Scottish & Southern Electricity Networks

Fanellan Hub 400 kV Substation and Converter Station Environmental Impact Assessment

Volume 2 | EIA Report

Chapter 9 – Ecology and Nature Conservation

February 2025

CONTENTS

OTHER VOLUMES

9. ECOLOGY AND NATURE CONSERVATION

9.1 Introduction

9.1.1 This chapter reports the outcome of the assessment of likely significant effects arising from the Proposed Development on ecology and nature conservation. This chapter (and its associated appendices) are not intended to be read as a standalone assessment and reference should be made to the introductory chapters of this EIA Report (**Volume 2, Chapters 1 to 7**).

9.1.2 The specific objectives of this chapter are to:

- describe the assessment methodology and significance criteria applied to this assessment;
- describe the relevant baseline conditions and identify important ecological features;
- assess the potential significant effects on important ecological features;
- describe the additional measures proposed to address likely significant effects and meet legal obligations; and
- describe any significant residual effects.

9.1.3 This chapter is supported by the following technical appendices:

- **Volume 4, Technical Appendix 9.1: Habitats Baseline**;
- **Volume 4, Technical Appendix 9.2: Protected Species Baseline**; and
- **Volume 5, Technical Appendix 9.3: Confidential Badger Baseline**[1].

9.1.4 **Refer to Volume 4, Appendix 1.1 EIA Team for details of the competent experts who undertook the assessment.**

9.1.5 A Biodiversity Net Gain (BNG) assessment has been undertaken for the Proposed Development and is presented separate to this EIA Report. The BNG Report considers the condition, distinctiveness and spatial extent of habitats within the Proposed Development's footprint. The BNG assessment outlines the Applicant's commitment to achieving a minimum 10 % net gain for the Proposed Development, by measuring the change in biodiversity units of affected habitats and outlining any required habitat creation and/or enhancement measures.

9.1.6 Effects on birds are addressed separately in **Volume 2, Chapter 10: Ornithology**. The effects on hydrology and the hydrological effects on potential Groundwater Dependent Terrestrial Ecosystems (GWDTEs) identified in the baseline section of this Chapter are addressed in **Volume 2, Chapter 13: Hydrology, Hydrogeology, Geology and Soils**. Further detailed information on forestry and felling proposals is contained within **Volume 2, Chapter 15: Forestry**.

9.2 Legislative Framework, Policy, and Guidance

9.2.1 This assessment has been compiled with reference to the following relevant ecology and nature conservation legislation, planning policy and guidance documents from which the protection of sites, habitats and species is derived in Scotland.

Legislation

- UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021;
- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive);
- Conservation (Natural Habitats &c.) Regulations 1994 (as amended) (the Habitats Regulations);

[1] Due to the on-going persecution of badgers, information relating to this species is considered sensitive. Survey methods and results with regards to badgers are reported on separately in confidential document.

- Wildlife and Countryside Act 1981 (as amended);
- Nature Conservation (Scotland) Act 2004 (as amended);
- Wildlife and Natural Environment (Scotland) Act 2011 (as amended);
- Protection of Badgers Act 1992;
- Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003;
- Water Environment (Controlled Activities) (Scotland) Regulations 2005 (as amended);
- Wild Mammals (Protection) Act 1996;
- Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020;
- Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017; and
- Planning (Scotland) Act 2019.

Policy

- EU Biodiversity Strategy for 2030[2] which sets out commitments to protect and restore biodiversity, including relevant targets on bringing nature back to agricultural land;
- National Planning Framework 4[3] (NPF4) which aims to secure positive effects for biodiversity, specifically including the following policies of relevance:
  - Policy 3 - Biodiversity, intends to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks; and is relevant with a proposed change to the baseline of the Site.
  - Policy 4 - Natural Places, which intends to protect, restore and enhance natural assets making best use of nature-based solutions; and is relevant as it requires proposals that are likely to have an adverse effect on protected species to meet the relevant statutory tests. It also requires appropriate baseline surveys to be undertaken and legal protection to be factored into the planning and design of the development. It also requires the precautionary principle to be applied.
  - Policy 6 - Forestry, Woodland and Trees, which intends to protect and expand forests, woodland and trees; and is relevant due to the presence of woodland and lines of trees at the Site.
- Scottish Biodiversity Strategy (SBS) to 2045[4] which sets out an ambition for Scotland to be Nature Positive by 2030 and to have restored and regenerated biodiversity by 2045. The SBS to 2045 refers to a series of overarching targets and indicators. Instead of using the Scottish Biodiversity List[5] (SBL) of flora, fauna and habitats considered of principal importance for the conservation of biodiversity, the SBS to 2045 references the Species on the Edge (SOTE) Programme[6] which aims to deliver nine species recovery projects. The following non-ornithological species would be relevant to the Proposed Development, based on the Site location, land-use, habitats and species present:
  - common pipistrelle bat (*Pipistrellus pipistrellus*);
  - soprano pipistrelle bat (*Pipistrellus pygmaeus*);
  - brown long-eared bat (*Plecotus auritus*); and
  - Daubenton's bat (*Myotis daubentonii*).

[2] European Commission, Directorate-General for Environment (2021). EU Biodiversity Strategy for 2030: bringing nature back into our lives. Publications Office of the European Union. Online at: https://data.europa.eu/doi/10.2779/677548

[3] Scottish Government (2023). National Planning Framework 4. Published by the Scottish Government, Edinburgh. Available at: https://www.gov.scot/publications/national-planning-framework-4/documents/

[4] Scottish Government (2023). Scottish Biodiversity Strategy to 2045. Tackling the Nature Emergency in Scotland. Available at: https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland-2/

[5] Scottish Ministers (2012). Scottish Biodiversity List. Online at: https://www.nature.scot/doc/scottish-biodiversity-list

[6] NatureScot (online). Species on the Edge. Online at: https://www.nature.scot/scotlands-biodiversity/species-edge-sote/species-edge-about-programme

- Code of Practice on Non-Native Species[7]. This provides guidance on how to act responsibly within the law that makes it an offence to release non-native animals or plant non-native plants in the wild.

Local Policy

9.2.2 The Highland-wide Local Development Plan (HwLDP) 2012[8] has the following policies relevant to this assessment:

- Policy 57 - Natural, Built and Cultural Heritage, which states that all development proposals will be assessed taking into account the level of importance and type of heritage features, the form and scale of the development, and any impact on the feature and its setting.
- Policy 58 - Protected Species, which states that, where there is good reason to believe that a protected species may be present on site or may be affected by a proposed development, a survey will be required to establish any such presence and if necessary a mitigation plan to avoid or minimise any impacts on the species, before determining the application.
- Policy 59 - Other Important Species, which states that The Highland Council will have regard to the presence of, and any adverse effects of development proposals on, species which are included in the following lists, if they are not already protected by other legislation or by nature conservation site designations:
  - Species listed in Annexes II and V of the EC Habitats Directive[9];
  - Priority species listed in the UK[10] and Local[11] Biodiversity Action Plans; and
  - Species included on the SBL[5].
- Policy 60 - Other Important Habitats and Article 10 Features, which states that The Highland Council will seek to safeguard the integrity of features of the landscape which are of major importance because of their linear and continuous structure or combination as habitat "stepping stones" for the movement of wild fauna and flora (Article 10 Features). The policy also states that The Highland Council will have regard to the value of the following Other Important Habitats, where not protected by nature conservation site designations (such as natural water courses), in the assessment of any development proposals which may affect them either individually and/or cumulatively:
  - Habitats listed in Annex I of the EC Habitats Directive;
  - Habitats of priority and protected bird species;
  - Priority habitats listed in the UK and Local Biodiversity Action Plans; and
  - Habitats included on the SBL.

9.2.3 The HwLDP is supported by supplementary information of relevance to this assessment and other guidance from The Highland Council that aim to protect and promote biodiversity, including:

- Protected species Development Guidance[12];
- Highland Nature Biodiversity Action Plan (HNBAP)[11]; and
- Biodiversity Enhancement Planning Guidance[13].

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[7] Scottish Government (2012). Code of Practice on Non-Native Species. Made by the Scottish Ministers under section 14C of the Wildlife and Countryside Act 1981. Published by the Scottish Government, Edinburgh. Online at: https://www.gov.scot/publications/non-native-species-code-practice/

[8] Highland Council (2012). The Highland-wide Local Development Plan. Available at: https://www.highland.gov.uk/info/178/development_plans/199/highland-wide_local_development_plan

[9] European Commission (1992). The Habitats Directive. Available at: https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en

[10] UK Government (1994). The UK Biodiversity Action Plan (UK BAP): 1992–2012. Available at: https://jncc.gov.uk/our-work/uk-bap/

[11] Highland Nature (online). Highland Nature Biodiversity Action Plan. Available at: https://www.highland.gov.uk/downloads/download/2260/highland_nature_biodiversity_action_plan_2021_to_2026

[12] The Highland Council (2013). Development guidance - Protected species. Available at: https://www.highland.gov.uk/directory_record/712039/protected_species/category/469/countryside_and_the_environment

[13] The Highland Council (2024). Biodiversity Enhancement Planning Guidance. Available at: https://www.highland.gov.uk/info/1210/environment/68/biodiversity/2

Guidance

9.2.4 The following guidance documents have been used to inform this assessment:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland[14];
- Environmental Impact Assessment Handbook[15];
- CIEEM advice note on the lifespan of ecological reports and surveys[16];
- CIEEM Competency Framework[17];
- Planning Circular 1/2017 on *The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017*[18];
- NatureScot standing advice for planning consultations on protected species[19]; and
- NatureScot Developing with Nature Guidance[20].

9.2.5 Additional guidance is referenced throughout this chapter as applicable.

9.3 Assessment Methodology and Significance Criteria

Scope of the Assessment

9.3.1 The scope of this assessment has been established through a scoping process. Further information can be found in **Volume 2, Chapter 6: Scope and Consultation**.

9.3.2 The CIEEM Guidelines for EcIA[14] state: "*For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general.*". Therefore, the assessment process does not require consideration of effects on ecological features deemed to be below a predefined nature conservation importance threshold and focuses on Important Ecological Features (IEF) – which are those that occurred within the Proposed Development's Ecological Zone of Influence (EZoI) and have been evaluated to be of Local or greater importance on a predefined geographical scale.

9.3.3 The footprint of the Proposed Development's permanent construction elements and vegetation clearance areas are hereafter referred to in this Chapter as the 'Direct Impact Areas'. The layout of these elements is displayed on the figures accompanying this chapter. The layout of areas of 'cut' within the Proposed Development's earthworks activities, which may all require high-impact blasting activities, are displayed on the protected species figures accompanying this chapter (**Section 9.3.39**). The Proposed Development's temporary construction elements are considered further in **Issues Scoped Out, Section 9.3.7**.

[14] CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater and Coastal. Version 1.2 - Updated April 2022. CIEEM, Winchester. Available at: https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/

[15] Historic Environment Scotland and NatureScot (2018). Environmental Impact Assessment Handbook. Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Version 5. [Online] Available at: https://web.archive.org/web/20220901050635/https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf

[16] CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports & Surveys. Available at: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf

[17] CIEEM (2024). Competency Framework, Version 3.0. Available at: https://cieem.net/resource/competency-framework/

[18] The Scottish Government (2017). Planning Circular 1/2017: Environmental Impact Assessment regulations. Available at: https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/

[19] NatureScot (online). Planning and development: standing advice and guidance documents. [Online] Available at: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-standing-advice-and-guidance-documents [Accessed October 2024]

[20] NatureScot (online). Developing with Nature guidance. [Online] Available at: https://www.nature.scot/doc/developing-nature-guidance [Accessed October 2024]

9.3.4 Based on data available at the time of preparing the Proposed Development's EIA Scoping Report (**Volume 4, Technical Appendix 6.3: Scoping Report**), it was anticipated that IEFs would be limited to bat species, badger (*Meles meles*) and Great Crested Newt (GCN) (*Triturus cristatus*). As baseline data collection progressed beyond the EIA Scoping Report, a pine marten (*Martes martes*) resting site was also identified. For the avoidance of doubt, this species has also been assessed in order to determine if they are an IEF and if they should thereafter be carried forward to impact assessment.

Issues Scoped Out

9.3.5 An EIA Scoping Report (**Volume 4, Technical Appendix 6.3: Scoping Report**) proposed and provided justification to scope out an assessment of effects on specified ecological features. The non-ornithological features are summarised in **Table 9-1**.Opinion .No further information on these features has been provided within this assessment.

