorded as crossing the Proposed Development** and to **Volume 3, Figure 12.4.2: Flight Activity Surveys**). Of these, five flights and 528 birds were recorded crossing the Proposed Development within Section A, although only a single flight (of 450 birds) was recorded at pch.

Table 12.1.14: Firth of Tay and Eden Estuary SPA Pink-footed Goose flights recorded as crossing the Proposed Development

Session	Date	Number	Flight number	Vantage Point	Crossing	At pch?	South span	North span
230927_VP25_SK	27 September 2023	8	1	25	Yes	No	S210	S211
230927_VP25_SK	27 September 2023	57	2	25	Yes	No	S209	S210
240117_VP25_JND	17 January 2024	450	330	25	Yes	Yes	S205	S206
240215_VP25_DW	15 February 2024	1	390	25	Yes	No	S209	S210
240215_VP25_DW	15 February 2024	12	392	25	Yes	No	S209	S210

Firth of Tay and Eden Estuary SPA/Ramsar Summary

- 12.7.46 A summary of flight activity recorded from the Vantage points within 10 km of Firth of Tay and Eden Estuary SPA is provided below in **Table 12.1.15: Firth of Tay and Eden Estuary SPA summary flight data**.

Table 12.1.15: Firth of Tay and Eden Estuary SPA summary flight data

Qualifying species	Citation population	Overall Flight Activity		Flights over Proposed Development		Flights at pch		% SPA citation @ pch
		Flights	Number birds	Flights	Number birds	Flights	Number birds	%
Pink- footed Goose	2,800	12	3,455	5	528	1	450	16.1%
Greylag Goose	1,200	0	0	0	0	0	0	0%

Outer Firth of Forth and St. Andrews Bay SPA

Herring Gull

- 12.7.47 It is considered that Herring Gull (a Red-listed BoCC) are likely to range on average 10.5 km from breeding sites with some foraging flights potentially to greater distances⁴³. The Outer Firth of Forth and St. Andrews Bay SPA was cited as holding 3,044

⁴³ Thaxter, C. B., Ross-Smith, Viola H., Bouten, Willem, Clark, Nigel A., Conway, Greg J., Masden, Elizabeth A., Clewly, Gary D., Barber, Lee J., Burton, Niall H.K., 2019. *Avian vulnerability to wind farm collision through the year: Insights from lesser black-backed gulls (Larus fuscus) tracked from multiple breeding colonies*. Journal of Applied Ecology, 56(11), p.2410-2422.

breeding pairs of the species from 1980 to 2006 (1.1% of the then UK population⁴⁴). Birds from this population are considered likely to nest as close as 7.5 km from the Proposed Development, in and around Dundee⁴⁵. However, the SPA population of the species is likely associated more heavily with the Fife coast, and areas of cliffs and buildings within the confines of the SPA extent. Over 12,000 birds are supported by the SPA within the non-breeding season (when SPA habitats are used for roosting and foraging). These birds are also likely to forage to similar distances as breeding birds but will likely inter-mingle with a wider North Sea population present in Scotland during the Winter period⁴⁶. Tay Estuary WeBS counts averaging 1,191 birds were recorded across the last five years with St. Andrews Bay area holding 152 birds²³.

- 12.7.48 Flight activity surveys were carried out across the non-breeding season, only. Herring Gull flight activity was recorded sporadically across the non-breeding season, with records of generally low numbers (a maximum count of seven birds flying over the Site) during the Winter surveys of 2023/2024. A flock of 200 mixed gull species, including 80 Herring Gull, was recorded on 19 April 2024 foraging in fields 200 m west beyond the Proposed Development. No Herring Gull breeding behaviour was recorded across the surveys.

Outer Firth of Forth and St. Andrews Bay SPA Summary

- 12.7.49 The non-breeding flight activity surveys did record Outer Firth of Forth and St. Andrews Bay SPA species Herring Gull. The species citation is part of a breeding population at the SPA, and therefore these birds cannot be assigned specifically to the SPA. Herring Gulls were recorded during BBS surveys foraging on farmland within the survey area in Section A, at the start of the breeding season.

Fowlsheugh SPA

Herring Gull

- 12.7.50 The Fowlsheugh SPA was cited as supporting 3,190 breeding pairs of Herring Gull (2% of the UK population⁴⁷). WeBs counts of St. Cyrus to Stonehaven section provides an average count of 104 individuals during the Winter months only²³; however, the larger WeBS section from Stonehaven to Aberdeen has not been surveyed.
- 12.7.51 As noted above, SPA birds are likely to feed inland (mean maximum range of 10.5 km⁴³). Only a small section of the Proposed Development lies within this distance of the SPA, and as such the Proposed Development is unlikely to impact foraging activities.
- 12.7.52 Herring Gull were recorded sporadically during the breeding season, with gulls noted foraging in fields to the east of Easter Auquhollie and with no foraging habitat of note identified within 5 km of the Proposed Development. Herring Gull were also recorded as foraging during the breeding season to the west of Drumlithie and near to the Proposed Development, but over 10 km from the SPA.
- 12.7.53 Flight activity surveys focussed on the non-breeding season and wintering/migratory wildfowl, with no Herring Gull recorded in flight during the VP watches. No breeding season flight activity surveys were carried out.

Fowlsheugh SPA Summary

- 12.7.54 Flight activity surveys did not record any Fowlsheugh SPA qualifying species. Herring Gulls only, were recorded during BBS surveys foraging on upland farmland in Section D during the breeding season.

12.8 Non-SPA Target Species

- 12.8.1 Field survey results for Target Species are summarised below with reference to the regional areas 'Natural Heritage Zones' (NHZs⁴⁸), since it is at this level that the regional level population assessments are carried out for the ornithological features

⁴⁴ NatureScot, n.d. *SiteLink - Outer Firth of Forth and St Andrews Bay Complex SPA*. [Online] Available at: <https://sitelink.nature.scot/site/10478>.

⁴⁵ Balmer, D.E., Gillings, S., Caffrey, B. J., Swann, R.L., Downie, I.S., and Fuller, R.J., 2013. *Bird Atlas 2007-11: The Breeding and Wintering birds of Britain and Ireland*. BTO Books.

⁴⁶ Forrester, R.W., Andrews, I.J., McInerny, C.J., Murray, R.D., McGowan, R.Y., Zonfrillo, B., Betts, M.W., Jardine, D.C. & Grundy, D.S. (eds), 2007. *The Birds of Scotland*, The Scottish Ornithologists' Club, Aberlady.

⁴⁷ NatureScot, n.d. *SiteLink - Fowlsheugh SPA*. [Online] Available at: <https://sitelink.nature.scot/site/8505>.

⁴⁸ SNH (Scottish Natural Heritage), 2000. *Natural Heritage Zones*. Battleby: SNH.

(refer **Volume 2, Chapter 12: Ornithology**). NHZs are biogeographical regions of Scotland identified by their landscape properties, including their associated fauna.

12.8.2 The Proposed Development is positioned across three NHZs described in detail in SNH (2000)⁴⁸. These NHZs include

- NHZ 16 Eastern Lowlands;
- NHZ 9 North East coastal Plain; and
- NHZ 12: North East Glens.

12.8.3 Sections A-F of the Proposed Development lie within these NHZs as follows:

- Section A (towers: Gantry to S164: NHZ 16 – Eastern Lowlands);
- Section B (towers S163-S105: NHZ 16 – Eastern Lowlands);
- Section C (towers S104-S56: NHZ 16 – Eastern Lowlands);
- Section D (towers S55 -S4: NHZ 16 – Eastern Lowlands and towers S4 - S1: NHZ 12 North East Glens);
- Section E (towers N96-N70: NHZ 12 – North East Glens and towers N70-N60: NHZ 9 – North East Coastal Plain); and
- Section F (towers N59-Gantry 1: NHZ 9 – North East Coastal Plain).

Target Species (non-SPA)

Schedule 1/Annex 1 species

Red Kite

12.8.4 Red Kite (Schedule 1/1A, High Nature Conservation Importance (NCI) species) was recorded during survey work in 2023 and 2024 in Section A, B, C, D (possible) and F, as described below (further detailed information is presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species with Black Grouse**).

12.8.5 NBN desk records also show presence of Red Kite within the following 10 km squares:

- Section A: NO33, NO34 and NO44;
- Section B: NO45, NO46 and NO56;
- Section C: NO56, NO66 and NO67;
- Section D: NO67, NO77 and NO78;
- Section E: NO78 and NO79; and
- Section F: NO79, NJ70 and NJ1.

12.8.6 In Section A, one nest was confirmed in 2024 within the Study Area of the Proposed Development.

12.8.7 Red Kite was recorded during survey work in 2023 and 2024 in Section B. Two nest sites were confirmed in 2024, both within of the Study Area of the Proposed Development. In addition, desk records from the RSPB recorded a further two nests from 2017 (not confirmed as active in the present surveys).

12.8.8 In Section C one nest was confirmed in 2024 within the Study Area of the Proposed Development.

12.8.9 A possible (unconfirmed) Red Kite nest was recorded during survey work in 2024 in Section D Study Area, although this was considered more likely to be nesting Buzzard (*Buteo buteo*).

12.8.10 No Red Kite nests were identified during surveys of Section E in 2023 and 2024, although nests were recorded to the east of the Proposed Development over 2 km away (during survey work in 2023). A known roost site (from RSPB records) was confirmed, located just over 2 km east of Section E in 2023, and out with the Study Area.

12.8.11 Section F surveys recorded three nests of Red Kite in the Study Area of the Proposed Development. In addition, the RSPB provided the records of another nest from 2017; surveys in 2024 did not record nesting activity here, although a raptor nest was present.

12.8.12 There were an estimated 298 pairs of Red Kite breeding in Scotland in 2022⁴⁹. There has been a rapid increase in population size from 1992, when the first pair was known to have nested in Scotland; this increase is largely fuelled by the central Scotland population, which was expanding by about 25% per annum⁴⁶ with Tayside area being a stronghold for the species. The species has been subject to a number of releases into Scotland across the last 35 years, undertaken as a joint RSPB and NatureScot (SNH) program, with releases in central Scotland near Doune from 1996 to 2001⁵⁰.

12.8.13 The regional NHZ Red Kite populations are as follows:⁵⁵

- NHZ 16 – Eastern Lowlands – 60 pairs;
- NHZ 9 - North East coastal Plain – 12 pairs; and
- NHZ 12 - North East Glens – Seven pairs

12.8.14 The NHZ 16 population of Red Kite is at least 60 pairs, with numbers having likely increased (the Tayside and Fife raptor study group regions recorded 99 pairs holding territory in 2022⁴⁹). As such, the regional population would be in the order of at least 200 birds (120 adults and 80 young, with this number likely to be higher as it does not include unmated and sexually immature birds (most breed when they reach two (females) or three (males) years of age⁴⁹) and the likelihood is that numbers of the species continue to increase.

12.8.15 The Red Kite NHZ 12 population is given as seven pairs, with 12 pairs in NHZ 9⁵⁵. Both values are likely considerably greater in 2023 and 2024, given the establishment of a breeding population in this area, following the release of 101 birds on the outskirts of Westhill between 2007 and 2009⁵⁰.

Osprey

12.8.16 Survey in 2023 recorded osprey nesting over 3 km from Section F of the Proposed Development, at a site for which the RSPB had provided records. NBN desk records noted the presence of breeding birds within the 10 km square NJ70 (likely the known pair; refer to further information presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species with Black Grouse**).

12.8.17 The regional NHZ 9 – North East Coastal Plain population of osprey is eight pairs⁵⁵.

Goshawk

12.8.18 Goshawk (Schedule 1, High NCI) were recorded breeding in 2024 in forestry within Section D and E (refer to further detailed information presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species with Black Grouse**).

12.8.19 Goshawk were recorded during flight activity surveys in Winter 2023/2024 in Section F. However, follow up surveys in 2024 did not record the species in the woodlands.

12.8.20 Regional NHZ populations are⁵⁵:

- NHZ 12 – North East Glens estimated as 25 pairs; and
- NHZ 16 – Eastern Lowlands population is estimated as 14 pairs.

Peregrine

12.8.21 A desk record of a peregrine nest site located in Section D within the 2 km Study Area was provided by a landowner in 2024 (further information is presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report**).

- The NHZ 16 Eastern Lowlands population of peregrine is 103 pairs⁵⁵.

Merlin

12.8.22 Merlin (Schedule 1, BoCC Red-list species) was recorded during survey work in 2023, with one pair recorded as breeding within the Study Area of the Proposed Development in Section A (further information presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1**

⁴⁹ Challis, A., Beckmann, B.C., Wilson, M.W., Eaton, M.A., Stevenson, A., Stirling-Aird, P., Thornton, M. & Wilkinson, N.I., 2023. *Scottish Raptor Monitoring Scheme Report 2021 & 2022*. BTO Scotland, Stirling.

⁵⁰ Scottish Raptor Study Group, n.d. *Red Kite* [Online] Available: <https://www.scottishraptorstudygroup.org/raptors/red-kite/>

species with Black Grouse). No other breeding attempts were recorded for the species across the Proposed Development, with little suitable breeding habitat (upland heath or moorland) present. Although, potential breeding habitat is present near Craignell to the south of Durris Forest. In addition, Merlin was recorded on occasion during the Winter Goose Foraging Surveys and VP watches, including a hunting male observed on the back road C1K near Annamuick.

12.8.23 NBN desk records also show presence of the species within:

- Section A: 10 km grid square NO34;
- Section B: NO45, NO46 and NO56;
- Section C: NO56 and NO67;
- Section D: NO67 only;
- Section E: NO79 only; and
- Section F: NO79 and NJ70.

12.8.24 Merlin is a scarce resident breeding species in Scotland with a breeding population of 733 pairs representing approximately 60 % of the UK breeding population⁴⁶. The species favours upland sites with deep heather for nesting of which an extent (over 2km²) is present within Section A. In Winter the Scottish population consists of at least 3,000 birds, with individuals favouring open country including farmland and coastal areas for foraging⁴⁶.

12.8.25 NHZ regional populations⁵⁵ are:

- NHZ 16 – Eastern Lowlands population is estimated as four pairs;
- NHZ 12 – North East Glens population is an estimated four pairs; and
- NHZ 9 - North East coastal Plain; Merlin is not known to breed in this Region.

Short-eared Owl

12.8.26 A single pair of Short-eared Owl (Annex 1; Amber-listed; High NCI species) was recorded as breeding within Section A only, in an area of upland heath near Ironside Hill, within 500m of the Proposed Development (further detailed information is presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species with Black Grouse**). Birds were recorded here in May and June 2023, suggesting that the nest had been successful (no nest was located, however).

12.8.27 NBN desk records also show presence of the species within the following 10 km squares:

- Section A: NO33 and NO34;
- Section B: NO45 and NO46;
- Section C: NO66 and NO67;
- Section D: NO67 and NO78;
- Section E: NO78; and
- Section F: NJ71 only.

12.8.28 Short-eared Owl is a resident breeder in Scotland although many move from the breeding areas to separate wintering sites. In Scotland it is described as a restricted resident breeder with strongholds in the uplands of the south, central and eastern areas, with Scotland holding more than 75 % of the UK's breeding Short-eared Owl population. Numbers do fluctuate significantly between years, dependent on the population of prey species (notably vole species *Microtus* sp⁵¹). The Scotland wide estimate is of approximately 1,200 pairs. Breeding territories of Short-eared Owl of between 16 – 120 hectares are reported, the former where vole numbers are very high (ibid). These breeding birds will disperse from breeding territories for the Winter, at which time they will be joined by a large number of continental birds, such that the UK wintering population has been estimated at between 5,000-50,000 birds⁵²).

⁵¹ Village, A., 1987. *Numbers, territory size and turnover of Short-eared Owls Asio flammeus in relation to vole abundance*. Ornis Scandinavica 18: 198-204

⁵² British Trust for Ornithology, n.d. *BTO Atlases*. [Online] Available at: <https://app.bto.org/mapstore/StoreServlet>.

12.8.29 The regional population of Short-eared Owl is:

- NHZ 16⁵⁵ – Eastern Lowlands population estimated as 58 pairs.

Nightjar

12.8.30 Nightjar is an Annex 1, BoCC Amber-listed bird species in Scotland. The species migrates to the UK in early Summer (April-May) from sub-Saharan Africa, returning there in early Autumn (September). Relatively few of these were thought to be present in Scotland – estimates from Forrester *et al.*,⁴⁶ (2007) suggested as few as 27 males present in the early 2000's (ca 4,600 estimated singing males present in the UK), with the majority in the southwest, in Dumfries and Galloway. As such the species is considered as a High NCI species.

12.8.31 There is no known regional population number of Nightjar for North-East Glens Natural Heritage Zone (NHZ 12).

12.8.32 The population has since seen an upsurge in range and number, with data provided by Aberdeenshire Council on 13 February 2025 describing the presence of at least 2 nesting attempts of Nightjar in 2024 (refer to **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species with Black Grouse**). Additionally, a recently published paper from Knox⁵³ in 2024, records breeding nightjar in North-East Scotland in 2014, 2023 and 2024. The species appears to be primarily found in commercial forestry clear-fell areas.

