

# Natura Impact Statement

## Proposed Battery Storage Facility at Ballysumaghan, Co. Sligo

On behalf of

**Brookfield**Renewable



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**Title: Natura Impact Statement, Proposed Battery Storage Facility at Ballysumaghan,  
Co. Sligo, Brookfield Renewable**

**Job Number: E1629**

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## Revision Record

Issue No.	Date	Description	Remark	Prepared	Checked	Approved
00	17/01/2020	NIS Report	FINAL	AK	DH	DH

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**Natura Impact Statement**  
**Proposed Battery Storage Facility at Ballysumaghan, Co. Sligo**  
**Brookfield Renewable**

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## **APPENDICES**

### **Appendix A: Site Layout**

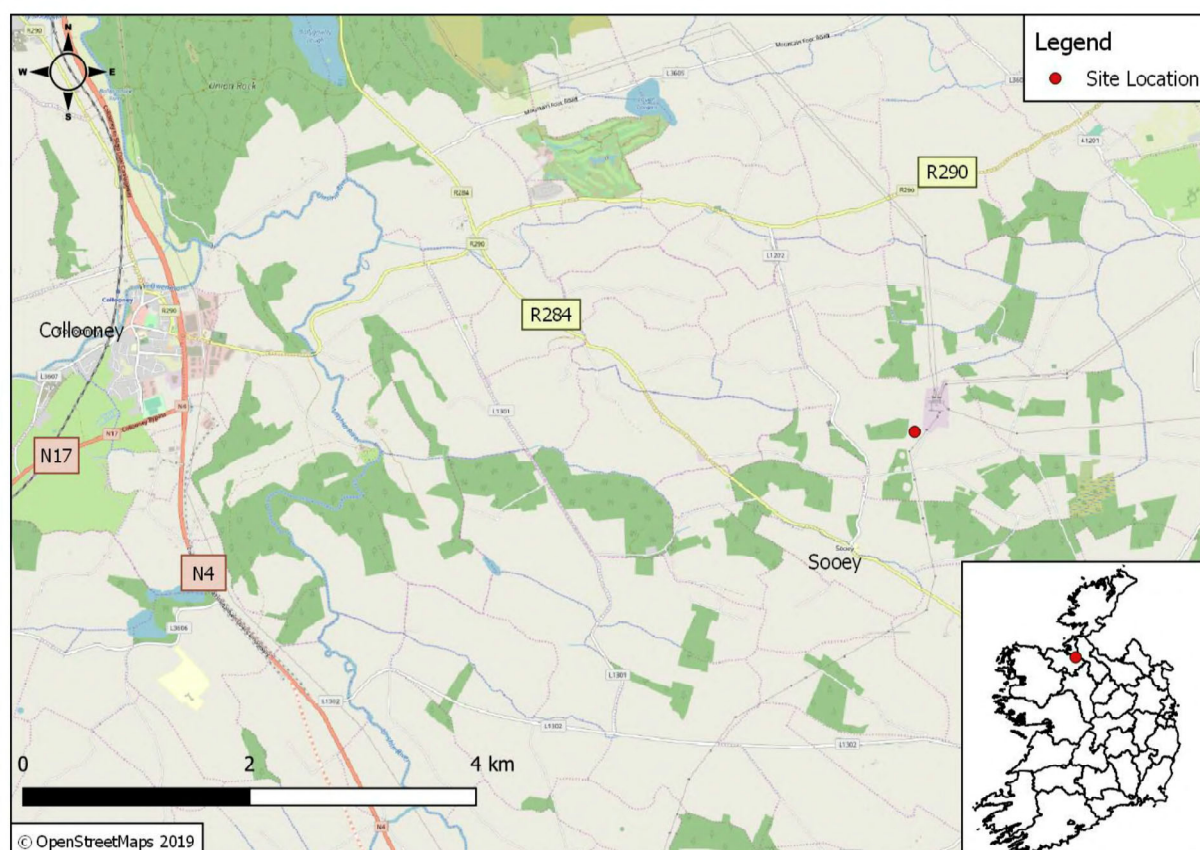
# 1 INTRODUCTION

## 1.1 Background

Malone O'Regan Environmental (MOR) were commissioned by Brookfield Renewable to undertake an Appropriate Assessment (AA) to assess the potential adverse effects, if any, of the proposed battery storage facility and associated works on nearby sites with European conservation designations (i.e. Natura 2000 sites).

