

Denny to Wishaw Network Upgrade

Volume 3 Appendices

*Appendix 8.8 Statement to Inform Habitats
Regulations Appraisal*

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Appendix 8.8

1. Introduction

1.1 Background

This appendix accompanies Volume 1, Chapter 8 Biodiversity of the Environmental Impact Assessment Report (EIA Report). It provides information to inform the screening and appropriate assessment of effects from the Denny to Wishaw Network Upgrade on Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites (collectively referred to as ‘European sites’).

Although presented as an appendix to the EIA Report, this Statement to Inform Habitats Regulations Appraisal (this ‘HRA Report’) addresses separate legislative requirements, which relate solely to European sites. Further information on the legislative context is given below.

Species scientific names for those associated with European sites are listed in Annex A. All distances are cited as the shortest distance ‘as the crow flies’, unless otherwise specified.

1.2 Quality Assurance

This appendix, and the desk study and field survey described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). AECOM’s IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment and sustainability management. All AECOM staff members are committed to maintaining this accreditation to those parts of BS EN ISO 9001:2015 and 14001:2015, as well as BS OHSAS 18001:2007 that are relevant to a consultancy service.

1.3 Legislative Context

Under the Habitats Regulations¹, a network of sites has been designated across Scotland for the purposes of nature conservation. This network comprises sites known as SACs and SPAs. SACs are designated for the protection of habitats and non-avian animal species of conservation concern. SPAs are designated to protect rare or vulnerable species of bird, as well as certain regularly-occurring migratory bird species.

Prior to the UK’s exit from the European Union (EU), Scotland’s SACs and SPAs were part of a wider network of such sites known as the ‘Natura 2000’ network. They were consequently referred to as ‘European sites’. Now that the UK has left the EU, Scotland’s SACs and SPAs are no longer part of the Natura 2000 network but form part of a UK-wide network of designated sites referred to as the ‘UK site network’. However, it is current Scottish Government policy to retain the term ‘European sites’ to refer collectively to SACs and SPAs (including any which are designated following the UK’s exit from the EU)².

The Habitats Regulations or, for reserved matters, the Conservation of Habitats and Species Regulations 2017 require that any plan or project, which is not directly connected with or necessary to the conservation of a European site, and which is likely to have a significant

¹ The Conservation (Natural Habitats, &c.) Regulations 1994, more commonly referred to as the ‘Habitats Regulations’.

² Scottish Government (2020). EU Exit: The Habitats Regulations in Scotland. December 2020. Available at: <https://www.gov.scot/publications/eu-exit-habitats-regulations-scotland-2/> (Accessed June 2025).

effect on such a site, either alone or in-combination with other plans or projects, must be subject to an ‘Appropriate Assessment’ of the implications for the Conservation Objectives of that site. Generally, such proposals may only be approved if the ‘Competent Authority’ has ascertained, by means of an Appropriate Assessment, that there will be no adverse effect on the integrity of the European site(s). The procedure to be applied is known as ‘Habitats Regulations Appraisal’ (HRA)³.

In addition to fully designated European sites, the Habitats Regulations also apply to those sites in the earlier stages of the designation process, including:

- Sites of Community Interest (SCI);
- Candidate Special Areas of Conservation (cSAC);
- Possible / proposed Special Areas of Conservation (pSAC); and
- Potential / proposed Special Protection Areas (pSPA).

It is also Scottish Government policy to treat Wetlands of International Importance (more commonly known as ‘Ramsar sites’) in the same way as European sites, for the purposes of HRA⁴. In this document, the term ‘European site’ refers to fully designated SACs, SPAs, and candidate, possible, potential and proposed SACs / SPAs, SCI, and Ramsar sites.

The Competent Authority responsible for carrying out a HRA is the relevant consenting body for a project – in this case the Scottish Ministers. The Competent Authority is required to apply the Precautionary Principle⁵, and can only grant consent once it has been ascertained beyond reasonable scientific doubt that there will be no adverse effect on the integrity of the European site(s) concerned. However, the Habitats Regulations provide that, even if adverse effects on European site integrity are predicted, and in the absence of a suitable alternative solution, the project can still be carried forward for imperative reasons of over-riding public interest (IROPI). In such cases, compensatory measures must be implemented, and these should be in place and effective before the negative effect(s) on a European site begin.

Although the UK is no longer part of the EU, a series of prior rulings of the Court of Justice of the European Union (CJEU) are relevant and must be considered when conducting HRA. Some of the rulings which are of relevance, and which have been considered when preparing

³ In the past, the term ‘Appropriate Assessment’ has been used to describe both the overall process and a particular stage of that process. The term ‘Habitat Regulations Appraisal’ has come into use in order to refer to the process that leads to an Appropriate Assessment, thus avoiding confusion. Throughout this document, HRA is used to refer to the overall procedure required by the Habitats Regulations.

⁴ Scottish Government (2025). Wetlands – protecting Ramsar sites: updated Scottish Government policy. Available at: <https://www.gov.scot/publications/updated-scottish-government-policy-protecting-ramsar-sites/> (Accessed August 2025).

⁵ The Precautionary Principle: the “*absence of scientific evidence on the significant negative effects of an action cannot be used as justification for the approval of this action. When applied to Article 6(3) procedure, the Precautionary Principle implies that the absence of a negative effect on European sites has to be demonstrated before a plan or project can be authorised. In other words, if there is a lack of certainty as to whether there will be any negative effects, then the plan or project cannot be approved*”, taken from European Commission (2021).

this Statement to Inform Habitats Regulations Appraisal, are described in NatureScot guidance^{6; 7; 8}.

As a consequence of the UK's exit from the EU, it was necessary for various amendments to be made to the Habitats Regulations. These changes were required to ensure that Scotland continues to maintain the same standard of protection afforded to European sites. The Habitats Regulations remain in force, including the general provisions for the protection of European sites and the procedural requirements to undertake HRA. The changes made were only those necessary to ensure that they remain operable following the UK's exit from the EU.

1.4 Overview of HRA Process

The Habitats Regulations set out a step-by-step sequence of statutory procedures to be followed when conducting an HRA. The steps are designed to test the potential effects of a project on a European site and must be followed in the correct and particular order.

NatureScot recommends an approach for HRA of plans or projects which is outlined as a series of thirteen steps⁷. However, with cognisance of case law clarifying when mitigation can be taken into account in the HRA process⁹, this has been revised and a flow chart with nine steps is provided on the NatureScot website, and which is reproduced as Plate 1. Further guidance published by NatureScot on HRA also sets out the methods for assessing whether plans or projects will affect a European site⁶.

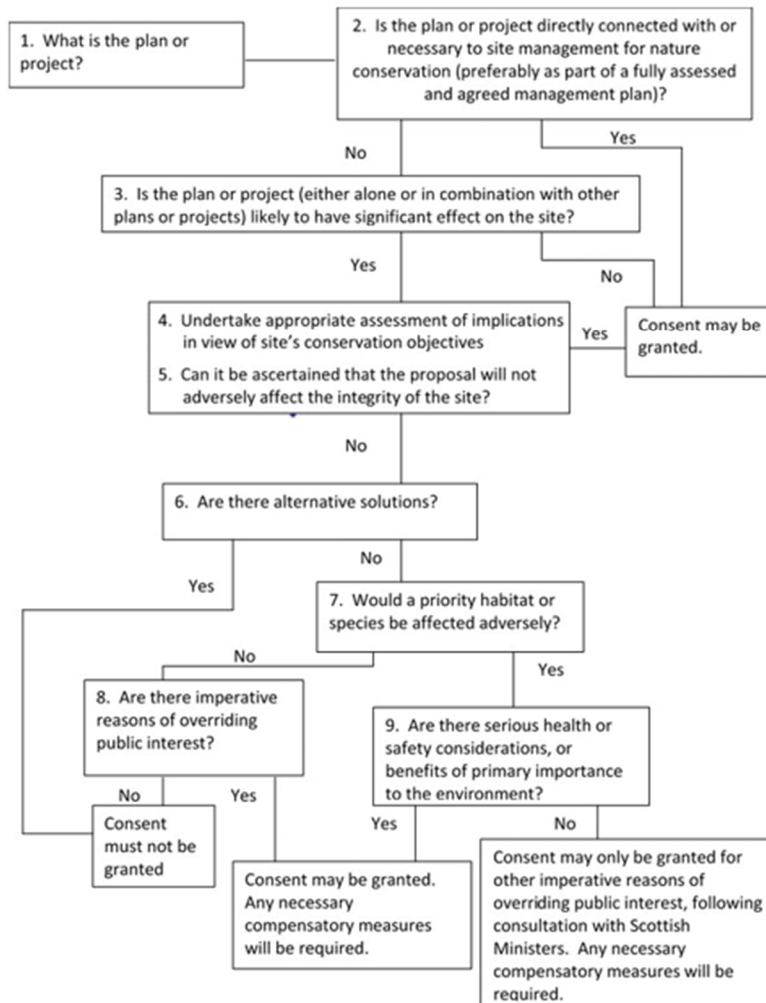
⁶ SNH (2014). Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Available at: [European Site Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation \(SACs\) and Special Protection Areas \(SPAs\) | NatureScot](#). (Accessed June 2025)

