APPROPRIATE ASSESSMENT SCREENING REPORT

Continued use and deepening of an existing permitted quarry, Aghamore Near & Carrownamaddoo townlands, Co. Sligo

Prepared for: Lagan Bitumen Ltd.

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INTRODUCTION

1.1 SLR Consulting Ireland (SLR) was commissioned by Lagan Bitumen Ltd. to submit an application on their behalf for continued use and deepening of an existing permitted quarry at Aghamore Near and Carrownamaddoo, Co. Sligo. This Appropriate Assessment (AA) screening report forms part of the supporting documentation for the application for permission.

General Description of the Site

1.2 Aghamore Quarry ("the Site") is located in the townlands of Aghamore Near and Carrownamaddoo, approximately 3.5 km south of Sligo Town. The quarry is set in an agricultural landscape with the most common landuse in the surrounding area being pasture for grazing animals.

1.3 Quarrying activity and the associate processing operations were established at Aghamore in the 1950s, with permission for works in additional lands to the west, north and north-east of the original quarry granted in 1996 (Planning Ref. 96/172). Planning permission to further extend and deepen the quarry was granted in June 2003.

1.4 The Site is screened by planted trees at the Site entrance and a short distance along either side of the access track. The northernmost corner of the Site is also well vegetated with dense scrub and well-structured field boundaries. The remaining length of the Site perimeter consists of stock proof fencing with occasional semi-mature trees present. The quarry void is itself largely unvegetated with occasional ruderal species growing sparsely.

Brief Project Description

1.5 The proposed development being applied for is similar to that previously granted under Sligo County Council Ref. No 02/271 and will consist of:

- Continued use and operation of the existing permitted quarry area (c. 10.9ha) within an overall application area of c. 18 hectares;
- Deepening of the existing permitted quarry area by a further bench from -34.5m OD to -50m OD;
- The provision of a settlement lagoon (c. 2,800m2).

1.6 Upon the cessation of extraction operations it is proposed to return the worked lands to natural habitat[1] after-uses. Where feasible, restoration of exhausted and redundant areas will be carried out at the earliest opportunity. However, it is envisaged that the majority of restoration proposals will only be carried out after extraction operations at the site have ceased – refer to Figure 2.3.

1.7 The proposed development / project is described in more detail in Chapter 2 of the Environmental Impact Assessment Report (EIAR) prepared for this planning application.

[1] Natural habitat (lake, wetland – nature conservation) as defined by the EPA Environmental Management Guidelines for the Extractive Industry (2006)

Purpose of the Report

1.8 The purpose of this screening report is to provide supporting information to assist the competent authority, in this case Sligo County Council, to carry out an appropriate assessment screening of the proposed development at Aghamore Near and Carrownamaddoo, Co. Sligo.

Objectives of Appropriate Assessment

1.9 The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures to be addressed in the AA process as follows:

- Firstly, a plan / project should aim to avoid any negative impacts on Natura 2000 sites by identifying possible impacts early and designing the project / plan to avoid such impacts.
- Secondly, mitigation measures should be applied during the AA process to the point where no adverse impacts on the site(s) remain.
- Thirdly a plan / project may have to undergo an assessment of alternative solutions. Under this stage of the assessment, compensatory measures are required for any remaining adverse effects, but they are permitted only if (a) there are no alternative solutions and (b) the plan / project is required for imperative reasons of overriding public interest (the 'IROPI test'). European case law highlights that consideration must be given to alternatives outside the plan / project boundary area in carrying out the IROPI test.

Evidence of Technical Competence and Experience

1.10 The appropriate assessment screening report was prepared by Elaine Dromey MCIEEM. Elaine Dromey holds a BSc in Earth Science from University College Cork and an MSc in Vegetation Survey and Assessment from the University of Reading, UK. She is a full member of the Chartered Institute of Ecology and Environmental Management. Elaine has prepared AA screening reports and Natura Impact Statements (NIS) for a range of different projects and plans including large wind farms, single turbine developments, power lines, quarry developments, anaerobic digesters, industrial developments and single small developments.

RELEVANT LEGISLATION

European Nature Directives (Habitats and Birds)

1.11 The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation. Similarly, Special Protection Areas are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are referred to as the Natura 2000 network. In general terms, they are considered to be of exceptional importance for rare, endangered or vulnerable habitats and species within the European Community.