The location of the proposed development ('the Site') is located on lands at Ballysumaghan, Co. Sligo (OS Reference: G 74785 25211) and is shown in Figure 1-1.

**Figure 1-1: Site Location**



The purpose of this assessment was to determine the appropriateness, or otherwise, of the proposed works in the context of the conservation objectives of Natura 2000 sites.

## 1.2 Statement of Authority

The report was approved by Mr. Dyfrig Hubble, Principal 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.

## 1.3 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.

## **1.4 Stages of Appropriate Assessment**

There are four 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 Desk Based Studies**

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

- 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 (National Parks and Wildlife Service, 2019);
- The National Biodiversity Data Centre website was consulted with regard to species distributions (National Biodiversity Data Centre, 2019);
- The EPA Envision website was consulted to obtain details about watercourses in the vicinity of the Site (<https://gis.epa.ie/EPAMaps/>) (EPA, 2019); and,
- The EPA Catchments website was consulted to obtain details about watercourses in the vicinity of the Site (<https://www.catchments.ie/maps/>) (EPA Catchments, 2019).

### **2.2 Field Based Studies**

A site walkover was undertaken on the 3<sup>rd</sup> of December 2019 by two (2No.) suitably qualified MOR Ecologists, to assess the on-site conditions and to identify any potential ecological receptors associated with the Natura 2000 sites.

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.

#### **2.2.1 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.

##### **2.2.1.1 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.

##### **2.2.1.2 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.

### **2.3 Survey Limitations**

No survey limitations were encountered.



### 3 DESCRIPTION OF THE PROJECT

#### 3.1 Site Context and Description

The Site, which is ca.0.64 hectares (ha) in size, is located within the Ballysumaghan townland, Co. Sligo. The Site is located ca.6.7km southeast of Collooney and ca.11.3km southeast of Sligo within a rural landscape.

The Site is located approximately 135m southwest of the ESB Srananagh 220/110kV substation, which was constructed under Planning Ref.: **001256**. The Site is accessed via an unnamed local road to the east of the Site.

The Site is comprised predominantly of 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, 2019).