⁷ SNH (2015). Habitats Regulations Appraisal of Plans. Guidance for Plan-making Bodies in Scotland. Version 3 – January 2015. Available at: <https://www.nature.scot/habitats-regulations-appraisal-plans-guidance-plan-making-bodies-scotland-jan-2015> (Accessed June 2025)

⁸ SNH (2019). SNH Guidance Note: The handling of mitigation in Habitats Regulations Appraisal – the People Over Wind CJEU judgement. Available at: <https://www.nature.scot/habitats-regulations-appraisal-plans-guidance-plan-making-bodies-scotland-jan-2015> (Accessed June 2025).

⁹ People Over Wind and Sweetman v Coillte Teoranta (C-323/17).

Plate 1: Stages of HRA Process (taken from NatureScot online guidance¹⁰)



In accordance with the process recommended by NatureScot, and relevant case law, the methodology for the HRA of a project can comprise four main activities:

- HRA Activity 1: Screening (including a ‘likely significant effect’ judgement);
- HRA Activity 2: Appropriate Assessment;
- HRA Activity 3: Assessment of alternative solutions; and
- HRA Activity 4: Assessment of IROPI, where no alternative solutions exist and where adverse effects remain.

Should the HRA Screening stage not rule out the possibility of likely significant effects on the qualifying features of any European site, then the second activity in the HRA process – Appropriate Assessment – is required.

Appropriate Assessment considers in more detail the possibility that the likely significant effects of a project identified at the HRA Screening could result in adverse effects on the

¹⁰NatureScot (2025). Habitats Regulations Appraisal. Available online: <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra> (Accessed June 2025).

integrity of the European sites, in view of the Conservation Objectives of those sites. It introduces to the assessment mitigation measures designed specifically to avoid adverse effects on European sites (the HRA Screening stage must be carried out without consideration of mitigation measures specifically designed to safeguard European sites).

1.5 Purpose of this HRA Report

This HRA Report has been written to provide the Competent Authority, in their role as Competent Authority, with the information needed to conduct a HRA of the Denny to Wishaw Network Upgrade (hereafter, the Project). It has been prepared with regard to best scientific knowledge and an examination of all of the potential impacts of the Project on European sites.

2. Methodology

2.1 Sources of Guidance

This Statement to Inform Habitats Regulations Appraisal has been prepared with cognisance of the following guidance published by the European Commission (EC) and NatureScot:

- NatureScot webpage on HRA¹⁰;
- Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC¹¹;
- Managing Natura 2000 sites – The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC¹²;
- Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)⁶;
- Habitats Regulations Appraisal of Plans. Guidance for Plan-making bodies in Scotland⁷; and
- SNH Guidance Note. The handling of mitigation in Habitats Regulations Appraisal – the People Over Wind CJEU judgement⁸.

Information on relevant European sites, including qualifying features, the latest assessed condition of those features, and the Conservation Objectives for each site was obtained from the NatureScot SiteLink website¹³.

¹¹ European Commission (2021). Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Available at: https://ec.europa.eu/environment/nature/natura2000/management/pdf/methodological-guidance_2021-10/EN.pdf (Accessed June 2025)

¹² European Commission (2019). Managing Natura 2000 sites – The provisions of Article 6 of the ‘Habitats Directive’ 92/43/EEC. Available at: https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/EN_art_6_guide_jun_2019.pdf (Accessed June 2025)

¹³ NatureScot (2025). SiteLink. Available at: <https://sitelink.nature.scot/home> (Accessed June 2025).

3. The Project

A description of the Project and accompanying figures is provided in Volume 1, Chapter 4. In summary the Project comprises approximately 20km of new overhead line, modifications of existing overhead lines to increase their capacity and modifications of existing substations. The Project includes the following elements:

- The construction of a new 275/400kV double circuit overhead line (to be known as WB route). This is hereafter referred to as the 'New Build Overhead Line'.
- The uprating of the three existing overhead line routes from 275kV to 400kV, hereafter referred to as the 'Upgraded Overhead Lines':
 - o ZG Route – uprating of approximately 4km of an existing overhead line between Denny North and Bonnybridge Substations;
 - o ZD Route - installation of two new towers as part of reconfiguration of connections to Denny North Substation
 - o XX Route – uprating of 15km of an existing overhead line between Easterhouse and Newarthill Substations; and
 - o XR Route – uprating of approximately 16km of existing overhead line between Newarthill and Wishaw Substations.
- There are also ancillary works which form part of the Project, these are hereafter referred to as the 'Ancillary Works', and comprise the following:
 - o The removal of approximately 11km of an existing 132kV overhead line between Bonnybridge and Cumbernauld, referred to as the 'CB Route Removal';
 - o The undergrounding of two short sections of the existing 132kV overhead line referred to as the 'AA Route Undergrounding';
 - o Works to and extensions of Cumbernauld, Denny North, Bonnybridge, and Wishaw substations; and
 - o Diversions to other SP Distribution (SPD) infrastructure are required as part of the Project, referred to as the 'Distribution Line Diversion Works'

For the purposes of this HRA Report, land encompassing the footprint of the Project, including all temporary construction areas and access tracks, and woodland felling corridors is referred to as the Site.

Where appropriate this HRA Report refers to the separate components of the Project, as detailed in Volume 1, Chapter 4 and shown on Volume 2, Figure 1.1.

4. Identification of European Sites

Potentially relevant European sites were initially identified during the routeing studies undertaken for the New Build Overhead Line and during ornithology survey scoping

undertaken at an early stage to inform the assessment for all Project elements. This early-stage screening of European sites was necessary to ensure European sites were considered at an early stage and determine the scope of supporting information required to inform this HRA Report.

European sites included in this HRA were initially determined by an examination of the potential impacts of the Project in relation to worst case scenario Zone of Influence (Zol) for each impact, with cognisance of the wide-ranging qualifying features that could occupy the Zol (i.e. land on or adjacent to Site). The screening used to inform this HRA Report was then updated based on the final design of the Project. The key potential impacts from the Project are detailed in Section 6.

An initial 'long list' of European sites to consider within the HRA report was gathered by identifying all European sites within 10km of the Site, with this distance extended to a maximum of 20km to identify any further SPAs designated for wide ranging qualifying features (e.g. goose species). A distance of 20km is deemed appropriate for terrestrial projects as there are no wide-ranging marine mammal / pelagic bird species to consider and follows the approach taken by NatureScot to identifying precautionary buffers on their InformedDECISION platform. Table 1 details the European Sites which were initially considered but discounted due to the absence of impact pathways with the Project.

Table 1: European Sites Excluded from Further Consideration

European Site	Distance from Site	Justification for Excluding during Pre-Screening
Clyde Valley Woods SAC	470m south	The SAC is designated for supporting mixed woodland on base-rich soils associated with rocky slopes with no mobile qualifying features. There is no hydrological connectivity between the Garrion Burn, which flows through the SAC, and the Site. At a distance of 470m impacts on the SAC from any dust is unlikely.
West Fannyside Moss SAC	1.4km east	The SAC is designated for supporting blanket bog habitat with no mobile qualifying features. The Site is downgradient from the SAC and therefore there is no potential for effects on water quality to impact the SAC.
North Shotts Moss SAC	3.6km east	The SAC is designated for supporting active and degraded raised bog habitat with no mobile qualifying features. The Site is downgradient from the SAC and therefore there is no potential for effects on water quality to impact the SAC.
Black Loch Moss SAC	6.2km east	The SAC is designated for supporting active raised bog habitat with no mobile qualifying features. The Site is downgradient from the SAC and therefore there is no potential for effects on water quality to impact the SAC.
Blawhorn Moss SAC	9.0km east	The SAC is designated for supporting active and degraded raised bog habitat with no mobile qualifying features. The Site is downgradient from the SAC and therefore there is no potential for effects on water quality to impact the SAC.

