

October 2022

Stage 2: Appropriate Assessment - Natura Impact Statement

Proposed Synchronous Condenser Facility at Ballysumaghan, Co. Sligo

On behalf of

**Orsted Onshore Ireland Midco
Limited**



MALONE O'REGAN

Form ES - 04

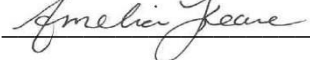


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Stage 2: Appropriate Assessment - Natura Impact Statement
Proposed Synchronous Condenser Facility at Ballysumaghan, Co. Sligo
Orsted Onshore Ireland Midco Limited

Contents

1	INTRODUCTION	1
1.1	Background	1
1.2	Planning History	2
1.1	Statement of Authority	2
1.2	Regulatory Context	2
1.3	Stages of Appropriate Assessment	3
2	METHODOLOGY	5
2.1.1	Determining Zone of Influence	5
2.1.2	Source-Pathway-Receptor Model	5
2.2	Desk Based Studies	6
2.3	Field Based Studies	6
2.3.1	Protected / Notable Species	6
2.4	Survey Limitations	6
3	DESCRIPTION OF THE PROJECT	7
3.1	Site Context and Description	7
3.2	Watercourses within the Vicinity of the Site	7
3.2.1	Drainage	8
3.3	Proposed Development	8
3.3.1	Site Access	9
3.3.2	Water Supply	9
3.3.3	Surface Water Drainage	9
3.3.4	Foul Water Drainage	10
3.3.5	Landscaping	10
3.3.6	Indicative Grid Connection	10
3.3.7	Construction Procedures	11
3.3.8	Waste Management	12
3.3.9	Duration and Timing of Works	12
3.4	Monitoring	12
3.5	Operational Procedures	12

3.5.1	Synchronous Condenser Operations.....	12
3.5.2	Monitoring.....	13
3.5.3	Maintenance.....	14
3.5.4	Emergency Response.....	14
3.5.5	Fire Safety.....	14
3.6	Decommissioning.....	15
4	IDENTIFICATION OF NATURA 2000 SITES.....	16
4.1	Unshin River SAC (Site Code: 001898).....	20
4.2	Ballysadare Bay SAC (Site Code: 000622).....	20
4.3	Ballysadare Bay SPA (Site Code: 004129).....	21
4.4	Conservation Objectives.....	22
5	STUDY RESULTS.....	23
5.1	Desk-Based Study Results.....	23
5.1	Field Studies Results.....	23
5.1.1	Habitat Assessment.....	23
6	STAGE 1 SCREENING: IDENTIFICATION OF POTENTIAL ADVERSE EFFECTS.....	26
6.1	Potential Adverse Effects.....	26
6.2	Screening Conclusion.....	35
7	STAGE 2: ASSESSMENT OF POTENTIAL ADVERSE EFFECTS	36
7.1	Potential Impairment of Water Quality during the Construction Phase	36
7.2	Potential Impairment of Water Quality during the Operational Phase	37
7.2.1	Surface Water Drainage.....	37
7.2.2	Oil, Hydrocarbons, Fuels.....	38
7.3	Analysis of 'In-Combination' Effects.....	38
8	SCREENING CONCLUSIONS AND STATEMENT.....	40
9	REFERENCES.....	41
FIGURES		
	Figure 1-1: Site Location.....	1
	Figure 3-1: Indicative Connection to the ESB Srananagh Substation.....	7
	Figure 3-2: Watercourses in the Vicinity of the Site.....	8

Figure 3-3: Indicative Connection to the ESB Srananagh Substation	11
Figure 4-1: Site Location and Natura 2000 Designated Sites within 15km.....	16
Figure 4-2: Potential Hydrological Connection	19
Figure 5-1: Habitat Map	25

TABLES

Table 1-1: Planning History - Sligo County Council Planning Portal	2
Table 4-1: European Designated Sites within 15km of the Site	17
Table 4-2: European Designated Sites within Zol.....	18
Table 4-3: Qualifying Annex I Habitats for the Unshin River SAC.....	20
Table 4-4: Qualifying Annex II Species for the Unshin River SAC	20
Table 4-5: Qualifying Annex I Habitats for the Ballysadare Bay SAC	21
Table 4-6: Qualifying Annex II Species for the Ballysadare Bay SAC.....	21
Table 4-7: Qualifying Annex I Species of Birds for Bannow Bay SPA.....	21
Table 6-1: Screening Assessment: Annex I Habitats – Unshin River SAC	27
Table 6-2: Screening Assessment: Annex II Species – Unshin River SAC	28
Table 6-3: Screening Assessment: Annex I Habitats – Ballysadare Bay SAC	30
Table 6-4: Screening Assessment: Annex II Species – Ballysadare Bay SAC.....	31
Table 6-5: Screening Assessment: Annex II Species – Ballysadare Bay SPA.....	32

APPENDICES

Appendix A: Proposed Site Layout

1 INTRODUCTION

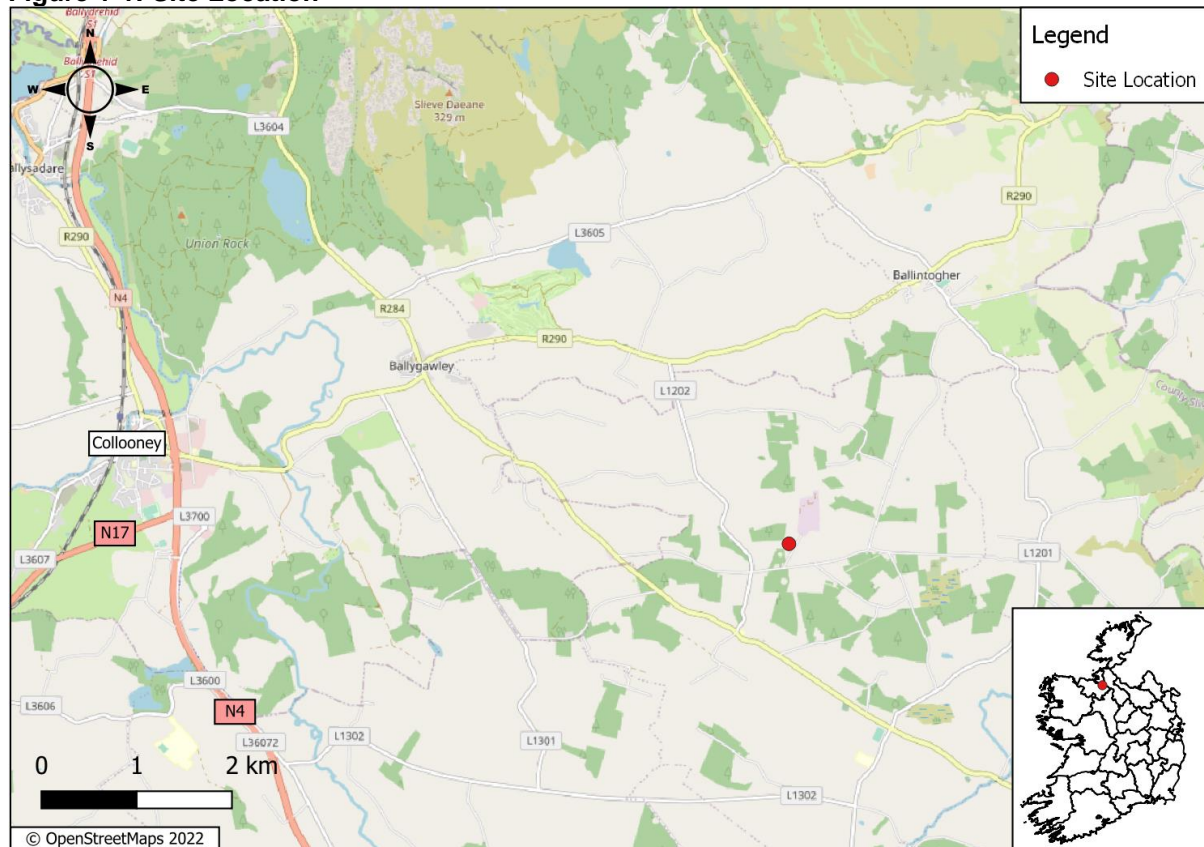
1.1 Background

Malone O'Regan Environmental Services (MOR) was commissioned by Orsted Onshore Ireland Midco Limited ('the Applicant') to undertake an Appropriate Assessment (AA) to assess the potential adverse effects, if any, of the proposed synchronous condenser facility and associated infrastructure on nearby sites with European conservation designations (i.e. Natura 2000 sites).

The Proposed Development will be located on a site that is ca. 1.196 hectares (ha) in size and is located within the townland of Ballysumaghan, Co. Sligo ('the Site'). The Site is shown in Figure 1-1 (OS Reference: G 74749 25189). A proposed Site Layout drawing is presented in Appendix A.

This report has been prepared to inform the Planning Authority with regard to Stage 1 (Screening) and Stage 2 (Appropriate Assessment) of the Proposed Development through the research and interpretation of best scientific, geographic and engineering knowledge and in view of the conservation objectives of the surrounding Natura 2000 sites. This report seeks to determine whether the Proposed Development will, on its own or in-combination with other plans / projects have a significant effect on Natura 2000 sites within a defined radius of the Site. On completion of the Appropriate Assessment Screening Report, it was found necessary to progress to a Stage 2 of the Appropriate Assessment process and prepare a Natura Impacts Statement (NIS).

Figure 1-1: Site Location



1.2 Planning History

The Sligo County Council ePlan Planning Portal was consulted for previous planning applications within the Site (ePlan, 2022). There are three (3No.) planning permissions that have been approved within close proximity to the Site as outlined in Table 1-1 below.

The existing Srananagh ESB 220/110kV Substation (Planning Ref: 001256) is located ca. 150m north of the Site and was granted in 2002. This substation was constructed in 2005/2006 (EirGrid Group, 2018).

The battery storage facility (Planning Ref.: 2011) was submitted by Brookfield Renewable Ireland Ltd, granted planning in 2020 and was acquisitioned by the Applicant in 2021. This facility is located within the Site Boundary and is currently undeveloped. The Proposed Development will not be linked with the granted battery storage development; however, the Proposed Development will utilise the same Site entrance.

The proposed synchronous condenser granted in 2021 (Planning Ref.: 2090) is ca. 260m northeast of the Proposed Development and is currently undeveloped.

These developments were subjected to an Appropriate Assessment. Therefore, as part of the planning process both developments were assessed for potential adverse effects to Natura 2000 sites. Analysis of 'In-Combination' effects is outlined in 7.2.

Table 1-1: Planning History - Sligo County Council Planning Portal

Planning Ref.	Applicant Name	Decision	Grant Date	Description
001256	Mr. Larry Donal, (Secretary)	Granted	31/10/2002	<i>new 220/110kV Srananagh Substation</i>
2011	Brookfield Renewable Ireland Ltd.	Granted	21/09/2020	<i>Development consisting of the installation of battery arrays, located within container units (18 number units, each 30m² by c.2.6m tall), a control building (c.160.5m² by c.6.4m tall) and transformer (c.5m tall). The development will include for ancillary infrastructure including security fencing, lighting, CCTV, internal access roads and drainage. The overall development site is c.0.64Ha.</i>
2090	PNG Energy Ltd.	Granted	02/03/2021	<i>Development consisting of a 10 year permission. The development will consist of the development and operation of a 250 to 300 MVA (electrical rating) synchronous condenser. The development which will be located within a site compound of c. 1 hectare... All other ancillary and miscellaneous site works including site clearance; demolition of an existing agricultural shed, site access, internal roads and development of areas of hard standing including a maintenance lay-down area.</i>

1.1 Statement of Authority

The report was approved by Mr. Dyfrig Hubble, Associate Director - Ecologist. Dyfrig is a full member of the Chartered Institute of Ecology and Environmental Management. Dyfrig has over 15 years of experience working in the ecological consultancy sector including habitat appraisals and specialist species specific surveys.

1.2 Regulatory Context

This AA was prepared in accordance with Article 33 of the Planning and Development Regulations 2001 and in compliance with the following legislation:

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna better known as “The Habitats Directive” provides the framework for legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC as amended 2009/149/EC) (better known as “The Birds Directive”).

Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (now termed Natura Impact Statement):

“Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage, and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the Appropriate Assessment (AA) process to the point, where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, it is rejected. If no alternative solutions are identified and the project is required for imperative reasons of overriding public interest (IROPI test) under Article 6 (4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

1.3 Stages of Appropriate Assessment

There are four (4No.) distinct stages to undertaking an AA as outlined in current EU and DOEHLG guidance:

Stage 1: Screening

This process identifies the potential impacts of a plan or project on a Natura site, either alone or in combination with other plans and projects and considers whether these impacts are likely to be significant. If potential significant impacts are identified the plan or project cannot be screened out and must proceed to Stage 2.

Stage 2: Appropriate Assessment

Where potential significant impacts are identified, an assessment of the potential mitigation of those impacts is required; this stage considers the appropriateness of those mitigation measures in the context of maintaining the integrity of the Natura 2000 sites. If potential significant impacts cannot be eliminated with appropriate mitigation measures, the assessment must proceed to Stage 3.

Stage 3: Assessment of Alternatives Solutions

This process examines alternative ways to achieve the objectives of the plan or project that avoid adverse impacts on the integrity of the Natura 2000 site if mitigation measures are deemed insufficient.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)

Assessment where no alternative solution exists for a plan or project and where adverse impacts remain. This includes an assessment of compensatory measure where in the case of projects or plans which can be considered to be necessary for IROPI.

This report has been prepared to inform the planning authority with regard to Stage 1 (Screening) and Stage 2 (Appropriate Assessment) of the Proposed Development through the research and interpretation of available scientific, geographic and engineering knowledge. The report seeks to determine whether the installation of the Proposed Development will, on its own or in combination with other plans / projects have a significant effect on Natura 2000 sites within a defined radius of the subject Site.

2 METHODOLOGY

2.1.1 Determining Zone of Influence

The Zone of Influence comprises of the area which the Proposed Development may potentially affect the conservation objectives (or qualifying interests) of a Natura 2000 site.

Guidance in Appropriate Assessment of plans and projects in Ireland notes that a distance of 15km is recommended for the identification of relevant European sites (DEHLG, Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, 2010). However, guidance from the NPWS recommends that the distance should be evaluated on a case-by case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative) (DEHLG, Appropriate Assessment under Article 6 of the Habitats Directive; Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10, 2010). For some projects the distance could be greater than 15km, and in some cases less than 100m.

Definition of the zone of influence for the proposed works includes evaluating the following:

- Identification of the Natura 2000 sites that are situated within, in close vicinity or downstream within the zone of influence of the Proposed Development;
- Identification of the designated habitats and species and Conservation Objectives for the identified Natura 2000 sites;
- Identification of the environmental conditions that stabilise and increase the qualifying interests of the Natura sites towards favourable conservation status;
- Identification of the threats/impacts – actual or potential that could negatively impact the conservation objectives for the Natura 2000 sites;
- Identifying the activities of the proposed works that could give rise to significant adverse impacts; and,
- Identification of other plans or projects, for which in-combination impacts would likely have significant adverse effects.

2.1.2 Source-Pathway-Receptor Model

Natura 2000 sites are only at risk from significant effects where a source-pathway-receptor link exists between a Proposed Development and a Natura 2000 sites. This can take the form of a direct impact (e.g. where the Proposed Development is located within / in close vicinity to the boundary of a Natura 2000 site), or an indirect impact where impacts outside of the Natura 2000 site but affect ecological receptors within (e.g. impacts to water quality which can affect estuarine habitats at a distance from the impact source).

The likely effects of the Proposed Development on any Natura 2000 site have been assessed using a source-pathway-receptor model. A source-pathway-receptor model is a standard tool used in environmental assessment (Cooper, 2004) (OPW, 2012). The model comprises of:

- A *source*: any potential impacts from the Proposed Development, e.g. the runoff of sediment / construction pollution.
- A *pathway*: the means or route by which a source can affect the ecological receptor.
- A *receptor*: the qualifying interests and / or special conservation interests of the Natura 2000 sites.

In order to establish the Zone of Influence of the Proposed Development works, the likely key environmental impacts / changes associated with the Proposed Development were

determined having regard to the project characteristics set out in Section 3.3 of this report. Zone of Influence for various potential impact pathways are discussed in Section 4.1.

2.2 Desk Based Studies

A desk-based review of information sources was completed, which included the following sources of information:

- Review of aerial maps of the Site and surrounding area;
- The National Parks and Wildlife Service (NPWS) website was consulted with regard to the most up to date detail on conservation objectives for the Natura 2000 sites relevant to this assessment (NPWS, 2022);
- The National Biodiversity Data Centre (NBDC) website was consulted with regard to species distributions (NBDC, 2022); and,
- The EPA Envision website was consulted to obtain details about watercourses in the vicinity of the Site (EPA, 2022).

2.3 Field Based Studies

A habitat survey was undertaken on the 17th August 2022 by two (2No.) suitably qualified MOR Ecologists, to assess the onsite conditions and to identify any potential ecological receptors associated with the Natura 2000 sites.

This survey was undertaken for the Site with the Heritage Councils – ‘*A Guide to Habitats in Ireland*’ (Fossitt, 2000). This is the standard habitat classification system used in Ireland and includes both a desk based and field-based assessment.

The assessment was extended to also identify the potential for these habitats to support other features of nature conservation importance, such as species afforded legal protection under either Irish or European legislation.

2.3.1 Protected / Notable Species

The methodologies used to establish the presence / potential presence of faunal species are summarised below. These relate to those species / biological taxa that the desk study and habitat types present indicated could occur on the Site.

2.3.1.1 Invasive species

The Site walkover also aimed at identifying the presence of any noxious / invasive species such as Japanese knotweed (*Fallopia japonica*) and any other invasive species within the Site and adjacent area.

2.3.1.2 Other Species

In addition, an assessment was carried out of the potential for the Site to support any other species considered to be of value for biodiversity, including those that were identified as occurring locally by the desktop study.

2.4 Survey Limitations

No survey limitations were encountered.

3 DESCRIPTION OF THE PROJECT

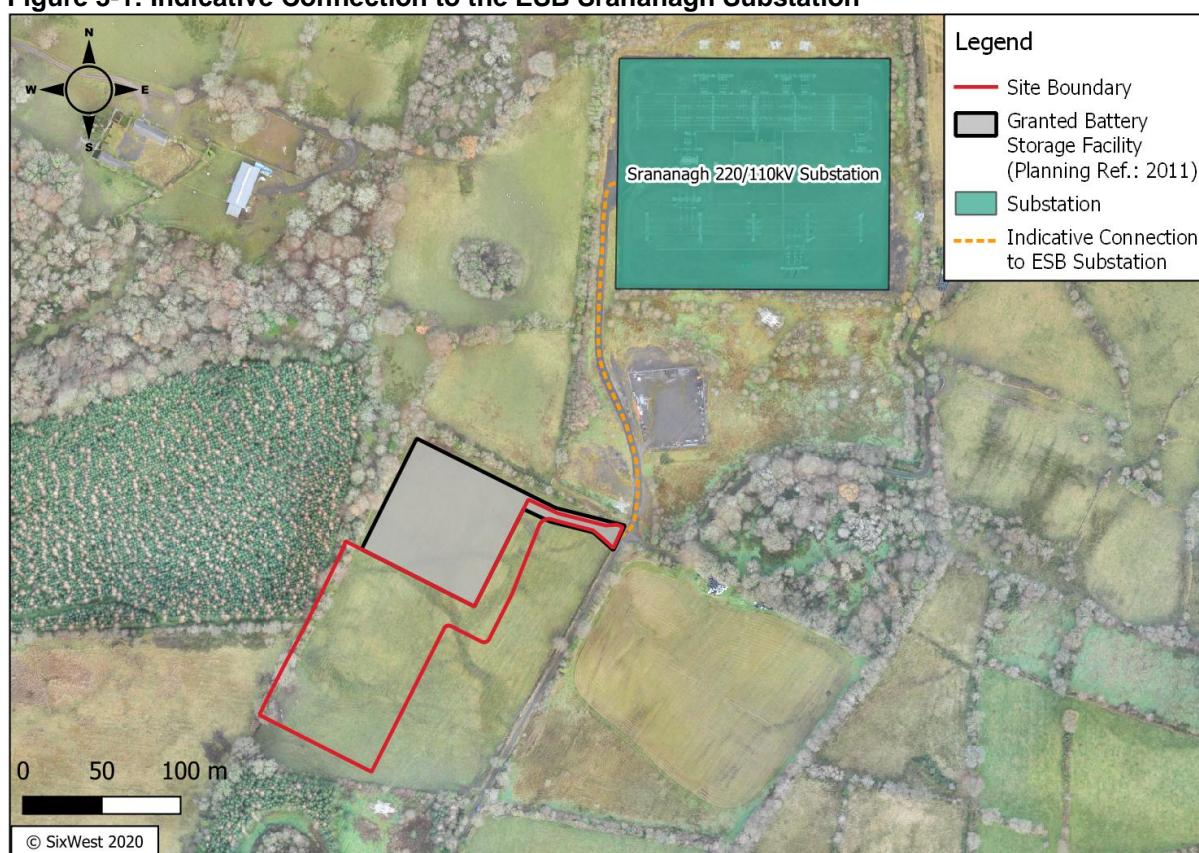
3.1 Site Context and Description

The Site, which is ca. 1.196 hectares (ha) in size is located ca. 6.7km southeast of Collooney and ca. 11.3km southeast of Sligo within a rural landscape.

The Site is located approximately 150m southwest of the ESB Srananagh 220/110kV substation, which was constructed under Planning Ref.: 001256. The Site is located directly adjacent to the granted battery storage facility (Planning Ref.: 2011) and will utilise the granted battery storage facility entrance off an unnamed local road for access.

The Site is currently comprised of predominantly agricultural grassland. The surrounding landscape is made up of agricultural grassland, hedgerows, a network of drainage ditches and pockets of forestry.

Figure 3-1: Indicative Connection to the ESB Srananagh Substation



3.2 Watercourses within the Vicinity of the Site

The Site is situated within the Sligo Bay and Drowse Catchment [Catchment_ID: 35] and the Owenmore[Sligo]_SC_030 subcatchment [Subcatchment_ID: 35_2] (EPA, 2022).

As per EPA maps, two (2No.) watercourses were identified within the vicinity of the Site (see Figure 4-2):

1. The Ballygrania River

This river is located ca. 434m north of the Site. The Ballygrania River flows in an easterly direction and discharges into the Unshin 35 River ca. 6km downstream, which forms part of the Unshin River SAC.