Black Grouse

12.8.33 Breeding bird surveys in 2023 identified a male and female Black Grouse (Red-list BoCC species; Moderate NCI) within Section A of the survey area. The pair were recorded as foraging within the woodland to the north of moorland associated with Ironside Hill. Surveys specific for the species were carried out in 2024. Black Grouse surveys carried out in April and May 2024 revealed the presence of a single lekking male Black Grouse within the Study Area on 9 May 2024 (further detailed information is presented in **Volume 6, Appendix 12.2: Ornithology Confidential Report** and in **Volume 6, Figures A12.6.1 to A12.6.6: CONFIDENTIAL Breeding Schedule 1/Annex 1 species with Black Grouse**). In addition, birds were also recorded approximately 1.5 km from the Proposed Development, north of Kincaldrum hill.

12.8.34 NBN desk records also show presence of Black Grouse within the following 10 km squares:

- Section A: NO33 and NO34;
- Section B: NO45, NO46 and NO56;
- Section C: NO67 and NO56 (woodland beyond Fettercairn and Auchenblae);
- Section D: NO67 and NO78, notably in Drumochty Forest and also at the west of Fetteresso Forest, with the nearest records 5 km distant from the Proposed Development;
- Section E: NO78 and NO79 (Hill of Fare, over 5 km to the west of the Proposed Development); and
- Section F: NO79, NJ70 and NJ71.

12.8.35 Black Grouse is a widespread resident in suitable moorland and woodland habitats, though the population has suffered a serious decline and range contraction in recent years. Conservation action has had some local success in halting or reversing the decline. The number of lekking males in Scotland is estimated to be between 3,550-5,750 birds, with the Winter population thought to be 7,500-19,000 individuals, representing 71% of the UK population⁴⁶. The rapid population declines (more than 50% of the UK breeding population in the last 25 years) has led Black Grouse to be included on the UK Red List of Birds of Conservation Concern (BoCC) and it is listed as a UK BAP priority species⁵⁴.

12.8.36 The NHZ 16 Eastern Lowlands population comprises 167 lekking males⁵⁵. There are no known lekking males within NHZ 9.

⁵³ Knox, A. 2024. *Nightjar in North-East Scotland: a species at the edge of its range*. Scottish Birds, 44, 312-328

⁵⁴ Stanbury, A.J. Burns, F., Aebischer, N.J., Baker, H., Balmer, D., Brown, A.F., Dunn, T., Lindley, P., Murphy, M., Noble, D.G., Owens, R. & Quinn, L., 2024. *The status of the UK's breeding seabirds: an addendum to the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. [Online] British Trust for Ornithology. Available at: <https://www.bto.org/our-science/publications/peer-reviewed-papers/status-uk%E2%80%99s-breeding-seabirds-addendum-fifth-birds>

⁵⁵ Wilson, M. W., Austin, G. E., Gillings S. and Wernham, C. V., 2015. *Natural Heritage Zone Bird Population Estimates*. SWBSG Commissioned report number SWBSG_1504. P. 72.

- 12.8.37 A summary of the presence of the Target Species recorded during field surveys of 2023/24 is shown below in **Table 12.1.16: Summary of Target Species bird breeding status by Section.**

Table 12.1.16: Summary of Target Species bird breeding status by Section

Target Species	Conservation status			Proposed Development Section					
	BoCC	Schedule 1	Annex 1	A	B	C	D	E	F
Red Kite	Green	Yes	Yes	Breeding	Breeding	Breeding	Breeding	Breeding	Breeding
Merlin	Red	Yes	Yes	Breeding	-	-	-	-	-
Peregrine	Green	Yes	Yes		-	-	Breeding	-	-
Goshawk	Green	Yes	-		-	-	Breeding	Breeding	-
Short-eared Owl	Amber	-	Yes	Breeding	-	-	-	-	-
Black Grouse	Red	-	-	Breeding	-	-	-	-	-
Nightjar	Amber	-	Yes	-	-	-	Yes	Yes	-

*Birds of Conservation Concern (BoCC Red list; non-passerines – refer to **Table 12.1.17: Breeding bird species recorded across surveys (BBS Areas 1-10 surveyed in 2023; areas 12-15 in 2024; number of pairs)**)*

Curlew

- 12.8.38 The BTO wader sensitivity map produced 1 km squares of good habitat within Section A of the Proposed Development (refer to **Volume 3, Figure 12.3.2: Breeding Bird Surveys**). At least 5 km of high sensitivity²² (level 5), 2 km of level 3 and 3 km of level 2 (lower quality) wader breeding ground lies within Section A. As a result, breeding bird surveys covered all this ground (surveys predicated on Curlew-sensitivity data). At least 12 Curlew (Red-list Moderate NCI species) breeding pairs were recorded within approximately 500 m of the Proposed Development in Section A (equivalent to approximately 1.2 pairs per km²). No specific survey was undertaken out with these sensitivity squares; however, it is suspected that numbers of Curlew would be considerably lower across the rest of Section A, given the lower quality habitat present (as represented by lower wader habitat sensitivity scores).
- 12.8.39 No high-quality Curlew breeding habitat is present across Section B of the Proposed Development (recorded as 3 -5 on scale 1 to 5; refer to **Volume 3, Figure 12.3.2 and Figure 12.3.3: Breeding Bird Surveys**). However, surveys were carried out between towers S170 and S166 where BTO habitat sensitivity data show squares rated as 2. Notably, at least three pairs of Curlew were present during 2023 surveys. Of these, two pairs were identified within 500 m of the Proposed Development.
- 12.8.40 BTO sensitivity modelled data show no parts of Section C as being of good quality habitat for Curlew (2 and above on the scale of 1-5; refer to **Volume 3, Figure 12.3.3: Breeding Bird Surveys**) within the LOD. No breeding Curlew were identified in Section C and no BBS was undertaken in Section C.
- 12.8.41 Survey was carried out in 2024 along 2 km of Section D for breeding birds (refer to **Volume 3, Figure 12.3.4: Breeding Bird Surveys**). BTO sensitivity data shows only 500 m of Section D as being of good quality habitat for Curlew (2 and above on the scale of 1-5). It is estimated that three pairs of Curlew were present in 2024 during surveys in Section D and that they were breeding in areas of good quality habitat within 500 m of the Proposed Development.
- 12.8.42 Survey was carried out in 2024 along 2 km of Section E for breeding birds. As for Section D, only a very small proportion of the proposed Section E lies within good quality habitat for the species (BTO sensitivity data 2 and above on the scale 1-5; refer to **Volume 3, Figure 12.3.4 and to Figure 12.3.5: Breeding Bird Surveys**). Desk records of breeding Curlew were available for 10 km squares NO78 and NO79 within Section D. No Curlew was recorded as breeding within 2 km of the Proposed Development.
- 12.8.43 Within Section E surveys in 2023 recorded Curlew breeding within good quality habitat beyond 500 m east of the LOD; however, when consideration was being given to a previous potential alignment of the OHL. The surveys here produced an approximate density of 0.5-1 Curlew pair per km², in line with other similar areas encountered across surveys. The density of Curlew recorded during surveys is in line with the modelled NHZ density for the region²².
- 12.8.44 Section F lies within NHZ 9 –North East Coastal Plain. Approximately 5 km of Section F lies within BTO sensitivity of good quality habitat for Curlew (2 on the scale 1-5; no habitat above score 2 was present within 500 m of Section F; refer to **Volume 3,**

Figure 12.3.6 and Figure 12.3.7: Breeding Bird Surveys). No Curlew were recorded as breeding within at least 1 km of Section F during field surveys.

12.8.45 NBN desk records also show presence of Curlew within the following 10 km squares:

- Section A: NBN desk records (birds present in NO33, NO34, NO44, NO45);
- Section B: 10 km squares NO45, NO46 and NO56;
- Section C: 10 km squares NO56, NO66 and NO67;
- Section D: 10 km squares NO67, NO77 and NO78;
- Section E: 10 km squares NO78 and NO79; and
- Section F: 10 km squares NO78, NO 79, NJ70 and NJ71.

12.8.46 Curlew is a widespread breeding resident in Scotland with a breeding population of approximately 58,800 pairs (16-27 % of the European breeding population)⁴⁶. The wintering population, which also includes immigrants from Fennoscandia, is approximately 85,700 birds. This figure also includes 20 % of the East Atlantic Flyway non-breeding population and therefore Curlew is included in the UK Red List of Birds of Conservation Concern⁵⁴. It is also a species with unfavourable conservation status in Europe (Species of European Conservation Concern; SPEC 2 or 3) and is listed as a UK BAP priority species.

12.8.47 Regional populations⁵⁵ of Curlew are as follows:

- NHZ 16 - Eastern Lowlands population is 3,253 pairs [surveys recorded 12 pairs];
- NHZ 12 – North East Glens; 2,815 pairs [species not surveyed in this region]; and
- NHZ 9 – North East Coastal Plain - estimated 1,037 pairs [not recorded during field surveys in the Study Area].

Lapwing (refer to Table 12.1.17: Breeding bird species recorded across surveys (BBS Areas 1-10 surveyed in 2023; areas 12-15 in 2024; number of pairs))

12.8.48 Survey was carried out in both 2023 and 2024 along the Proposed Development in areas marked as higher sensitivity habitat for Curlew only²². These areas also coincided with 1 km squares of higher sensitivity for Lapwing (Red-list Moderate NCI species). Lapwing were found on breeding grounds only to the north of Section A – i.e. from towers S170 north (refer to **Volume 3, Figure 12.3.2: Breeding Bird Surveys**). Between towers S210 and S180 no breeding Lapwing were recorded.

12.8.49 Survey was carried out in 2023 along only 2 km of Section B for breeding birds (refer to **Volume 3, Figure 12.3.2 and Figure 12.3.3: Breeding Bird Surveys**). The surveys, based on BTO Curlew sensitivity data, identified only 2 km of the Proposed Development as present within areas marked as higher sensitivity habitat for Curlew. The BTO sensitivity data also recorded less than 5 km of Section B as being of higher (3 and above on the scale 1-5) quality habitat for Lapwing. Lapwing was recorded as breeding only between towers S170 and S166.

12.8.50 No BBS was carried in Section C: BTO sensitivity data identifies less than 3 km of Section C as of higher quality habitat for Lapwing (3 and above on the scale 1-5).

12.8.51 Survey was carried out in 2024 along 2 km of Section D for breeding birds. Only approximately 7 km of the Proposed Development lies within BTO higher quality habitat (3 and above on the scale 1-5) for Lapwing. In Section D, two pairs of Lapwing were recorded in the area surveyed (between S20 and S16), with neither record present within 500 m of the Proposed Development (refer to **Volume 3, Figure 12.3.4: Breeding Bird Surveys**).

12.8.52 Survey was carried out in 2024 along 2 km of ground that aligns with the Proposed Development in Section E for breeding birds (refer to **Volume 3, Figure 12.3.4 and Figure 12.3.5: Breeding Bird Surveys**). No Lapwing were recorded in the Section E area surveyed.

12.8.53 Approximately 8 km of Section F of the Proposed Development lies within BTO sensitivity of higher quality habitat for Lapwing (3 and above on the scale 1-5), of which 5 km was surveyed for breeding birds in 2024 (refer to **Volume 3, Figure 12.3.6 and Figure 12.3.7: Breeding Bird Surveys**). Three pairs of Lapwing were recorded in these BBS Areas – (BBS Areas 13 and 14).

12.8.54 NBN desk records also show presence of the species within the following 10 km squares:

- Section A: NO33, NO34 and NO44;
- Section B: NO45, NO45 and NO56;

- Section C: NO56, NO66 and NO67;
- Section D: NO67, NO77 and NO78;
- Section E: NO78 and NO 79; and
- Section F: NO78, NO 79, NJ70 and NJ71.

12.8.55 No NHZ regional populations of Lapwing are available. The Scottish population was estimated as being between 69,800 pairs and 91,200 pairs in 1998⁴⁶. BTO breeding distribution data records the highest breeding densities of the species generally to the west of the Proposed Development, occurring on hillier land often used for cattle and sheep grazing.

12.8.56 Lapwing were recorded within the Study Area in NHZ 16 (4 pairs) and NHZ 12 (3 pairs), during BBS in 2023 and 2024.

Table 12.1.17: Breeding bird species recorded across surveys (BBS Areas 1-10 surveyed in 2023; areas 12-15 in 2024; number of pairs)

BBS Area	Year of survey	In LOD	Section	NHZ Region	Curlew pairs	Lapwing pairs
1	2023	Outside	F	9	0	0
2	2023	Outside	E	9 & 12	2	1
3	2023	Outside	E	12	2	1
4	2023	Outside	E	12	1	0
5	2023	Outside	E	12	1	0
6	2023	In LOD	A and B	16	3	2
7	2023	In LOD	A and B	16	1	0
8	2023	In LOD	A and B	16	2	0
9	2023	In LOD	A and B	16	3	0
10	2023	In LOD	A and B	16	1	0
12	2024	In LOD	E	9	0	0
13	2024	In LOD	F	9	0	2
14	2024	In LOD	F	9	0	1
15	2024	In LOD	D	16	2	2

Summary

12.8.57 A summary table of survey results in relation to regional NHZ populations is provided below in **Table 12.1.18: NHZ population estimates for Target Species recorded during ornithology surveys in Study Area.**

Table 12.1.18: NHZ population estimates for Target Species recorded during ornithology surveys in Study Area

Species	Measure	NHZ 9. Northeast Coastal Plain		NHZ 12. North-East Glens		NHZ 16. Eastern Lowlands	
		Regional Population	Survey estimates (max counts)	Regional Population	Survey estimates (max counts)	Regional Population	Survey estimates (max counts)
Black Grouse	Displaying males	0	0	215	0	167	1
Red Kite	Breeding pairs	12	3	7	1	60	5
Hen Harrier (<i>Circus cyaneus</i>)	Breeding pairs	0	Flight only	3	0	3	Flight only
Goshawk	Breeding pairs	14	Flight only	25	3	14	0

Species	Measure	NHZ 9. Northeast Coastal Plain		NHZ 12. North-East Glens		NHZ 16. Eastern Lowlands	
		Regional Population	Survey estimates (max counts)	Regional Population	Survey estimates (max counts)	Regional Population	Survey estimates (max counts)
Osprey	Breeding pairs	8	0	18	0	16	Not recorded in study area
Merlin	Breeding pairs	0	0	4	0	4	1
Peregrine	Breeding pairs	23	Flight only	13	0	103	1
Golden Plover	Breeding pairs	552	75	659	0	902	80 max.
Curlew	Breeding pairs	1,037	0 pairs	2,815	Not surveyed	3,253	12 pairs
Lapwing	Breeding pairs	n/a	3 pairs	n/a	Not surveyed	n/a	4 pairs
Short-eared Owl	Breeding pairs	0	0	8	0	58	1
Herring Gull	Breeding pairs	7,136	Flights only	47	0	16,782	Flights only

12.9 Line marking

12.9.1 Embedded Mitigation with respect to collision risk mortality was designed through the use of bird flight diverters (BFDs; refer to **Volume 2, Chapter 12 Ornithology, Section 12.11 Mitigation and Monitoring**). Line marking has been carried out within the design under the following circumstances:

- within 5 km of all SPAs that support qualifying species classed as at relatively high risk of collision (*i.e.*, waterfowl) across the Proposed Development;
- where flight activity across any OHL span is judged to be substantial (adjacent OHL spans also to be marked);
- within 500 m of identified Schedule 1 raptor species nests; and
- where the OHL spans a waterway (principally to mitigate risk to Red-breasted Merganser)⁷⁵.

12.9.2 Flight activity surveys were used to determine high-risk 'hot-spot' spans of the Proposed Development.

12.9.3 'Hot-spots' were defined in reference to the SPAs to which the goose flights were assigned. Those flights above the 2nd quartile of the flight activity data set, for which flights were recorded as crossing the Proposed Development, were recorded as 'high-risk' spans. These were supplemented by flight activity within the LOD *ie*, flights which were recorded within the LOD, but were not seen to cross the Proposed Development. Four main watch areas were present:

- Tay and Eden Estuary SPA (overseen by VP 25; with 2.5 km only of the Proposed Development within 10 km of the roost);
- Loch of Lintrathen SPA and Loch of Kinnordy SPA (overseen by VPs 20, 21 and 22; with 15.4 km of the Proposed Development within 10 km of the SPA roosts);
- Montrose SPA area (overseen by VPs 10, 11, 12 and 35; approximately 17 km present within 10 km of the SPA roost); and
- Loch of Skene SPA (overseen by VPs 1, 26, 27, 28, 29, 30, 31, 32, and 33 with 19.4 km of Proposed Development within 10 km of the SPA roost).

