CURRAGHINALT 33KV CONNECTION PROJECT

STATEMENT OF CASE TECHNICAL REPORT ECOLOGY & ORNITHOLOGY

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Contents

1 INTRODUCTION

This Technical Report sets out the following::

- The methodology used in the Ecological Impact Assessment ('EIA');
- Impacts without mitigation;
- Proposed mitigation measures;
- Residual impacts;
- Cumulative impacts/Interactions/Transboundary impacts;
- Consideration of any changes to relevant policy, guidance and legislation since the completion of the Environmental Statement in May 2021;
- Consideration of consultation replies from statutory agencies and relevant third-party representations.

This Technical Report has been prepared by Suzanne Lowry, Adam McClure and Samuel O'Hara.

Suzanne Lowry is a Senior Associate of Ecology within RPS, responsible for preparing the Ecological Impact Assessment (EcIA) contained within the Environmental Statement (ES) for the planning applications (Planning Ref LA10/2019/1386/F & LA11/2019/1000/F) for the 33kV power line connections to serve the Curraghinalt mine (Planning application ref: LA10/2017/1249/F). Suzanne holds a BSc (Hons) in Biological Sciences, a MSc in Environmental Management and has over 20 years of experience in the field of ecology and environmental consultancy. Suzanne has extensive experience in project management, coordination, surveying and technical reporting for a wide range of energy infrastructure projects. Suzanne is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Adam McClure is a Senior Ecologist within RPS and the Ornithologist responsible for planning, surveying, and reporting on the ornithological interests contained in the ES. Adam holds a BSc (Hons) in Palaeoecology and Archaeology with over 14 years of experience in field of ornithology. Adam has extensive expertise in breeding bird surveys, vantage point surveys, wetland bird surveys, wintering bird surveys and is a licensed bird ringer. Adam is the County Antrim Regional Representative for the British Trust for Ornithology (BTO) and is an active member of the Northern Ireland Raptor Study Group (NIRSG) and Copeland Bird Observatory (CBO). Adam is a Full member of CIEEM and is currently a member of the CIEEM Irish Section Committee.

Samuel O'Hara is an Associate Ecologist with RPS, responsible for preparing the shadow Habitats Regulations Assessment (sHRA) submitted with the planning applications (Planning Ref LA10/2019/1386/F & LA11/2019/1000/F) for the 33kV power line connections to serve the Curraghinalt mine (Planning application ref: LA10/2017/1249/F). Samuel holds a BSc (Hons) in Ecology and has 8 years of experience in the field of ecology. Samuel has extensive experience in the preparation of sHRA for a wide range of projects. Samuel is a full member of the CIEEM.

This Technical Report should be read alongside the environmental information, in the form of an Environmental Statement (ES) and Annex II Shadow Habitats Regulations Assessment (sHRA), previously submitted to the Department for Infrastructure (DfI) on 1st June 2021.

Where the review of baseline data or any relevant change in legislation, policy or guidance results in a need to update environmental information, this is clearly identified in this Technical Report.

Additional environmental information following the submission of the ES can be found in Appendix A Ecology Survey Report and Record of Clarification (Appendix D of the Statement of Case) to the Department of Agriculture Environment and Rural Affairs (DAERA), submitted in August 2021 of this Technical Report.

2 METHODOLOGY

There have been no legislation or policy updates relating to Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES, since its submission on 1st June 2021.

There has been an update to the Bat Conservation Trust (BCT) Good Practice Guidelines since the submission of the ES on 1st June 2021 with the release of the BCT Bat Surveys for Professional Ecologist Good Practice Guidelines 4th Edition (Collins, 2023). The update includes some changes to terminology in relation to survey types and a change in categorisation of trees. The update has no implications in relation to Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES, as a precautionary approach to tree categorisation was undertaken in line with the 3rd Edition of the guidelines. Although the terminology may have changed, sufficient survey effort was carried out to meet the requirements of the 4th Edition.

All ecological and ornithological survey methodologies employed to inform the planning application for the Curraghinalt 33Kv Connection Project can be found in the ES in:

- Volume I Chapter 7 Terrestrial Ecology & Ornithology Section 7.2 Methodology which (in summary) comprised the following:
  - Review of the relevant legislation, policy & guidance;
  - Consultation with relevant statutory bodies through the EIA screening process;
  - Identification of a 'Zone of Influence' for ecological features;
  - Desk and field studies of the existing baseline for habitats and species;
  - Completion of EcIA & sHRA.
- Volume III Appendix 7.1 Ecological Survey for Marsh Fritillary
- Volume III Appendix 7.2 Ecological Survey for Smooth Newt
- Volume III Appendix 7.3 Ecological Survey for Common Lizard
- Volume III Appendix 7.4 Ecological Survey Birds
- Annex I Confidential Ecological Survey for Badger

The EcIA has been undertaken in consideration of the British Standard (BS) 42020:2013 Biodiversity - Code of practice for planning and development (BSI 2013[1]) and the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2018[2]).

The EcIA methodology determines the significance of effects on ecological features, as set out below in Table 2.3.1 and Table 2.3.2. Table 2.3.1 has been devised to set out the sensitivity or ecological value of a feature. Table 2.3.2 has been devised to assign the significance of effects and to set out the magnitude of the impact, defined using a set of definitions to characterise the effect in relation to ecological features.

In addition to the ecological surveys carried out to inform the EcIA of the ES, RPS have undertaken the following further ecology surveys in subsequent years to ensure surveys remain valid in accordance with the CIEEM Advice Note on the Lifespan of Ecological Reports & Surveys (CIEEM 2019[3]) and in line with the Northern Ireland Environment Agency (NIEA) Survey Specifications[4]:

- Extended Phase 1 Habitat Survey, Badger Survey and Otter Survey in 2023
- Ecological Survey for Bats - Potential Roost Feature Aerial Inspection Survey of Trees in 2022 and 2023
- Ecological Survey for Marsh Fritillary - Larval Web Survey in 2022 and 2023

[1] British Standards Institution (2013) *BS 42020:2013 Biodiversity: Code of practice for planning and project*, BSI, London.

[2] CIEEM (2018*) Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater and Coastal and Marine*, Technical Guidance Series, Version 1.1, Chartered Institute of Ecology and Environmental Management, Winchester.

[3] CIEEM (2019) *Advice Note on the Lifespan of Ecological Reports & Surveys*, Chartered Institute of Ecology and Environmental Management, Winchester.

[4] NIEA Site Surveys

- Ecological Survey for Smooth Newt – Visual Inspection and Artificial Refugia along cable route next to ponds in 2022
- Ecological Survey for Common Lizard - Terrestrial Search and Artificial Refugia in 2022 and 2023
- Ecological Survey for Birds - Breeding Bird Survey in 2022 and 2024

The results of these surveys can be found in Appendix A Ecology Survey Report of this Technical Report. RPS can confirm that the results of the further ecological surveys do not change the assessment of impacts set out in the EcIA of the ES.

Table 2.3.1: Geographic Frame of Reference for Value of Ecological Features

Ecological Value	Criteria
International	• 'European Sites' including Special Areas of Conservation (SAC) & Special Protection Areas (SPA). • Sites that satisfy the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended). • Features essential to maintaining the coherence of the UK national site network. • Sites containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive. • Resident or regularly occurring populations (assessed to be important at the national level) of the following: – Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Wild Birds Directive; and/or – Species of animal and plants listed in Annex II and/or IV of the Habitats Directive. • Ramsar Sites (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971). • World Heritage Sites (Convention for the Protection of World Cultural & Natural Heritage, 1972). • Sites hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979). • Sites hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979).
National	• Areas of Special Scientific Interest (ASSI). • National Nature Reserves (NNR). • Marine Nature Reserves (MNR). • Area of Outstanding Natural Beauty (AONB). • Refuge for species protected under the Wildlife (Northern Ireland) Order 1985 (as amended). • Undesignated sites fulfilling the criteria for designation as an ASSI; NNR; MNR; and/or refuge for species protected under the Wildlife (Northern Ireland) Order 1985 (as amended). • Resident or regularly occurring populations (assessed to be important at the national level) of the following: – Species protected under Wildlife (Northern Ireland) Order 1985 (as amended); and/or – Species listed on the relevant Red Data list. • Sites containing 'viable areas' of the habitat types listed in Annex I of the Habitats Directive.
Regional	• Sites of Local Nature Conservation Importance (SLNCI). • Areas subject to a Tree Preservation Order. • Resident or regularly occurring populations (assessed to be important at the Regional level) of the following: – Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Wild Birds Directive; – Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; – Species protected under the Wildlife (Northern Ireland) Order 1985 (as amended); and/or – Species listed on the relevant Red Data list. • Sites containing areas of the habitat types listed in Annex I of the Habitats Directive that do not satisfy the criteria for valuation as of International or National importance. • Regionally important populations of species or viable areas of semi-natural habitats or natural heritage features identified in the National or Local Biodiversity Action Plan (BAP), if this have been prepared. • Sites containing semi-natural habitat types with high biodiversity in a regional context and a high degree of naturalness, or populations of species that are uncommon within the region. • Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.
Local	• Locally important populations of priority species or habitats or features of natural heritage importance identified in the Local BAP, if this has been prepared; • Resident or regularly occurring populations (assessed to be important at the Local level) of the following: – Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Wild Birds Directive; – Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; – Species protected under the Wildlife (Northern Ireland) Order 1985 (as amended); and/or

	– Species listed on the relevant Red Data list. • Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality; • Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value
Site	• Sites containing small areas of semi-natural habitat that are of some local importance for wildlife; • Sites or features containing non-native species that are of some importance in maintaining habitat links.