1.12 Under Article 6(3) of the Habitats Directive an Appropriate Assessment must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

1.13 Article 6, paragraph 3 of the EC Habitats Directive 92/43/EEC ("the Habitats Directive") states that:

> "*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".*

EC (Birds and Natural Habitats) Regulations 2011

1.14 Part 5 of the EC (Birds and Natural Habitats) Regulations 2011 sets out the circumstances under which an 'appropriate assessment' is required. Section 42(1) requires that '*a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.*'

1.15 Section 42(2) expands on this, stipulating that a public authority must carry out a screening for Appropriate Assessment before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken. To assist a public authority to discharge its duty in this respect, Section 42(3)(a) gives them the authority to direct a third party to provide a Natura Impact Statement and Section 42(3)(b) allows them request any additional information that is considered necessary for the purposes of undertaking a screening. A Natura Impact Statement has to include such information or data as the public authority considers necessary to enable it to ascertain if the plan or project will affect the integrity of a Natura 2000 site. Where appropriate, a Natura Impact Statement also needs to include:

I. the alternative solutions that have been considered and the reasons why they have not been adopted,

II. the imperative reasons of overriding public interest that are being relied upon to indicate that the plan or project should proceed notwithstanding that it may adversely affect the integrity of a European site,

III. the compensatory measures that are being proposed.

1.16 Section 42(6) requires that '*the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site*'.

Planning and Development Regulations 2001 to 2015

1.17 Section 250 of the Planning and Development Regulations 2001 to 2015 sets out the circumstances under which an 'appropriate assessment' is required.

1.18 Section 250 (1) requires that *'In order to ascertain whether an appropriate assessment is required in respect of a development which it proposes to carry out a local authority shall carry out a screening of the proposed development to assess, in view of best scientific knowledge, if the development, individually or in combination with other plans or projects, would be likely to have a significant effect on a European site.*'

1.19 Section 250 (2) states that "*If on the basis of a screening under sub- article (1) it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, would have a significant effect on a European site, the local authority shall determine that an appropriate assessment of the proposed development is required and shall prepare an NIS in respect of the proposed development and shall submit the proposed development to the Board for approval under section 177AE of the Act.*"

1.20 Section 250 (3) (a) requires that "*The Board shall, where it considers that an application for development proposed to be carried out by a local authority would be likely to have a significant effect on a European site, require the local authority to prepare, or cause to be prepared, an NIS in respect thereof*."

1.21 Section 250 (b) requires that "*Where any person considers that a development proposed to be carried out by a local authority would be likely to have a significant effect on a European site, he or she may apply to the Board for a determination as to whether the development would be likely to have such significant effect and the Board shall make a determination on the matter as soon as possible*."

1.22 Section 250 (c) requires that "*An application for a determination under paragraph (b), in order to be considered by the Board, shall state the reasons for the forming of the view that the development would be likely to have a significant effect on a European site*."

1.23 Section 250 (d) requires that "*Where Board makes a determination under paragraph (b) that a development would be likely to have a significant effect on a European site it shall require the local authority to prepare, or cause to be prepared, an NIS in respect thereof.*"

1.24 Section 250 (e) states that "*For the purposes of paragraphs (a) and (b), a local authority shall provide information requested by the Board in relation to development proposed to be carried out by the local authority.*"

1.25 Section 250 (4) requires that "*Where an NIS is prepared, or caused to be prepared, by a local authority under sub-article (3), the authority concerned shall apply to the Board for approval*."

1.26 Section 250 (5) requires that "*An application for approval under sub-article (4) shall be deemed to be an application for approval under section 177AE of the Act and the provisions of that section shall apply to the application*."

1.27 Section 250 (6) states that "*Where a local authority makes a determination under sub-article (1) that a proposed development would not be likely to have a significant effect on a European site, it shall, in addition to the documents specified in article 83, make the determination, including the main reasons and considerations on which the determination is based, available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy, in accordance with that article*."

METHODS

Scope of the Report

1.28 The scope of this Appropriate Assessment (AA) screening report is to identify potential impacts as a result of the project and to determine the likelihood of significant effects, if any, that the project could have on Natura 2000 sites. In this case the project consists of the proposed continued use and deepening of an existing permitted quarry, in the townlands of Aghamore Near and Carrownamaddo, Co. Sligo.

Zone of Influence

1.29 The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2016).

1.30 A distance of 15 km is currently recommended *in the case of plans*, as a potential zone of influence, and this distance is derived from UK guidance (Scott Wilson *et al*, 2006). *For projects*, the distance could be much less than 15km, and in some cases less than 100m, but National Parks and Wildlife Service guidance (NPWS 2009) advises that this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.