River Teith SAC	9.9km north	The SAC is designated for supporting Atlantic salmon, brook lamprey, river lamprey and sea lamprey. There is no direct hydrological connectivity between the Site and the SAC. The Site crosses multiple watercourses, e.g. the River Carron, which discharge into the Firth of Forth approximately 26km downstream of the SAC. Any pollution effects on water quality in the Firth of Forth would be negligible due to effects of dilution. As the Site lies in an entirely different catchment to the River Teith SAC it is likely that any individuals / populations that use the Site catchment watercourses are not part of the SAC population. Regardless, direct impacts on major watercourses would be avoided as Overhead line would span them, works areas would be set back (minimum of 10m) and water crossings for access tracks will be designed and installed to comply with all relevant legislation and guidance. Based on the above there is no potential for impacts on the SAC from the Project.
Muirkirk and North Lowther Uplands SPA	18.1km south	The SPA is designated for supporting a suite of upland breeding birds comprising golden plover, merlin, hen harrier (additional designated for the non-breeding season), peregrine and short-eared owl. There is no connectivity with the Site as the documented maximum foraging range for any qualifying feature is 18km (as listed for peregrine in NatureScot guidance ¹⁴) ¹⁵ .

The European sites identified for inclusion within this HRA Report are detailed in Table 2 with the locations relative to the Site shown on Figure 8.1a. Full details are provided in Annex A, at the end of this appendix.

Table 2: Identified European Sites

European Site	Distance from Site	Justification for Including Following Pre-Screening
Slamannan Plateau SPA	Overlaps the Site	Two small lochs and their surrounding peatlands, and associated areas of rough and improved grassland, that support roosting and feeding Taiga bean geese (hereafter bean geese) during the non-breeding season. The existing CB Route overlaps the SPA between Towers CB021 and CB023 and between Towers CB007 and CB008. The latter section of the SPA is also crossed between towers WB024 and WB025 of the New Build Overhead Line (along the same alignment as the CB Route).
Firth of Forth SPA	7.1km east of the Site	A complex of estuarine and coastal habitats in southeast Scotland stretching from Alloa to the coasts of Fife and East Lothian. The site includes extensive invertebrate-rich

¹⁴ Scottish Natural Heritage (2016). Assessing connectivity with special protection areas - Guidance. Version 3.

¹⁵ 18 km is the maximum recorded foraging distance for this species. Core foraging range is noted as 2 km from nest sites.

European Site	Distance from Site	Justification for Including Following Pre-Screening
		intertidal flats and rocky shores, areas of saltmarsh, lagoons and sand dune. The SPA is designated for supporting a range of waders and waterfowl during the non-breeding season plus Sandwich tern during the passage period. A number of qualifying features could potentially use habitat outside the SPA, particularly for foraging. The qualifying feature with the largest foraging range from the SPA is pink-footed goose, which could potentially range up to 20km from the SPA and therefore potentially use habitat on and adjacent to Site.
Firth of Forth Ramsar Site	7.1km east of the Site	The Ramsar site is coincident with the Firth of Forth SPA and is designated for the same species. In comparison to the Firth of Forth SPA the Ramsar site does not list a specific 'waterfowl assemblage' as a qualifying feature however all species listed under this assemblage for the SPA are also listed Ramsar site species.

5. Supporting Information

Supporting information to inform this HRA Report was collected in parallel with that collected to inform the EIA. A summary of studies relevant to this HRA is provided in this section with full details of methodology in Volume 3, Appendix 8.6 and Appendix 8.7, and Volume 1, Chapter 8. In relation to this HRA, supporting information focused on gathering data on bean goose and pink-footed goose. The results of these surveys are described, where relevant, in Section 6.

5.1 Bean Goose Advisory Group Data

Bean geese associated with the Slamannan plateau have been monitored by the Bean Goose Advisory Group (BGAG) since 1996. The group primarily undertake monitoring on a voluntary basis and have also been involved in surveys / monitoring commissioned by NatureScot. In early years monitoring was restricted to distribution surveys by conventional survey methods (e.g. walking/drive around surveys) while latterly Global Positioning System (GPS) technology has been used to track individual birds. Data in relation to distribution surveys and GPS tracking across the last five years (2020/21 to 2024/25) was obtained from the BGAG to inform the HRA Report.

5.2 AECOM Bird Surveys

Ornithology surveys were undertaken by AECOM to focus on the New Build Overhead Line element of the Project. Due to their proximity to the New Build Overhead Line most of the CB Route and AA Route, and Bonnybridge Substation, were also encompassed by the surveys detailed below. The survey areas therefore did not encompass the ZG Route, XR Route, XX Route and associated substations. This was considered an appropriate proportionate

approach due to the relatively low magnitude of impacts, particularly during operation with respect to the existing operational baseline, associate with these project elements. While no surveys were undertaken impacts associated with these project elements have been considered in this report.

The following flight activity and distribution and abundance surveys were undertaken to provide a baseline data for the relevant European site qualifying features as identified in Table 2.

Vantage Point Surveys

Vantage point (VP) surveys were undertaken during the 2019/20, 2021/22 and 2024/25¹⁶ non-breeding seasons and 2022 breeding season from VPs overlooking the New Build Overhead Line, including adjacent areas encompassed by the Strategic Corridor (for surveys undertaken in 2019/20) and the Proposed Route Corridor (for surveys undertaken in 2021/22 and 2024/25). Surveys in 2024/25 were discontinued in November 2024 after consultation with NatureScot confirmed that sufficient data had been gathered to inform the assessment.

The aim of the surveys was to quantify flight activity of Target Species, including all SPA qualifying features, in the vicinity of the New Build Overhead Line. Flight lines were mapped and information on height recorded every 15 seconds. Flights at Potential Collision Height (PCH) were those with flight time between 10 – 70m above ground level. Flights at Potential Risk of Collision (PRC) were those with flight time at 10 – 70m above ground level which also crossed the New Build Infrastructure Location Allowance (100m either side of the New Build Overhead Line route)

Goose Foraging and Roost Surveys

Fortnightly goose foraging / roosting surveys took place from the end of September and thereafter twice per month from October to February, inclusive, in all three non-breeding survey seasons (although only until November in the 2024/25 season). All species of goose, including pink-footed goose and bean goose, were recorded.

6. Screening for Likely Significant Effects

6.1 Approach to Screening

Embedded Impact Avoidance and Mitigation Measures

The avoidance of impacts on European sites was a key consideration during the design and routing stages of the Project as detailed in Volume 1, Chapter 3 Evolution of Design and Alternatives. The following key aspects of the design were taken with cognisance of potential impact on the Slamannan Plateau SPA:

¹⁶ In winter 2024/25 only the full hours for September were achieved. The hours for October and November were reduced due to access restrictions and the decision to stop surveys in November 2024.

- The route of the New Build Overhead-Line was selected to avoid significant overlap with the SPA and avoid key foraging or roosting areas for bean goose outside the SPA; and
- Where possible the route of the New Build Overhead-Line followed that of the existing CB Route.

NatureScot advises that, although mitigation designed specifically to avoid significant effects on the qualifying features of a European site cannot be referred to at the HRA Screening stage, it is reasonable to consider the 'intrinsic elements' of a development, including those which can be regarded as standard practice for development of that development type.

