Appropriate Assessment for a development at Lisbanagher, Co. Sligo.

Environmental Services Consultancy

Reference no.: 2200, Appropriate Assessment

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Site Address: Lisbanagher, Co. Sligo.

Project Type: Appropriate Assessment Screening

Date: January 2022

Our Ref: Environmental Services Consultancy- Appropriate Assessment Screening

Contents

Introduction

Background

This Appropriate Assessment Screening was prepared for the proposed development of a dwelling house and waste water treatment plant with associated site works at Lisbanagher, County Sligo (see Figure 1 for site location, Figure 2 for local site location). Having regard to the location of the proposed development site and its proximity to the Unshin River Special Area of Conservation, an Appropriate Assessment of the proposed restoration works was prepared in accordance with Article 6 of the Habitats Directive.

The purpose of the assessment is to determine the appropriateness of the proposed project, in the context of the conservation status of the site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive ecological impact assessment of the plan or project, it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the site conservation objectives.

Aim of this report

This Appropriate Assessment (AA) Screening has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010), and provides an ecological impact assessment (EcIA) for the proposed development of a dwelling house and waste water treatment plant with associated site works at Lisbanagher, County Sligo.

An AA provides information required in order to establish whether or not a proposed development is likely to have a significant impact on certain Natura sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated. In the case of this proposed development site in Lisbanagher, the main Natura 2000 site considered is the Unshin River SAC (Site Code 0001898) due to its proximity to the proposed development.

Accordingly, a comprehensive assessment of the ecological impacts of this application was carried out in January 2022 by Environmental Services Consultancy. This assessment identified areas of potential ecological value and potential ecological constraints associated with the proposed reinstatement to be identified. It also enabled potential ecological impacts associated with the proposed reinstatement to be assessed and mitigated for.

Fig. 1. Location of the construction site at Lisbanagher, Co. Sligo

Relevant Legalisation

The Birds Directive (Council Directive 79/409/EEC) implies that particular protection is given to sites (Special Protection Areas) which support certain bird species listed in Annex I of the Directive and that surveys of development sites should consider the status of such species.

The EU Habitats Directive (92/43/EEC) gives protection to sites (Special Areas of Conservation) which support particular habitats and species listed in annexes to this directive. Articles 6(3) and 6(4) of this Directive call for the undertaking of an Appropriate Assessment for plans and projects likely to have an effect on designated sites. This is explained in greater detail in the following section.

The Wildlife Act 1976 (and its amendment of 2000) provides protection to most wild birds and animals. Interference with such species can only occur under license. Under the act it is an offence to "willfully interfere with or destroy the breeding place or resting place of any protected wild animal". The basic designation for wildlife is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000) NHAs are legally protected from damage. NHAs are not part of the Natura 2000 network and so the Appropriate Assessment process does not apply to them.

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2015 and that status doesn't deteriorate in any waters.

Appropriate Assessment and the Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 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. Natura 2000 sites 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).

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications 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."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions and imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The Appropriate Assessment Process

The aim of Appropriate Assessment is to assess the implications of a proposal in respect of a site's conservation objectives.

Appropriate Assessment is an assessment of the potential effects of a proposed plan - 'in combination' with other plans and projects - on one or more European sites. The 'Appropriate Assessment' itself is a statement which must be made by the competent authority which says whether the plan affects the integrity of a European site. The actual process of determining whether or not the plan will affect the site is also commonly referred to as 'Appropriate Assessment'.

If adverse impacts on the site cannot be avoided, then mitigation measures should be applied during the Appropriate Assessment process to the point where no adverse impacts on the site remain (European Commission, 2000, 2001).

The conclusions of the appropriate assessment report should enable the competent authority to ascertain whether the proposal would adversely affect the integrity of the site (European Commission, 2000, 2001).

Under the terms of the directive (European Commission, 2000, 2001), consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of the site will not be adversely affected, or (b) where an adverse effect is anticipated, there is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

1. Methodology

This preliminary Statement of Screening for Appropriate Assessment (Stage 1) has been prepared with reference to the following:

European Commission (2000). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission (2002). Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.

European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.

European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.

Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

The EC Guidance sets out several principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty. When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

There will be no significant effects on a Natura 2000 site,

There will be no adverse effects on the integrity of a Natura 2000 site,

There is an absence of alternatives to the project or plan that is likely to have an adverse effect to the integrity of a Natura 2000 site,

There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four-stage process to assess the impacts, on a designated site or species, of a policy or proposal. The EC Guidance states that "each stage determines whether a further stage in the process is required". Consequently, the Council may not need to proceed through all four stages in undertaking the Appropriate Assessment. The four-stage process is:

Stage 1: Screening – The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether or not these impacts are likely to be significant;

Stage 2: Appropriate Assessment – The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3: Assessment of Alternative Solutions – The process which examines alternative ways of achieving objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain – An assessment of the compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this screening statement has been structured as a stage by stage approach as follows:

Description of the proposed project;

Identification of the Natura 2000 sites close to the proposed development;

Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project;

Assessment of the significance of the impacts identified above on-site integrity. Exclusion of sites where it can be objectively concluded that there will be no significant effects;

Screening statement with conclusions.

1.1. Desk Studies

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

National Parks and Wildlife Service - aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species; conservation objectives, site synopses and standard data forms for relevant designated sites;
Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area;
Ordinance Survey of Ireland (GeoHive) - access to spatial mapping data and metadata, including historical layers.
National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;
Sligo County Council – Information on planning and planning history in the area, landscape characterisation;
Water Matters – Catchment based information;
Environmental Services Consultancy – Plans and information pertaining to the development.
Google Streetview – for photointerpretation purposes, providing details on immediate and surrounding habitats, quality and land use
HeritageMaps.ie – general background information relating to the study area
GSI.ie- Information on water sources, geology, and mapping data.

Screening

Project and site description

The project involves the construction of a new dwelling house with a waste water treatment system and associated site works at Lisbanagher, County Sligo (Coordinates: 54° 8'32.40"N, 8°25'32.40"W) (see Figure 1 for site location, Figure 2 for local site location).

Fig. 2. Aerial image of proposed site in blue

The site landscape to the south is predominantly of agricultural land-use within rural Sligo; specifically, Normal Rural Landscape Character Area (Sligo County Development Plan 2017-2023).

The site is on an area with a shallow slope, with the general contours of the land leading down in a south-westerly aspect towards the drainage ditch and the N4. The site is surrounded by agricultural land on all sides. The nearest settlement to the proposed site is Riverstown, and the area is designated as a Rural Area in need to regeneration under the Sligo Development plan 2017-2023. In this development plan, Riverstown is noted as a village supporting rural communities. The development works are not located within susceptible flood zones and are outside the development limits for Riverstown. The site is composed of Improved agricultural grassland (GA1). The site is surrounded by Hedgerows WL1 and Treelines (WL2) with Drainage ditches (FW4) situated to the south of the site. The wider landscape is principally of intensified agriculture, comprised mostly of Improved Agricultural Grassland (GA1) interspersed with areas of semi-natural grasslands. These habitats were all defined with the Fossitt 2000 habitat classification. Interrogation of the National Biodiversity Data Centre for the immediate 1-kilometer grid square (G6628) determined the presence of three species of conservation interest, and one invasive species of concern. The species of conservation interest are the Eurasian Badger (*Meles meles*), Eurasian Red Squirrel (*Sciurus vulgaris*), and Pine Marten (*Martes martes*). Japanese knotweed (*Fallopia japonica*) is the invasive species found in the area, and it is noted in the Unshin River SAC Natura 2000 data page that Japanese knotweed has previously been identified in the SAC.

The application site is within the Sligo Bay (35) WFD Catchment area, in the Unshin_SC_010 subcatchment. The most recent status of this river (River Waterbody WFD Status 2013-2018) states the status as 'good'. The river is the Unshin River SAC and flows in a north-westerly direction and ultimately flows into Ballysodare Bay, an area which has both SAC and SPA status.

The predicted soil type is Alluvium surrounded by Acid Brown Earths and Brown Podzolics. These soils are usually well draining, allowing good percolation. Due to the good drainage qualities of the soil, surface water is less likely to be a potential pollution receptor. However, the drainage can result in more vertical water movement, which can result in groundwater being a potential target for pollution.

