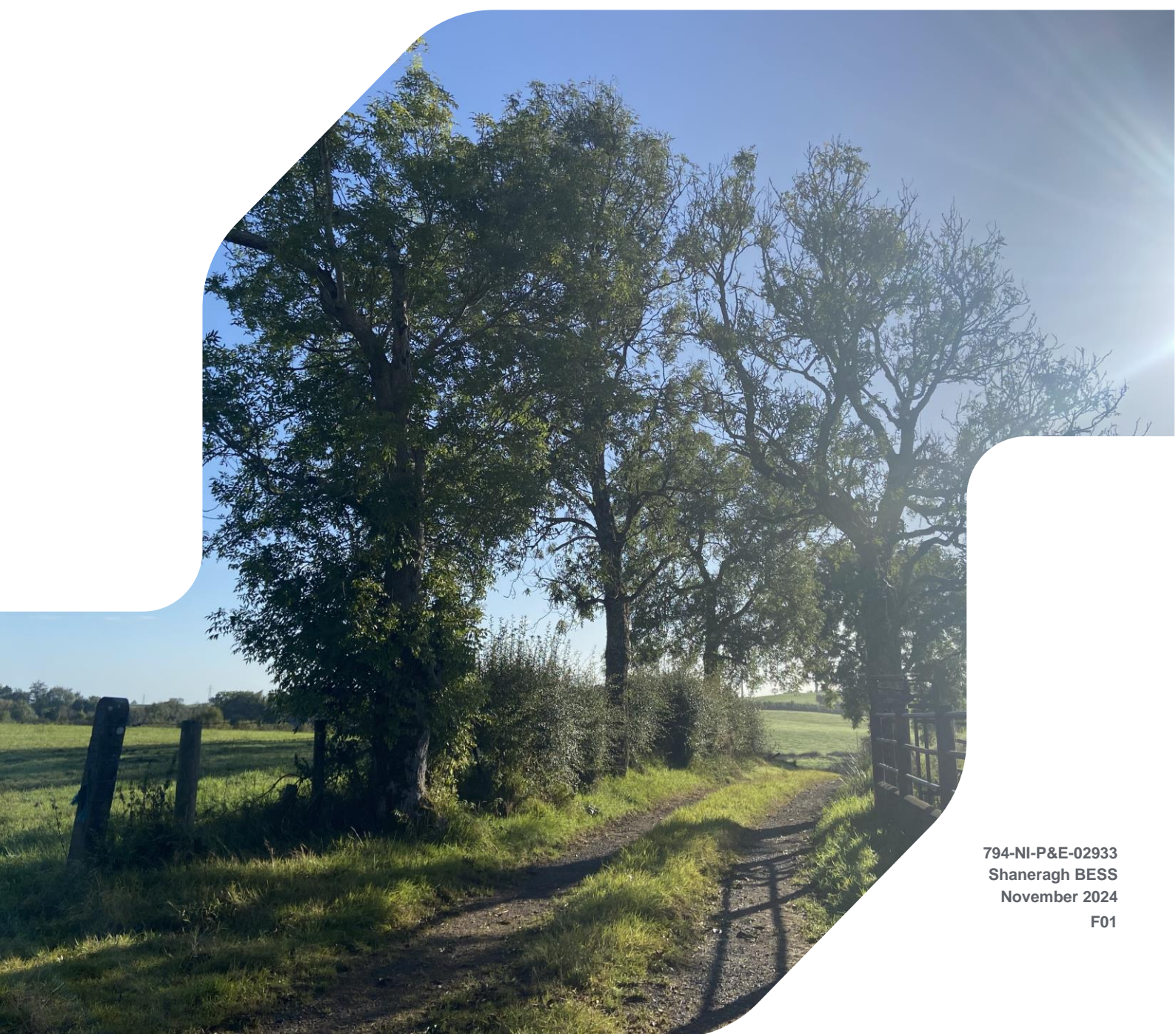


ECOLOGICAL IMPACT ASSESSMENT

Shaneragh Battery Energy Storage System



794-NI-P&E-02933
Shaneragh BESS
November 2024
F01

REPORT

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Prepared by:

RPS

Holly Owen
Graduate Ecologist

Elmwood House
74 Boucher Road, Belfast
Co. Antrim, BT12 6RZ

T +44 2890 667 914
E holly.owen@rps.tetrattech.com

Prepared for:

RES UK & Ireland Ltd

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SUMMARY

RPS was commissioned by RES UK & Ireland Ltd to produce an Ecological Impact Assessment to support a planning application for a proposed Battery Energy Storage System on land at Skreen Road, Omagh.

The proposed project involves the installation of up to 110MW Battery Energy Storage System provided within a compound area consisting of associated plant, equipment, and buildings.

The Ecological Impact Assessment includes the results of consultation, a desk study and an Extended Phase 1 Habitat Survey in order to identify potential impacts associated with the proposed project; to evaluate the likely significance of effects; to implement the mitigation hierarchy; and to highlight potential opportunities for ecological enhancement.

The site of the proposed project is not located within the boundary of any statutory or non-statutory designated sites of international, national or local nature conservation importance. The site however is hydrologically linked to Fairy Water Bogs Special Area of Conservation which is located approximately 35 km downstream of the site.

The site of the proposed development is approximately 8ha in size and consists of improved grassland, bare ground, hedgerows, and trees. The principal habitats on site include improved grassland and hedgerow.

The proposed project will have **No Significant Effect** on the ecological features identified within the site due to the design of the proposed project and the implementation of mitigation measures.

1 INTRODUCTION

RPS was commissioned by RES UK & Ireland Ltd to produce an Ecological Impact Assessment (EcIA) to support a planning application for a proposed Battery Energy Storage System (BESS) on land at Skreen Road, Omagh.

1.1 Ecological Impact Assessment

EcIA is the process of identifying, quantifying and evaluating the potential effects of a proposed project on ecological features based on objective assessment of the best information available (CIEEM 2024¹). An ecological feature is defined as a species, habitat or ecosystem that has the potential to be affected by a proposed project.

The aim of the EcIA is therefore to describe the existing ecological environment within and surrounding the proposed project; to identify important ecological features; to identify the potential impacts associated with the proposed project; to evaluate the likely significance of effects on the important ecological features; to apply the mitigation hierarchy to avoid, mitigate and compensate for significant ecological effects; to highlight potential opportunities for ecological enhancement; and to set out requirements for post-construction monitoring (CIEEM 2024¹).

The EcIA has been written in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM 2024¹).

1.2 Proposed Project

The proposed project involves the installation of a Battery Energy Storage System (BESS), DNO substation building, control building, auxiliary transformer, grid compliance equipment, CCTV & lighting columns, security fencing, ancillary works, access track, entrance upgrades, hardstanding, widening along the Skreen Road and associated works. The site of the proposed project is approximately 8 ha. Access tracks will connect the BESS development to Skreen Road to the east. The construction phase of the project will be an estimated 18 months in duration. The location of the site and the red line boundary are illustrated in **Figure 1.0 Site Location**.