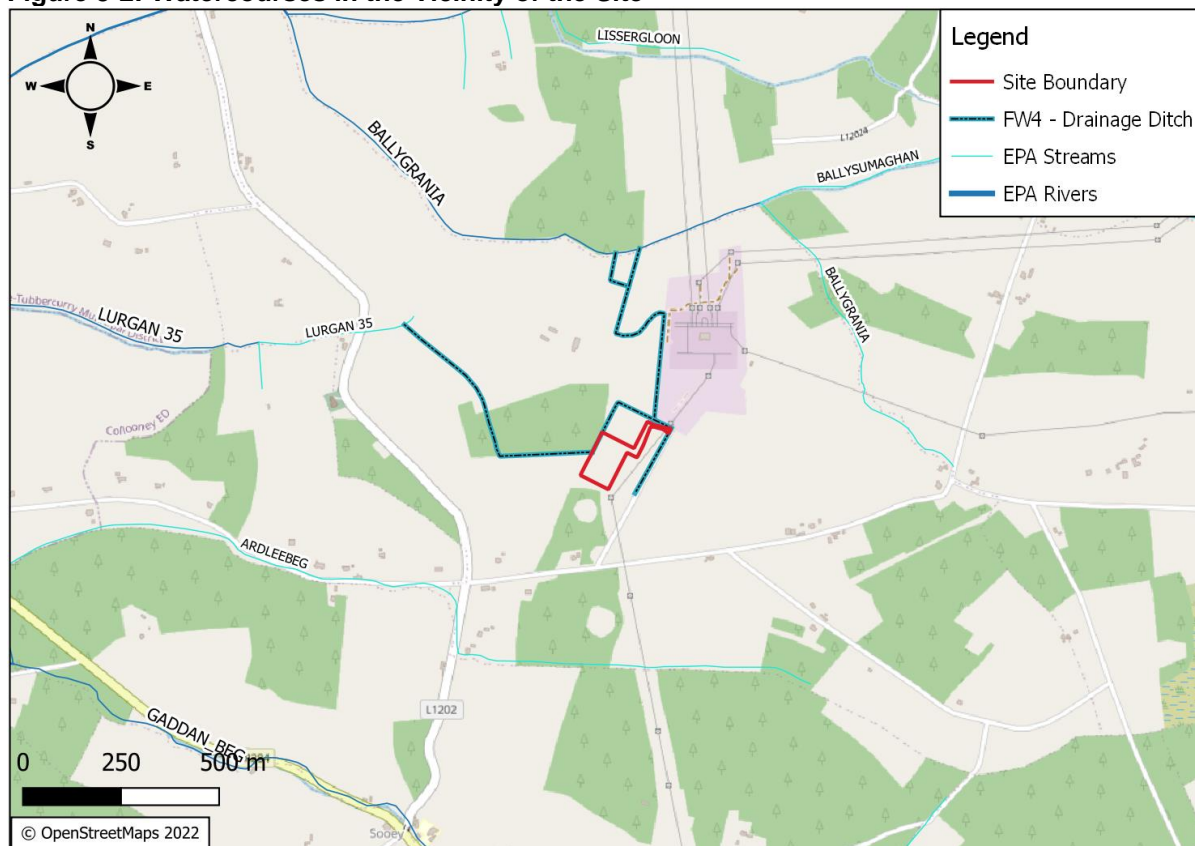
2. Lurgan 35 Stream

The Lurgan 35 Stream is located ca. 562m northwest of the Site and flows in an easterly direction. The stream drains into the Lurgan 35 River, ca.400m downstream of the Site, and eventually joins the Ballygrania River, a further ca. 800m downstream.

According to the EPA, both the Ballygrania River and the Lurgan 35 Stream are classified as having 'high' water quality status, based on the monitoring period 2013-2018, but are considered to be 'at risk' (EPA, 2022).

The waterbodies within the vicinity of the Site are presented in Figure 3-2 below.

Figure 3-2: Watercourses in the Vicinity of the Site



3.2.1 Drainage

The Site is bordered by drainage ditches to the north, west and east. At the time of the survey, the drainage ditches were dry. However, the water level within the drainage ditches is considered to seasonally fluctuate, and therefore, there is potential for water to flow following heavy rains.

Given the topography of the Site and following a review of aerial imagery of the drainage ditch network within the surrounding area of the Site, it is considered that there is potential for the surrounding drainage ditches to discharge into the Lurgan 35 Stream and the Ballygrania River.

3.3 Proposed Development

The planning application will be for a 10 year planning permission for the construction and operation of a synchronous condenser facility. The facility will be a fenced compound ca. 1.196ha in size at Ballysumaghan, Sooley, Co. Sligo. The development will consist of a synchronous condenser, which will have a 30 year operational lifetime and will include the following elements:

- Generator and flywheel building (ca. 600 sq.m., ca. 12.5m high) to house the equipment including the generator, flywheel, lube oil skid, vacuum skid, TEWAC pump skid, reverse switch cubicle and star point cubicle;
- SFC start-up equipment room (ca. 43.650 sq.m., ca. 4.20m high);
- AC/DC room (ca. 81.480 sq.m., ca. 4.20m high);
- C&P room (ca. 70.685 sq.m., ca. 4.20m high);
- Battery room (ca. 28.130 sq.m., ca. 4.20m high);
- Storage room (ca. 49.200 sq.m., ca. 4.20m high);
- Supporting components of plant within the compound that include:
 - Outdoor cooler (ca. 190.925 sq.m., ca. 2.660m high);
 - Start-up transformer & auxiliary transformer structure (ca. 68.265 sq.m., ca. 4.50m high);
 - Step-up transformer (ca. 170.985 sq.m., ca. 8.0m high) partially surrounded by a fire wall; and,
 - Generator circuit breaker (40.160 sq.m., ca. 10m high).
- All other ancillary and miscellaneous site works including:
 - Six (6No.) lightening masts – height of lightening masts will be determined by lightening protection study prior to commencement of construction;
 - Site clearance;
 - Site access;
 - Separation walls (8m high) to the south of the transformers;
 - Internal hardcore access track; and,
 - Development of areas of hard standing including a maintenance layout area.
- The development will be bound by 2.4m high perimeter fencing.

The proposed Site Layout is illustrated in Appendix A.

3.3.1 Site Access

The Site will be accessed via the site access located off the unnamed local road located adjacent to the eastern Site boundary that was granted under Planning Reference 2011.

3.3.2 Water Supply

There is no water supply required for the construction or operation of the Proposed Development.

3.3.3 Surface Water Drainage

The synchronous condenser compound and access road surface will be surfaced with a permeable stone hardcore material, providing filtration for these areas a large soak-pit for the rainfall on these areas. This free draining material will allow rainfall to permeate into the ground. Assuming a basic infiltration rate through the permeable stone it is clear that the existing greenfield condition will be maintained.

Run-off from the roofs of the buildings will be collected from a series of down pipes and gullies and will be gathered into uPVC pipes ranging from 150mm to 225mm diameter pipes and run into an attenuation tank.

The critical rainfall storm event as outlined in the accompany engineering report requires an attenuation volume of 55m³. The purpose of the attenuation tank is to store the surface water balance in excess of the allowable surface water runoff area. Post attenuation the storm water will discharged to an existing watercourse; the discharge is to be restricted to 9.603 l/s by a hydrobrake.

The surface water pipes were designed for a rainfall intensity of 50 mm/hour in accordance with Part H of the Building Regulations, which equates to the peak a half-hour rainfall with a 100-year return period allowing 15% for climate change.

Please see drawing W22048/P811 and Drainage Report submitted with this application for full details of the proposed drainage.

3.3.4 Foul Water Drainage

During the construction phase, portable toilet facilities will be provided for workers. All associated waste will be disposed offsite by a suitably licensed and monitored waste contractor.

There is no requirement for foul drainage during the operational phase of the Proposed Development.

3.3.5 Landscaping

As part of the Proposed Development works, landscaping works will be included. This will involve:

- Retention, maintenance and strengthening of existing hedgerow / treelines; and,
- Planting of additional hedgerow / treeline as screening management.

The planting will include ca. 235m of additional hedgerow plantings as screening management, resulting in an overall net gain of hedgerows. A height of 3-4m will be established along all hedge / treelines after 2-3 years (3-4 growing seasons) and will form an effective screen. All planting will commence at the first available planting season following the commencement of construction.

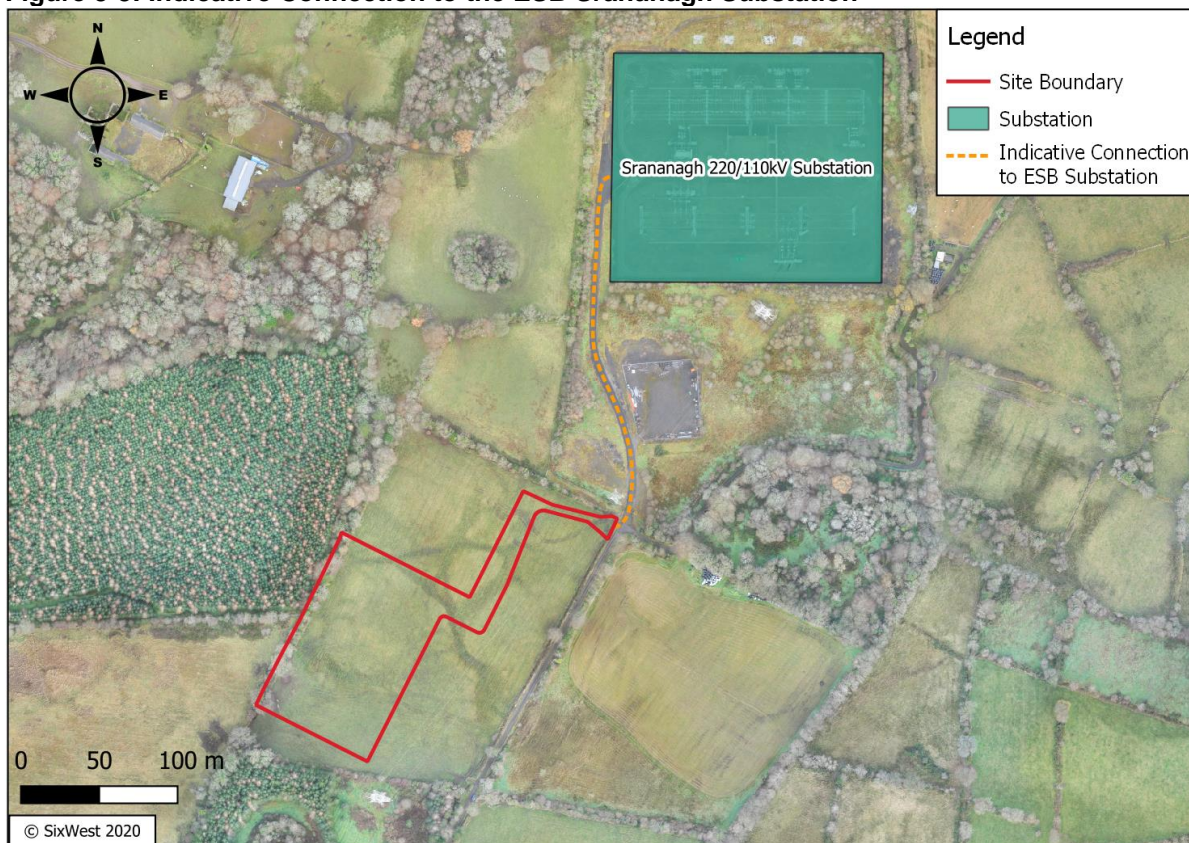
The landscaping has been developed, not only to ensure that the any visual impacts from the Proposed Development will be mitigated against, but also to enhance the biodiversity value of the Site. It has been developed through consultation with the project ecologist to ensure that the biodiversity value of the Site will be enhanced where practically possible.

3.3.6 Indicative Grid Connection

The Proposed Development will connect into the existing ESB Srananagh 110/220kV Substation. At this stage of planning the confirmed grid connection route cannot be obtained as consultation with ESB is not possible until the final grant of planning has been obtained. Should the necessary planning consent be obtained for the Proposed Development, then a separate application for the grid connection will be submitted for statutory consent.

Figure 3-3 illustrates the indicative grid connection route that is envisioned for the Proposed Development.

Figure 3-3: Indicative Connection to the ESB Srananagh Substation



3.3.7 Construction Procedures

All construction works will comply with relevant legislation and best practice guidelines in order to reduce the environmental impacts associated with the works. Where remaining potential impacts have been identified, this ER states the additional mitigation measures that will be employed to reduce, as far as practicable, these impacts, and clearly states, where relevant, any residual impacts that will arise.

The proposed contractor will prepare a comprehensive Construction Environmental Management Plan (CEMP) in accordance with current best practice guidelines, when appointed, to reflect the specific plant and programme of works to be utilised. This ER assess the broad environmental construction impacts that can be readily addressed assuming standard construction procedures.

The CEMP will include procedures for monitoring the effectiveness of the environmental protection measures outlined within this ER and any specific additional measures as deemed relevant through the planning conditions. Therefore, the Proposed Development will be constructed in a manner which will minimise potential impacts. To achieve this objective, the CEMP will:

- Incorporate all environmental commitments and mitigation measures in the construction contract documents which will include mitigation measures identified in this ER, any conditions of any permission as may be granted and any further requirements of Statutory Bodies;
- Provide a method of documenting compliance with these environmental commitments and mitigation measures;
- List all relevant environmental legislative requirements and provide a method of documenting compliance with these requirements; and,

- State methods by which construction work will be managed to avoid, reduce or remedy potential adverse impacts on the environment.

The following guidance will be referred to and will be followed during the construction phase of the project to prevent water pollution;

- C532 – Control of Water Pollution from Construction, Guidance for Consultants and Contractors (CIRIA, 2011); and,
- C741 - Environmental Good Practice on Site (4th edition) (CIRIA, 2015).