The Project incorporates a number of impact avoidance and mitigation measures to avoid / minimise effects on the environment, regardless of European site implications. The below measures will be set out in a Construction Environment Management Plan (CEMP), and other associated documents, to be implemented by the Principal Contractor. Measures of relevance to this HRA Report are (see Volume 1, Chapter 8 – Biodiversity for full details):

- An Ecological or Environmental Clerk of Works (ECoW) will be employed for the duration of the construction of the Project. The ECoW will monitor compliance with the CEMP;
- The ECoW or other suitably qualified and experienced ecologist would carry out an updated survey for plant invasive non-native species (INNS) prior to commencement of works and, if required (likely due to the presence of rhododendron and Japanese knotweed), a Biosecurity Management Plan (BMP) would be prepared and appropriate mitigation implemented to prevent the spread of INNS. Measures would comprise avoidance or removal/treatment by a specialist contractor;
- The works area will be restricted to within the footprint of the Project and retained habitats will not be accessed by personnel, vehicles or other equipment during the Construction phase;
- All habitats impacted under temporary works areas, and areas under/around existing infrastructure removed as part of the Project, will be reinstated post works.
- Pollution prevention – as a minimum, construction will adhere to SEPA Guidance for Pollution Prevention (GPP)/ Pollution Prevention Guidance (PPG). The following embedded measures will be incorporated into the Project:
 - o Airbourne dust will be controlled via the use of dust suppression techniques (i.e. water used in crushing operations as per GPP/PPG, watering access tracks in dry weather);
 - o Controls and contingency measures to manage run-off and sediment from construction areas;
 - o Storage of oils, lubricants or chemicals in an appropriate secure container in a suitable storage area at least 10m from any watercourse, with spill kits at this location and across the Site; and
 - o Refuelling and servicing of vehicles/plant in a designated bunded area with an impermeable base, situated at least 50m from any watercourse; and

- Water crossings – water crossings will be designed and installed to comply with all relevant legislation and Scottish Environment Protection Agency (SEPA) River Crossings guidance¹⁷;

The above measures will be set out in a Construction Environment Management Plan (CEMP), and other associated documents, to be implemented by the Principal Contractor.

Impact Pathways Scoped Out

Construction Phase

With respect to this HRA report it is considered that these tried and tested, and industry standard measures would reduce the potential magnitude / likelihood of the following impact pathways to negligible levels:

- Changes to water quality due to the accidental release of pollutants and / or sediment;
- Degradation of habitats due to the spread of invasive non-native species (INNS);
- Alteration of habitats due to changes to surface water flows; and
- Degradation of habitats due to the release of dust.

The following potential impact pathway was considered but discounted:

- Direct mortality of qualifying features – all qualifying features are designated during the non-breeding season and therefore not nest sites, which could be vulnerable to direct mortality. Adult birds are mobile and therefore not at risk of direct mortality during construction.

As such the above impact pathways are not considered further in this HRA Report.

Operational Phase

All potential operational impacts, with the exception of collision mortality, caused by the New Build Overhead Line, have been scoped out due to the nature and design of the Project for the following reasons:

- Electrocution due to contact with overhead line infrastructure- None of the SPA qualifying features are known to perch on electricity infrastructure and therefore would be at no risk of electrocution.
- Displacement due to Overhead line infrastructure – Overhead line infrastructure associated with the Project would largely be associated with the replacement / uprating of existing Overhead line lines with only a small section of the New Build Overhead Line deviating from the existing CB Route, which would be removed as part of the Project. As such the Project would introduce limited ‘new’ overhead line structures within the environment. The New Build Overhead Line structures would emit no significant noise and have no ‘moving parts’ beyond the movement of the conductors in the wind. It is unlikely that a relatively unobtrusive structure would displace birds from the surrounding habitat. Additionally, as existing perching opportunities are present on the existing overhead lines, and woodland throughout the Site, it is not considered that the Project would increase the number of perching predators (e.g. common buzzard) to the extent

¹⁷ Scottish Environment Protection Agency, 2010. River Crossings. Engineering in the Water Environment: Good Practice Guide.

that they may result in displacement of qualifying species from potentially suitable habitat.

- Collision mortality from uprating overhead lines – As part of the Project the XR Route, XX Route and ZG Route would be uprated from 275kV to 400kV. As this will involve stringing new conductors on existing tower infrastructure the height and layout of the ‘wires’ won’t significantly change in relation to the baseline. Additionally, the new conductors would be thicker, and therefore likely more visible to flying birds, which could potentially reduce collision risk.
- Operational impacts from Bonnybridge Substation Extension, Denny North Substation Works and– operational impacts from these substations on European sites would be negligible. The substations would generally be operated remotely with access limited to inspections, servicing or repairs should they be required. Full operational lighting for maintenance / emergencies will be temporary and sporadic. Lighting will be lower-level and be contained to security / perimeter lighting which is assumed to operate throughout the hours of darkness. Lights will be directional, downward-facing and shielded to minimise upward spill and horizontal glare. Operational noise levels associated with the substations will comprise a continuous low-frequency hum that can be easily habituated to. This is considered less impactful than acute noise generated by routine farming operations at baseline, which is more likely to be perceived as a threat and cause disturbance.

Decommissioning Phase

As detailed in Volume 1, Chapter 4, decommissioning of the Project is not anticipated. As such, decommissioning is not considered further in this HRA Report.

6.2 Potential Impacts from the Project

The potential impacts during the construction and operational phase are detailed in Table 3.

Table 3: Potential Impacts from the Project

Potential Impact	Description	Potential Zone of Influence
Construction Phase		
Loss / degradation of terrestrial habitats	Direct loss of habitat under the footprint of the Project including both permanent and temporary loss i.e. temporary construction areas reinstated following construction. Loss / degradation of habitat could also occur in areas adjacent to the Site by disruption of supporting hydrological pathways.	Direct loss – directly under work areas and across woodland felling areas within the Site. Groundwater flows – SEPA guidance suggests that activities could impact Ground Water Dependant Terrestrial Ecosystems (GWTDE) up to 100m from excavations less than 1m in depth, extending up to 250m for deeper excavations¹⁸.
Disturbance / displacement of qualifying species	Visual or acoustic disturbance of qualifying features from the movement and operation of plant, equipment and personnel.	ZoI is species- and source-specific. The maximum zone of influence for qualifying species considered in this HRA Report is 1km from source, which is applicable to pink-footed goose ¹⁹ .
Operational Phase		
Collision mortality	Death / injury to birds due to collision with Overhead line infrastructure, particularly conductors and earth wire	The route of the Overhead line elements of the New Build Overhead Line.

¹⁸ SEPA (2024). Guidance on Assessing the Impacts of Development on Groundwater Dependant Terrestrial Ecosystems

¹⁹ Goodship, N.M. and Furness, R.W. (MacArthur Green) (2022). Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283.

6.3 Screening Assessment

Potential impact pathways from the Project and their potential effects on the qualifying features of the European sites are detailed in Table 4 and Table 5. Due to their coincident designated areas and overlapping qualifying features, potential effects on the Firth of Forth SPA and Firth of Forth Ramsar site are considered together. For conciseness the above designated sites are referred to only as 'Firth of Forth SPA' in the HRA Report going forward with conclusions applying equally for the respective Ramsar site.

The Screening Assessment considers design and mitigation measures which are considered essential or intrinsic components of the Project and / or are standard practice for developments of this type. This approach aligns with NatureScot guidance for the consideration of mitigation in HRA⁸.

Likely Significant Effects (LSE) could not be ruled out for the Slamannan Plateau SPA and Firth of Forth SPA based on the Project alone. As all impacts were considered to result in LSEs for the Project alone there is no requirement to consider in-combination effects at screening stage.

As LSE have been identified, the HRA is required to progress to Stage 2 Appropriate Assessment. Information to inform the Appropriate Assessment is provided in Section 7.

Table 4: Screening Assessment for the Slamannan Plateau SPA

Potential Impact	Screening Assessment	Screening Conclusion
Construction Phase		
Loss / degradation of habitats on Site	The Project directly overlaps the SPA at two locations: • CB route removal at tower 22 and associated access tracks on grazing land associated with Beam Farm. The majority of access is along existing hard standing farm tracks; and • Scaffolding and associated access track to facilitate the construction of the New Build Overhead Line at tower 25. The scaffolding and access track overlap with a small (c. 60m by 20m) area of the SPA at the northern extent of the SPA parcel directly adjacent to Fannyside Road. All SPA habitats lost during the above operations would be temporary with access tracks and tower sites reinstated. Following reinstatement, the area of SPA habitat available to the birds would likely very marginally increase due to the removal of CB Route Tower 22. Reinstated habitats would, however, require time to become re-established. The Project also overlaps with adjacent areas of similar habitat which could constitute functionally linked land (FLL)²⁰. Such habitat could be permanently lost under the footprint of the New Build Overhead Line towers (although minor in extent) or temporary lost under the footprint of access tracks and works areas. Based on the distribution of bean goose none of the Substations are located within known bean goose foraging areas. Due primarily to direct impacts on SPA habitat a likely significant effect on bean goose due to a temporary reduction in foraging habitat has been identified.	LSE on bean goose

²⁰ The term 'functional linkage' refers to the role or 'function' that land or sea beyond the boundary of a European site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore 'linked' to the European site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status.