12.9.4 These areas reflect both SPA roost usage and local foraging behaviours.

12.9.5 Towers between which the spans are marked are noted below in **Table 12.1.19: Line-marking and rationale** with **Volume 3, Figures A12.7.1 to A12.7.5: Bird Flight Diverter Placement** illustrating these spans in relation to SPA and Section. This includes the flight rate of combined SPA species crossing the line per hour of watch. For example, between towers S200 and S201 (of

Section A) a total of 32.2 Pink-footed and Greylag Geese were recorded in flight every hour of VP watches (refer to **Table 12.1.19: Line-marking and rationale** and to **Figure A12.7.1: Bird flight diverter placement in Volume 3** of this EIAR). Across the non-breeding season, a conservative estimate of at least 1,000 available flying hours is present for wildfowl (flight activity in the non-breeding season is at least 2,500 hours; however, given foraging activities, distances from roosts and roost usage across the season etc it is considered likely that flight activity would be relatively restricted in the foraging areas at the Proposed Development). The rate, expressed across the season, was divided by the SPA goose species resource (i.e. citation population) to estimate the proportion of the SPA population that would cross the Proposed Development every year.

12.9.6 The Tay and Eden SPA citation of Pink-footed and Greylag Geese combined is 4,000 birds with 17.5% of that number considered likely to cross the Proposed Development every year. The proportion of Loch of Kinnordy SPA and Loch of Lintrathen SPA birds interacting with the Proposed Development is higher at almost 95% of the SPA population. Reflecting both the relative importance of the Study Area for Montrose Basin SPA birds and the combined SPA citation of almost 23,000 geese (1,080 Greylag Geese and 21,800 Pink-footed Geese), only 8.5% of the Montrose Basin SPA Greylag Goose and Pink-footed Goose population were recorded over the Study Area. In contrast, 152% of the Loch of Skene SPA population citation of 5,500 were recorded over the Study Area for that SPA population (this also reflects that 20 km of the Proposed Development lies within 10 km of the SPA roost here).

12.9.7 The majority of marked spans within 5 km of the Loch of Skene SPA also recorded high levels of flight activity of Pink-footed Geese, a SSSI species only, at this Designated Site. Line-marking in this section is best practice: it supports the use of marking within 5 km of all SPAs with wildfowl and allows incorporation of Embedded Mitigation into the design of a section of the Proposed Development, where landowners and the general public have referenced the possibility of collision of foraging geese.

Table 12.1.19: Line-marking and rationale

North Tower	South Tower	SPA/Ramsar site	Species (PG – Pink-footed Goose; GJ – Greylag Goose)	Flight Rate	% SPA population crossing	Rationale for marking
Section A						
S206	Gantry2-Emmock	Tay and Eden	Both PG/GJ	0.0	0.00	Adjacent span
S205	S206	Tay and Eden	Both PG/GJ	0.6	0.14	Flight activity (high-risk) + LOD
S204	S205	Tay and Eden	Both PG/GJ	5.0	1.25	Flight activity (high-risk)
S203	S204	Tay and Eden	Both PG/GJ	0.0	0.00	Adjacent span
S201	S202	Tay and Eden	Both PG/GJ	0.0	0.00	Adjacent span
S200	S201	Tay and Eden	Both PG/GJ	32.2	8.04	Flight activity (high-risk)
S199	S200	Tay and Eden	Both PG/GJ	0.0	0.00	Adjacent span
S198	S199	Tay and Eden	Both PG/GJ	32.2	8.04	Flight activity (high-risk)
S197	S198	Tay and Eden	Both PG/GJ	0.0	0.00	Adjacent span
Firth of Tay and Eden SPA/Ramsar Pink-footed and Greylag Geese population crossing = 17.5%						
S179	S180	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S178	S179	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S177	S178	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S176	S177	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S175	S176	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S169	S170	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Adjacent span
S168	S169	Kinnordy & Lintrathen	Both PG/GJ	166.7	23.91	Flight activity (high-risk)
S167	S168	Kinnordy & Lintrathen	Both PG/GJ	13.2	1.89	Adjacent span
S166	S167	Kinnordy & Lintrathen	Both PG/GJ	177.8	25.51	Flight activity (high-risk)

North Tower	South Tower	SPA/Ramsar site	Species (PG – Pink-footed Goose; GJ – Greylag Goose)	Flight Rate	% SPA population crossing	Rationale for marking
S165	S166	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Adjacent span
S164	S165	Kinnordy & Lintrathen	Both PG/GJ	12.0	1.72	Flight activity (high-risk)
S163	S164	Kinnordy & Lintrathen	Both PG/GJ	13.7	1.96	Flight activity (high-risk)
S162	S163	Kinnordy & Lintrathen	Both PG/GJ	10.5	1.51	Flight activity (high-risk)
S161	S162	Kinnordy & Lintrathen	Both PG/GJ	63.7	9.13	Flight activity (high-risk)
S160	S161	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Adjacent span
S159	S160	Kinnordy & Lintrathen	Both PG/GJ	9.6	1.37	Flight activity (high-risk)
S158	S159	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Flight activity (high-risk) +LOD
S157	S158	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Flight activity (high-risk) +LOD
S156	S157	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Adjacent span
S154	S155	Kinnordy & Lintrathen	Both PG/GJ	1.0	0.14	Adjacent span
S153	S154	Kinnordy & Lintrathen	Both PG/GJ	21.2	3.05	Flight activity (high-risk)
S152	S153	Kinnordy & Lintrathen	Both PG/GJ	169.8	24.36	Flight activity (high-risk)
S151	S152	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Flight activity (high-risk)
S150	S151	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Flight activity (high-risk)
S149	S150	Kinnordy & Lintrathen	Both PG/GJ	2.6	0.38	Flight activity (high-risk)
S148	S149	Kinnordy & Lintrathen	Both PG/GJ	0.0	0.00	Adjacent span
Loch of Lintrathen SPA/Ramsar and Loch of Kinnordy SPA/Ramsar Pink-footed and Greylag Geese population crossing = 94.9%						
S142	S143	River Esk	River Esk	N/A	0.00	River Esk
S130	S131	Noran Water	Noran Water	N/A	0.00	Noran Water
S111	S112	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S110	S111	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S109	S110	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S105	S106	Cruick water	Cruick water	N/A	0.00	Cruick water
S99	S100	Cruick water	Cruick water	N/A	0.00	Cruick water
S95	S96	Montrose Basin	Both PG/GJ	0.4	0.02	Adjacent span
S94	S95	Montrose Basin	Both PG/GJ	7.4	0.32	Flight activity (high-risk)
S93	S94	Montrose Basin	Both PG/GJ	3.5	0.15	Flight activity (high-risk)
S92	S93	Montrose Basin	Both PG/GJ	14.8	0.65	Flight activity (high-risk)
S91	S92	Montrose Basin	Both PG/GJ	0.7	0.03	Flight activity (high-risk) + LOD
S90	S91	Montrose Basin	Both PG/GJ	0.2	0.01	Flight activity (high-risk)
S89	S90	Montrose Basin	Both PG/GJ	10.5	0.46	Flight activity (high-risk)
S88	S89	Montrose Basin	Both PG/GJ	7.4	0.32	Flight activity (high-risk)

North Tower	South Tower	SPA/Ramsar site	Species (PG – Pink-footed Goose; GJ – Greylag Goose)	Flight Rate	% SPA population crossing	Rationale for marking
S87	S88	Montrose Basin	Both PG/GJ	4.6	0.20	Flight activity (high-risk)
S86	S87	Montrose Basin	Both PG/GJ	32.3	1.41	Flight activity (high-risk)
S85	S86	Montrose Basin	Both PG/GJ	0.0	0.00	Flight activity (high-risk)
S84	S85	Montrose Basin	Both PG/GJ	0.0	0.00	Adjacent span
S82	S83	Montrose Basin	Both PG/GJ	0.1	0.00	Adjacent span
S81	S82	Montrose Basin	Both PG/GJ	5.9	0.26	Flight activity (high-risk)
S80	S81	Montrose Basin	Both PG/GJ	7.1	0.31	Flight activity (high-risk)
S79	S80	Montrose Basin	Both PG/GJ	0.0	0.00	Adjacent span
S68	S69	Montrose Basin	Both PG/GJ	27.6	1.21	Flight activity (high-risk)
S67	S68	Montrose Basin	Both PG/GJ	72.0	3.15	Flight activity (high-risk)
S64	S65	Montrose Basin	Both PG/GJ	0.0	0.00	Adjacent span
S63	S64	Montrose Basin	Both PG/GJ	>75	Significant flight activity recorded with local foraging birds	Flight activity (high-risk) - Significant flight activity recorded with local foraging birds
S62	S63	Montrose Basin	Both PG/GJ	>75	As above	Flight activity (high-risk) - Significant flight activity recorded with local foraging birds
S61	S62	Montrose Basin	Both PG/GJ	>75	As above	Flight activity (high-risk) Significant flight activity recorded with local foraging birds
S60	S61	Montrose Basin	Both PG/GJ	>75	As above	Flight activity (high-risk) Significant flight activity recorded with local foraging birds
S59	S60	Montrose Basin	Both PG/GJ	>75	As above	Flight activity (high-risk) Significant flight activity recorded with local foraging birds
S58	S59	Montrose Basin	Both PG/GJ	>75	As above	Flight activity (high-risk) Significant flight activity recorded with local foraging birds
S57	S58	Montrose Basin	Both PG/GJ	0.0	0.00	Adjacent span
Montrose Basin SPA/Ramsar Pink-footed and Greylag Geese population crossing = 8.5%						
S22	S23	Bervie water	Bervie water	N/A	0.00	Bervie water
S17	S18	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S16	S17	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S15	S16	Schedule 1	Schedule 1	N/A	0.00	Flight activity
S11	S12	Carron water	Carron water	N/A	0.00	Carron water
N61	N62	River Dee	River Dee	N/A	0.00	River Dee
N53	N54	Schedule 1	Schedule 1	N/A	0.00	Flight activity

North Tower	South Tower	SPA/Ramsar site	Species (PG – Pink-footed Goose; GJ – Greylag Goose)	Flight Rate	% SPA population crossing	Rationale for marking
N52	N53	Schedule 1	Schedule 1	N/A	0.00	Flight activity
N51	N52	Schedule 1	Schedule 1	N/A	0.00	Flight activity
N48	N49	Loch of Skene	GJ (PG SSSI)	5.9	1.07	Adjacent span
N47	N48	Loch of Skene	GJ (PG SSSI)	0.2	0.03	SPA (5 km)
N46	N47	Loch of Skene	GJ (PG SSSI)	0.1	0.02	SPA (5 km)
N45	N46	Loch of Skene	GJ (PG SSSI)	0.9	0.16	SPA (5 km)
N44	N45	Loch of Skene	GJ (PG SSSI)	7.8	1.42	SPA (5 km)
N43	N44	Loch of Skene	GJ (PG SSSI)	23.8	4.32	Flight activity (high-risk)/SPA (5 km)
N42	N43	Loch of Skene	GJ (PG SSSI)	8.1	1.47	Flight activity (high-risk)/SPA (5 km)
N41	N42	Loch of Skene	GJ (PG SSSI)	23.6	4.30	Flight activity (high-risk)/SPA (5 km)
N40	N41	Loch of Skene	GJ (PG SSSI)	38.6	7.02	Flight activity (high-risk)/SPA (5 km)
N39	N40	Loch of Skene	GJ (PG SSSI)	9.1	1.66	Flight activity (high-risk)/SPA (5 km)
N38	N39	Loch of Skene	GJ (PG SSSI)	20.4	3.72	Flight activity (high-risk)/SPA (5 km)
N37	N38	Loch of Skene	GJ (PG SSSI)	8.2	1.48	Flight activity (high-risk)/SPA (5 km)
N36	N37	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N35	N36	Loch of Skene	GJ (PG SSSI)	25.5	4.64	Flight activity (high-risk)/SPA (5 km)
N34	N35	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N33	N34	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N32	N33	Loch of Skene	GJ (PG SSSI)	9.5	1.73	Flight activity (high-risk)/SPA (5 km)
N31	N32	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N30	N31	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N29	N30	Loch of Skene	GJ (PG SSSI)	0.4	0.07	Flight activity (high-risk)/SPA (5 km)
N28	N29	Loch of Skene	GJ (PG SSSI)	6.6	1.20	Flight activity (high-risk)/SPA (5 km)
N27	N28	Loch of Skene	GJ (PG SSSI)	11.5	2.09	Flight activity (high-risk)/SPA (5 km)
N26	N27	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N25	N26	Loch of Skene	GJ (PG SSSI)	1.8	0.33	Flight activity (high-risk)/SPA (5 km)
N24	N25	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N23	N24	Loch of Skene	GJ (PG SSSI)	37.1	6.75	Flight activity (high-risk)/SPA (5 km)
N22	N23	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N21	N22	Loch of Skene	GJ (PG SSSI)	4.6	0.84	Flight activity (high-risk)/SPA (5 km)
N20	N21	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)

North Tower	South Tower	SPA/Ramsar site	Species (PG – Pink-footed Goose; GJ – Greylag Goose)	Flight Rate	% SPA population crossing	Rationale for marking
N19	N20	Loch of Skene	GJ (PG SSSI)	368.8	67.05	Flight activity (high-risk)/SPA (5 km)
N18	N19	Loch of Skene	GJ (PG SSSI)	70.1	12.74	Flight activity (high-risk)/SPA (5 km)
N17	N18	Loch of Skene	GJ (PG SSSI)	174.9	31.80	Flight activity (high-risk)/SPA (5 km)
N16	N17	Loch of Skene	GJ (PG SSSI)	414.3	75.33	Flight activity (high-risk)/SPA (5 km)
N15	N16	Loch of Skene	GJ (PG SSSI)	171.7	31.22	Flight activity (high-risk)/SPA (5 km)
N14	N15	Loch of Skene	GJ (PG SSSI)	209.6	38.12	Flight activity (high-risk)/SPA (5 km)
N13	N14	Loch of Skene	GJ (PG SSSI)	35.7	6.49	Flight activity (high-risk)/SPA (5 km)
N12	N13	Loch of Skene	GJ (PG SSSI)	25.5	4.63	Flight activity (high-risk)/SPA (5 km)
N11	N12	Loch of Skene	GJ (PG SSSI)	0.0	0.00	Flight activity (high-risk)/SPA (5 km)
N10	N11	Loch of Skene	GJ (PG SSSI)	138.5	25.17	Flight activity (high-risk)/SPA (5 km)
N9	N10	Loch of Skene	GJ (PG SSSI)	0.0	0.00	SPA (5 km)
N8	N9	Loch of Skene	GJ (PG SSSI)	0.0	0.00	SPA (5 km)
N7	N8	Loch of Skene	GJ (PG SSSI)	0.0	0.00	SPA (5 km)
N6	N7	Loch of Skene	GJ (PG SSSI)	0.0	0.00	SPA (5 km)
N4	N6	Loch of Skene	GJ (PG SSSI)	0.0	0.00	SPA (5 km)
Loch of Skene SPA/Ramsar = 152% of Greylag Goose SPA citation population crossing						

ANNEX 12.1.1: FLIGHT ACTIVITY SURVEY AND WINTER GOOSE FORAGING SURVEY RESULTS

Table 12.1.20: Vantage Point survey times and weather conditions

Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
230927_VP25_SK	27 September 2023	25	SK	12:40	14:40	2	Start	8	700	4	ESE	5	1	
230927_VP25_SK	27 September 2023	25	SK			2	1st hour	8	700	4	ESE	5	1	
230927_VP25_SK	27 September 2023	25	SK			2	2nd hour	8	700	4	ESE	5	1	
231005_VP12_SK	05 October 2023	12	SK	12:45	14:45	2	Start	7	800	3	SSE	2	2	No Target Species detected.
231005_VP12_SK	05 October 2023	12	SK			2	1st hour	7	800	3	SSE	2	2	No Target Species detected.
231005_VP12_SK	05 October 2023	12	SK			2	2nd hour	8	800	3	SSE	2	2	No Target Species detected.
231011_VP35_SK	11 October 2023	35	SK	13:45	15:45	2	Start	4	700	4	W	5	0	No Target Species flights.
231011_VP35_SK	11 October 2023	35	SK			2	1st hour	4	700	4	W	5	0	No Target Species flights.
231011_VP35_SK	11 October 2023	35	SK			2	2nd hour	5	700	4	WNW	5	0	No Target Species flights.
231024_VP26_DW	24 October 2023	26	DW	12:45	15:45	3	Start	7	700	2	ESE	5	0	
231024_VP26_DW	24 October 2023	26	DW			3	1st hour	3	600	1	ESE	5	0	
231024_VP27_AM	24 October 2023	27	AM	13:50	16:50	3	Start	4	2000	1	ENE	5	0	
231024_VP27_AM	24 October 2023	27	AM			3	1st hour	3	2000	2	ENE	5	0	

⁵⁶ Precipitation across watch hour – 0 (none); 1 (intermittent light rain); 2 (continuous light rain); 3 (intermittent heavy rain); 4 (continuous heavy rain); S –(snow) .

⁵⁷ Additional comments by the surveyor during VP watches – including reference to weather and species present.