Natura 2000 sites identified

In compliance with the Departmental Guidance, this screening assessment includes any Natura 2000 sites within or adjacent to the plan area, any sites within 15 km of the area, and depending on the likely impacts of the plan and the sensitivities of the receptors, could be further than 15 km away. In this case, due to the nature and size of the construction works and the limited impacts of this project, no direct impacts are likely to occur at a distance more than 10 km away (see Appendix 1), therefore designated sites outside this range were not considered. Natura sites identified within a 10 km range of the construction site are listed in Table 1 & 2 with reference to full spatial illustration available in Appendix 1. Sites were evaluated for the potential of impacts arising from the materials deposition, as an individual development or in combination with other plans or projects.

Table 1. List of Special Protection Areas within 10 km of the site

Special Protection Areas (SPA)	Evaluation	Potential Impact
Lough Arrow SPA (IE0004050) Proximity: 7.4km	Site is located alongside a drainage ditch which discharges into the Unshin River which flows from Lough Arrow.	None
Ballysadare Bay SPA (IE0004129) (Proximity: 9.9 km)	Site is located alongside a drainage ditch which discharges into Ballysadare Bay via the Unshin River.	Unlikely

Table 2. List of Special Areas of Conservation within 10 km of the site

Special Area of Conservation (SAC)	Evaluation	Potential Impact
Unshin River SAC (IE0001898) Proximity: 0.4 km	Site is located alongside a drainage ditch which discharges into Ballysadare Bay via the Unshin River	Likely
Bricklieve Mountains & Keishcorran SAC (IE0001656) (Proximity: 7.6 km)	No hydrological / geographical pathways or connections	None
Union Wood (000638) (Proximity: 7.2 km)	Site is located close to Unshin River SAC	None
Templehouse and Cloonacleigha Loughs SAC (IE0000636) Proximity: 9.5 km	No hydrological / geographical pathways or connections	Likely
Lough Arrow SAC (IE0001673) Proximity: 7.4 km	No hydrological/geographical pathways or connections	None

3.2.1 Natura sites considered

Natura sites identified and considered in this screening assessment are presented in Table 3. The closest Natura 2000 site to the proposed development is the Unshin River SAC. Since there is potential for pollution from surface water run-off, it is possible the site development and use may impact Unshin River SAC.

Table 3. List of Natura sites considered for appropriate assessment screening, including distance to the proposed site and respective site qualifying interests.

Site name/code	Dist. to site (km)	Site qualifying interests
Unshin River SAC (IE0001898) Proximity: 0.4 km	0.4 km South	Water courses of plain to montane levels with *the Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae*) [6410] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] *Salmo salar* (Salmon) [1106] *Lutra lutra* (Otter) [1355]

Identification of potential impacts

The proposed site development and operation will occur close to the Unshin River, which is designated under Unshin River SAC. Therefore, impacts upon the Unshin River SAC arising from the development and operation of this proposed site cannot be ruled out. Only those processes of the site development and operation that have the potential to affect the integrity and conservation objectives of the identified Natura sites and protected species have been considered. A number of factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. The following factors were examined in relation to potential impacts arising from the proposed restoration works on the Natura 2000 sites identified:

Deterioration of water quality in designated areas arising from the lateral movement of polluted groundwater downhill and downstream from the site.

It should be noted that the site development and operation will not be carried out within any designated SAC or SPA site, lead to habitat loss, land-take or fragmentation of habitats. There will be no interference with the boundaries of any designated area.

The potential impacts of the site are mostly from the construction phase of the development. There will be no hydraulic link between the completed development and the nearby SAC and SPA.

Screening conclusions

The proposed development is not directly connected with or necessary to the nature conservation management of the designated site. Therefore, following consideration of the location being adjacent to the Unshin River SAC, and the potential impacts that may occur, this project should proceed to the next stage of Appropriate Assessment, namely the Natura Impact Assessment.

Stage II – Appropriate Assessment

Introduction

The main objective of this stage (Stage 2, Natura Impact Statement) in the Appropriate Assessment process is to determine whether the proposed development, either alone or in combination with other plans, programmes and projects, will result in significant adverse impacts to the integrity of the Unshin River SAC with respect to these sites structures, species, functions and/or conservation objectives. This stage also outlines the mitigation measures that should be taken in order to avoid any negative impacts of this application, should it receive consent.