Details of the predicted impacts and mitigation measures associated with the construction of the Proposed Development are included within the relevant chapters of this ER and associated appendices.

3.3.7.1 Traffic Control

In advance of works a Construction Traffic Management Plan will be prepared and submitted to the Council for approval. The Construction Traffic Management Plan will address:

- Consultation with Sligo County Council throughout the construction phase in relation to traffic management requirements;
- Traffic control procedures to be implemented to ensure minimal impact to the normal day to day activities of the local community; and,
- Appropriate signage and their erection locations.

3.3.8 Waste Management

A detailed Waste Management Plan will be submitted to the Planning Authority for approval prior to the commencement of construction.

A cut and fill analysis of the Site indicates any soil to be excavated will be required to fill other areas within the Site. Therefore, no soil will need to be removed from the Site. Furthermore, regrading of the Site will take place during the initial stages of the construction phase

There will be no operational waste associated with the Proposed Development.

3.3.9 Duration and Timing of Works

The proposed works are anticipated to take approximately 18-24 months to complete. Construction working hours will be restricted to 07:00 to 19:00 Monday to Friday and 08:00 to 14:00 on Saturday, unless specifically agreed with the Council for special circumstances.

3.4 Monitoring

The construction works will be subject to monitoring by an appointed Ecological Clerk of Works (ECoW), to ensure that the works will be completed in line with the measures and recommendations made within this ER and the CEMP.

In addition, the ECoW will deliver a Site induction to all personnel working onsite.

3.5 Operational Procedures

3.5.1 Synchronous Condenser Operations

The purpose of the synchronous condenser facility is to provide system services to the Irish electricity grid. The types of system services that a synchronous condenser can provide include reactive power support, short circuit contribution and system inertia. Synchronous generators have traditionally provided these system services to the grid but to facilitate a system with higher renewables and lower emissions, these services need to be provided by zero-emission sources such as synchronous condensers. EirGrid, the Transmission System

Operator, has confirmed the need for such service providers in its recent consultation on Low Carbon Inertia Services (Consultation on Low Carbon Inertia Service (LCIS) Competitive Procurement 22nd June 2022). Such service providers will reduce the reliance on fossil fuelled synchronous generation to provide these services and will enable higher penetrations of renewable generation connect to the power system.

Although the exact specifications and supplier have not been confirmed at this stage of planning, the general operations of a synchronous condenser are as follows.

A synchronous condenser is like a synchronous generator / motor in design, but it does not combust any fuel and does not have a prime mover. The synchronous condenser facility proposed includes a synchronous condenser with associated flywheel. The flywheel increases the mass and therefore the amount of inertia the facility can provide to the electricity system. Unlike a synchronous generator, the synchronous condenser does not produce any real power or megawatts but it requires a small amount of real power from the electricity network to operate. The synchronous condenser can provide / absorb reactive power or megavars (MVAR) which supports the voltage of the national electricity grid.

The step-up transformer allows the facility to be at an appropriate voltage level to connect to the electricity network at the Srananagh 220kV transmission station. The auxiliary transformer brings power to the auxiliary systems. The cooling system, comprising of air compressor, pumps and outdoor coolers, is used to cool the synchronous condenser. Other auxiliary systems aid the safe operation of the synchronous condenser facility, such as the lube oil system which keeps the relevant parts of the system adequately lubricated and the vacuum system which minimises air friction losses and reduces the cooling requirement to maintain a suitable temperature in the flywheel. The onsite batteries supply the control and protection equipment and are the same type used in a typical substation. These batteries ensure that control and protection equipment will continue to operate correctly in the event of loss of AC electricity supply to the facility.

The synchronous condenser will be remotely operated. When it is required to provide system stability services, EirGrid, the transmission system operator, will send an electronic instruction/signal. The static frequency converter (SFC) starts the synchronous condenser. Once the machine is brought up to the correct rotational speed (3000rpm) to match the electricity grid frequency (50Hz) it will be synchronised with the grid by closing the generator circuit breaker. It takes approximately 15 minutes from receiving the signal the synchronous condenser's services are required to synchronising with the electricity grid.

While synchronised to the electricity grid, the synchronous condenser facility provides inertia and short circuit contribution and reactive power support as needed by the grid, thereby improving system stability. The synchronous condenser will remain synchronised to the electricity grid until EirGrid issues an instruction / signal indicating it is no longer required. The generator circuit breaker will be opened, thereby disconnecting the machine from the electricity grid. Over approximately 1 hour the machine will slow down and come to a standstill.

3.5.2 Monitoring

Once operational, the Proposed Development will be an unmanned facility. It will require a small number of maintenance visits per year, a minimum of once per month, to undertake routine maintenance tasks, along with technician visits to review onsite systems.

The facility will be monitored 24 hours a day remotely by the Applicant's operation system and the Engineer Procurement and Construction provider. All electrical equipment and bunds will be remotely monitored via the Supervisory Control and Data Acquisition (SCADA) system. Therefore, any fault flagged on the control system will be flagged immediately and will be inspected by maintenance personal or dealt with remotely if possible. All systems onsite will

be automated, with remote access provided. There will be no requirement for any other natural resources to the Proposed Development.

Although the exact specifications and supplier have not been confirmed at this stage of planning, it is envisioned that the liquids that will be located within the Proposed Development will include transformer oil, lubricant oil for the bearings of the generator and flywheel and batteries for the DC system of the plant, which will be similar to typical batteries used in substations. The oil skid will have a steel tank that will hold ca. 8,000 litres of lubrication oil, which will be located within synchronous condenser building. Also, the amount of transformer oil held onsite will equate to ca. 20,000 litres.

The onsite transformers will be banded. In line with EPA guidance, the bands will be designed to hold 110% capacity of the liquid stored in the transformers. The bands will be alarmed with the SCADA system. Under normal operation, this oil is maintained within the system and no emissions will occur.

The SCADA system will notify the operator when water levels are high or if oil is detected, in which case maintenance works will take place to manually pump the liquid from the band to the suitably sized onsite oil interceptor. In the event of a significant breach of oil, the transformer will fail to operate, bringing the transfer of energy from the substation to the Proposed Development to a stop. Ongoing preventative maintenance will be conducted on all critical infrastructure by the Applicant to prevent such instances.

3.5.3 Maintenance

Once operational, the Proposed Development will be an unmanned facility. The Proposed Development will require a small number of routine maintenance visits per year, a minimum of once a month. Significant maintenance works during the operational life of the facility are not envisaged.

3.5.4 Emergency Response

Prior to the commencement of development, the Applicant will prepare a detailed Emergency Response Plan to the Planning Authority for approval. This Emergency Response Plan will provide appropriate actions in response to potential incidents.

3.5.5 Fire Safety

The safety of people working onsite and those living nearby is of the highest priority to the Applicant. Therefore, prior to the commencement of development works at the Site, a Fire Safety Certificate will be obtained from the Sligo Fire Services. As part of the submission for the Fire Safety Certificate, a hazard analysis and risk assessment will be undertaken.

Furthermore, although the supplier for the Proposed Development has not yet been confirmed, the Applicant will ensure that the design, operation and maintenance of the Proposed Development is in line with recognised safety standards. The Applicant will also utilise the latest technologies available at the time of commencement of the development. The standards and codes that will be adhered to will ensure that there will be proper preventative and protection measures put in place to prevent any potential risks.

As previously mentioned, the Proposed Development will be continuously monitored and controlled by a SCADA safety system. Therefore, as soon as any faults, issues or changes in regular operation are detected, the flow of electricity will be reduced, switched off or disconnected completely from the power supply. These safety monitoring systems also works to identify problems before they occur, which allows remote operators to know of any deterioration or fault immediately so that appropriate maintenance carried out.

Full details of the Fire Safety measures will be outlined as part of the submission for the Fire Safety Certificate. These measures will be issued to the Planning Authority for agreement prior to the commencement of development.

3.6 Decommissioning

The Proposed Development will have a 30 year operational life span. At the end of the plant life, the Proposed Development will be decommissioned and as part of this all components of the plant and associated infrastructure will be removed, and the Site will be returned to its original state.

As part of the decommissioning works required, and due to changes in future energy markets, the following tasks will need to be completed:

- The plant and equipment will be disassembled;
- The removal of the transformer units and step-up transformer units: This will require decontamination of the unit and the removal of the physical structure of the main unit. An articulated HGV, specialist personnel and a crane will be required for these works; and,
- Reinstatement works will be undertaken and will include reseeded of grass areas.

The above work will therefore require similar processes as the construction phase, with a timeframe comparable with the construction programme. Given the nature of the Proposed Development, it is considered highly unlikely that any impacts would occur as a result of decommissioning works. However, decommissioning works will be carried out in accordance with best practice and legislation applicable at the time of decommissioning.

A detailed Decommissioning Plan will be prepared and agreed with the Planning Authority in writing prior to the commencement of decommissioning works.

4 IDENTIFICATION OF NATURA 2000 SITES

In accordance with the European Commission Methodological Guidance (EC, 2018) a list of European sites that can be potentially affected by the Proposed Development has been compiled. Guidance for Planning Authorities prepared by the Department of Environment Heritage and Local Government (DEHLG, Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, 2010) states that defining the likely zone of impact for the screening and the approach used will depend on the nature, size, location and the likely significant effects of the project. The key variables determining whether or not a particular Natura 2000 site is likely to be negatively affected by a project are:

- The physical distance from the project to the Site;
- The presence of impact pathways;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

All SPAs and SACs within 15km have been considered to assess their ecological pathways and functional links. As acknowledged in the OPR guidelines (OPR, 2021), few projects have a zone of influence this large, however the identification of Natura 2000 sites within 15km has become widely accepted as the starting point for the screening process. For this reason, all SPAs and SACs in 15km have been identified for consideration as part of the screening.

There are eleven (11No.) European sites located within 15km of the Site - these are identified in Figure 4-1 and Table 4-1.