Table 9-1 Ecology and Nature Conservation features scoped out of assessment

Feature scoped out	Justification
Statutory designated sites • Moniack Gorge Special Area of Conservation (SAC); • Strathglass Complex SAC; and • Moray Firth SAC.	Due to their distance from the Proposed Development site and lack of functional connectivity, there are no perceived effect pathways for impacts on the qualifying interests of these sites.
Non-statutory designated sites • Buglife's 'East Inverness-shire' Important Invertebrate Area[21]; • Butterfly Conservation's 'Great Glen and the Beauly Catchment' Scottish Priority Landscape[22]; and • A Buglife B-line[23].	Due to the predominance of modified/improved habitats, there are no perceived effect pathways for impacts on the identified non-statutory designations.
Habitats	Habitats are scoped out of assessment as an IEF, due to the relatively low ecological value of the broad habitat types within the Direct Impact Areas; their commonly occurring or widespread floral species composition; current modified/land use condition; and from the same broad habitats being well represented in the wider landscape. Woodlands and treelines at the Proposed Development will also be retained as far as reasonably possible through the proposed design. Three individual veteran trees were identified outwith the Direct Impact Areas but within the south-western portion of the Proposed Development's RLB. The Proposed Development's landscape forms were modified to retain these trees and avoid their respective root protection areas. These veteran trees and their protection are presented and considered further in **Volume 2, Chapter 15: Forestry**.
Invasive non-native species • rhododendron (*Rhododendron ponticum*).	The spread of rhododendron and subsequent effects of habitat degradation have been scoped out. Effective, industry-standard mitigation measures will be embedded within the project (detailed within the Proposed Development's Construction Environmental Management Plan (CEMP) and the Applicant's General Environmental Management Plan (GEMP) documents).
Protected species • red squirrel (*Sciurus vulgaris*); • native reptiles;	Due to a low abundance of evidence during the baseline studies within an EZoI; and the Direct Impact Areas offering low suitability habitat and is unlikely to represent a key area for these species/groups.

[21] Buglife, Important Invertebrate Areas (online). Available at: https://www.buglife.org.uk/our-work/important-invertebrate-areas/

[22] Butterfly Conservation, Our Conservation Strategies (online). Available at: https://butterfly-conservation.org/our-work/our-conservation-strategies/

[23] Buglife, Downloadable B-Lines Maps (online). Available at: https://www.buglife.org.uk/our-work/b-lines/b-lines-guidance/downloadable-b-lines-maps/

Feature scoped out	Justification
• invertebrates; • otter (*Lutra lutra*); • beaver (*Castor fiber*); • water vole (*Arvicola amphibius*); and • fish.	With additional regard to beavers, the watercourses observed within the Proposed Development's RLB and its outer 100 m proximity had a capacity of less than 70 cm in water depth. Therefore, these watercourses are considered unlikely to support the creation of potential beaver lodge or burrow resting sites in the future[24].

9.3.6 Please refer to the Proposed Development's EIA Scoping Report (**Volume 4, Technical Appendix 6.3: Scoping Report**), for full details of the ecology and nature conservation features scoped out of assessment.

9.3.7 A majority of the land within the Proposed Development's RLB comprised agricultural land under active management. A public road (C1106 Fanellan Road) also passes through the RLB. Baseline disturbance regularly occurred within the RLB from regular farm plant movement; farm soil and crop operations; and livestock presence, as well from road traffic in areas beside the public road. Other than when within 100 m of blasting locations (**Section 9.3.39**), where not directly impacted by/overlapping with the associated operations, it is not anticipated that indirect disturbance will be encountered by the identified ecological receptors as a result of the temporary works.

Extent of the Study Area

9.3.8 The provisional study areas which have been applied to collect relevant baseline information on species which were included within the initial scope of the EIA are summarised below. These have been informed by NatureScot's standing advice for planning consultations[19]; consultations (**Table 9-2**); and relevant species-specific guidelines (**Table 9-3**).

9.3.9 The Proposed Development's assessment boundary changed as the design layout evolved. The assessed boundaries included:

- June 2023 – preliminary surveys conducted to the Proposed Development's initial Ground Investigation (GI) boundary and its outer 30 m buffer;
- July 2023 – preliminary surveys conducted to areas of the Proposed Development's site selection indicative boundary applicable at the time of survey not covered by the June 2023 survey, and up to the following outer protected species survey buffers:
  - 30 m ground-level Preliminary bat Roost Assessment (PRA);
  - 100 m badgers;
  - 250 m pine martens; and
  - 500 m great crested newts.
- April 2024 – preliminary surveys conducted to areas of the Proposed Development's preliminary design red line boundary (RLB) for planning applicable at the time of survey not covered by the June and July 2023 survey and its outer protected species survey buffers.

9.3.10 The combined areas covered by each species' preliminary surveys is hereafter referred to as the relevant species' 'Study Area':

- 'Bat Study Area';
- 'Badger Study Area';
- 'Pine Marten Study Area'; and
- 'GCN Study Area'.

[24] NatureScot, Standing advice for planning consultations - Beavers (online). Available at: https://www.nature.scot/doc/standing-advice-planning-consultations-beavers

9.3.11 These Study Areas are displayed on the following applicable figures:

- **Volume 3, Figure 9.2.1 - Protected Species, Bat Baseline**;
- **Volume 3, Figure 9.2.2 - Protected Species, Squirrel, Otter & GCN Baseline**; and
- **Volume 5, Figure 9.3.1 - Confidential Badger Baseline**.

9.3.12 After baseline data collection from the provisional study areas above, any findings from the baseline data (e.g. resting sites, signs of species activity) have been considered in relation to the specific construction works associated with the Proposed Development's Direct Impact Areas and it's EZoI. The Guidelines for EcIA[14] define the EZoI as the area over which ecological features may be subject to significant effects as a result of the Proposed Development. This could extend beyond the footprint of the Proposed Development. The EZoI will vary for each ecological feature and will depend on the type of works. Other factors such as mobility range of a species, supporting habitat, connectivity, sensitivity to disturbance, are considered when determining if a feature falls within the Proposed Development's EZoI. The Proposed Development's EZoI for a feature may be less than the provisional study area but would unlikely be greater.

9.3.13 Information on the extent of the study areas for features which were scoped out of the EIA may also be found within **Volume 4**, **Technical Appendix 9.1: Habitats Baseline** and **Technical Appendix 9.2: Protected Species Baseline**.

Consultation Undertaken to Date

9.3.14 Responses received from the EIA scoping process which were relevant to ecology and nature conservation have been captured in **Table 9-2**. Other consultations which have been undertaken to inform survey design have also been summarised in **Table 9-2**.

Table 9-2 Consultations relevant to ecology and nature conservation

Body / organisation	Type of Consultation/ Date	Comments	How the comments have been considered
NatureScot	Pre-application consultation, 6 October 2023	The preferred sites are located within or adjacent to protected areas and have potential to cause significant effects. NPF4 sets out new requirements for development to deliver positive effects, primarily under Policy 3. For national and major developments, or those subject to EIA, Policy 3b notes that proposals will only be supported where it can be demonstrated that they will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention. The policy requires that significant biodiversity enhancements are provided, in addition to any proposed mitigation.	This comment from NatureScot was a summary for preferred sites for various proposed projects that they provided joint feedback on. There are no protected areas within or adjacent to the Proposed Development RLB. Further consideration to potential effects on protected areas in the wider area, due to ornithological associations, are covered further in **Volume 2, Chapter 10: Ornithology**. A BNG assessment report, which outlines the Applicant's commitment to achieving a minimum of 10% net gain, has been produced for the Proposed Development, separate to this EIA Report.
NatureScot	EIA Scoping Response, 8 July 2024	As the EIA Scoping Report highlights, no designated sites for nature conservation lie within close proximity to the proposal site. However, we agree that the breeding osprey and greylag goose features of the Inner Moray Firth Special Protection Area (SPA) should be scoped in due to the fact that osprey associated with this European site are known to breed within close proximity to the proposal site and greylag geese may utilise the area for feeding.	Inner Moray Firth SPA and other ornithological interests are covered in **Volume 2, Chapter 10: Ornithology**.

Body / organisation	Type of Consultation/ Date	Comments	How the comments have been considered
		We are content with the proposed scope of survey and assessment.	
Scottish Environment Protection Agency (SEPA)	EIA Scoping Response, 9 July 2024	A National Vegetation Classification (NVC) survey should be submitted.	An NVC survey has been completed and is presented in **Volume 4, Technical Appendix 9.1: Habitats Baseline** and **Volume 3, Figure 9.1.2: National Vegetation Classification**. Consideration of potential effects on GWDTEs are covered in **Volume 2, Chapter 13: Hydrology, Hydrogeology, Geology and Soils**.
The Highland Council	EIA Scoping Opinion, 6 August 2024	An EIAR chapter covering ecology, habitats and ornithology will be required. This should provide a baseline survey of the bird and animals interest on site. It needs to be categorically established what species are present on the site, and where, before a future application is submitted. Further the EIAR should provide an account of the habitats present on the proposed development site. It should identify rare and threatened habitats, and those protected by European or UK legislation, or identified in national or local Biodiversity Action Plans. Habitat enhancement and mitigation measures should be detailed. Details of any habitat enhancement programmes (such as native-tree planting, stock exclusion, etc.) for the proposed site should be provided. It is expected that the EIAR will address whether or not the development could assist or impede delivery of elements of relevant Biodiversity Action Plans. An ecological impact assessment for the site and should be considered alongside the development EIAR. This should follow the CIEEM guidance on ecological impact assessment and be proportionate to the scale of development. It should cover the ecological resources of the site including protected species within the Highlands Nature Biodiversity Action Plan. It is expected that the proposal shall demonstrate compliance with NPF4 policy 3b and that using the DEFRA metric, a minimum of 10% of biodiversity enhancement overall, can be brought about. The EIAR should address the likely impacts on the nature conservation interests of all the designated sites in the vicinity of the proposed development. It should provide proposals for any mitigation that is required to avoid these impacts or to reduce them to a level where they are not significant. NatureScot has provided specific advice in respect of the designated site boundaries for SPAs on protected species and habitats within those sites. The EIAR needs to address the aquatic interests within local watercourses,	This chapter in combination with **Volume 2, Chapter 10: Ornithology** and all associated appendices to these chapters considers the ecological impact assessment for the Proposed Development in line with CIEEM guidance[14]. Baseline survey data of the habitat and faunal interests on site are presented in this chapter and accompanying appendices. Their relating legislation or connection to Biodiversity Action Plans are outlined, where applicable. Potential effects on ornithological (bird) interests are covered in **Volume 2, Chapter 10: Ornithology**. Habitats present on the proposed development site, and habitat enhancement and mitigation measures are covered in **Chapter 8: Landscape Character and Visual Amenity** and the Proposed Development's BNG assessment report. The BNG assessment report, which outlines the Applicant's commitment to achieving a minimum of 10 % net gain, has been produced for the Proposed Development, separate to this EIA Report. This BNG assessment will be informed by the Applicant's own biodiversity calculation toolkits, which are founded on the Department for Environment, Food and Rural Affairs (DEFRA) metric. The Proposed Development's embedded mitigation, in the form of the Applicant's GEMP documents, are anticipated to mitigate down-stream affects to the River Beauly. Consultation with Beauly District Fishery Board has been undertaken. The Direct Impact Areas' habitats predominantly comprise agricultural land. Deer are not known to frequent the Direct Impact Areas in large numbers. However, deer do have the potential to traverse the accessible portions of the RLB. Deer fencing currently bounds the northern side of the public road (C1106 Fanellan Road). Additional deer fencing is planned within the final landscape design (**Volume 2, Chapter 8: Landscape Character and Visual Amenity**). General mammal mitigation measures, such as covering of excavations

Body / organisation	Type of Consultation/ Date	Comments	How the comments have been considered
		including downstream interests that may be affected by the development, for example increases in silt and sediment loads resulting from construction works; pollution risk/incidents during construction; obstruction to upstream and downstream migration both during and after construction; disturbance of spawning beds/timing of works; and other drainage issues. The EIAR should evidence consultation input from the local fishery board(s) where relevant. If wild deer are present or will use the site an assessment of the potential impact on deer will be required. This should address deer welfare, habitats, and other interests. The EIAR should include a map and assessment of impacts upon Groundwater Dependent Terrestrial Ecosystems (GWDTE) and buffers, these habitats are easily damaged by insensitive drainage. NPF4's commitment to deliver positive effects for biodiversity through development. Policy 3 states that, 'Development proposals for national, major and of EIA development should only be supported where it can be demonstrated that the proposal will conserve and enhance biodiversity, including nature networks within and adjacent to the site, so that they are in a demonstrably better state than without intervention, including through future management.' A draft or outline Habitat Management Plan (HMP) and Species Protection Plan (SPP) should be produced as part of the EIA, including any proposals for mitigation and enhancement in relation to important habitats and species. Any compensatory planting plans should be carefully considered and included in the HMP.	or pipework, will be included within the Proposed Development's CEMP document. The construction of the Proposed Development, including the additional deer fencing, is not anticipated to cause adverse effects on the Direct Impact Areas or neighbouring habitats due to the displacement of deer or realignment of commuting corridors. A dedicated Deer Assessment or Deer Management Plan is not planned for the Proposed Development, however, consideration will be included within the planned Habitat Management Plan documents. Consideration of potential effects on GWDTEs are covered in **Volume 2, Chapter 13: Hydrology, Hydrogeology, Geology and Soils**. An Outline Landscape and Habitat Management Plan (Outline LHMP) will be produced for the Proposed Development, separate to this EIA Report. The Applicant's own SPPs, produced in conjunction with NatureScot, form part of the Proposed Development's baseline mitigation.
NatureScot	Online meeting with WSP Ecology Lead, 8 October 2024	Discussion with regards to survey data limitations and assumptions, and their proposed consideration within the Proposed Assessment's EIA Report. Specifically: Restricted access for bat surveys to one residential building. Bat suitability and presence will be assumed in the EIA Report. Restricted access for GCN survey to one residential pond. Breeding GCN populations will not be assumed to be present in the EIA Report. Limited use of a burrow under a residential shed by badger and pine marten. The burrow will be assumed to be a non-breeding, outlier badger sett and non-	This Chapter; **Volume 4, Technical Appendix 9.2: Protected Species Baseline**; and **Volume 5, Technical Appendix 9.3: Confidential Badger Baseline** produced in line with these conclusions.