Table 2.3.2: Classification and Characterisation of Significant Effects

Impact Significance	Magnitude	Characterisation of Effects
Significant Negative Effect	Major Adverse	• Loss of, permanent damage to or adverse impact on any part of a site of international or national importance; • Loss of a substantial part or key feature of a site of regional importance; • Loss of favourable conservation status (FCS) of a legally protected species; • Loss of or moderate damage to a population of nationally rare or scarce species.
	Moderate Adverse	• Temporary disturbance to a site of international or national importance, but no permanent damage; • Loss of or permanent damage to any part of a site of regional importance; • Loss of a key feature of local importance; • A substantial reduction in the numbers of legally protected species such that there is no loss of FCS but the population is significantly more vulnerable; • Reduction in the amount of habitat available for a nationally rare or scarce species, or species that are notable at a regional or county level.
	Minor Adverse	• Temporary disturbance to a site of regional value, but no permanent damage; • Loss of, or permanent damage to, a feature with some ecological value in a local context but that has no nature conservation designation; • A minor impact on legally protected species but no significant habitat loss or reduction in FCS; • A minor impact on populations of nationally rare or scarce species or species that are notable at a regional or county level.
No Significant Effect	Negligible	• No impacts on sites of international, national or county importance; • Temporary disturbance or damage to a small part of a feature of local importance; • Loss of or damage to land of negligible nature conservation value; • No reduction in the population of legally protected, nationally rare, nationally scarce or notable (regional level) species on the site or its immediate vicinity. • Beneficial and adverse impacts balance such that resulting impact has no overall affect upon feature.
Significant Positive Effect	Minor Beneficial	• A small but clear and measurable gain in general wildlife interest, e.g. small-scale new habitats of wildlife value created where none existed before or where the new habitats exceeds in area that habitats lost.
	Moderate Beneficial	• Larger new scale habitats (e.g. net gains over 1 ha in area) created leading to significant measurable gains in relation to the objectives of biodiversity action plans.
	Major Beneficial	• Major gains in new habitats (net gains of at least 10 ha) of high significance for biodiversity being those habitats, or habitats supporting viable species populations, of national or international importance cited in Annexes I and II of the Habitats Directive or Annex I of the Birds Directive.

3 BASELINE

Habitats

Habitats that will be directly impacted by the Proposed Development consist of broadleaved semi-natural woodland; coniferous plantation woodland; mixed plantation woodland, scrub; improved grassland; marshy grassland; poor semi-improved neutral grassland; dwarf shrub heath; blanket bog; modified bog; valley mire and acid flush; standing water; running water; hedgerows; and earth banks.

Seven Northern Ireland Priority Habitats (NIPH) will be directly impacted by the Proposed Development. These consist of wet woodland; hedgerows; rivers and streams; purple moor-grass and rush pasture; blanket bog; upland heath; and upland fens, flushes and swamps.

The invasive non-native plant species, Himalayan balsam and Japanese knotweed, can be found at five locations along the route of the Proposed Development.

There were no major changes to habitats along the route of the Proposed Development during updated surveys carried out in 2023.

Bats

Woodland, hedgerow, treeline and running water habitats, found along the route of the Proposed Development, have potential suitability to support bat roosting habitat, foraging habitat and/or commuting habitat.

The Potential Roost Feature (PRF) Inspection Surveys confirmed a total of 12 trees with negligible suitability, 22 trees with low suitability and 10 trees with moderate suitability for roosting bats that will be directly impacted by the Proposed Development. There were no bats or evidence of bats recorded in any of the trees during the PRF Inspection Surveys carried out in 2019, 2022 or 2023.

Otter

There were no otter underground holts or above ground couches recorded along the route of the Proposed Development. Otter activity, however, was recorded at a number of locations indicating otter presence along watercourses traversed by the route. There was no additional evidence of otter recorded along the route of the Proposed Development during updated surveys carried out in 2023.

Marsh Fritillary

A single marsh fritillary larval web was recorded in habitat along the route of the Proposed Development in 2019. There were no marsh fritillary larval webs recorded in suitable habitat along the route of the Proposed Development in 2020, 2022 or 2023.

Pine Marten

There was no evidence of pine marten recorded along the route of the Proposed Development.

Red Squirrel

There was no evidence of red squirrel recorded along the route of the Proposed Development.

Badger

A total of 29 badger setts were identified between 2018 and 2021, along the route of the Proposed Development, ranging from main setts with multiple entrances and signs of breeding to single entrance outlier setts. A total of eight badger setts will be directly impacted by the Proposed Development with site clearance and construction works occurring within 25 m of these setts that will require a derogation licence.

Smooth Newt

Environmental DNA (eDNA) analysis returned a positive result in one pond, indicating the presence of smooth newt close to the underground cable (UGC) section along the Meenadoo Road that connects to Terminal Pole 2251. There were no smooth newts recorded during the course of newt surveys in 2019. There was no additional evidence of smooth newt found during visual inspection and artificial refugia surveys carried out at this location during updated surveys carried out in 2022 and 2023.

Common Lizard

Common lizard was confirmed to be present at three locations along the route of the Proposed Development in 2020. There were no common lizards found during visual inspection and artificial refugia surveys at any of the five sites in 2022 and 2023.

Birds

A single snipe observed displaying, which is indicative of breeding behaviour, was confirmed to be present at one location along the route of the Proposed Development in 2018 and another location nearby in 2019. There were no breeding waders observed in 2020-2022 or 2024.

4 IMPACTS WITHOUT MITIGATION

As set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES, and in accordance with the EcIA methodology in Section 2 of this report, below is a summary of the likely significance of effects on the ecological environment during construction, operation and decommissioning of the Proposed Development, prior to the application of mitigation measures.:

Construction & Decommissioning Phases

Designated Sites

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Major Adverse)** on the Owenkillew River SAC and Owenkillew River ASSI with potential water quality and habitat deterioration from pollution incidents, spread of invasive non-native species and disturbance to otter. The sHRA Stage 1 Screening concludes likely significant effects of European sites in the absence of mitigation measures and therefore, Stage 2 Appropriate Assessment is required.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Major Adverse)** on the River Foyle and Tributaries SAC and the River Foyle and Tributaries ASSI with potential deterioration of water quality from pollution incidents and spread of invasive non-native species. The sHRA Stage 1 Screening concludes likely significant effects on European sites in the absence of mitigation measures and therefore, Stage 2 Appropriate Assessment is required.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Major Adverse)** on the River Finn SAC with potential deterioration of water quality from pollution incidents. The sHRA Stage 1 Screening concludes likely significant effects of European sites in the absence of mitigation measures and therefore, Stage 2 Appropriate Assessment is required.

There will be **No Significant Effect** on the Owenreagh River ASSI as it is upstream of the Proposed Development.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on the Owenreagh Hill Local Wildlife Site with damage and disturbance to habitats considered of regional ecological value.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on the Glenelly River Local Wildlife Site with potential deterioration of water quality from pollution incidents.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on Golan Burn Local Wildlife Site with potential deterioration of water quality from pollution incidents.

Habitats

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on NIPH Blanket Bog and Wet Modified Bog with damage and disturbance to habitats considered of regional ecological value.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on NIPH Upland Fens, Flushes and Swamps with damage and disturbance to habitats considered of regional ecological value.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on NIPH Upland Heath with damage and disturbance to habitats considered of regional ecological value.

In the absence of mitigation measures and compensation measures, the Proposed Development will have a **Significant Negative Effect (Moderate Adverse)** on NIPH Wet Woodland with the direct loss of 0.005 ha of woodland habitat of regional ecological value.

In the absence of mitigation measures, the Proposed Development will have a **Significant Negative Effect (Moderate Adverse)** on NIPH Hedgerows, treelines and riparian trees with felling of trees and loss of hedgerows.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on the NIPH Rivers & Streams considered of regional ecological value with potential water quality deterioration from pollution incidents.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** with the loss of broadleaved semi-natural woodland of local ecological value.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Minor Adverse)** with the loss of coniferous and mixed woodland of ecological value at a site level.

In the absence of mitigation measures, the Proposed Development is likely to result in a **Significant Negative Effect (Minor Adverse)** with the loss of or disturbance of marshy grassland of local ecological value.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** with the direct loss of or disturbance to non-priority habitats including improved grassland, species-poor marshy grassland, poor semi-improved grassland, earth banks, scrub and scattered trees of ecological value at a site level.

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Adverse Impact (Major Adverse)** with the spread of invasive non-native species within sites of international ecological value downstream of the Proposed Development. In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Adverse Impact (Minor Adverse)** with the spread of invasive non-native species within habitats of local ecological importance.

Bats

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Major Adverse)** on bats with the felling of trees with potential for bat occupancy and therefore, the potential killing or injury of bat species and the destruction of unknown bat roosts in trees with PRFs of moderate suitability.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on bat foraging and commuting habitat due to vegetation clearance and management with a minor impact on a legally protected species but no significant habitat loss or reduction in conservation status.

Otter

The Proposed Development will have a **Significant Negative Impact (Minor Adverse)** on otter foraging and commuting along watercourses in the vicinity of works with a minor impact from disturbance on a legally protected species but no significant habitat loss or reduction in conservation status.

Marsh Fritillary

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on marsh fritillary with the potential killing or injury of marsh fritillary and the destruction and damage to marsh fritillary habitat.

Badger

In the absence of mitigation measures, the Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on badger with potential damage to setts within 25 m of works and disturbance to a species of local importance.

Smooth Newt

There are two ponds with potential to provide habitat for smooth newt, located 59 m west of the UGC between Terminal Poles 2248-2251. If smooth newts are present in the wider terrestrial habitat within 200 m of ponds, the Proposed Development is likely to have a **Significant Negative Effect (Minor Adverse)** with the potential killing or injury of smooth newt in the absence of mitigation measures.