Figure 4-1: Site Location and Natura 2000 Designated Sites within 15km

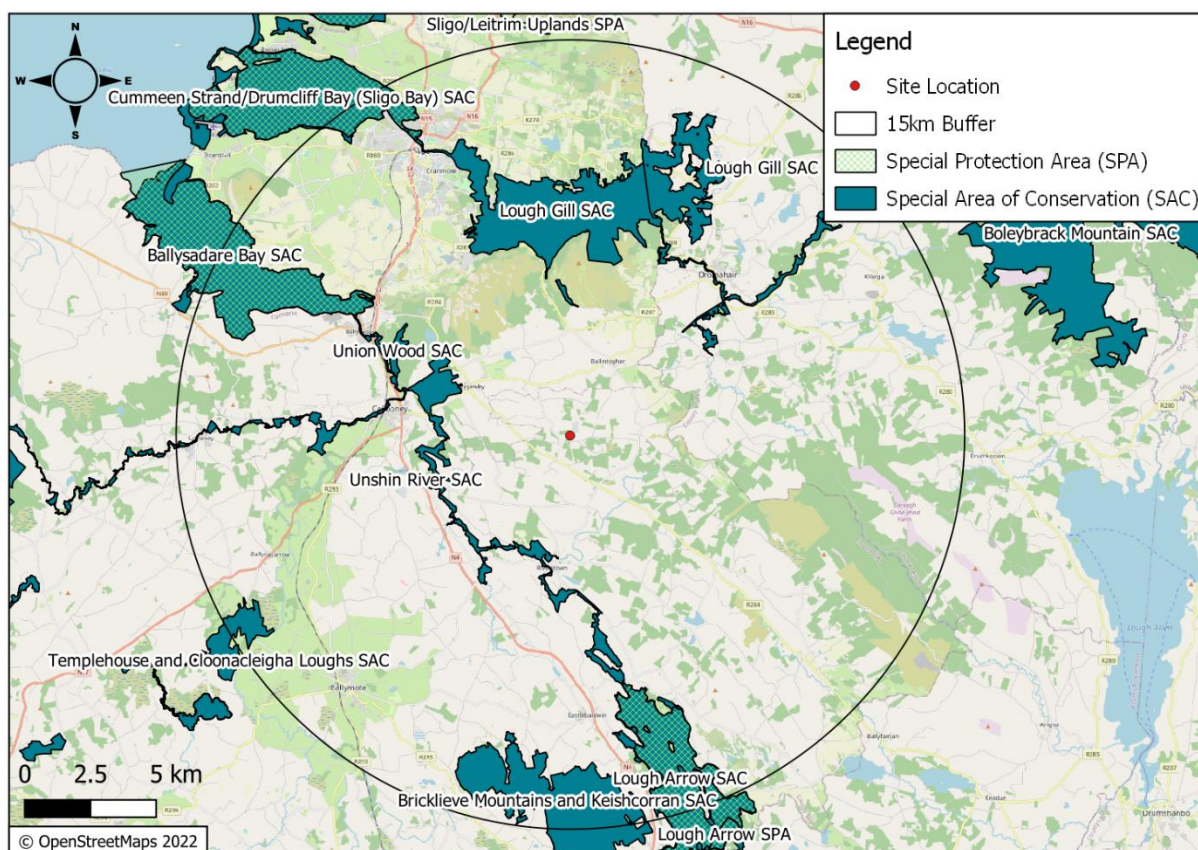


Table 4-1: European Designated Sites within 15km of the Site

Site Name	Code	Distance	Direction from the Site
Special Area of Conservation (SAC)			
Unshin River	001898	4.4km	W
Lough Gill	001976	4.8km	N
Union Wood	000639	6.9km	NW
Ballysadare Bay	000622	9km	NW
Lough Arrow	001673	9.5km	SE
Bricklieve Mountains and Keishcorran	001656	11.4km	SW
Cummeen Strand / Drumcliff Bay (Sligo Bay)	000627	12.5km	NW
Templehouse and Cloonacleigha Loughs	000636	13.4km	NW
Special Protection Area (SPA)			
Ballysadare Bay	004129	8.9km	NW
Lough Arrow	004050	9.5km	S
Cummeen Strand	004035	12.6km	NW

Habitat Loss / Degradation

The Site is located within an area of agricultural land. No impacts associated with designated habitat loss / degradation as a result of the Proposed Development given the distance separating the Site from the Natura 2000 sites.

Water Quality Impairment

Potential water quality impacts would typically be associated with the release of sediment and other pollutants to surface water during the construction phase of the Proposed Development, therefore the ZOI would be considered to include the receiving waterbodies adjacent to and downstream of the Site during the construction phase within 5km.

Given the topography of the Site and the network of drainage ditches onsite and within the vicinity of the Site, it is considered that there is a potential hydrological connection between the Site and Ballygrania River and the Lurgan 35 Stream. Both of these watercourses are hydrologically linked to the Unshin River SAC, the Ballysadare Bay SAC and the Ballysadare Bay SPA (Refer to Section 3.2 and Figure 4-2). Therefore, it is considered that there is a potentially hydrological link between the Site these Natura 2000 sites.

Air Quality Impairment

According to the Institute of Air Quality Management (IAQM) Guidelines, the potential adverse effects from dust occur to ecological receptors from dust associated with construction works within a distance of 50m from the boundary of the Site (IAQM, 2014). No impacts associated with dust will as a result of the Proposed Development given the distance separating the Site from the Natura 2000 sites.

Noise / Disturbance

Noise from the construction activity has the potential to cause disturbance to resting, foraging and commuting qualifying species of the Natura 2000 sites. As there will be no piling or in-river works required for the Proposed Development, there is no potential for underwater noise impacts beyond the immediate vicinity of the Site. Individual species will provoke different behavioural responses to disturbances at different distances from the source of disturbance.

- Transport Infrastructure Ireland (formally the National Roads Authority) has produced a series of best practice planning and construction guidelines for the treatment of certain protected mammal species (i.e., otter), which indicate that disturbance to terrestrial mammals would not extend beyond 150m (National Roads Authority, 2006); and,
- Studies have noted that different types of disturbance stimuli are characterized by different avifaunal reactions, however, in general a distance of 300m can be used to represent the maximum likely disturbance distance for waterfowl (Cutts, 2013).

Therefore, the Zol for noise / disturbance is therefore established as the Site with a 300m buffer.

No impacts associated with noise / disturbance will as a result of the Proposed Development given the absence of suitable habitats onsite for designated bird species along with the distance separating the Site from the Natura 2000 sites.

Identification of Natura 2000 Sites

The Site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of eight (8No.) SACs and three (3No.) SPAs are located within 15km from the Site (refer to Table 4-1).

Given the lack of impact pathways and the distance separating the Site from the Natura 2000 sites, it is considered unlikely that the Proposed Development will result in adverse effects to the Lough Gill SAC, Templehouse and Cloonacleigha Loughs SAC, Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC, Lough Arrow SAC, Bricklieve Mountains and Keishcorran SAC, Lough Arrow SPA and Cummeen Strand SPA. Therefore, the above-mentioned Natura 2000 sites have been screened out.

The following Natura 2000 sites listed in Table 4-2 have been screened in for further consideration to assess potential adverse effects resulting from the Proposed Development.

Table 4-2: European Designated Sites within Zol

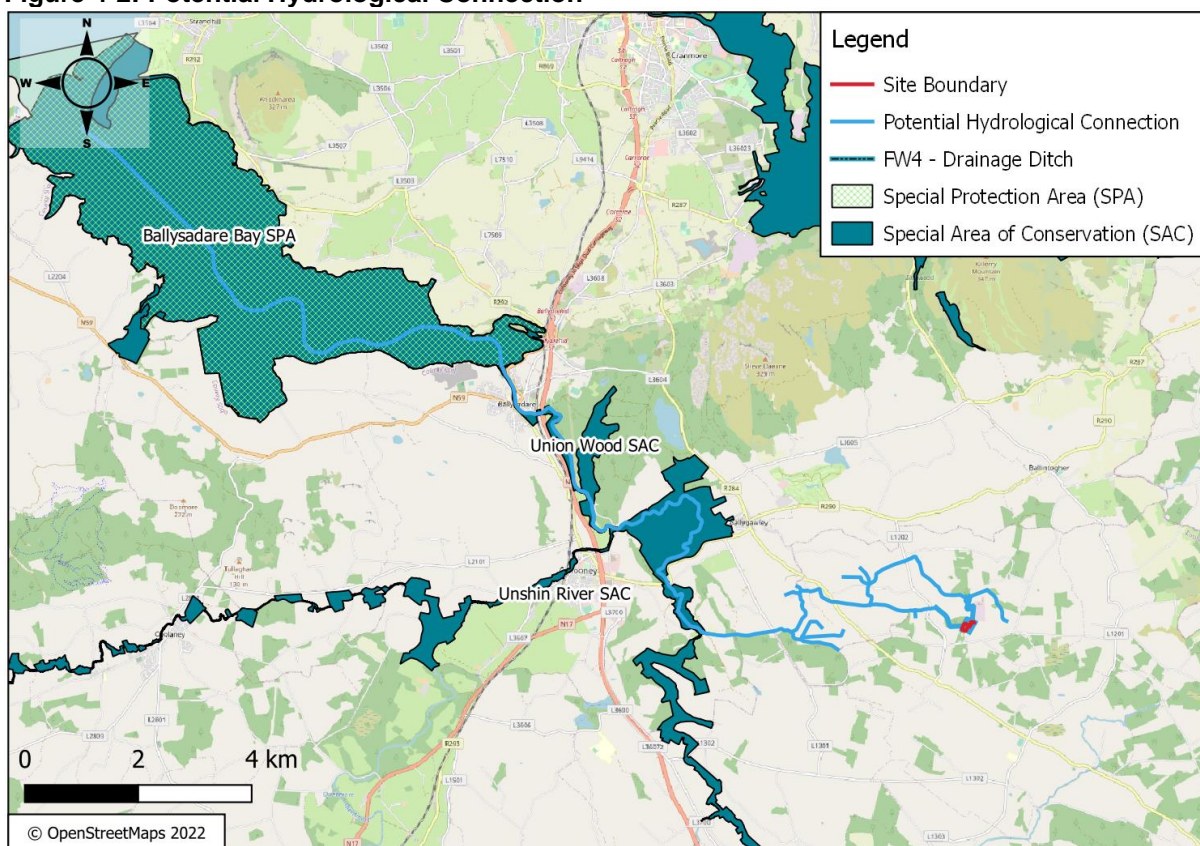
Site Name	Code	Distance at closest point and source-pathway-receptor link
Unshin River SAC	001898	The Site is located ca. 4.4km west of the SAC, see Figure 4-2. Given the topography of the Site and the network of drainage ditches onsite and within the vicinity of the Site, there is potential for a hydrological connection between the Site and Unshin River SAC via, the Ballygrania River and the Lurgan 35 Stream. Therefore, potential adverse effects to designate species will be taken forward for further consideration.
Ballysadare Bay SAC	000622	The Site is located ca. 9km northwest of the SAC, see Figure 4-2. Given the topography of the Site and the network of drainage ditches onsite and within the vicinity of the Site, there is potential for a hydrological connection between the Site and Ballysadare Bay SAC via, the Ballygrania River and the Lurgan

Site Name	Code	Distance at closest point and source-pathway-receptor link
		35 Stream. The Unshin River discharges into the Ballysadare River, ca. 5.3km downstream, which forms part of the Ballysadare Bay SAC Therefore, potential adverse effects to designate species will be taken forward for further consideration.
Ballysadare Bay SPA	004129	The Site is located ca. 8.9km northwest of the SPA. see Figure 4-2. Given the topography of the Site and the network of drainage ditches onsite and within the vicinity of the Site, there is potential for a hydrological connection between the Site and Ballysadare Bay SPA via the Ballygrania River and the Lurgan 35 Stream. The Unshin River discharges into the Ballysadare River, ca. 5.3km downstream, which forms part of the Ballysadare Bay PA. Therefore, potential adverse effects to designate species will be taken forward for further consideration.

The screening assessment for individual designated habitats and species for each of the screened in Natura 2000 sites and the potential for them to be adversely affected by the Proposed Development are presented in Section 6 below.

Further information on the screened in Natura 2000 sites is provided below.

Figure 4-2: Potential Hydrological Connection



4.1 Unshin River SAC (Site Code: 001898)

This SAC extends from Lough Arrow to Ballysadare Bay, Co. Sligo. This SAC is made up primarily of the Unshin River but other watercourses included within this site are the Owenboy / Owenbeg and a number of smaller tributaries. The Unshin River flows across a number of geological boundaries of sandstone, shales and limestone, which results in unusual physico-chemical qualities which in turn are reflected in the rich and varied plant and animal populations. The SAC supports multiple Annex I habitats (Table 4-3) and Annex II species (Table 4-4).

The Unshin River is considered one of the most pristine rivers in Ireland. Also, the quality and the aquatic macrophyte communities make it rare in both an Irish and European context.

Table 4-3: Qualifying Annex I Habitats for the Unshin River SAC

Qualifying Habitats (* denotes Priority Habitat)	Code	Site Specific Conservation Objective
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	3260	Maintain or restore favourable conservation condition
Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	6210	Maintain or restore favourable conservation condition
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	6420	Maintain or restore favourable conservation condition
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)*	91E0	Maintain or restore favourable conservation condition

Table 4-4: Qualifying Annex II Species for the Unshin River SAC

Species	Species Name	Code
Mammals listed on Annex II of the Habitats Directive	Otter (<i>Lutra lutra</i>)	1355
Fish listed on Annex II of the Habitats Directive	Atlantic salmon (<i>Salmo salar</i>)	1106

4.2 Ballysadare Bay SAC (Site Code: 000622)

This SAC extends ca.10km from Ballysadare, Co. Sligo to the southernmost inlet of the Sligo Bay complex. Ballysadare Bay is of high ecological value for its range of good quality coastal habitats. This SAC supports multiple Annex I habitats (Table 4-5) and Annex II species (Table 4-6).

This SAC is also of ornithological importance for a range of waterfowl species in autumn and winter as this SAC is part of the larger Sligo Bay complex. Brent Goose occur in internationally important numbers and Red-breasted Merganser, Oystercatcher, Grey Plover, Dunlin, Redshank and Greenshank have populations of national importance. Also, two (2No.) Annex I species of the E.U. Birds Directive, Bar-tailed Godwit and Golden Plover are also supported within this SAC.