Body / organisation	Type of Consultation/ Date	Comments	How the comments have been considered
		breeding pine marten den with limited use in the EIA Report. The assessment approaches were concluded to be agreeable.	
NatureScot	Email, 15 October 2024	Discussion with regards to the potential presence of Freshwater Pearl Mussels (FWPM) in relation to prospective upgrade works to the Black Bridge over the River Beauly[25]. NatureScot confirmed several records of FWPM elsewhere in the River Beauly. Considered unconfirmed potential for FWPM to be within direct vicinity of the Black Bridge. Considered access limitations to water directly beneath bridge. Recommended following best practice guidance, standard survey methods, as close to the area directly affected without being a health and safety issue. Recommended to contact the Beauly District Fishery Board to seek additional FWPM records.	Presence in Beauly catchment noted. Beauly District Fishery Board contacted.
Beauly District Fishery Board	Email, 21 October 2024	Request for FWPM records. The Beauly District Fishery Board confirmed that they do not hold any data or records of FWPM, but confirmed anecdotal observations of their presence elsewhere, in the lower River Beauly catchment. Recommended to contact NatureScot to seek FWPM data.	Presence in Beauly catchment noted. NatureScot already contacted.

Method of Baseline Data Collation

Desk study

9.3.15 A desk study was undertaken to review existing ecological baseline information available in the public domain. The objective was to identify records of protected or priority species within 2 km of the Proposed Development's red line boundary between 2013-2024 (i.e., relatively recent records). This included a review of data available on NBN Atlas[26]. Only datasets that are freely available for commercial use were searched which includes those with Open Government Licence (OGL), Creative Commons No rights reserved (CCO) and Creative Commons licence[27] with attribution (CC-BY).

Habitat surveys

9.3.16 UK Habitat Classification (UKHab) and NVC surveys were undertaken for the Proposed Development. The objectives of the surveys were to:

[25] Distinct from the Proposed Development's works but required as part of associated enabling works and relating LPA planning conditions.
[26] NBN Atlas (online). Available: https://nbnatlas.org/ [Accessed: February 2023].
[27] NBN Atlas (online). Available: https://docs.nbnatlas.org/data-licenses/ [Accessed: February 2023].

- Spatially map and describe the primary habitats present within the Proposed Development's planning application boundary and up to its outer 250 m buffer using UKHab methods.
- Identify primary habitats of elevated importance with reference to national and local biodiversity priority lists.
- Identify NVC communities within and surrounding the Direct Impact Areas with the potential to be Groundwater Dependent Terrestrial Ecosystems (GWDTEs); priority peatland; or other habitats of elevated importance, subject to further assessment.

UKHab Surveys

9.3.17 A UKHab survey was undertaken during the Proposed Development's detailed site selection stage in December 2022 of the initial proposed site boundary. Another survey to review the initial UKHab mapping during a more optimal time of year for botanical interests and extend the coverage across the Proposed Development's preliminary design red line boundary for planning and up to its outer 250 m buffer was undertaken during April 2024.

NVC Surveys

9.3.18 The UKHab data were reviewed to identify areas with potential to be GWDTEs; priority peatland; or other habitats of elevated importance (e.g., EU Habitats Directive Annex 1 habitats). Any areas with potential to represent these were subject to additional botanical assessment via NVC survey. The targeted NVC survey was undertaken in the field during September 2024 to assess and assign NVC communities to the targeted areas.

9.3.19 Further information on the UKHab and NVC surveys may be found within **Volume 4, Technical Appendix 9.1: Habitats Baseline**.

Species surveys

9.3.20 Surveys for signs of, and suitable habitat for, bats; badger; GCN; and pine marten have been undertaken between June 2023 and August 2024, summarised in **Table 9-3**. Please refer to **Volume 4, Technical Appendix 9.2: Protected Species Baseline** for full details of the methods, alongside baseline assessments of other protected species which were scoped out of EIA (**Section 9.3.5**). Please refer to **Volume 5, Technical Appendix 9.3: Confidential Badger Baseline** for data collection methods relating to badgers.

9.3.21 Bat assessments conducted to the Black Bridge over the River Beauly (**Volume 3, Figure 9.2.1 - Protected Species, Bat Baseline**, **Structure O55**) and adjacent 'Old Mill' Building (**Structure O13**) are reported on separately in **Volume 4: Appendix 3.2 Summary of Associated Access Works.**

Table 9-3 Summary of species surveys

Species	Study area	Survey type(s)	Survey date(s)	Guidance applied
Bats	Bat Study Area	Preliminary bat Roost Assessment (PRA) of structures and trees	June 2023, July 2023, April 2024	NatureScot's standing advice for planning consultations – bats[28].
		Trees – Detailed Inspections	May to July 2024	
		Trees – Manual Activity Surveys	July and August 2024	

[28] NatureScot (online). Standing advice for planning consultations – bats. Online at: https://www.nature.scot/doc/standing-advice-planning-consultations-bats.

Species	Study area	Survey type(s)	Survey date(s)	Guidance applied
		Structures – Manual Activity Surveys	April to June 2024	Bat Surveys for Professional Ecologist, Good Practice Guidelines[29, 30]. Interim Guidance Note: Use of night vision aids for bat emergence surveys[31]. Assessing Sites for Hibernation Potential[32].
Badger	Badger Study Area	Preliminary Habitat Assessment	June 2023, July 2023, April 2024, January 2025	NatureScot's standing advice for planning consultations – badgers[33]. Surveying for Badgers, Good Practice Guidelines[34].
		Candidate Main Sett Monitoring	April to June 2024	
GCN	GCN Study Area	Habitat Suitability Index	July 2023	NatureScot's standing advice for planning consultations – Great Crested Newts[35]. Great Crested Newt Habitat Suitability Index Advice Note[36]. Testing the validity of a commonly-used habitat suitability index at the edge of a species' range: great crested newt Triturus cristatus in Scotland[37].
		eDNA Survey	June 2024	
Pine marten	Pine Marten Study Area	Preliminary Habitat Assessment	June 2023, July 2023, April 2024	NatureScot's standing advice for planning consultations – pine martens[38]. UK BAP Mammals, Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation[39].

[29] Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists, Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.
[30] Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
[31] Bat Conservation Trust (2022). Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys. Bat Conservation Trust, London.
[32] Middleton, N. (2019). Assessing Sites for Hibernation Potential. A Practical Approach, including a Proposed Method & Supporting Notes.
[33] NatureScot (online). Standing advice for planning consultations – badgers. Online at: https://www.nature.scot/doc/standing-advice-planning-consultations-badgers.
[34] Scottish Badgers (2018). Surveying for Badgers. Good Practice Guidelines (V1). Available at: https://www.scottishbadgers.org.uk/wp-content/uploads/2020/12/Surveying-for-Badgers-Good-Practice-Guidelines_V1-2020-2455979.pdf.
[35] NatureScot (online). Standing advice for planning consultations – Great Crested Newts. Online at: https://www.nature.scot/doc/standing-advice-planning-consultations-great-crested-newts.
[36] Amphibian and Reptile Groups of the United Kingdom (2010) ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. ARG UK, UK.
[37] O'Brien, D. Hall, J., Miró, A., & Wilkinson, J. (2017). Testing the validity of a commonly-used habitat suitability index at the edge of a species' range: great crested newt Triturus cristatus in Scotland. Amphibia-Reptilia 38: 265-273.
[38] NatureScot (online). Standing advice for planning consultations – pine martens. Online at: https://www.nature.scot/doc/standing-advice-planning-consultations-pine-martens.
[39] Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trewhella, W.J., Wells, D. and Wray, S. (2012). UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton.

Assessment Modelling

9.3.22 The following sections describe the impact assessment methods which have been applied, with the main objective of identifying potential significant effects that would result from the Proposed Development. It is broadly accepted that the significance of an effect reflects the relationship between two factors:

- the value, importance or sensitivity of the resource or system that might be impacted; and
- the magnitude of the impact on that resource and system, (i.e., the actual change taking place to the environment).

Identification of Important Ecological Features

9.3.23 This assessment focuses on Important Ecological Features (IEFs). IEFs are species and habitats present within the Proposed Development's EZoI that are of sufficiently high value that certain levels of impact upon them could result in a significant effect.

9.3.24 Designated sites and habitats have been scoped out of this assessment (see **Issues Scoped Out**, **Section 9.3.5**). In this assessment, species populations and assemblages can qualify as IEFs if they are within the EZoI and meet a minimum level of 'Local' importance (see **Table 9-4** for criteria). Species populations or assemblages of lesser importance may still be affected, beneficially or adversely, however it is considered that no significant effect can occur.

9.3.25 The description and valuation of ecological features has taken account of any likely changes, including, for example: trends in the population size or distribution of species; likely changes to the extent of habitats; and the effects of other proposed schemes or land-use changes.

9.3.26 Due consideration has been given to ecological receptors below local importance throughout the construction and operation period, with regard to legislative protection.

9.3.27 The conservation value of each ecological feature was evaluated within a geographical context using the categories recommended in the Guidelines for EcIA[14]. The evaluation considered a variety of factors including for example (but not exclusively) the rarity of a species or habitat; habitat diversity; whether the species population size is notable in a wider context; whether the habitats are important in supporting a rare species; whether species are on the edge of their habitat range; or whether the faunal assemblage is characteristic of that habitat type.

9.3.28 The Guidelines for EcIA note the difficulty of devising valuation criteria that can be consistently applied to designated sites, habitats and species in the same way in all parts of the country. It recommends an approach to valuation that involves teasing apart the different values that can be attached to the ecological receptors under consideration. However, it is beneficial to give examples of the sorts of criteria used in the valuation process, summarised in **Table 9-4**.

Table 9-4 Evaluation criteria for level of ecological importance

Level of value	Examples
International (Europe)	Extremely rare (endangered), potentially extremely vulnerable to change, of international importance or recognition, very limited potential for substitution. For example: • SPA; SAC; Ramsar site; or area meeting the criteria for designation as such. • Considerable extents of a priority habitat type listed in Annex I of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or smaller area of such habitat that are essential to maintain the viability of a larger area. • Any regularly occurring population of an internationally important species, which is threatened or rare in the UK, i.e. International Union for the conservation of Nature (IUCN)

Level of value	Examples
	'Red List' species, or any species of uncertain conservation status or of global conservation concern. • A regularly occurring significant population/number of any internationally important species, e.g., species listed in Annex II of the Habitats Directive, 1 % of the known international population of a particular species.
National (Scotland)	Rare, of national importance or recognition, limited potential for substitution, highly vulnerable to change. For example: • Site of Special Scientific Interest (SSSI), National Park, National Nature Reserve (NNR) and their qualifying interests; or a site considered worthy of such designation. • Ancient Woodland. A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. A regularly occurring significant population/number of any nationally important species e.g. listed on Schedules 5 and 8 of the *Wildlife and Countryside Act 1981 (as amended)*, or e.g. 1 % of the known UK population of a particular species. Areas of viable, connected habitat which may support delivery of the SBS to 2045 and meet EU Nature Restoration Law Targets, with actions such as improving and re-establishing biodiversity habitats on a large scale, and bringing back species populations by improving and enlarging their habitats (wetlands, forests, grasslands, rivers and lakes, heath and scrub, rock habitats, and dunes). This is adapted from the SBS to 2045. Species recognised as vulnerable/important in the SBS to 2045 and associated projects/conservation strategies (e.g., SOTE[6]) – which are regularly occurring in moderate to large numbers.
Regional (North Scotland)	Somewhat rare or vulnerable, difficult to substitute. For example: • Areas of internationally or nationally important habitats which are degraded but are considered readily restored. Sites falling slightly below criteria for selection as a national designated site. Any regularly occurring significant population of HNBAP Priority Species, e.g., present in regionally important numbers (e.g. >1 % of the regional population). Viable areas of HNBAP Priority Habitat, or smaller areas of such habitat which are essential to maintain the viability of a larger whole.
District (Highland)	Difficult to substitute at a district level, rare or unusual at the district level but well represented elsewhere. For example: • Sites that the Local Authority has determined meet the published ecological selection criteria for designation, including Local Nature Conservation Sites. Areas identified of conservation interest by organisations such as Scottish Wildlife Trust, Buglife, Butterfly Conservation Trust. • Sites or features that are scarce within the Local Authority area which appreciably enrich the habitat resource. • Areas of internationally or nationally important habitats which are degraded and have little or no potential for restoration. • A regularly occurring population of a species which is large enough to be of district level importance.
Local (Inverness-shire)	Locally important, difficult to substitute at a local level, but well represented elsewhere in the district/region. For example: • A species-rich, good condition example of a common or widespread habitat in the local area. • A regularly occurring population of a species which is large enough to be of local level importance, or of a species scarce in the local area. • Habitats or species considered to enrich the ecological resource within the local context.
Neighbourhood (Site and its vicinity, including areas of habitats	Examples include:

Level of value	Examples
contiguous with or linked to those on Site)	• Areas of heavily modified or managed vegetation of low species diversity or low value as habitat to species of nature conservation interest. • Common and widespread species.
Negligible	No intrinsic nature conservation value associated with habitat or species. Generally, these are areas of hard standing or buildings with no nature conservation interest. Invasive and non-native species which threaten native habitat or species are also included here.

