

Chapter 07: Ecology and Biodiversity

Environmental Impact Assessment
Report for:

Westfield Substation Extension

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7. Ecology and Biodiversity

7.1 Introduction

- 7.1.1 This chapter, prepared by EDP, presents an assessment of the likely significant effects of the Proposed Development on Important Ecological Features (IEF), which includes all features that are considered to be important and those that could be affected by the project, relating specifically to species populations, habitats and designated sites. It is not considered necessary to carry out the detailed assessment for features that are sufficiently widespread, unthreatened and resilient to development related impacts that will remain viable and sustainable, and these features, alongside the reason for scoping out of the EIAR, are outlined in **Technical Appendix 2.2**. This chapter has been prepared with reference to The CIEEM Ecological Impact Assessment Guidelines 2018; (last updated in September 2024).
- 7.1.2 This chapter evaluates the importance of the nature conservation interest (terrestrial) and the likely significant effects predicted as a result of the Proposed Development. It outlines the methodologies used to assess likely significant effects on protected habitats, flora and fauna both within the footprint of the Proposed Development and the surrounding area. It presents an assessment of the likely significant effects on sensitive ecological receptors, along with suggested mitigation measures to avoid or reduce the likely significant effects; and an assessment of the residual likely significant effects of the Proposed Development after mitigation measures have been implemented.
- 7.1.3 In addition, the cumulative effects of the Proposed Development and other relevant schemes have been considered and are presented in **Chapter 12**. The intra-effects have also been considered, and none have been identified in relation to the Proposed Development.

7.2 Scope of Assessment and Consultation

- 7.2.1 The scope of the Ecological Impact Assessment (EclA) has been determined by current ecological investigations of the site and a formal EIA Scoping Opinion. The Scoping Report was submitted to Fife Council (FC) in July 2024, and a Scoping Opinion provided by FC in September 2024. The feedback provided on ecological impacts determined that not enough information was provided at the time of submission of the Scoping Report and therefore NatureScot recommended and FC required that ecological likely significant effects are scoped into the EIAR.
- 7.2.2 The views of the FC and NatureScot were sought as part of the general pre-application consultation, with detail provided in respect to likely ecological sensitivities pertaining to the site and necessary survey scope. The response in relation to NatureScot and Natural Heritage, as provided in **Technical Appendix 2.2**, has been addressed and summarised in **Table 7.1** below, alongside the response from FC.

Table 7.1: Scoping Responses – Ecology and Biodiversity

Consultee/ Source	Advice/Requirement	Applicant Response
NatureScot	Provide clear description of habitats/species, impacts, and mitigation	Detailed ecological surveys have been undertaken in accordance with best practice to identify presence or potential presence of protected and notable species and habitats. The Technical Appendix 7.1 sets out baseline conditions, assesses potential impacts and defines appropriate mitigation measures
NatureScot	Biodiversity should be scoped into the EIA	Biodiversity has been scoped into the EIAR and is fully assessed within this chapter
NatureScot	Include a section outlining positive effects for biodiversity	The Proposed Development includes habitat creation and installation of habitat features (e.g. bat boxes), with positive effects to biodiversity assessed within this chapter
FC - Natural Heritage	Neutral grassland and habitats require assessment	Habitat surveys have been undertaken and all habitats, including neutral grassland, are assessed within Technical Appendix 7.1 .
FC - Natural Heritage	Low potential for protected species (e.g. badger)	Surveys have been undertaken to confirm presence/potential presence of protected species and inform mitigation, where required.
FC - Natural Heritage	Identify mitigation and compensation measures	Mitigation has been defined through Technical Appendix 7.1 and embedded within the design, with no adverse impacts on key ecological receptors identified
FC/NPF4 Policy 6	Avoid impacts on ancient woodland, veteran trees and high-value habitats	There is no loss or adverse impact to ancient woodland, ancient/veteran trees, or woodland/hedgerows with high biodiversity value as a result of the Proposed Development
FC/Woodland Policy	Justify woodland removal and provide compensatory planting	Limited woodland removal is required to facilitate the Proposed Development, which delivers public benefits through upgrading the local electricity network to secure future energy supplies. Landscaping is proposed on site.
FC/NatureScot	Provide biodiversity enhancement and landscape proposals using native species	Biodiversity enhancements are incorporated through habitat creation and native planting, supported by a Landscape Strategy and Landscape and Ecology Management Plan (LEMP)

723 An Ecological Appraisal has been produced, provided at **Technical Appendix 7.1** to this EIAR, to outline the findings of the detailed surveys and recommendations for mitigation, in conjunction with this EIAR.

7.3 Assessment Methodology and Significance Criteria

731 This section identifies the key ecological issues considered as part of the EIA, describes the methods used to establish baseline conditions and assesses the magnitude and significance of the likely ecological effects of the Proposed Development.

732 The chapter is based upon the findings of a desk study and detailed ecological investigations undertaken between 2023 and 2025 with respect to designated sites, non-designated sites, habitats, breeding birds, bats, otter (*Lutra lutra*), water vole (*Arvicola amphibius*), badger (*Meles meles*), greatcrested newt (*Triturus cristatus*); reptiles and fish. Those surveys scoped out include further detailed botanical surveys, wintering birds, pine martin (*Martes martes*), red squirrel (*Sciurus vulgaris*), due to a lack of suitable habitat present within the site to support these ecological receptors. The initial survey scope and findings of the walkover surveys were shared with FC as part of a pre-application consultation during 2024. The detailed findings of the ecological surveys undertaken of the site are set out within **Technical Appendix 7.1** to this EIAR. SPT is committed to achieving Biodiversity Net Gain (BNG) and a statement on biodiversity enhancement has been provided in **Technical Appendix 7.2**.

Establishing the Baseline

733 A summary of desk study, and survey methodologies are provided below and set out in full detail in **Technical Appendix 7.1**.

734 The desk study, undertaken in November 2023, involved utilising free online mapping resources, as well as collating biodiversity information from the following sources:

- Fife Nature Records Centre (FNRC);
- NatureScot Site Link;
- Multi-Agency Geographic Information for the Countryside (MAGIC) website;
- National Biodiversity Network (NBN) Atlas website;
- Habitat Map of Scotland (HabMoS);
- Aerial mapping; and
- A review of the FIFEplan (adopted 2017).

735 The desk study involved obtaining the following information (within the following spatial parameters):

- International statutory designations (20km radius around the site);
- National and Local statutory designations (2km) and non-statutory local sites (1km radius around the site);

- All other protected species, Priority Species and other notable species records (1km radius around the site); and
- All other Priority Habitat records (1km radius around the site).

736 These search areas are considered sufficient to cover the potential Zone of Influence (Zol) of the Proposed Development in relation to designated sites, habitats and species.