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231024_VP27_AM	24 October 2023	27	AM			3	2nd hour	3	3000	2	ENE	5	0	
231024_VP28_AM	24 October 2023	28	AM	16:15	18:15	2	Start	6	2000	1	ENE	5	0	
231024_VP28_AM	24 October 2023	28	AM			2	1st hour	7	800	1	ENE	5	1	
231024_VP28_AM	24 October 2023	28	AM			2	2nd hour	8	400	1	ENE	5	1	
231024_VP28_AM	24 October 2023	28	AM			2	2nd hour	8	400	1	ENE	5	1	
231024_VP32_DW	24 October 2023	32	DW	16:20	18:20	2	Start	9	408	1	SE	5	3	Some of viewshed restricted by trees
231024_VP32_DW	24 October 2023	32	DW			2	1st hour	10	550	0	N/A	5	1	Some of viewshed restricted by trees
231024_VP32_DW	24 October 2023	32	DW			2	2nd hour	8	800	1	SE	5	0	Some of viewshed restricted by trees
231025_VP30_AM	25 October 2023	30	AM	10:00	12:00	2	Start	10	250	3	E	3	3	
231025_VP30_AM	25 October 2023	30	AM			2	1st hour	10	250	3	E	2.5	4	
231025_VP30_AM	25 October 2023	30	AM			2	2nd hour	10	250	2	E	2.5	3	
231025_VP31_DW	25 October 2023	31	DW	07:30	09:30	2	Start	10	750	1	ESE	3	3	
231025_VP31_DW	25 October 2023	31	DW			2	1st hour	10	750	2	SE	3	3	
231025_VP31_DW	25 October 2023	31	DW			2	2nd hour	10	750	2	SE	4	3	
231025_VP33_AM	25 October 2023	RouteG-A.1	AM	07:30	09:30	2	Start	10	250	2	E	3	3	
231025_VP33_AM	25 October 2023	RouteG-A.1	AM			2	1st hour	10	250	2	E	3	3	
231025_VP33_AM	25 October 2023	RouteG-A.1	AM			2	2nd hour	10	250	3	E	3	4	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231025_VP33_AM	25 October 2023	RouteG-A.1	AM	07:30	09:30	2	Start	10	250	2	E	3	3	
231025_VP33_AM	25 October 2023	RouteG-A.1	AM			2	1st hour	10	250	2	E	3	3	
231025_VP33_AM	25 October 2023	RouteG-A.1	AM			2	2nd hour	10	250	3	E	3	4	
231026_VP1_JND	26 October 2023	1	JND	11:10	13:10	2	Start	9	650	0	N/A	5	0	
231026_VP1_JND	26 October 2023	1	JND			2	1st hour	9	450	1	SE	5	0	
231026_VP1_JND	26 October 2023	1	JND			2	2nd hour	9	500	1	SSE	5	0	
231026_VP10_DW	26 October 2023	10	DW	14:00	16:00	2	Start	10	400	2	E	5	0	
231026_VP10_DW	26 October 2023	10	DW			2	1st hour	10	400	2	E	5	1	
231026_VP10_DW	26 October 2023	10	DW			2	2nd hour	10	600	1	ESE	5	1	
231026_VP10_DW	26 October 2023	10	DW	14:00	16:00	2	Start	10	400	2	E	5	0	
231026_VP10_DW	26 October 2023	10	DW			2	1st hour	10	400	2	E	5	1	
231026_VP10_DW	26 October 2023	10	DW			2	2nd hour	10	600	1	ESE	5	1	
231026_VP11_DW	26 October 2023	11	DW	16:15	18:15	2	Start	10	500	2	ESE	4	3	
231026_VP11_DW	26 October 2023	11	DW			2	1st hour	10	300	2	ESE	2	4	
231026_VP11_DW	26 October 2023	11	DW			2	2nd hour	0	300	1	ESE	2	4	
231026_VP20_JND	26 October 2023	20	JND	08:15	10:15	2	Start	10	350	0	N/A	2	0	
231026_VP20_JND	26 October 2023	20	JND			2	1st hour	10	450	0	N/A	2	0	
231026_VP20_JND	26 October 2023	20	JND			2	2nd hour	10	400	0	N/A	2.5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231031_VP21_AM	31 October 2023	21	AM	15:00	17:00	2	Start	5	800	4	NE	5	0	
231031_VP21_AM	31 October 2023	21	AM			2	1st hour	5	800	4	NE	5	1	
231031_VP21_AM	31 October 2023	21	VC			2	2nd hour	4	700	3	NE	5	0	
231031_VP29_VC	31 October 2023	29	VC	12:00	14:00	2	Start	5	1000	3	NE	5	0	
231031_VP29_VC	31 October 2023	29	VC			2	1st hour	4	1000	3	NE	5	0	
231101_VP12_DW	01 November 2023	12	DW	06:50	08:50	2	Start	9	700	2	NE	5	1	
231101_VP12_DW	01 November 2023	12	DW			2	1st hour	9	600	2	NE	5	3	
231101_VP12_DW	01 November 2023	12	DW			2	2nd hour	10	500	2	NNE	5	1	
231101_VP20_SK	01 November 2023	20	SK	15:00	17:00	2	Start	10	800	3	ENE	3	3	
231101_VP20_SK	01 November 2023	20	SK			2	1st hour	10	800	3	ENE	3	3	
231101_VP20_SK	01 November 2023	20	SK			2	2nd hour	10	800	3	ENE	3	1	
231101_VP25_SK	01 November 2023	25	SK	12:40	14:40	2	Start	10	800	3	ENE	2	3	
231101_VP25_SK	01 November 2023	25	SK			2	1st hour	10	800	3	ENE	2	3	
231101_VP25_SK	01 November 2023	25	SK			2	2nd hour	10	800	3	ENE	2	3	
231101_VP35_DW	01 November 2023	35	DW	09:15	11:15	2	Start	10	500	1	NE	5	3	
231101_VP35_DW	01 November 2023	35	DW			2	1st hour	10	500	1	NE	4	3	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231101_VP35_DW	01 November 2023	35	DW			2	2nd hour	10	300	3	ENE	3	3	
231108_VP26_AM	08 November 2023	26	AM	12:15	15:15	3	Start	2	3000	1	WSW	5	0	
231108_VP26_AM	08 November 2023	26	AM			3	1st hour	1	3000	2	WSW	5	0	
231108_VP26_AM	08 November 2023	26	AM			3	2nd hour	0	0	2	WSW	5	0	
231108_VP27_AM	08 November 2023	27	AM	14:40	16:40	2	Start	0	0	3	WSW	5	0	
231108_VP27_AM	08 November 2023	27	AM			2	1st hour	0	0	3	W	5	0	
231108_VP27_AM	08 November 2023	27	AM			2	2nd hour	4	0	3	WSW	5	0	
231108_VP28_DW	08 November 2023	28	DW	12:30	14:30	2	Start	1	800	1	NW	5	0	
231108_VP28_DW	08 November 2023	28	DW			2	1st hour	1	700	1	NW	5	0	
231108_VP28_DW	08 November 2023	28	DW			2	2nd hour	0	0	2	SW	5	0	
231108_VP29_DW	08 November 2023	29	DW	15:35	17:05	1.5	Start	1	900	1	SW	5	0	
231108_VP29_DW	08 November 2023	29	DW			1.5	1st hour	1	800	2	SW	5	0	
231108_VP29_DW	08 November 2023	29	DW			1.5	2nd hour	0	0	1	SW	5	0	
231109_VP21_SK	09 November 2023	21	SK	12:30	14:30	2	Start	8	800	2	SW	5	0	
231109_VP21_SK	09 November 2023	21	SK			2	1st hour	8	800	2	SW	5	0	
231109_VP21_SK	09 November 2023	21	SK			2	2nd hour	8	800	2	SW	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231109_VP22_SK	09 November 2023	22	SK	14:45	16:45	2	Start	3	1000	2	SW	5	0	
231109_VP22_SK	09 November 2023	22	SK			2	1st hour	3	1000	2	SW	5	0	
231109_VP22_SK	09 November 2023	22	SK			2	2nd hour	1	1000	2	SW	5	0	
231109_VP30_AM	09 November 2023	30	AM	07:10	09:10	2	Start	3	2000	2	S	5	0	
231109_VP30_AM	09 November 2023	30	AM			2	1st hour	2	3000	3	SSE	5	0	
231109_VP30_AM	09 November 2023	30	AM			2	2nd hour	3	3000	3	SSE	5	0	
231109_VP31_DW	09 November 2023	31	DW	07:10	09:10	2	Start	5	700	1	SE	5	0	
231109_VP31_DW	09 November 2023	31	DW			2	1st hour	4	600	1	SE	5	0	
231109_VP31_DW	09 November 2023	31	DW			2	2nd hour	2	550	1	SW	5	0	
231115_VP1_VC	15 November 2023	1	VC	14:30	16:30	2	Start	1	600	1	NW	5	0	
231115_VP1_VC	15 November 2023	1	VC			2	1st hour	1	600	1	NW	5	0	
231115_VP32_DW	15 November 2023	32	DW	14:35	16:35	2	Start	1	1100	0	N/A	5	0	
231115_VP32_DW	15 November 2023	32	DW			2	1st hour	1	2000	0	N/A	5	0	
231115_VP32_DW	15 November 2023	32	DW			2	2nd hour	1	2000	1	NNW	5	0	
231116_VP11_DW	16 November 2023	11	DW	07:55	09:55	2	Start	6	800	1	WSW	5	0	
231116_VP11_DW	16 November 2023	11	DW			2	1st hour	5	800	1	WSW	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231116_VP11_DW	16 November 2023	11	DW			2	2nd hour	3	700	1	WSW	5	0	
231130_VP27_DW	30 November 2023	27	DW	14:10	16:10	2	Start	4	1100	1	NE	5	0	
231130_VP27_DW	30 November 2023	27	DW			2	1st hour	2	1000	1	NE	5	0	
231130_VP27_DW	30 November 2023	27	DW			2	2nd hour	3	1200	1	NE	5	0	
231130_VP28_DW	30 November 2023	28	DW	12:00	14:00	2	Start	6	1200	0	N/A	5	0	
231130_VP28_DW	30 November 2023	28	DW			2	1st hour	9	1000	1	ENE	5	0	
231130_VP28_DW	30 November 2023	28	DW			2	2nd hour	9	900	1	ENE	5	1S	
231123_VP10_VC	30 November 2023	10	VC	12:30	15:30	3	Start	8	750	1	ENE	5	0	
231123_VP10_VC	30 November 2023	10	VC			3	1st hour	8	750	0	N/A	5	0	
231123_VP10_VC	30 November 2023	10	VC			3	2nd hour	9	800	0	N/A	5	0	
231123_VP32_JND	30 November 2023	32	JND	14:00	17:00	3	Start	8	1000	1	E	5	0	
231123_VP32_JND	30 November 2023	32	JND			3	1st hour	9	900	0	N/A	5	0	
231123_VP32_JND	30 November 2023	32	JND			3	2nd hour	9	900	0	N/A	5	0	
231201_VP29_DW	01 December 2023	29	DW	07:50	09:50	2	Start	1	2000	1	NNW	5	0	
231201_VP29_DW	01 December 2023	29	DW			2	1st hour	2	2000	1	NNW	5	0	
231201_VP29_DW	01 December 2023	29	DW			2	2nd hour	3	1800	0	N/A	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231201_VP31_DW	01 December 2023	31	DW	10:00	12:00	2	Start	3	2000	0	N/A	5	0	
231201_VP31_DW	01 December 2023	31	DW			2	1st hour	2	2000	1	ENE	5	0	
231201_VP31_DW	01 December 2023	31	DW			2	2nd hour	2	2000	1	ENE	5	0	
231205_VP25_AM	05 December 2023	25	AM	14:10	16:10	2	Start	5	3000	2	N	5	0	
231205_VP25_AM	05 December 2023	25	AM			2	1st hour	3	3000	2	N	5	0	
231205_VP25_AM	05 December 2023	25	AM			2	2nd hour	2	4000	1	W	5	0	
231218_VP11_AM	18 December 2023	11	AM	10:10	12:10	2	Start	10	400	4	SW	5	0	
231218_VP11_AM	18 December 2023	11	AM			2	1st hour	10	300	4	SW	5	0	
231218_VP11_AM	18 December 2023	11	AM			2	2nd hour	10	300	4	SW	5	0	
231218_VP20_JND	18 December 2023	20	JND	11:15	13:15	2	Start	9	650	3	SW	5	0	
231218_VP20_JND	18 December 2023	20	JND			2	1st hour	10	650	3	WSW	5	1	
231218_VP20_JND	18 December 2023	20	JND			2	2nd hour	4	750	2	W	5	0	
231218_VP21_JND	18 December 2023	21	JND	14:00	16:00	2	Start	7	750	3	SW	5	0	
231218_VP21_JND	18 December 2023	21	JND			2	1st hour	7	750	3	WSW	5	0	
231219_VP1_JND	19 December 2023	1	JND	13:55	15:55	2	Start	5	1000	3	W	5	0	
231219_VP1_JND	19 December 2023	1	JND			2	1st hour	10	700	3	SW	5	1	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
231219_VP1_JND	19 December 2023	1	JND			2	2nd hour	6	1200	2	W	5	0	
231219_VP10_JND	19 December 2023	10	JND	11:15	13:15	2	Start	2	1000	2	WSW	5	0	
231219_VP10_JND	19 December 2023	10	JND			2	1st hour	4	1000	2	SW	5	0	
231219_VP10_JND	19 December 2023	10	JND			2	2nd hour	4	1000	3	WSW	5	0	
231219_VP12_AM	19 December 2023	12	AM	13:25	16:25	3	Start	1	1500	3	SW	5	0	
231219_VP12_AM	19 December 2023	12	AM			3	1st hour	4	1500	4	SW	5	0	
231219_VP12_AM	19 December 2023	12	AM			3	2nd hour	5	1200	4	SW	5	0	
240109_VP22_AM	09 January 2024	22	AM	14:40	16:40	2	Start	10	700	1	NE	5	0	
240109_VP22_AM	09 January 2024	22	AM			2	1st hour	10	650	2	NE	5	1S	
240109_VP22_AM	09 January 2024	22	AM			2	2nd hour	10	600	2	NE	5	1	
240111_VP20_DW	11 January 2024	20	DW	12:15	14:15	2	Start	1	2000	1	SW	5	0	
240111_VP20_DW	11 January 2024	20	DW			2	1st hour	1	2000	1	SW	5	0	
240111_VP20_DW	11 January 2024	20	DW			2	2nd hour	1	2000	1	SW	5	0	
240111_VP21_DW	11 January 2024	21	DW	14:30	16:30	2	Start	1	1800	1	SW	5	0	
240111_VP21_DW	11 January 2024	21	DW			2	1st hour	1	1800	2	SW	5	0	
240111_VP21_DW	11 January 2024	21	DW			2	2nd hour	1	2000	1	SW	5	0	
240116_VP1_JND	16 January 2024	1	JND	12:20	14:00	2	Start	10	650	2	W	5	0	Start 1200