Characterising the Potential Ecological Impact

9.3.29 Change can be described by a range of characteristics. For each IEF, the impacts of construction and operational aspects of the Proposed Development and their resultant effects on IEFs may be characterised by the following:

- Beneficial or adverse – whether the impact will result in net loss or degradation of an IEF or whether it will enhance or improve it.
- Extent – the spatial area over which an impact occurs.
- Magnitude – the size or intensity of the impact measured in relevant terms, e.g. number of individuals lost or gained, area of habitat lost or created or the degree of change to existing conditions (e.g. noise or lighting levels).
- Duration – the length of time over which the impact occurs. This may be permanent or temporary; short term (e.g., during applicable construction operation), medium term (e.g., 7-10 years), or long term (e.g., duration of the full operational phase).
- Reversibility – the extent to which impacts are reversible either through natural regeneration and succession or through active mitigation.
- Timing and frequency – consideration of the timing of events in relation to ecological change, e.g., some impacts may be of greater magnitude if they take place at certain times of year (e.g., breeding season). The extent to which an impact is repeated may also be of importance.

9.3.30 These factors are brought together to assess the magnitude of the impact on a particular IEF and, wherever possible, the magnitude of the impact is quantified. Professional judgment based on knowledge and experience on similar schemes is then used to assign the impacts on the IEF to one of four classes of magnitude. A matrix approach has not been applied to this assessment, in line with the Guidelines for EcIA[14].

Table 9-5 Classes of impact magnitude

Level	Examples of definitions
Major	A permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. If adverse, this is likely to threaten its sustainability. If beneficial, this is likely to enhance its conservation status.
Moderate	A permanent or long-term effect on the extent or size or integrity of a site, habitat, species assemblage or community, population or group. A short-term effect which will adversely affect the integrity of a receptor in a permanent manner. If adverse, this is unlikely to threaten its sustainability. If beneficial, this is likely to be sustainable but is unlikely to enhance its conservation status.
Minor	A permanent, long-term reversible or short-term effect on a site, habitat, species assemblage or community, population or group whose magnitude is detectable but will not threaten/change its conservation status.
Negligible	A short-term reversible effect on the extent, size or integrity of a site, habitat, species assemblage or community, population or group that is within the normal range.

9.3.31 Potential impacts are characterised initially in the absence of any mitigation, except where this is integral to the design of the Proposed Development.

9.3.32 Any additional mitigation or compensation proposed is identified and its likely effectiveness is assessed. An indication of the confidence with which predictions of potential impacts are made is also given.

Significance of Effects

9.3.33 The Guidelines for EcIA[14] define an ecological significant effect as: "*…an effect that either supports or undermines the biodiversity conservation objectives for important ecological features or for biodiversity in general.*"

9.3.34 The ecological significance of the potential effects on IEFs arising from the identified impacts of the Proposed Development, including embedded and additional mitigation measures, is assessed as adverse or beneficial.

9.3.35 For species, conservation status defined in the Guidelines for EcIA is "*determined by the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within a given geographical area*".

9.3.36 For species, a beneficial effect would be ecologically significant if the Proposed Development causes restoration of desired conservation status for a species population; and/or restoration of a site's integrity (where this has been undermined).

9.3.37 The decision as to whether the conservation status of an IEF is likely to be compromised is made using professional judgement based on an analysis of the predicted impacts of the Proposed Development (including consideration of the specific parameters outlined above).

9.3.38 Following the assessment of how each IEF may be impacted and whether the impact has an ecologically significant effect, the Guidelines for EcIA[14] recommend that significant effects are qualified with reference to an appropriate geographic scale. The geographical scale of significance has been used as specified within the Guidelines for EcIA both to evaluate the receptor and to assess the scale at which an effect is significant. An ecologically significant effect is defined as an effect (adverse or beneficial) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area. The significance of effects upon features is determined considering their value at a geographic scale (as noted above); however, any given effect may be significant at a reduced scale depending on the extent and magnitude of the effect.

Limitations and Assumptions

Proposed Development Construction

9.3.39 Prior to the completion of planned additional, pre-construction Ground Investigation (GI) works, it is precautionarily assumed that blasting activity may be required in all areas of 'cut' within the Proposed Development's earthworks activities. These cut areas and their associated potential outer 100 m disturbance buffer are displayed on the following figures:

- **Volume 3, Figure 9.2.1 - Protected Species, Bat Baseline**;
- **Volume 3, Figure 9.2.2 - Protected Species, Squirrel, Otter & GCN Baseline**; and
- **Volume 5, Figure 9.3.1 - Confidential Badger Baseline**.

Bats

9.3.40 It is assumed that all trees with Potential Roost Features (PRFs) also have the potential to support hibernating bats over the winter period, particularly those assessed as PRF-M[40] suitability during the summertime.

9.3.41 It is precautionarily assumed that bats may roost in trees with 'PRF-I'[30, 41] suitability that have not been subject to additional survey.

[40] PRF-M indicates feature is suitable for multiple bats and may therefore be used by a maternity colony.

[41] PRF-I indicates feature is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.

9.3.42 Permissions to undertake manual bat activity surveys of **Structure Y4** (**Volume 3, Figure 9.2.1 - Protected Species, Bat Baseline**) were sought but were not able to be secured. It is assumed on a precautionary basis that this structure has the potential to support roosting bats, with 'Moderate' suitability during the active bat season (April to October) and 'Low' hibernation suitability.

9.3.43 Trees that did not directly overlap with the Direct Impact Areas and that were already subject to baseline disturbance from the immediately adjacent public road (**Section 9.3.7**) were not included for further inspection. Should the Direct Impact Areas and/or associated works change in the future to potentially impact more or different locations, then additional protected species surveys and/or licencing may be required prior to the applicable works commencing. It is assumed that high-impact activities, such as blasting (**Section 9.3.39**), would cause a greater level of disturbance within 100 m of these trees.

Badgers

9.3.44 It is precautionarily assumed that any identified potential setts, which have not been subject to further survey or monitoring, are used by badgers.

GCN

9.3.45 A GCN eDNA survey of **Pond N** (**Volume 3, Figure 9.2.2 - Protected Species, Squirrel, Otter & GCN Baseline**) was not possible due to not being able to secure permission. However, GCN were confirmed as absent from the remaining accessible waterbodies within the Direct Impact Areas' EZoI and there was a lack of historic desk study records of their presence in the wider area. This pond is therefore assumed to not support a breeding population of GCN and this limitation is not considered to have a negative effect on subsequent GCN impact assessment.

9.4 Baseline Conditions

9.4.1 Please refer to the following for full details of the baseline conditions:

- **Volume 3, Figure 9.1.1 - UK Habitat Classification**;
- **Volume 3, Figure 9.1.2 - National Vegetation Classification**;
- **Volume 3, Figure 9.2.1 - Protected Species, Bat Baseline**;
- **Volume 3, Figure 9.2.2 - Protected Species, Squirrel, Otter & GCN Baseline**;
- **Volume 4, Technical Appendix 9.1: Habitats Baseline**;
- **Volume 4, Technical Appendix 9.2: Protected Species Baseline**;
- **Volume 5, Technical Appendix 9.3: Confidential Badger Baseline**; and
- **Volume 5, Figure 9.3.1 - Confidential Badger Baseline**.

9.4.2 This section summarises the baseline relevant to the anticipated IEFs (**Section 9.3.4**) which have been found to use the Direct Impact Areas and surrounding area or where there may be suitable habitat.

Bats

9.4.3 Eleven commercially available records of bat species were identified on NBN Atlas within 2 km of the Proposed Development's red line boundary, comprising:

- one record of brown long-eared bat;
- one record of Daubenton's bat;
- two records of Natterer's bat (*Myotis nattereri*);
- six records of soprano pipistrelle bat; and
- one record of non-specific pipistrelle species of bat.

9.4.4 The records were located within a mix of wooded and open environments.

9.4.5 A total of 249 trees were identified within the Bat Study Area as having potential suitability for use by roosting bats during the active bat season:

- 149 trees with 'PRF-M' suitability; and
- 100 trees with 'PRF-I' suitability.

9.4.6 Of the identified trees, 29 occurred within 30 m of the Direct Impact Areas, comprising 20 PRF-I trees and nine PRF-M trees. A further 16 trees occurred outwith 30 m of the Direct Impact Areas but within 100 m of the potential blasting areas. Their Direct Impact Areas context and suitability for roosting bats is presented in **Table 9-6**.

Table 9-6 Summary of trees with potential bat roost suitability within 30 m of the Direct Impact Areas

Tree reference	Bat roost suitability[41]	Direct Impact Areas context
0101	PRF-I	Within Direct Impact Areas
0102	PRF-I	Within Direct Impact Areas
0103	PRF-I	Within Direct Impact Areas
0104	PRF-I	Within Direct Impact Areas
0105	PRF-I	Within Direct Impact Areas
0106	PRF-I	Within Direct Impact Areas
0107	PRF-I	Within Direct Impact Areas
0108	PRF-M	Within Direct Impact Areas
0109	PRF-I	Within Direct Impact Areas
0276	PRF-M	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0794	PRF-M	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0703	PRF-I	Within 30 m of Direct Impact Areas
0704	PRF-I	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0705	PRF-M	Within 30 m of Direct Impact Areas
0712	PRF-I	Within 30 m of Direct Impact Areas
0715	PRF-M	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0719	PRF-I	Within Direct Impact Areas
0721	PRF-I	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0728	PRF-I	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0730	PRF-M	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0735	PRF-I	Within 30 m of Direct Impact Areas
0737	PRF-I	Within 30 m of Direct Impact Areas
0738	PRF-I	Within 30 m of Direct Impact Areas
0739	PRF-I	Within Direct Impact Areas
0741	PRF-M	Within 30 m of Direct Impact Areas
0743	PRF-M	Within 30 m of Direct Impact Areas
0745	PRF-I	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0746	PRF-I	Within Direct Impact Areas
0751	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
0765	PRF-I	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas
0768	PRF-I	Outwith 30 m of Direct Impact Areas but within 100 m of potential blasting areas

Tree reference	Bat roost suitability[41]	Direct Impact Areas context
0770	PRF-I	Within 30 m of Direct Impact Areas
0772	PRF-I	Within Direct Impact Areas
0786	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
0787	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
0788	PRF-M	Within 30 m of Direct Impact Areas
0792	PRF-M	Within 30 m of Direct Impact Areas
0793	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
0794	PRF-I	Within Direct Impact Areas
0796	PRF-I	Within Direct Impact Areas
2657	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
2658	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
2659	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
2660	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road
2661	PRF-M	Within 30 m of Direct Impact Areas, but adjacent to public road

9.4.7 The Direct Impact Areas context for the 29 trees with potential bat roost suitability within 30 m of the Direct Impact Areas is summarised as:

- 15 trees within the Direct Impact Areas, comprising 14 PRF-I trees and one PRF-M tree;
- 11 trees within 30 m of the Direct Impact Areas, comprising six PRF-I trees and five PRF-M trees; and
- Three trees within 30 m of the Direct Impact Areas, but adjacent to public road, comprising three PRF-M trees.

9.4.8 The 16 trees with potential bat roost suitability outwith 30 m of the Direct Impact Areas but within 100 m of the potential blasting areas comprised: six PRF-I trees; and eight PRF-M trees.

9.4.9 The trees within the Direct Impact Areas are anticipated to be lost during the Proposed Development's construction.

9.4.10 The trees within 30 m of the Direct Impact Areas have the potential to be disturbed during the Proposed Development's construction. However, other than when within 100 m of blasting locations, no disturbance is anticipated to any retained trees that are both within 30 m of Direct Impact Areas and also adjacent to the public road (C1106 Fanellan Road), due to baseline disturbance caused by the road traffic (**Section 9.3.43**).

9.4.11 The trees outwith 30 m of the Direct Impact Areas but within 100 m of the potential blasting locations have the potential to be disturbed during the Proposed Development's associated construction blasting activities.

9.4.12 No roosts were identified during the field surveys within the above 29 trees within 30 m of the Direct Impact Areas; or 16 trees outwith 30 m of the Direct Impact Areas but within 100 m of the potential blasting areas. However, it is assumed that they have the potential to support hibernating bats over the winter period (see **Limitations and Assumptions**). It is also precautionarily assumed that bats may roost in trees with 'PRF-I' suitability that have not been subject to additional survey.

9.4.13 An external, ground-level PRA was completed to six structures in the Proposed Development's RLB which occurred within 30 m of the Direct Impact Areas or were otherwise considered to have the potential to receive disturbance from high-impact construction activities, such as piling or blasting, that were under consideration at the time of the PRA survey. The identified structures were categorised as presenting the following suitability to support bats during the active season:

- Four structures with 'Moderate' suitability (**Structures R1**; **Y2**; **Y3**; and **Y4**); and
- Two structures with 'Low' suitability (**Structures R2** and **Y1**).