Disturbance / displacement of bean goose from the Site and adjacent areas	As detailed above, the Site is located within sections of the SPA and also spans adjacent habitat which could constitute FLL. Data provided by the BGAG identified records of geese using habitats within the disturbance zone of the works, determined to be 500m based on guidance in Goodship & Furness (2022)¹⁹. Works associated with the Project therefore have the potential to disturb and displace bean goose during the construction phase. This could result in a likely significant effect on bean goose due to a reduction in time spent foraging and / or reduction in foraging area.	LSE on bean goose
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Operational Phase

Collision Mortality	Overhead lines are a known collision risk for birds and waterfowl are particularly susceptible to collisions²¹. The removal of the CB line within the SPA, and the routeing of the New Build Overhead Line to the north of the SPA, could potentially reduce the risk of collision in this area. However, the New Build Overhead Line would typically be higher than the CB overhead line, tower heights of 46m and 33m on average respectively, and therefore even when sited directly adjacent the New Build Overhead Line could pose a different risk of collision than the CB Overhead line that it is replacing. There could also be a change in collision risk associated with routeing the New Build Overhead Line outside the SPA, on potentially FLL. Due to the potential for an increase in collision mortality to bean geese a potential for an LSE has been identified.	LSE on bean goose
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Table 5: Screening Assessment for Firth of Forth SPA

Potential Impact	Screening Assessment	Screening Conclusion
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²¹ J. Bernardino, K. Bevanger, R. Barrientos, J.F. Dwyer, A.T. Marques, R.C. Martins, J.M. Shaw, J.P. Silva, F. Moreira (2018). Bird collisions with power lines: State of the art and priority areas for research, Biological Conservation, Volume 222, Pages 1-13.

Loss / degradation of habitats on Site	The Site does not overlap the SPA and therefore no SPA habitat would be affected by the Project. Numerous qualifying features have the potential to utilise inland habitats for foraging. The majority, however, tend to use habitats relatively close to the SPA, typically within 2 to 5km. Only pink-footed goose has a core foraging range that could encompass habitats on or adjacent to site (core foraging range listed as 15 to 20km in NatureScot guidance)²². Two key roost sites for the species are known within the SPA, Aberlady Bay and Skinflats, with the later approximately 8km to the east of the Site. Much of the site encompasses arable and grazing pasture which is favoured foraging habitat for the species. Such habitat could be permanently lost under the footprint of substations (Bonnybridge and Denny North substations are located within 20km of the SPA) and Overhead line towers and temporarily lost / degraded under temporary construction areas and access tracks. The loss or degradation of habitats has the potential to result in an LSE on pink-footed goose due to a reduction in foraging habitat.	LSE on pink-footed goose No effects on all other qualifying features
Disturbance / displacement of qualifying species from the Site and adjacent areas	Data collected during AECOM surveys identified records of pink-footed goose using habitats within the disturbance zone of the works, determined to be 1km based on guidance in Goodship & Furness (2022)¹⁹. As detailed above pink-footed goose is the only qualifying feature with the potential to use habitats on or adjacent to Site due to the distance from the SPA. Works associated with the Project therefore has the potential to disturb and displace pink-footed goose during the construction phase. This could result in an LSE on pink-footed goose due to a reduction in time spent foraging / reduction in available foraging area.	LSE on pink-footed goose No effects on all other qualifying features
Operational Phase		
Collision Mortality	Overhead lines are a known collision risk for birds and waterfowl are particularly susceptible to collisions²¹. The removal of the CB line with the taller towers of the New-build Overhead Line, as well as the re-route to the north, could potentially increase the collision risk to pink-footed goose with respect to the existing baseline conditions.	LSE on pink-footed goose No effects on all other qualifying features

²² Scottish Natural Heritage (2016). Assessing connectivity with special protection areas - Guidance. Version 3.

Due to the potential for an increase in collision mortality to pink-footed goose a potential
for an LSE has been identified.

7. Information to Inform Appropriate Assessment

7.1 Introduction

The following LSE were identified during the preceding screening assessment:

- Slamannan Plateau SPA:
 - Loss / degradation of habitat during construction that could support bean goose
 - Disturbance / displacement of bean goose during construction
 - Collision mortality of bean goose during operation
- Firth of Forth SPA:
 - Loss / degradation of habitat during construction that could support pink-footed goose
 - Disturbance / displacement of pink-footed goose during construction
 - Collision mortality of pink-footed goose during operation

This section provides information to inform an Appropriate Assessment, to be undertaken by the Competent Authority. The information will allow the Competent Authority to consider potential Adverse Effects on Site Integrity (AESI) for the above SPAs as a consequence of the Project.

Identified LSEs are further assessed in relation to details of the Project, European site information, ecological supporting information, and impact avoidance and mitigation measures.

7.2 Impact Avoidance and Mitigation

The mitigation measure detailed below will be implemented to reduce the potential for bird collision with sections of the New Build Overhead Line.

Bird Flight Divertors

The installation of Bird Flight Diverters (BFDs) on overhead lines is recommended by NatureScot as a mitigation measure to reduce the potential for collision. Based on the distribution of bean goose, detailed in Section 7.3, the risk of collision with the New Build Overhead Line is low. However, to further reduce this risk, BFDs are proposed between identified foraging areas to the west of the overhead line, albeit infrequently used, and roost sites to the east of the overhead line. As such, BFDs will be installed on the earth wire of the New Build Overhead Line between towers 30 and 38 (Volume 2, Figure 8.36). This will

encompass potential foraging areas identified from recent (post 2020/21) BGAG data and historic records of foraging areas to the west of the overhead line (e.g. around Lochgreen)²³.

Bird Flight Diverters will be installed during construction at a minimum of 5m intervals along the earth wire in this section and will be monitored and maintained throughout the lifespan of the Project. The type and specification will be determined by the principal contractor and agreed in advance of construction with the Energy Consents Unit or the Local Authority, in consultation with NatureScot. Earth wires are considered a greater risk of collision than conductors as they are thinner and are positioned above the more visible conductors.

While not a primary reason for installation, BFDs will also reduce collision risk for pink-footed goose between towers 30 and 38 of the New Build Overhead Line.

7.3 Consideration of the Project Alone

Slamannan Plateau SPA

Loss / Degradation of Habitats during Construction

Neither of the areas where the Site overlaps the SPA were used by bean geese based on data gathered during AECOM surveys and provided by the BGAG. These areas of the SPA are therefore not considered important to maintaining the conservation status of the species. Additionally, all impacts to habitats in these areas would be temporary with reinstated habitats following the removal of the CB Route likely increasing the area of habitat available in the SPA (due to the removal of Tower CB22).

Areas of potentially FLL within 250m of the Site were identified from BGAG tracking data north of Towers 33 and between Towers 35 and 36 of the New Build Overhead Line. The field used by bean goose north of Tower 33 is approximately 140m north of the Site and therefore habitats won't be directly affected, and grazing pasture is unlikely to be ground water dependant. As such, this area of habitat would be unaffected by the Project.

The access track for the New Build Overhead Line directly crosses the field between Towers 35 and 36 which was used by GPS tagged bird 215345 across 5 days in early January 2025 (Volume 3, Appendix 8.8 and Volume 2, Figure 6). Habitats under the access tracks would therefore be temporarily unavailable to the birds, including post construction as habitats would likely become degraded under the access tracks. As habitats comprise grazing pasture recovery would likely be relatively quick i.e. across a single growing season. While some GPS fixes of tagged bird 21534 overlapped the Site, the majority of records within this field were scattered throughout the southern end of the field which suggests no one area is particularly favoured. A small area of the field under Tower 36 foundations would be permanently lost, however no birds were recorded in this area and the area lost would comprise a very small proportion of this field.

Consequently, there would be no effect on bean geese as a result of this impact pathway.

Disturbance / Displacement of Bean Goose during Construction

As shown on Volume 2, Figure 8.28 the core areas used by foraging and roosting bean goose were to the east of the Site. As detailed in Section 6.3, the works have the potential to disturb

²³ Bean Goose Advisory Group (2025). Scotland Bean Geese. Available online: <https://sites.google.com/view/scotlands-bean-geese/downloads>. Accessed October 2025.

and displace bean goose to a distance of approximately 500m from the Site. No foraging or roosting bean goose were recorded within 500m of the Site during AECOM surveys.