1.31 The zone of influence for the proposed development at Aghamore and Carrownamaddoo townlands, Co. Sligo is defined in paragraph 1.54 of this report.

Desk Study

1.32 A desk study was carried out to collate information available on Natura 2000 sites within the potential zone of influence of the quarry (See **Figure 1**). The Site and the surrounding area were viewed using existing available satellite and street view imagery[2] (last accessed on 25 July 2018). Sligo County Council planning portal was accessed for information on other planning applications within the Site and immediate area (last accessed 25 July 2018). The National Parks and Wildlife Service (NPWS)[3] (last accessed 25 July 2018) and National Biodiversity Data Centre (NBDC)[4] (last accessed 25 July 2018) websites were accessed for information on Natura 2000 sites.

1.33 The Chapters prepared for the EIAR submitted with this planning application; such as Chapter 2 (Project Description), Chapter 7 (Water), Chapter 10 (Noise) and Chapter 13 (Landscape) for the proposed continued use and deepening of the existing permitted quarry at Aghamore were also reviewed to inform this report.

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[2] https://www.google.ie/maps & https://www.bing.com/maps
[3] https://www.npws.ie/protected-sites
[4] http://maps.biodiversityireland.ie/#/Map

Site Visit

1.34 The Site was visited on two separate occasions by an ecologist from SLR. Steve Judge MCIEEM visited the Site on 20 May 2016 and Elaine Dromey MCIEEM visited the Site on 14 September 2017. The Site visits were carried out in suitable weather conditions. On both occasions the Site was walked to identify and classify the habitats present and to evaluate the suitability of the Site for use by protected species. The findings of the site visits are discussed in detail in Chapter 5 of the EIAR. The Site visit also allowed the surveyors to put the Natura 2000 sites adjacent to the quarry in context in terms of the wider landscape and to understand how the quarry may impact the receiving environment.

Screening Report

1.35 The approach to preparing the AA screening report is as follows: -

- Identify Natura 2000 sites, within the potential zone of influence of the development / works.
- Identify the features of interest of the Natura 2000 sites and review their conservation objectives.
- Review whether there is potential for the features of interest to be affected by the proposed works based on information such as the vulnerabilities of the Natura 2000 site, proximity to the Site and the nature and scale of the works associated with the proposed development / works.
- Consider the likelihood of potential impacts occurring based on the information collated and professional judgement.
- Consider the likelihood of cumulative effects arising from the project in-combination with other plans and projects.
- Identify the likelihood of significant effects in the absence of mitigation, alone or in – combination, on Natura 2000 sites occurring because of the proposed development / works.

1.36 The approach taken in preparing this document is based on standard methods and best practice guidance, as listed in the references section of this report.

DETAILED DESCRIPTION OF THE DEVELOPMENT

1.38 The proposed development being applied for under this current planning application is shown on **Figure 1** and is similar to that previously granted under Sligo County Council Ref. No 02/271 and will consist of:

- Continued use and operation of the existing permitted quarry area (c. 10.9ha) within an overall application area of c. 18 hectares;
- Deepening of the existing permitted quarry area by a further bench from -34.5m OD to -50m OD;
- The provision of a settlement lagoon (c. 2,800m2).

1.39 The quarry extraction area is currently accessed via an existing permitted entrance located on the western side of the Local road that leads to the R287 regional road. There is no other vehicular access to the application site. The access gate is locked outside operational hours. There is no change proposed to the current access arrangements.

1.40 Aggregate extracted from the quarry will be processed within the quarry void and transported by HGV's to the existing manufacturing / ancillary area located on the Eastern side of the Local road, where further processing will be carried out.

1.41 Within the planning application boundary an area of 10.9 hectares has been used for the extraction of limestone and therefore has been completely stripped of overburden and topsoil material. No further stripping of topsoil or overburden materials will be carried out within the application area as part of the permission being applied for.

1.42 Planning permission for a 15-year period is sought for the extraction and processing period and a further two years to complete final restoration of the site. The quarry will operate between 8.00 – 18.00 hrs Monday to Friday; or from 09.00 – 17.00 hrs Saturday. The quarry will not operate on Sundays or Bank Holidays, except in emergency situations.

1.43 Dewatering of the site and discharge to the stream leading into Lough Gill have been occurring for more than 10 years. The current floor level (c. -21mOD) of the quarry is below the water table requiring surface water and groundwater to be pumped from the quarry to a nearby stream (Aghamore Stream) which leads directly to Lough Gill c. 800m downstream.