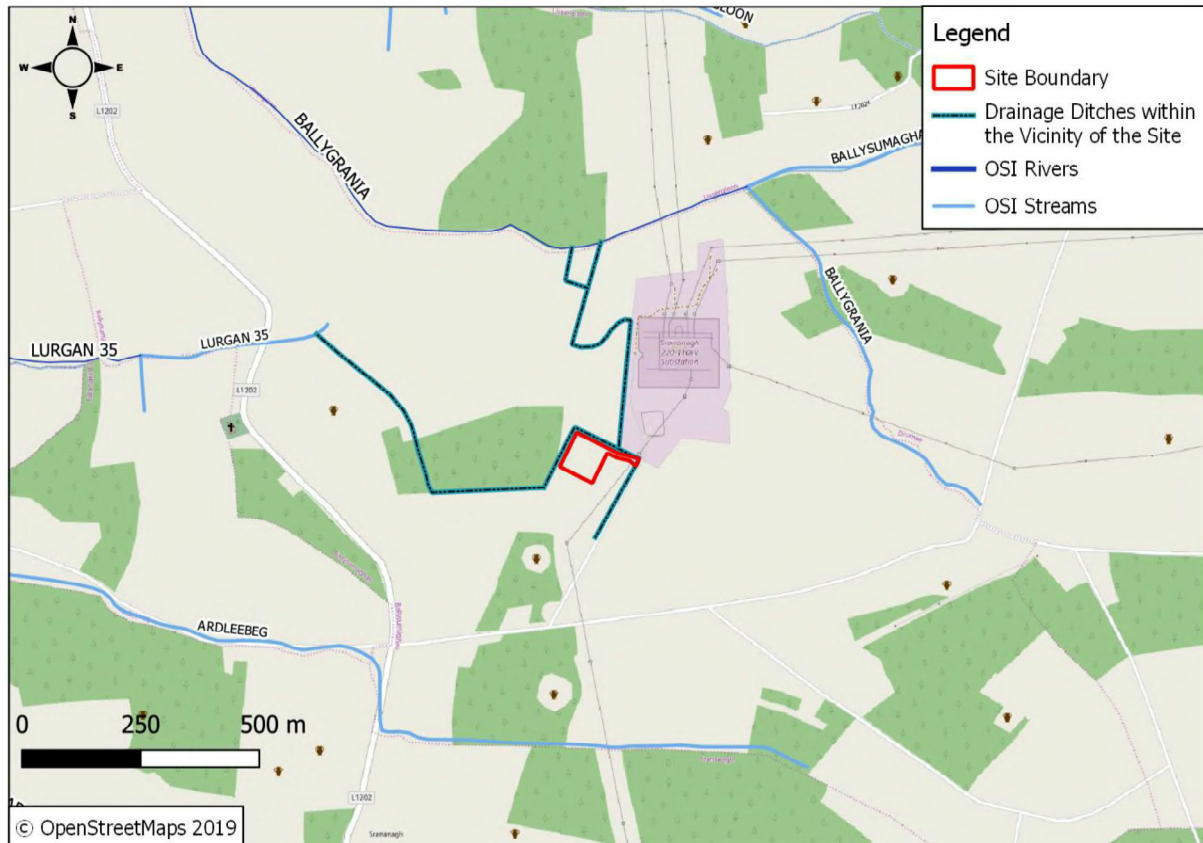
There are two watercourses within the vicinity of the Site, the Ballygrania River, located 382m north of the Site, and the Lurgan 35 Stream, located 566m northwest of the Site. According to the EPA, both the Ballygrania River and the Lurgan 35 Stream have 'high' water quality status but are considered to be 'at risk.'

The Site is bordered by drainage ditches to the north, west and east. Given the topography of the Site and the drainage ditch network within the area surrounding the Site, there is potential for these drainage ditches to discharge into the Lurgan 35 Stream and the Ballygrania River. The Lurgan 35 Stream discharges into the Lurgan 35 River, ca.427m downstream east of the

Site, and eventually joins the Ballygrania River, a further ca.814m downstream. The Ballygrania River discharges into the Unshin 35 River ca.6.6km downstream, which is part of the Unshin River SAC (See Figure 4-2).

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**



### 3.3 Proposed Development

The proposed development will comprise the installation of eighteen (18No.) ISO shipping container units positioned within the Site. These units will be similar to the unit presented in Figure 3-3 below. These units will house lithium-ion (li-ion) battery arrays. Li-ion batteries will be used due to their proven-track record with high cycle life. Li-ion battery arrays have an expected life cycle of over 4,500 cycles, equivalent to ca.15 years of use.

The units will be equipped with control features to monitor and respond to temperature variations and voltage protection. The battery arrays will be certified to UL 1973 or similar. UL 1973 is the 'Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications', 2018. This standard evaluates the battery systems ability to safely withstand simulated abuse conditions, and thereby ensure that the systems are fit for purpose.

They are the energy storage method of choice within the renewable energy sector due to their track record in safety and wide array of uses in sectors such as:

- Integration of renewable energy,
- Area regulation; and,
- Reduction of grid congestion.

The units are sealed, with the internal batteries fixed into cabinet arrays. Monitoring systems relating to the performance of the batteries are remotely monitored, both within the onsite Control Building and externally to the Site via remote access. Any loss in battery capacity is thereby notified immediately to the system controllers and will trigger a site inspection.

**Figure 3-3: An example ISO shipping container unit for battery storage unit**



The proposed development will enable the storage of electricity, typically during periods of high supply / low demand that will be available for use by the system operator in the event of a system disturbance, or where supply is lower than demand.