9.4.14 The following roosts were observed in the assessed structures:

- **Structure R1** - two small day roosts and one maternity roost, supporting common pipistrelle and soprano pipistrelle bats;
- **Structure Y1** - four small day roosts, supporting common pipistrelle and soprano pipistrelle bats;
- **Structure Y2** - one small day roost and one maternity roost, supporting soprano pipistrelle bats; and
- **Structure Y3** - two small day roosts, supporting soprano pipistrelle bats.

9.4.15 **Structure Y4**, was not able to be surveyed due to access limitations (see **Limitations and Assumptions**). It is precautionarily assumed that this structure has the potential to support roosting bats, with 'Moderate' (non-maternity) suitability during the active season and 'Low' hibernation suitability.

9.4.16 The structures' context, suitability for roosting bats and confirmed roosts are presented in **Table 9-7**.

Table 9-7 Summary of structures during PRA survey

Structure reference	Bat roost suitability[30]	Direct Impact Areas context	Active season (summer) roost status
R1	Moderate	Within Direct Impact Areas	Confirmed – two day roosts and one maternity roost.
R2	Low	Within Direct Impact Areas	None observed.
Y1	Low	Outwith 30 m of Direct Impact Areas and outwith 100 m of potential blasting areas	Confirmed – four day roosts.
Y2	Moderate	Outwith 30 m of Direct Impact Areas and outwith 100 m of potential blasting areas	Confirmed – one day roost and one maternity roost.
Y3	Moderate	Outwith 30 m of Direct Impact Areas and outwith 100 m of potential blasting areas	Confirmed – two day roosts.
Y4	Moderate	Outwith 30 m of Direct Impact Areas and outwith 100 m of potential blasting areas	Assumed suitability.

9.4.17 The Direct Impact Areas context for the six structures that received a PRA is summarised as:

- Two structures within the Direct Impact Areas (**Structures R1** and **R2**); and
- Four structures greater than 30 m from the Direct Impact Areas (**Structures Y1**; **Y2**; **Y3** and **Y3**).

9.4.18 The structures within the Direct Impact Areas are proposed to be lost during the Proposed Development's construction. The structures outwith 30 m of the Direct Impact Areas did not occur within an EZoI and no disturbance is anticipated during the Proposed Development construction or operation.

9.4.19 Of the structures within the Direct Impact Areas, **Structure R2** was found to present 'negligible' winter hibernation suitability due to its open structure, lack of sheltered PRFs, and lack of capacity to present predictable consistent cool temperatures and high humidity levels during the hibernation period. **Structure R1** was also initially found to present 'negligible' suitability during the PRA survey, however, due to the identified summer roosts, the hibernation suitability has been raised to 'low', informed by non-classic hibernation consideration guidelines[30].

9.4.20 Where assumptions have been made on the use of buildings and trees by roosting bats, it is considered reasonable to assume that these would most likely be used by the more common and widespread species known to occur within the region across a similar agricultural landscape. These species favour the type of habitats and potential roost features represented at the Direct Impact Areas and surrounding area, and which

have been recorded during the Proposed Development's programme of bat surveys. This includes common pipistrelle and soprano pipistrelle bats.

Badgers

Within Study Area

9.4.21 Following completion of the sett monitoring, a total of 32 identified confirmed and potential setts within the Badger Study Area were categorised using field evidence and/or surrounding sett information into the following:

9.4.22 Twenty-one confirmed setts, comprising:

- two confirmed Main setts;
- two confirmed Annex setts;
- ten confirmed Subsidiary setts; and
- seven confirmed Outlier setts.

9.4.23 Eleven potential setts, comprising:

- one potential Subsidiary sett; and
- ten potential Outlier setts.

Within Direct Impact Areas

9.4.24 Of the above identified setts, the following eight are located within the Direct Impact Areas footprint and will be lost due to the Proposed Development's construction:

9.4.25 Six confirmed setts, comprising:

- four confirmed Subsidiary setts; and
- two confirmed Outlier setts.

9.4.26 Two potential setts, comprising:

- two potential Outlier setts.

Within 30 m of Direct Impact Areas

9.4.27 The following four setts are located within the outer 30 m buffer of the Direct Impact Areas footprint and have the potential to be disturbed by the Proposed Development's construction:

9.4.28 Two confirmed setts, comprising:

- one confirmed Subsidiary sett; and
- one confirmed Outlier sett.

9.4.29 Two potential setts, comprising:

- one potential Subsidiary sett; and
- one potential Outlier sett.

Outwith 30 m of Direct Impact Areas but within 100 m of Potential Blasting Areas

9.4.30 The following two setts are located outwith 30 m of the Direct Impact Areas but within 100 m of the potential blasting locations and have the potential to be disturbed during the Proposed Development's construction blasting activities (where required):

- one confirmed Subsidiary sett; and
- one potential Outlier sett.

GCN

9.4.31 No commercially available records of GCN were identified within 2 km of the Proposed Development's RLB during the desk study.

9.4.32 Habitat Suitability Index (HSI) surveys were completed to ten waterbodies which occurred within the GCN Study Area. Due to their proximity to the Direct Impact Areas and potential suitability HSI results, further DNA analysis was conducted to samples retrieved from two of the waterbodies (**Ponds C** and **B**). Both returned a negative laboratory result for the presence of GCN DNA.

9.4.33 No evidence of breeding populations or individual GCN were recorded within the GCN Study Area.

Pine Marten

9.4.34 One, non-breeding, pine marten den, located within the Direct Impact Areas footprint (**Burrow Reference 15**, **Volume 5, Figure 9.3.1 - Confidential Badger Baseline)** was observed to be in use, on an infrequent basis in the Pine Marten Study Area (a total of only two minutes on one occasion during a six-week monitoring study period). This den will be lost during the Proposed Development's construction. No other potential denning sites or definitive field signs of pine marten activity were recorded during the survey effort.

Evaluation

9.4.35 The ecology and nature conservation value of anticipated IEFs (**Section 9.3.4**) which have been found to use the Direct Impact Areas and surrounding area; or where there may be suitable habitat; and that are within the Proposed Development's EZoI has been evaluated, as set out in **Table 9-8**. The follow-on assessment focuses on IEFs (a feature within the Proposed Development's EZoI and of Local-level importance or greater) with those which have been scoped in noted in the final column.

Table 9-8 Evaluation of features within Proposed Development's EZoI

Feature	Level of importance	Further information on protection, conservation status, extent/ context of Direct Impact Areas	Assessment of effects?
Bats	District	As European Protected Species (EPS), all bat species found in Scotland are fully protected under the *Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)* – Schedule 2. All bat species which occur in Scotland are of 'Least Concern' on the Global IUCN Red List study[42]. Within the Direct Impact Areas and its EZoI, two confirmed day roosts and one maternity roost used by common pipistrelles and soprano pipistrelles were recorded in **Structure R1**. Species which have been recorded roosting within the Proposed Development's EZoI (common pipistrelle and soprano pipistrelle) are of 'Least Concern' on the Red List for Scotland. A best estimate of population size in Scotland for common pipistrelle was 875,000; and soprano pipistrelle was 1,210,000[43]. Soprano pipistrelle and common pipistrelle have been identified as 'threatened and vulnerable species found on Scotland's coasts and islands' through NatureScot's SOTE programme[6]. The UK Bat Mitigation Guidelines[44] provides a framework for assessing the importance of a bat assemblage based on the rarity/range of each species within the different regions of the UK. As the Direct Impact Areas are in northern Scotland and the baseline data includes confirmed presence of common pipistrelle and soprano pipistrelle, the bat assemblage would meet a threshold for District importance. The UK Bat Mitigation Guidelines also provides a framework for assessing the importance of roosts. The hibernation roost within the Bat Study Area would be of District level importance. The bat assemblage has been assessed as a whole and has been evaluated with District importance.	Yes
Badger	Local	In Scotland, badgers and their setts are protected under the *Protection of Badgers Act 1992* as amended by the *Wildlife and Natural Environment (Scotland) Act 2011* (WANE act). Their strong level of legal protection has been derived from their persecution, rather than conservation concern. Badgers are of 'Least Concern' in Scotland on the Global IUCN Red List study[42]. IUCN Red List study states that their population size is inferred to be increasing, with a Scottish population central estimate in the region of 115,000 individuals. Within the Direct Impact Areas and its EZoI, 12 setts were identified, comprising subsidiary and outlier sett types. In total, 32 setts were identified within the wider Badger Study Area, of which contained two main setts (outwith the Direct Impact Areas and EZoI). These badger results indicate a higher density of main setts/km² than previous estimates for the Highland region[45].	Yes

[42] IUCN (online). Red List of Threatened Species. Online at: https://www.iucnredlist.org/en.

[43] Mathews, F. and Harrower, C. (2020). IUCN – compliant Red List for Britain's Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and NatureScot. Natural England, Peterborough. Online at: https://mammal.org.uk/current-research/red-list-for-britains-mammals.

[44] Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Version 1.1. CIEEM, Ampfield. Available at: https://cieem.net/wp-content/uploads/2023/09/Bat-Mitigation-Guidelines-2023-V1.1.pdf.

[45] Rainey, E., Butler, A., Bierman, S., Roberts, A. M. I. (2009). Scottish Badger Distribution Survey 2006-2009: Estimating the distribution and density of badger main setts in Scotland. Scottish Badgers and Biomathematics and Statistics Scotland.

Feature	Level of importance	Further information on protection, conservation status, extent/ context of Direct Impact Areas	Assessment of effects?
		Badgers are adapted to exploiting the modified habitats at the Direct Impact Areas and surrounding area which would otherwise hold relatively low ecological value (grazing pasture, cropland). Based on the population trends; records of badgers and sett density; and non-breeding status of the setts within the Proposed Development's EZoI; badgers using the Direct Impact Areas and connected habitat have been valued at Local level.	
GCN	Negligible	GCN have full protection under the *Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)*. No evidence of breeding populations or individual GCN were recorded within the Direct Impact Areas and its EZoI. The Direct Impact Areas and immediate surrounding area have a lack of suitable habitat to support viable, regularly occurring populations. The Direct Impact Areas are unlikely to be relied upon for locally important populations. Therefore, GCN have been evaluated with Negligible importance.	No
Pine marten	Neighbourhood	The pine marten receives full protection under Schedule 5 of the *Wildlife and Countryside Act 1981 (as amended)*. Certain methods of killing or taking pine martens are illegal under the *Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)*. Pine Martens are of 'Least Concern' in Scotland on the Global IUCN Red List[42] study. IUCN Red List study states that their geographical range has increased in the last 10 years, which also infers an increase in their population size, with a Scottish population central estimate in the region of 3,700 individuals. Within the Direct Impact Areas and its EZoI, one non-breeding pine marten den with infrequent use was identified, being recorded using the den for only a total of two minutes during a six-week study period. The Direct Impact Areas and immediate surrounding area have a lack of suitable habitat to support viable, regularly occurring populations. The Direct Impact Areas are unlikely to be relied upon for locally important populations. Therefore, pine martens have been evaluated with Neighbourhood importance.	No

Future Baseline

9.4.36 In the absence of the Proposed Development and on the assumption that the current land use would continue (crop production, livestock grazing), it is anticipated that the habitats at the Proposed Development's RLB would remain consistent in their extent and condition.

9.4.37 Any observed trends in species populations which are set out in **Table 9-8** are predicted to continue in the absence of the Proposed Development.

9.4.38 In the absence of the Proposed Development, PRFs within buildings and trees would remain at the Proposed Development's RLB and may be used by roosting bats.

9.4.39 Any positive effects for biodiversity that would be realised through the Proposed Development, such as the creation of woodland, wetland, and species-rich grassland, would not be delivered in the absence of the Proposed Development or other funding sources.

9.5 Assessment of Effects, Mitigation and Residual Effects

Mitigation by Design

9.5.1 The mitigation hierarchy (avoid, mitigate, compensate, enhance) has been applied during the site selection stages and through the design and EIA process. This Chapter assesses potential impacts after the application of mitigation, which has been secured by design (primary mitigation) and tertiary mitigation measures[46] - set out below.

9.5.2 The design of the Proposed Development has been informed by the findings of the suite of ecological field surveys. Alternative design options were considered that would allow retention of ecological interests or, where no alternative existed, to justify the requirement. For example, the alteration of the Direct Impact Areas and subsequent EZoI to retain and avoid anticipated disturbance of bat tree roost (**Tree 0759**) identified in the wider Bat Study Area.

9.5.3 Three individual veteran trees were identified outwith the Direct Impact Areas but within the south-western portion of the RLB. The Proposed Development's landscape forms were modified to retain these trees and avoid their respective root protection areas. These veteran trees and their protection are presented and considered further in **Volume 2, Chapter 15: Forestry**.

9.5.4 As per The Highland Council's consultation request (**Table 9-2**), an Outline LHMP will be prepared, as a stand-alone document for the Proposed Development, to set out high-level management expectations for long term habitat retention and monitoring, to help ensure the success of the habitat creation to be tracked against the predicted BNG values.

9.5.5 In addition to these design-led mitigations, the following tertiary mitigation measures would occur with or without input from the EIA feeding into the design process and have therefore been captured here.

9.5.6 A CEMP would set out how construction of the Proposed Development would be controlled to satisfy general requirements to safeguard the environment and mitigate potentially adverse effects.