737 In addition, the following suite of surveys has been carried out within the site:

- An Extended Phase 1 Habitat survey on 16 July 2024;
- Breeding bird surveys, with three visits completed between late April and June 2024;
- Ground level roost assessment of trees for bat roosting suitability, undertaken on 16 July 2024 with a further survey for trees associated with the 33kV OHL carried out on 11 August 2026;
- Emergence surveys of potential roost features on trees to confirm presence/infer absence of roosting bats prior to removal, surveys have been undertaken on 29 August and 23 September 2025;
- Nighttime Bat Walkover (NBW) surveys conducted each season in spring (28 May 2024), summer (10 July 2024) and autumn (17 September 2024) to assess importance of a bat assemblage utilising the site for foraging/commuting/roosting;
- Automated detector surveys conducted seasonally in May, July and September 2024 to assess importance of a bat assemblage utilising the site for foraging/commuting;
- Otter and water vole surveys were undertaken on 19 March and 16 July 2024, and July 2026;
- Badger survey to assess usage of the site by this species on 16 July 2024;
- Habitat Suitability Index (HSI) Assessment of on-site waterbodies (P34) on 24 July 2024 to determine habitat suitability for great crested newt;
- Reptile surveys undertaken between 25 June and 07 October 2024; and
- Fish Survey to assess the in-stream habitat for salmonids, lampreys and eels, undertaken on the 1 May 2026.

738 The methodology used for these surveys is further detailed in Section 2 of **Technical Appendix 7.1**.

Assessment of Effects Methodology

739 The assessment of the likely significant effects on ecological receptors is based on both the 'sensitivity' of a receptor and the nature and magnitude of the impact that the Proposed Development will have on it. Effects on biodiversity may be direct (e.g. the loss of species or habitats), or indirect (e.g. effects due to noise, dust or disturbance, on receptors located within or outside the application area).

Receptor Sensitivity

7310 The evaluation methodology has been adapted from the Guidelines to allow for consistency in approach across the different assessment chapters. A key consideration in assessing the effects of any development on flora and fauna is to define the areas of habitat and the species that need to be

considered. This requires the identification of a potential Zol, which is defined as those areas and resources that may be affected by biophysical changes caused by project activities, however remote from the site.

- 7.3.11 The Guidelines recommend that the value or potential value of an ecological resource or feature be determined within a defined geographical context and recommends that the ecological features are valued using the scale set out in **Table 7.2**, with examples provided of criteria used when defining the level of value.

Table 7.2: Scale of Value

Sensitivity of Receptor	Examples
International and European	European sites including SPAs, SACs, proposed SACs and Sites of Community Importance (SCI). Proposed SPAs (pSPA), and Ramsar sites (designated under international convention) and proposed Ramsar sites; and Areas of habitat or populations of species which meet the published selection criteria based on discussions with NatureScot for designation as a European site, but which are not themselves currently designated at this level.
National (UK context)	A nationally designated site including SSSIs and National Nature Reserves (NNR); Areas (and the populations of species which inhabit them), which meet the published selection criteria guidelines for selection of biological SSSIs but which are not themselves designated based on discussions with NatureScot; Scottish Biodiversity List habitats and species, Red listed and legally protected species that are not addressed directly in Part 2 of the 'Guidelines for Selection of Biological SSSIs' but can be determined to be of national importance using the principles described in Part 1 of the guidance; and Areas of Ancient Woodland e.g. woodland listed within the Ancient Woodland Inventory and ancient and veteran trees.
Scotland National/UK Regional	Regularly occurring Scottish Biodiversity List habitats or populations of Scottish Biodiversity List species, Red listed and legally protected species may be of regional (Scotland) importance in the context of published information on population size and distribution.
Council Area (FC)	LNRs and Non-statutory Designated sites including Wildlife Sites of Council Area Importance; and Areas which meet the published selection criteria for those sites listed above (for habitats or species, including those listed in relevant Local Biodiversity Action Plans) but which are not themselves designated.
Local	Scottish Biodiversity List habitats and species, Red listed and legally protected species that based on their extent, population size, quality etc are determined to be at a lesser level of importance than the geographic contexts above;

Sensitivity of Receptor	Examples
	Common and widespread semi-natural habitats occurring within the study area in proportions greater than may be expected in the local context; and Common and widespread native species occurring within the study area in numbers greater than may be expected in the local context.
Less than Local	Common and widespread semi-natural habitats and species that do not occur in levels elevated above those of the surrounding area.
Negligible	Areas of heavily modified or managed land uses (e.g. hard standing used for car parking and as roads etc.) that offer no value to biodiversity.

7.3.12 Within this chapter, any ecological feature of Local level or higher, or those features that are of Less than Local level but are afforded legal protection, are considered an Important Ecological Feature (IEF)

Characterisation of Effects

7.3.13 The Guidelines state that the assessment of likely significant effects should be undertaken in relation to the baseline conditions within the ZOI that are expected to occur if the development were not to take place. Having identified the activities that could have likely significant effects, it is then necessary to describe the resultant changes and to assess the impact on important ecological features.

7.3.14 The Guidelines recommend that the process of identifying likely significant effects should make explicit reference to aspects of ecological structure and function on which the feature depends. Likely significant effects must be assessed in the context of the baseline conditions within the ZOI during the lifetime of the proposed development.

7.3.15 When describing changes/activities and impacts on ecosystem structure and function, reference should be made, where appropriate, to the following parameters:

- Beneficial or adverse;
- Extent (i.e. the spatial or geographical area over which the likely significant effect may occur during a representative range of conditions);
- Magnitude (i.e. the size, amount, intensity or volume. Magnitude is quantified where possible and provided in absolute or relative terms);
- Duration (which is defined in relation to ecological characteristics such as the lifecycle of a species as well as human timeframes);
- Timing and frequency (timing may change the result of the likely significant effect if it coincides with sensitive life-stages or seasons, and the number of times an activity occurs will influence the resulting effect); and
- Reversibility (an effect is considered reversible if it can be counteracted by mitigation or if spontaneous recovery is possible).

7.3.16 In order to characterise the likely significant effect, it is necessary to take into account all the above parameters where applicable.

7.3.17 The assessment also considers the magnitude, and in order to characterise the magnitude of each likely significant effect on each feature, the following parameters are taken into account, where relevant:

- The magnitude of change;
- The spatial extent over which the likely significant effect would occur;
- The temporal duration of the likely significant effect;
- Whether the likely significant effect is reversible and over what timeframe; and
- The timing and frequency of the likely significant effect.

Significance of Effect

7.3.18 Following the classification of a likely significant effect, a clear statement is made as to whether it is 'significant' or 'not significant' in the context of EIA regulations. For the purpose of EclA, a significant effect is an effect that either supports or undermines biodiversity conservation objectives for IEFs or for biodiversity in general. The effects on the general biodiversity of the site are identified and discussed within **Technical Appendix 7.1**, with the effects on the IEF's assessed within the EIAR.