The proposed battery storage facility will comprise of the following:

- Battery yard;
- Control building;
- Transformer and transformer bund; and,
- Ancillary works which include underground cable trench, step-up transformers, hardcore areas, fencing, security lighting and CCTV.

The proposed Site Layout is illustrated in Appendix A.

### **3.3.1 Site Access**

The Site will be accessed via an access track located off the unnamed local road located adjacent to the eastern Site boundary (See Appendix A). The existing field access will be widened to facilitate safe access to the Site.

### **3.4 Sensitive Design**

Specialist ecological input was a key element of the proposed design. This was to ensure that the design of the proposed infrastructure works was extremely sensitive to valued ecological features that occur or may occur within the Site and the surrounding landscape.

### **3.5 Construction Procedures**

During the construction phase, potential environmental impacts will be short-term and localised. Nonetheless, all works will comply with the relevant legislation, construction industry guidelines and best practice in order to reduce potential environmental impacts.

As detailed within the Ecological Impact Assessment (EclA), a Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor and will be submitted to Sligo County Council (SCC) in advance of works commencing at the Site. The following



guidance 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 (4<sup>th</sup> edition) (CIRIA, 2015).

#### Duration and Timing of Works

The proposed works will take approximately 12-16 weeks to complete. Construction working hours will be restricted to 08:00 to 19:00 Monday to Saturday, unless specifically agreed with the Council for special circumstances.

### **3.6 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 the Environmental Report (ER) and the CEMP.

In addition, the ECoW will either deliver or provide the resident engineer with sufficient environmental information to deliver a Site induction to all personnel working on-site.

#### **3.6.1 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. Significant maintenance works during the operational life of the facility are not envisaged.

#### **3.6.2 Decommissioning**

The project will have a 15 year life span from the grant of planning application. This is the usable life for the battery technology proposed for the Site.

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

- Removal of the battery storage units from the Site: This will require the use of a fixed crane and articulated Heavy Goods Vehicles (HGVs). These units contain precious components and removal will enable recycling of these units on the open market, or the option of repositioning to an alternative site;
- 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,
- The control building will require the removal of all internal Information Technology (IT) from the building: This will leave a re-usable building unit.

The above work will therefore require similar processes as the construction phase, with a timeframe comparable with the construction programme.