1.44 The current water management within the quarry involves pumping the combination of rainwater and groundwater from the quarry floor directly to the Aghamore Stream. This is an interim measure agreed with Sligo County Council as there is no activity on site and no sources of potential water pollution remain within the quarry void. Incidental rainwater and groundwater seepages entering the quarry drain across the quarry floor to a sump located in the southern corner. Two pumps installed in the sump discharge directly to the Aghamore Stream via two 160mm uPVC pipelines and a hydrocarbon interceptor, under an existing Discharge Licence (Ref. No. (DL(W)139)). The discharge point at the Aghamore Stream is c. 330m east of the quarry void.

1.45 Measures are implemented to ensure that surface water discharges into Lough Gill are controlled and that the discharge water meets conditions set out in the existing discharge licence. These measures and the Groundwater quality monitoring will continue to be carried out on a biannual basis from a representative number of monitoring wells around the quarry.

1.46 Blasting is and will continue to be used within the quarry area to fragment the stone prior to processing (crushing / screening etc.). The processing of the extracted rock, into aggregate products, will consist of crushing and screening by mobile processing plant located within the quarry void. There will be no

blasting outside the hours of 11:00 and 18:00 during Monday to Friday and none taking place at the weekend or public holidays. Residents nearby are informed / will be informed on the day prior to planned blasting schedule using house-calls, written note/signage at entrance (or combination). A warning siren will be sounded prior to blast taking place.

1.47 All surface water monitoring required under the existing Trade Effluent Discharge Licence will be carried out once activities recommence on site. Flowmeters are already installed in the discharge pipes from the quarry sump and a flowmeter installed upstream of the quarry discharge to the Aghamore Stream. Monitoring of groundwater levels by datalogger with periodic site visits to download data will be required. Groundwater quality monitoring will continue to be carried out on a biannual basis from a representative number of monitoring wells around the quarry.

1.48 The only chemicals that are stored on site and will continue to be while the quarry is operational, that have the potential to cause water pollution are lubricating oils, hydraulic oils and diesel fuel. All of these chemicals are / will continue to be stored in suitably certified tanks within areas bunded to a capacity of 110% of the tank. Surface water from bunds is pumped out through a suitable oil interceptor.

1.49 A dust monitoring programme is in place at the existing site, and dust deposition monitoring is carried out as part of the environmental monitoring programme when the site is operational. Monitoring results are, and will continue to be, submitted to Sligo County Council on an annual basis.

1.50 Noise monitoring is currently undertaken at the application site, when operational. Noise monitoring locations shall be reviewed and revised where necessary. The results of the noise monitoring will be submitted to Sligo County Council on a regular basis for review and record purposes.

1.51 A restoration plan has been prepared for the planning application area. The application area will be restored to a natural habitat, which is one of the beneficial after uses listed in the EPA Guidelines: *'Environmental Management in the Extractive Industry*' (2006). This will be achieved by the following measures:

- The application area will be left for natural recolonisation by locally occurring grass and shrub/scrub species and the void will fill with water.
- All existing boundary fences and hedgerows will be retained to ensure that the site is secure.
- All plant and machinery will be removed from the quarry void.

APPROPRIATE ASSESSMENT SCREENING

1.52 This section of the report sets out a detailed description of the proposed development (please see Chapter 2 of the EIAR for detailed description on individual aspects of the development), identifies the potential zone of influence of the development, provides information on the Natura 2000 sites within the potential zone of influence and sets out the potential impacts and likelihood of significant effects.

Identification of Potential Zone of Influence

1.53 The potential Zone of Influence for quarry operations, such as the quarry at Aghamore, is typically limited to 1 – 2 km unless there are surface water pathways or other ecological connections to Natura 2000 sites outside this distance. The effects of quarrying are unlikely to extend beyond this distance unless there is potential for impacts on ground water or surface water that may result in effects beyond this zone. There is no landscape connectivity[5]; such as treelines, hedgerows, woodlands and watercourses; between the quarry and Natura 2000 sites. Therefore, applying a precautionary approach, the potential zone of influence is selected as 5 km for the purposes of this AA screening report.

Identification of Natura 2000 sites

1.54 The application area is not within a site designated for nature conservation or subject to any nature conservation designations.

1.55 There are seven Natura 2000 sites within 5 km of the boundary of the application area. Lough Gill SAC (Site code 001976) is within c. 520 m east of the Site boundary at its closest point. Ballysadare Bay SAC (Site code 000622) and SPA (Site code 004129) are approximately 3 km east while the Unshin River SAC (Site code 001898) is approximately 4 km east of the Site. Union Wood SAC (Site code 000638) is approximately 2.7 km south – west of the Site. Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (Site code 000627) and Cummeen Strand SPA (Site code 004035) are approximately 4 km north and west of the Site at Aghamore.