The proposed project will include installation of:

- 116 no. Battery Storage Enclosure (BSE);
- 21 no. Power Conversion Systems with Single MV Skid and Apron Slab;
- 1 no. 110kv DNO Substation Compound with DNO Substation Building;
- 3 no. BESS Substation Buildings;
- 4 no. Auxiliary Transformer;
- 2 no. Lv Distribution Equipment;
- 1 no. 110kv BESS Substation Compound;
- 17 no. Aggregation Panel with LV Pillar;
- 1 no. Pre-insertion resistor;
- Capacitor Bank;
- 1 no. Harmonic Filter and Resistor;
- 4 no. Spares Container;
- Lighting CCTV Columns

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During the operational phase of project, activity on site will be minimal due to the nature of the proposed development, and limited to routine checks and maintenance 2 -4 per month.

2 LEGISLATION & PLANNING POLICY

2.1 International Directives

Ramsar Convention on Wetlands of International Importance (1971)

The principal aims of the Convention are to halt the worldwide loss of wetlands and to provide a framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The provisions of the Convention underlie the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 (as amended).

Bern Convention on Conservation of European Wildlife and Natural Habitats (1979)

The principal aims of the Convention are to ensure the conservation and protection of wild plants and animal species, with particular emphasis on endangered and vulnerable species and their natural habitats. The provisions of the Convention underlie the Wildlife (Northern Ireland) Order 1985, the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).

Bonn Convention on Conservation of Migratory Species of Wild Animals (1979)

The principal aims of the Convention are to conserve migratory species and their habitats by providing strict protection for endangered migratory species. The provisions of the Convention underlie the Wildlife (Northern Ireland) Order 1985 and the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).

Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora (92/43/EEC) (The Habitats Directive)

The main aim of the Directive is to promote the maintenance of biodiversity through the conservation of natural habitats and wild species listed on the Annexes of the Directive. The provisions of the Directive underlie the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).

Convention on Biological Diversity (1993)

The principal aims of the Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the use of genetic resources. The provisions of the Convention underlie the Wildlife and Natural Environment Act (Northern Ireland) 2011 which introduced new provisions and amendments to the Wildlife (Northern Ireland) Order 1985 (as amended).

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

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It makes provisions for the maintenance of the wild bird populations across their natural range; conserves the habitats for rare or vulnerable species listed in Annex I and of migratory species through the classification of SPAs and provides protection for all wild birds. The provisions of the Directive underlie the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).

2.2 Northern Ireland Legislation

The Wildlife (Northern Ireland) Order 1985 (as amended)

The Order prohibits the intentional killing, taking or injuring of certain wild birds or wild animals; or the intentional destruction, uprooting or picking of certain wild plants. It also allows for the establishment of Wildlife Refuges (akin to Nature Reserves) for the special protection of certain species of rare plants or animals.

Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 (as amended)

The Order provides for the establishment of National Nature Reserves (NNRs), Nature Reserves (NRs) and Marine Nature Reserves (MNRs). It also provides for the designation and formulation of proposals for National Parks and Areas of Outstanding Natural Beauty (AONBs).

Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended)

The Regulations promote the maintenance of biodiversity through the conservation of natural habitats and wild species listed in the Annexes of the Council Directive on the Conservation of Natural Habitats of Wild Fauna and Flora (92/43/EEC) (The Habitats Directive) and the Council Directive on the Conservation of Wild Birds (2009/147/EC) (The Birds Directive). The Regulations require measures to maintain or restore, at favourable conservation status, biodiversity whilst taking account of economic, social, cultural requirements and regional and local characteristics. They give effect to site and species protection measures through establishment of the UK national site network and designation of European Sites including Special Areas of Conservation (SAC) and Special Protection Areas (SPA). They also establish a list of species (other than birds) whose habitats must be protected to secure their survival. These priority species and habitats are subject to a higher level of protection. The Regulations also requires appropriate assessment of any plan or project not directly connected with or necessary to the management of a European site, but likely to have significant effects upon a European site, either individually or in combination with other plans or projects.

Environment (Northern Ireland) Order 2002

The Order provides for the designation, management and protection of Areas of Special Scientific Interest (ASSIs). ASSIs may be designated for important geology and land forms as well as for wildlife and habitats. The legislation repeals Part VI of the Nature Conservation and Amenity (Northern Ireland) Order 1985.

Wildlife and Natural Environment Act (Northern Ireland) 2011

The Act makes provision about biodiversity; amends the Wildlife (Northern Ireland) Order 1985 and Part 4 of the Environment (Northern Ireland) Order 2002; abolishes game licences and game dealers' licences; prohibits hare coursing events and amends the Game Preservation Act (Northern Ireland) 1928.

Marine Act (Northern Ireland) 2013 (The Marine Act)

The Marine Act establishes a network of Marine Protected Areas (MPA) in the inshore region of Northern Ireland, which comprises of the territorial sea out to twelve nautical miles, including all tidal rivers and sea loughs (including Lough Foyle and Carlingford Lough, that contributes to the conservation and improvement of the marine environment in the UK marine area.

Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019 (as amended)

The Order imposes strict restrictions on a list of species known as 'species of special concern'. Species whose potential adverse impacts are such that concerted action is required. Restrictions mean that (subject to certain defences or exemptions) species of special concern cannot be imported into the United Kingdom, kept, bred, transported, placed on the market, used or exchanged, allowed to reproduce, grown or cultivated, or released into the environment.

2.3 Northern Ireland Planning Policy

Strategic Planning Policy Statement for Northern Ireland (SPPS) 2015

The SPPS consolidates all planning policy in Northern Ireland and sets out strategic planning policy. The regional strategic objectives for natural heritage are delivered through regional strategic polices that must be taken into account in the determination of planning applications. Table 2.1 below provides a summary of regional strategic polices for natural heritage.

Table 2.1: Northern Ireland Strategic Policy for Natural Heritage

Theme	Policy
International Designations	<p>Planning permission will only be granted for a project proposal that, either individually or in combination with existing and/or proposed plans or projects, is not likely to have a significant effect on a European Site or Ramsar site.</p> <p>A project proposal which could adversely affect the integrity of a European or Ramsar site may only be permitted in exceptional circumstances as laid down in the relevant statutory provisions.</p>
National Designations	<p>Planning permission will only be granted for a project proposal that is not likely to have an adverse effect on the integrity, including the value of the site to the habitat network, or special interest of an ASSIs, NRs, NNRs or MCZs.</p> <p>A project proposal which could adversely affect any of the above-mentioned sites of national importance may only be permitted where the benefits of the proposed project clearly outweigh the value of the site. In such cases, appropriate mitigation and/or compensatory measures will be required.</p>
Local Designations	<p>A project proposal which could have a significant adverse impact on a site of local importance should only be permitted where the benefits of the proposed project outweigh the value of the site. In such cases, appropriate mitigation and/or compensatory measures shall be required.</p>
Protected Species	<p>Planning permission will only be granted for a project proposal that is not likely to harm a European Protected Species. In exceptional circumstances a project proposal that is likely to harm these species may only be permitted where:</p> <ul style="list-style-type: none"> • there are no alternative solutions; and • it is required for imperative reasons of overriding public interest; and • there is no detriment to the maintenance of the population of the species at a favourable conservation status; and • compensatory measures are agreed and fully secured. <p>Planning permission will only be granted for a project proposal that is not likely to harm any other statutorily protected species (including National Protected Species) and which can be adequately mitigated or compensated against.</p>
Other Habitats, Species or Features of Natural Heritage Importance	<p>Planning permission should only be granted for a project proposal which is not likely to result in the unacceptable adverse impact on, or damage to known:</p> <ul style="list-style-type: none"> • priority habitats; • priority species; • active peatland; • ancient and long-established woodland; • features of earth science conservation importance; • features of the landscape which are of major importance for wild flora and fauna; • rare or threatened native species; • wetlands (includes river corridors); or • other natural heritage features worthy of protection, including trees and woodland.