Two areas within the SPA, within 500m of the Site, were shown to be used by bean goose in data provided by the BGAG:

- Moorland southwest of Tower 29 – Foraging flocks were recorded on two occasions in 2024/25 only, with a mean count of 133 birds (Volume 2, Figure 8.33). Records of GPS tagged birds in this field were concentrated around Fannyside Moor Roost site at the southern end of the field approximately 900m to the south of the Site. The roost site would therefore not be impacted by the Project. Records of foraging birds are provided at the field scale and therefore detailed location information beyond this is unavailable. All habitat to the north of the roost site in this field is heath and therefore unsuitable foraging habitat for bean geese (the species favours grassland and pasture). As such the records within this field likely comprise loafing birds in or around the Fannyside Moor roost site, 900m south of the site. Therefore the works are unlikely to impact birds using this area.
- Field approximately 400m south of access track to CB Tower 22 - Foraging flocks were recorded in this field on two occasions in winter 2020/21 with a mean count of 45 birds (Volume 2, Figure 8.29). The only records of GPS tagged birds in this field were recorded during the same winter with records comprising four separate birds recorded during January 2021. No use of this field was recorded during winters 2021/22, 2022/23, 2023/24 or 2024/25 indicating this area is not a regular key foraging area. Even if this was a regular foraging area, which it is not, works associated with the CB route would only affect foraging geese for a maximum of four months (the construction program for the CB route).

An additional two areas used by bean geese within 500m of the Site, outside the SPA, were identified as follows:

- Field approximately 180m north of WB Tower 33 – Four GPS tagged birds were recorded within the field across relatively short time periods. Tag ID 215345 and WHIT182 were recorded on a single day (05 January 2025 and 18 January 2022 respectively), Tag ID WHIT242 across 6 days in November 2021, and Tag WHIT27 across three days in November 2021. No birds were recorded in this field during the foraging distribution surveys or during AECOM surveys. As such, this field is not considered a core foraging area used frequently between years. Due to the proximity of works it is assumed that bean geese could be dissuaded from foraging within this field during the removal of the CB route and construction of the WB route in this area. This would encompass periods within both the 2027/28 and 2028/29 wintering periods.
- Field between WB Towers 35 and 36 - A single GPS tagged bird (Tag 215345) was recorded in this field with multiple GPS fixes across four days in early January 2025. No birds were recorded in this field during foraging distribution surveys or during AECOM surveys. This area was evidently used infrequently by foraging geese and is not considered an important foraging area for the population. Due to their proximity, it is assumed that works could prevent bean geese from foraging within this field during the removal of the CB route and construction of the WB route in this area. This would encompass periods within both the 2027/28 and 2028/29 wintering periods.

All of the above areas were used infrequently by bean geese in comparison to areas more distant to the Site. None of these areas, within 500m of the Site, are considered as core foraging areas based on the data collected between 2020/21 and 2024/25 or were even important foraging areas within years. Consequently, there could only be a temporary effect of minor magnitude on bean goose as a result of this impact pathway.

Collision Mortality during Operation

Of the 97 bean goose flights recorded during the AECOM VP surveys only one, during 2024/25, was recorded at PRC. An additional single flight, attributed to either pink-footed goose or bean goose, was recorded at PRC during 2019/20. A low level of flight activity over the New Build Overhead Line would be anticipated as key roost sites and foraging areas are to the east of the overhead line.

In comparison to the existing baseline the New Build Overhead Line will follow the route of the CB route until tower 38 when it deviates to the north, avoiding the SPA. The CB route in this area, which crosses the SPA, will be removed. No bean geese were recorded using this area of the SPA since 2020/21. The route of the New Build Overhead Line directly north of Tower 38 passes through a field used by bean geese in early January 2025 (based on tag data). As detailed above use of this area was very low, although habitats are suitable for foraging geese. The New Build Overhead Line would be a taller than the CB route (a range of approximately 46m to 63m in height compared to 30 m) although both overhead lines comprise dual circuit conductors and an earth wire. This increase in height would not result in a material difference in the collision risk of the respective infrastructure. Bean geese are known to fly at relatively low heights, with the majority of flights recorded during AECOM VP surveys below 70m and numerous flights also recorded entirely below 10m (e.g. 15 of the 42 flights recorded during 2019/20 were entirely below 10m).

As a precautionary measure, whilst risk of collision is only considered low, line markers are proposed on the earth wire along sections of the New Build Overhead line. It is considered that this measure, as well as the removal of the CB route within the SPA would result in a decrease in the collision risk with respect to the baseline. Consequently, there would be a permanent minor positive effect on bean goose as a result of this impact pathway.

Appropriate Assessment Conclusion

Based on the information provided above it is considered that there would be no effect on any of the Slamannan Plateau SPA conservation objectives and therefore no adverse effects on the integrity of the SPA. Temporary minor adverse effects could occur during construction from disturbance and displacement but the minimal magnitude of these effects detailed above would not result in effects on the population or distribution of bean geese and disturbance impacts are not considered 'significant' with respect to the conservation objectives.

Post construction there would likely be minor positive effects from the Project due to the reduction in the risk of collision.

Therefore, the Project is no impediment to maintaining bean goose at a Favourable Maintained conservation status for the SPA.

Firth of Forth SPA

Loss / Degradation of Habitats during Construction

Pink footed geese were recorded foraging or roosting within two broad areas in proximity to the Site; at the northern end of the New Build Overhead Line west of Bonnybridge and at the southern end south of Cumbernauld. As the southern area is more than 20km from the SPA it is reasonable to assume that these birds are not connected to the SPA but rather part of the wider countryside population. The concentration of records at the northern end is approximately 8-9km from the SPA and therefore could potentially be connected to the SPA (these birds are assumed to be associated with the Skinflats roost site).

None of the records at the northern end New Build Overhead Line overlapped with the Site, with the closest records approximately 160m from the Site. Additionally, a flock of 100 unidentified geese, which were likely pink-footed goose, were recorded foraging in a field approximately 30m from the site. Pink-footed goose foraging habitat is predominately pasture and arable fields, which are not ground water dependant and therefore not subject to impacts from excavations associated with the Project.

Additionally, the ZG Uprating Route, at the northern end of the Project, overlaps with habitats that have the potential to support foraging pink-footed geese. The habitats lost due to construction associated with the Denny North Substation extension, primarily scrub and heath, are not used by foraging pink-footed goose. These project elements, both within 20km of the SPA, were not encompassed by the AECOM surveys.

The potential loss of foraging habitat would be mainly temporary, associated with access tracks and temporary compounds; although would include minimal areas of permanent loss associated within the footprints for the new towers. Access tracks would be removed post works and habitats reinstated. As the habitat is grazing pasture, reinstatement would occur quickly, likely across a single growing season. There are extensive areas of alternative foraging habitat available to the birds within 20km of the SPA roost site and changes in agricultural rotations regularly modify such habitat with habitat availability changing between years, further necessitating shifts in foraging distribution between years.

It is therefore considered that there would be no measurable effect on pink-footed goose that could result in adverse effects on the integrity of the SPA as a result of this impact pathway.

Disturbance / Displacement of Pink-footed Goose during construction

As detailed in the section above, foraging and roosting geese potentially associated with the SPA were recorded around the northern end of the New Build Overhead Line and suitable habitat exists for foraging birds along the ZG uprating route (an area not covered by AECOM surveys). Pink-footed goose could be disturbed up to a maximum of 1km from works, based on NatureScot guidance¹⁹. Records of pink-footed goose within 1km of the Site comprised records clustered in three areas:

- In vicinity of A883 – three foraging records of pink-footed goose were recorded within 500m of the site in pasture fields adjacent to the A883 to the northeast of the northern end of the New Build Overhead Line. Records comprised flocks of 200, 400 and 600 birds recorded in January 2022, December 2021 and October 2019 respectively.

- Adjacent to St. Helen's Loch – Three foraging records of pink-footed geese were recorded within 300m of the Site in fields to the southeast of St. Helen's loch. Records included flocks numbering 1100 and 190 birds recorded in January and February 2020 respectively.
- Bonnybridge Farm – four foraging records of pink-footed goose were recorded within 500m of the Site. Records comprised flocks of 43, 151, 500 and 750 birds recorded across different surveys between 2019 and 2022.