Common Lizard

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Moderate Adverse)** on common lizard with the potential killing or injury of lizard and the destruction and damage to lizard habitat.

Birds

In the absence of mitigation measures, the Proposed Development is likely to have a **Significant Negative Effect (Minor Adverse)** on breeding bird species due to disturbance and a reduction in the amount of available habitat.

Operational Phase

Designated Sites

In the absence of mitigation measures, the operational maintenance of the overhead line (OHL) is likely to have a **Significant Negative Effect (Moderate Adverse)** on the Owenkillew River SAC and ASSI during the three yearly vegetation management cycle. In the absence of mitigation measures, the operational maintenance of the UGC, where a fault occurs and requires repair within close proximity to the watercourse or at watercourse crossings is likely to have a **Significant Negative Effect (Major Adverse)** on water quality within the Owenkillew River SAC and ASSI.

The operational maintenance of the OHL will have **No Significant Effect** on the River Foyle and Tributaries SAC and ASSI as there will be no vegetation management within the designated sites. In the absence of mitigation measures, operational maintenance of the UGC, where a fault occurs and requires repair within close proximity to a watercourse or at watercourse crossings, is likely to have a **Significant Negative Effect (Major Adverse)** on water quality of the River Foyle and Tributaries SAC and ASSI.

The Operational maintenance of the OHL will have **No Significant Effect** on the River Finn SAC and ASSI as there will be no vegetation management within the designated sites. In the absence of mitigation measures, the operational maintenance of the UGC, where a fault occurs and requires repair within close proximity to a watercourse or at watercourse crossings, is likely to have a **Significant Negative Effect (Major Adverse)** on water quality of the River Finn SAC and ASSI.

The operational maintenance of the OHL will have **No Significant Effect** on the Owenreagh Hill Local Wildlife Site as there will be no vegetation management within the designated site.

In the absence of mitigation measures, the operational maintenance of the OHL will have a **Significant Negative Effect (Minor Adverse)** on the Glenelly River Local Wildlife Site during the three yearly vegetation management cycle.

In the absence of mitigation measures, the operational maintenance of the UGC, where a fault occurs and requires repair within close proximity to a watercourse or at watercourse crossings is likely to have a **Significant Negative Effect (Major Adverse)** on water quality of the Golan Burn Local Wildlife Site.

Habitats

In the absence of mitigation measures, the operational maintenance of the underground cable (UGC), where a fault occurs and requires repair, is likely to have a **Significant Negative Effect (Moderate Adverse)** on NIPH Blanket Bog and Wet Modified Bog with damage and disturbance to habitats considered of regional ecological value.

In the absence of mitigation measures, the operational maintenance of the OHL during the three yearly vegetation management cycle is likely to have a **Significant Negative Effect (Minor Adverse)** on NIPH Upland Fens, Flushes and Swamps with temporary disturbance to habitats considered of regional ecological value.

In the absence of mitigation measures, the operational maintenance of the OHL during the three yearly vegetation management cycle is likely to have a **Significant Negative Effect (Minor Adverse)** on NIPH Upland Heath with temporary disturbance to habitats.

In the absence of mitigation measures, the operational maintenance of the OHL during the three yearly vegetation management cycle is likely to have a **Significant Negative Effect (Minor Adverse)** on NIPH Wet Woodland with temporary disturbance to habitats.

The operational maintenance of the OHL during the three yearly vegetation management cycle is likely to have a **Significant Negative Effect (Minor Adverse)** on NIPH Hedgerows, treelines and riparian trees with periodic tree and shrub management. In the absence of mitigation measures, the operational maintenance of the UGC, where a fault occurs and requires repair, is likely to have a **Significant Negative Effect (Moderate Adverse)** on NIPH Hedgerows, treelines and riparian trees with damage and disturbance to habitats considered of regional ecological value.

The operational maintenance of the OHL during the three yearly vegetation management cycle will have a **Significant Negative Effect (Minor Adverse)** on woodland with periodic tree and shrub management.

The operational maintenance of the OHL during the three yearly vegetation management cycle and the UGC, where a fault occurs and requires repair will have **No Significant Effect** on non-priority habitats including improved grassland, species-poor marshy grassland, poor semi-improved grassland, earth banks, scrub and scattered trees.

In the absence of mitigation measures, the operational maintenance of the OHL during the three yearly vegetation management is likely to have a **Significant Adverse Impact (Minor Adverse)** with the spread of invasive non-native species within habitats of local ecological value.

Bats

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on bat foraging and commuting habitat during operational maintenance of the OHL during the three yearly vegetation management cycle, with a minor impact on a legally protected species but no significant habitat loss or reduction in conservation status.

Otter

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on otter foraging and commuting along watercourses in the vicinity of works during the operational maintenance of the OHL during the three yearly vegetation management cycle with a minor impact on a legally protected species but no significant habitat loss or reduction in conservation status.

Marsh Fritillary

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on marsh fritillary during the operational maintenance of the OHL during the three yearly vegetation management cycle with minor disturbance to the habitat of a legally protected species but no significant habitat loss or reduction in conservation status.

Badger

The Proposed Development will have **No Significant Effect** on badger during the operational maintenance of the OHL during the three yearly vegetation management cycle as works will be carried out on foot using hand-operated equipment.

Smooth Newt

The Proposed Development will have **No Significant Effect** on smooth newt as the route of the UGC requires no vegetation maintenance and, therefore, no disturbance to smooth newt habitat.

Common Lizard

The Proposed Development will have **Significant Negative Effect (Minor Adverse)** on common lizard during the operational maintenance with minor disturbance to the habitat of legally protected species but no significant habitat loss or reduction in conservation status.

Birds

In the absence of mitigation measures, the operational maintenance of the OHL during the three yearly vegetation management cycle is likely to have a **Significant Negative Effect (Minor Adverse)** on wild birds due to disturbance.

5 PROPOSED MITIGATION MEASURES

Mitigation

Mitigation measures, as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES, have been proposed to offset likely significant effects of the Proposed Development. Residual impacts following the implementation of mitigation measures are set out below in Section 6 Residual Impacts.

Mitigation measures include the appointment of an Ecological Clerk of Works (ECoW), Pre-Construction Ecology Surveys, Pre-Construction Protected Species Surveys, Ecological Exclusion Zones (EEZ), a Construction Environmental Management Plan (CEMP), an Invasive Non-Native Species Method Statement, reduction in Working Areas, specific working methods, timing of works and habitat reinstatement.

Designated Sites

A Final CEMP will be produced, within the parameters of the Outline Construction Environmental Management Plan (OCEMP), to set out mitigation measures to protect watercourses. Mitigation measures, as set out in the OCEMP, include the timing of works, specific construction methods, pollution prevention and sediment control measures, contingency planning, good practice measures and reinstatement measures that will protect both watercourses and water-dependent ecological features.

An Invasive Non-Native Species Method Statement, as outlined in the OCEMP, will be included within the Final CEMP. The method statement will set out the measures that will be implemented to prevent the spread of the non-native species Japanese knotweed and Himalayan balsam during the construction of the Proposed Development.

An Ecological Clerk of Works (ECoW) will be employed to provide direction in relation to relevant international and national legislation relating to the protection of ecology; to provide advice on the timing of works; to undertake pre-construction ecology and protected species surveys; to supervise works at sensitive sites; to monitor the implementation of mitigation and compensation measures; to monitor identified works; and to produce site inspection reports.

The 80 m Working Area will be reduced to between a 5 m-20 m Working Area on a case-by-case basis at sensitive sites, as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES.

Habitats

The 80 m Working Area will be reduced to between a 5 m-20 m Working Area on a case-by-case basis, in all areas of priority habitat which include blanket bog, upland heath, upland fens, flushes and swamps, wet woodland, purple moor-grass and rush pasture; hedgerows and rivers and stream; specific working methods will be used to reduce damage and disturbance to sensitive habitats. All construction works will be supervised by an ECoW, as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES.

The 80 m Working Area will also be reduced to between a 5 m-10 m Working Area on a case-by-case basis in areas of broadleaved woodland and marshy grassland. Specific working methods will be used to reduce damage and disturbance and construction works will be supervised by an ECoW, as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES.

An Invasive Non-Native Species Method Statement, as outlined in the OCEMP, will be included within the Final CEMP. The method statement will set out the measures that will be implemented to prevent the spread of the non-native species, Japanese knotweed and Himalayan balsam, during the construction of the Proposed Development.

Bats

As a belt and braces safeguard to supplement existing surveys, a Pre-Construction Protected Species Survey will be carried out by an ECoW, under a licence to survey for bats, to inspect 12 trees with moderate suitability to provide roosting habitat for bats immediately prior to pre-construction site clearance works. In the event that a bat roost is found to be present, a derogation licence will be obtained for capture or exclusion and compensation measures will be put in place as set out below in Section 5.22.

Otter

As a belt and braces safeguard to supplement existing surveys, a Pre-Construction Protected Species Survey will be carried out by the ECoW to provide the most up to date information and to confirm the continued absence of otter holts within the site, immediately prior to pre-construction site clearance and construction works.

Marsh Fritillary

A precautionary approach will be undertaken, and the 80 m Working Area will be reduced to a 10 m Working Area in all seven locations with potential to provide suitable habitat for marsh fritillary. Specific working methods will be used to reduce damage and disturbance at two locations where marsh fritillary larval webs were confirmed in the past and construction works will be supervised by an ECoW, as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES.