Theme	Policy
	A project proposal which is likely to result in an unacceptable adverse impact on, or damage to, habitats, species or features listed above may only be permitted where the benefits of the proposed project outweigh the value of the habitat, species or feature. In such cases, appropriate mitigation and/or compensatory measures will be required.

Fermanagh & Omagh Local Development Plan 2030

Section 5.0 of the Fermanagh & Omagh Local Development Plan 2030 states the environmental objectives which include:

- Conserve, sustain and enhance the area's environmental qualities, local distinctiveness including special landscapes, and sites of environmental importance in terms of biodiversity, wildlife and habitats, local landscape character, townscape, traditional settlement patterns, and historic environment.
- Follow the principles of sustainability and high quality design standards in all developments to assist with meeting Climate Change targets and placemaking.
- Sustainably manage and safeguard, where appropriate, our natural resources including minerals and water, protecting the environment and public health, and providing sustainable services including effective and sustainable waste management to meet population needs.
- Support renewables infrastructure whilst affording protection to the environment including impacts on landscapes from wind energy developments.
- Prevent inappropriate new development in areas known to be at risk of flooding or that may increase the flood risk elsewhere and put in place measures to assist in flood risk management.
- Protect and enhance the local green infrastructure network such as open space and green wildlife corridors whilst contributing to the enhancement of community health and well-being.

2.4 Local Biodiversity Action Plans

Fermanagh and Omagh District Council Biodiversity Strategy and Action Plan 2022 – 2027

The Biodiversity Strategy and Action plan states that the Council recognises its obligations and responsibility to contribute positively and, as such, has developed a series of plans which aim to:

- Protect, enhance and restore biodiversity on Council managed estate.
- Increase awareness and action for local biodiversity in the District.
- Work in partnership with others to deliver biodiversity action in the District.

This plan follows seven themes:

- Pollinators
- Trees and Woodlands
- Pesticide Reduction
- Invasive Alien Species
- Education and Outreach
- Projects and Partnership
- Governance, Implementation and Resourcing

The outcomes involve:

- Protection of biodiversity

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- Maintenance of biodiversity
- Enhancing biodiversity
- Restoring biodiversity
- Promoting the understanding of biodiversity

3 METHODOLOGY

3.1 Statement of Authority

Holly Owen, author and ecology surveyor, carried out the Extended Phase 1 Habitat Survey. Holly is a Graduate Ecologist with RPS and holds a BSc (Hons) in Biological Sciences, specialising in Animal Biology. Holly has one year of experience in ecological consulting and ecological field surveys including habitat, mammal, bird and reptile survey and has four years of experience in volunteer conservation work. Holly is currently a Qualifying member of CIEEM.

The report has been reviewed and edited by Suzanne Lowry, a Senior Associate of Ecology within RPS. 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 of project management and co-ordination, ecology field survey and technical report writing. Suzanne is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

The report has been approved for issue by James McCrory, Technical Director of Ecology with RPS. James holds a BA (Hons) in Natural Sciences (Mod) Botany and a MSc in Habitat Creation and Management. James is a Chartered Environmentalist (CEnv), a Chartered Ecologist (CEcol), a Chartered Biologist (CBiol) and a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Royal Society of Biology (MRSB). James is a former member of the CIEEM Irish Section Committee and CIEEM Policy Review Group in Ireland and a member of the CIEEM technical working group updating the Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland. James currently sits on the CIEEM technical working group for EcIA accreditation across the Institutes practitioner network.

RPS confirm that the professional judgement expressed herein is the true and bona fide opinion of our professional ecologists. The information prepared and provided is accurate at the time of issue of this report and has been prepared and provided in accordance with the CIEEM Code of Professional Conduct (CIEEM 2022).

3.2 Zone of Influence

The Zone of Influence (Zoi) is the area over which ecological features may be affected by biophysical changes resulting from the proposed project and its associated activities. The Zoi varies for different ecological features depending on their sensitivity to environmental change and therefore further details on the specific Zoi for each ecological feature is described below under the relevant sections. In some instances, the Zoi may extend beyond the red line boundary of the site.

3.3 Desk Study

A desk study was undertaken to review existing information relevant to the site of the proposed project and the surrounding environment. The information gathered is third party controlled data purchased or obtained for the purposes of this report only. RPS cannot guarantee its accuracy and cannot be held liable for any inaccuracies.

The Northern Ireland Bat Group (NIBG) and National Biodiversity Network (NBN) Atlas Northern Ireland (NBN Atlas Partnership 2021) were consulted to identify historical bat records within 5 km of the site of the proposed project.

The Northern Ireland Environment Agency (NIEA) Natural Environment Map Viewer (DAERA 2024) was used to identify the location of designated sites of nature conservation importance; priority habitats, priority species and other features of natural heritage importance that have the potential to be affected by the proposed project.

The NIEA Catchment Data Map Viewer (DAERA 2024) was used to identify the river and marine waterbodies hydrological linked to the site of the proposed project.

The National Biodiversity Network (NBN) Atlas Northern Ireland (NBN Atlas Partnership 2021) was used to identify the existence of historical records of protected species or species of natural heritage importance within 1 km of the site of the proposed project.

The Woodland Trust Ancient Tree Inventory (Woodland Trust 2024) was used to identify ancient, veteran and notable trees within the site of the proposed project.

3.4 Extended Phase 1 Habitat Survey

An Extended Phase 1 Habitat Survey was carried out in October 2024 within the site of the proposed project. Phase 1 Habitat Survey (JNCC 2010) is the standard system used to rapidly record, categorise and map habitats. Habitats are mapped using standard colour codes and target notes are used to describe any features of ecological or natural heritage importance. Aerial photographs were used as an aid to map habitats. The survey was extended to include further information on the potential of the habitats identified to support species protected by law or of natural heritage importance.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site no survey can consist of a complete characterisation and prediction of the ecological environment. The habitat survey will remain valid for a period of one year of being carried out in accordance with NIEA survey specifications (DAERA 2023²).