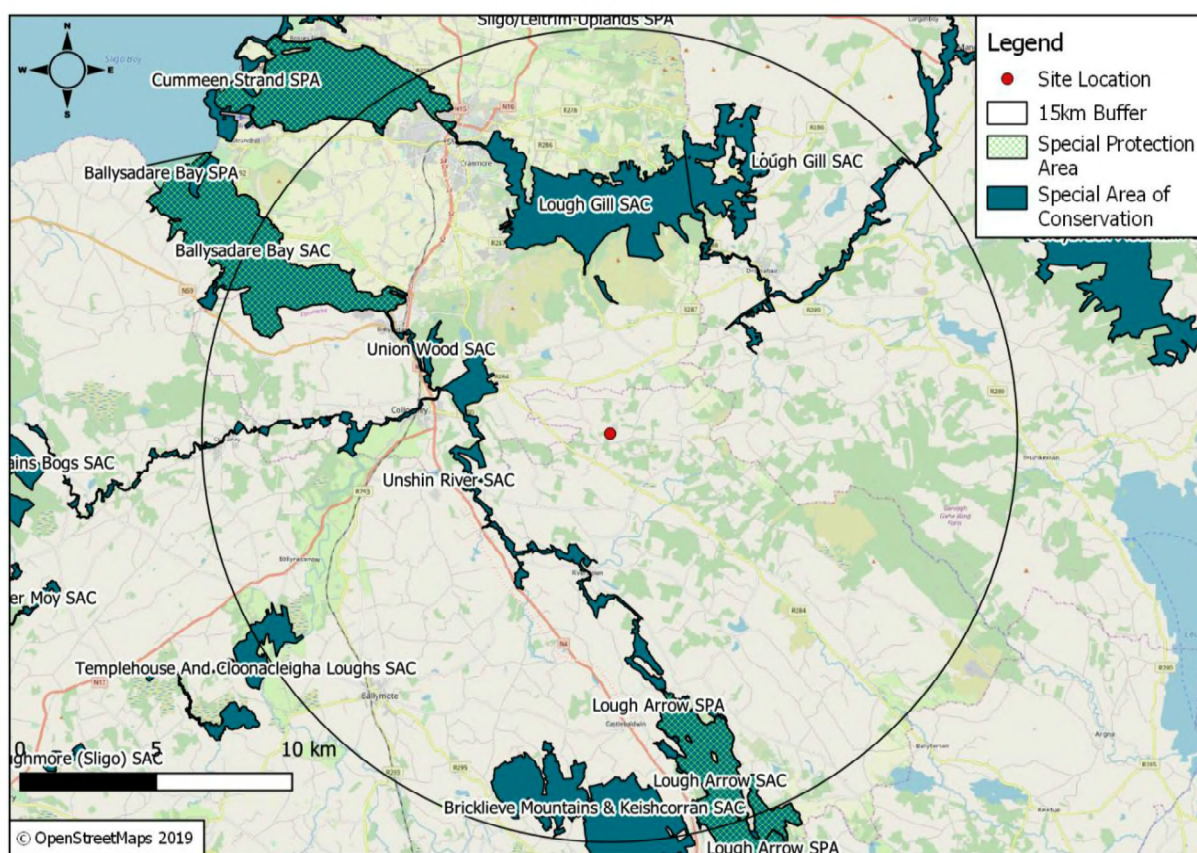
Given the nature of the proposed development and the small amount of infrastructure required for the development, it is considered highly unlikely that any impacts would occur as a result of decommissioning works. However, decommissioning works will be carried out in accordance with best practice and legislation applicable at the time of decommissioning.

## 4 IDENTIFICATION OF NATURA 2000 SITES

In accordance with the European Commission Methodological Guidance (European Commission, 2002) 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 (DoEHLG, 2009) 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 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 sensitivities of the ecological receptors; and, the potential for in-combination effects.

Adopting the precautionary principle, all SAC and SPA sites within a 15km radius of the Site have been considered (Refer to Figure 4-1).

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



There are ten (10No.) European sites located within 15km of the Site - these are identified in Figure 4-1 and Table 4-1.

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

Site Name	Code	Distance (km)	Direction from the Site
<b>Special Areas of Conservation (SAC)</b>			
Unshin River	001898	4.4km	W
Lough Gill	001976	4.8km	N
Union Wood	000639	7.0km	NW

Site Name	Code	Distance (km)	Direction from the Site
Ballysadare Bay	000622	9.0km	NW
Lough Arrow	001673	9.8km	SE
Bricklieve Mountains and Keishcorran	001656	11.6km	S
Cummeen Strand / Drumcliff Bay (Sligo Bay)	000627	12.3km	NW
Templehouse and Cloonacleigha Loughs	000636	13.6km	SW
<b>Special Protection Area (SPA)</b>			
Ballysadare Bay	004129	9.0km	NW
Lough Arrow	004050	9.8km	SE
Cummeen Strand	004035	12.6km	NW

The Site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of seven (7No.) 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.