Badger

As a belt and braces safeguard to supplement existing surveys, a Pre-Construction Protected Species Survey will be carried out by the ECoW to provide the most up to date information and update the status of the badger setts, immediately prior to pre-construction site clearance and construction works. A derogation licence will be obtained by the ECoW for any works within 25 m of badgers sett,25 m EEZs will be set up around badger setts identified within the 80 m Working Area and construction works will be supervised by an ECoW, as set out in Annex I (of the ES) Confidential Ecological Survey for Badger.

Smooth Newt

A precautionary approach will be undertaken and the 80 m Working Area will be reduced to a 10 m Working Area in locations that provide suitable habitat for smooth newt; an EEZ will be set up to highlight the location and protect features that have the potential to be used by smooth newt at one location identified within the 80 m Working Area; specific working methods will be used to reduce damage and disturbance to habitats; a hand search by the ECoW will be carried out immediately prior to pre-construction site clearance and construction works; and construction works will be supervised by an ECoW as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES.

Common Lizard

A precautionary approach will be undertaken in locations that provide suitable habitat for common lizard: specific working methods will be used to reduce disturbance; EEZs will be set up to highlight the locations and protect features that have the potential to provide refugia for common lizard identified within the 80 m Working Area; a hand search by the ECoW will be carried out immediately prior to pre-construction site clearance and construction works; and construction works will be supervised by an ECoW ,as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES.

Birds

All pre-construction site clearance works and removal of vegetation, as well as construction works within sensitive habitats suitable for ground nesting birds or raptors, will take place outside the bird breeding season which extends between 1st March and 31st August inclusive. If pre-construction site clearance and removal of vegetation is deemed necessary by NIE Networks within the bird breeding season, an ECoW will undertake a survey to check for active bird nests immediately prior to works and species-specific buffer zones, gleaned from peer-reviewed scientific evidence on a species-specific basis, will be put in place to protect any nesting birds until breeding activity has ceased. The creation of buffer zones for avian species is dependent on the type and duration of the proposed project or disturbance.

Compensation

Compensation measures as set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES and agreed as per Appendix D of the Statement of Case, Record of Clarification to the DAERA in August 2021

have been proposed to offset residual effects of the Proposed Development. Residual impacts following the implementation of compensation measures are set out below in Section 6 Residual Impacts.

Compensation measures include restoration and enhancement measures of priority habitats and the provision of artificial bat roosts where required.

Northern Ireland Priority Habitat

Compensation measures for the loss of priority habitats including 293 m^2 of blanket bog and upland fens, flushes & swamps, 42 m^2 of upland heath and 50.84 m^2 of wet woodland will include 670 m^2 'like for like' habitat replacement on land within the control of Dalradian Gold Ltd, secured by way of negative planning condition and/or a Section 76 Planning Agreement between NIE Networks, Dalradian Gold Ltd and the Planning Authority.

Compensation measures will also include the reinstatement of 10 m of species rich hedgerow with 'like for like' habitat replacement at two locations within the 5 m Working Area of the UGC, to be secured by way of a negative planning condition.

Bats

In the event that a bat roost is found to be present during the Pre-Construction Protected Species Survey of 12 trees with moderate suitability for bats, compensation measures in the form of alternative roost provision will be provided using appropriate artificial bat boxes for the species concerned, that will be erected on suitable trees, as close to the site of the original roost as possible.

6 RESIDUAL IMPACTS

As set out in Volume I Chapter 7 Terrestrial Ecology & Ornithology of the ES, and in accordance with the EcIA methodology in Section 2 of this report, residual impacts of the Proposed Development following the implementation of mitigation measures and compensation measures are predicted as follows:

Designated Sites

The sHRA Stage 1 Screening concludes likely significant effects on European sites in the absence of mitigation measures and, therefore, the requirement for Stage 2 Appropriate Assessment. The sHRA Stage 2 Appropriate Assessment concludes that **no adverse effects upon the integrity of any European sites** will arise as a result of the Proposed Development with the application of mitigation measures, and no reasonable scientific doubt remains as to the absence of such effects.

The Proposed Development will have **No Significant Effect** on the Owenkillew SAC and ASSI during construction and operation following the implementation of mitigation measures to protect water quality, to reduce levels of disturbance, to retain low level bankside vegetation and to prevent the spread the invasive non-native species.

The Proposed Development will have **No Significant Effect** on the River Foyle and Tributaries SAC and ASSI and the River Finn SAC during construction and operation following the implementation of mitigation measures to protect water quality and prevent the spread of invasive non-native species.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on Owenreagh Hill Local Wildlife Site during construction due to pole installation, with temporary disturbance to a site of regional importance but no permanent damage and **No Significant Effect** during operation following the implementation of mitigation measures to protect habitat.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on Glenelly River Local Wildlife Site during construction and operation due to site clearance of vegetation and vegetation management, with temporary disturbance to a site of regional importance but no permanent damage following the implementation of mitigation measures to protect water quality.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on Golan Burn Local Wildlife Site during construction due to site clearance of vegetation and cable installation and during operation due to potential cable repair, with temporary disturbance to a site of regional importance but no permanent damage following the implementation of mitigation measures to protect water quality and reinstate habitat.

Habitats

The Proposed Development will have **No Significant Effect** on the NIPH Wet Woodland following the implementation of mitigation measures during construction and operation and compensation measures that will provide 'like for like' habitat replacement on land within the control of Dalradian Gold Ltd secured by way of negative planning condition and/or a Section 76 Planning Agreement between NIE Networks, Dalradian Gold Ltd and the Planning Authority.

The Proposed Development will have **No Significant Effect** on the NIPHs Blanket Bog; Wet Modified Bog; Upland Fens, Flushes and Swamps; Upland Heath and Purple Moorgrass and Rush Pasture following the implementation of mitigation measures during construction and operation and compensation measures that will provide restoration and enhancement of existing peatland habitats on land within the control of Dalradian Gold Ltd secured by way of negative planning condition and/or a Section 76 Planning Agreement between NIE Networks, Dalradian Gold Ltd and the Planning Authority.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on NIPH Rivers and Streams at three locations where crossings are proposed using 'Methodology C: Dam watercourse and install open trench through watercourse' with temporary disturbance to a feature of regional importance but no permanent damage, and **No Significant Effect** at all other locations following the implementation of mitigation measures to protect water quality.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on the NIPH Hedgerows and the non-priority habitat broadleaved semi-natural woodland during construction and operation due to site clearance of vegetation and vegetation management, with the loss of woodland of regional importance following the implementation of mitigation measures.

The Proposed Development will have a **Significant Negative Effect (Minor Adverse)** on the non-priority habitat marshy grassland during construction due to pole and cable installation, with temporary disturbance to features of regional importance but no permanent damage and **No Significant Effect** during operation following the implementation of mitigation measures to protect habitat.

The Proposed Development will have **No Significant Effect** on habitats resulting from invasive non-native species following the implementation of mitigation measures to prevent spread during the construction of the Proposed Development.

Species

The Proposed Development will have **No Significant Effect** on bats following the implementation of mitigation measures to undertake Pre-Construction Protected Species Surveys and compensation measures that will provide alternative roost provision where necessary.

The Proposed Development will have **No Significant Effect** on otter following the implementation of mitigation measures to undertake Pre-Construction Protected Species Surveys.

The Proposed Development will have **No Significant Effect** on marsh fritillary butterfly following the implementation of mitigation measures to reduce Working Areas and use specific working methods under the supervision of an ECoW.

The Proposed Development will have **No Significant Effect** on badger following the implementation of mitigation measures including Pre-Construction Protected Species Surveys and establishment of EEZs under the supervised by an ECoW.

The Proposed Development will have **No Significant Effect** on smooth newt and common lizard following the implementation of mitigation measures to reduce the Working Areas, use specific working methods and establish EEZs under the supervision of an ECoW.

The Proposed Development will have **No Significant Effect** on breeding birds following the implementation of mitigation measures due to the timing of works and supervision of an ECoW where necessary.

7 CUMULATIVE IMPACTS, INTERACTIONS AND TRANSBOUNDARY

Cumulative Impacts

Planning applications considered during the assessment of cumulative impacts included development in relation to agriculture, electricity transmission, telecommunications, renewable energy, infrastructure, tourism and leisure, waste disposal, the food industry and the extraction industry.

The Proposed Development has the potential to act in combination with these existing, permitted and proposed developments to create cumulative impacts that have additive or incremental effects on the water quality of watercourses, hydrologically linked to European sites downstream of the Proposed Development in the absence of mitigation measures.

The Proposed Development is not likely to give rise to significant ecological or water quality impacts which in turn could give rise to cumulative impacts with the implementation of the mitigation measures, as set out in the ES, OCEMP and final OCEMP which will ensure that the Proposed Development does not contribute to any cumulative effects.

Interactions

Terrestrial Ecology and Ornithology has the potential for interactions with Fisheries and Aquatic Ecology, Water Quality, Flood Risk, Noise and Vibration, Traffic, Waste and Major Accidents and Disasters. The interacting impacts and effects from the Proposed Development have been identified, assessed, and mitigated as set out in the ES.

Transboundary

The Proposed Development is hydrologically linked to the River Foyle and Tributaries, which is a cross-border catchment that includes the River Finn SAC in the Republic of Ireland. The residual impacts of the Proposed Development will have No Significant Effect on the River Foyle and Tributaries SAC and the River Finn SAC following the implementation of mitigation measures to protect water quality and prevent the spread of invasive non-native species.

8 CONSULTATION RESPONSES AND SUBMISSIONS

Statutory Consultation Responses

Clarifications sought by DAERA following the submission of the ES associated with the Proposed Development were addressed in a Record of Clarification which included clarifications relating to protected species and compensation. DAERA confirmed they were content that the Record of Clarification provided the information required to progress their response to the planning application. The Record of Clarification can be found in Appendix D of the Statement of Case.