7.3.19 The significance of a likely significant effect is considered, using professional judgement, within the context of the geographical-based ecological importance of the feature, on a range of scales from International to Local. For example, the significance of a potential effect on a habitat of local ecological importance is considered to be significant, or not significant, at a Local level.

7.3.20 CIEEM guidelines recommend that significance is not defined as 'major', 'moderate' or 'minor' in the context of biodiversity due to the complexities of ecological processes. Therefore, for the purpose of EclA, all likely significant effects identified within the assessment are considered to be significant within the context of EIA Regulations. However, to allow for the likely significant effects identified in this chapter to be considered alongside those addressed across the EIA, a 'conversion' has been undertaken, as set out in **Table 7.3**. Converted effects of Major and Moderate and Minor are considered 'significant' in the context of EIA regulations.

Table 7.3: Effects Significance Conversion

EclA Significance	Conversion
International	Major
National	Major
/Regional	Moderate
Council Area	Moderate
Local	Minor
Less than Local (Site)	Negligible

- 7.3.21 Since the purpose of an EIA is to focus on likely significant effects, it is not reasonable to expect the assessment to include every ecological feature that may be affected, since effects will not be significant where features are not legally protected and are less than Local level importance. The assessment therefore focuses on IEFs, based on professional judgement, experience and contextual information, of Local Ecological Value or above, or those of Less than Local level that are afforded legal protection. **Technical Appendix 7.1** gives greater consideration of less than Local value features not scoped into the assessment.
- 7.3.22 Where the likely significant effect upon an IEF is considered to be less than local level, the effect is considered to be 'Negligible' and this is 'Not Significant'.
- 7.3.23 The following terms have also been used, to aid the description of the effect:
- Beneficial – positive effects;
 - Adverse – negative effects;
 - Short/Medium/Long Term – length of the effect;
 - Permanent – effect cannot be reversed;
 - Temporary – effect can be reversed ;
 - Direct – effects that are a direct result of the Proposed Development; and
 - Indirect – effects that may be 'knock-on' effects of direct effects.

Assessment Limitations and Assumptions

- 7.3.24 The baseline surveys that were carried out at the site followed standard industry guidance at the time of completion and therefore provide a robust basis for the identification of IEFs. However, no surveys can provide absolute confidence about the presence or absence of species at a site, or a completely accurate knowledge about the distribution of species across a site as surveys represent only a snapshot in time and many species are transient in nature.
- 7.3.25 The assessment is based on baseline survey results that are accurate at the time of survey. However, the baseline can change due to the mobility of some species, changes in land management and natural processes of vegetation succession. As all pertinent habitat and species surveys were completed in 2024 and 2025 it is considered that the baseline data are up to date for the purpose of conducting a thorough assessment.
- 7.3.26 The methodology and approach follow best practice guidance. Details pertaining to limitations within the survey methodology and results are provided within **Technical Appendix 7.1**.
- 7.3.27 There were no significant limitations relating to access, seasonality or weather conditions for the majority of the surveys. For the Extended Phase 1 Habitat Survey, the initial walkover was carried out on the 19 March 2024, which is outside of the optimal season for this survey type. In response, a further habitat survey was carried out on the 16 July 2024, during the peak growing season, to account for any species potentially missed during the first walkover.
- 7.3.28 The first two breeding bird surveys were undertaken later in the morning than guidance recommends due to unfavourable weather conditions earlier in the morning. As such, this could have impacted bird activity levels recorded. However, this is not considered to be a significant limitation to the

- surveys as the low numbers of common and widespread species recorded were aligned with those recorded on the third survey.
- 7329 During the July and May NBWs, light rain was recorded, however, the conditions were dry for the majority of both surveys, and light rain will not deter the invertebrate prey species so bats will still continue to forage and commute.
- 7330 An aerial inspection scheduled for 27 February 2025 was not undertaken due to health and safety concerns, as the trees were unsafe to climb, and consequently, emergence surveys were carried out. Based on the context of the Site, the habitats present and the results from the activity surveys, which included a stationary observation point facing the trees and static detectors deployed along the line of trees, in the absence of climbing inspections, all trees were classified as Potential Roost Features (PRFs). Therefore, two emergence surveys were carried out per tree to determine the presence of roosting bats and three NBW with the stationary observation periods facing these trees to observe where bats are potentially emerging from, as per the Bat Conservation Trust guidelines.
- 7331 For the otter and water vole surveys, it was not possible to access the banks of the watercourse fully during the July survey, due to dense and overgrown vegetation, particularly where the watercourse extends into the south of the site. As the watercourse is generally very open and the vegetation present is not suitable for holt creation, the surveys are still deemed adequate for determining presence/likely absence, and if the species are utilising the site, then this would be apparent through obvious mammal paths in the vegetation. It should also be noted that this survey provides a snapshot of otter presence at the time of survey, and activity levels and presence can change over time.
- 7332 For water voles, March is a sub-optimal time to undertake such surveys. However, the March survey was undertaken alongside the habitat survey, during which it was noted that vegetation at the Site has the potential to become dense during the optimal period. As such, the March visit provided an opportunity to assess habitat suitability and identify more permanent evidence of water vole presence, such as burrows, which can become obscured later in the season. No burrows or other evidence was recorded during the March or the July survey. The habitat is considered to be of moderate suitability, primarily due to its connectivity to the wider landscape, and the desk study returned no records of water vole within 1km of the Site. Therefore, this is not considered to be a significant limitation.
- 7333 The single pond within 250m of the site boundary was very shallow at the time of survey and therefore, was unsuitable to undertake an eDNA survey to determine the presence of great crested newt. However, given that an HSI survey was also undertaken, suitability of the pond to support a breeding population of great crested newts can still be assessed.
- 7334 The majority of the reptile surveys were undertaken under suitable weather conditions with temperatures being between 9°C and 18°C and no rain. Two surveys were carried out when temperatures were over 18°C, and two surveys were started 10 minutes before the optimal time of day for reptile surveys (08:30 to 11:00 or 16:00 to 18:30). Given that these surveys are to determine presence/absence and the majority of the surveys were completed within optimal conditions, this not likely to significantly impact the outcome and recommendations of the assessment.
- 7335 Due to localised water scarcity and the drought conditions experienced at the time of the fish survey, the watercourse may be subject to drying out or changes in water temperatures resulting in fish

mortalities. Salmonid fish may seek deeper water during drought conditions and drop into the lower sections of the survey area, which would therefore impact the absence of fish, or potential presence in areas where salmonids are not usually found.

7.4 Legislation and Policy Context

74.1 All relevant Legislation, Guidance Documents and Standards which have been used to inform or guide the assessment are summarised below and provided in detail within **Technical Appendix 7.1:**

Legislation

- Conservation (Natural Habitats &c.) Regulations 1994;
- Wildlife and Countryside Act 1981;
- Nature Conservation (Scotland) Act 2004;
- Wildlife and Natural Environment (Scotland) Act 2011;
- Protection of Badgers Act 1992; and
- The Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003.