1.56 Union Wood SAC is designated for sessile oak woodland and is not connected to the Site via ecological features or surface water pathways. The potential impacts, such as emissions to air, of the quarry operation are not considered likely to result in emissions that could disperse and cause significant effects to Union Wood SAC. However, as this site is within the potential zone of influence of the quarry it is considered further in this report.

1.57 Cummeen Strand SPA and Ballysadare Bay SPA form part of the complex of SPA sites in the wider Sligo Bay. These sites are classified for a range of wintering birds that are reliant on the estuarine habitats for feeding and roosting. The potential impacts of the quarry operation are not considered likely to cause significant effects to these SPAs. However, as these sites are within the potential zone of influence of the quarry they are considered further in this report.

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[5] Landscape connectivity is a combined product of structural and functional connectivity, i.e. the effect of physical landscape structure and the actual species use of the landscape (Kettunen *et al*. 2007)

1.58 There are no other Natura 2000 sites within 5 km of the Site boundary; the Site is not connected via ecological features or surface water pathways to any Natura 2000 sites beyond 5 km and Natura 2000 sites (and their features of interest) beyond 5 km not previously discussed can be considered to be sufficiently distant so as not be affected by the potential impacts and resultant effects arising from proposed continued use and deepening of the quarry at Aghamore.

Description of the Natura 2000 Sites

1.59 A brief description of the seven Natura 2000 sites within the 5 km zone of influence is provided below. The description has been extracted, and summarised, using the supporting information available for each site on the NPWS website[6].

Lough Gill SAC (Site Code 001976)

"This site includes Lough Gill, Doon Lough to the north-east, the Bonet River (as far as, but not including, Glenade Lough), and a stretch of the Owenmore River near Manorhamilton in Co. Leitrim. Lough Gill itself, 2 km east of Sligo town, lies at a geological junction of ancient metamorphic rocks which produce acid groundwater, and limestone which dissolves in the groundwater.

Lough Gill is a large lake, being 8 km long, and has steep limestone shores and underwater cliffs. It is over 20 m deep in places. The lake appears to be naturally eutrophic. The aquatic macrophyte flora is very limited, probably due to the rapid increase in depth around most of the margin. Species such as pondweeds (Potamogeton spp.) are present, as well as Shoreweed (Littorella uniflora). Where the lake shore has a shallow gradient, some swamp vegetation occurs, mainly dominated by Common Reed (Phragmites australis), with Common Club-rush (Scirpus lacustris) and sedges (Carex spp.). The Old Oak Woodlands within this site are dominated by oak (Quercus spp.), Rowan (Sorbus aucuparia) and willows (Salix spp.)

Areas of unimproved wet and dry grassland also occur within the site, the former particularly by the lake and the latter well developed in the north-east of the site and in the vicinity of O'Rourke's Table. Orchid-rich Calcareous Grassland, a priority habitat listed on Annex I of the E.U. Habitats Directive, has been reported from Clogher Beg, according to the Irish Semi-natural Grasslands Survey, 2010. Heathcovered hillsides above the woods are dominated by Heather (Calluna vulgaris).

The site is of considerable importance for the presence of four Red Data Book fish species that are listed on Annex II of the E.U. Habitats Directive - Brook Lamprey (Lampetra planeri), River Lamprey (Lampetra fluviatilis), Sea Lamprey (Petromyzon marinus) and Atlantic Salmon (Salmo salar). White-clawed Crayfish (Austropotamobius pallipes), Otter and Pine Marten are well established on this site, the first two are both Annex II species."

Union Wood SAC (Site Code 000638)

"Union Wood is located on the eastern bank of the Ballysadare River between Ballysadare and Collooney in Co. Sligo. The site contains old oak woodland which is typical of western Oak wood (Blechno-Quercetum) and one of the best remaining in the region. Part of Union Wood consists of

[6] https://www.npws.ie/protected-sites

fairly pure, open woodland dominated by Sessile Oak (Quercus petraea), and with some Downy Birch (Betula pubescens), Holly (Ilex aquifolium) and Rowan (Sorbus aucuparia). Hazel (Corylus avellana), Hawthorn (Crataegus monogyna) and Blackthorn (Prunus spinosa) also occur. The soils of the area are acidic and the ground flora is typical of an acidic wood. The presence of an area of heath at Union Rock adds diversity to the site. The wood supports a diverse fauna, including Pine Marten (Martes martes) and Badger (Meles meles), both Red Data Book species, and also Fox (Vulpes vulpes) and Red Squirrel (Sciurus vulgaris). The conservation significance of the site is reduced by the inter- and under-planting of stands of commercial conifers. Despite damage from introduced exotic species, Union Wood is an important Oak woodland and one of the largest remaining Oak woodlands in the region."