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240116_VP1_JND	16 January 2024	1	JND			2	1st hour	10	650	2	W	5	0	Start 1200
240116_VP1_JND	16 January 2024	1	JND			2	2nd hour	10	600	2	W	5	0	Start 1200
240116_VP26_SK	16 January 2024	26	SK	13:30	16:30	3	Start	10	600	2	SW	2	3S	
240116_VP26_SK	16 January 2024	26	SK			3	1st hour	10	600	2	SW	1	3S	
240116_VP26_SK	16 January 2024	26	SK			3	2nd hour	10	600	2	SW	1	3S	
240116_VP26_SK	16 January 2024	26	SK			3	3rd hour	10	600	2	SW	1	3S	
240116_VP30_AM	16 January 2024	30	AM	14:30	16:30	2	Start	10	400	2	SW	3	3S	
240116_VP30_AM	16 January 2024	30	AM			2	1st hour	10	300	1	W	2	4S	
240116_VP30_AM	16 January 2024	30	AM			2	2nd hour	10	300	1	W	2	4S	
240116_VP31_JND	16 January 2024	31	JND	14:30	16:30	2	Start	10	500	1	W	2.5	3S	
240116_VP31_JND	16 January 2024	31	JND			2	1st hour	10	500	1	W	2	3S	
240116_VP31_JND	16 January 2024	31	JND			2	2nd hour	10	500	1	W	1	3S	
240117_VP11_JND	17 January 2024	11	JND	11:55	13:55	2	Start	1	750	1	NW	5	0	
240117_VP11_JND	17 January 2024	11	JND			2	1st hour	1	1000	1	W	5	0	
240117_VP11_JND	17 January 2024	11	JND			2	2nd hour	1	800	2	W	5	0	
240117_VP25_JND	17 January 2024	25	JND	08:05	10:05	2	Start	0	0	2	W	5	0	
240117_VP25_JND	17 January 2024	25	JND			2	1st hour	0	0	1	W	5	0	
240117_VP27_SK	17 January 2024	27	SK	08:00	10:00	2	Start	0	0	2	SW	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240117_VP27_SK	17 January 2024	27	SK			2	1st hour	0	0	2	WSW	5	0	
240117_VP27_SK	17 January 2024	27	SK			2	2nd hour	0	0	2	W	5	0	
240117_VP28_AM	17 January 2024	28	AM	08:05	10:05	2	Start	0	0	3	NW	5	0	
240117_VP28_AM	17 January 2024	28	AM			2	1st hour	0	0	3	W	5	0	
240117_VP28_AM	17 January 2024	28	AM			2	2nd hour	0	0	2	W	5	0	
240117_VP29_SK	17 January 2024	29	SK	10:55	12:55	2	Start	2	1000	3	SW	5	0	
240117_VP29_SK	17 January 2024	29	SK			2	1st hour	2	1000	3	SW	5	0	
240117_VP29_SK	17 January 2024	29	SK			2	2nd hour	2	1000	3	SW	5	0	
240117_VP32_AM	17 January 2024	32	AM	10:50	12:50	2	Start	0	0	2	W	5	0	
240126_VP10_JND	26 January 2024	10	JND	08:00	10:00	2	Start	1	750	2	WSW	5	0	
240126_VP10_JND	26 January 2024	10	JND			2	1st hour	2	800	3	WSW	5	0	
240126_VP35_JND	26 January 2024	35	JND	12:20	15:20		Start	4	800	2	WSW	5	0	
240126_VP35_JND	26 January 2024	35	JND				1st hour	3	650	3	SW	5	0	
240126_VP35_JND	26 January 2024	35	JND				2nd hour	2	750	3	SW	5	0	
240206_VP1_VC	06 February 2024	1	VC	07:55	10:35	2.5	Start	2	700	2	WSW	5	0	
240206_VP1_VC	06 February 2024	1	VC			2.5	1st hour	1	800	2	SW	5	0	
240206_VP1_VC	06 February 2024	1	VC			2.5	2nd hour	1	1000	3	SW	5	0	
240206_VP27_DW	06 February 2024	27	DW	12:15	14:15	2	Start	0	0	5	W	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240206_VP27_DW	06 February 2024	27	DW			2	1st hour	2	1800	5	W	5	0	
240206_VP27_DW	06 February 2024	27	DW			2	2nd hour	3	1500	4	WSW	5	0	
240206_VP31_DW	06 February 2024	31	DW	15:20	17:20	2	Start	10	1000	4	WNW	5	3	
240206_VP31_DW	06 February 2024	31	DW			2	1st hour	7	800	5	NW	5	1	
240206_VP31_DW	06 February 2024	31	DW			2	2nd hour	5	700	5	NW	4	1S	
240207_VP26_DW	07 February 2024	26	DW	07:25	09:25	2	Start	2	2000	1	NW	5	0	
240207_VP26_DW	07 February 2024	26	DW			2	1st hour	1	2000	0	N/A	5	0	
240207_VP26_DW	07 February 2024	26	DW			2	2nd hour	1	2000	1	NW	5	0	
240207_VP29_DW	07 February 2024	29	DW	10:10	12:10	2	Start	2	1200	3	WNW	5	0	Notable activity around pond/ field, PG and GJ seen landing and taking off from this area
240207_VP29_DW	07 February 2024	29	DW			2	1st hour	2	1400	2	WNW	5	0	Notable activity around pond/ field, PG and GJ seen landing and taking off from this area
240207_VP29_DW	07 February 2024	29	DW			2	2nd hour	2	1800	1	NW	5	0	Notable activity around pond/ field, PG and GJ seen landing and taking off from this area
240207_VP35_DW	07 February 2024	35	DW	15:25	17:25	2	Start	9	600	2	E	5	1H	
240207_VP35_DW	07 February 2024	35	DW			2	1st hour	8	800	1	E	5	2H	
240207_VP35_DW	07 February 2024	35	DW			2	2nd hour	5	1000	2	E	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240208_VP10_JND	08 February 2024	10	JND	15:15	17:25	2	Start	7	850	1	NE	5	0	
240208_VP10_JND	08 February 2024	10	JND			2	1st hour	6	800	1	ENE	5	0	
240208_VP10_JND	08 February 2024	10	JND			2	2nd hour	8	900	1	NE	5	0	
240208_VP12_JND	08 February 2024	12	JND	12:15	14:15	2	Start	6	900	1	NE	5	0	
240208_VP12_JND	08 February 2024	12	JND			2	1st hour	7	900	1	NE	5	0	
240208_VP12_JND	08 February 2024	12	JND			2	2nd hour	8	800	1	NE	5	0	
240215_VP21_JND	15 February 2024	21	JND	07:15	09:15	2	Start	10	600	0	N/A	1.5	0	
240215_VP21_JND	15 February 2024	21	JND			2	1st hour	10	600	0	N/A	1.5	0	
240215_VP21_JND	15 February 2024	21	JND			2	2nd hour	10	500	0	N/A	1.25	0	
240215_VP22_DW	15 February 2024	22	DW	09:40	11:40	2	Start	10	200	1	NNE	1	3	Visibility poor. Averaging ~400 m throughout 1st hour, ~700 m throughout second.
240215_VP22_DW	15 February 2024	22	DW			2	1st hour	10	200	0	N/A	5	3	Visibility poor. Averaging ~400 m throughout 1st hour, ~700 m throughout second.
240215_VP22_DW	15 February 2024	22	DW			2	2nd hour	10	200	1	NE	1	1	Visibility poor. Averaging ~400 m throughout 1st hour, ~700 m throughout second.
240215_VP25_DW	15 February 2024	25	DW	07:10	09:10	2	Start	10	200	1	NNE	1	0	Visibility poor throughout due to low lying fog. Geese (small groups) were heard but not seen on two

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
														occasions (07:45 and 08:12). Visibility around 600 m average during survey
240215_VP25_DW	15 February 2024	25	DW			2	1st hour	10	200	1	NNE	5	0	Visibility poor throughout due to low lying fog. Geese (small groups) were heard but not seen on two occasions (07:45 and 08:12). Visibility around 600 m average during survey
240215_VP25_DW	15 February 2024	25	DW			2	2nd hour	10	100	1	NNE	1	0	Visibility poor throughout due to low lying fog. Geese (small groups) were heard but not seen on two occasions (07:45 and 08:12). Visibility around 600 m average during survey
240215_VP20_AM	15 February 2024	20	AM	07:10	10:10	3	Start	10	500	1	N	1	0	
240215_VP20_AM	15 February 2024	20	AM			3	1st hour	10	600	1	N	2	0	
240215_VP20_AM	15 February 2024	20	AM			3	2nd hour	9	500	2	NE	2	0	
240227_VP30_DW_1	27 February 2024	30	DW	13:30	15:30	2	Start	2	1000	3	WSW	5	0	
240227_VP30_DW_1	27 February 2024	30	DW			2	1st hour	1	1400	3	SW	5	0	
240227_VP30_DW_1	27 February 2024	30	DW			2	2nd hour	3	1300	2	SW	5	0	
240227_VP31_AM	27 February 2024	31	AM	13:15	15:15	2	Start	5	1000	4	W	5	0	
240227_VP11_MO	27 February 2024	11	MO	06:55	09:55	3	Start	8	700	4	W	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240227_VP11_MO	27 February 2024	11	MO				1st hour	7	650	3	SW	5	0	
240227_VP11_MO	27 February 2024	11	MO				2nd hour	8	750	4	SW	5	0	
240227_VP1_JND	27 February 2024	1	JND	07:10	10:10	3	Start	5	800	2	SW	5	0	
240227_VP1_JND	27 February 2024	1	JND				1st hour	6	1000	2	SW	5	0	
240227_VP1_JND	27 February 2024	1	JND				2nd hour	4	1000	2	SW	5	0	
240228_VP27_DW_1	28 February 2024	27	DW	06:40	08:40	2	Start	2	2000	0	N/A	5	0	
240228_VP27_DW_1	28 February 2024	27	DW			2	1st hour	3	2000	1	SW	5	0	
240228_VP27_DW_1	28 February 2024	27	DW			2	2nd hour	4	2000	1	SW	5	0	
240228_VP28_DW_1	28 February 2024	28	DW	08:50	10:50	2	Start	5	1400	1	SW	5	0	
240228_VP28_DW_1	28 February 2024	28	DW			2	1st hour	8	1200	3	SW	5	0	
240228_VP28_DW_1	28 February 2024	28	DW			2	2nd hour	10	900	3	SW	5	3	
240307_VP20_JND	07 March 2024	20	JND	13:25	15:25	2	Start	8	900	1	SE	5	0	
240307_VP20_JND	07 March 2024	20	JND			2	1st hour	8	800	2	SSE	5	0	
240307_VP20_JND	07 March 2024	20	JND			2	2nd hour	8	750	2	SSE	5	0	
240307_VP29_MO	07 March 2024	29	MO	10:00	12:00	2	Start	10	550	3	S	2	0	
240307_VP29_MO	07 March 2024	29	MO			2	1st hour	10	550	3	S	2	0	
240307_VP29_MO	07 March 2024	29	MO			2	2nd hour	10	550	3	S	5	0	
240307_VP30_MO	07 March 2024	30	MO	14:00	16:00	2	Start	10	550	3	SE	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240307_VP30_MO	07 March 2024	30	MO			2	1st hour	10	550	2	SE	5	0	
240307_VP30_MO	07 March 2024	30	MO			2	2nd hour	10	550	2	SE	5	0	
240307_VP35_DW	07 March 2024	35	DW	12:45	14:45	2	Start	10	1700	1	E	5	0	
240307_VP35_DW	07 March 2024	35	DW			2	1st hour	10	1700	2	SE	5	0	
240307_VP35_DW	07 March 2024	35	DW			2	2nd hour	10	1200	3	SE	5	0	
240307_VPKT2_JND	07 March 2024	KT2	JND	16:30	18:30	2	Start	9	700	2	SE	5	0	
240307_VPKT2_JND	07 March 2024	KT2	JND			2	1st hour	10	650	2	E	5	0	
240307_VPKT2_JND	07 March 2024	KT2	JND			2	2nd hour	10	550	1	E	5	0	
240314_VP11_DW	14 March 2024	11	DW	08:50	10:50	2	Start	10	1000	1	WSW	5	0	
240314_VP11_DW	14 March 2024	11	DW			2	1st hour	10	900	1	WSW	5	0	
240314_VP11_DW	14 March 2024	11	DW			2	2nd hour	10	700	2	SW	5	1	
240314_VP21_DW	14 March 2024	21	DW	06:00	08:00	2	Start	8	1400	0	N/A	5	0	
240314_VP21_DW	14 March 2024	21	DW			2	1st hour	8	1400	1	W	5	0	
240314_VP21_DW	14 March 2024	21	DW			2	2nd hour	8	1200	1	W	5	0	
240319_VP10_DW	19 March 2024	10	DW	16:55	18:55	2	Start	4	1200	1	W	5	0	
240319_VP10_DW	19 March 2024	10	DW			2	1st hour	3	1500	1	W	5	0	
240319_VP10_DW	19 March 2024	10	DW			2	2nd hour	3	1500	1	W	5	0	
240319_VP12_DW	19 March 2024	12	DW	14:30	16:30	2	Start	6	1800	3	WSW	5	0	

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Session	Date	VP	Surveyor	Start	End	Duration (h)	VP Hour	Cloud cover (10ths)	Cloud base (m agl)	Wind Force (Beaufort)	Wind direction	Visibility (km)	Precip. ⁵⁶	Notes ⁵⁷
240319_VP12_DW	19 March 2024	12	DW			2	1st hour	6	1800	2	WSW	5	0	
240319_VP12_DW	19 March 2024	12	DW			2	2nd hour	4	2000	2	W	5	0	
240319_VP22_JND	19 March 2024	22	JND	14:30	16:30	2	Start	6	800	3	W	5	0	
240319_VP22_JND	19 March 2024	22	JND			2	1st hour	4	800	3	W	5	0	
240319_VP22_JND	19 March 2024	22	JND			2	2nd hour	4	800	3	W	5	0	
240319_VP25_JND	19 March 2024	25	JND	17:00	19:00	2	Start	7	750	2	W	5	0	
240319_VP25_JND	19 March 2024	25	JND			2	1st hour	7	750	2	W	5	0	
240319_VP25_JND	19 March 2024	25	JND			2	2nd hour	7	750	2	W	5	0	
230927_VP25_SK	27 March 2024	25	SK	12:40	14:40	2	Start	8	700	4	ESE	5	1	
230927_VP25_SK	27 March 2024	25	SK			2	1st hour	8	700	4	ESE	5	1	
230927_VP25_SK	27 March 2024	25	SK			2	2nd hour	8	700	4	ESE	5	1	
240327_VP26_AM	27 March 2024	26	AM	09:30	11:30	2	Start	10	300	2	NE	4	4	
240327_VP26_AM	27 March 2024	26	AM			2	1st hour	10	300	2	NE	4	4	
240327_VP26_AM	27 March 2024	26	AM			2	2nd hour	10	300	2	NE	4	4	
240327_VP32_DW	27 March 2024	32	DW	09:25	11:25	2	Start	10	1000	0	N/A	5	3	
240327_VP32_DW	27 March 2024	32	DW			2	1st hour	10	1000	0	N/A	5	3	
240327_VP32_DW	27 March 2024	32	DW			2	2nd hour	10	1000	2	NE	5	3	

Table 12.1.21: Winter Goose foraging survey results (including additional results from VP watch surveys)

Species	Date	Number	Behaviour	Habitat/notes	xcoord	ycoord	Record number	SPA
PG - Pink footed Goose	11 January 2024	282	feeding/loafing	On winter-sown cover crop, half of geese asleep/laying on ground	339787	736018	1	Tay
GJ - Greylag Goose	26 January 2023	22	feeding/loafing	Pasture	337802	736949	2	Tay
PG - Pink footed Goose	19 March 2024	235	feeding/loafing		338981	737069	3	Tay
PG - Pink footed Goose	26 January 2023	235	feeding/loafing	Pasture	339171	737095	4	Tay
PG - Pink footed Goose	14 March 2023	950	feeding/loafing	Pasture field (wet)	339325	737334	5	Tay
PG - Pink footed Goose	14 March 2023	5	feeding	Pasture	336697	737701	6	Tay
GJ - Greylag Goose	05 December 2023	220	feeding/loafing	Feeding on wheat stubble crop	339029	743343	7	Kinnordy
PG - Pink footed Goose	05 December 2023	645	feeding/loafing	Feeding on wheat stubble	338960	743423	8	Kinnordy
PG - Pink footed Goose	18 December 2023	650	flying	birds flying over and dropping down out of sight for foraging	341855	750640	9	Kinnordy
PG - Pink footed Goose	18 December 2023	100	flying	birds flying over and dropping down out of sight for foraging	341855	750640	10	Kinnordy
PG - Pink footed Goose	14 February 2023	2	Loafing	Rough pasture	337328	751251	11	Kinnordy
PG - Pink footed Goose	14 March 2023	51	feeding/loafing	Improved grassland	345897	758385	12	Kinnordy
GJ - Greylag Goose	22 March 2023	11	loafing	Disused quarry pond	358097	758900	13	Montrose
GJ - Greylag Goose	01 February 2023	1	loafing	lake (disused quarry)	358022	758939	14	Montrose
GJ - Greylag Goose	01 February 2023	2	loafing	tilled arable field	357595	760376	15	Montrose
GJ - Greylag Goose	31 October 2023	2	loafing	On partially flooded winter-sown cover crop	357251	761925	16	Montrose
PG - Pink footed Goose	09 January 2024	185	feeding/loafing	Wheat stubble	358446	763854	17	Montrose
PG - Pink footed Goose	22 March 2023	10	loafing	surrounding scrape at edge of field seeded with winter-sown crop	360726	764954	18	Montrose

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Species	Date	Number	Behaviour	Habitat/notes	xcoord	ycoord	Record number	SPA
GJ - Greylag Goose	09 January 2024	1	loafing		358597	765146	19	Montrose
PG - Pink footed Goose	09 January 2024	3700	feeding/loafing	On bare/harvested crop field, accidentally flushed flock during count, numbers potentially as high as 4000	358585	765198	20	Montrose
PG - Pink footed Goose	01 February 2023	1200	feeding/loafing	Rough pasture	361965	766757	21	Montrose
PG - Pink footed Goose	31 October 2023	70	feeding/loafing	Presumed the same flock seen landing at 14:05, loafing/roosting on tilled field	374994	767554	22	Montrose
PG - Pink footed Goose	22 March 2023	8	feeding/loafing	Stubble crop	361683	767989	23	Montrose
PG - Pink footed Goose	01 February 2023	250	feeding/loafing	Rough pasture	361362	768008	24	Montrose
PG - Pink footed Goose	22 March 2023	450	feeding/loafing	Rough pasture	361514	768076	25	Montrose
PG - Pink footed Goose	19 December 2023	57	feeding/loafing	Foraging until flushed by dog at 11:20	362137	768165	26	Montrose
PG - Pink footed Goose	26 October 2023	300	feeding/loafing		362439	768233	27	Montrose
GJ - Greylag Goose	31 October 2023	1	feeding/loafing	GJ heard calling amongst PG, although weren't seen so numbers unknown	374605	768728	28	Montrose
PG - Pink footed Goose	31 October 2023	205	feeding/loafing	Feeding on wheat stubble crop	374588	768741	29	Montrose
PG - Pink footed Goose	09 January 2024	202	feeding/loafing	Feeding/loafing on winter-sown cover crop	365336	769394	30	Montrose
PG - Pink footed Goose	19 December 2023	1050	feeding/loafing	Foraging loafing in winter wheat	365868	769776	31	Montrose
PG - Pink footed Goose	19 December 2023	500	feeding/loafing	Foraging in stubble fields	365411	770173	32	Montrose
PG - Pink footed Goose	26 January 2024	750	feeding/loafing		364819	771584	33	Montrose
PG - Pink footed Goose	09 January 2024	38	feeding/loafing	In tilled field a little further out from main feeding flock	366778	771793	34	Montrose