The above data was recorded across 25 surveys undertaken across the 2019/20, 2021/22 and 2024/25 wintering periods (surveys ended in November 2024). Foraging birds were therefore recorded infrequently in the above areas both within and between wintering years. The number of birds recorded, however, were relatively high with a peak of 1100 birds which represents approximately 7% of the SPA population. Works in this area would be temporary encompassing a maximum of two wintering periods. In addition, higher intensity works (such as works associated with towers) would be intermittent along the Site and therefore all areas would not be subject to disturbance simultaneously. The closest part of the Site to all areas detailed above would be temporary access tracks with tower sites typically located further away and/or screened from these foraging areas by woodland. As detailed in the section above there is extensive alternative foraging resources available to the birds and the species naturally redistributes in response to agricultural practices. Such habitat is also regularly subject to disturbance from ongoing agricultural operations. Finally, the species is at favourable conservation status according to the most recent NatureScot condition assessment.

Based on the above it is reasonable to conclude that foraging areas within 1km of the Site would not be particularly important to the birds. The data demonstrates this as usage of particular areas was irregular although sometimes large flocks of birds were recorded. Consequently, there would be a temporary effect of minor magnitude on pink-footed goose as a result of this impact pathway.

Collision Mortality during Operation

Of the 360 pink-footed goose flights recorded during AECOM VP surveys, 72 were at PRC. The majority of these flights were recorded at the northern end of the New Build Overhead Line route. Both the New Build Overhead Line and CB / AA routes cross some areas of habitat suitable for foraging pink-footed geese, although the New Build Overhead Line is not located closer to any identified key foraging or roost sites for this species. The New Build Overhead Line will replace the CB route in this area, which will be dismantled as part of the Project, and the AA route in the area will also be undergrounded. There would therefore be a net decrease in the length of high voltage overhead line in the area and a reduction in the potential for collision. Consequently, there would be no adverse effect on pink-footed goose as a result of this impact pathway.

Appropriate Assessment Conclusion

Based on the information provided above it is considered that there would be no effect on any of the Firth of Forth SPA conservation objectives and therefore no adverse effects on the integrity of the SPA. Minor effects detailed above would not result in effects on the population or distribution of the species. Although temporary minor adverse effects would remain during

construction from disturbance and displacement, these potential impacts are not considered 'significant' with respect to the conservation objectives. As such the Project is no impediment to maintaining pink-footed goose at a Favourable Maintained conservation status.

7.4 In-combination Assessment

The HRA Report concluded that the Project would not result in an adverse effect on the integrity of any European sites. Minor 'residual' effects, however, would remain as a result of disturbance and displacement of foraging bean goose and pink-footed goose during construction of the Project. There is therefore a requirement to assess if these effects could result in an adverse effect on the integrity of the Slamannan Plateau SPA and Firth of Forth SPA respectively in-combination with any effects from other plans or projects.

The methodology used to identify plans and projects to consider in the In-combination assessment follows that detailed in Volume 1, Chapter 16 - Cumulative Effects. In summary relevant plans and projects were selected based on the following criteria:

- Any energy developments (including generation, transmission and infrastructure), road developments and large housing developments within 3km of the Site; and
- All Major energy developments (wind farms >50MW, and Overhead Lines 132kV and above) within 20km of the Slamannan Plateau SPA

It is considered that the above search parameters identified all significant developments in proximity to the Site as well as Major developments within the potential foraging range of the Slamannan Plateau SPA. The 20km search radius from the Slamannan Plateau SPA also incorporates the majority of the potential foraging area of pink-footed goose from the Firth of Forth SPA Skinflats roost site. Projects of relevance to the Slamannan Plateau SPA or Firth of Forth SPA, as detailed in the sections below, are included in Table 6.

Slamannan Plateau SPA

No plans or projects were identified overlapping the SPA or any areas used by foraging or roosting bean goose. The closest development is a consented residential development (Firview Manor residential development (24/01227/MSC; 22/01051/MSC; 16/00698/PPP)) located approximately 950m west of the SPA and approximately 2km west of Fannyside Moor and Fannyside Loch (the closest area used by bean geese). However, the above development and another residential development to the southwest (24/00230/PPP; 23/00067/PAN) identified potential effects on the SPA from recreational impacts during operation. Both developments committed to implement mitigation detailed in Recreational Management Plans (RMP) and as such it was concluded that there would be no effects on the SPA.

Consequently, there would be no impacts on bean geese in combination with other plans or projects.

Firth of Forth SPA

Within 20km of the Skinflats pink-footed goose roost site nine projects were identified with the potential to impact pink-footed goose foraging habitat (i.e on or adjacent to agricultural fields or grassland) (Table 6). All projects could result in loss of potential foraging habitat and/or disturbance/displacement of pink-footed goose during construction. As discussed in

Section 7.3 the potential foraging range of the species extends up to 20 km from roost sites. In data presented in Mitchell (2012)²⁴ key foraging areas for pink-footed goose roosting at Skinflats were identified across agricultural land adjacent to Skinflats and in areas east and south of Alloa. While there were records in the vicinity of the Site, and identified projects, these were less numerous. As such key foraging areas are distant from the Site and identified projects.

None of the projects identified in Table 6 identified impacts on the Firth of Forth SPA however detailed assessment was not undertaken in most cases. Notwithstanding, it is considered that the identified projects could result in the loss of habitat and disturbance from areas used occasionally by foraging pink-footed goose. These areas are not key foraging areas and there is extensive alternative foraging habitat available across agricultural land throughout the lower forth area.

Based on the above it is considered that there would be, at most, minor effects on pink-footed goose in combination with other plans and projects. As such the Project, in combination with other plans and projects, is no impediment to maintaining pink-footed goose at a Favourable Maintained conservation status.

²⁴ 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.

Table 6 In-Combination Projects

Application reference	Description	Tier	Distance from Site (KM)	Consideration of European sites in Application ²⁵
ECU00004510	Earlsburn Wind Farm Extension (100MW) - 7 Turbine	2	11.5km north-west of Denny North Substation.	No HRA was available in the application documents. NatureScot responded to a consultation request and stated that there would be no likely significant effects on any European sites as a result of the project.
ECU00006191	DWUP – ZD Uprating.	3	ZD route intersects XX route at Easterhouse Substation, and XX route at Denny North Substation Works.	There is no comment on European sites in the Scoping Request or Scoping Opinion other than stating that there are no European sites within 1km of the project site.
24/01227/MS 22/01051/MS 16/00698/PP	Firview Manor - Residential development (300 dwellings).	1	180m northeast of the CB route, Tower CB001.	No HRA Report, or any ecology report of any kind, was included in application documents on the planning portal. In a consultation response NatureScot objected to the proposal due to potential impacts on the Slamannan Plateau SPA due to recreational disturbance. They advised that they would withdraw objections if

²⁵ All applications are Full Applications unless specified

				the proposed mitigation, detailed in a Recreational Management Plan (RMP), were implemented in full. Following implementation of the RMP NatureScot advised that there would be adverse effect on the integrity of the SPA.
24/00230/PPP 23/00067/PAN	Residential led mixed use development.	1	555m southeast of the WB Route, Tower WB021C.	The HRA report concludes that there would be the potential for operational effects on the Slamannan Plateau SPA as a result of recreational disturbance. Following the implementation of mitigation detailed in a RMP the HRA report concluded that there would be no effects on the SPA
19/01284/FUL 19/00626/PAN	Energy Recovery Centre.	1	1km east of the WB Route, Tower WB002.	No HRA report was available in application documents. The EIA Report, however, concluded that there would be no impact pathways between the project and any European site.
25/00593/PAN 24/01024/EIASCO	East Airdrie Link Road. The two-way single carriageway road, would run from the M8 at Newhouse to north of Riggend.	3	The development runs to the east of the WB Route and intersects the route between Tower WB008 and WB009.	The Scoping Report identified one European site, Black Loch Moss SAC, within the study area. In their consultation response NatureScot advised that an assessment under the Habitats Regulations would be required due to the potential for effects on European sites.

ECU00005047	Glenside Farm BESS (400MW).	1	1.3km from the New Build Overhead Line where it enters Denny North Substation.	No HRA Report produced to support the application.
24/00772/FUL	Durieshill Residential Development (543 no. dwellings).	2	1.9km north of Denny North Substation.	No HRA Report produced to support the application.

8. Conclusion

This Statement to Inform Habitats Regulations Appraisal therefore concludes that the Project would not result in adverse effects on the integrity of any European site, either alone or in combination with other projects or plans.