Relevant Third Party Representations

One of the main objection reasons to the planning application for the Curraghinalt 33kV Connection Project included the impact on nature and biodiversity. The EcIA contained within the ES and the further ecological surveys carried out in subsequent years, as set out in Appendix A Ecology Survey Report, fully assess the impacts on nature and biodiversity and the mitigation and compensation measures proposed to reduce the significance of effects sufficiently that the Proposed Development satisfies relevant planning policy.

APPENDIX A ECOLOGY SURVEY REPORT

Contents

1 INTRODUCTION

1.1 This Ecology Survey Report sets out the results of additional ecological surveys carried out in subsequent years following submission of the Environmental Statement (ES) for the planning applications (Planning Ref LA10/2019/1386/F & LA11/2019/1000/F) for the 33kV power line connections to serve Curraghinalt mine (Planning application ref: LA10/2017/1249/F).

1.2 RPS have undertaken the following addtional ecology surveys to ensure surveys remain valid in accordance with the CIEEM Advice Note on the Lifespan of Ecological Reports & Surveys (CIEEM 2019[1]) and in line with the Northern Ireland Environment Agency (NIEA) Survey Specifications[2]:

- Extended Phase 1 Habitat Survey, Badger Survey and Otter Survey in 2023
- Ecological Survey for Bats - Potential Roost Feature Aerial Inspection Survey of Trees in 2022 and 2023
- Ecological Survey for Marsh Fritillary - Larval Web Survey in 2022 and 2023
- Ecological Survey for Smooth Newt – Visual Inspection and Artificial Refugia along cable route next to ponds in 2022
- Ecological Survey for Common Lizard - Terrestrial Search and Artificial Refugia in 2022 and 2023
- Ecological Survey for Birds - Breeding Bird Survey in 2022 and 2024

1.3 RPS can confirm that the results of the additional ecological surveys do not change the assessment of impacts set out in the EcIA of the ES.

[1] CIEEM (2019) *Advice Note on the Lifespan of Ecological Reports & Surveys*, Chartered Institute of Ecology and Environmental Management, Winchester.

[2] NIEA Site Surveys

2 METHODOLOGY

Statement of Authority

2.1 Dave Welsh, as licence holder, led the Potential Roost Feature (PRF) Inspection Surveys in 2022 and 2023 and the Marsh Fritillary Larval Web Surveys and Common Lizard Surveys in 2022. Dave is a Principal Ecologist with RPS and holds a BSc (Hons) in Marine Science, a MSc in Ecological Management and Conservation Biology with over nine years of experience in ecological consultancy. Dave has extensive experience of habitat, mammal, amphibian, reptile and invertebrate surveys and is a protected species license holder. Dave is an Associate member of the CIEEM and a former volunteer with the Northern Ireland Bat Group and Northern Ireland Badger Group.

2.2 Conor Finlay, assisted with the PRF Inspection Surveys in 2023 and as licence holder, led the Marsh Fritillary Larval Web Surveys and Common Lizard Surveys in 2023. Conor is an Ecologist with RPS and holds a BSc (Hons) in Environmental Science, a MSc in Ecological Management and Conservation Biology with over three years of experience in ecological consultancy. Conor has experience of habitat, mammal, reptile, and bird surveys and is a protected species licence holder. Conor is a Qualifying member of the CIEEM and a volunteer with the Northern Ireland Amphibian and Reptile Group.

2.3 Holly Owen, assisted with PRF Inspection Surveys, Marsh Fritillary Larval Web Surveys and Common Lizard Surveys in 2023. Holly is a Graduate Ecologist with RPS and holds a BSc (Hons) in Biological Sciences, specialised in Animal Biology. Holly has one year experience in ecological field surveys including habitat, mammal, bird and reptile surveys and has four years of experience in volunteer conservation work. Holly is currently a Qualifying member of CIEEM.

Extended Phase 1 Habitat Survey

2.4 The Phase 1 Habitat Survey (JNCC 2010[3]) was ground truthed and updated in 2023.

Ecological Survey for Bats

2.5 PRF Inspection Surveys of trees were updated in 2022 and 2023 in accordance with Collins (2016[4]). The aim of the survey was to allow closer inspection of PRFs identified during the ground level Preliminary Roost Assessment of Trees in 2019, in order to look for evidence of bats including live or dead bats, droppings, staining, odour and/or other physical characteristics and where necessary to reclassify PRFs.

Ecological Survey for Marsh Fritillary

2.6 Marsh Fritillary Larval Web Surveys were updated in 2022 and 2023,in accordance with the NIEA specific requirements for Marsh Fritillary Butterfly Surveys (NIEA, 2017[5]). The aim of the survey was to identify the presence of larval webs within areas where devil's-bit scabious was observed and establish the location of potential breeding colonies along the route of the Proposed Development. A complete search of areas containing devil's-bit scabious at four sites was carried out systematically using a walked transect, which included walking parallel lines 2 m apart searching 1 m either side of the lines, to search for and record the number of larval webs. Details of dates and meteorological conditions at the time of survey can be found below in **Table 2-1**.

[3] JNCC (2010) Handbook for Phase 1 habitat survey – a technique for environmental audit, 5th Revised Reprint, Joint Nature Conservation Committee, Peterborough

[4] Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn), The Bat Conservation Trust, London.

[5] NIEA Site Surveys

Table 2-1 Dates & Meteorological Conditions of Marsh Fritillary Larval Web Surveys

Date	Temperature (°C)	Weather Conditions	Notes
26/09/2023	13	Cloudy with a light breeze	No larval webs observed
26/09/2023	13	Relatively clear with a light breeze	No larval webs observed
26/09/2023	14	Relatively clear with a light breeze	No larval webs observed
03/10/2023	10	Cloudy with a light breeze	No larval webs observed
12/10/2023	9	Cloudy with a light breeze	No larval webs observed
12/10/2023	9	Cloudy with a light breeze	No larval webs observed
12/10/2023	9	Cloudy with a light breeze	No larval webs observed
19/10/2023	9	Cloudy with intermittent drizzle and a moderate breeze	No larval webs observed
19/10/2023	8	Foggy with a moderate breeze	No larval webs observed
19/10/2023	8	Cloudy with drizzle and moderate breeze	No larval webs observed
19/10/2023	7	Cloudy with drizzle and moderate breeze	No larval webs observed
25/10/2023	7	Clear with a light breeze	No larval webs observed

Ecological Survey for Smooth Newt

2.7 Smooth Newt Surveys were updated in 2022 and 2023. The aim of the survey was to identify the presence of smooth newt in suitable habitat along the route of the Proposed Development. Pond 1 and Pond 2, identified during the original surveys in 2020, are located outside the 80 m Working Area of the UGC section along Meenadoo Road that connects to Terminal Pole 2251, and access to survey these ponds was denied by the landowner in subsequent years. The survey methodology, during each visit, included a combination of terrestrial habitat searches, direct observation and the use of artificial refugia within the 80 m Working Area adjacent to Pond 1 and Pond 2. Details of dates and meteorological conditions at the time of survey can be found below in **Table 2-2**.

2.8 A terrestrial habitat search was undertaken and all objects with potential to provide refugia were checked for the presence of newts at the start of each survey. The search involved lifting and searching underneath rocks, debris and other materials for the presence of newts.

2.9 A total of 20 artificial refugia consisting of 500x450mm corrugated bitumen roofing sheets were also positioned in suitable habitat within the 80 m Working Area of the Proposed Developed adjacent to Pond 1 and Pond 2. The artificial refugia were spaced at a baseline density of ten per hectare (Froglife, 2013). The artificial refugia were deployed and left for 22 days and periodically checked for smooth newts sheltering beneath refugia.

Table 2-2 Dates & Meteorological Conditions of Smooth Newt Surveys

Date	Temperature (°C)	Weather Conditions	Notes
26/05/20	14	Partial cloud, dry	Pond 1 Large Subsection: some water present but drying out Pond 1 Small Subsection: clear, water present Pond 2: Dried out
02/06/20	15	Cloudy, dry	Pond 1 Large Subsection: some water present but drying out Pond 1 Small Subsection: clear, water present but decreasing Pond 2: Dried out
09/06/20	15	Cloudy, dry	Pond 1 Large Subsection: only wet mud present Pond 1 Small Subsection: clear, water present but decreasing Pond 2: Dried out

Ecological Survey for Common Lizard

2.10 Common Lizard Surveys were updated in 2022 and 2023 and in accordance with the NIEA specific requirements for Common Lizard Surveys (NIEA, 2017). The aim of the survey was to identify the presence of common lizard in a representative sample of suitable habitats along the route of the Proposed Development. These habitats included wet dwarf shrub heath, mosaic habitat, marshy grassland and wet modified bog. The survey methodology, during each visit, included a combination of direct observation and the use of artificial refugia. All surveys were undertaken in suitable weather conditions when the temperature was between 9°C and 18°C. Details of dates and meteorological conditions at the time of survey can be found below in **Table 2-3**.

2.11 A total of 10 artificial refugia,consisting of 500x450mm corrugated bitumen roofing sheets,were positioned in suitable habitat within each of the five survey locations along the route of the Proposed Development. The artificial refugia were spaced at a baseline density of ten per hectare (Froglife, 2013). The artificial refugia were deployed and left for 22 days prior to the initial survey for the presence of basking lizards on top of refugia and sheltering lizards beneath refugia. A walked transect was set up to search for lizards whilst moving between artificial refugia. Each transect was walked slowly, scanning the ground 3-4m in front for the presence of basking lizards.