Species	Date	Number	Behaviour	Habitat/notes	xcoord	ycoord	Record number	SPA
PG - Pink footed Goose	09 January 2024	2400	feeding/loafing	Feeding on wheat stubble, occasional small flocks of 2-5 landed with feeding flock throughout watch, larger flights recorded as VP flights. Flock watched for an hour 11:20-12:29, with flocks continuing to splinter after watch	366624	772040	35	Montrose
BY - Barnacle goose (<i>Branta leucopsis</i>)	05 October 2023	2	feeding	With 1800 PG.	365928	772166	36	Montrose
PG - Pink footed Goose	26 January 2024	80	feeding/loafing		365103	772251	37	Montrose
PG - Pink footed Goose	01 February 2023	4	loafing	on banks of dried out pond in field with winter-sown crop	369735	773151	38	Montrose
PG - Pink footed Goose	05 October 2023	5	feeding/loafing	Feeding	372662	775732	39	Montrose
PG - Pink footed Goose	26 March 2024	22	feeding/loafing	On pasture, birds watched for 30 mins and stayed put for duration	380847	779255	40	Skene
PG - Pink footed Goose	16 January 2024	800	feeding/loafing	At least 800 geese seen landing in this rough area, presumably to feed	382300	784591	41	Skene
PG - Pink footed Goose	16 January 2024	1000	feeding/loafing	On wheat stubble, snow also in field	381592	784706	42	Skene
PG - Pink footed Goose	18 December 2023	750	feeding/loafing	Feeding on wheat stubble, 40 or so momentarily flushed up (just a few seconds) by passing car at 15:35, whole flock flushed briefly again at 15:42 by passing lorry, and 80ish for a third time at 15:50	382502	795734	43	Skene
PG - Pink footed Goose	02 February 2023	7	feeding/loafing	rough pasture	384237	797593	44	Skene
GJ - Greylag Goose	27 February 2024	2	loafing	Potential pair with nearby pond suggesting possible territory	378890	799955	45	Skene
WS - Whooper swan (<i>Cygnus cygnus</i>)	09 November 2023	16	feeding/loafing	11 ad 5 juv Loafing and feeding on flooded field	381467	801189	46	Skene
PG - Pink footed Goose	09 November 2023	340	feeding/loafing	Couldn't confirm due to road access but around 340 Geese landed in this rough location throughout the earlier VP watch	375959	802060	47	Skene
PG - Pink footed Goose	23 March 2023	1100	feeding/loafing	pasture field	376346	802288	48	Skene
PG - Pink footed Goose	02 February 2023	265	feeding	pasture field	376492	802320	49	Skene

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Species	Date	Number	Behaviour	Habitat/notes	xcoord	ycoord	Record number	SPA
PG - Pink footed Goose	03 March 2023	1100	flying/landed in field	pasture	376297	802567	50	Skene
GJ - Greylag Goose	09 February 2024	26	Feeding	On edge of pond, 17 MA , 24 T. , and 1 MS also present	375753	802592	51	Skene
GJ - Greylag Goose	07 March 2024	5	feeding/loafing		375861	802617	52	Skene
MS - Mute swan	07 March 2024	1	loafing		375850	802628	53	Skene
PG - Pink footed Goose	03 March 2023	360	flying/landed in field	pasture	380888	803084	54	Skene
PG - Pink footed Goose	19 December 2023	185	feeding/loafing	Feeding on pasture, watched for 1hr from when first seen (from 10:53-11:53). Flock stayed put throughout duration although was joined by sporadic small flocks. Landowner says there's 200 geese here year-round	376142	803172	55	Skene
PG - Pink footed Goose	26 March 2024	160	feeding/loafing	Mixture of adult and immature PG, feeding w some roosting & loafing. Monitored for 1 hour	376280	803256	56	Skene
PG - Pink footed Goose	27 January 2023	8	feeding	on banks of marshy scrape in stubble field	376333	803453	57	Skene
PG - Pink footed Goose	03 March 2023	315	feeding/loafing	rough pasture	376233	803469	58	Skene
PG - Pink footed Goose	27 January 2023	120	took off from ground/flying		376236	803480	59	Skene
PG - Pink footed Goose	01 December 2023	350	feeding/loafing	09:10: ~240 feeding in field; 09:35: increased to ~ 350	375859	803571	60	Skene
WS - Whooper Swan	09 November 2023	14	feeding/loafing	10 ad four juv feeding on wheat stubble	375821	803620	61	Skene
PG - Pink footed Goose	09 November 2023	500	feeding/loafing	Feeding on wheat stubble	375795	803638	62	Skene
PG - Pink footed Goose	03 March 2023	3500	feeding/loafing	Feeding in wheat field stubble	381838	804177	63	Skene
GJ - Greylag Goose	27 January 2023	68	feeding/loafing	pasture	374279	804220	64	Skene
GJ - Greylag Goose	02 February 2023	15	feeding/loafing	pasture	374255	804351	65	Skene
GJ - Greylag Goose	03 March 2023	8	feeding/loafing	pasture	374137	804423	66	Skene
GJ - Greylag Goose	02 February 2023	105	feeding/loafing	field with winter-sown crop	373884	804452	67	Skene
GJ - Greylag Goose	27 January 2023	4	feeding	cover crop	378503	806418	68	Skene

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Species	Date	Number	Behaviour	Habitat/notes	xcoord	ycoord	Record number	SPA
GJ - Greylag Goose	23 March 2023	2	feeding	pasture	376146	806716	69	Skene
PG - Pink footed Goose	03 March 2023	43	feeding/loafing	pasture	379166	808593	70	Skene
PG - Pink footed Goose	02 February 2023	570	feeding/loafing	pasture/winter cover crop	380334	812976	71	Skene
PG - Pink footed Goose	03 March 2023	450	feeding/loafing	pasture	371798	813619	72	Skene
PG - Pink footed Goose	27 January 2023	16	Flying before landing in field near Craigeearn	field with winter-sown crop	372153	814161	73	Skene
PG - Pink footed Goose	23 March 2023	290	feeding	field with winter-sown crop	372488	814384	74	Skene
PG - Pink footed Goose	27 January 2023	30	flying SE before landing in field near Craigeearn	field with winter-sown crop	372375	814399	75	Skene
PG - Pink footed Goose	02 February 2023	442	feeding/loafing	On winter cover crop	373570	814618	76	Skene
PG - Pink footed Goose	27 January 2023	56	feeding, briefly flushed up before landing in same spot	field with winter-sown crop	371601	814735	77	Skene
WS - Whooper Swan	23 March 2023	53	feeding/loafing	Winter-sown crop	371768	815665	78	Skene
GJ - Greylag Goose	03 March 2023	3	feeding	pasture	372357	815720	79	Skene
GJ - Greylag Goose	02 February 2023	1	loafing	small lake	373939	817610	80	Skene
PG – Pink footed Goose	08 December 2023	1,200	Feeding/loafing	Rough, wet pasture	380000	804208	81	Skene

Table 12.1.22: Vantage Point survey results – Target Species flights recorded

Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
230927_VP25_SK	27 September 2023	PG	8	1	25	Yes	S205	S206	FALSE	Tay	Tay	A	
230927_VP25_SK	27 September 2023	PG	57	2	25	Yes	S204	S205	FALSE	Tay	Tay	A	
230927_VP25_SK	27 September 2023	PG	52	3	25	No			FALSE	Tay	Tay	A	
231024_VP26_DW	24 October 2023	GI	1	4	26	No			TRUE			F	Circling high over trees (mixed woodland, mostly Scots pine)
231024_VP27_AM	24 October 2023	PG	21	5	27	No			FALSE		Skene	F	
231024_VP27_AM	24 October 2023	PG	60	6	27	No			TRUE		Skene	F	
231024_VP26_DW	24 October 2023	GJ	45	7	26	Yes	N16	N17	FALSE	Skene	Skene	F	
231024_VP26_DW	24 October 2023	PG	90	8	26	Yes	N13	N14	FALSE		Skene	F	
231024_VP27_AM	24 October 2023	KT	2	9	27	No			FALSE			F	
231024_VP27_AM	24 October 2023	PG	52	10	27	No			FALSE		Skene	F	
231024_VP27_AM	24 October 2023	PG	6	11	27	No			FALSE		Skene	F	

58 BTO Codes: CU – Curlew; GI – Goshawk; GJ – Greylag Goose; GP – Golden Plover; HH – Hen Harrier; KT – Red Kite; L – Lapwing; LE – Long-eared Owl; ML – Merlin; PE – Peregrine; PG- Pink footed Goose; WS – Whooper Swan

59 Number of birds recorded in flight line

60 If the tracked flight line was drawn over the Proposed Development 'Yes' ; if the flight line did not intersect the Proposed Development at any point 'No'.

61 Birds described as flying at pch ('TRUE' 10-75m agl) or above/below pch ('FALSE')

62 Flight activity of qualifying species of Designated Sites – named Sites

63 Section A-F of the Proposed Development

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231024_VP32_DW	24 October 2023	PG	80	12	32	No			FALSE		Skene	F	
231024_VP28_AM	24 October 2023	PG	1	13	28	Yes	N28	N29	FALSE		Skene	F	
231024_VP32_DW	24 October 2023	PG	26	14	32	No			TRUE		Skene	F	
231024_VP28_AM	24 October 2023	PG	55	15	28	Yes	N36	N37	TRUE		Skene	F	
231024_VP28_AM	24 October 2023	GP	6	16	28	No			FALSE			F	
231024_VP32_DW	24 October 2023	PG	125	17	32	No			FALSE		Skene	F	
231024_VP32_DW	24 October 2023	PG	430	18	32	No			FALSE		Skene	F	
231024_VP28_AM	24 October 2023	PG	180	19	28	Yes	N35	N36	FALSE		Skene	F	
231024_VP32_DW	24 October 2023	GJ	26	20	32	No			TRUE	Skene	Skene	F	
231024_VP32_DW	24 October 2023	GJ	110	21	32	No			FALSE	Skene	Skene	F	
231024_VP32_DW	24 October 2023	GJ	30	22	32	No			TRUE	Skene	Skene	F	
231024_VP32_DW	24 October 2023	GJ	20	23	32	No			FALSE	Skene	Skene	F	
231024_VP32_DW	24 October 2023	PG	75	24	32	No			TRUE		Skene	F	
231024_VP28_AM	24 October 2023	GP	17	25	28	No			FALSE			F	
231024_VP32_DW	24 October 2023	PG	55	26	32	No			TRUE		Skene	F	
231025_VP31_DW	25 October 2023	PG	40	27	31	No			FALSE		Skene	F	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231025_VP33_AM	25 October 2023	GJ	2	28	33	No			TRUE	Skene	Skene	F	Lost sight in low hanging cloud
231025_VP33_AM	25 October 2023	PG	26	29	33	No			FALSE		Skene	F	Lost sight in low hanging cloud
231025_VP33_AM	25 October 2023	PG	12	30	33	Yes	N37	N38	FALSE		Skene	F	Lost sight in low hanging cloud
231025_VP30_AM	25 October 2023	LE	1	31	30	No			FALSE			F	Interacting with C.
231025_VP30_AM	25 October 2023	L.	25	32	30	Yes	N44e	N45	FALSE		Skene	F	
231026_VP20_JND	26 October 2023	PG	13	33	20	Yes	S154	S155	FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	PG	21	34	20	Yes	S153	S154	FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	PG	670	35	20	Yes	S152	S153	FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	PG	120	36	20	Yes	S152	S153	FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	PG	175	37	20	No			FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	PG	100	38	20	No			FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	PG	9	39	20	No			FALSE	Kinnordy		B	
231026_VP20_JND	26 October 2023	KT	1	40	20	No			FALSE			B	
231026_VP17_JND	26 October 2023	PG	120	41	17	No			FALSE	Montrose	Montrose	C	
231026_VP17_JND	26 October 2023	PG	25	42	17	No			TRUE	Montrose	Montrose	C	
231026_VP17_JND	26 October 2023	PG	12	43	17	No			FALSE	Montrose	Montrose	C	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231026_VP10_DW	26 October 2023	PG	240	44	10	No			TRUE	Montrose	Montrose	C	Landed in field by Dalladies, feeding
231026_VP10_DW	26 October 2023	PG	60	45	10	No			FALSE	Montrose	Montrose	C	Joined first flock
231026_VP10_DW	26 October 2023	PG	70	46	10	No			FALSE	Montrose	Montrose	C	Flew over to next field
231026_VP10_DW	26 October 2023	PG	11	47	10	No			FALSE	Montrose	Montrose	C	
231026_VP10_DW	26 October 2023	PG	70	48	10	No			FALSE	Montrose	Montrose	C	Moved to another field again
231026_VP10_DW	26 October 2023	PG	230	49	10	No			FALSE	Montrose	Montrose	C	
231026_VP10_DW	26 October 2023	PG	70	50	10	No			FALSE	Montrose	Montrose	C	
231026_VP10_DW	26 October 2023	PG	190	51	10	No			FALSE	Montrose	Montrose	C	
231026_VP10_DW	26 October 2023	PG	50	52	10	No			FALSE	Montrose	Montrose	C	
231026_VP10_DW	26 October 2023	GJ	4	53	10	No			TRUE	Montrose	Montrose	C	
231026_VP11_DW	26 October 2023	PG	1	54	11	Yes	S91	S92	TRUE	Montrose	Montrose	C	Lone bird, flew towards large flock and joined them
231026_VP11_DW	26 October 2023	PG	180	55	11	Yes	S86	S87	TRUE	Montrose	Montrose	C	
231026_VP11_DW	26 October 2023	PG	60	56	11	Yes	S86	S87	TRUE	Montrose	Montrose	C	
231031_VP34_VC	31 October 2023	KT	1	57	34	No			FALSE			F	
231031_VP34_VC	31 October 2023	PG	20	58	34	No			FALSE			F	
231031_VP34_VC	31 October 2023	PG	30	59	34	No			FALSE			F	Only watched briefly as larger group