In this section, the Natura 2000 site identified in the previous section will be described in greater detail in terms of its site characteristics and conservation objectives.

Natura 2000 sites identified

Unshin River SAC (001898)

The Unshin River runs from Lough Arrow north to Ballysadare Bay, Co. Sligo. The river is largely undrained and unaltered along much of its course. The marginal vegetation associated with the river is also included in the site, along with other semi-natural habitats adjacent to the river (included in order to enhance its protection). Many of these habitat types are interesting and of conservation value in their own right. Other watercourses included within the site are the Owenboy/ Owenbeg and a number of smaller tributaries. The Unshin River flows across several geological boundaries between sandstone, shales and limestone. This results in unusual physico-chemical qualities which in turn are reflected in the rich and varied plant and animal populations.

Table 10: Habitat composition of Unshin River SAC, including habitat classification and percentage cover

Habitat class	% Cover
N10: Humid grassland, Mesophile grassland	73.0
N06: Inland water bodies (Standing water, Running water)	6.0
N23: Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	1.0
N07: Bogs, Marshes, Water fringed vegetation, Fens	4.0
N20: Artificial forest monoculture	1.0
N14: Improved Grassland	1.0
N16: Broad-leaved deciduous woodland	11.0
N08: Heath, Scrub, Maquis and Garrigue, Phygrana	2.0
N07: Bogs, Marshes, Water fringed Vegetation, Fens	4.0
N09: Dry grassland, Steppes	1.0
Total cover:	100

The Unshin River supports an excellent example of floating river vegetation. The diversity of aquatic macrophytes is exceptional, and to a certain extent the unusual combinations and richness of species can be accounted for by the good quality water being discharged from Lough Arrow upstream. The lake also imparts a stabilising influence on the flow regime and provides a source of lacustrine species – for example, Long-stalked Pondweed (*Potamogeton praelongus*). Plant species present which indicate base-rich conditions include Lesser Water-parsnip (*Berula erecta*), Blunt-fruited Water-starwort (*Callitriche obtusangula*), Fan-leaved Water-crowfoot (*Ranunculus circinatus*) and the internationally rare River Water-dropwort (*Oenanthe fluviatilis*). Species such as Lesser Marshwort (*Apium inundatum*), normally associated with more acidic peat pools, also occur. Fen and floating mire communities are represented by Bogbean *(Menyanthes trifoliata*),

Cowbane (*Cicuta virosa*), Yellow Loosestrife (*Lysimachia vulgaris*) and Water Avens (*Geum rivale*). A rare and unusual alga, *Nostoc parmelioides*, is also present.

There are a number of areas of woodland, many of which flood, included within the site. These wet alluvial woodlands are found on water-logged soils and species such as Alder (*Alnus glutinosa*), Ash (*Fraxinus excelsior*), willows (*Salix spp*.), Pedunculate Oak (*Quercus robur*) and birch (*Betula spp*.) are common. Occasionally, Lime (*Tilia sp*.) and Horse-chestnut (*Aesculus hippocastanum*) are found also. The ground flora is diverse in places, and species such as Meadowsweet (*Filipendula ulmaria*), Wild Angelica (Angelica sylvestris), Lesser Celandine *(Ranunculus ficaria*), Wood Anemone (*Anemone nemorosa*), Yellow Iris *(Iris pseudacorus*), Bracken (*Pteridium aquilinum*), Reed Canary-grass (*Phalaris arundinacea*), Soft Rush (*Juncus effusus*), Common Valerian (*Valeriana officinalis*), Bramble (*Rubus fruticosus agg*.), Enchanter's-nightshade (*Circaea lutetiana*), Purple Loosestrife (*Lythrum salicaria*), Golden Saxifrage (*Chrysosplenium oppositifolium*), Greater Tussock-sedge (*Carex paniculata*), Remote Sedge (*Carex remota*), Bottle Sedge (*C. rostrata*), Common Nettle (*Urtica dioica*), Hart's-tongue *(Phyllitis scolopendrium*), Broad Buckler-fern (*Dryopteris dilatata*) and Lady-fern (*Athyrium filix-femina*) are all found. A number of non-native shrub species, some of which are invasive, are found: Snowberry (*Symphoricarpos albus*), Rhododendron *(Rhododendron ponticum*) and Cherry Laurel (*Prunus laurocerasus*). The non-native herbs Japanese Knotweed (*Reynoutria japonica*) and Giant Hogweed (*Heracleum mantegazzianum*) have also been recorded.