Annex A European Sites Information

All information provided below is taken from NatureScot sitelink¹³ unless otherwise stated. Population estimates are taken from the Joint Nature Conservation Committee (JNCC) third SPA Review²⁶. All population estimates listed are based on counts of individuals unless otherwise stated.

As no conservation objectives are listed for the Firth of Forth Ramsar site the conservation objectives for the Firth of Forth SPA are listed. This is appropriate due to the coincident qualifying features.

²⁶ Stroud, D.A., Bainbridge, I.P., Maddock, A., Anthony, S., Baker, H., Buxton, N., Chambers, D., Enlander, I., Hearn, R.D., Jennings, K.R., Mavor, R., Whitehead, S. & Wilson, J.D. - on behalf of the UK SPA & Ramsar Scientific Working Group (eds.) 2016. The status of UK SPAs in the 2000s: the Third Network Review. [c.1,108] pp. JNCC, Peterborough

Slamannan Plateau SPA
Date of designation: 09 October 2008
Local planning authority: North Lanarkshire & Falkirk
Total area: 590.91ha
Qualifying features [Population and latest assessed condition]:
Non-Breeding Season
• Taiga bean goose <i>Anser fabalis</i> [276; Favourable maintained]
Conservation objectives:
1. To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained. 2. To ensure for the qualifying species that the following are maintained in the long term: – Population of the species as a viable component of the site. – Distribution of the species within site. – Distribution and extent of habitats supporting the species. – Structure, function and supporting processes of habitats supporting the species. – No significant disturbance of the species.
Existing threats, pressures, and activities with impacts on the site:
None listed

Firth of Forth SPA	
Date of designation: 30 October 2001	
Local planning authority: East Lothian (primary), City of Edinburgh, Clackmannanshire, Falkirk, Fife, Marine Scotland (inshore), Stirling, West Lothian	
Total area: 6,317.93 ha	
Qualifying features [SPA population and latest assessed condition]:	
Non-Breeding Season • Bar-tailed godwit <i>Limosa lapponica</i> [1,312; Favourable Maintained] • Common scoter <i>Melanitta nigra</i> [1,393; Unfavourable Declining] • Cormorant <i>Phalacrocorax carbo</i> [615; Favourable Maintained] • Curlew <i>Numenius arquata</i> [3,740; Favourable Maintained] • Dunlin <i>Calidris alpina</i> [5,853; Favourable Declining] • Eider <i>Somateria mollissima</i> [5,298; Favourable Declining] • Golden plover <i>Pluvialis apricaria</i> [2,664; Unfavourable Declining] • Goldeneye <i>Bucephala clangula</i> [768; Unfavourable Declining] • Great crested grebe <i>Podiceps cristatus</i> [113; Unfavourable Declining] • Grey plover <i>Pluvialis squatarola</i> [396; Favourable Declining] • Knot <i>Calidris canutus</i> [3,752; Unfavourable Declining] • Lapwing <i>Vanellus vanellus</i> [4,717; Favourable Declining] • Long-tailed duck <i>Clangula hyemalis</i> [193; Unfavourable Declining] • Mallard <i>Anas platyrhynchos</i> [1,115; Favourable Declining]	• Oystercatcher <i>Haematopus ostralegus</i> [7,212; Favourable Maintained] • Pink-footed goose <i>Anser brachyrhynchus</i> [15,098; Favourable Maintained] • Red-breasted merganser <i>Mergus serrator</i> [336; Unfavourable Declining] • Red-throated diver <i>Gavia stellata</i> [87; Favourable Maintained] • Redshank <i>Tringa totanus</i> [4,898; Favourable Maintained] • Ringed plover <i>Charadrius hiaticula</i> [619; Favourable Maintained] • Scaup <i>Aythya marila</i> [40; Unfavourable Declining] • Shelduck <i>Tadorna tadorna</i> [3,343; Favourable Maintained] • Slavonian grebe <i>Podiceps auratus</i> [29; Unfavourable Declining] • Turnstone <i>Arenaria interpres</i> [854; Favourable Maintained] • Velvet scoter <i>Melanitta fusca</i> [652; Favourable Maintained] • Wigeon <i>Anas penelope</i> [1,976; Favourable Maintained] • Waterfowl assemblage [Favourable Maintained] Passage • Sandwich tern <i>Sterna sandvicensis</i> [1,243; Favourable Maintained]
Conservation objectives:	
1. To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained. 2. To ensure for the qualifying species that the following are maintained in the long term: – Population of the species as a viable component of the site. – Distribution of the species within site. – Distribution and extent of habitats supporting the species. – Structure, function and supporting processes of habitats supporting the species. – No significant disturbance of the species.	
Existing threats, pressures, and activities with impacts on the site:	
The main threats to the qualifying features for Firth of Forth SPA are recreational activities and disturbance, including dog walking, and climate change. Other negative pressures include game and fisheries management (including fishing and harvesting aquatic resources), changes in biotic conditions (water quality) and other natural events.	

Firth of Forth Ramsar Site

Date of designation: **30 October 2001**

Local planning authority: **East Lothian (primary), City of Edinburgh, Clackmannanshire, Falkirk, Fife, Marine Scotland (inshore), Stirling, West Lothian**

Total area: **6,317.93 ha**

Qualifying features [Ramsar population and latest assessed condition]:

Non-Breeding Season

- | | |
|---|--|
| <ul style="list-style-type: none"> • Bar-tailed godwit <i>Limosa lapponica</i> [1,312; Favourable Maintained] • Common scoter <i>Melanitta nigra</i> [1,393; Unfavourable Declining] • Cormorant <i>Phalacrocorax carbo</i> [615; Favourable Maintained] • Curlew <i>Numenius arquata</i> [3,740; Favourable Maintained] • Dunlin <i>Calidris alpina</i> [5,853; Favourable Declining] • Eider <i>Somateria mollissima</i> [5,298; Favourable Declining] • Golden plover <i>Pluvialis apricaria</i> [2,664; Unfavourable Declining] • Goldeneye <i>Bucephala clangula</i> [768; Unfavourable Declining] • Great crested grebe <i>Podiceps cristatus</i> [113; Unfavourable Declining] • Grey plover <i>Pluvialis squatarola</i> [396; Favourable Declining] • Knot <i>Calidris canutus</i> [3,752; Unfavourable Declining] • Lapwing <i>Vanellus vanellus</i> [4,717; Favourable Declining] • Long-tailed duck <i>Clangula hyemalis</i> [193; Unfavourable Declining] • Mallard <i>Anas platyrhynchos</i> [1,115; Favourable Declining] | <ul style="list-style-type: none"> • Oystercatcher <i>Haematopus ostralegus</i> [7,212; Favourable Maintained] • Pink-footed goose <i>Anser brachyrhynchus</i> [15,098; Favourable Maintained] • Red-breasted merganser <i>Mergus serrator</i> [336; Unfavourable Declining] • Red-throated diver <i>Gavia stellata</i> [87; Favourable Maintained] • Redshank <i>Tringa totanus</i> [4,898; Favourable Maintained] • Ringed plover <i>Charadrius hiaticula</i> [619; Favourable Maintained] • Scaup <i>Aythya marila</i> [40; Unfavourable Declining] • Shelduck <i>Tadorna tadorna</i> [3,343; Favourable Maintained] • Slavonian grebe <i>Podiceps auratus</i> [29; Unfavourable Declining] • Turnstone <i>Arenaria interpres</i> [854; Favourable Maintained] • Velvet scoter <i>Melanitta fusca</i> [652; Favourable Maintained] • Waterfowl assemblage [Favourable Maintained] • Wigeon <i>Anas penelope</i> [1,976; Favourable Maintained] |
|---|--|

Passage

- Sandwich tern *Sterna sandvicensis* [1,243; Favourable Maintained]

Conservation objectives:

- To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained.
- To ensure for the qualifying species that the following are maintained in the long term:
 - Population of the species as a viable component of the site.
 - Distribution of the species within site.
 - Distribution and extent of habitats supporting the species.
 - Structure, function and supporting processes of habitats supporting the species.
 - No significant disturbance of the species.

Existing threats, pressures, and activities with impacts on the site:

The main threats to the qualifying features for Firth of Forth Ramsar site are recreational activities and disturbance, including dog walking, and climate change. Other negative pressures include game and fisheries management (including fishing and harvesting aquatic resources), changes in biotic conditions (water quality) and other natural events.