Habitats occurring within this SAC, such as dunes, are sensitive to development that alter their structure such as overgrazing. Also, agricultural improvement, particularly the application of fertilisers, threatens dune vegetation, leading to the eventual loss of species diversity.

Table 4-5: Qualifying Annex I Habitats for the Ballysadare Bay SAC

Qualifying Habitats (* denotes Priority Habitat)	Code	Site Specific Conservation Objective
Estuaries	1130	Maintain favourable conservation condition
Mudflats and Sandflats not covered by seawater at low tide	1140	Maintain favourable conservation condition
Embryonic shifting dunes	2110	Restore favourable conservation condition
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	2120	Restore favourable conservation condition
Fixed coastal dunes with herbaceous vegetation (grey dunes)*	2130	Restore favourable conservation condition
Humid dune slacks	2190	Restore favourable conservation condition

Table 4-6: Qualifying Annex II Species for the Ballysadare Bay SAC

Species	Species Name	Code
Mammals listed on Annex II of the Habitats Directive	Common (Harbour) Seal (<i>Phoca vitulina</i>)	1365
Molluscs listed on Annex II of the Habitats Directive	Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>)	1014

4.3 Ballysadare Bay SPA (Site Code: 004129)

This SPA extends ca.10km from Ballysadare, Co. Sligo to the southernmost inlet of the Sligo Bay complex. Ballysadare Bay SPA is of high ornithological importance and supports internationally and nationally important populations of six Annex (6No.) I bird species (refer to Table 4-7). Light-bellied Brent Goose population is of international importance and the populations Grey Plover, Dunlin, Bar-tailed Godwit and Redshank are of national importance.

Other species that have been recorded frequenting the SPA include: Whooper Swan, Shelduck, Wigeon, Teal, Mallard, Goldeneye, Red-breasted Merganser, Cormorant, Oystercatcher, Ringed Plover, Golden Plover, Lapwing, Curlew, Greenshank, Turnstone, Black-headed Gull and Common Gull.

Table 4-7: Qualifying Annex I Species of Birds for Bannow Bay SPA

Species Names	Scientific Name	Code
Light-bellied Brent Goose	<i>Branta bernicla hrota</i>	A046
Grey Plover	<i>Pluvialis squatarola</i>	A141
Dunlin	<i>Calidris alpina</i>	A149
Bar-tailed Godwit	<i>Limosa lapponica</i>	A157
Redshank	<i>Tringa totanus</i>	A162
Wetland and Waterbirds		A999

4.4 Conservation Objectives

European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status areas designated as Special Areas of Conservation and Special Protection Areas. The Irish Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

According to the EU Habitats Directive, favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, is stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and,
- The conservation status of its typical species is favourable as defined below.

The favourable conservation status of a species is achieved when:

- Population data on the species concerned indicate that it is maintaining itself;
- The natural range of the species is neither being reduced or likely to be reduced for the foreseeable future; and,
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The full report for the conservation objectives for the Unshin River SAC¹, Ballysadare Bay SAC² and the Ballysadare Bay SPA³ can be found on the NPWS website.

¹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001898.pdf

² https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000622.pdf

³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004129.pdf

5 STUDY RESULTS

5.1 Desk-Based Study Results

As per National Biodiversity Data Centre's database, no records are held for any legally protected or otherwise notable species protected under the Unshin River SAC, Ballysadare Bay SAC and Ballysadare Bay SPA occur within a 2km grid square of the Site, from the last ten (10No.) years (NBDC, 2022).

CIEEM's guidelines recommend that consideration be given to the biodiversity conservation value of the species that occur within this zone of influence (as appropriate) (CIEEM, 2022).

5.1 Field Studies Results

5.1.1 Habitat Assessment

The following section provides details of the field-based assessment that was undertaken for the Site on the 17th August 2022. A description of the habitats and features of ecological significance are outlined below and illustrated in Figure 5-1.

Site Context and Surrounding Habitats

The Site comprises a waterlogged agricultural field. The principal natural or semi-natural linear features identified during the field survey were the drainage ditches and treelines / hedgerows bordering the Site. A small mixed broadleaved woodland was present adjacent to the northwest boundary of the Site. A conifer plantation dominated by Sitka spruce (*Picea sitchensis*) was identified adjacent to the southwest boundary of the Site.

The Site is currently managed and used for grazing livestock. The wider area surrounding the Site comprises agricultural land, conifer plantations and woodland areas alongside residential houses and farm holdings. Srananagh ESB 220/110kV Substation is located ca. 150 north of the Site.

Improved Agricultural Grassland (GA1) / Wet Grassland (GS4)

The Site comprised one (1No.) wet grassland field. No livestock were utilising this field during the habitat survey; however, evidence of cattle was present.

At the time of survey, this field was dominated by perennial rye (*Lolium perenne*) and rushes (*Juncus spp.*). Creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), horsetail (*Equisetum spp.*), birds-foot trefoil (*Lotus corniculatus*), daisy (*bellis perennis*), broadleaved dock (*Rumex obtusifolius*), dandelion (*Taraxacum officinale*), chickweed (*Stellaria media*) common vetch (*Vicia sativa*) and self-heal (*Prunella vulgaris*) were also identified in this habitat.

The topography of the grassland was undulating and subsequently, areas of the Site at lower elevations were more waterlogged and contained plants which thrive in wet conditions such as starwort (*Callitriche stagnalis*), yellow flag iris (*Iris pseudocorus*), water mint (*Mentha aquatica*) and peat moss species (*sphagnum spp.*).

Drainage Ditch (FW4)

Drainage ditches were present to the north, east and west of the Site. At the time of survey, the drainage ditch network was dry with no evidence of water pooling or previous water flows. The drainage ditches ranged from 0.5m to 1.5m in depth and were overgrown with vegetation. The vegetation identified within these drainage ditches included bracken (*Pteridium spp.*), canary reeds (*Phalaris arundinacea*), ivy (*hedera helix*), rushes, brambles (*Rubus fruticosus*), harts tongue fern (*Asplenium scolopendrium*), tutsan (*Hypericum androsaemum*).

The drainage ditches were often shaded by hedgerows / treelines bordering the Site.

Hedgerow / Treeline

The northern, western and southern boundaries of the Site were made up of unmanaged hedgerows / treelines at the time of survey. A hedgerow bordered the Site to the east.

All of these linear features comprised predominantly of hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), gorse (*Ulex spp.*), alder (*Alnus glutinosa*), ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), sycamore (*Acer pseudoplatanus*), horse-chestnut (*Aesculus hippocastanum*) and beech (*Fagus spp.*). The surveyor noted the presence of lichens on these trees.

Brambles (*Rubus fruticosus*) and nettles (*Urtica dioica*) are frequent in the understorey layer throughout. Ivy (*Hedera Hibernica*) is common both in the trees and in the ground layers. An array of herbaceous species was recorded in the understorey layer of these hedgerows / treelines including ground ivy (*Glechoma hederacea*), curly thistle (*Carduus crispus*), meadow sweet (*Filipendula rubra*), purple loosestrife (*Lythrum salicaria*), foxglove (*Digitalis purpurea*), stinging nettles (*Urtica dioica*), cleavers (*Galium aparine*), brambles, common vetch, dandelion, yellow flag iris and gorse.

Figure 5-1: Habitat Map



6 STAGE 1 SCREENING: IDENTIFICATION OF POTENTIAL ADVERSE EFFECTS

6.1 Potential Adverse Effects

Potential adverse effects, if any, on the Unshin River SAC, Ballysadare Bay SAC and the Ballysadare Bay SPA were considered further in this section. The key output of this stage of the assessment is the identification of the types of threats to the integrity of the Natura 2000 sites as a result of implementing the Proposed Development.

A number of factors were examined at this stage and dismissed due to the very low risk associated with them. Table 6-1, Table 6-2, Table 6-3, Table 6-4 and Table 6-5 present further details and rationale of the screening assessment undertaken for each of the qualifying interests of each of the Natura 2000 sites identified as having the potential to be adversely affected.

These factors were screened in or out, based on whether or not it was concluded that they are likely to be affected by the Proposed Development if no mitigation measures were applied, and if progression to Stage 2 is required. The rationale for these conclusions is based on results from the aforementioned desk study, literature search and field survey results.

Table 6-1: Screening Assessment: Annex I Habitats – Unshin River SAC

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	The field survey shows that this habitat is not within the immediate vicinity of the Site or the surrounding area.	N/A	<p>It is considered highly unlikely that the works will have any significant direct or indirect negative effects on this habitat during either the construction or operational phase of the Proposed Development.</p> <p>This conclusion is based on the absence of this habitat within the Site boundary and the distance separating this habitat from the Site.</p> <p>It is considered highly unlikely that any potential pollutants could reach this habitat due to the fact that pollutants will either be diluted within the drainage ditch network, potentially hydrologically connected watercourses, or pollutants, such as sediment, will settle to the bottom of the watercourse. In addition, there will be no direct discharge into any drainage ditch or watercourses during the construction and operational phases of the Proposed Development.</p> <p>Nonetheless, water quality mitigation measures will be implemented as part of the proposed works to protect local water quality and therefore no likely significant effects are considered likely during either construction or operation.</p> <p>This habitat can therefore be screened out and no further assessment required.</p>	Screened Out
Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)*	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out

Table 6-2: Screening Assessment: Annex II Species – Unshin River SAC

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Otter	<p>The NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022).</p> <p>Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.</p>	<p>Main / Possible threats to the species include:</p> <p>Decrease in water quality.</p>	<p>It is considered highly unlikely that the works will have any significant direct or indirect negative effects on this species during either the construction or operational phase of the Proposed Development. This conclusion is based on the absence of this qualifying species within 2km boundary of the Site, the lack of suitable habitat for this species within the Site boundary and the distance separating the SAC from the Site.</p> <p>However, given that the Site is located within close proximity to the SAC and the hydrological connection linking the Site to the SAC, there is potential for impacts to occur as a result of a potential pollution events or elevated noise levels during the construction phase. Therefore, water mitigation measures and disturbance mitigation measures will be incorporated into the works.</p> <p>Therefore, this species has been screened in and will require further assessment.</p>	Screened In
Atlantic salmon	<p>The NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022). Similarly, the field survey show that this species is not</p>	<p>Main / Possible threats to the species include:</p> <p>Decrease in water quality.</p>	<p>This species is very sensitive to water quality and any potential adverse effects on water quality could adversely affect the species. However, given the absence of this qualifying species within 2km boundary of the Site and the lack of suitable habitat in the vicinity of the Site, it is considered highly unlikely that the works will have any</p>	Screened In

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
	<p>present within the immediate vicinity of the Site.</p>		<p>significant negative impact on this species during either the construction or operational phase of the Proposed Development.</p> <p>Nonetheless, due to the potential indirect hydrological connection between the Site and the Unshin River SAC, there is potential for the construction phase to have adverse effects on this species should pollutants enter the onsite drainage ditches.</p> <p>To ensure that no significant adverse effects occur, further consideration will be given to this species and in addition to the standard pollution prevention guidance, site-specific mitigation will be incorporated into the proposed works.</p> <p>Further assessment will be required.</p>	

Table 6-3: Screening Assessment: Annex I Habitats – Ballysadare Bay SAC

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Estuaries	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	<p>It is considered highly unlikely that the works will have any significant direct or indirect negative effects on this habitat during either the construction or operational phase of the Proposed Development.</p> <p>This conclusion is based on the absence of this habitat within the Site boundary and the distance separating this habitat from the Site.</p> <p>It is considered highly unlikely that any potential pollutants could reach this habitat due to the fact that pollutants will either be diluted within the drainage ditch network, potentially hydrologically connected watercourses, or pollutants, such as sediment, will settle to the bottom of the watercourse. In addition, there will be no direct discharge into any drainage ditch or watercourses during the construction and operational phases of the Proposed Development.</p> <p>Nonetheless, water quality mitigation measures will be implemented as part of the proposed works to protect local water quality and therefore no likely significant effects are considered likely during either construction or operation.</p> <p>This habitat can therefore be screened out and no further assessment required.</p>	Screened Out
Mudflats and Sandflats not covered by seawater at low tide	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out
Embryonic shifting dunes	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out
Shifting dunes along the shoreline with	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
<i>Ammophila arenaria</i> (white dunes)				
Fixed coastal dunes with herbaceous vegetation (grey dunes)*	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out
Humid dune slacks	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	As Above	Screened Out