Guidance Documents

- Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat survey;
- Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust (2023);
- Common Bird Census Method (1983);
- Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature (2003);
- The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series) Mammal Society (2016);
- Surveying Badgers. Occasional publication of Mammal Society, Number 9. Mammal Society (1989);
- Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155 (2000);
- Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10, Froglife, Halesworth;
- Guidance on Ecological Impact Assessment in Scotland; and
- NatureScot Standing Advice for various Protected Species including birds, badgers, bats, beavers, great crested newt, mountain hare, otter, pine martin, red squirrel, reptiles, water vole and wildcats.

Standards and Policy

- The Scottish Biodiversity List;
- Scottish Government Planning Guidance: Biodiversity (2023); and
- CIEEM advice note on the lifespan of ecological reports and surveys.

742 A summary of the primary biodiversity policy requirements is provided below.

National Planning Policy

The National Planning Framework 4 (NPF4)

743 The NPF4 includes:

- Policy 2, which sets out the Scottish Government's intentions to minimise the lifecycle of greenhouse gas emissions, adapt to current and future risks to climate change and to reduce emissions and improve adaptations to climate change for existing infrastructure;
- Policy 3, which sets out the intentions to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks;
- Policy 4, which sets out the intentions to protect, restore and enhance natural assets making best use of nature-based solutions;
- Policy 6, which sets out the intentions to protect and expand forests, woodland and trees; and
- Policy 11, which sets out the intention to support all forms of renewable, low-carbon and zero emissions technologies, including enabling works such as grid transmissions and distribution infrastructure. It also sets out the expectation that design and mitigation will demonstrate how impacts on biodiversity, including birds, will be addressed.

Local Policy

FIFEplan (adopted September 2017)

744 Specific policies within the Fife Local Plan, which relate to biodiversity are detailed below; these are taken from the FIFEplan (adopted September 2017):

- Policy 13 states that development proposals will only be supported where they protect or enhance natural heritage and access assets including: designated sites of international, national and local importance, woodlands, biodiversity in the wider environment, and protected and priority habitats and species.

7.5 Baseline Conditions

751 This section provides an assessment of the 'baseline' (existing) conditions in respect of designated sites, habitats and species present.

Current Baseline (2025)

752 A detailed account of valued IEFs including designated sites, habitats and protected and notable species present within and around the site is provided in **Technical Appendix 7.1**. Those species, or species assemblages, of sufficient value for inclusion as IEFs in the assessment, are summarised in **Table 7.4**. All IEFs of less than ‘Local’ geographic value have been scoped out of the EIA, unless they require further consideration owing to their legal status and/or are considered more holistically with respect to biodiversity enhancement policy requirements.

Table 7.4: Summary of Important Ecological Features

Feature	Summary Description and Relationship with Site	Sensitivity of Receptor
Statutory Designations		
Loch Leven SPA/Ramsar/SSSI	A eutrophic lake designated for important winter populations of waterfowl. 2.1km north-west.	International
Firth of Forth SPA/Ramsar/SSSI	A complex of estuarine and coastal habitats designated for important winter populations of waterfowl. 10.6km south-east.	International
Outer Firth of Forth and St Andrews Bay Complex SPA/Ramsar	A larger estuarine/marine site designated for important winter populations of waterfowl. 10.7km south-east	International
Forth Islands SPA/SSSI	Three volcanic islands supporting a nationally important seabird colony. 14.4km south	International
Turflundie Wood SAC	A pond cluster designated for its population of great crested newt. 15.9km north	International
Pitkeathly Mires SAC	Upland mires with the presence of transition mires and quaking bogs. 17.9km north-north-east	International
Non-statutory Designations		
Ballingry Meadow Wildlife Site	The site is designated for the presence of botanically rich neutral and marshy grassland. 320m west.	Council Area
Habitats		
Hedgerow/Line of trees/Broadleaved semi-natural woodland	A boundary hedgerow is present, separating the two fields from north to south along the centre of the site. A small patch of woodland/trees and scrub habitat to the west of the existing substation.	Local

Feature	Summary Description and Relationship with Site	Sensitivity of Receptor
Running Water	A watercourse is present along the southern boundary of the site, which branches off and extends into the site	Local
Species		
Bird Assemblage	Assemblage of limited diversity and abundance, including low numbers of conservation concern and Priority Species.	Less than Local (included due to legal protection)
Bat Assemblage	Commuting and foraging in low numbers by a small number of species plus 11 trees with PRFs present suitable for roosting bats, and a further 5 trees associated with the corridor of the 33kV OHL due to be retained. The emergence surveys recorded no roosting bats.	Local
Otter	A single old otter spraint was recorded within the small stream of running water along the southern boundary of the site.	Local
Fish	The presence of salmonid fry and parr habitat recorded in the west of the site, but limited suitability for salmonids, eels and lampreys in the south of the site and to the east of the site boundary.	Local

Future Baseline (2030)

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A number of assumptions are made to define the 'no development' scenario or future baseline of the site. The future Ecology and Biodiversity baseline for the habitats within this site would largely depend on natural processes, climate and land management practices. The existing habitat and species composition of the site is expected to remain largely unchanged without development due to a continuation of the existing land management regime.

- 754 The habitats within the site are of limited ecological value, and in the case of the hedgerows, these features will deteriorate over time without management, and therefore are expected to offer the same, or fewer, opportunities based on a continuation of the current land management. There is no connectivity between on-site hedgerows and woodland and surrounding habitats, meaning they are isolated from the potential colonisation by species whose numbers could increase in response to new Scottish Government Policy which seeks to increase woodland cover by 3% by 2032¹ such as red squirrel and pine marten. However, should vegetation be left to naturally succeed without intervention, the habitats recorded within the site are not likely to change beyond the potential colonisation of the grasslands by scrub, but these changes are not expected to be notable beyond up to a local context.
- 755 Impacts from climate change may alter the ecological resources within the site. However, significant changes are unlikely within the development's lifetime. Overall, both current and future conditions suggest minimal changes in the site's habitats and species resources due to climate impacts.

7.6 Assessment of Likely Significant Effects

- 761 An assessment of likely significant effects of the Proposed Development on those IEFs identified above has been undertaken based on the basis that all habitats, with the exception of the watercourse and boundary vegetation, will be lost. The Illustrative Landscape Strategy (**Figure 3.2**) and the description of the development (**Chapter 3**) have also been used and referenced, where appropriate.