3.5 Ecological Survey for Bats

3.5.1 Preliminary Ecological Appraisal for Bats

The Phase 1 Habitat Survey was extended to include a Preliminary Ecological Appraisal for Bats (PEAB) within the site of the proposed project. The PEAB included a Daytime Bat Walkover (DBW) and a Ground Level Tree Assessment (GLTA) carried out in October 2024 to inform the EclA. The results can be found below in **Section 4.3 Bats**.

3.5.2 Daytime Bat Walkover

The aim of the DBW was to observe, assess and record the potential suitability of the site of the proposed project to support bat roosting habitat, commuting habitat and/or foraging habitat. Habitat features were classified as None, Negligible, Low, Moderate or High in accordance with the *Bat Conservation Trust (BCT) Good Practice Guidelines 4th Edition* (Collins 2023). The results can be found below in **Section 4.3 Bats**.

3.5.3 Ground Level Tree Assessment

A Ground Level Tree Assessment (GLTA) was carried out during the DBW. A detailed external inspection of trees was undertaken to identify Potential Roost Features (PRFs) that could be used by roosting bats. Bats rely on the presence of disease and decay; damage; and associations in trees to provide suitable roosting habitat. These three forms of PRF result in the development of a variety of different features that can provide preferred roost sites for bat species (Andrews 2018 and Collins 2016).

- Disease and decay PRFs include woodpecker holes, squirrel holes, knot holes, pruning cuts, tear outs, wounds, cankers, compression forks and butt rots.
- Damage PRFs include lightning strikes, hazard beams, subsidence cracks, shearing cracks, transverse snaps, welds, lifting bark, desiccation fissures and frost cracks.
- Association PRFs include fluting and ivy with stem diameters in excess of 50 mm.

Tree suitability was classified as None, Further Assessment Required (FAR) or Potential Roost Feature (PRF) in accordance with the *BCT Good Practice Guidelines 4th Edition* (Collins 2023). The aim of the GLTA is to

determine if further PRF Aerial Inspection Surveys are required. The results can be found below in **Section 4.3 Bats**.

3.6 Ecological Survey for Otter

The Phase 1 Habitat Survey was extended to include a Preliminary Otter Survey within the site of the proposed project, within 30 m of the red line boundary, and 150 m upstream and downstream of any watercourse within the red line boundary. The aim of the survey was to establish the presence of otter *Lutra lutra*, otter holts and/or otter foraging areas within the Zol of the proposed project and determine the requirement for further survey. The results can be found below in **Section 4.4 Otter**.

3.7 Ecological Survey for Badger

The Phase 1 Habitat Survey was extended to include a Preliminary Badger Survey within the site of the proposed project and within 30 m of the red line boundary. The aim of the survey was to establish the presence of badger *Meles meles*, badger setts and/or badger foraging areas within the Zol of the proposed project and determine the requirement for further badger surveys.

Full details of the badger survey methods, results and an interpretation of the results will be submitted directly to the DAERA Planning Response Team, as a Confidential Annex to the EclA. Badgers are vulnerable to persecution and in line with published advice from the NIEA badger survey information must not be made publicly available.

3.8 Ecological Impact Assessment

The EclA has been prepared taking into consideration the British Standard (BS) 42020:2013 and guidelines produce by the CIEEM (CIEEM 2024¹).

The ecological value of a feature was determined using a geographic frame of reference (Table 3.1). Professional judgement was used to define the geographic framework based on available guidance, existing criteria, historical trends and information on the distribution, abundance and status of the ecological feature.

The assessment takes into account the source-pathway-receptor model. The source is defined as the individual elements of the proposed project that have the potential to affect identified ecological features. The pathway is defined as the means or route by which a source can affect the ecological feature. The receptor is defined as the ecological feature (species, habitat or ecosystem) of natural heritage importance. Each element can exist independently however an effect is created where there is a linkage between the source, pathway and receptor.

For the purposes of this assessment an impact is defined as an action that results in changes to an ecological feature. An effect is defined as the outcome to an ecological feature from an impact. The likely significance of effects is the combined function of the value of the ecological feature; the type, magnitude and duration of the impact and/or effect; the extent to which the impact and/or effect occurs; the timing and frequency of the impact and the reversibility of impacts and/or effects (CIEEM 2018). The geographic level at which the ecological feature is considered important needs to be considered when assessing the likely significance of effects.

A significant effect is a positive or negative effect that either supports or undermines the conservation objectives of a designated site; results in changes in ecosystem structure and function; or affects the conservation status of habitats or species. Effects can be considered significant at a wide range of scales from international to site level.

The CIEEM (2018) defines a significant effect as “...an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. A significant effect is a positive or negative ecological effect that should be given weight in judging whether to authorise a project: it can influence whether permission is given or refused and, if given,

whether the effect is important enough to warrant conditions, restrictions or further requirements such as monitoring”.

BS 42020:2013 states “...if an effect is sufficiently important to be given weight in the planning balance or to warrant the imposition of a planning condition, e.g. to provide or guarantee necessary mitigation measures, it is likely to be “significant” in that context at the level under consideration. The converse is also true: insignificant effects would not warrant a refusal of permission or the imposition of conditions”.

Table 3.1: Geographic Frame of Reference for Important Ecological Features

Ecological Value	Criteria
International	<ul style="list-style-type: none"> • ‘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: <ul style="list-style-type: none"> – Species of bird, listed in Annex I and/or referred to in Article 4(2) of the 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	<ul style="list-style-type: none"> • Areas of Special Scientific Interest (ASSI) • National Nature Reserves (NNR) • Marine Nature Reserves (MNR) • 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: <ul style="list-style-type: none"> – 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	<ul style="list-style-type: none"> • Sites of Local Nature Conservation Importance (SLNCI) or Local Wildlife Sites (LWS) • Areas subject to a Tree Preservation Order • Resident or regularly occurring populations (assessed to be important at the Regional level) of the following: <ul style="list-style-type: none"> – Species of bird, listed in Annex I and/or referred to in Article 4(2) of the 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) • 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	<ul style="list-style-type: none"> • Locally important populations of priority species or habitats or features of natural heritage importance identified in the Local BAP • Resident or regularly occurring populations (assessed to be important at the Local level) of the following: <ul style="list-style-type: none"> – Species of bird, listed in Annex I and/or referred to in Article 4(2) of the 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	<ul style="list-style-type: none"> • 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

4 BASELINE ECOLOGICAL CONDITIONS

4.1 Designated Sites

The site of the proposed project is not located within the boundary of any statutory or non-statutory designated sites of international, national, or local nature conservation importance. There are no designated sites within 15 km that are hydrologically linked to the proposed project.

Table 4.1 below provides descriptive details of designated sites located in close proximity or hydrologically linked to the proposed project. The boundary of each of the designated sites in relation the proposed project is illustrated in **Figure 2.0 Designated Sites**.

Table 4.1: Designated Sites

Designated Site/Feature	Distance from Site (km)	Description
Cranny Bogs SAC	1.8	Active raised bogs
Cranny Bogs ASSI	1.8	Active raised bogs
Fairy Water Bogs SAC	11.3 ~35 Hydrological link (HL)	Active raised bogs

4.2 Habitats

A map illustrating the red line boundary and the existing habitats on the site can be found in **Figure 3.0 Extended Phase 1 Habitat Survey**.