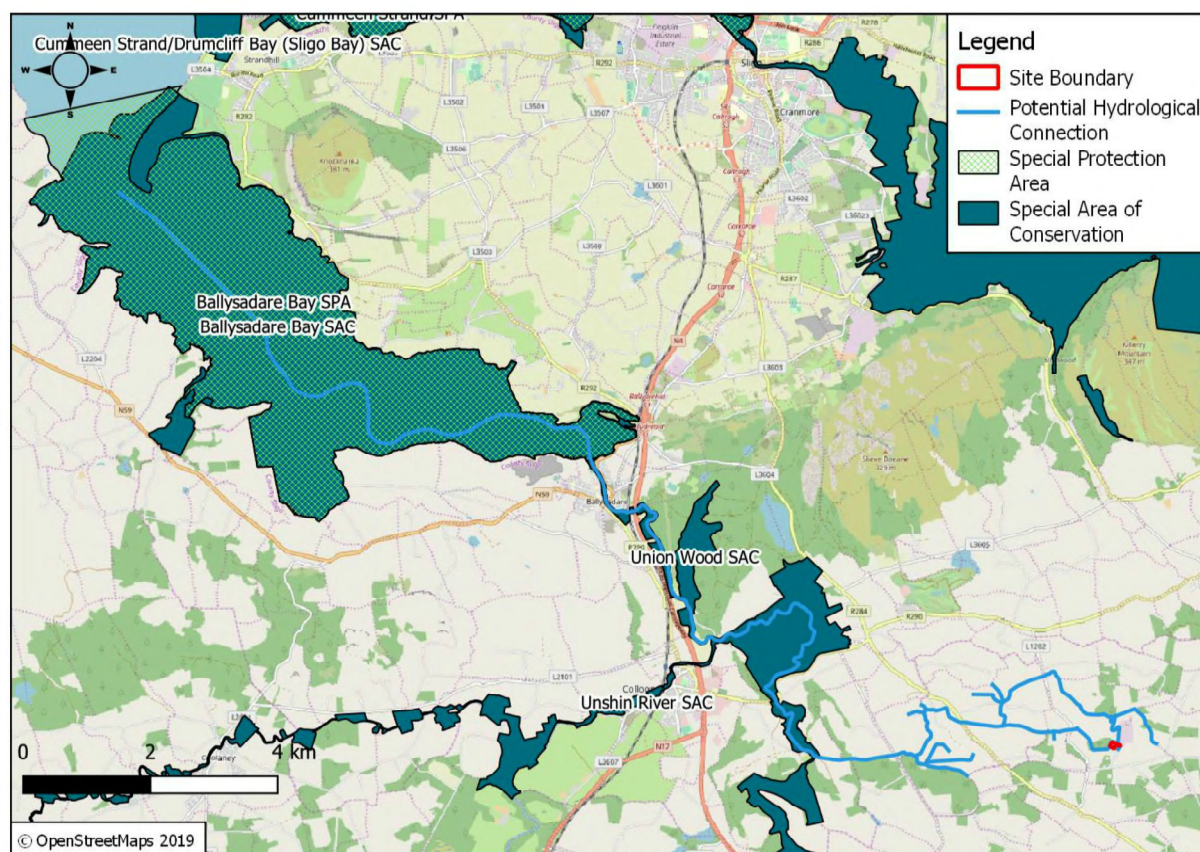
However, given the topography of the Site and the network of drainage ditches on-site and within the vicinity of the Site, there is potential for an indirect hydrological connection between the Site and Unshin River SAC via, the Ballygrania River, located ca.382m north of the Site, and the Lurgan 35 Stream, located 566m northwest of the Site (Refer to Section 3.2 and Figure 4-2).

Also, the Unshin River discharges into the Ballysadare River, ca.5.2km downstream, and the Ballysadare River is part of the Ballysadare Bay SAC and SPA approximately 4.2km downstream (Figure 4-2).

Therefore, further consideration will be given to these Natura 2000 sites, to assess potential adverse effects resulting from the proposed development. Further details of the Unshin River SAC, Ballysadare Bay SAC and Ballysadare SPA are provided below.



**Figure 4-2: Potential Indirect 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 4-2) and Annex II species (Table 4-3).

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 4-2: 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 <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	3260	Maintain or restore favourable conservation condition
Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> ) (* important orchid sites)	6210	Maintain or restore favourable conservation condition
<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )	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
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**Table 4-3: 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 4-4) and Annex II species (Table 4-5).

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 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 4-4: 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 4-5: 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 I bird species (refer to Table 4-6). 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 4-6: 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 SAC<sup>1</sup>, Ballysadare Bay SAC<sup>2</sup> and the Ballysadare Bay SPA<sup>3</sup> can be found on the NPWS website.