9.5.7 The CEMP would also be supported by the Applicant's series of General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs), included in **Volume 4, Technical Appendix 3.1: General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**. Any additional mitigation measures identified through this assessment or through licensing would supersede the Applicant's standard GEMPs and SPPs.

9.5.8 An Environmental Manager would be appointed by the Principal Contractor for the duration of the construction phase. Their role would include coordinating input from specialists, reviewing incoming information from additional surveys, and coordinating any subsequent recommendations of mitigation measures and licensing requirements. Based on the current understanding of the Proposed Development and baseline information, the requirement for specialist ecological input (e.g. licensed bat surveyor) has been identified in the subsequent assessment. However, the Environmental Manager would be responsible for continued review of incoming information and coordinating any additional specialist input to meet the Proposed Development's environmental obligations.

9.5.9 An Ecological Clerk of Works (ECoW) would be appointed by the Principal Contractor to monitor, report and advise on the environmental compliance of the construction works. The ECoW would report to the

[46] Actions that would occur with or without input from the environmental assessment feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.

Environmental Manager and Applicant. The ECoW would be competent, demonstrated by relevant experience and accreditations.

Construction Phase

Bats

9.5.10 Predicted impacts/effects that have been considered are as follows:

- Adverse:
  - Works affecting roosts/roosting bats (e.g., disturbance, destruction);
  - Mortality and injury;
  - Loss of roost resources (i.e. PRFs); and
  - Artificial light at night.
- Beneficial:
  - None.

Works affecting roosts/roosting bats

9.5.11 It is noted that whilst the assemblage of bat species, roosts and supporting habitat has been valued as a single IEF (bats), the impacts on different roost types (where known) have been explored.

9.5.12 The baseline studies confirmed two day roosts (summer, non-breeding) used by soprano pipistrelles; and one maternity roost (summer, breeding) used by both common pipistrelles and soprano pipistrelles within the Direct Impact Areas and EZoI within **Structure R1**. The building has 'low' winter hibernation suitability. This building is proposed to be lost during the Proposed Development's construction, causing the destruction of the identified roosts.

9.5.13 For the confirmed day roosts, it would be reasonable to consider this roost is part of a network of others and roost switching has been evidenced as a natural behaviour in bats. If the destruction of **Structure R1** is timed to occur outwith the active bat season (April to October) it would help avoid potential disturbance or harm to bats occupying the roost at other periods and bats would have access to other opportunities to roost, post-construction. In the absence of additional mitigation measures, potential effects to bats using the day roosts at **Structure R1** would be adverse, direct and unavoidable. At a **Local** population level, this may be reversible.

9.5.14 It is anticipated that similar conclusions could be made for any other undetected non-breeding roosts in trees within the Direct Impact Areas' EZoI. This includes trees with PRF-I suitability that have been discounted from further assessment as per current guidance[30] and to apply a level of proportionality. In the absence of additional mitigation measures, the loss or disturbance of tree roosts would be adverse, direct and unavoidable. At a **Local** population level, this may be reversible.

9.5.15 For the confirmed maternity roost, if the proposed demolition overlaps with the bat maternity period (May-August), it would risk the welfare and reproductive health of a maternity colony – even if bats would not be harmed because works cease when identified, the commencement of demolition of a building supporting a maternity colony during this period may displace the colony and result in fatalities. If the proposed demolition of **Structure R1** is timed to occur outwith the active bat season (April to October) it would help avoid potential disturbance or harm to bats occupying the roost at other periods. In the absence of additional mitigation measures, the loss of the maternity roost at **Structure R1** would be adverse, permanent, direct, and unavoidable. At a **Local** population level, this may be reversible.

9.5.16 Works affecting roosts/roosting bats within the Direct Impact Areas (e.g., roost loss) have potential to cause a **Major Adverse** effect, in the absence of additional mitigation measures. At a **Local** population level, this may be reversible.

Mortality and injury

9.5.17 It is possible that proposed construction works required to demolish buildings or fell trees with PRFs could result in injury to or killing of bats that may be roosting within a feature at the time and remain undetected during the operation. This would be from direct contact with a bat; mortality of vulnerable bats within maternity roosts has been described above (under works affecting roosts) where it may result in loss of the roost. Injury or killing of bats from direct contact would be adverse and long-term (injury) or permanent (death) for an individual bat. It would be reasonable to assume that proposed demolition/felling works would cease in the event that an unexpected bat/roost is observed or suspected (due to legislation protecting bats), such that the effects of injury to or killing of an individual or low number of bats would be short-term and reversible at a **Local** population scale and **Minor Adverse**, in the absence of additional mitigation measures. At a **Local** population level, this may be reversible.

Loss of roost resources

9.5.18 Bats have been found to switch roosts within and between seasons and tree roosts in particular can be difficult to detect. Therefore, the loss of roosting resources (i.e., PRFs) has also been considered.

9.5.19 Compared to the 234 trees with PRFs to be retained within the Bat Study Area and likelihood of tree PRFs in the surrounding landscape, the loss of up to 15 trees with PRFs (including those of PRF-I suitability) at the Direct Impact Areas when considered as roosting resources would be **Minor Adverse**, in the absence of additional mitigation measures. At a **Local** population level, this may be reversible.

Artificial light at night

9.5.20 It is anticipated that the majority of construction works would be undertaken during hours of daylight and any lighting required to support construction tasks would be turned off once a shift is finished at each platform construction area. However, it is also anticipated that artificial lighting would be used to continuously illuminate parts of the RLB overnight during the construction phase to provide safe access or for security purposes. This is considered likely to consist of background lighting overnight to illuminate the building platforms; temporary construction compound fencing perimeter; walkways; and access routes.

9.5.21 As described in guidance from the Bat Conservation Trust (BCT) and Institute of Lighting Professionals (ILP)[47], artificial light at night can affect bats at roosting sites; when foraging; or when travelling across the landscape, by:

- attracting prey species which could in turn attract bats, but in illuminated areas bats would be at greater risk of predation. This could also alter population dynamics from areas where prey and bats have been displaced;
- deterring bats from using illuminated roost features due to increased risk of predation; and
- creating a barrier to movement between roosts and foraging sites and wider habitats.

9.5.22 These effects of artificial light at night would mainly relate to the active season and not over winter when prey is scarcer and bats hibernate. There would be no barrier effect because the Direct Impact Areas are isolated in the landscape and connective features (e.g., hedgerows, tree lines, burns) would remain surrounding the Direct Impact Areas. There is potential for night-time background lighting illuminating portions of the RLB during the active season to attract prey species, increase a bats risk of predation, and deter them from using PRFs at trees and buildings retained at/around the Direct Impact Areas. In the absence of additional mitigation measures, these effects of artificial light at night on the **Local** bat populations would be **Minor Adverse** – the effects would be continuous throughout construction however relatively short-term and reversible.

Significance and additional mitigation

[47] BCT and ILP (2023). Guidance Note 08/23: Bats and artificial lighting at night.

9.5.23 Overall, the combined effects on bats using the Direct Impact Areas and surrounding area would be **Significant** at a **Local** scale. Note, the geographical scale at which this would be significant does not always equate to the importance of the IEF (District). A **Local** scale has been applied because the effects on confirmed roosts would be relatively minor and the effects would largely be reversible at a **Local** population scale.

9.5.24 Additional mitigation measures have been identified to inform the steps needed to reduce the effects identified above, as well as to comply with legal obligations associated with works affecting bats. These have been prepared with reference to the Bat Mitigation Guidelines[44].

9.5.25 Sensitive timings of works:

Structure R1 contains summer roosts (including a maternity roost) and has 'low' hibernation suitability. In line with the Bat Mitigation Guidelines[44], the extent to which a building of this type can be surveyed in winter is limited. Therefore, the works should proceed within the following timescales.

- Proposed demolition of **Structure R1** must be timed to avoid the maternity period (May to August). Due to the 'low' hibernation suitability, precautionary preference would also be given to avoiding the hibernation period (November to March). Therefore, in recognition of these periods in combination, the ideal months for the demolition of **Structure R1** are April, September or October. Pre-works surveys would apply (see below).
- Preference would be given to all other proposed structure demolition and tree felling outwith the active bat season (April to October), whilst bats are less likely to be present within summer PRFs. Pre-works surveys would apply (see below).

9.5.26 Sensitive lighting:

- Artificial lighting should not spill over to vegetation (lines of trees, hedgerows, scrub, etc.) and riparian corridors that would be retained around the periphery of the Direct Impact Areas.
- The specifications of artificial lighting should consider use of LED luminaires with peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats, and a warm white spectrum (ideally less than 2700 Kelvin) to reduce blue light component. Prevailing guidance from BCT and ILP[47] should be followed.
- The use of background lighting overnight should be minimised as far as reasonably possible whilst still fulfilling safety and security requirements.

9.5.27 Pre-and during works:

- Once the Proposed Development's final required blasting areas are ascertained (**Section 9.3.39**), any PRF-M trees that still occur within 100 m of these areas and that have not yet been subject to further detailed assessment, should have detailed surveys completed to them, to ascertain their summer roost status. Based on the full potential blasting area, this currently applies to 15 of the 16 trees within this zone (**Trees 0276**; **0294**; **0704**; **0715**; **0721**; **0728**; **0730**; **0745**; **0765**; **0768**; **0786**; **0787**; **0793**; **2659**; **2660**; and **2661**).
- A NatureScot licence will be raised prior to the Proposed Development's construction works commencing within 30 m of; or blasting works within 100 m of; any identified roosts, including the known roosts at **Structure R1**.
- All proposed building demolition and tree felling would be preceded by a survey for roosting bats, regardless of the known presence of a roost. This would ensure the baseline information remains valid (e.g., in case of any delays between additional baseline surveys described above and construction start) and reduce the risk of encountering bats during invasive works.
  - For trees, this would comprise an inspection of PRFs (from ground-level or at-height) within 24-48 hours before felling, regardless of the time of year.
  - For buildings, this would comprise a dusk emergence survey of PRFs 24-48 hours before demolition, when demolition is planned between April and October (inclusive). At all other times of year, the

supervising bat licensed surveyor should carry out an inspection of PRFs immediately prior to the demolition commencing.

  - If a new roost is identified, works would be postponed until a licence is in place. Surveys would conform to the prevailing BCT guidelines[30]. Surveys would be undertaken by competent and experienced surveyors, with night vision aids[31].

- A bat licensed surveyor would oversee all proposed building demolition and tree felling, regardless of the known presence of a roost or time of year. Any bats found during the hibernation period (November to March) should be treated as 'unexpected finds'. Works would be postponed until a licence is in place in conjunction with suitable hibernation roost mitigation/compensation discussions with NatureScot.
- With the above protocols in place, in the unlikely event that a bat is encountered during proposed demolition/felling, the works would cease (if safe to do so). The bat licensed surveyor should try to collect any exposed bats by gloved hand and move them to a nearby bat box (see below). NatureScot would be consulted for a licence before continuing works, as required.

9.5.28 With the above additional measures in place, it is anticipated that the magnitude of impacts to bats from lighting, disturbance, and harm (injury/mortality) would be reduced. However, a **Moderate Adverse** effect would remain due to the loss of the **Structure R1** roosts and assumed potential roosting suitability of the trees with PRFs. This residual effect would be **Significant** at a **Local scale** in a worst-case scenario, due to loss of a maternity roost and potential loss of further potential non-breeding rooting resource. Therefore, compensation for this potential significant residual effect is provided below.

9.5.29 Compensation:

- As compensation for the loss of the **Structure R1** day roosts, two concrete (postcrete, woodcrete or similar) bat boxes suitable for non-breeding pipistrelle species of bats (i.e. Schwegler 2FN[48] or similar) will be installed, prior to the loss of the roost. The bat boxes will be installed on suitable trees or structures within 100 m of the Direct Impact Areas, in accordance with the bat licence's accompanying custom bat SPP.
- As compensation for the loss of the **Structure R1** maternity roost:
  - Prior to the loss of the roost, to ensure compensatory roosting resource is available prior to the loss of the current roost, one concrete bat box suitable for breeding pipistrelle species of bats (i.e. Schwegler 3FS[49] or similar) will be installed. The bat box will be installed on a suitable tree or structure within 100 m of the Direct Impact Areas, in accordance with the bat licence's accompanying custom bat SPP.
  - Once construction is completed, to provide compensatory roost resource with similar conditions to the lost roost, a heated maternity bat box will be installed on an appropriate building within the Direct Impact Areas, in accordance with the bat licence's accompanying custom bat SPP. The previously installed, non-heated maternity box defined in the previous statement shall also remain in place.
- Should additional confirmed bat roosts be identified following the (above) pre-and during works additional surveys, a NatureScot bat licence would be obtained providing licensing tests can be met (e.g. no suitable alternative). Works that could affect a roost include roost destruction from essential proposed building demolition and/or tree felling; as well as potential disturbance effects where buildings and trees with roosts can be retained but would be in proximity to construction works (e.g. within 30 m); or within 100 m of blasting activities. The loss of additional confirmed roosts would be compensated for at a 1:1 ratio. The compensation would mimic the type of roosting location to be lost, be suitable for use by the affected species, and support the same function of the roost to be lost (e.g. maternity, hibernation, or other purpose). The licence would be in place prior to commencement of works affecting bats. A custom species protection plan supporting the licence would detail any specific roost exclusion requirements, timing

[48] Schwegler (online). Bat Box 2FN. Available at: https://www.schwegler-natur.de/portfolio_1395072079/fledermaushoehle-2fn/?lang=en

[49] Schwegler (online). Bat Box 3FS. Available at: https://www.schwegler-natur.de/portfolio_1395072079/fledermaus-grossraumhoehle-3fs/?lang=en

restrictions, and additional mitigation and compensation measures, depending on the type and structure of the roost.