4.2.1 Improved Grassland

The vast majority of the site is improved grassland habitat (Plate 1). Species include Yorkshire fog *Holcus lanatus*, perennial rye *Lolium perenne*, cock's-foot grass *Dactylis glomerata*, creeping bent *Agrostis stolonifera*, soft rush *Juncus effusus*, sharp flowered rush *Juncus acutiflorus*, spear thistle *Cirsium vulgare*, nettle *Urtica dioica*, white clover *Trifolium repens*, common mouse-ear *Cerastium fontanum*, creeping buttercup *Ranunculus repens*, meadow buttercup *Ranunculus acris*, dandelion *Taraxacum* sp., broad-leaved dock *Rumex obtusifolius*, common chickweed *Stellaria media*, meadowsweet *Filipendula ulmaria*, bramble *Rubus fruticosus*, redshank *Persicaria maculosa*, and sneezewort *Achillea ptarmica*.

Improved grassland habitat is considered of ecological value at a site level.

4.2.2 Bare Ground

The existing agricultural lane through the site consists of bare rocky ground with some recolonising grassland species (Plate 2).

Bare ground is considered of negligible ecological value.

4.2.3 Hedgerow

Hedgerows on site consist solely of hawthorn *Crataegus monogyna*. Most hedgerows on site are classified as species poor and intact (Plate 3) or species poor and defunct (Plate 4). Hedgerows are considered a Northern Ireland Priority Habitat (NIPH).

Hedgerow is considered of ecological value at a local level.

4.2.4 Broadleaved Scattered Trees

Trees on site are predominantly ash *Fraxinus excelsior*, with a single poplar *Populus sp.* and are considered of ecological value at a local level.

4.2.5 Running Water

An unnamed tributary of Ballynahatty water which runs through the eastern corner of the site, overlapping with the edge of the red line boundary.

4.3 Bats

Consultation with the NIBG was carried out, however, no response was received at the time of writing this report. The NBN Atlas NI (NBN Atlas Partnership 2021) highlighted 18 historical records of bat species within 5 km of the site including common pipistrelle *Pipistrellus pipistrellus*, and Daubenton's bat *Myotis daubentoni*.

4.3.1 Daytime Bat Walkover

The site consists of improved grassland, hedgerows, and tree habitat which could be used by a small number of foraging and commuting bats. Foraging opportunities within 250 m of the site consist of agricultural grassland, hedgerows, woodland, and riparian habitats. Hedgerow and riparian habitats provide a suitable commuting route linking the site to the wider landscape.

Bat records within 5 km of the site show the presence of Daubenton's bat which is strongly associated with riparian habitats, preferring large waterways and abundant woodland. Habitats surrounding the site are more suited to this species, specifically the surrounding rivers and pockets of woodland, with habitat features on site being of low importance to this species.

Common pipistrelle has also been recorded within 5 km of the proposed development site. This species is a generalist but primarily forages over managed and grazed pasture and deciduous woodland. The surrounding habitat of grazed and managed farmland as well as the pockets of woodland are suited to this species. Grassland habitat on site may be utilised by a small number of this species.

Overall, the potential suitability of the site to provide habitat for foraging and commuting bats is Low.

4.3.2 Ground Level Tree Assessment

A total of three trees on site had PRFs that could be used by roosting bats. Two trees were classified as None with no PRFs. One tree was classified as FAR with further assessment required to establish if PRFs are present in the tree. A total of two trees were classified as PRF with at least one PRF present. Full details of the GLTA for each tree can be found in **Appendix B**. The location of each tree can be found in **Figure 1.0 Extended Phase 1 Habitat Survey**.

4.4 Otter

The NBN Atlas NI (NBN Atlas Partnership 2021) identified no historical records of otter within 1 km of the site. There were no otter underground holts, above ground couches or evidence of otter recorded within the site or within 150 m of the boundary of the site. Otter has therefore been removed from any further assessment.

4.5 Badger

The NBN Atlas NI (NBN Atlas Partnership 2021) identified no historical records of badger within 1 km of the site.

Badger is a species considered vulnerable to persecution and in line with published advice from the NIEA, badger survey information must not be made publicly available. The results of the badger survey can be found in a Confidential Annex to the EclA that will be submitted directly to the DAERA Planning Response Team.

4.6 Birds

The NBN Atlas NI (NBN Atlas Partnership 2021) identified one historical record of a single species, reed bunting *Emberiza schoeniclus*, within 1 km of the site.

Birds identified within site by sight and sound were recorded during the Extended Phase 1 Habitat Survey. Species included robin *Erithacus rubecula*, chaffinch *Fringilla coelebs*, jackdaw *Corvus monedula*, magpie *Pica pica*, wren *Troglodytes troglodytes*, meadow pipit *Anthus pratensis*, blue tit *Cyanistes caeruleus*, and blackbird *Turdus merula*.

The site has potential to provide habitat for an assemblage of common and widespread breeding bird species associated with improved grassland, hedgerow, and tree habitats on the site.

5 IMPACT ASSESSMENT

5.1 Designated Sites

Legislation & Policy

The principal legislation in Northern Ireland relating to designated sites includes the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), which provides for the designation on European Sites (SPAs and SACs); the Environment (Northern Ireland) Order 2002, which provides for the designation of ASSIs; and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985, which provides for the designation of NRs, NNRs and MNRs.

Designated sites are a material consideration in the determination of the planning application as set out in the SPPS (DOE 2015). The strategic policies state that; a project, either individually or in combination with existing and/or proposed plans or projects, must not have a significant effect on a designated site of international importance; must not have an adverse effect on the integrity, including the value of the site to the habitat network, on a designated site of national importance; and must not have a significant adverse impact on a designated site of local importance.

Potential Impacts & Effects

International Designated Sites (SACs, SPAs & Ramsar Sites)

The closest Internationally designated site is Cranny Bogs SAC (1.8 km straight line distance). However, it is not hydrologically linked to the proposed project and there is no impact pathway of effect to this designated site.

The site is hydrologically linked to Fairy Water Bogs SAC. This designated site is located approximately 35 km (hydrological distance) downstream of the proposed project.

A section of the proposed northern access track is located within close proximity to the unnamed watercourse flowing north of the proposed development. Pre-construction site clearance and construction works have the potential to directly impact on this watercourse through run-off and accidental release of sediments and or pollutants during the construction of the proposed access road. The release of these pollutants may lead to deterioration of water quality in this watercourse and connecting watercourses further downstream of the proposed project. However, given the large hydrological distance of 35 km between the proposed project and Fairy Water Bogs SAC, construction of the proposed project will have a **No Significant Effect** on internationally important designated sites in the absence of mitigation measures.

Operation of the proposed project is limited to site checks and maintenance 2-4 times per month. Therefore, the operational phase will have no impact the watercourse and will have **No Significant Effect** on internationally important designated sites in the absence of mitigation measures.