Embedded Mitigation

- 762 Ecological input has been provided throughout the iterative design process, so the development layout reflects some important measures to avoid and mitigate for ecological impacts. However, the assessment has had to be completed on a precautionary basis given uncertainty regarding future management to habitats onsite and therefore the long-term delivery of habitat enhancements within the Site. On this basis, the embedded mitigation considered as part of the assessment of effects includes the following:
- Retention/buffering of valuable boundary habitats (including habitats known to support protected/notable species) – specifically the stream to the south and the scrub to the north, which will be buffered to protect commuting and foraging by birds, bats and otter;
 - A Construction Environmental Management Plan (CEMP), detailing a range of standard measures to avoid or mitigate environmental impacts during construction, including controls over working hours; avoiding the use of artificial lighting in sensitive areas; suppression of dust, vibration and noise; and prevention of surface water pollution;
 - Compliance with wildlife legislation including obtaining relevant mitigation licences for works affecting certain legally protected species, i.e. EPS licences in respect of roosting bats and sensitive working methodologies for the protection of nesting birds;

¹ [Why are we expanding Scotland's woodlands? | Scottish Forestry](#)

- A surface water drainage strategy, including the incorporation of Sustainable Drainage System (SuDS) features, to maintain existing greenfield run-off rates and to improve water quality through intercepting pollutants; and
- Landscape and Ecology Management Plan (LEMP) or equivalent document, setting out the long-term management, maintenance and monitoring of retained, created and enhanced habitats.

Construction

763 General construction impacts, which may result in effects (both positive and negative) on IEFs are listed in **Table 7.5**.

Table 7.5: Likely Effects caused by General Construction Impacts

Effect	Possible Causes/Mechanisms
Habitat loss	Felling of trees, removal or disturbance of vegetation or soils by heavy plant, materials storage/stockpiling, etc. during site preparation and construction.
Habitat degradation	Pollution by dust, fuels, lubricants, hydraulic fluid, cement or silt resulting in toxic effects to plants/animals. Damage to soils or vegetation by physical damage, soil compaction (resulting in changes in flora), change in hydrology resulting in the drying of wetland areas or reductions in local populations of wetland animals or plants.
Habitat fragmentation	Temporary or permanent reduction in habitat connectivity through severance of habitat corridors or isolation of patches of habitats, e.g. by severance of hedgerows or watercourses, or through installation of features or land use that presents a barrier or hostile environment (such as A roads, urban areas, bridges or culverts).
Killing, injury, or disturbance of animals	Digging, vegetation/tree removal, movement of vehicles/heavy plant, and entrapment of animals in trenches, pits or pipes.
Displacement of animals	Visual, noise or vibration-related disturbance from vehicles/heavy plant, lighting, digging or piling.

764 An appraisal of likely significant effects upon wider species interests of Less than Local value with no legal protection, that were identified as having no significant effect is provided in **Technical Appendix 7.1**, including appropriate mitigation measures.

Statutory Designated Sites

765 No statutory ecological designations are located within the site and therefore would not be subject to direct habitat loss during construction.

766 The closest statutory designation is Loch Leven SPA/Ramsar/SSSI, which is located 2.1km northwest of the site. There is no hydrological connectivity between the Proposed Development and Loch Leven. As such, indirect impacts associated with construction, such as dust, pollution, or

run-off are not anticipated. The desk study found no recent records indicating the regular presence of notable wintering bird species associated with this designation within the site itself. Given the abundance of suitable arable and grassland habitats in the wider area, the loss of habitat associated with the Proposed Development is unlikely to displace any wintering bird species potentially using the site.

- 767 The Proposed Development involves an extension to an existing electricity substation and the decommissioning of the 275kV elements of the existing substation. It will not generate impacts associated with increased air pollution, recreational pressure, noise disturbance, or traffic that could affect Loch Leven or its qualifying features. Based on the lack of hydrological or physical connectivity and the nature of the qualifying features, no significant effects on this designated site are anticipated.
- 768 For all other statutory designations within the ZOI, due to their spatial separation and the limited scale and scope of the Proposed Development, being confined to a substation extension and the decommissioning of the 275kV elements of the existing substation, no impacts are expected in relation to air quality, recreation, noise, traffic or hydrological change.
- 769 No significant effects are therefore anticipated on any statutory designated sites during the construction phase (**Not Significant**).

Habitat Regulations Assessment

- 7610 Not only do impacts on international designations need to be considered under the EIA regulations and in respect of planning policy, but in accordance with Conservation (Natural Habitats, &c) Regulations 1994 (as amended 2019). Under these Habitat Regulations, all competent authorities must consider whether any plan or project could affect a European site before it can be authorised or carried out. This includes whether it will have a 'Likely significant effect', and if so they must carry out an 'appropriate assessment' (AA), a process known as a Habitats Regulations Appraisal (HRA) in Scotland. European sites include Special Protection Areas (SPAs) and Ramsar sites designated for their importance to bird populations, such as Loch Leven. Where potential for likely significant effects cannot be excluded, the HRA process must be undertaken to assess implications for the conservation objectives of the site. A HRA comprises several stages of assessment as outlined below:
- Stage 1: What is the plan or project? - The applicant should provide the competent authority with sufficient information to carry out the HRA;
 - Stage 2: Is the plan or project directly connected with or necessary to site management for nature conservation? - for the majority of proposals this will be 'no' and Stage 3 should be considered by the competent authority;
 - Stage 3: Is the plan or project directly connected with or necessary to site management for nature conservation? - this represents a screening stage to determine whether the AA is required;
 - Stage 4: Undertake an appropriate assessment of the implications for the site in view of its conservation objectives – where the plan or project is considered to have likely significant effects on the qualifying interest(s) of a European site an AA is required.

- Stage 5: Can it be ascertained that the proposal will not adversely affect the integrity of the site? - for a plan or project to be consented the AA must ascertain that the plan or project will not adversely affect the integrity of a European site;
- Stage 6: Are there alternative solutions? - If it can't be ascertained that the proposal will not adversely affect the integrity of a European site it can only proceed if there are no alternative solutions and imperative reasons of overriding public interest;
- Stage 7: Would a priority habitat or species be adversely affected?; and
- Stages 8 and 9: Are there any imperative reasons for overriding public interest? - here it cannot be ascertained that a plan or project will not adversely affect the integrity of a European site, and there are no alternative solutions, a plan or project can only proceed if there are imperative reasons of overriding public interest for doing so.

7.6.11 A copy of the HRA proforma² has been provided as **Technical Appendix 7.3** to provide the competent authority with the detail required for the Proposed Development to carry out the HRA for Loch Leven SPA/Ramsar/SSSI, and subsequently the AA if required.

Non-statutory Designated Sites

7.6.12 No non-statutory ecological designated sites are located within or adjacent to the site and therefore no direct habitat loss during construction is anticipated.

7.6.13 The only non-statutory designation within the proposals ZOI is Ballingry Meadow Wildlife Site is located 320m to the west of the site and is designated for the presence of botanically-rich neutral and marshy grassland. Given the nature of the Proposed Development, reasons for the site's designation and spatial separation, there is not considered to be a risk of direct effects on the Local Wildlife Site (LWS) during construction. In addition, the substation construction will not generate recreational pressure or other indirect effects, such as dust deposition, water or air pollution that could damage the designated habitats, particularly given the delivery of industry standard prevention measures via a CEMP. As such, no significant effects are anticipated on non-statutory designations (**Not Significant**).