Table 2-3 Dates & Meteorological Conditions of Common Lizard Surveys

Date	Temperature (°C)	Weather Conditions	Notes
03/10/2023	10	Cloudy with a light breeze	No lizards observed
12/10/2023	9	Cloudy with a light breeze	No lizards observed
12/10/2023	9	Cloudy with a light breeze	No lizards observed
12/10/2023	9	Cloudy with a light breeze	No lizards observed
12/10/2023	8	Clear with a light breeze	No lizards observed
25/10/2023	7	Clear with a light breeze	No lizards observed
25/10/2023	8	Clear with a light breeze	No lizards observed
25/10/2023	8	Clear with a light breeze	No lizards observed
25/10/2023	8	Clear with a light breeze	No lizards observed
25/10/2023	9	Cloudy with a light breeze	No lizards observed

Ecological Survey for Birds

2.12 Breeding wader surveys were undertaken in 2024 using an adapted Brown and Shepard methodology (1993[6]), as agreed with NIEA during a pre-commencement consultation meeting. Four visits were carried out across the breeding season, one per month from April to July. Visits were made between 08.30 and 18.00,during favourable weather conditions. Details of dates and meteorological conditions at the time of survey can be found below in **Table 2-4**.

2.13 The ornithologist slowly walked transects through the survey areas, observing areas of suitable habitat for target species. Target species were curlew, lapwing, snipe and redshank. The Surveyor stopped at regular intervals to scan with binoculars,as far as terrain or weather allowed,and listened for calls or song. All sightings of waders within the survey area were recorded.

2.14 In addition to waders, NIEA requested that observations of raptors (with a focus on Annex 1 species such as hen harrier and merlin) and red grouse observed during walkovers were recorded. Potential predators such as foxes were also noted.

[6] Brown, A.F. and Shepherd, K.B. (1993) A method for censusing upland breeding waders. Bird Study, 40:3, 189-195.

Table 2-4 Dates & Meteorological Conditions of Bird Surveys

Date	Site	Cloud cover	Wind	Visibility	Precipitation	Temperature (°C)
25/04/2024	Mullydoo	8/8	NNW3	>10km	Light rain shower	8
26/04/2024	Slievebeg	Variable	ENE1-2	>10km	Light rain showers	8
30/04/2024	Craignagapple	8/8	Var3/4	1-3km - >10km	Rain showers	8
16/05/2024	Mullydoo	Variable	NE1	>10km	None	15
17/05/2024	Slievebeg	2/8	N3	>10km	None	12
21/04/2024	Craignagapple	8/8	SE1	>10km	None	12
12/06/2024	Mullydoo	8/8	W2	>10km	None	12
19/06/2024	Slievebeg	7/8	WNW2	>10km	None	13
21/06/2024	Craignagapple	8/8	S4	>10km	Light rain showers	14
19/07/2024	Mullydoo	7/8	S4	>10km	None	20
23/07/2024	Slievebeg	6/8	N2	>10km	None	17
24/07/2024	Craignagapple	8/8	S2	>10km	Light rain showers	14

3 RESULTS

Habitats

3.1 There were no major changes to habitats along the route of the Proposed Development during the updated surveys carried out in 2023.

Bats

3.2 A Preliminary Roost Assessment (PRA) of trees that will be directly impacted by the Proposed Development, and Potential Roost Feature (PRF) Inspection Surveys of these trees, were carried out in 2019. The PRF Inspection Survey was repeated in 2022 and 2023. The bat roost suitability of trees was reclassified, where necessary, as trees had either had no cavity or only superficial cavities with no PRFs following closer inspection. A summary of the total number of trees with bat roost suitability can be found below in **Table 3-1**. A more detailed summary of the results can be found in **Table 3-2**.

3.3 There were no bats or evidence of bats recorded in any of the trees during any of the PRF Inspection Surveys.

Table 3-1 Total Number of Trees with Bat Roost Suitability during Preliminary Roost Assessment of Trees & PRF Inspection Survey in Years 2019-2023

Bat Roost Suitability	Ground Level Survey 2019	PRF Inspection Survey 2019	PRF Inspection Survey 2022	PRF Inspection Survey 2023
Negligible	-	11	12	11*
Low	33	21	22	22
Moderate	11	12	10	8*
High	0	0	0	0
Total No. of Trees Surveyed	**44**	**44**	**44**	**41**

Notes:

* One negligible tree and two moderate trees could not be accessed during 2023 due to heightened concerns regarding surveyor health & safety

Table 3-2 Results of Preliminary Roost Assessment for Trees and PRF Inspection Surveys in Years 2019-2023

Pole No.	Tree No.	Tree Species	Description of PRFs	Ground Level Roost Suitability 2019	PRF Inspection Roost Suitability 2019	PRF Inspection Roost Suitability 2022	PRF Inspection Roost Suitability 2023	Evidence of Bats
2012 to 2013	T1	Common Alder	Ivy stems and branches	Low	Low	Low	Low	No
2012 to 2013	T2	Wych Elm	Ivy stems and branches	Low	Low	Low	Low	No
2012 to 2013	T3	Ash	Ivy stems and branches	Low	Low	Low	Low	No
2012 to 2013	T4	Ash	Ivy stems and branches	Low	Low	Low	Low	No
2012 to 2013	T5	Ash	Ivy stems and branches	Low	Low	Low	Low	No
2012 to 2013	T6	Common Alder	Ivy stems and branches	Low	Low	Low	Low	No
2015	T7	Common Birch	Sufficient size/age to contain PRFs - none seen from the ground	Low	Low	Low	Low	No
2015	T8	Common Birch	Sufficient size/age to contain PRFs - none seen from the ground	Low	Low	Low	Low	No
2015	T9	Common Birch	Ivy stems and branches	Low	Low	Low	Low	No
2015	T10	Common Birch	Ivy stems and branches	Low	Low	Low	Low	No
2016	T11	Common Birch	Sufficient size/age to contain PRFs - none seen from the ground	Low	Negligible	Negligible	Negligible	No
2177	T12	Rowan	Two knot holes the first 1m from base of tree. Heartwood decay.	Moderate	Moderate	Moderate	No Access	No
2178 to 2179	T13	Rowan	Rotting limbs and peeling bark. Cavity.	Moderate	Negligible	Negligible	No Access	No
2180 to 2181	T14	Rowan	Large cavity 1 m from base of tree.	Moderate	Moderate	Moderate	No Access	No
2183 to 2184	T15	Ash	Appressed ivy. Part decaying. Potential PRFs - none seen from the ground. The most significant of three aligned ash dead or dying.	Low	Low	Low	Low	No
2185	T16	Ash	Ivy stems and branches.	Low	Low	Low	Low	No

Pole No.	Tree No.	Tree Species	Description of PRFs	Ground Level Roost Suitability 2019	PRF Inspection Roost Suitability 2019	PRF Inspection Roost Suitability 2022	PRF Inspection Roost Suitability 2023	Evidence of Bats
2186	T17	Ash	Ivy stems and branches on the boundary of the 10m wayleave corridor	Low	Low	Low	Low	No
2186	T18	Ash	Mature ash with ivy. Upper branches leaning into wayleave. Potential PRFs - none seen from the ground.	Low	Low	Low	Low	No
2187	T19	Common Alder	Mature alder with ivy. Potential PRFs - none seen from the ground	Low	Low	Low	Low	No
2188	T20	Rowan	Ivy stems and branches. Potential PRFs - none seen from the ground	Low	Low	Low	Low	No
2188	T21	Unknown	Tree stump entirely covered with ivy	Low	Low	Low	Low	No
2191 to 2193	T22	Ash	A mature ash with knot holes	Low	Moderate	Negligible	Negligible	No
2195 to 2196	T23	Ash	Mature ash with splitting bark, possible frost crack. Tree on boundary of the 10m wayleave corridor.	Moderate	Negligible	Negligible	Negligible	No
2238 to 2239	T24	Pine & spruce	Naturally peeling bark on multiple trees	Low	Low	Low	Low	No
2250 to 2251	T25	Common Alder	Bulbous canker at 4m.	Low	Negligible	Negligible	Negligible	No
2250 to 2251	T26	Common Birch	Longitudinal split / tear-out	Moderate	Negligible	Negligible	Negligible	No
2258	T27	Common Alder	Sufficient size/age to contain PRFs - none seen from the ground. Edge of wayleave corridor.	Low	Low	Low	Low	No
2259	T28	Rowan	But rot. 1.5m vertical opening with exposed interior cavity extending up the tree.	Moderate	Moderate	Moderate	Moderate	No
2267 to 2268	T29	Rowan	Rowan growing through Holly. Small knot hole circa 3m up main trunk	Moderate	Moderate	Moderate	Moderate	No
2268 to 2269	T30	Ash	Ivy cover and small decay feature on main bole.	Low	Negligible	Low	Low	No
2271	T31	Ash	Rotting limb with potential access and pruning-cut at 2m	Low	Moderate	Moderate	Moderate	No
2278	T32	Ash	Sufficient size/age to contain PRFs - none seen from the ground.	Low	Negligible	Negligible	Negligible	No
2278	T33	Ash	Sufficient size/age to contain PRFs - none seen from the ground.	Low	Negligible	Negligible	Negligible	No