Ballysadare Bay SAC (Site Code 000622)

"Ballysadare Bay is the most southerly of the three inlets of Sligo Bay. It is the estuary of the Ballysadare River, which receives the flows of the Unshin, Owenboy and Owenbeg rivers. The Ballysadare River flows through the small town of Ballysadare before entering the bay. It is a large site, extending along a 10 km south-east to west-north-west axis from Ballysadare town to the sea at Marley's Point. The bay has an average width of c.2 km. A sand dune spit extends into the outer bay at Culleenamore, restricting the outlet to the sea to a width of c.700 m. Other habitats present include salt marshes, small saline lakes or ponds, dry grassland, wet grassland, reedbeds and scrub. Recreation is a main landuse within the site.

This large site displays an excellent diversity of coastal habitats. The estuarine and intertidal sand and mud flat habitats are typical of the region and are extensive in area and of good quality. The sand dune system is highly dynamic, with the tip of the peninsula actively growing and displaying a good, though limited, example of embryonic shifting dunes. The shifting marram dunes are fairly extensive in area and are also displaying signs of growth. An area of fixed dunes of moderate size also occurs which has a flora typical of western dunes. A small area of humid dune slack remains. Actively developing dune systems are rare in western Ireland. Site is important for occurrence of the Annex II mollusc Vertigo angustior. A nationally important colony of Phoca vitulina also occurs. A number of localised insect species are known from the site."

Ballysadare Bay SPA (Site Code 004129)

"Ballysadare Bay is an important component of the larger Sligo Bay complex. It supports nationally important populations of four species: Calidris alpina, Limosa limosa, Tringa totanus and Tringa nebularia. It also has a good diversity of other waterfowl species, including Branta bernicla hrota, Cygnus cygnus, Mergus serrator, Pluvialis apricaria and Charadrius hiaticula. The estuarine habitat is of good quality and the site provides both feeding and roost sites for the birds.

The bay contains extensive intertidal sand and mudflats. The flats support good populations of macro-invertebrates which are important food items for wintering waterfowl. Common species present include the polychaete worms Hediste diversicolor, Arenicola marina, Lanice conchilega and Nepthys hombergii, and the bivalves Cerastoderma edule, Macoma balthica and Scrobicularia plana. Also present on the intertidal flats are the vascular plants Eelgrass (Zostera marina) and Beaked Tasselweed (Ruppia maritima), which provide food for herbivorous wildfowl. Well-developed salt marshes, which provide roosting sites for birds at high tide, occur at several locations around the bay. The sandy beaches around the Strandhill peninsula are used by roosting birds."

Unshin River SAC (Site Code 001898)

"The Unshin River has a spring-fed lake, Lough Arrow, as its source and flows north-westwards for some 24 km to reach the sea at Ballysadare Bay. The river supports a rich aquatic and emergent

flora and runs beside or through a wide variety of habitats. The site also includes the Ballysadare and Owenboy/Owenbeg rivers. The whole site is underlain by Carboniferous limestone. The Unshin River is an excellent example of a pristine, unmanaged, undrained lowland limestone river and is extremely important as it represents one of only four remaining undrained limestone rivers in Ireland. Such rivers as this are otherwise almost unknown in Europe. It is unpolluted for almost its entire length and supports a species-rich, diverse aquatic flora, several important bird species, fish and several rare riverbank plant species, including Poa palustris. A good diversity of adjacent habitats is found along its length, including alluvial woodland. 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."

Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (Site Code 000627)

"This large coastal site extends from Cullamore in the north-west to Killaspug in the south-west, and from Sligo town in the south-east to Drumcliff village in the northeast. It encompasses two large, shallow bays, Drumcliff Bay and Sligo Harbour, and both Ardboline and Horse Island. Sand dunes and sand hills at Rosses Point, Killaspug, Yellow Strand and Coney Island are included, as are grasslands at Ballintemple and Ballygilgan (Lissadell), along with a variety of other habitats such as woodland, saltmarsh, sandy beaches, boulder beaches, shingle, fen, freshwater marshes, rocky sea cliffs and lakes.