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
													passing same time to the west through F1.2
231031_VP34_VC	31 October 2023	PG	90	60	34	No			FALSE			F	
231031_VP18_AM	31 October 2023	PG	105	61	18	No			FALSE	Montrose	Montrose	C	
231031_VP18_AM	31 October 2023	HH	1	62	18	No			FALSE			C	Took off from ground, hunting
231031_VP18_AM	31 October 2023	GP	64	63	18	No			TRUE			C	
231031_VP18_AM	31 October 2023	KT	1	64	18	No			FALSE			C	Hunting, landed on grass
231031_VP18_AM	31 October 2023	GP	64	65	18	No			TRUE			C	
231031_VP18_AM	31 October 2023	PG	233	66	18	No			FALSE	Montrose	Montrose	C	
231031_VP18_AM	31 October 2023	GP	70	67	18	No			TRUE			C	
231031_VP18_AM	31 October 2023	PG	90	68	18	No			FALSE	Montrose	Montrose	C	
231031_VP18_AM	31 October 2023	PG	35	69	18	No			FALSE	Montrose	Montrose	C	
231031_VP18_AM	31 October 2023	GP	18	70	18	No			FALSE			C	
231031_VP18_AM	31 October 2023	PG	80	71	18	No			FALSE	Montrose	Montrose	C	
231031_VP18_AM	31 October 2023	PG	95	72	18	No			FALSE	Montrose	Montrose	C	
231031_VP18_AM	31 October 2023	PG	350	73	18	No			FALSE	Montrose	Montrose	C	
231101_VP12_DW	01 November 2023	L.	6	75	12	No			FALSE			C	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231101_VP12_DW	01 November 2023	GJ	12	76	12	Yes	S99	S100	FALSE	Montrose	Montrose	C	
231101_VP35_DW	01 November 2023	KT	1	77	35	No			FALSE			C	Landed in field
231101_VP35_DW	01 November 2023	KT	1	78	35	No			FALSE			C	
231101_VP35_DW	01 November 2023	KT	1	79	35	No			TRUE			C	
231101_VP35_DW	01 November 2023	KT	1	80	35	No			FALSE			C	
231101_VP35_DW	01 November 2023	KT	1	81	35	No			FALSE			C	Recorded simultaneously w KT seen at 10:21
231101_VP35_DW	01 November 2023	KT	1	82	35	No			FALSE			C	
231101_VP35_DW	01 November 2023	KT	1	83	35	Yes	S110	S111	FALSE			C	
231101_VP35_DW	01 November 2023	KT	1	84	35	No			FALSE			C	
231101_VP20_SK	01 November 2023	PG	75	85	20	No			FALSE	Kinnordy		B	
231101_VP20_SK	01 November 2023	PG	28	86	20	No			FALSE	Kinnordy		B	
231108_VP26_AM	08 November 2023	PG	45	87	26	Yes	N17	N18	FALSE		Skene	F	
231108_VP26_AM	08 November 2023	GJ	14	88	26	No			TRUE	Skene	Skene	F	
231108_VP26_AM	08 November 2023	KT	1	89	26	Yes	N16	N17	TRUE			F	
231108_VP28_DW	08 November 2023	GP	45	90	28	No			FALSE			F	
231108_VP26_AM	08 November 2023	GP	75	91	26	Yes	N13	N14	FALSE			F	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231108_VP26_AM	08 November 2023	PG	80	92	26	No			TRUE		Skene	F	
231108_VP26_AM	08 November 2023	PG	18	93	26	Yes	N16	N17	FALSE		Skene	F	
231108_VP26_AM	08 November 2023	PG	1	94	26	Yes	N14	N15	TRUE		Skene	F	
231108_VP26_AM	08 November 2023	KT	1	95	26	No			FALSE			F	
231108_VP26_AM	08 November 2023	PG	158	96	26	Yes	N12	N13	FALSE		Skene	F	
231108_VP26_AM	08 November 2023	GP	30	97	26	No			FALSE			F	
231108_VP26_AM	08 November 2023	PG	9	98	26	Yes	N13	N14	FALSE		Skene	F	
231108_VP26_AM	08 November 2023	KT	1	99	26	No			TRUE			F	
231108_VP27_AM	08 November 2023	KT	1	100	27	No			TRUE			F	
231108_VP27_AM	08 November 2023	GP	13	101	27	No			TRUE			F	
231108_VP27_AM	08 November 2023	PG	1	102	27	No			FALSE		Skene	F	
231108_VP29_DW	08 November 2023	PG	1	103	29	Yes	N41	N42	FALSE		Skene	F	Lone flight- called
231108_VP27_AM	08 November 2023	PG	12	104	27	Yes	N17	N18	FALSE		Skene	F	
231108_VP29_DW	08 November 2023	PG	1	105	29	No			FALSE		Skene	F	Another lone flight
231108_VP27_AM	08 November 2023	PG	3	106	27	No			FALSE		Skene	F	
231108_VP27_AM	08 November 2023	PG	52	107	27	Yes	N18	N19	TRUE		Skene	F	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231108_VP27_AM	08 November 2023	WS	3	108	27	No			FALSE			F	
231108_VP27_AM	08 November 2023	PG	750	109	27	Yes	N17	N18	TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	22	110	29	Yes	N39	N40	TRUE		Skene	F	
231108_VP27_AM	08 November 2023	PG	2700	111	27	Yes	N19	N20	TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	42	112	29	No			TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	26	113	29	Yes	N40	N41	FALSE		Skene	F	
231108_VP27_AM	08 November 2023	PG	32	114	27	Yes	N19	N20	TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	50	115	29	Yes	N40	N41	FALSE		Skene	F	
231108_VP29_DW	08 November 2023	PG	50	116	29	No			FALSE		Skene	F	
231108_VP29_DW	08 November 2023	PG	130	117	29	Yes	N40	N41	TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	170	118	29	No			TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	64	119	29	No			FALSE		Skene	F	
231108_VP29_DW	08 November 2023	PG	140	120	29	No			TRUE		Skene	F	
231108_VP29_DW	08 November 2023	PG	12	121	29	No			FALSE		Skene	F	
231109_VP30_AM	09 November 2023	PG	2	122	30	No			TRUE		Skene	F	
231109_VP30_AM	09 November 2023	WS	5	123	30	No			TRUE			F	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231109_VP30_AM	09 November 2023	PG	81	124	30	Yes	N42e	N43	FALSE		Skene	F	Appeared to be landing in field
231109_VP30_AM	09 November 2023	PG	28	125	30	Yes	N43e	N44	FALSE		Skene	F	Appeared to be landing in same spot as previous flock
231109_VP30_AM	09 November 2023	PG	98	126	30	Yes	e	e	FALSE		Skene	F	
231109_VP30_AM	09 November 2023	PG	14	127	30	No			TRUE		Skene	F	
231109_VP30_AM	09 November 2023	PE	1	128	30	No			FALSE			F	
231109_VP30_AM	09 November 2023	PG	155	129	30	Yes	N40e	N41	TRUE		Skene	F	
231109_VP30_AM	09 November 2023	KT	1	130	30	No			TRUE			F	
231109_VP30_AM	09 November 2023	PG	15	131	30	Yes	N44e	N45	TRUE		Skene	F	
231109_VP30_AM	09 November 2023	PG	140	132	30	Yes	N43e	N44	FALSE		Skene	F	Appeared to be landing in field with previous flocks
231109_VP31_DW	09 November 2023	PG	16	133	31	No			TRUE		Skene	F	
231109_VP30_AM	09 November 2023	PG	44	134	30	No			FALSE		Skene	F	
231109_VP30_AM	09 November 2023	PG	59	135	30	Yes	N48	N49	FALSE		Skene	F	
231109_VP30_AM	09 November 2023	PG	9	136	30	Yes	N45e	N46	FALSE		Skene	F	
231109_VP30_AM	09 November 2023	PG	26	137	30	Yes	N41e	N42	FALSE		Skene	F	
231109_VP21_SK	09 November 2023	PG	112	138	21	Yes	S167	S168	FALSE	Kinnordy		B	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231109_VP21_SK	09 November 2023	PG	45	139	21	Yes	S167	S168	FALSE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	1	140	21	Yes	S167	S168	TRUE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	34	141	21	Yes	S166	S167	FALSE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	68	142	21	Yes	S164	S165	TRUE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	3000	143	21	No			FALSE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	2100	144	21	Yes	S166	S167	FALSE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	93	145	21	Yes	S161	S162	FALSE	Kinnordy		B	
231109_VP21_SK	09 November 2023	WS	24	146	21	Yes	S164	S165	FALSE			B	
231109_VP21_SK	09 November 2023	WS	8	147	21	No			FALSE			B	
231109_VP21_SK	09 November 2023	WS	34	148	21	Yes	S162	S163	FALSE			B	
231109_VP21_SK	09 November 2023	PG	64	149	21	Yes	S163	S164	TRUE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	57	150	21	No			FALSE	Kinnordy		B	
231109_VP21_SK	09 November 2023	PG	24	151	21	No			TRUE	Kinnordy		B	
231109_VP21_SK	09 November 2023	WS	9	152	21	No			FALSE			B	
231109_VP21_SK	09 November 2023	PG	2000	153	21	Yes	S168	S169	FALSE	Kinnordy		B	
231115_VP1_VC	15 November 2023	PG	2	154	1	Yes	N1	N2	FALSE		Skene	F	

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231115_VP32_DW	15 November 2023	PG	170	155	32	No			TRUE		Skene	F	
231116_VP11_DW	16 November 2023	PG	45	156	11	Yes	S89	S90	TRUE	Montrose	Montrose	C	
231116_VP11_DW	16 November 2023	GP	7	157	11	Yes	S91	S92	FALSE		Montrose	C	
231116_VP11_DW	16 November 2023	PG	60	158	11	Yes	S87	S88	TRUE	Montrose	Montrose	C	
231116_VP11_DW	16 November 2023	PG	80	159	11	Yes	S89	S90	FALSE	Montrose	Montrose	C	
231116_VP11_DW	16 November 2023	PG	90	160	11	No			TRUE	Montrose	Montrose	C	
231116_VP11_DW	16 November 2023	PG	35	161	11	No			TRUE	Montrose	Montrose	C	
231116_VP11_DW	16 November 2023	PG	190	162	11	Yes	S92	S93	FALSE	Montrose	Montrose	C	
231130_VP28_DW	30 November 2023	PG	64	163	28	No			FALSE		Skene	F	
231130_VP28_DW	30 November 2023	PG	55	164	28	Yes	N27	N28	TRUE		Skene	F	
231130_VP28_DW	30 November 2023	PG	95	165	28	Yes	N32	N33	FALSE		Skene	F	
231130_VP28_DW	30 November 2023	PG	17	166	28	No			FALSE		Skene	F	
231130_VP28_DW	30 November 2023	PG	230	167	28	No			FALSE		Skene	F	
231130_VP28_DW	30 November 2023	PG	35	168	28	No			TRUE		Skene	F	
231130_VP28_DW	30 November 2023	PG	18	169	28	Yes	N25	N26	TRUE		Skene	F	
231130_VP28_DW	30 November 2023	PG	370	170	28	Yes	N23	N24	TRUE		Skene	F	Heading towards Skene

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Session	Date	Species ⁵⁸	Number ⁵⁹	Flight number	Vantage Point	Crossing ⁶⁰	South tower	North tower	At pch ⁶¹	SPA feature ⁶²	SSSI	Section ⁶³	Notes
231130_VP27_DW	30 November 2023	PG	40	171	27	No			FALSE		Skene	F	
231130_VP27_DW	30 November 2023	PG	60	172	27	No			TRUE		Skene	F	
231130_VP27_DW	30 November 2023	PG	60	173	27	Yes	N15	N16	TRUE		Skene	F	
231130_VP27_DW	30 November 2023	PG	55	174	27	Yes	N19	N20	FALSE		Skene	F	
231130_VP27_DW	30 November 2023	PG	88	175	27	Yes	N18	N19	FALSE		Skene	F	
231130_VP27_DW	30 November 2023	PG	93	176	27	Yes	N17	N18	TRUE		Skene	F	
231201_VP29_DW	01 December 2023	PG	1	177	29	Yes	N47e	N48	TRUE		Skene	F	Lone goose
231201_VP29_DW	01 December 2023	GJ	12	178	29	Yes	N39	N40	FALSE	Skene	Skene	F	
231201_VP29_DW	01 December 2023	PG	100	179	29	No			FALSE		Skene	F	
231201_VP29_DW	01 December 2023	PG	1	180	29	Yes	N40	N41	TRUE		Skene	F	Lone goose
231201_VP29_DW	01 December 2023	GP	42	181	29	Yes	N41e	N42	TRUE			F	
231201_VP29_DW	01 December 2023	PG	60	182	29	Yes	N41	N42	FALSE		Skene	F	Changed direction multiple times
231201_VP29_DW	01 December 2023	PG	40	183	29	Yes	N38	N39	TRUE		Skene	F	
231201_VP29_DW	01 December 2023	PG	5	184	29	No			FALSE		Skene	F	
231201_VP29_DW	01 December 2023	PG	20	185	29	Yes	N37	N38	TRUE		Skene	F	
231201_VP29_DW	01 December 2023	PG	45	186	29	No			TRUE		Skene	F	

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231201_VP29_DW	01 December 2023	PG	40	187	29	Yes	N41	N42	FALSE		Skene	F	
231201_VP29_DW	01 December 2023	PG	18	188	29	Yes	N41	N42	FALSE		Skene	F	
231201_VP29_DW	01 December 2023	PG	25	189	29	Yes	N38	N39	TRUE		Skene	F	
231201_VP29_DW	01 December 2023	PG	170	190	29	Yes	N38	N39	FALSE		Skene	F	Landed in field
231201_VP29_DW	01 December 2023	PG	80	191	29	Yes	N41	N42			Skene	F	
231201_VP29_DW	01 December 2023	PG	50	192	29	Yes	N39	N40	TRUE		Skene	F	Joined flock feeding on ground
231201_VP29_DW	01 December 2023	PG	21	193	29	Yes	N39	N40	TRUE		Skene	F	Joined flock on the ground
231201_VP29_DW	01 December 2023	PG	45	194	29	Yes	N40e	N41	FALSE		Skene	F	
231201_VP29_DW	01 December 2023	PG	60	195	29	Yes	N37	N38	TRUE		Skene	F	Joined flock in field
231205_VP25_AM	05 December 2023	WS	3	196	25	No			TRUE			A	
231218_VP11_AM	18 December 2023	PG	230	197	11	No			TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	230	197	11	No			FALSE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	145	199	11	No			FALSE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	145	199	11	No			TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	1	201	11	No			FALSE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	1	201	11	No			TRUE	Montrose	Montrose	C	

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231218_VP11_AM	18 December 2023	PG	180	203	11	Yes	S86	S87	FALSE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	96	206	11	Yes	S88	S89	TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	96	206	11	Yes	S94	S95	TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	45	208	11	Yes	S93	S94	TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	12	209	11	Yes	S89	S90	TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	35	210	11	No			FALSE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	PG	84	211	11	No			FALSE	Montrose	Montrose	C	
231218_VP20_JND	18 December 2023	KT	1	212	20	No			FALSE			B	
231218_VP11_AM	18 December 2023	PG	22	213	11	No			TRUE	Montrose	Montrose	C	
231218_VP11_AM	18 December 2023	GP	80	214	11	No			TRUE			C	
231218_VP11_AM	18 December 2023	PG	1	215	11	No			TRUE	Montrose	Montrose	C	
231218_VP20_JND	18 December 2023	PG	234	216	20	Yes	S153	S154	TRUE	Kinnordy		B	
231218_VP20_JND	18 December 2023	PG	21	217	20	Yes	S153	S154	FALSE	Kinnordy		B	
231218_VP11_AM	18 December 2023	PG	5	218	11	Yes	S95	S96	TRUE	Montrose	Montrose	C	
231218_VP20_JND	18 December 2023	PG	195	219	20	No			FALSE	Kinnordy		B	
231218_VP20_JND	18 December 2023	PG	300	220	20	No			TRUE	Kinnordy		B	

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231218_VP20_JND	18 December 2023	PG	180	221	20	No			FALSE	Kinnordy		B	
231218_VP21_JND	18 December 2023	PG	650	222	21	Yes	S161	S162	FALSE	Kinnordy		B	
231218_VP21_JND	18 December 2023	PG	1	224	21	No			FALSE	Kinnordy		B	
231218_VP21_JND	18 December 2023	PG	115	226	21	Yes	S159	S160	FALSE	Kinnordy		B	
231218_VP21_JND	18 December 2023	KT	5	232	21	Yes	S162	S163	TRUE			B	5 birds recorded flying similar direction possibly towards roost
231218_VP21_JND	18 December 2023	PG	100	234	21	Yes	S163	S164	FALSE	Kinnordy		B	
231219_VP10_JND	19 December 2023	PG	88	240	10	Yes	S81	S82	FALSE	Montrose	Montrose	C	
231219_VP10_JND	19 December 2023	PG	20	244	10	Yes	S78	S79	FALSE	Montrose	Montrose	C	
231219_VP10_JND	19 December 2023	KT	1	245	10	No			FALSE			C	
231219_VP12_AM	19 December 2023	PG	52	246	12	No			FALSE	Montrose	Montrose	C	
231219_VP12_AM	19 December 2023	PG	1	247	12	Yes	S101	S102	TRUE	Montrose	Montrose	C	
231219_VP12_AM	19 December 2023	GI	1	248	12	Yes	S100	S101	FALSE			C	
231219_VP10a_JND	19 December 2023	PG	1050	249	10	Yes	S67	S68	FALSE	Montrose	Montrose	C	Put up by small 'plane and flew to stubble fields
231219_VP12_AM	19 December 2023	KT	1	250	12	No			TRUE			C	
231219_VP10a_JND	19 December 2023	PG	420	251	10	Yes	S68	S69	FALSE	Montrose	Montrose	C	Some birds returning to Winter crop field

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231219_VP12_AM	19 December 2023	GI	2	252	12	No			TRUE			C	Soaring, interacting/flying together, lost behind foreground trees
231219_VP12_AM	19 December 2023	GI	2	253	12	No			FALSE			C	Brief sighting of pair flying through trees
231219_VP10a_JND	19 December 2023	GP	85	254	10	No			FALSE			C	Flushed
231219_VP12_AM	19 December 2023	GI	1	255	12	No			FALSE			C	Brief flight through trees
231219_VP10a_JND	19 December 2023	PG	44	256	10	Yes	S67	S68	FALSE	Montrose	Montrose	C	Several flights between the Goose flocks all low below pch
231219_VP12_AM	19 December 2023	GI	1	257	12	Yes	S101	S102	TRUE			C	Lost behind foreground trees
231219_VP12_AM	19 December 2023	PG	2	258	12	Yes	S97	S98	FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	35	259	WWO	No			FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	275	260	WWO	No			TRUE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	2	261	WWO	No			TRUE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	35	262	WWO	Yes	S63	S64	FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	15	264	WWO	No			FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	205	265	WWO	No			TRUE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	205	266	WWO	No			TRUE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	120	267	WWO	No			TRUE	Montrose	Montrose	C	