Pole No.	Tree No.	Tree Species	Description of PRFs	Ground Level Roost Suitability 2019	PRF Inspection Roost Suitability 2019	PRF Inspection Roost Suitability 2022	PRF Inspection Roost Suitability 2023	Evidence of Bats
2278	T34	Ash	Sufficient size/age to contain PRFs - none seen from the ground.	Low	Negligible	Negligible	Negligible	No
2280 to 2281	T35	Alder	Sufficient size/age to contain PRFs - none seen from the ground.	Low	Low	Low	Low	No
2280 to 2281	T36	Alder	Second alder (with holly) in same boundary on edge of the wayleave corridor. Sufficient size/age to contain PRFs - none seen from the ground.	Low	Low	Low	Low	No
2281	T37	Alder	At pole. Cavity at 1m. Some decaying limbs providing possible voids for bats	Low	Moderate	Moderate	Moderate	No
2281	T38	Willow	Tree on edge of the wayleave corridor. Cavity at 1.3m extending circa 45cm	Moderate	Moderate	Moderate	Moderate	No
2283	T39	Willow	Part fallen fractured willow	Low	Negligible	Negligible	Negligible	No
2283	T40	Willow	Second willow – relatively shallow cavity with some future potential	Low	Moderate	Moderate	Moderate	No
2283	T41	Common Birch	Tear-out with upward facing cavity	Moderate	Negligible	Negligible	Negligible	No
2283	T42	Common Birch	Vertical wound with future use and knot hole with limited potential	Moderate	Moderate	Moderate	Moderate	No
2283	T43	Common Birch	Large suitable cavities.	Moderate	Moderate	Moderate	Moderate	No
2284	T44	Common Birch	Single tubular entry point into heartwood on leading branch	Low	Moderate	Negligible	Negligible	No

Otter

3.4 There were no otter underground holts or above ground couches recorded along the route of the Proposed Development. Otter activity, however, was recorded at a number of locations indicating otter presence along watercourses traversed by the route. There was no additional evidence of otter recorded along the route of the Proposed Development during the updated surveys carried out in 2023.

Marsh Fritillary

3.5 A total of seven locations along the route of the Proposed Development, grouped into four sites, had the potential to provide suitable habitat for marsh fritillary butterfly. A single marsh fritillary larval web was recorded in habitat along the route of the Proposed Development in 2019. There were no marsh fritillary larval webs recorded at any of the four sites in 2020, 2022 or 2023. A summary of the total number of marsh fritillary larval webs recorded can be found below in **Table 3-3**.

Table 3-3 Total Number of Marsh Fritillary Larval Web Recorded in Years 2019-2023

Site Reference	Pole Reference	Larval Web Survey 2019	Larval Web Survey 2020	Larval Web Survey 2022	Larval Web Survey 2023
Site 1	Poles 2030-2032	0	0	0	0
Site 2	Poles 2150-2051 & Poles 2160-2162	0	0	0	0
Site 3	Poles 2254-2255 & Pole 2256	1	0	0	0
Site 4	Pole 2284 & Poles 2287-2288	0	0	0	0

3.6

Badger

3.7 A total of 29 badger setts were identified between 2018 and 2020, along the route of the Proposed Development, ranging from main setts with multiple entrances and signs of breeding to single entrance outlier setts. A total of eight badger setts will be directly impacted by the Proposed Development and construction works within 25 m of these setts will require a derogation licence. There were no additional badger setts found during updated surveys carried out in 2023. A summary of the badger setts impacted by the Proposed Development can be found below in **Table 3-4.**

Table 3-4 Badger Setts Impacted by Proposed Development

Sett Reference	Pole Reference	Sett Type
3	Pole 2016	Outlier/Subsidiary Sett
4	Pole 2031	Outlier, Subsidiary
8	Pole 2180-2181	Outlier (unconfirmed)
13	Pole 2195-2196	Outlier
16	Pole 2238-2239	Possible main or lower-order sett (abandoned)
23	Pole 2315-2316	Outlier
26	Pole 2304	Outlier
27	Pole 2313	Outlier

Smooth Newt

3.8 Two ponds at the UGC section along the Meenadoo Road that connects to Terminal Pole 2251 were considered to have potential for smooth newts. Environmental DNA (eDNA) analysis returned a positive result for one of these ponds,indicating the presence of smooth newt. However there were no smooth newts recorded during the course of newt surveys in 2019. There was no additional evidence of smooth newt found during visual inspection and artificial refugia surveys carried out at this location during updated surveys carried out in 2022 and 2023. A summary of the total number of common newt survey results can be found below in **Table 3-5**.

Table 3-5 Results of Smooth Newt Surveys Recorded in Years 2020-2023

Site Reference	Pole Reference	eDNA 2020	Smooth Newt Surveys 2020	Visual Inspection & Artificial Refugia 2022	Visual Inspection & Artificial Refugia 2023
Pond 1	UGC Meenadoo Road to Terminal Pole 2251	Positive	0	0	0
Pond 2	UGC Meenadoo Road to Terminal Pole 2251	Pond Dried Out	0	0	0

Common Lizard

3.9 A representative sample of suitable habitats for common lizard were surveyed at five locations along the route of the Proposed Development. Common lizard was confirmed to be present at three locations along the route of the Proposed Development in 2020. There were no common lizards found during visual inspection and artificial refugia surveys at any of the five sites in 2022 and 2023. A summary of the total number of common lizards recorded can be found below in **Table 3-6**.

Table 3-6 Total Number of Common Lizards Recorded in Years 2020-2023

Site Reference	Pole Reference	Larval Web Survey 2020	Larval Web Survey 2022	Larval Web Survey 2023
Site 1	Poles 2289 - 2292	1	0	0
Site 2	Poles 2245 - 2247	0	0	0
Site 3	Poles 2225 - 2228	0	0	0
Site 4	Poles 2090A - 2091	1	0	0
Site 5	Poles 2068 - 2070	1	0	0

Birds

3.10 No breeding waders were recorded in 2024. Three sightings of Golden plover were noted, but these were all considered to be birds still on migration to northern breeding grounds. A summary of breeding waders recorded can be found below in **Table 3-7**.

Table 3-7 Breeding Waders Recorded in Years 2018, 2019, 2020 and 2024 (No. of Pairs)

Site Reference	2018	2019	2020	2024
Mullydoo	1 x Snipe	1 x Snipe	0	0
Slievebeg	0	0	0	0
Craignagapple	0	0	0	0

4 CONCLUSION

4.1 RPS have undertaken additional ecological surveys, carried out in subsequent years following submission of the ES, to ensure the continued validity of surveys in accordance with the CIEEM Advice Note on the Lifespan of Ecological Reports & Surveys (CIEEM 2019[7]) and in line with the Northern Ireland Environment Agency (NIEA) Survey Specifications[8].

4.2 RPS can confirm that the results of the additional ecological surveys do not change the assessment of impacts set out in the EcIA of the ES.

[7] CIEEM (2019) *Advice Note on the Lifespan of Ecological Reports & Surveys*, Chartered Institute of Ecology and Environmental Management, Winchester.

[8] NIEA Site Surveys

APPENDIX B Shadow Habitats Regulations Assessment Addendum

Contents

1 INTRODUCTION

1.1 This Addendum sets out changes in relation to the underground cable construction sequence and construction methodology to that assessed within Annex II Shadow Habitats Regulations Assessment (sHRA) of the Environmental Statement (ES) for the planning applications (Planning Ref LA10/2019/1386/F & LA11/2019/1000/F) for the 33kV power line connections to serve Curraghinalt mine (Planning application ref: LA10/2017/1249/F).

1.2 The Applicant has utilised the time period since the submission of the planning applications and ES to further refine the proposed construction methodologies in the context of emerging working practice and further consideration of the watercourse crossings. No changes have been made to the proposed route alignment, pole locations or the planning boundaries. In this regard, no change is required to be made to the description of the Proposed Development, as subject of the aforementioned planning applications. The principal change being in the construction methodology,as outlined within the Outline Construction Environmental Management Plan (OCEMP).

1.3 A palette of construction methods was adopted for the purposes of the Environmental Impact Assessment (EIA) to ensure that all construction options and applicable mitigation measures were assessed where it had not been determined which of the potential construction techniques would be undertaken. The palette contains a number of options as listed in Chapter 2 and Volume III, Appendix 2.2 OCEMP of the ES, to cover the options. All of these options were assessed within the Annex II sHRA.

2 UNDERGROUND CABLE CONSTRUCTION METHODS ASSESSED IN SHRA

2.1 A number of sections along the electricity transmission route will include underground cable (UGC), laid within the road network and on private lands. Where the proposed UGC route intersects a watercourse along the route of an existing roadway and sufficient depth is supported between the road surface and the underlying culvert or bridge, the UGC will be installed in the same fashion as the in-road sections of the route.

2.2 Three proposed alternative methods for installation of the UGC were also assessed in the sHRA to ensure that all construction options and applicable mitigation measures were included where it had not been determined which of the potential construction techniques would be undertaken. These included:

- Methodology A: Excavation and installation around and below a structure
- Methodology B: Directional drilling
- Methodology C: Dam watercourse and install open trench through watercourse

2.3 Stage 1 Screening concluded the possibility of likely significant effects from the Proposed Development upon the River Finn SAC, River Foyle and Tributaries SAC, Owenkillew River SAC, Lough Foyle SPA, Lough Foyle SPA (ROI) and Lough Foyle Ramsar site. The Proposed Development was,therefore,progressed to Stage 2 Appropriate Assessment.

2.4 Stage 2 Appropriate Assessment concluded that no adverse effect upon the integrity of any European site will arise as a result of the Proposed Development with the application of mitigation measures, and no reasonable scientific doubt remains as to the absence of such effects.

3 ALTERNATIVE CONSTRUCTION METHODS

3.1 'Methodology B: Directional drilling' using Horizontal Direction Drilling (HDD) was identified as an option for a number of crossings on the UGC route where the cable cannot be laid safely within the carriageway above a culvert or structure. Following further assessment of the existing culverts, it has been determined that HDD is not required and therefore, it is proposed to replace the existing concrete culverts.