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<sup>1</sup> [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO001898.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001898.pdf)

<sup>2</sup> [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO000622.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000622.pdf)

<sup>3</sup> [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO004129.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004129.pdf)

## 5 STUDY RESULTS

### 5.1 Desk-Based Study Results

Using the National Biodiversity Data Centre's data bases, there were no records of legally protected or otherwise notable designated species that occur within a 2km grid square of the Site boundary from the last ten (10No.) years (National Biodiversity Data Centre, 2019).

### 5.1 Field Studies Results

#### 5.1.1 Habitat Survey

##### Site Context and Surrounding Habitats

The Site is situated within an agricultural field, ca.135m southwest of the existing ESB Srananagh 220/110kV substation. The Site is bounded by agricultural fields, hedgerows, drainage ditches, and a broadleaved woodland to the northwest of the Site. Also, ca.143m southwest of the Site there is a conifer plantation.

A description of the habitats and features of ecological significance are outlined below and their distribution is illustrated in Figure 5-1.

##### Improved Agricultural Grassland (GA1)

The entirety of the Site is within a managed agricultural field currently grazed by cattle. At the time of the survey, the field had been topped. The species that dominated the grassland included: grasses, primarily perennial ryegrass (*Lolium perenne*), and rushes (*Juncus* spp.). Also identified within the grassland, were mosses (*Brachythecium* species), meadow buttercup (*Ranunculus acris*) and speedwells (*Veronica* spp.). The Site has an undulating topography, as a result portions of the field with lower elevation were wetter and more heavily dominated by rushes.

##### Hedgerows (WL1)

The northern, eastern and a portion of the southern Site boundary were made up of unmanaged hedgerows that were becoming treelines. All of the hedgerows were comprised of predominantly hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), gorse (*Ulex* spp.), blackthorn (*Prunus spinosa*), alder (*Alnus glutinosa*) and ash saplings (*Fraxinus excelsior*).

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 were recorded in the ground layer of the hedgerows, including ground ivy (*Glechoma hederacea*), common vetch (*Vicia sativa* ssp. *segetalis*), creeping buttercup (*Ranunculus repens*), snowberry (*Symphoricarpos albus*), shield fern (*Polystichum setiferum*) and harts-tongue fern (*Phyllitis scolopendrium*).

##### Drainage Ditches (FW4)

Drainage ditches occur adjacent to the eastern, northern and a portion of the western Site boundaries. At the time of the survey the drainage ditches were wet, however, there was not enough water in the ditches for there to be a flow of water.

The drainage ditches are steep sided, approximately 0.5m deep and heavily shaded by the hedgerows and broadleaved woodland. Limited plant diversity was observed within the ditches due to the heavy shading by the terrestrial vegetation and the ditch profile. The species identified growing along the sides of the drainage ditches included common Tamarisk-moss (*Thuidium tamariscinum*), ivy, shield ferns, harts-tongue fern, common field speedwell (*Veronica persica*), bramble and broad-leafed dock (*Rumex obtusifolius*).



**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 Ranunculus fluitans and Callitriche-Batrachion vegetation	The field survey shows that this habitat is not within the immediate vicinity of the Site or the surrounding area.	N/A	Given the absence of this habitat within the Site boundary, 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 development.  No further assessment required.	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	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development.  No further assessment required.	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	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development.  No further assessment required.	Screened Out
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	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development.  No further assessment required.	Screened Out

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

Qualifying Feature of Interest	Baseline	Potential effects	Adverse effects	Screening Rationale	Screening Conclusion
<b>Otter</b>	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	<b>Main / Possible threats to the species include:</b> Decrease in water quality.		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 in the absence of mitigation. To ensure that no significant adverse effects occur on otter, 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.  Further assessment will be required.	<b>Screened In</b>
<b>Atlantic salmon</b>	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	<b>Main / Possible threats to the species include:</b> Decrease in water quality.		This species is very sensitive to water quality and any potential adverse effects on water quality could adversely affect the species.  Therefore, 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 on-site drainage ditches.  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.  Further assessment will be required.	<b>Screened In</b>