Table 11: List of most important known impacts and activities with high effect on Unshin River SAC.

Threats and Pressures	Rank	Internal/External
J02.10: Management of aquatic and bank vegetation for drainage	Low	Internal
I01: Invasive non-native species	High	Internal
A02.01: Agricultural intensification	Medium	Internal
B02: Forest and Plantation management & use	Medium	External
A04.02.02: Non intensive sheep grazing	Medium	Internal

Areas of grassland, ascribable to the E.U. Habitats Directive Annex I types: Orchidrich Calcareous Grassland and Molinia Meadows, have been reported at Cloonmacduff, according to the Irish Semi-natural Grasslands Survey, 2010. There are also extensive wetlands within this site, and one area contains the Red Data Book plant Swamp Meadow-grass (*Poa palustris*).

The Unshin and its tributaries form a very important system for Atlantic Salmon, a species that is listed on Annex II of the E.U. Habitats Directive. The Owenboy/ Owenbeg river is the principle spawning and nursery tributary for the system's salmon fishery. The Unshin and its tributaries is the most important salmon producing river in Co. Sligo. The system also supports a good population of Trout. The Annex II species Otter has been recorded in and near this site. Two notable bird species which occur along the river are Whooper Swan, which feeds in the wet grasslands that flank the river, and Kingfisher. Both are listed on Annex I of the E.U. Birds Directive. The trophic status of the river increases downstream indicating that some enrichment is taking place. However, the quality of the Unshin River and particularly its aquatic macrophyte communities, make it rare in both an Irish and European context, and it is considered one of the most pristine rivers in the country. The river has an Ecological Status or Potential of High status. The qualifying interests and specific conservation objectives are outlined in the table below.

Site qualifying interests	Specific Conservation Objectives
Floating River Vegetation [3260]	The permanent area occupied by the river vegetation should be stable other than that occurring from natural patterns of variation
Orchid-rich Calcareous Grassland [6210]	The permanent area occupied by the river vegetation should be stable other than that occurring from natural patterns of variation
Molinia Meadows [6410]	The permanent area occupied by the river vegetation should be stable other than that occurring from natural patterns of variation
Alluvial Forests [91E0]	The permanent area occupied by the river vegetation should be stable other than that occurring from natural patterns of variation
Atlantic Salmon (*Salmo salar*) [1106]	Long term population trend stable or increasing; no significant decrease in the range, timing and intensity of use of areas by salmon, and it is the principle spawning and nursery tributary for the system's salmon fishery
Otter (*Lutra lutra*) [1355]	Long term population trend stable or increasing; no significant decrease in the range, timing and intensity of use of areas by otters, other than that occurring due to natural patterns of variation

Table 12. List of Unshin River SAC qualifying interests and specific conservation objectives.

Identification of potential impacts

The identification of potential impacts and the assessment of their significance typically require the identification of the type and magnitude of the impacts. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation. This section will establish whether the impacts of the proposed construction at Lisbanagher that were identified in the previous section, are likely to occur and whether or not they are significant. These potential impacts will be examined with respect to the conservation objectives of the three Natura 2000 sites identified previously in section 4.2.

In the screening section of this report, the following possible future impacts on the Unshin River SAC were listed. These concerns are again listed below and they will be dealt with in more detail in this section.

> Deterioration of water quality in designated areas arising from the lateral movement of polluted water from the site.

This may occur principally under the following conditions:

1. Surface Water Runoff from the site
2. Ground water Runoff from site

It should be noted that the site development and operation will not be carried out within any designated SAC or SPA site, lead to habitat loss, land-take or fragmentation of habitats. There will be no interference with the boundaries of any designated area and no infilling of any designated area will occur.