National Designated Sites (ASSI, NNR & MCZs)

The closest nationally designated site Cranny Bogs ASSI (1.8 km straight line distance). However, it is not hydrologically linked to the proposed project and there is no impact pathway of effect to this designated site.

Operation of the proposed project is limited to site checks and maintenance 2 -4 times per month. Therefore, the operational phase will have not impact the watercourse and will have **No Significant Effect** on nationally important designated sites in the absence of mitigation measures.

Significance of Residual Effects

The proposed project will have **No Significant Effect** on any designated site.

5.2 Habitats

Legislation & Policy

Priority habitats include both those listed on Annex I of the Habitats Directive, which is transposed into national law by means of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as Amended) and those identified under the Northern Ireland Biodiversity Strategy (NIBS). Priority habitats require conservation action due to their decline, rarity and importance.

The presence of priority habitat, active peatland, ancient and long-established woodland and wetlands is a material consideration in the determination of the planning application as set out in the SPPS (DOE 2015). The strategic policies state that a project must not have an unacceptable adverse impact on, or damage to, these habitats.

Potential Impacts & Effects

The proposed project has been designed, as far as possible, to avoid the unnecessary loss of hedgerows and trees. However, the proposed project will involve the loss of hedgerow NIPH. Several trees will also be removed.

Pre-construction site clearance and construction works will result in a direct impact to habitats with the removal of improved grassland, trees, and hedgerow habitats within the construction footprint and extensive earthworks across the site will result in significant changes to the physical characteristics of the site.

Operation of the proposed project is limited to site checks and maintenance 2-4 times per month. Therefore, the operational phase of the proposed project will have **No Significant Effect** on habitats in the absence of mitigation measures.

The proposed project will have a **Significant Negative Effect** at a site/local level with the permanent loss of hedgerow, trees, and grassland habitat. Table 5.1 below provides a summary of the habitat loss associated with the proposed project.

Table 5.1: Habitat Loss

Habitat Type	Total Area	Habitat Loss
Improved Grassland	74327 m ²	21769 m ²
Hedgerow	546 m	115 m
Trees	14 n	6 n

Avoidance & Mitigation Measures

All trees that are to be retained on site will be protected in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* (BSI 2012) prior to pre-construction site preparation and construction works.

DAERA Standing Advice for Pollution Prevention Guidance (DAERA 2023) will be adhered to in order to protect watercourses from potential adverse effects during all phases of the proposed project.

Works taking place within 10 m of a recorded watercourse, namely the construction of the proposed access road, will be undertaken in line with standard measures for the protection of watercourses which will be detailed within a Construction Environmental Management Plan (CEMP) to be implemented at construction phase.

A 10 m land buffer will be maintained during other construction activities which do not involve the installation of the access roads between the unnamed watercourse located east of the proposed project in order to avoid and/or minimise adverse effects from pollution and runoff and to ensure the project will not have adverse effects on the integrity of this watercourse.

Biodiversity Enhancement

Landscape design should aim to deliver no net loss of habitat; incorporate planting that prioritises the use of native and wildlife friendly species; include both species diversity and structural diversity; leave areas of the site for natural succession with no active management; and enhance the ecological connectivity of the site to the surrounding environment. A landscape plan has been prepared which involves the planting of new hedgerows and tree habitats. Re-sowing of grassland species is also proposed surrounding the development footprint.

It is recommended to re-plant areas of hedgerow and trees that are removed as part of the proposed project, incorporating a mixture of native species.

Such hedgerow species include hazel *Corylus avellana*, blackthorn *Prunus spinosa*, holly *Ilex aquifolium*, gorse *Ulex europaeus*, yew *Taxus baccata*, ivy *Hedera helix*, bramble *Rubus*, elder *Sambucus nigra*, dog rose *Rosa canina*, guelder rose *Viburnum opulus*, hawthorn *Crataegus monogyna*, honeysuckle *Lonicera periclymenum*, and spindle *Euonymus europaeus*.

Likewise, such tree species include alder *Alnus glutinosa*, downy birch *Betula pubescens*, hazel *Corylus avellana*, ash *Fraxinus excelsior*, sessile oak *Quercus petraea*, pedunculate oak *Quercus robur*, and rowan *Sorbus aucuparia*.

Significance of Residual Effects

The proposed project will have a **Significant Adverse Effect** at a site level on grassland habitats, with the permanent loss of grassland habitat within the development footprint. The proposed project will have a **Significant Adverse Effect** on hedgerow and tree habitats at a site level, with the permanent loss of trees and sections of hedgerow within the development footprint.

The implementation of the mitigation and enhancement measures as set out above will mitigate the negative effects on hedgerow and tree habitat and therefore there will be **No Significant Effect** on these habitats as a result of the proposed development.

5.3 Bats

Legislation & Policy

All species of bats are European Protected Species (EPS) listed on Schedule 2 of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as Amended). Under the Regulations it is illegal to deliberately capture, injure or kill a EPS; deliberately disturb a EPS while it is occupying a structure or place it uses for shelter or protection; or deliberately disturb a EPS in such a way as is likely to affect its local distribution or abundance; impair its ability to survive, breed, reproduce or care for its young; impair its ability to hibernate or migrate; or deliberately obstruct access to or damage or destroy a resting or breeding site.

The presence of bat species is a material consideration in the determination of the planning application as set out in the SPPS and described above in Section 2.3. The strategic policies state that the proposed project must not harm EPS; must be sensitive to all protected species; and must be sited and designed to protect EPS, their habitats and prevent deterioration and destruction of their breeding or resting sites.

Potential Impacts & Effects

Construction works will result in significant changes to the physical characteristics of the site alongside visual and noise disturbance from physical construction over the construction period. Operation of the proposed project will not result in a significant or permanent increase in visual and noise levels across the site. There will be an increase in artificial light which is to be installed for safety and security purposes.

The removal of hedgerows and trees may have the potential to cause minor loss in foraging habitats for bats. The two trees classified as PRFs and single tree classified as FAR on site will be retained as part of the proposed project.

The proposed project will have a **Significant Negative Effect** on bats at a site level in the absence of avoidance and mitigation measures.

Avoidance & Mitigation Measures

No temporary artificial lighting during the construction phase of the project should be directed toward hedgerow habitat in order to mitigate any disturbance to foraging and commuting bats.

Lighting design will only be installed where and when necessary i.e. when it is needed for safety reasons or to comply with statutory guidelines. There will be no direct illumination of existing woodland or trees to be retained and a dark buffer zone will be maintained around these areas where light levels will not exceed 1 Lux.

A landscape mitigation plan has been prepared for the proposed project, which involves the planting of new hedgerow, trees and grassland species. The replacement of hedgerows and trees will mitigate for the loss of foraging habitats for bats.

Significance of Residual Effects

The proposed project will have **No Significant Effects** on bats with the implementation of mitigation measures described above.