Habitats

Hedgerow/Line of Trees/Broadleaved Semi-natural Woodland

7.6.14 The development will result in the direct loss of 0.16km of native hedgerow, 0.18km of a line of trees and 0.09ha of woodland habitat. While these habitats are species-poor and the extent of direct loss is very small, on a precautionary basis, this is considered to constitute a direct, permanent, adverse effect at a Local level, which is considered to be a minor adverse effect (**Significant**).

Running Water

7.6.15 The Proposed Development will not result in the loss of the watercourse network to the south of the site, and a 50m buffer will be instated from the development footprint. However, there will be a direct impact due to the realignment of the watercourse to facilitate the Proposed Development, which extends into the site from the watercourse. Impacts from the realignment of the watercourse in the

² Habitats Regulations Appraisal (HRA) | NatureScot

absence of mitigation will result in a permanent, which is considered to be a minor adverse effect at a Local level (**Significant**).

- 7616 Additionally, there may be impacts through wider ranging factors such as dust deposition or polluted water run-off, which could also result in negative impacts to the species using these habitats. Embedded mitigation, namely the delivery of protection and pollution control measures via the CEMP, will ensure the extent and magnitude of such indirect short term, temporary and reversible impacts is reduced to negligible levels (**Not Significant**).

Fauna

Birds

- 7617 Given the small size of the site and the suitability of the surrounding countryside, it is considered that birds present will not be significantly impacted by the Proposed Development. The impact will be on the legislative protection afforded to all breeding birds only. Where there is the removal of suitable nesting habitat for breeding birds in the form of hedgerow, woodland and unmanaged grassland, there is a risk of losing, damaging or disturbing active nests during the breeding season (April – August Inclusive). Compliance with legislation to protect nesting birds, such as precautionary measures adopted during the clearance of suitable habitats as detailed within the Construction Environmental Management Plan (CEMP) in **Technical Appendix 3.1**, will ensure the protection of breeding birds and **no significant** effects are anticipated (**Not Significant**).

Bats

- 7618 The Proposed Development will result in the loss of 11 trees identified as having suitability to support roosting bats. As aerial inspections were not possible due to health and safety concerns, all trees have been assumed as PRF based on the context, habitat suitability and survey results to date, which recorded no roosting bats in any of trees during the emergence surveys. All 11 trees will be lost as a result of the Proposed Development. The loss of these potential bat roosts is considered to constitute a direct, permanent, adverse effect at a Local level, which is considered to be a minor adverse effect (**Significant**).
- 7619 Commuting/foraging behaviour was largely concentrated along the line of trees through the centre of the site and the hedgerow/woodland habitat within and adjacent to the site. The removal of the line of trees, hedgerow and part of the woodland habitat is required as part of the Proposed Development. As such, there will be an impact on currently used foraging/commuting pathways, disrupting connectivity and reduce the suitability of the site for use by commuting bats. There will also be the loss of 11.56ha of improved grassland and 1.18ha of semi-improved grassland. The grassland habitats are considered to be of low value for foraging bats, and their loss will therefore only result in a small reduction in suitable foraging resource.
- 7620 The embedded mitigation, including protection measures set out in the CEMP and LEMP, supported by the legal compliance to the protection afforded to bats will limit the risk of potential impacts to foraging and commuting bats. Therefore, the loss of commuting and foraging resources on the bat assemblage as a result of the Proposed Development will have **no significant** effects on the bat assemblage (**Not Significant**).

7621 In terms of light disturbance during construction, there are no plans to carry out construction activities overnight and only when daylight hours are reduced during Autumn/Winter could the lighting for site compounds potentially cause disturbance to foraging/commuting or roosting bats if the retained scrub or any off-site trees are illuminated. However, given the existing operational substation is already lit, the increase in potential light spill will be minimal and the common and widespread bat species present will already be habituated to some levels of artificial lighting. In light of this, **no significant** effects are anticipated as a result of light disturbance (**Not Significant**).

Otter

7622 The watercourse along the southern boundary and the network within the site, which is hydrologically connected to various other streams and ditches within the wider landscape, will be retained and therefore the proposed works will not fragment any population of otter dispersing across the wider landscape.

7623 In addition, the watercourse within the site will be realigned as part of the development proposals. Given the presence of a more suitable habitat in the form of the watercourse along the southern boundary,, maintained connectivity to the wider landscape throughout construction, and the lack of holts identified, the works will have **no significant** effects on the population of otter (**Not Significant**).

7624 In the absence of mitigation, there is a risk of direct killing or injury through construction traffic and trapping in open excavations, given that otter have been identified using the watercourse on the southern boundary of the site to disperse through the landscape. In addition, there is a low risk of indirect disturbance through water pollution and noise, for otters using the watercourse as a commuting resource during construction. However, the extent and magnitude provides limited temporary impacts and will be further reduced through the delivery of industry standard protection measures via a CEMP, and therefore there are no adverse effects, and **no significant** effect is anticipated (**Not Significant**).

7625 Increased light-spill during construction has the potential to impact commuting and foraging otters. However, as discussed for bats, the existing operational substation already emits light, which otter using the watercourse are likely to be habituated to, and the construction footprint is predominantly located within the north of the site which would minimise the light spill along the watercourse . Given the limited extent and magnitude of potential light spill impacts, therefore **no significant** effects are anticipated as a result of light disturbance (**Not Significant**).

Fish

7626 There will be impacts to the watercourse network for the realignment, where salmonid fry (trout) has been identified, in addition to the in-channel works associated with the rerouting and undergrounding of the 33kV OHL where salmonid parr (trout) and suitable habitat for salmonids has also been identified. In the absence of mitigation, there is the potential for harm to individual salmonids present which constitute a direct, permanent, adverse effect at a Local level, which is considered to be a minor adverse effect (**Significant**).

7627 The remaining section of watercourse that runs along the south-east boundary of the site, will be retained with a 50m buffer from the development footprint and therefore, the proposed works will avoid impacts to potential salmonid fry and parr present and will maintain connectivity for dispersal

throughout the existing watercourse network, and therefore the works will have **no significant** effects on the population of salmonids (**Not Significant**).

- 7.6.28 There is a risk of impacts through water pollution and surface water run-off, for salmonid parr and fry present using the watercourse network during construction. The extent and magnitude of the construction activity will provide limited temporary impacts, that will be further reduced through the delivery of industry standard protection measures via a CEMP. However, there is still a risk of indirect, adverse effect at a Local level, which is considered to be a minor adverse effect (**Significant**).

Operational

- 7.6.29 General operational impacts, which may result in effects (both positive and negative) upon IEFs are listed in **Table 7.6**.