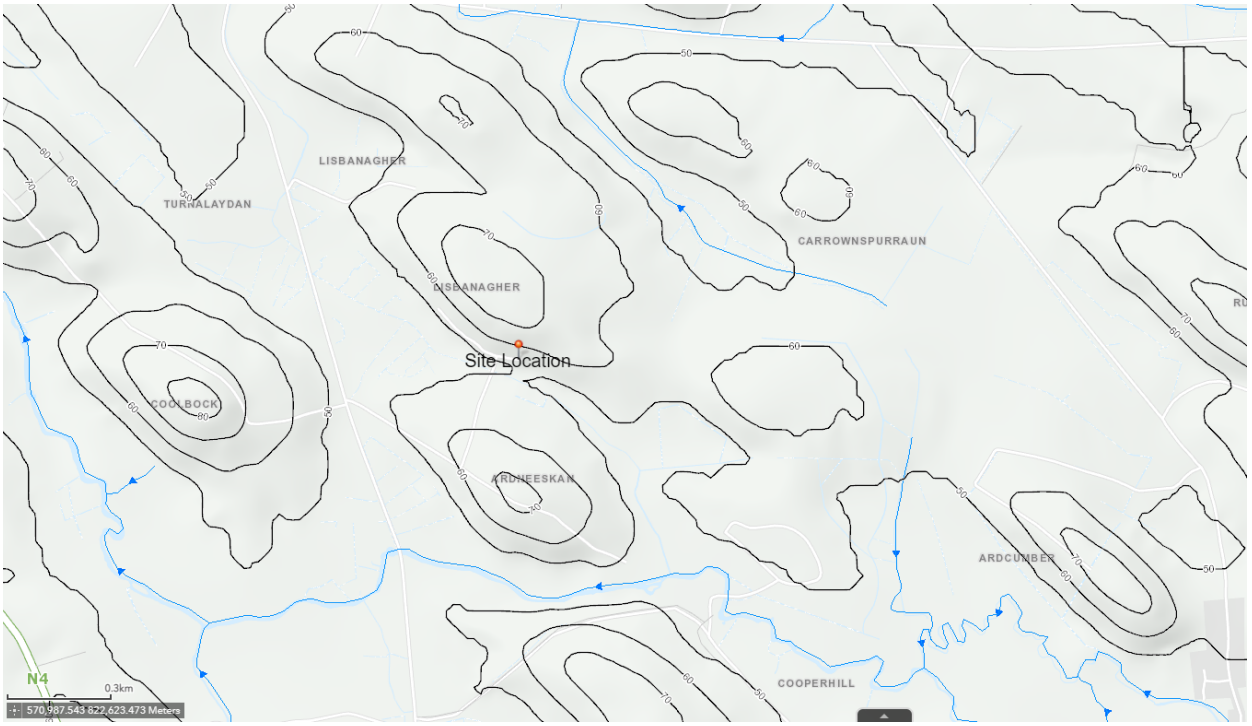

Fig 3: Contours and surface water around proposed site

Surface water runoff

There exists an inherent risk that surface water runoff may become contaminated with pollutants from the proposed construction area, transporting them to the Unshin River via groundwater or drainage ditches in the area. In order to assess the significance of this risk, the following should be considered

- The site is not connected to a sewer. Wastewater treatment will occur on-site.
- There exists significant setback from the Unshin River as there is 600m between the site and the River, with agricultural land between the site and the receptor. There is a drainage ditch near the site location that leads to the Unshin River. The drainage ditch is 55m north of the drainage ditch.

Groundwater runoff

Due to the alluvial soils present, there is a risk of groundwater becoming contaminated with pollutants from the proposed construction site, and these pollutants leeching into the river via groundwater. This risk can be minimized by numerous different mitigation measures covered in section 6: Mitigation Measures

Other Plans or Projects in the Area

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first; through persistent additions or losses of the same materials or resource, and second; through the compounding effects as a result of the coming together of two or more effects (Bowers-Marriott, 1997).

Development in the Riverstown area falls under the influence of the Sligo County Development Plan 2017-2023. This includes appropriate zoning of lands for development with appropriate restrictions in sensitive areas. Influences to the River Unshin SAC water quality include widespread diffuse and point sources of pollution associated with agriculture, forestry, residential and commercial developments. These are beyond the scope of this document; however, contribution to diffuse and point pollution as a result of this development must be avoided.