- Bat boxes would be installed between 3-4 m above ground, at a variety of aspects and away from artificial lighting. The locations must be carefully considered to ensure they would be sheltered and connected to natural habitat (i.e. not within open habitat). The approximate locations would be identified at the detailed design stage, then further advice on-site should be sought from the ECoW on the positioning.

9.5.30 Monitoring:

- It is anticipated that monitoring surveys of compensatory roost features would be conditioned through licensing.
- Where compensatory roost features are provided, as a minimum, a single inspection of each would be undertaken by a licensed bat surveyor, between 2-5 years after the removal of the original roost resource (regardless of the potentially ongoing construction phase). This is based on the Bat Mitigation Guidelines[44] that references fewer later monitoring checks are better than intense survey effort because the features require time to embed into the **Local** bat population's resource network. If any boxes/features are found to be defective during this inspection, the boxes would be replaced.

9.5.31 With the above compensation in place, **no significant effects** would occur on the bat population at a **Local** scale.

9.5.32 The full approach described above, from avoidance, mitigation and compensation measures where no alternative exists, would also ensure that legal obligations would be met. A licence would be required for works affecting bats.

Badger

9.5.33 Predicted impacts/effects that have been considered are as follows:

- Adverse:
  - Works affecting setts/resting badgers (e.g., disturbance, destruction);
  - Mortality and injury; and
  - Spatial reduction in territory/range and associated resources (e.g., foraging habitat, sett opportunities).
- Beneficial:
  - None.

Works affecting setts and spatial reduction in territory/range

9.5.34 Construction of the Proposed Development would result in the unavoidable loss of four subsidiary setts; and four outlier setts.

9.5.35 A further two subsidiary and two outlier setts were identified within the outer 30 m proximity of the Direct Impact Areas and have the potential to be disturbed during the Proposed Development's construction. One further subsidiary and one further outlier sett also occur outwith 30 m of the Direct Impact Areas but within 100 m of the potential blasting areas and have the potential to be disturbed during the Proposed Development's associated construction blasting activities.

9.5.36 The above-described setts that have the potential to be impacted or disturbed may/may not be used by the same badger social group (unknown). However, due to their close proximity it is considered likely that they are used by the same social group.

9.5.37 As well as sett loss and disturbance, the social group(s) within vicinity of the Direct Impact Areas are anticipated to lose a proportion of foraging habitat. This is based on the spatial distribution of other setts across the wider Badger Study Area and assumption that they occupy/forage across the Direct Impact Areas.

9.5.38 The loss of the setts, combined with a loss of habitat for foraging or creation of new setts, would be adverse and direct.

9.5.39 At a **Local** population scale, the above impacts would have a **Minor Adverse** effect. There would be legal obligations and licensing requirements associated with any works affecting confirmed setts. At a **Local** population level, this may be reversible.

Mortality and injury

9.5.40 Given the relatively high levels of badger activity at the Direct Impact Areas and surrounding area, in the absence of mitigation measures there is an elevated risk of incidental killing of, or injury to, badgers during general construction activities (e.g. plant movement or excavations) or specific works affecting badger setts (e.g. sett destruction). Incidental events would be adverse, direct, and permanent for an individual. However, this would be medium-term and reversible at a **Local** population scale. This would have a **Minor Adverse** effect.

Significance and Additional Mitigation

9.5.41 In the context of the high density of badger setts in the region and increasing population trends (**Table 9-8**) and the landscape/land use providing an abundance of foraging habitat, the above effects would be adverse for the social group(s) using the Direct Impact Areas and surrounding area. However, this would not undermine the biodiversity conservation objectives of the population at a **Local** scale. This would not affect the long-term distribution and abundance of the locally valued populations. Therefore, the overall effect would be **Not Significant**.

9.5.42 In the context of EIA, no compensation or monitoring has been proposed because there would be no significant effects on the **Local** badger population. However, additional measures have been identified below to comply with legal obligations associated with works affecting badgers.

9.5.43 Avoidance:

- It is considered likely that the setts that lie within the Direct Impact Areas will be lost, including those within the tree and vegetation clearance areas, due to heavy plant movement. For the retained setts that occur within 30 m of the Direct Impact Areas (**Setts 2**; **3**; **21**; and **38**), it is recommended that a 20 m proximity zone is setup to exclude heavy plant and mitigate potential tunnel collapse, below ground. Only small plant and hand-held machinery should be operated within the 20 m zone. Care should be taken to avoid direct impacts to any mammal burrow entrances in all areas.

9.5.44 Sensitive lighting:

- Artificial lighting should not spill over to vegetation (lines of trees, hedgerows, scrub, etc.) and riparian corridors that would be retained around the periphery of the Direct Impact Areas.
- The use of background lighting overnight should be minimised as far as reasonably possible whilst still fulfilling safety and security requirements.

9.5.45 Pre- and during works:

- Once the Proposed Development's final required blasting areas are ascertained (**Section 9.3.39**), any potential setts that still occur within 100 m of these areas and that have not yet been subject to further detailed assessment, should have detailed surveys completed to them, to ascertain their active badger sett status. Based on the full potential blasting area, this currently applies to one of the two setts within this zone (**Sett 17**).
- The potential setts that occurred within the Direct Impact Areas or their EZoI[50] (**Setts 3**; **16**; **17**; **18**; and **21**), plus any newly established/identified potential setts identified during pre-construction badger survey(s),

[50] Based on current, full, potential blasting areas.

should be monitored prior to the Proposed Development's construction[51] commencing within 30 m; or blasting activities commencing within 100 m of them, to confirm their current use by badgers. Monitoring should be completed for a minimum of two-weeks during the summer months, or four-weeks during the winter.

- Due to the transient nature of badgers, a pre-construction badger survey should be undertaken within the Direct Impact Areas and their EZoI, no earlier than two months prior to construction commencing, in order to confirm that the situation regarding badger at the Direct Impact Areas has not changed in the interim period.
- Surveys would be undertaken by competent and experienced surveyors. Surveys would follow best practice prevailing guidelines. This may be fulfilled by the ECoW if they hold the relevant experience. Surveys would be undertaken prior to construction works, with subsequent update timings and any deviation from prevailing guidelines at the direction of the ECoW. The findings would be reported to the Environmental Manager. This would be required with reference to guidance on the lifespan of ecological data[52]; due to the change in land use during construction; the badgers transient nature; and the relatively high density of setts, such that the baseline could change within and between seasons.

9.5.46 Licensing:

- Where no suitable alternative exists and other licensing tests can be satisfied, a licence would be obtained for works affecting badgers. This would include sett destructions and potential disturbance effects where badger setts can be retained but would be in proximity (e.g., within 30 m) to construction operations with the potential to cause disturbance; or within 100 m of blasting activities. The licence would be in place prior to commencement of the works affecting badgers. A custom species protection plan supporting the licence would detail any specific sett exclusion requirements, timing restrictions, and additional mitigation and compensation measures, depending on the current use of a sett at the time of works[53].
- It is not proposed that artificial setts would be constructed for the loss of the Direct Impact Areas' subsidiary and outlier setts, as these would have relatively less importance within the territory and badgers may establish setts for similar functions at retained habitats with the Direct Impact Areas and immediate surrounding area.
- Licensing requirements may be dynamic over the construction period and should be reviewed regularly by the Environmental Manager in consultation with the ECoW. The ECoW would also monitor compliance with the conditions of any licences.

9.5.47 With the above additional measures in place, which are predominantly driven by application of the *Protection of Badgers Act 1992* for licensing works affecting badger setts, it is anticipated that the magnitude of impacts to badgers using the Direct Impact Areas and surrounding area would be reduced. In terms of this assessment which considers how badgers would be affected at a **Local** scale, residual effects would remain **Minor Adverse** and **Not Significant**.

Operational Phase

Bats

9.5.48 Predicted impacts/ effects that have been considered are as follows:

- Adverse:

[51] Includes any activities with the potential to directly impact a sett; obstruct access to it; or disturb badgers occupying setts, including, but not limited to: ground investigations; vegetation clearance etc.

[52] CIEEM (2019). Advice note on the lifespan of ecological reports and surveys. Available at: https://cieem.net/resource/advice-note-on-the-lifespan-of-ecological-reports-and-surveys/

[53] Sett use can change within and between seasons, especially with increasing populations and changing dynamics of social groups. Licensing and compensation requirements must be revised using current use information at the time of works.

- Artificial light at night.

- Beneficial:
  - Enhanced habitat for foraging, heterogeneity, connectivity.

Artificial light at night.

9.5.49 The effects of artificial light at night to bats set out under the construction phase have also been assessed at operation of the Proposed Development. There would be no barrier effect because the Direct Impact Areas are isolated in the landscape and connective features (e.g., hedgerows, tree lines, burns) would remain surrounding the Direct Impact Areas, as well as additional vegetation within the Direct Impact Areas and screening around the Proposed Development's infrastructure. It is understood that, during operation, the substation would not be generally illuminated. Floodlights would be installed but would only be used in the event of a fault during the hours of darkness; during the over-run of planned works; or when sensor activated as security lighting for night-time access. The proposed access roads would not be lit under normal operation. The perimeter fence would use infra-red lighting which would only switch to visible light if the fence alarm were activated. A light would be provided permanently at access gates. There is potential for any such artificial lighting during the active season to attract prey species, increase a bats risk of predation, and deter them from using PRFs at trees retained at/around the Direct Impact Areas or created to compensate for the loss of roosting resources. In the absence of additional mitigation measures, these effects of artificial light at night on the **Local** bat populations would be short-term as lighting would be incidental, reversible, **Minor Adverse** and **Not Significant**.

Habitat enhancements

9.5.50 The proposed landform screen woodland planting (**Volume 3, Figure 8.10 Landscape Mitigation Plan**) would create additional linear features across the RLB for commuting and foraging bat species, connecting across the RLB to further woodlands in the wider landscape to the south-west and north-east. The proposed wildflower and wetland grassland areas, and attenuation basins would offer an enhanced variety of foraging resources for bats, compared to the surrounding predominantly open and agricultural landscape.

9.5.51 Once established, the enhanced foraging habitat benefits for bats within the RLB would be long-term or permanent with a possible **Moderate Beneficial** effect for bats using the RLB and surrounding area. However, in the context that a beneficial effect would only be ecologically significant if it causes restoration of desired conservation status for the local bat population, the newly created habitats in the RLB would be **Not Significant** at a **Local** scale or greater.

Badger

9.5.52 The majority of effects on badgers using the RLB and surrounding area, and **Local** badger population, have been assessed at the construction phase due to the scale of the Proposed Development and length of construction programme.

9.5.53 Predicted impacts/effects that have been considered for the operational phase are as follows:

- Adverse:
  - None.
- Beneficial:
  - Enhanced habitat for connectivity.

Habitat enhancements

9.5.54 The proposed landform screen woodland planting (**Volume 3, Figure 8.10 - Landscape Mitigation Plan**) would create additional sheltered commuting corridors for commuting badgers, connecting across the RLB to further woodlands and sheltered habitats in the wider landscape to the south-west and north-east. Once established, the enhanced commuting habitat benefits for badgers within the RLB would be long-term or

permanent with a possible **Minor Beneficial** effect for badgers using the RLB and surrounding area. However, in the context that a beneficial effect would only be ecologically significant if it causes restoration of desired conservation status for the local badger population, the newly created commuting opportunity in the RLB would be **Not Significant** at a **Local** scale or greater.

9.5.55 With the measures considered during the construction phase in place, which are predominantly driven by application of the *Protection of Badgers Act 1992* for licensing works affecting badger setts, it is anticipated that the magnitude of effects to badger social groups using the RLB and surrounding area during the operational phase would also be reduced. In terms of this assessment which considers how badgers would be affected during the operational phase at a **Local** scale, residual effects would remain **Minor Adverse** and **Not Significant**.

9.6 Cumulative Effects

9.6.1 Cumulative effects can result from individually not significant but collectively significant actions taking place over time or concentrated in a location. **Volume 2, Chapter 5: EIA Process and Methodology, Table 5.2 Cumulative Developments** sets out those developments located within a 3 km study area of the Direct Impact Areas, which have been considered as part of the in-combination cumulative assessment. The cumulative developments are shown in **Volume 3, Figure 17.1: Cumulative Development**.

9.6.2 The following section identifies developments which have the potential to combine with the Proposed Development's residual effects to create a significant cumulative effect on each IEF assessed in this Chapter. The study area has been reduced or increased for certain IEFs based on the relevant EZoI. The assessment of cumulative effects on ecological receptors is based on professional judgement, consideration of baseline conditions within the Direct Impact Areas and the surrounding area, together with the findings from various technical studies.