3.2 'Methodology B: Directional drilling' is,therefore,replaced by 'Alternate Methodology B: Culvert replacement'. The construction methodology for culvert replacement is summarised below and set out in further detail in Appendix C OCEMP of the Statement of Case.

- The position of the culvert will be marked out.
- A silt barrier will be erected on the downstream side of the crossing. This silt barrier will come in the form of posts being installed into the ground with a geotextile being attached to the posts. Six inches of the silt fence will be buried in the ground to ensure there are no bypasses.
- The stream will be dammed and, dependant on the volumetric flow of the watercourse,a temporary diversion twin wall pipe may be required. This will maintain the flow bypassing the works area.
- Remaining water will be over pumped. Discharge from the over pump will be routed to ensure that the water quality is not adversely affected downstream.
- Once the site is secure, the following works will prepare for the installation of the culvert replacement. The existing culvert will be excavated to formation level. The material excavated from the verge will be stored for reuse within the verge side filling and reinstating.
- PVC power cable ducts will be installed below the bedding level of the culvert.
- Culvert pipes will be transported and lifted into place and pipe bedding installed to surround the pipe to above the crown of the culvert.
- The upstream verge to the culvert will then be regraded using CBS sandbags to form the header and existing or imported riverbed stone will be used to help tie in with the new structure.
- Concrete is poured using a skip and 13T excavator. Concrete vibrated during install. If required concrete shutters are to be installed at the edge of carriageway and stripped once concrete has set.
- Road then to be reinstated and verges filled with previously excavated material and the area reinstated and tidied on completion of works.
- Once culvert replacement is completed, the temporary diversion is to be removed. The works area will then be cleaned withthe verge top soiled & sowed out.
- Silt barrier then to be removed.

3.3 Table 3.1 below provides a summary of the proposed watercourse crossings where Alternate Methodology B: Culvert replacement will be utilised.

Table 3.1: Summary of Watercourse Crossings

Approximate Location (OCEMP Reference)	Watercourse	Route Section	Construction Required	Located in which European Site catchment
Hollyhill Road (ST2)	Unnamed tributary of the Glenmornan River.	UGC	Alternate Methodology B: Culvert Replacement.	River Foyle and Tributaries SAC
Hollyhill Road (ST3)	Unnamed tributary of the Glenmornan River.	UGC	Alternate Methodology B: Culvert Replacement.	No River Foyle and Tributaries SAC
Meenadoo Road (ST5)	Unnamed tributary of the Owenkillew River	UGC	Alternate Methodology B: Culvert Replacement.	Owenkillew River SAC
Meenadoo Road (ST6)	Unnamed tributary of the Owenkillew River	UGC	Alternate Methodology B: Culvert Replacement.	Owenkillew River SAC

Approximate Location (OCEMP Reference)	Watercourse	Route Section	Construction Required	Located in which European Site catchment
Meenadoo Road (ST7)	Unnamed tributary of the Owenkillew River	UGC	Alternate Methodology Culvert Replacement.	B: Owenkillew River SAC
Meenadoo Road (ST8)	Unnamed tributary of the Owenkillew River	UGC	Alternate Methodology Culvert Replacement.	B: Owenkillew River SAC
Meenadoo Road (ST9)	Unnamed tributary of the Owenkillew River	UGC	Alternate Methodology Culvert Replacement.	B: Owenkillew River SAC
Meenadoo Road (ST10)	Golan Burn (a tributary of the Owenkillew River)	UGC	Alternate Methodology Culvert Replacement.	B: Owenkillew River SAC
Gortacashel Road (ST11)	Unnamed tributary of the Owenkillew River	UGC	Alternate Methodology Culvert Replacement.	B: Owenkillew River SAC

4 MITIGATION MEASURES

4.1 The terms and conditions of the Construction Contract require the Contractor to deliver through a Final CEMP (FCEMP) all the mitigation measures contained within the OCEMP as set out in Appendix C OCEMP of the Statement of Case.

Site Drainage, Foul Water Disposal and Silt Management Measures

4.2 During the construction phase of the project pollution from spillage of fuels, lubricants and hydraulic fluids from construction plant may lead to incidents, especially in the absence of adequate pollution mitigation measures. Other risks include:

- water abstraction, which may cause contamination;
- pollution due to vandalism of plant;
- pollution due to waste materials, dust or residues from handling contaminated land; and,
- pollution from pumped discharges. These can also cause erosion.

4.3 Any river crossings or excavations and constructions close to rivers or streams pose an inherent risk of surface water and groundwater contamination. There is always a potential risk of pollution incidents which can occur from activities associated with site excavations, site preparations and the use of surface materials or from fuel/oil spills from mechanical plant. Construction activities associated with proposed river crossings, including the use of open channel cutting, directional drilling or the typical channel excavations required along roadways and through private agricultural lands, could result in excessive silt generation,leading to high levels of suspended solids, high turbidity, and discolouring and reduced water transparency in the watercourse.

4.4 The bullet points below list the main sources of pollution from construction sites adjoining rivers as follows:

- The discharge or entry into waters of contaminated site run-off or pumped contaminated surface/ground waters;
- Pollution due to vandalism of plant;
- Direct disturbance of the beds of rivers & streams by excavation or fording;
- Loss of oil or petrochemical fuels from machinery or storage areas; and,
- Cement and cement wash from batching plants, storage areas and other areas where cement grout or concrete is being applied.

4.5 Contractors will be made aware, during the toolbox talk, that it is an offence under Article 7(1) of The Water (Northern Ireland) Order 1999, to discharge or deposit, whether knowingly or otherwise, any poisonous, noxious or polluting matter so that it enters a waterway. The toolbox talk will also set out that it is an offence under Article 9 of that Order, to make any discharge into a waterway of any trade or sewerage effluent or any other poisonous, noxious or polluting matter without the consent of DAERA. Similar regulations regarding pollution and damage to fish are contained in The Fisheries Act (Northern Ireland) 1966 as amended by The Fisheries (Amendment) (Northern Ireland) Order 1991. In carrying out works in compliance with all measures included within the OCEMP and Environmental Statement, and subsequently the FCEMP, the potential for such events to occur will be prevented.

4.6 All works will be undertaken in adherence to relevant Guidance for Pollution Prevention in particular GPP 5, Works and maintenance in or near water in addition to GPP 1, GPP 21 and GPP 22, including the following measures:

- No construction machinery will enter any watercourse;
- Necessary works will be undertaken in dry conditions (using cofferdams in association with open channel cutting);
- Machinery working near watercourses will be inspected twice daily for leakages (of fuel and lubricants);

- Machinery will not be stored within 20 m of a watercourse;
- Refuelling, fuel storage and equipment wash down will be undertaken away from watercourses;
- All refuelling will take place outside a 20 m buffer zone around all existing watercourses. Operatives will utilise drip trays for all refuelling and an emergency spill kit will be available at each refuelling location. All construction plant will be equipped with emergency spill kits.
- Fuel storage will be via double skinned containers or a double skinned bowser, as required. It is noted however that fuel storage will only be required on a relatively small scale with all plant refuelling off-site.

4.7 Construction activities will adhere to best practices as defined by CIRIA documents and the EA's PPGs listed above (with particular reference to CIRIA Report 648 (2006) "Control of Water Pollution from Linear Construction Sites") (CIRIA 2006).

4.8 The OCEMP and FCEMP will be signed up to by the Contractor to ensure effective mitigation is implemented on site. The legal requirements to not "cause or knowingly permit" pollution of the water environment will be highlighted to the appointed contractor and all personnel working on-site would be made aware of their responsibilities.

4.9 A key element of the management of construction activities is to ensure that unacceptable impacts on the water environment are prevented. Construction areas will be clearly demarcated from the rest of the site so as to minimise disturbance of land which is not required for development, as required by the OCEMP.

4.10 Construction activities will adhere to CIRIA Reports C532 'Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors' and C648 'Control of Water Pollution from Linear Construction Sites' and the following SEPA Pollution Prevention Guidelines:

- GPP 1 General guide to the prevention of pollution
- GPP 2 Above ground oil storage tanks
- PPG 3 The use and design of oil separators in surface water drainage systems
- GPP 5 Works and maintenance in or near water
- PPG 6 Working at construction and demolition sites
- GPP 21 Pollution incident response planning

4.11 It is envisaged that these measures could be subject to an appropriately worded condition attached to any planning approval to ensure no adverse effect on the integrity of the site.

Watercourse Crossing Using Culvert Replacement

4.12 In order to mitigate against river pollution, largely sedimentation during culvert replacement, the following measures will be adhered to, as required by the OCEMP:

- All culvert installation works will be undertaken within the dry watercourse channel, following damming of the watercourse at both the upstream and downstream aspects, and the pumping of water from the upstream section to an area downstream of the proposed works.
- Damming of the watercourse will be undertaken using sandbag cofferdams.
- A silt barrier system will be constructed along the base of any material stockpile, situated at an appropriate distance from the watercourse. The barrier will consist of a fence with a geotextile fabric strip fixed to the bottom of the fence.
- Filter fabric will be entrenched into the ground and the filter fabric will remove any coarse particles from any surface water runoff.
- The watercourse section will be reinstated immediately following completion of works.

5 CONCLUSION

This Addendum sets out changes in relation to the underground cable construction sequence and construction methodology to that assessed within Annex II sHRA of the ES and concludes that no adverse effect upon the integrity of any European site will arise as a result of the Proposed Development with the application of mitigation measures, and no reasonable scientific doubt remains as to the absence of such effects.