Housing density around the Lisbanagher area and the surrounding townlands is low. Cumulative impacts with agricultural activities in the area were considered. As these activities are required to operate within the legalisation defined in S.I. 31 of 2014 regarding manure storage, minimisation of soiled water and general good agricultural practice, etc., cumulative impacts arising from the combined operation of these activities with the development and operation of the site are deemed negligible.

Mitigation Measures

In order to avoid any reductions in water quality in the area surrounding the quarry, a number of mitigation measures must be fully implemented and followed. Measures have also been suggested that will help to protect the local biodiversity of the surrounding area and to ensure the protection of local wildlife.

Mitigation measures specific for Surface Water Runoff

The immediate local watercourses (drainage ditches) can play various roles for biodiversity, including serving as potential riparian corridors. It is vital that there is no deterioration in water quality in the watercourses in the vicinity of the restoration site. This will protect both habitats and species that are sensitive to pollution, especially siltation.

Construction:

- Raw or uncured waste concrete / cementitious material will be removed from the site;
- Any excavation spoil wastes are expected to be minimal as excavations and site preparations are minimal; spoil arising will be backfilled away from the river and its banks, or taken off-site by licensed contractors.
- Fuelling and lubrication of equipment will be carried out under controlled conditions in bunded areas and away from watercourses or drains;
- Any spillage of fuels, lubricants or hydraulic oils will be immediately contained and the contaminated soil removed from the site and properly disposed of;
- Sufficient oil soakage pads will be kept on site to deal with any accidental spillage;
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or re-cycling;
- Prior to any work it will be ensured that all construction equipment is mechanically sound to avoid leaks of oil, fuel, hydraulic fluids and grease;
- Overnight parking of plant machinery and site vehicles will only take place in the designated site compound area away from watercourses and aquatic zones;
- Release of suspended solids will be controlled by interception (silt trap) and management of site run-off. If there is a requirement to release water, it will be to grassed areas of low gradient to allow water to percolate to ground. The location and specification of the settlement areas will be agreed with a site ecologist.

Operation:

- The site will be fully contained and all surface water runoff will be treated via an attenuation area serviced by an oil trap to prevent infiltration of hydrocarbons.

Mitigation measures for the control of oil and fuel:

Fuel and oils must not, under any circumstances, discharge into any surface water body. The measures outlined below are designed to prevent fuel and oil from entering any surface water body and will describe the emergency procedures designed to control any accidental spillages. All site plant and machinery e.g. excavators, dumpers, etc., will be refuelled in a bunded designated area situated in a designated area and away from any watercourses, drains or riparian zones. All site vehicles will be refuelled off site, and no maintenance or servicing will occur outside the bunded site compound area. The following measures will be undertaken to reduce risk of oil and fuel in the water system:

Construction:

- Prior to any work commencing it will be ensured that all construction equipment is mechanically sound to avoid leaks of oil, fuel, hydraulic fluids and grease;
- Fuels, lubricants and hydraulic fluids for equipment used will be carefully handled to avoid spillage and properly secured against unauthorised access or vandalism. Spill containment measures will be in-situ according to current best practice;
- Mobile bowsers, tanks and drums will be stored in a secure, impermeable storage area, at least 50 m away from drains and open water;
- Fuel containers will be stored within a secondary containment system e.g. bund for static tanks or a drip tray for mobile stores;
- Ancillary equipment such as hoses, pipe and pumps must be contained within the bund;
- Fuelling and lubrication of equipment will be carried out in bunded areas;
- Taps, nozzles or valves should be fitted with a lock system;
- Fuel and oil stores, including tanks and drums, will be regularly inspected for leaks and signs of damage;
- Only designated trained operators will be authorised to refuel plant on site;
- Procedures and contingency plans will be set up to deal with emergency accidents or spills;
- Oil soakage pads will be kept on site to deal with any accidental spillage. In the event of a spill any fluids collected and any contaminated soil will be collected in leak proof containers and removed from the site for disposal by a licensed contractor.

Operation:

- The site will be fully contained and all surface water runoff will be treated via an attenuation area serviced by an oil trap to prevent infiltration of hydrocarbons.

Storage

The storage of materials, containers, stockpiles and waste, however temporary, will follow best practice at all times, and will be stored at dedicated areas only. Storage areas will be located:

- At least 50 m from drains and the Unshin River;
- On an impermeable base;
- Under cover to prevent damage from the elements;
- In secure areas;
- Well away from moving plant, machinery and vehicles;
- On land not required until later in the development;
- All containers will be stored upright and clearly labelled. Sufficient waste storage will be provided near to all working areas.