**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	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development. No further assessment required.	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	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development. No further assessment required.	Screened Out
Embryonic shifting dunes	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development. No further assessment required.	Screened Out
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development. No further assessment required.	Screened Out
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	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development.	Screened Out

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
			No further assessment required.	
Humid dune slacks	The field survey shows that this habitat is not within the immediate vicinity of the Site.	N/A	Given the absence of this habitat within the Site boundary and lack of impact pathways, 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 development.  No further assessment required.	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 (Harbour) Seal	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	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. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	Screened Out
Narrow-mouthed Whorl Snail	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	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. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	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	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	Due to the fact that this SPA is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SPA, it is considered unlikely that the proposed development will result in adverse effects to this species. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	Screened Out
Grey Plover	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	Due to the fact that this SPA is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SPA, it is considered unlikely that the proposed development will result in adverse effects to this species. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	Screened Out
Dunlin	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	Due to the fact that this SPA is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SPA, it is considered unlikely that the proposed development will result in adverse effects to this species. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	Screened Out
Bar-tailed Godwit	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	Due to the fact that this SPA is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SPA, it is considered unlikely that the proposed development will result in adverse effects to this species. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.	Screened Out

Qualifying Feature of Interest	Baseline	Potential Adverse effects	Screening Rationale	Screening Conclusion
			No further assessment required.	
Redshank	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	Due to the fact that this SPA is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SPA, it is considered unlikely that the proposed development will result in adverse effects to this species. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	Screened Out
Wetland and Waterbirds	The NBDC does not hold records for this species within 2km of the Site within the last 10 years (National Biodiversity Data Centre, 2019). Similarly, the field survey show that this species is not present within the immediate vicinity of the Site.	N/A	Due to the fact that this SPA is located ca.15km downstream of the Site, with approximately fourteen (14No.) other tributaries entering the watercourse prior to entering the SPA, it is considered unlikely that the proposed development will result in adverse effects to this species. Similarly, there is no suitable habitat for this species on-site or within the vicinity of the Site.  No further assessment required.	Screened Out



## 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.

### 7.1 Potential Impairment of Water Quality during the Construction Phase

The northern, eastern and western Site boundaries are bordered by drainage ditches and 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, both of which 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 indirect 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 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 on-site. 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 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.

Taking into account the small scale and localised nature of the proposed development and the best practice guidelines which will be implemented during the construction and operational phase of the development, it is concluded there will not be any significant in-combination contribution by the project to possible adverse effects on the Unshin River SAC, the Ballysadare Bay SAC and Ballysadare SPA.

## 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.

Ten (10No.) 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, 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 battery storage 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.

## 9 REFERENCES

- CIRIA. (2011). *C532 – Control of Water Pollution from Construction, Guidance for Consultants and Contractors* .
- CIRIA. (2015). *C741 - Environmental Good Practice on Site (4th edition)*.
- DoEHLG. (2009). *Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government .
- EPA. (2019). *EPA Map Viewer*. Retrieved from EPA Maps: <https://gis.epa.ie/EPAMaps/>
- EPA Catchments. (2019, May). Retrieved from Catchments.ie: <https://www.catchments.ie/maps/>
- European Commission. (2002). *Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of articles 6(3) and (4) of the Habitats Directive 92/43/EEC*. Luxembourg: Office for official publications of the European Communities .
- IFI. (2016). *Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters* . Inland Fisheries Ireland.
- National Biodiversity Data Centre. (2019, May). *National Biodiversity Live Maps*. Retrieved from National Biodiversity Data Centre: <http://maps.biodiversityireland.ie/>
- National Parks and Wildlife Service. (2019, May). *National Parks and Wildlife Service*. Retrieved from National Parks and Wildlife Service: <https://www.npws.ie>
- NRA. (2005). *Guidelines for the crossing of watercourses during the reconstruction of national road schemes* . National Roads Authority .

# APPENDICES

# APPENDIX A