5.4 Birds

Legislation & Policy

Birds are protected under the Wildlife (Northern Ireland) Order 1985 (as Amended). Under Article 4 it is an offence to intentionally or recklessly kill, injure or take any wild bird; or take, damage or destroy the nest of any wild bird while that nest is in use or being built; or at any other time take, damage or destroy the nest of any wild bird included in Schedule A1; or obstruct or prevent any wild bird from using its nest; or take or destroy an egg of any wild bird. Under Article 6 it is an offence to intentionally or recklessly disturb any wild bird other than one included in Part II of Schedule 2 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. Disturbance of birds included in Schedule 1 is liable to special penalties. It is also an offence if any person knowingly causes or permits an act which is made unlawful by any of the foregoing provisions of Article 6.

Potential Impacts & Effects

Pre-construction site clearance and construction works will require removal of hedgerow and tree habitats. The works have potential to result in destruction of bird nests and disturbance to breeding birds, if carried out during the bird breeding season, which extends between 1st March and 31st August inclusive. Construction works will result in visual and noise disturbance from physical construction over the construction period, which will be around 18 months in duration.

Operation of the proposed project will not result in a significant increase in visual, noise, artificial light and human disturbance levels across the site.

There is limited suitable habitat on site that provides nesting, roosting and foraging habitat for bird species. The hedgerow along the boundary to the entrance of the site will be retained. The project will may have **Significant Negative Effects** on breeding bird species at a local level.

Avoidance & Mitigation Measures

Timing of works will ensure that the removal or management of vegetation including trees and hedgerows will take place outside the bird breeding season, which extends between 1st March and 31st August inclusive, to ensure breeding birds are protected from harm. If pre-construction site clearance and removal of vegetation is deemed unavoidable within the bird breeding season an Ecological Clerk of Works (ECoW) will undertake a survey to check for breeding birds immediately prior to works. If breeding birds are found to be present the ECoW will establish species-specific Ecological Exclusion Zones around active nests to ensure birds will be protected from disturbance or harm during works.

Significance of Residual Effects

The implementation of the mitigation measures as set out above will ensure a **No Significant Effect** for birds on site.

6 MONITORING

6.1 Ecological Clerk of Works

An Ecological Clerk of Works (ECoW) will be employed during pre-construction and construction works. In accordance with BS 42020:2013 Biodiversity, an ECoW is a person who has the ecological qualifications, training, skills and relevant experience to undertake appropriate monitoring and to provide specialist advice to site personnel on the necessary working practices required to safeguard ecological features on site and to aid compliance with any consents and relevant wildlife legislation (BSI 2013).

The ECoW, as an independent professional, will have responsibility for monitoring and reporting compliance with planning conditions in relation to ecology features. The ECoW will provide advice in relation to relevant international and national legislation relating to the protection of ecology; to provide advice on the timing of works and the implementation of mitigation and compensation measures; to apply for relevant derogation licences; to monitor identified works; and to produce site inspection reports. There may be more than one ECoW required depending on the specialist advice required throughout the project.

6.2 Pre-Construction Protected Species Surveys

Pre-construction protected species surveys will be undertaken by an ECoW, immediately prior to construction works, to update the status of protected species recorded on site; to provide information to support any derogation licences; and to ensure that proposed mitigation measures are still appropriate.

REFERENCES

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- CIEEM (2024¹) *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.
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Plates



Plate 1 Improved Grassland Habitat



Plate 2 Bare Ground of Existing Access Lane



Plate 3 Intact Species Poor Hedgerow



Plate 4 Defunct Species Poor Hedgerow

Figures

Figure 1.0 Site Location

Figure 2.0 Designated Sites

Figure 3.0 Extended Phase 1 Habitat Map

KEY

- LANDLORD'S PROPERTY (INSIDE EDGE OF LINE DENOTES BOUNDARY)
- DEVELOPMENT BOUNDARY (OUTSIDE EDGE OF LINE DENOTES BOUNDARY)