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240109_WWO_AM	09 January 2024	PG	150	268	WWO	No			TRUE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	7	269	WWO	No			FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	205	270	WWO	No			FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	165	272	WWO	Yes	S58	S59	FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	46	273	WWO	Yes	S62	S63	FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	95	274	WWO	No			FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	80	275	WWO	No			FALSE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	105	276	WWO	Yes	S61	S62	TRUE	Montrose	Montrose	C	
240109_WWO_AM	09 January 2024	PG	12	277	WWO	Yes	S61	S62	FALSE	Montrose	Montrose	C	
240109_VP22_AM	09 January 2024	ML	1	278	22	No			TRUE			B	Lost sight as bird flew behind tree
240111_VP20_DW	11 January 2024	L.	22	279	20	No			FALSE			B	
240111_VP20_DW	11 January 2024	KT	1	280	20	No			TRUE			B	Flying with another adult
240111_VP20_DW	11 January 2024	KT	1	281	20	No			TRUE			B	Flying with other adult but remained after other KT left area
240111_VP20_DW	11 January 2024	PG	170	282	20	No			FALSE	Kinnordy		B	
240111_VP20_DW	11 January 2024	PG	34	283	20	Yes	S149	S150	TRUE	Kinnordy		B	

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240111_VP20_DW	11 January 2024	PG	15	284	20	Yes	S152	S153	FALSE	Kinnordy		B	
240111_VP20_DW	11 January 2024	PG	1400	285	20	Yes	S152	S153	FALSE	Kinnordy		B	Flock feeding behind treeline emerged and moved to field closer to VP continued roosting and feeding
240111_VP21_DW	11 January 2024	KT	1	286	21	No			FALSE			B	
240111_VP21_DW	11 January 2024	PG	2	287	21	Yes	S162	S163	TRUE	Kinnordy		B	
240111_VP21_DW	11 January 2024	GJ	21	288	21	Yes	S161	S162	FALSE	Kinnordy	Kinnordy	B	
240116_VP1_JND	16 January 2024	PG	18	289	1	Yes	N6	N7	FALSE		Skene	F	
240116_VP31_JND	16 January 2024	PG	2	290	31	No			FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	160	291	27	Yes	N16	N17	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	340	292	27	Yes	N17	N18	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	800	293	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	390	294	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	HH	1	295	28	Yes	N28	N29	TRUE			F	
240117_VP27_SK	17 January 2024	PG	310	296	27	Yes	N17	N18	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	700	297	27	Yes	N16	N17	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	250	298	27	Yes	N15	N16	TRUE		Skene	F	

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240117_VP27_SK	17 January 2024	PG	1300	299	27	Yes	N15	N16	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	1700	300	27	Yes	N16	N17	TRUE		Skene	F	
240117_VP25_JND	17 January 2024	PG	425	301	25	No			FALSE	Tay	Tay	A	
240117_VP27_SK	17 January 2024	PG	250	302	27	Yes	N15	N16	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	16	303	28	No			FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	220	304	27	Yes	N18	N19	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	160	305	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	340	306	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	80	307	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP25_JND	17 January 2024	PG	30	308	25	No			FALSE	Tay	Tay	A	
240117_VP25_JND	17 January 2024	PG	1200	309	25	No			FALSE	Tay	Tay	A	
240117_VP27_SK	17 January 2024	PG	250	310	27	Yes	N17	N18	FALSE		Skene	F	
240117_VP25_JND	17 January 2024	PG	750	311	25	No			FALSE	Tay	Tay	A	
240117_VP27_SK	17 January 2024	PG	170	312	27	Yes	N15	N16	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	240	313	28	Yes	N19	N20	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	240	314	27	Yes	N19	N20	TRUE		Skene	F	

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240117_VP27_SK	17 January 2024	PG	42	315	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	80	316	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	210	317	27	Yes	N19	N20	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	18	318	27	Yes	N18	N19	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	260	319	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	319	320	28	Yes	N19	N20	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	250	321	27	Yes	N17	N18	TRUE		Skene	F	
240117_VP28_AM	17 January 2024	PG	75	322	28	Yes	N35	N36	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	9	323	28	No			TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	45	324	27	Yes	N18	N19	TRUE		Skene	F	
240117_VP27_SK	17 January 2024	PG	60	325	27	Yes	N13	N14	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	18	326	28	No			FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	6	327	28	No			FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	1	328	28	Yes	N23	N24	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	140	329	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP25_JND	17 January 2024	PG	450	330	25	Yes	S200	S201	TRUE	Tay	Tay	A	

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240117_VP27_SK	17 January 2024	PG	190	331	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	20	332	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	190	333	27	Yes	N13	N14	FALSE		Skene	F	
240117_VP27_SK	17 January 2024	PG	70	334	27	Yes	N16	N17	FALSE		Skene	F	
240117_VP28_AM	17 January 2024	PG	60	335	28	Yes	N18	N19	FALSE		Skene	F	
240117_VP32_AM	17 January 2024	PE	1	336	32	No			TRUE			F	
240117_VP32_AM	17 January 2024	KT	1	337	32	No			TRUE			F	
240117_VP11_JND	17 January 2024	KT	1	338	11	No			FALSE			C	
240117_VP11_JND	17 January 2024	ML	1	339	11	No			FALSE			C	
240117_VP11_JND	17 January 2024	KT	1	340	11	Yes	S90	S91	FALSE			C	
240117_VP11_JND	17 January 2024	KT	1	341	11	No			FALSE			C	
240117_VP11_JND	17 January 2024	KT	1	342	11	Yes	S91	S92	FALSE			C	Two with one returning to roadside trees
240117_VP11_JND	17 January 2024	KT	1	343	11	Yes	S90	S91	FALSE			C	
240117_VP29_SK	17 January 2024	PG	80	344	29	Yes	N43	N44	FALSE		Skene	F	
240126_VP10_JND	26 January 2024	GJ	2	345	10	No			TRUE	Montrose	Montrose	C	
240126_VP10_JND	26 January 2024	KT	2	346	10	No			FALSE			C	

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240126_VP10_JND	26 January 2024	KT	2	347	10	No			FALSE			C	
240126_VP10_JND	26 January 2024	PG	88	348	10	Yes	S80	S81	TRUE	Montrose	Montrose	C	
240126_VP10_JND	26 January 2024	L.	2	349	10	Yes	S81	S82	FALSE			C	
240126_VP10_JND	26 January 2024	KT	1	350	10	Yes	S82	S83	FALSE			C	
240126_VP10_JND	26 January 2024	KT	1	351	10	Yes	S80	S81	FALSE			C	
240126_VP10_JND	26 January 2024	PG	19	352	10	Yes	S80	S81	FALSE	Montrose	Montrose	C	
240126_VP10_JND	26 January 2024	PG	24	353	10	No			FALSE	Montrose	Montrose	C	
240206_VP27_DW	06 February 2024	PG	28	354	27	Yes	N12	N13	FALSE		Skene	F	
240206_VP27_DW	06 February 2024	PG	1	355	27	No			FALSE		Skene	F	Lone goose
240207_VP26_DW	07 February 2024	PG	85	356	26	Yes	N15	N16	TRUE		Skene	F	
240207_VP26_DW	07 February 2024	PG	90	357	26	Yes	N14	N15	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	65	358	26	Yes	N14	N15	TRUE		Skene	F	
240207_VP26_DW	07 February 2024	GJ	23	359	26	Yes	N15	N16	FALSE	Skene	Skene	F	
240207_VP26_DW	07 February 2024	PG	40	360	26	Yes	N14	N15	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	50	361	26	Yes	N14	N15	FALSE		Skene	F	Originally with the flock of 40 but split off, seemed to be preparing to land

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240207_VP26_DW	07 February 2024	PG	35	362	26	No			FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	40	363	26	Yes	N13	N14	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	45	364	26	Yes	N12	N13	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	190	365	26	Yes	N16	N17	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	26	366	26	No			TRUE		Skene	F	
240207_VP26_DW	07 February 2024	PG	43	367	26	Yes	N15	N16	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	31	368	26	No			FALSE		Skene	F	
240207_VP26_DW	07 February 2024	PG	40	369	26	Yes	N12	N13	FALSE		Skene	F	
240207_VP26_DW	07 February 2024	GJ	3	370	26	Yes	N14	N15	TRUE	Skene	Skene	F	
240207_VP26_DW	07 February 2024	PG	14	371	26	Yes	N14	N15	TRUE		Skene	F	
240207_VP29_DW	07 February 2024	GJ	14	372	29	Yes	N40	N41	TRUE	Skene	Skene	F	
240207_VP29_DW	07 February 2024	PG	12	373	29	No			FALSE		Skene	F	
240207_VP29_DW	07 February 2024	GJ	26	374	29	No			FALSE	Skene	Skene	F	Geese from pond left area, lost sight behind trees
240207_VP29_DW	07 February 2024	GJ	1	375	29	No			FALSE	Skene	Skene	F	Lone goose, landed at pond edge
240207_VP29_DW	07 February 2024	GJ	1	376	29	Yes	N41	N42	FALSE	Skene	Skene	F	Lone goose, goose already on ground calling to it, landed

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240207_VP29_DW	07 February 2024	GJ	10	377	29	No			TRUE	Skene	Skene	F	Landed in field near pond
240207_VP29_DW	07 February 2024	PG	25	378	29	No			TRUE		Skene	F	Landed in same field as GJ
240207_VP29_DW	07 February 2024	KT	1	379	29	No			FALSE			F	
240208_VP12_JND	08 February 2024	PG	25	380	12	Yes	S103	S104	FALSE	Montrose	Montrose	C	
240208_VP12_JND	08 February 2024	KT	1	381	12	No			FALSE			C	
240207_VP35_DW	08 February 2024	HH	1	382	35	No			FALSE			C	Flying low over field then perched on fence post
240207_VP35_DW	08 February 2024	HH	1	383	35	No			FALSE			C	Same individual as previous flight, left perch then flew back over field, lost sight over crest of hill
240207_VP35_DW	08 February 2024	PG	67	384	35	No			FALSE	Montrose	Montrose	C	
240207_VP35_DW	08 February 2024	PG	23	385	35	No			TRUE	Montrose	Montrose	C	Lost sight over tree line by VP
240207_VP35_DW	08 February 2024	PG	11	386	35	No			TRUE	Montrose	Montrose	C	
240117_VP27_SK	10 February 2024	PG	1	387	27	Yes	N15	N16	FALSE		Skene	F	
240215_VP21_JND	15 February 2024	PG	85	388	21	Yes	S162	S163	FALSE	Kinnordy		B	
240215_VP21_JND	15 February 2024	PG	49	389	21	Yes	S164	S165	FALSE	Kinnordy		B	
240215_VP25_DW	15 February 2024	PG	1	390	25	Yes	S204	S205	FALSE	Tay	Tay	A	Lone goose
240215_VP21_JND	15 February 2024	PE	1	391	21	No			FALSE			B	Male in tree mobbed by crows until it left

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240215_VP25_DW	15 February 2024	PG	12	392	25	Yes	S204	S205	FALSE	Tay	Tay	A	Heard before seen, fog reduced visibility of flight
240215_VP21_JND	15 February 2024	PG	8	393	21	No			FALSE	Kinnordy		B	
240227_VP31_AM	27 February 2024	KT	1	394	31	No			TRUE			F	
240227_VP30_DW	27 February 2024	KT	1	395	30	No			FALSE			F	
240227_VP30_DW	27 February 2024	KT	1	396	30	Yes	N47e	N48	TRUE			F	
240227_VP30_DW	27 February 2024	KT	1	397	30	No			TRUE			F	
240227_VP30_DW	27 February 2024	KT	1	398	30	No			FALSE			F	
240227_VP30_DW	27 February 2024	KT	1	399	30	No			TRUE			F	
240227_VP30_DW	27 February 2024	KT	1	400	30	No			TRUE			F	
240227_VP31_AM	27 February 2024	KT	1	401	31	No			FALSE			F	
240227_VP30_DW	27 February 2024	KT	1	402	30	No			FALSE			F	
240227_VP30_DW	27 February 2024	KT	1	403	30	Yes	N46e	N47	FALSE			F	
240227_VP30_DW	27 February 2024	PG	38	404	30	Yes	N44e	N45	FALSE		Skene	F	Landed in field within Proposed Development boundary
240228_VP27_DW	28 February 2024	PG	64	405	27	Yes	N17	N18	TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	94	406	27	Yes	N19	N20	TRUE		Skene	F	

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240228_VP27_DW	28 February 2024	PG	34	407	27	No			FALSE		Skene	F	
240228_VP27_DW	28 February 2024	PG	35	408	27	Yes	N18	N19	TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	190	409	27	Yes	N19	N20	TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	1800	410	27	Yes	N10	N11	TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	375	411	27	Yes	N18	N19	TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	130	412	27	Yes	N19	N20	FALSE		Skene	F	
240228_VP27_DW	28 February 2024	PG	85	413	27	No			TRUE		Skene	F	
240228_VP27_DW	28 February 2024	GJ	2	414	27	No			FALSE	Skene	Skene	F	
240228_VP27_DW	28 February 2024	GJ	2	415	27	Yes	N19	N20	FALSE	Skene	Skene	F	
240228_VP27_DW	28 February 2024	PG	1700	416	27	No			TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	160	417	27	Yes	N17	N18	TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	60	418	27	Yes	N21	N22	FALSE		Skene	F	
240228_VP27_DW	28 February 2024	PG	50	419	27	Yes	N15	N16	FALSE		Skene	F	
240228_VP27_DW	28 February 2024	PG	60	421	27	Yes	N12	N13	FALSE		Skene	F	
240228_VP27_DW	28 February 2024	PG	2	422	27	No			TRUE		Skene	F	
240228_VP27_DW	28 February 2024	PG	2	424	27	No			TRUE		Skene	F	

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240228_VP28_DW	28 February 2024	PG	60	425	28	Yes	N27	N28	TRUE		Skene	F	
240228_VP28_DW	28 February 2024	GJ	2	426	28	Yes	N29	N30	TRUE	Skene	Skene	F	
240228_VP28_DW	28 February 2024	PG	64	427	28	Yes	N28	N29	FALSE		Skene	F	
240228_VP28_DW	28 February 2024	GJ	2	428	28	No			TRUE	Skene	Skene	F	
240228_VP28_DW	28 February 2024	GJ	2	429	28	Yes	N29	N30	FALSE	Skene	Skene	F	
240228_VP28_DW	28 February 2024	GJ	2	430	28	No			FALSE	Skene	Skene	F	
240228_VP27_DW	01 March 2024	PG	75	431	27	No			TRUE		Skene	F	
240307_VP29_MO	07 March 2024	GJ	1	432	29	No			FALSE	Skene	Skene	F	
240307_VP29_MO	07 March 2024	PG	2	433	29	No			TRUE		Skene	F	
240307_VP29_MO	07 March 2024	KT	1	434	29	No			TRUE			F	
240307_VP29_MO	07 March 2024	GJ	2	435	29	No			FALSE	Skene	Skene	F	
240307_VP29_MO	07 March 2024	KT	1	436	29	No			FALSE			F	Flight height: 60-159 m and 30-60 m
240307_VP29_MO	07 March 2024	KT	1	437	29	No			FALSE			F	Flight height 60-150 m
240307_VP35_DW	07 March 2024	CU	1	438	35	No			FALSE			C	Heard first, only briefly seen in flight, took off from pasture field and lost sight behind treeline
240307_VP35_DW	07 March 2024	PG	38	439	35	Yes	S110	S111	FALSE	Montrose	Montrose	C	
240307_VP20_JND	07 March 2024	KT	1	440	20	No			FALSE			B	
240307_VP30_MO	07 March 2024	KT	2	441	30	No			TRUE			F	
240307_VP20_JND	07 March 2024	KT	2	442	20	Yes	S152	S153	FALSE			B	
240307_VP20_JND	07 March 2024	KT	2	443	20	No			FALSE			B	Likely nesting

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240307_VP30_MO	07 March 2024	KT	1	444	30	No			FALSE			F	
240314_VP21_DW	14 March 2024	PG	270	445	21	No			FALSE	Kinnordy		B	
240314_VP21_DW	14 March 2024	WS	1	446	21	Yes	S164	S165	TRUE			B	Lone swan
240314_VP21_DW	14 March 2024	PG	65	447	21	No			FALSE	Kinnordy		B	
240314_VP21_DW	14 March 2024	WS	2	448	21	Yes	S164	S165	FALSE			B	
240314_VP21_DW	14 March 2024	CU	1	449	21	No			FALSE			B	
240314_VP11_DW	14 March 2024	CU	2	451	11	Yes	S92	S93	TRUE			C	
240314_VP11_DW	14 March 2024	WS	14	452	11	No			TRUE			C	
240314_VP11_DW	14 March 2024	L.	1	453	11	No			FALSE			C	
240314_VP11_DW	14 March 2024	WS	2	454	11	No			FALSE			C	
240319_VP12_DW	19 March 2024	KT	1	455	12	No			FALSE			C	
240319_VP25_JND	19 March 2024	PG	235	456	25	No			FALSE	Tay	Tay	A	
240319_VP10_DW	19 March 2024	PG	3	457	10	No	S86	S87	TRUE	Montrose	Montrose	C	
240319_VP25_JND	19 March 2024	PG	235	458	25	No			FALSE	Tay	Tay	A	