Table 7.6: Likley Effects Caused by General Operational Impacts

Effect	Possible Causes/Mechanisms
Habitat Degradation	Pollution of watercourse through surface run-off.
Displacement of Animals	Lighting and noise (from substation operation) disturbance. Habitat loss and degradation (see above) may also displace resident animals.

Statutory and Non-Statutory Sites

- 7.6.30 Owing to the nature of the Proposed Development and spatial separation of the designations, no direct or indirect significant effects are anticipated to either statutory or non-statutory designated sites.

Habitat

Running Water

- 7.6.31 There may be impacts through changes in the quality or volume of water run-off during the operation of the substation. Any such degradation of habitats could also result in adverse impacts to the species using the watercourse through reduced water quality, changes in flow characteristics, and associated loss of habitat. However, in light of the delivery of industry standard embedded mitigation, including SuDS, the CEMP and a LEMP, there will be negligible direct or indirect adverse impacts. Therefore, would be **Not Significant**.

Fauna

Birds

- 7632 There will be no impacts to breeding birds through loss, damage or disturbance of nests, there are **No Significant** effects during operation of the Proposed Development on breeding birds.

Roosting Bats

- 7633 Similar to the construction phase, retained scrub and off-site trees adjacent to the site, may be subject to increased disturbance through lighting during the operation phase of the development. However, given the operation of the existing substation and limited value of the assemblage present, the existing assemblage are likely to be habituated to this type of disturbance. Therefore, the limited increase in light spill will have a negligible impact on the bat assemblage (**Not Significant**).

Otter

- 7634 The watercourse will be reinstated and connectivity to the wider landscape will be maintained during operation. However, there is limited potential for increased lighting during operation to impact otter. As the construction footprint is predominantly located approximately 200m north of the watercourse along the southern boundary of the site and given the presence of existing lighting associated with the substation, there will be no additional light pollution along the watercourse. Accordingly, no significant adverse effects on the otter population are predicted during the operational phase. (**Not Significant**)
- 7635 The indirect effects of water pollution due to run-off from the substation could result in negative impacts to the otter using the stream due to an associated reduction in food availability or refuge suitability. However, the implementation of the SuDS and LEMP will ensure that any such indirect, permanent adverse effects are mitigated to negligible significance (**Not Significant**)

Fish

- 7636 The indirect effects of water pollution due to run-off from the substation could result in negative impacts to salmonids using the watercourse network. However, the implementation of the SuDS and LEMP will ensure that any such indirect, permanent, adverse effects are mitigated to negligible significance (**Not Significant**)

Additional Mitigation

- 7637 The following mitigation measures will be employed to reduce the significant effects identified within the assessment of likely significant effects. The following measures will be applied to reduce the level of residual effect:
- The Illustrative Landscape Strategy enclosed as **Figure 3.2** sets out the habitat creation and planting measures designed to mitigate potential ecological effects associated with the development. These measures include, primarily, the establishment of wildflower grassland (6.01ha), areas of scrub (0.24ha) and the planting of 20 individual trees. Low growing tree species have been specified to avoid conflict with adjacent electrical infrastructure. This mitigated minor adverse effect of loss of commuting and foraging habitat for the local bat assemblage to negligible significance;

- An Ecological Construction Method Statement (ECMS) that details a range of species-specific measures to avoid or mitigate ecological impacts during construction, including identification of biodiversity protection zones with appropriate fencing and signage; sensitive timing and working methods to be adopted during both enabling and construction works to minimise harm to protected species;
- The attenuation basins are incorporated to manage surface water run-off, thereby reducing the risk of pollution entering the watercourse along the southern boundary of the site. A sensitive Lighting Strategy is to be produced, which will protect light sensitive species and those areas/habitats that are important to these species. This includes the hedgerow network and the off-site woodland, and any new habitats created; and
- Provision of a range of durable bird and bat boxes to be erected on mature trees on adjacent SPT owned land within the green infrastructure areas that will not be subject to light spill. This will be done in advance of construction activity to provide alternative habitat to suitable habitat lost within the site. SPT own the land immediately south of the existing 275kv substation, which will retain existing mature trees that can be used for this purpose. This could be controlled by an appropriately worded condition.

Assessment of Residual Effects

Construction Phase

7.6.38 Overall, negative effects during construction would be avoided or reduced through mitigation incorporated into the plans and delivered through industry standard methodologies employed during the construction phase via a CEMP, or equivalent documents, secured through planning conditions as well as mitigation licences, if required for roosting bats or through mitigation strategies **(Not Significant)**.

Habitats

7.6.39 The proposed development will result in an overall reduction of habitats present within the site, including woodland, hedgerows, a line of trees and a section of watercourse that will be rerouted. On-site mitigation will include the creation of grassland and low-height tree planting, the provision of SuDS and the creation of a new section of watercourse that will maintain connectivity to the wider watercourse network, seeded with wildflower mix and allowed to naturally be re-colonised by riparian vegetation. The above measures will reduce residual adverse effects from the loss of higher distinctiveness habitats on site to negligible **(Not Significant)**. In order to meet the requirement for the proposed development to restore and enhance biodiversity assets and to follow the mitigation hierarchy, offsite enhancements, specifically for these highly distinctive habitats, will also be utilised.

Fauna

7.6.40 Overall, subject to the mitigation measures outlined above being implemented, no significant, negative residual effects are anticipated on breeding birds, foraging and commuting bats and otters during the construction phase of development **(Not Significant)**.

Bats

7.6.41 In order to mitigate the loss of the 11 trees that have potential roost opportunities, the following measures will be implemented :

- Pre-commencement check to confirm that roosting bats are absent and that no additional PRFs are present;
- Where features cannot be fully inspected, a soft felling methodology will be employed for removal of trees, as prescribed by a non-licensed method statement (NLMS) to be included in the ECMS. This will involve slowly cutting the tree above and below each feature at the discretion of the supervising bat licensed ecologist and slowly lowering the feature so that it can be inspected;
- If roosting bats are confirmed, all works will cease and a European Protected Species (EPS) Licence will be obtained, and appropriate mitigation must be implemented prior to tree removal;
- If any additional trees are subsequently assessed as having potential roost features for individual bats (PRF-I), they will need to be subject to precautionary checks prior to felling, as outlined in an ECMS. In such cases, a minimum of one bat box per feature lost will be provided as mitigation; and
- The loss of the PRFs suitable for individual bats (PRF-I) in the 11 trees lost as a result of the Proposed Development will be replaced through the provision of bat boxes, on mature trees adjacent to the site, or the construction of a dedicated bat/wildlife house, which is to be detailed in the LEMP.

7.6.42 The above information should be detailed in the ECMS, secured by a pre-commencement planning condition. With the above measures implemented, the impacts of the loss of potential roosting opportunities on the bat assemblage is **Not Significant**.