Table 6-4: Screening Assessment: Annex II Species – Ballysadare Bay SAC

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Common Seal (Harbour)	<p>The NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022).</p> <p>Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.</p>	N/A	<p>It is considered highly unlikely that the works will have any significant direct or indirect negative effects on this species during either the construction or operational phase of the Proposed Development.</p> <p>This conclusion is based on the absence of suitable habitat for this species onsite or within the vicinity of the Site along with the distance separating this habitat from the SAC.</p> <p>Furthermore, due to the fact that this SAC is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SAC, it is considered unlikely that the Proposed Development will result in adverse effects to this species.</p> <p>Nonetheless, water quality mitigation measures will be implemented as part of the proposed works to protect local water quality and therefore no likely significant effects are considered likely during either construction or operation.</p> <p>This habitat can therefore be screened out and no further assessment required.</p>	Screened Out

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Narrow-mouthed Whorl Snail	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	As Above.	Screened Out

Table 6-5: Screening Assessment: Annex II Species – Ballysadare Bay SPA

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Light-bellied Brent Goose	Light-bellied Brent geese winter in Ireland primarily from October to April feeding predominantly on eel-grass (<i>Zostera</i> spp.) that grows in estuaries (BirdWatch Ireland, 2022). However, in January / February, when the concentrations of <i>Zostera</i> grasses tend to be depleted by the wintering birds, Brent geese will move to inland <i>ex-situ</i> feeding sites (BirdWatch Ireland, 2022). Brent geese will utilise these <i>ex-situ</i> feeding sites until March / April when Brent geese will return to the coastal feeding sites, as the <i>Zostera</i> grasses have replenish, before then migrating to their breeding grounds (Robinson, et al., 2004). Brent geese have shown a preference for inland <i>ex-situ</i> feeding sites that are typically large, open intensively managed short grasslands, such as sports fields, amenity grassland or golf courses, (Defra Wildlife Management Team, 2001; BirdWatch Ireland, 2022). Also, Brent geese have been known to display site	Effects associated with pollution during the construction works: <ul style="list-style-type: none"> Decrease in water quality. 	This species is not known to occur within the area, and no suitable habitat for this species was identified onsite or within the vicinity of the Site. However, the species has potential to utilise the main channel of the Ballysadare River. Therefore, given the potential hydrological connection linking the Site to the Ballysadare River and Ballysadare Bay SAC and SPA, there is potential for impacts to occur as a result of a potential pollution events during the construction phase. Pollution of the water course could adversely impact fish species within the river which is this species source of food. Therefore, as a precautionary measure, water mitigation measures will be incorporated into the works. Therefore, this species has been screened in and will require further assessment.	Screened In

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
	<p>fidelity to breeding and wintering sites, meaning juveniles that are brought to wintering sites by their parents will remain loyal to those parental sites (Summers & Critchlet, 1990).</p> <p>Although the agricultural grassland may be considered suitable for wintering Brent geese, this species is unlikely utilise the Site during the winter season given the species site fidelity for <i>ex-situ</i> feeding Site and the fact that the NBDC does not hold records for this species within 2km of the Site (NBDC, 2022).</p>			
Grey Plover	<p>This species breeds in the high arctic regions of Russia and North America, and winters in Ireland within coastal areas (BirdWatch Ireland, 2022).</p> <p>Therefore, the Site is considered unsuitable for breeding and wintering grey plover. Furthermore, the NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022).</p>	N/A	As Above	Screened In
Dunlin	<p>Dunlin breed in sparse low vegetation and have shown a preference for machair habitats and typically winter along coastal areas, specifically mudflats and estuaries (BirdWatch Ireland, 2022).</p> <p>Therefore, the Site is considered unsuitable for breeding and wintering dunlin. Similarly, the NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022).</p>	N/A	As Above	Screened In

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
Bar-tailed Godwit	<p>This species breeds in northern Europe, Norway and Finland, and winters entirely along Irish coastlines predominantly in sandy estuaries (BirdWatch Ireland, 2022).</p> <p>Therefore, this Site is considered unsuitable for breeding and wintering bar-tailed godwit. Similarly, the NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022).</p>	N/A	As Above	Screened In
Redshank	<p>Redshank are a ground nesting bird that prefer to nest in grassy tussock in wet marshy areas, but have been noted occasionally nesting in heather (BirdWatch Ireland, 2022). This species prefers to winter in mudflats, estuaries and inlets; however, small numbers have been noted in lakes and rivers (BirdWatch Ireland, 2022).</p> <p>The Site is considered unsuitable for breeding and wintering redshank based on the onsite habitats and location of the Site. Also, the NBDC does not hold records for this species within 2km of the Site within the last 10 years (NBDC, 2022).</p>	N/A	As Above	Screened In
Wetland and Waterbirds	<p>The NBDC does not hold records for any wetland and waterbird species within 2km of the Site within the last 10 years (NBDC, 2022).</p>	N/A	As Above	Screened In

6.2 Screening Conclusion

Using professional experience, guidance and judgement, the following factors have been taken into account on identifying potential significant impacts on the identified Natura 2000 site:

- Qualifying interests;
- Special conservation interests;
- Conservation objectives;
- The nature of the onsite habitats; and,
- The location of the Site.

The screening process has examined the potential for the Proposed Development to significant effects cause adverse effects on Natura 2000 sites and the qualifying features of interest as per the screening determination in Section 4.

Taking a precautionary approach, the screening exercise has identified the following designated habitats and species:

Species

- Otter;
- Atlantic Salmon;
- Light-bellied Brent Goose;
- Grey Plover;
- Dunlin;
- Bar-tailed Godwit;
- Redshank; and,
- Wetland and Waterbirds.

These species have been brought forward for further consideration due to the potential for adverse effects, as a result of the Proposed Development, in the absence of the appropriate mitigation measures. Therefore, progression to Stage 2 of the Appropriate Assessment process is required.

Section 7 further addresses potential issues arising from the Proposed Development and the mitigation measures required to negate any potential adverse effects on these habitats and species.

7 STAGE 2: ASSESSMENT OF POTENTIAL ADVERSE EFFECTS

This section provides recommendations for measures which will mitigate against any potential adverse effects of the proposed works on qualifying habitats and species throughout the duration of the project. The following effects with potential to adversely affect the conservation objectives of the identified Natura 2000 sites were identified and considered:

- Potential impairment of water quality during construction phase; and,
- Potential impairment of water quality during operational phase.

7.1 Potential Impairment of Water Quality during the Construction Phase

Due to the network of drainage ditches within the vicinity of the Site and the topography of the surrounding landscape, there is potential for these drainage ditches to discharge into either the Ballygrania River or the Lurgan 35 Stream. As detailed in section 3.2, both watercourses eventually drain into the Unshin River, which is part of the Unshin River SAC and discharges into the Ballysadare Bay SAC and SPA.

Although the NBDC does not hold records for otter or Atlantic salmon within 2km of the Site and suitable habitats for these species was not identified during the Site walkover; the potential hydrological connection between the Site and the Unshin River means that there is potential for pollutants to adversely affect these species should they enter the watercourse.

Should run-off of potential pollutants from the construction area reach surface water or receiving watercourses, this could adversely affect the water quality within the streams and further downstream, subsequently adversely affecting the species within the protected Natura 2000 site. Potential pollutants resulting from the construction works could include suspended solids and / or hydrocarbon leaks or spills.

Should sediment / silt enter the watercourses, this has the potential to clog fish gills, degrade spawning habitats and the cover / smother of aquatic plants, which would result in decreased food availability and shelter for fish species. Also, should pollutants, such as hydrocarbons, concrete washout water or detergents, enter the watercourses there is potential for the chemical balance of the watercourse to change, which would be toxic to fish and other wildlife. Similarly, a decreased in fish populations would result in a decrease of food availability for otter, birds and other fish species.

However, there will be no direct discharges to any of the nearby ditches during the construction phase. Nonetheless, all construction works will be undertaken in accordance with recognised best practice guidance as outlined in Section 3.5 of this report. Also, as a precautionary principle, the following mitigation measures will be put in place to remove the risk from potential contamination and emergency procedures to be implemented in the event of an accidental release or spill of potentially contaminating substances. These procedures will be communicated to all relevant site staff. At a minimum the following measures will be in place:

- Adequate spill kits including absorbent booms and other absorbent material will be maintained onsite;
- All contractor workers will be appropriately trained in the use of spill kits;
- Any spillage of cementitious materials will be cleaned-up immediately;
- Any sediments adversely effected by contamination will be excavated and stored in appropriate sealed containers for disposal offsite in accordance with all relevant waste management legislation;
- The working area will be clearly defined and construction activities will be carefully planned to minimise ground disturbance;

- Vegetation clearance will be limited where possible;
- Stockpile of material will be covered during periods of prolonged or heavy rain and will be located away from ditches;
- Concrete pours will be adequately planned and executed;
- Washouts of equipment used for concrete operations will be done either offsite or within a designated washout area, which will comprise of a container that will capture the washout material / water for reused or disposal offsite;
- Adequate fuel storage facilities and re-fuelling protocols will be provided; and,
- The installation of silt traps at the appropriate locations to mitigate against any potential impacts to the watercourses associated with suspended solids in runoff from the construction area.

The following best practice guidelines will be followed, which are based on Inland Fisheries Ireland (IFI, 2016) and National Roads Authority (NRA, 2005) guidance documents:

- All materials shall be stored at the main contractor compound and transported to the works zone immediately prior to construction;
- Only emergency breakdown maintenance will be carried out onsite. Emergency procedures and spillage kits will be available and construction staff will be familiar with emergency procedures;
- Any pouring of concrete will only be carried out in dry weather. Washout of concrete trucks will not be permitted on the Site;
- Fuels, lubricants and hydraulic fluids for equipment used in the construction site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice;
- Fuelling and lubrication of equipment will be carried out offsite;
- No vehicle or equipment maintenance work will take place within the Site;
- Prior to any works commencing, all construction equipment will be checked to ensure that they are mechanically sound, to avoid leaks of oil, fuel, hydraulic fluids and grease; and,
- Measures will be implemented to minimise waste and ensure correct handling storage and disposal of waste.

Periodic monitoring will be undertaken during the construction works to ensure that the above measures are effective.

Therefore, it can be concluded that the activity at the Site will not have any adverse effects on either the surface water or groundwater quality of the nearby watercourses, or on the protected Natura 2000 sites and their designated conservation interests.

7.2 Potential Impairment of Water Quality during the Operational Phase

7.2.1 Surface Water Drainage

As part of the design of the Proposed Development, the synchronous condenser compound and access road surface will be surfaced with a permeable stone hardcore material, which will effectively provide a large soak-pit for the rainfall on these areas. This free draining material will allow rainfall to permeate into the ground. Assuming a very basic infiltration rate through the permeable stone it is clear that the existing greenfield condition will be maintained.

Additionally, run-off from the roofs of the buildings will be collected from a series of down pipes and gullies and will be gathered into uPVC pipes ranging from 150mm to 225mm diameter pipes and run into an attenuation pond.

Calculations for the surface water attenuation system show that the critical storm durations for the 100-year return period is the half-hour storm, the volume of storage required is 55m³, see Drainage Report for further details. A Stormtech SC-740 attenuation system has been proposed to store the surface water balance. Post attenuation the storm water is to be discharged to an existing watercourse; the discharge is to be restricted to 9.603 l/s by a hydrobrake. For full details of the Stormtech attenuation details refer to the Drainage Report.

The pipes of the storm water drainage system were designed for a rainfall intensity of 50 mm/hour in accordance with Part H of the building regulations, which equates to the peak a half-hour rainfall with a 100-year return period allowing 15% for climate change. Before the storm water is attenuated it will pass through a Class 1 Klargestor NSBE015 by-pass separator to remove hydrocarbons and silt. For details of the by-pass separator refer to the Drainage Report.

Therefore, it can be concluded that the during the operational phase, surface water drainage will not have any adverse effects on either the surface water or groundwater quality of the nearby watercourses, or on the protected Natura 2000 sites and their designated conservation interests.