Soil Stripping and Excavation Works

The following measures will be undertaken to avoid or minimise negative effects to water quality as a result of excavations and earth works:

- Drainage and associated pollution control measures will be implemented on site before the main body of construction activity commences;
- The timing of the construction phase soil stripping and excavation works will take account of predicted weather, particularly rainfall;
- Excavations and soil stripping activities will be suspended during periods of prolonged rainfall events;
- The earthworks materials will be placed and compacted in layers to prevent water ingress and degradation of the material;
- The 24 hour advance meteorological forecasting service from Met Éireann will be used;
- In the event that petroleum contaminated soils or subsoils containing other potentially contaminated material are discovered during excavation activities (identified through staining, discoloration, or odour), this soil will be segregated, stockpiled, sampled for characterisation purposes sufficient to meet the requirements of the applicable disposal facility, transported off-site by a licensed transporter, and disposed of in an approved treatment or disposal facility.

Concrete Control and Wheel Washing

Wet concrete pollution is silty and very alkaline (high pH) and can have a serious effect on watercourses and aquatic life. Concrete should not enter site water. The following measures will be implemented regarding concrete:

- Concrete pours shall not be carried out during forecasted periods of heavy rainfall. Weather forecasts will be monitored during the construction phase.
- Designate a concrete washout area away from drains and the river
- To reduce the volume of cementitious water, only concrete chutes will be washed down onsite. The concrete trucks will wash down their chutes at a designated chute wash down area in the site compound. The wash down area will consist of a polythene lined bunded area of adequate capacity;
- Wash-water from the washing out of mixers and other equipment will be undertaken at a designated chute wash down area in the site compound;
- Washout of concrete trucks should occur off-site;
- No disposal of concrete remnants will be permitted elsewhere on site;
- A wheel wash will be installed near the construction site entrance and exit to wash construction vehicle tyres;
- The wheel wash area will be cleaned regularly so as to avoid the build-up of residue;
- Water residue from the wheel wash will be fed through an interceptor/filter prior to discharging from the site to a grassed area away from the River Shannon.

After Construction

After the construction is carried out, the dwelling will have no environmental impact as there will be very little environmental discharge. The waste water treatment system will be designed by a suitably qualified individual to ensure no negative environmental impact from its operation.

Findings of no significant effects

Name of project: Natura Impact Statement for the development of a filling station and car wash with connection to existing services and associated works

Name and location of Natura 2000 sites: Site is 0.4 km distant from the Unshin River SAC that discharges into the Ballysadare Estuary, which contains both an SAC and a SPA.

Description of project: The project involves construction of a new dwelling house with a waste water treatment system and associated site works at Lisbanagher, County Sligo

Is the project directly connected with or necessary to the management of the site? No.

Are there other projects or plans that together with project being assessed could affect the site? No.

The assessment of significance of effects:

Describe how the project is likely to affect the Natura 2000 site: Impact upon the water quality of the Unshin River SAC is unlikely.

Explain why these effects are not considered significant: The strict mitigation measures outlined in this plan must be fully enforced to ensure that these impacts will not occur.

Describe how the project is likely to affect species designated under Annex II of the Habitats Directive. If the mitigation measures outlined in Section 5 are attached to any grant of planning permission and fully implemented, then any direct, indirect or cumulative impacts upon these species will be negligible.

Data Collected to carry out the assessment

Who carried out the assessment:

Sources of data: NPWS, EPA, National Biodiversity Data Centre, Sligo County Council.

Level of assessment completed: Stage II Appropriate Assessment – Natura Impact Statement.

Where can the full results of the assessment be accessed and viewed: Full results included in this document.

Appropriate Assessment Conclusion

This Natura Impact Statement has concluded that with enforced and fully implemented mitigation measures and with due regard and care for the natural heritage of the surrounding area, that the development of the site at Lisbanagher, Co Sligo will have no significant impacts (direct, indirect or cumulative) upon the Unshin River SAC or other nearby Natura 2000 sites.

Appendix 1

Site location (yellow pin) with Natura sites identified within a 10km buffer zone.