The dominant habitats on the site are estuaries and intertidal sand and mud flats. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. Sand dune habitats are rare and threatened in Europe and three types are found in this site - embryonic dunes, Marram (Ammophila arenaria) dunes and fixed dunes. An area with Juniper (Juniperus communis) scrub is found on a gravel hill with species-rich fixed dune vegetation

An area of approximately 3.7 hectares of Orchid-rich Calcareous Grassland, a habitat listed with priority status on Annex I of the E.U. Habitats Directive, is reported to occur near Rosses Point, according to the Irish Semi-natural Grasslands Survey, 2010. Wetlands on the site include Doonweelin Lake, a freshwater lake on the Rosses Point peninsula, which supports interesting vegetation communities that reflect the juxtaposition of the underlying acidic and basic rocks. Ardtermon Fen, a small, floristically-rich area of freshwater marsh, swamp, wet grassland and fen is situated at the back of the Yellow Strand sand hills.

The site includes small areas of Hazel (Corylus avellana) and Ash (Fraxinus excelsior) woodland on limestone (e.g. Cummeen Wood), and several other stands of mixed woodland and wet willow (Salix spp.) woodland (as at Ardtermon Fen). Cliff-top grassland is common in the north-western part of the site. The site has a good example of petrifying springs with tufa formations, with several species of bryophyte typical of the Cratoneurion. The site has a very rich and diverse flora, on account of the wide variety of habitats found, and the presence of both basic and acidic substrates.

At least five species listed on Annex II of the E.U. Habitats Directive are found within this site. Drumcliff Bay is important for the presence of a breeding population of Common Seal. Sea Lamprey and River Lamprey have been recorded in the Garavogue River, and River Lamprey are also known from further upstream in the tributaries of Lough Gill. The Marsh Fritillary butterfly is found at Rosses Point, while the rare snail Vertigo angustior has recently been recorded from sand dunes at Killaspugbrone.

Cummeen Strand/Drumcliff Bay (Sligo Bay) is an important site of high conservation significance, which includes a wide variety of habitat types, including several listed on Annex I of the E.U. Habitats Directive, several species listed on Annex II of this Directive, large and important populations of waterfowl and seabirds, and several rare plant species."

Cummeen Strand SPA (Site Code 004035)

"Cummeen Strand is a large shallow bay stretching from Sligo Town westwards to Coney Island. It is one of three estuarine bays within Sligo Bay and is situated between Drumcliff Bay to the north and Ballysadare Bay to the south. The Garavogue River flows into the bay and forms a permanent channel.

At low tide, extensive sand and mud flats are exposed. These support a diverse macro-invertebrate fauna which provides the main food supply for the wintering waterfowl. Of particular note is the presence of eelgrass (Zostera noltii and Z. angustifolia) beds, which provide a valuable food stock for herbivorous wildfowl. The estuarine and intertidal flat habitats are of conservation significance and are listed on Annex I of the E.U. Habitats Directive. Areas of salt marsh fringe the bay in places and provide roosting sites for birds during the high tide periods. Sand dunes occur at Killaspug Point and Coney Island, with a shingle spit at Standalone Point near Sligo Town.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Oystercatcher and Redshank. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Cummeen Strand SPA is of high ornithological importance with one species, Light bellied Brent Goose, occurring in numbers of international importance. In addition, the site supports nationally important populations of a further two species. The regular presence of Golden Plover and Bar-tailed Godwit is of particular note as these species are listed on Annex I of the E.U. Birds Directive. The site is also important as a component of the much larger Sligo Bay complex. Cummeen Strand is a Ramsar Convention site."

Features of Interest and Conservation Objectives of the Natura 2000 sites

1.60 The Features of Interest and Conservation Objectives of the seven Natura 2000 sites are given in Table 1 below. This information was obtained from the NPWS website (last accessed on 27 July 2018).