7.2.2 Oil, Hydrocarbons, Fuels

The Proposed Development include transformer oil, lubricant oil for the bearings of the generator and flywheel and batteries for the DC system of the plant, which will be similar to typical batteries used in substations. The oil skid will have a steel tank that will hold ca. 8,000 litres of lubrication oil, which will be located within synchronous condenser building. Also, the amount of transformer oil held onsite will equate to ca. 20,000 litres.

In the event of a major emergency that results in a massive loss of oil from the transformer, should this oil be released into the environment this would have the potential for the chemical balance of the watercourse to change, which would be toxic to fish and other wildlife. Similarly, a decreased in fish populations would result in a decrease of food availability for otter, birds and other fish species. However, it can be concluded that should a major pollution event occur, water quality will not be adversely affected due to the fact that the transformers will be bunded. Furthermore, in line with EPA guidance, the bunds will be designed to hold 110% capacity of the liquid stored in the transformers. The bunds will be alarmed with the SCADA system. Under normal operation, this oil is maintained within the system and no emissions will occur.

Therefore, it can be concluded that the during the operational phase, the Proposed Development will not have any adverse effects on either the surface water or groundwater quality of the nearby watercourses, or on the protected Natura 2000 sites and their designated conservation interests.

7.3 Analysis of 'In-Combination' Effects

The Habitats Directive requires competent authorities to make an appropriate assessment of any plan or project which is likely to have a significant effect alone or in-combination with other plans and projects.

Following a review of the Sligo County Council ePlan website (ePlan, 2022), there are three (3No.) planning permissions of note within the vicinity of the Proposed Development as outlined in Table 1-1 above.

These developments were subjected to an Appropriate Assessment. Therefore, as part of the planning process both developments were assessed for potential adverse effects to Natura 2000 sites.

Taking into account the mitigation measures detailed within the prepared NIS Reports that will be implemented should these developments commence, it can be concluded that neither the proposed battery storage facility or the proposed 250 to 300 MVA synchronous condenser and any associated works will not result in any adverse effects on the integrity of any Natura 2000 sites either alone or in-combination with other plans or projects inclusive of the Proposed Development described in this report.

It should be noted that the nearby Srananagh ESB 220/110kV Substation was constructed in 2005/2006 (EirGrid Group, 2018). Taking into account the fact that this substation is already constructed, is established within the landscape, and there have been no adverse effects recorded on the Natura 2000 sites as a result of this substation, it can be concluded that the Proposed Development and the existing ESB substation will not result in any in-combination effects on any Natura 2000 sites.

Therefore, given the fact that the aforementioned projects will not result in any adverse effects to European Designated Sites, it can be concluded that the Proposed Development will not result in any in-combination contribution to adverse effects on the Unshin River SAC, the Ballysadare Bay SAC and Ballysadare SPA or the integrity of any other Natura 2000 site.

This conclusion is based on the localised nature of the Proposed Development, the mitigation measures that will be put in place and the best practice guidelines which will be implemented during the construction and operational phase of the Proposed Development.

8 SCREENING CONCLUSIONS AND STATEMENT

A detailed assessment of the layout and nature of the Proposed Development, the construction methods to be employed and the overall activities that will occur at the Site during construction and operation has been carried out and the potential for adverse effects on Natura 2000 sites and qualifying features of interest within a 15km radius of the Site has been examined in detail.

Eleven (11No.) designated sites, the Lough Gill SAC, Templehouse and Cloonacleigha Loughs SAC, Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC, Lough Arrow SAC, Bricklieve Mountains and Keishcorran SAC, the Unshin River SAC, the Ballysadare Bay SAC, Union Wood SAC, Ballysadare SPA Lough Arrow SPA and Cummeen Strand SPA, are located within a 15km radius of the Site. Of the Natura 2000 sites identified within a 15km radius, the Unshin River SAC, the Ballysadare Bay SAC and Ballysadare SPA was taken forward for further detailed consideration due to the hydrological connection between the Site and the Natura 2000 sites.

It is considered reasonable to conclude that the Proposed Development will not result in any adverse effects on the basis that the specific mitigation measures will be implemented. Specifically, the proposed construction works will be undertaken to avoid impairment of water quality.

In terms of significance with regard to adverse effects on Natura 2000 sites, the NPWS Guidance (2009) uses an EC definition as follows:

'Any element of a plan or project that has the potential to affect the conservation objectives of a Natura 2000 Site, including its structure and function, should be considered significant (EC, 2006).'

It can be concluded that the proposed synchronous condenser facility and all associated site works, alone or in-combination with other projects, will not adversely affect the integrity, and conservation status of any of the qualifying interests of the Unshin River SAC, the Ballysadare Bay SAC and Ballysadare SPA.

Accordingly, progression to Stage 3 of the Appropriate Assessment process (i.e. Assessment of Alternatives Solutions) is not considered necessary.

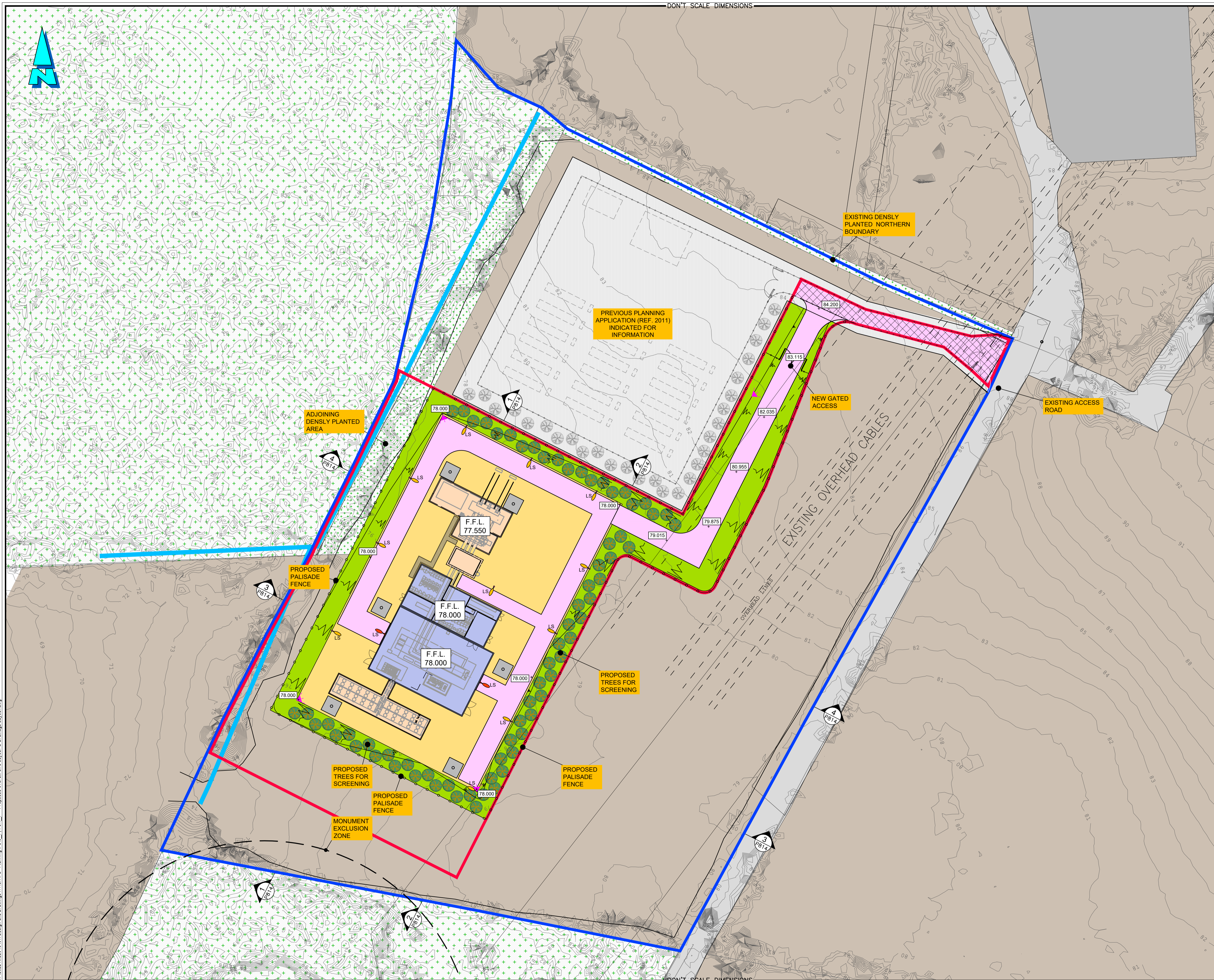
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APPENDICES

APPENDIX A



Health and Safety:

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, THE SPECIFICATION AND THE SAFETY AND HEALTH PLAN.

THE APPOINTMENT OF THE PROJECT SUPERVISOR DESIGN PROCESS IS THE CLIENT'S RESPONSIBILITY.

TEMPORARY WORKS PROPOSALS AND/OR METHOD STATEMENTS TO BE SUBMITTED TO THE PSDP AND THE PSCS FOR WORKS WHICH INVOLVE PARTICULAR RISKS.

Notes:

- NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE, WITHOUT THE WRITTEN PERMISSION OF MALONE O'REGAN CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DRAWING WAS ORIGINALLY ISSUED.
- THE APPOINTMENT OF THE PROJECT SUPERVISOR DESIGN PROCESS IS THE CLIENT'S RESPONSIBILITY.
- ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED TO THIS OFFICE IN WRITING.
- THIS DRAWING TO BE READ IN ACCORDANCE WITH ALL RELEVANT ENGINEERS' DRAWINGS AND SPECIFICATIONS.

LEGEND:

- EXTENT OF LAND UNDER THE APPLICANTS CONTROL
- EXTENT OF CURRENT PLANNING APPLICATION
- LOCATION OF EXISTING DRAINAGE DITCH
- AGRICULTURAL FIELD AREA
- FORESTRY AREAS
- EXISTING GROUND LEVEL CONTOUR
- PROPOSED GROUND LEVEL
- NATIVE VARIETIES DENSELY PLANTED TO NORTH, SOUTH & EASTERN BOUNDARIES.
- ACCESS ROADS
250mm MIN. dp. COMPACTED CLAUSE 808 COMPACTED IN LAYERS NOT GREATER THAN 200mm ON TERRAM 1000 GEOTEXTILE ON SOLID FORMATION
- SITE ACCESS GRANTED UNDER PLANNING REF. NO. 2011 TO BE USED TO ACCESS THE PROPOSED SITE.
250mm MIN. dp. COMPACTED CLAUSE 808 COMPACTED IN LAYERS NOT GREATER THAN 200mm ON TERRAM 1000 GEOTEXTILE ON SOLID FORMATION
- HARDCORE YARD AREA
250mm MIN. dp. COMPACTED CLAUSE 808 COMPACTED IN LAYERS NOT GREATER THAN 200mm ON TERRAM 1000 GEOTEXTILE ON SOLID FORMATION
- LANDSCAPED AREA
300mm MIN. dp. TOPSOIL ON SOLID FORMATION
- 11o. DISANO SpA 3478 16 LED 4K CLD MINI GIOVI M1 - STRADALE. POLE MOUNTED AT 6m ABOVE GL.
- 2o. DISANO SpA 3478 16 LED 4K CLD MINI GIOVI M1 - STRADALE. BUILDING MOUNTED AT 10m ABOVE GL.
- PROPOSED SECURITY CAMERA POLE MOUNTED AT 4m ABOVE GL.

P	PLANNING ISSUE	21.10.2022	JD	COB	BM
Rev.	Description	Date	Drawn	Chkd	Appr

THIS DRAWING TO BE USED FOR PLANNING PURPOSES ONLY

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Client: ORSTED ONSHORE IRELAND MIDCO LTD.

Job: SYNCHRONOUS CONDENSER AT BALLYSUMAGHAN, CO SLIGO.

Drawing: PROPOSED OVERALL SITE LAYOUT

Job No	Dwg No	Stage	Revision	Scale
W22048	P810	PL	P	A1 1:500 A3 1:1,000

R:\2022\W22048\07 - Design and Drawings\1 MOP\VL - Planning\P810 - Proposed Overall Site Layout & Drainage Layout.dwg