Fish

7.6.43 With regards to fish, to comply with Environmental Authorisations (Scotland) Regulations 2018 (ESAR) from the Scottish Environment Protection Agency (SEPA), where salmonid habitat has been identified in the section of realignment and in the crossing points of the 33kV OHL, mitigation will be required. The Forth District Salmon Fishery Board³ requires that where works could cause fish to become stranded, injured or killed then a fish rescue and fish exclusion is required for potential salmonid fish within the affected sections of watercourse prior to the completion of works. This will involve the isolation or dewatering of the affected area, a search of the isolated area for fish, the capture and identification of fish, followed by the release of fish into an appropriate unaffected section of the same watercourse. This will therefore remove residual adverse effects resulting from the risk of harm to individual salmonids during construction (**Not Significant**).

7.6.44 Prior to commencement of proposed works, engineering safeguards, such as a temporary silt traps, will be installed to form an intercept for silt and other potential pollutants. Additional pollution prevention measures such as straw bales, 'Terram' and booms will be kept on-site at all times for the duration of proposed works for deployment in the event of a spill and to prevent/reduce runoff to wetland habitats should proposed works result in excessive mobilisation of contaminated materials.

³ The Forth District Salmon Fishery Board has powers under the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003 to protect and improve fisheries and increase salmon stocks - <https://forthdsfb.org/>

7645 The above information should be detailed in a specific Fish Method Statement, secured by a pre-commencement planning condition. With the above mitigation measures implemented, the impacts of water pollution and surface water run-off on salmonid populations is **Not Significant**.

Operational Phase

7646 Similarly, negative effects during operation would be largely avoided or reduced through mitigation incorporated into the plans and delivered through industry standard methodologies employed during the operation phase via a Biodiversity Enhancement Plan or equivalent documents secured through planning conditions for biodiversity offsetting.

Habitats

7647 The post-development landscaping could potentially deliver positive effects for some habitats and species. However, its long-term retention will depend on future site maintenance requirements. Off-site habitat enhancement and creation to deliver enhancement in biodiversity based on a worst-case scenario of no landscaping being delivered within the site, will ensure there are no residual impacts to habitats.

Fauna

7648 The inclusion of appropriate drainage, attenuation basins designed for wildlife, individual tree and scrub planting, new hedgerows and wildflower grassland enhancements will ensure that there will be no significant adverse effects to species and their associated habitats.

7.7 Future Monitoring of Significant Environmental Effects

771 As detailed above, subject to the appropriate delivery of the proposed mitigation, including the BEP and associated habitat monitoring requirements to ensure appropriate establishment and management over the long-term, there are no anticipated residual environmental effects that will require monitoring. Off-site delivery of biodiversity gains will require an appropriately worded planning condition in place to ensure that these are implemented and monitored appropriately.

772 Should it transpire subsequently through update surveys prior to commencement that protected species licensing is required, then monitoring obligations will be agreed with NatureScot as part of the terms of licence.

7.8 Enhancements and Positive Effects to Biodiversity

781 Enhancement measures are proposed to deliver additional biodiversity benefits beyond those required for mitigation. These include the SuDS features incorporated within the Proposed Development that will be designed to provide ecological functionality alongside their primary role in surface water management. This will include the creation of habitat conditions suitable for aquatic and marginal species, thereby contributing to local biodiversity enhancement.

782 The applicant has completed a BNG exercise to understand biodiversity losses and determine the amount of off-site offsetting required to deliver 10% BNG, based on targeted, local biodiversity enhancement measures on a like-for-like or better principle. In accordance with this approach, any

biodiversity gains arising from on-site landscaping proposals will not be counted towards the BNG calculation and will be delivered in addition to the minimum requirement.

- 783 The Applicant will enter formal service agreements with partner organisations to provide off-site biodiversity enhancement measures, at a location to be confirmed within FC area, in accordance with SPEN RIIO T3 Business Plan to achieve 10% biodiversity net gains overall. Details will be set out within a Biodiversity Enhancement Plan (BEP). This will ensure that the proposals more than fulfil policy requirements should a worst-case scenario of minimal habitat retention, enhancement and creation occur within the site. The detailed BNG assessment and delivery mechanism can be secured by planning condition.

7.9 Summary

- 791 This chapter assesses the impacts and consequential ecological effects that may occur to IEFs from the Proposed Development. IEFs include designations, habitats, protected and Priority Species. The assessment includes a summary of the current baseline and predicted future ecological conditions and identifies measures to avoid, mitigate and/or compensate, where appropriate, for significant effects that may arise as part of the Proposed Development.
- 792 The assessment has been informed by baseline investigations (desk studies and a series of detailed ecological surveys). The assessment has been undertaken using professional judgement and experience, and in accordance with industry standard guidance.
- 793 The IEFs taken forward for detailed assessment included designated sites of up to international importance:
- Loch Leven SPA/Ramsar/SSSI (International);
 - Outer Firth of Forth and St Andrews Bay Complex SPA/Ramsar (International);
 - Firth of Forth SPA/Ramsar/SSSI (International);
 - Forth Islands SPA/SSSI (International);
 - Turflundie Wood SAC (International);
 - Pitkeathly Mires SAC (International);
 - Ballingry Meadow Wildlife Site (Council Area);
 - Semi-natural woodland/native hedgerow/line of trees (Local);
 - Running water (Local); and
 - Protected or Priority Species of up to Local Importance:
 - Breeding Birds (Less than Local – Protected Species);
 - Roosting Bats (Local);
 - Otter (Local); and
 - Fish (Local).
- 794 Likely significant adverse effects, in the absence of mitigation, are restricted to the direct loss of woodland, hedgerow, trees, watercourse and associated bat foraging, commuting and roosting

resources and impacts to fish populations during construction (**Local Level – Minor Adverse effect/Significant**).

- 7.95 In order to mitigate for potential impacts during the construction phase, a range of industry standard measures describing key working methods and timings to avoid/minimise ecological effects during construction will be delivered through an ECMS, which would detail any protected species licences and species-specific method statements, and, where required, will specify where work will require supervision by a suitably qualified ecologist. Licences, if required, would be obtained in advance of construction, and mitigation measures would be further refined and agreed during the licencing process.
- 7.96 Embedded mitigation has sought to retain the scrub habitat along the northern boundary, and the development footprint has been spatially separated from the retained watercourse to the south. Where the removal of habitats cannot be avoided, mitigation i.e. scrub, hedgerow and wildflower grassland will be planted within the site., Offsite habitat units will also be provided to ensure there is No Net Loss in biodiversity in line with NPF4 policy requirements. In parallel with this approach, SPT promote 10% biodiversity net gain to accord with the SPEN RIIO T3 business plan commitments. The establishment, maintenance and long-term management of the retained, enhanced and created habitats on-site will be delivered via a BEP or other equivalent documentation. The landscaping at site will be additional to the provision of off-site biodiversity enhancement. Any trees planted at site will need careful consideration to ensure they do not undermine site security.
- 7.97 In summary, with appropriate mitigation and design, the construction and operation of the Proposed Development is not anticipated to have any significant residual effects on Important Ecological Features.