Bats

9.6.3 The EZoI which has been assessed for bats is 3 km, in line with the largest Core Sustenance Zone (CSZ) for the bat species potentially impacted by the Proposed Development's construction (**Structure R1**)[30, 54]. Therefore, it is possible that any developments affecting roosts and supporting bat habitat (e.g., woodland, flight paths) within this EZoI could combine with the Proposed Development to elevate the significance of effects on bats using the Direct Impact Areas and surrounding area.

9.6.4 The following developments have been scoped out from consideration for bats for the outlined reasons:

- Fanellan Farmhouse Kiltarlity – Erection of agricultural building (20/02801/FUL). This development is completed and is considered within the Proposed Development's baseline surveys.
- Proposed energy storage facility (20/04849/PAN). The planning decision case is closed, with development not proceeding.
- Construction and operation of battery energy storage system (24/02885/SCRE). This development is located at a distance greater than 3 km from the Proposed Development and thus outwith the bat EZoI under consideration (**Section 9.6.3**).

9.6.5 The following developments of relevance to bats have been considered[55]:

<u>SSEN Transmission Projects</u>

- Kilmorack Power Station – replacement of existing Kilmorack Substation (24/02831/FUL). 1.6 km north of the Proposed Development.

[54] Common pipistrelle bats is 2 km and soprano pipistrelle is 3 km.

[55] Where not already constructed and considered as part of the baseline of this document.

- Aigas Substation – replacement and construction of existing Aigas Substation (24/02830/FUL). 1.2 km north-west of the Proposed Development.
- Kilmorack to Balblair – erection of replacement OHL (22/03536/PNO). 1.8 km north-east of the Proposed Development.
- Beauly to Denny 400kV OHL Diversion (24/00834/SCRE). Connecting to the Proposed Development.
- Western Isles Link HVDC UGC Connection. Connecting to the Proposed Development.
- Spittal to Beauly 400kV OHL (24/04588/SCOP). Adjacent to the Proposed Development.
- Beauly to Peterhead 400kV OHL (24/03064/SCOP). Adjacent to the Proposed Development.
- Black Bridge Replacement. 250 m north-east of the Proposed Development.

9.6.6 It is anticipated that all of the above projects would be undertaken in line with the Applicant's SPP and GEMP requirements.

9.6.7 No residual negative effects are anticipated on ecological IEFs within the Kilmorack Power Station or Aigas Substation projects' assessments available on the local authority planning portal.

9.6.8 The Kilmorack to Balblair replacement OHL; the Beauly to Denny 400 kV OHL Diversion; and Western Isles Link HVDC UGC Connection are limited in scale. Assessment of the Beauly to Denny 400 kV OHL Diversion project (which will be reported on separately to this EIA Report) identified one tree with PRFs within an outer EZoI. A preliminary habitat and protected species walkover conducted to the potential Western Isles Link HVDC UGC Connection project area during September 2024 (which will be reported on separately to this EIA Report) identified trees with PRFs adjacent to the project area. Negligible bat mortality/injury; loss of roost resources; or artificial light at night impacts are predicted following the implementation of the Applicant's baseline mitigation (SPPs and GEMPs). Potential disturbance could occur to bat roosts within the vicinity of the projects, which are anticipated to be short-term and reversible at a Local population scale. Therefore, this could have a **Minor Adverse** cumulative effect.

9.6.9 Preliminary baseline data collection for the portions of the proposed Spittal to Beauly 400 kV OHL; and proposed Beauly to Peterhead 400 kV OHL projects that occur within the 3 km CSZ indicated that there is potential for additional disturbance and/or loss of PRFs. There is also a potential for impacts to other supporting habitat (e.g., for commuting and foraging). It would be reasonable to assume that the mitigation hierarchy would be applied alongside a consideration of alternatives, such that features of importance would be retained as far as reasonably possible (e.g., by avoiding/micrositing around features or applying Horizontal Directional Drilling (HDD) construction methods under woodlands or riparian corridors). Where unavoidable, it is assumed that compensation for loss of confirmed roosts would be secured through licensing. It is unknown if the loss of supporting habitat (e.g., for commuting and foraging) from each project would be compensated for. Therefore this could have a **Minor Adverse** cumulative effect.

9.6.10 There is also potential for fragmentation of roosting and foraging resources from the portions of the proposed Spittal to Beauly 400 kV OHL; and proposed Beauly to Peterhead 40 0kV OHL projects that occur within the 3 km CSZ. Where the connections would bisect woodland, lines of trees, or hedgerows that can offer connectivity between roosts and foraging resources, it is anticipated that the wayleave corridors required to be cleared for construction and operation would be up to 80 m. Whilst this could result in additional loss of roosting and foraging resources, the agricultural landscape within which the Proposed Development and connections are located has a patchwork of linear features (e.g., hedgerows, lines of trees), such that if some are lost or bisected, it is anticipated that bats would still be able to navigate across their core sustenance zone between existing and otherwise unaffected roosting and foraging resources. This could have a **Minor Adverse** cumulative effect.

9.6.11 It is anticipated that the construction of the proposed Spittal to Beauly 400 kV OHL; and proposed Beauly to Peterhead 400 kV OHL would predominantly be undertaken during hours of daylight and that they would not require significant lighting during operation, such that the effects of artificial light at night would remain **Minor Adverse**.

9.6.12 With regards to the Black Bridge Replacement project, no bat roosts were identified within the bridge structure. However, bat roosts were identified within the 'Old Mill' building approximately 35 m from the bridge edge (**Section 9.3.21**), which falls within an EZoI of the project's potential operational area. Additional trees with PRFs were also identified within the outer EZoI surrounding the project. No bat mortality/injury, loss of roost resources or artificial light at night impacts are predicted following the implementation of the Applicant's baseline mitigation. Potential disturbance could occur to bat roosts within the vicinity of the project, which are anticipated to be short-term and reversible at a Local population scale. Therefore, this could have a **Minor Adverse** cumulative effect.

9.6.13 Overall, construction or operation of the Proposed Development concurrently or sequentially to the above described known SSEN Transmission projects would be unlikely to cause a significant cumulative effect on bats using the Direct Impact Areas and surrounding area.

9.6.14 Any compensatory PRFs (e.g. bat boxes) identified during the impact assessment for the Proposed Development (**Section 9.5.29**) would need to be located having cognisance to these other developments such that the PRFs would be effective and safeguarded from future impacts. For example, they should be located over 30 m away from other developments, in unlit areas, and in places with retained connectivity to wider bat habitat.

Other 3rd party projects

- South of Balblair Quarry – construction and operation of battery energy storage system (23/03772/SCRE and 24/01548/FUL). 2.8 km north-east of the Proposed Development

9.6.15 Following the implementation of standard mitigation measures, negligible impacts are anticipated on ecological IEFs within the battery energy storage system projects' assessments available on the local authority planning portal.

9.6.16 Habitat improvements, including grassland enhancements and creation of a 'biodiversity bank' are outlined in the projects' assessments. These have the potential to provide improved foraging opportunities in the CSZ for bats at a Local population scale. Therefore, this could have a **Minor Beneficial** cumulative effect.

9.6.17 Overall, construction or operation of the Proposed Development concurrently or sequentially to the above described battery energy storage system project would be unlikely to cause a significant cumulative effect on bats using the Direct Impact Areas and surrounding area.

Badger

9.6.18 The EZoI which has been assessed for badgers is 1 km, which is based on the single main sett identified during baseline studies within the RLB and would be a proportionate EZoI over which construction of the Proposed Development in combination with others, could have a cumulative effect on the local population.

9.6.19 The following developments have been scoped out from consideration for badgers for the outlined reasons:

- Fanellan Farmhouse Kiltarlity – Erection of agricultural building (20/02801/FUL). This development is completed and is considered within the Proposed Development's baseline surveys.
- Proposed energy storage facility (20/04849/PAN). The planning decision case is closed, with development not proceeding.

- The following developments are located at a distance greater than 1 km from the Proposed Development and are thus outwith the badger EZoI under consideration (**Section 9.6.18**):

- Kilmorack Power Station – replacement of existing Kilmorack Substation (24/02831/FUL).
- Aigas Substation – replacement and construction of existing Aigas Substation (24/02830/FUL).
- Kilmorack to Balblair – erection of replacement OHL (22/03536/PNO).
- South of Balblair Quarry – construction and operation of battery energy storage system (23/03772/SCRE and 24/01548/FUL).
- Construction and operation of battery energy storage system (24/02885/SCRE).

9.6.20 The following developments of relevance to badgers have been considered.

SSEN Transmission Projects

- Beauly to Denny 400 kV OHL Diversion (24/00834/SCRE). Connecting to the Proposed Development.
- Western Isles Link HVDC UGC Connection. Connecting to the Proposed Development.
- Spittal to Beauly 400 kV OHL (24/04588/SCOP). Adjacent to the Proposed Development.
- Beauly to Peterhead 400 kV OHL (24/03064/SCOP). Adjacent to the Proposed Development.
- Black Bridge Replacement. 250 m north-east of the Proposed Development.

9.6.21 It is anticipated that all of the above projects would be undertaken in line with the Applicant's baseline mitigation SPP and GEMP documents and procedures.

9.6.22 The Beauly to Denny 400 kV OHL Diversion; and Western Isles Link HVDC UGC Connection are limited in scale. Assessment of the Beauly to Denny 40 0kV OHL Diversion project (reported on separately to this EIA Report) identified one confirmed outlier sett that will be lost due to the project's construction. Six other confirmed and/or potential setts, comprising subsidiary and outlier sett types, were identified within the project's outer EZoI. A preliminary habitat and protected species walkover conducted to the proposed Western Isles Link HVDC UGC Connection project area during September 2024 (reported on separately to this EIA Report) identified no badger setts within an EZoI of the project. Negligible badger mortality/injury; or spatial reduction in territory/range impacts are predicted following the implementation of the Applicant's baseline mitigation and licence requirements. Potential disturbance could occur to retained badger setts within the vicinity of the projects, which are anticipated to be short-term and reversible at a Local population scale. Therefore, this could have a **Minor Adverse** cumulative effect.

9.6.23 Preliminary baseline data collection for the portions of the proposed Spittal to Beauly 400 kV OHL and proposed Beauly to Peterhead 400 kV OHL projects that occur within the 1 km EZoI indicate that they may impact areas of suitable badger foraging habitat. There is potential for any setts within the footprints of these projects to be lost and/or potential disturbance could occur to retained badger setts within the vicinity of the projects. It would be reasonable to assume that the mitigation hierarchy would be applied alongside a consideration of alternatives, such that features of importance (e.g., main breeding setts) would be retained as far as reasonably possible (e.g. by avoiding/ micrositing around features). Where unavoidable, it is assumed that compensation for loss of important setts would be secured through licensing. Potential disturbance and/or sett loss impacts are anticipated to be short-term and reversible at a Local population scale. Therefore, this could have a **Minor Adverse** cumulative effect.

9.6.24 Ranges into other social group territories may become more frequent if badgers are displaced, however it has been evidenced that badgers display flexibility in their social dynamics and some badgers may already display behaviours such as 'super-ranging'. Any cumulative effects on the inter-social dynamics would be **Minor Adverse**.

9.6.25 With regards to the Black Bridge replacement project, no confirmed badger setts were identified within the footprint of the project (**Section 9.3.21**). No confirmed or potential setts were identified within the outer EZoI surrounding the project. Negligible mortality/injury; disturbance; or spatial reduction in territory/range impacts are predicted following the implementation of the Applicant's baseline mitigation.

9.6.26 Overall, construction or operation of the Proposed Development concurrently or sequentially to the above described known SSEN Transmission projects would be unlikely to cause a significant cumulative effect on badgers using the Direct Impact Areas and surrounding area.

9.7 Summary

9.7.1 This assessment focussed on effects of the Proposed Development on bats and badgers. These species have been valued in the context of the Direct Impact Areas and surrounding area, and wider conservation status, including bats (**District**) and Badger (**Local**). Construction and operational effects on the IEF populations have been assessed, including (not limited to): effects from artificial lighting; loss of resting sites; changes to supporting habitat; disturbance/displacement of species/groups; and incidental mortality and injury of IEF species. The significance of these effects was balanced against the current distribution and abundance of badgers and relevant species of bats; their population trends; and conservation objectives at the relevant scale which they have been valued.

9.7.2 With the application of additional mitigation, any residual effects from construction or operation of the Proposed Development on badger would be **Not Significant**. Without additional measures in place, residual effects on bats would be **Significant**, in a worst-case scenario at a Local scale. However, compensation measures have been identified to offset this and ultimately there would be **no significant effects** on the bat populations at a Local scale, following the successful application of these measures. Beneficial effects driven by the landscape proposals have been identified but would be **Not Significant**.

9.7.3 Effects on designated sites of (non-ornithological) ecology and nature conservation interest would be **Not Significant**. Consideration of effects on sites of ornithological interest are considered further in **Volume 2, Chapter 10: Ornithology**.

9.7.4 A review of cumulative effects from other relevant developments has also been undertaken and **no significant cumulative effects** were identified.

9.7.5 A BNG assessment has been undertaken and is presented separately to this EIA Report. Whilst at outline landscape design stage and therefore subject to changes, the BNG assessment outlines the Applicant's commitment to achieving a minimum 10 % net gain for the Proposed Development, by measuring the change in biodiversity units of habitats at the Direct Impact Areas; and outlining any potential additional habitat creation and/or enhancement measures.