SITE LOCATION - NOT TO SCALE

PLANNING

SCALE: 1:2,000

GRID: A1

PROJ: N/A

PROJ: N/A

SHANERAGH

LOCATION PLAN

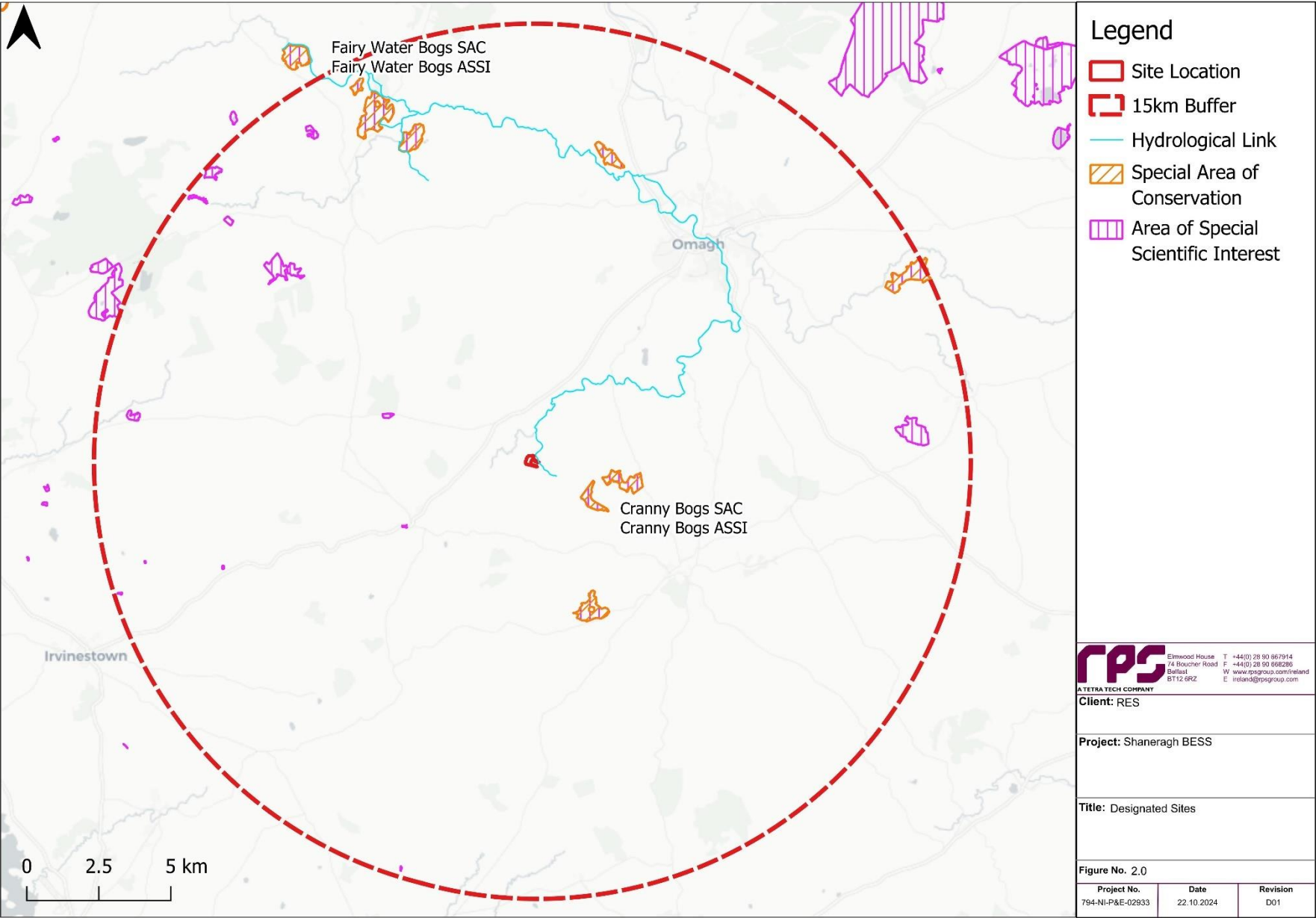
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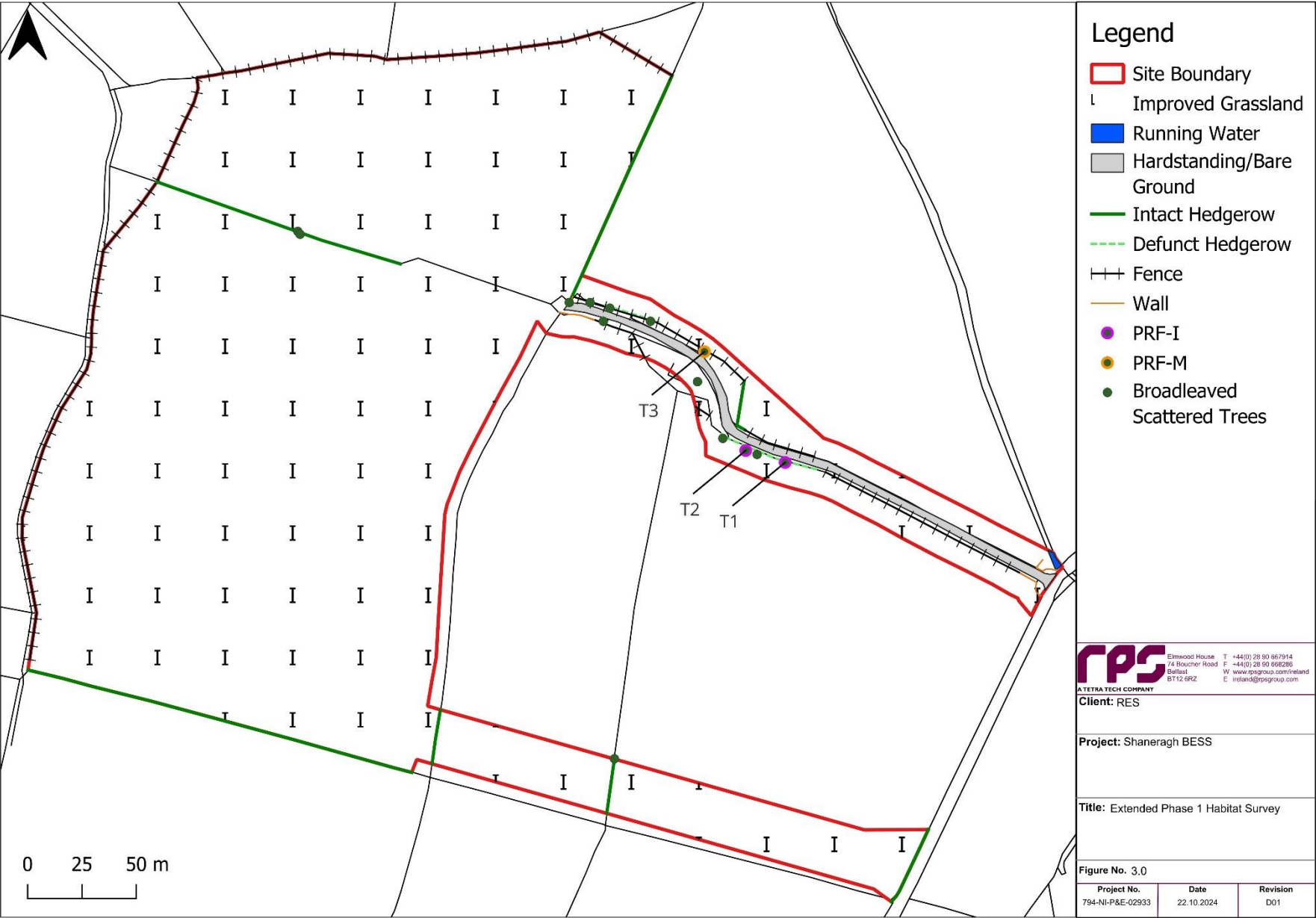
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FIGURES



FIGURES



Appendix A

National Biodiversity Network Datasets & Citations

APPENDICES

Table A1.1 NBN Atlas NI Species Records within 1 km of Proposed Project

Common Name	Latin Name	Date	Location
Reed Bunting	<i>Emberiza schoeniclus</i>	2011	Unavailable
Dotted Loosetrife	<i>Lysimachia punctata</i>	10/07/2017	Glenan Road

Table A1.2 NBN Atlas NI Bat Records within 5 km of Proposed Project

Common Name	Latin Name	Date	Location
Daubenton's Bat	<i>Myotis daubentonii</i>	26/08/2019	Not provided
Daubenton's Bat	<i>Myotis daubentonii</i>	13/08/2019	Not provided
Bat	<i>Chiroptera</i>	13/08/2019	Not provided
Bat	<i>Chiroptera</i>	26/08/2019	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	25/06/1999	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	21/06/2002	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	14/06/1998	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	13/06/2003	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	25/06/2004	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	15/06/1999	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	21/06/2001	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	12/06/2004	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	24/06/2003	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	10/06/2002	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	22/06/2000	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	11/06/2001	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	24/06/1998	Not provided
Pipistrelle	<i>Pipistrellus pipistrellus</i>	13/06/2000	Not provided

NBN Atlas NI Dataset Citations

Royal Society for the Protection of Birds (2024) Records provided by Royal Society for the Protection of Birds, accessed through NBN Atlas website.




Centre for Environmental Data and Recording (2024) Records provided by Centre for Environmental Data and Recording, accessed through NBN Atlas website.

Bat Conservation Trust (2024) Records provided by Bat Conservation Trust, accessed through NBN Atlas website.

Appendix B
Ecological Survey for Bats

APPENDICES

Table A2.2: Ground Level Tree Assessment

Tree No.	Date	Photo	Description	Evidence of Bats	Potential Suitability
T1	01/10/2024		Mature ash which is cloaked in dense living ivy. The ivy has potential to conceal PRFs.	No	PRF
T2	01/10/2024		Mature ash which is cloaked in dense living ivy. The ivy has potential to conceal PRFs.	No	PRF
T3	01/10/2024		Ash tree with subsidence/shearing crack up the stem. Could potentially provide roosting suitability for multiple bats. Further assessment required.	No	FAR

Annex A

Confidential Ecological Survey for Badger

Submitted directly to the DAERA Planning Response Team