Table 1 Features of interest and Conservation Objectives for Natura 2000 sites within potential zone of influence of 5 km

Natura 2000 Site	Distance from Site	Features of Interest	Conservation objectives
Lough Gill SAC 001976	520 m	• Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] • Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001976.pdf
Union Wood SAC 000638	2.7 km	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000638.pdf
Ballysadare Bay SAC 000622	3.0 km	• Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Embryonic shifting dunes [2110]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

Natura 2000 Site	Distance from Site	Features of Interest	Conservation objectives
		• Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Humid dune slacks [2190] • *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] • *Phoca vitulina* (Harbour Seal) [1365]	The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000622.pdf
Ballysadare Bay SPA 004129	3.0 km	• *Branta bernicla hrota* (Light - bellied brent goose) [A046] • *Pluvialis squatarola* (Grey Plover) [A141] • *Calidris alpina* (Dunlin) [A149] • *Limosa lapponica* (Bar - tailed Godwit) [A157] • *Tringa totanus* (Redshank) [A162] • Wetland and Waterbirds [A999]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004129.pdf.
Unshin River SAC 001898	4.0 km	• 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]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001898.pdf.
Cummeen Strand/Drumcliff Bay	4.0 km	• Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for

Natura 2000 Site	Distance from Site	Features of Interest	Conservation objectives
(Sligo Bay) SAC 000627		• Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Juniperus communis formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] • Petrifying springs with tufa formation (Cratoneurion) [7220] • Vertigo angustior (Narrow-mouthed Whorl Snail) [1014] • Petromyzon marinus (Sea Lamprey) [1095] • Lampetra fluviatilis (River Lamprey) [1099] • Phoca vitulina (Harbour Seal) [1365]	which the SAC has been selected. The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000627.pdf
Cummeen Strand SPA 004035	4.0 km	• Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Oystercatcher (*Haematopus ostralegus*) [A130] • Redshank (*Tringa totanus*) [A162] • Wetland and Waterbirds [A999]	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. The detailed conservation objectives developed in light of a defined list of attributes and targets for each feature of interest is available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004035.pdf

Potential Impacts and Likelihood of Significant Effects

1.61 The available information on the seven Natura 2000 sites within the 5 km potential zone of influence was reviewed to establish whether the continued use and deepening of the existing permitted quarry is likely to have a significant effect on their features of interest. The potential for impacts and likelihood of significant effects on the features of interest identified in this report is based on information collated from the desk study, the nature of the project i.e. limestone quarrying, the site visits and the detailed information provided in the relevant chapters of the EIAR for the continued use and deepening of the existing permitted quarry at Aghamore.

1.62 The likelihood of impacts occurring are established in light of the type and scale of the proposed development, the location of the proposed development with respect to Natura 2000 sites and the features of interest of the Natura 2000 sites.

1.63 This screening report has been prepared following the Cause – Pathway – Effect model7. The potential impacts of developments such as quarries are summarised into the following categories for screening purposes.

- Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be a result of change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment or the introduction of new activities such as aquaculture.

- Indirect and secondary impacts do not have a straight-line route between cause and effect. It is potentially more challenging to ensure that all the possible indirect impacts of the plan/project – in combination with other plans and projects - have been established. These can arise, for example, when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as an indirect consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact. Disturbance to fauna can arise directly through the loss of habitat (e.g. displacement of roosting bats) or indirectly through noise, vibration and increased activity associated with construction and operation.

1.64 The potential impacts that could occur as a result of the continued use and deepening of the existing permitted quarry are discussed in the following sections.

Identification of potential impacts on Natura 2000 sites

1.65 The continued use and deepening of the existing permitted quarry at Aghamore has the potential to result in impacts on Natura 2000 sites due to the following:

- Drawdown of groundwater.

- Emissions to air.

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[7] The approach is broadly based on information contained in Cooper, L. M. (2004), *Guidelines for Cumulative Effects Assessment in SEA of Plans, EPMG Occasional Paper 04/LMC/CEA*, Imperial College London.

- Emissions to water.

1.66 There will be no loss of habitat within the seven Natura 2000 sites and there will be no barrier to movement of species listed as features of interest as a result of the proposal to continue quarrying at Aghamore.

1.67 The features of interest of Natura 2000 sites likely to be affected by noise, such as SPA species, are sufficiently distant from the quarry so as to be unaffected by any operational noise. Features of Interest from the SPA sites within 5 km of the quarry are not likely to be found within the Site or in the immediate area as these species are dependent on the estuarine habitats associated with the SPA for feeding and roosting.

Drawdown of Groundwater

1.68 Deepening of the quarry will increase drawdown on the water table surrounding the quarry. The impacts and effects due to increases to groundwater drawdown at Aghamore Quarry are discussed in detail in Chapter 7 (Water) of the EIAR report. The following information has been extracted from the chapter and summarised for the purposes of this AA screening report.

1.69 An iterative method has been used to estimate the extent of drawdown at the lowest proposed quarry floor level (-50mOD) which is a combination of the Thiem-Dupuit Equation and the Rate-of-Recharge Method. The estimated radius of influence at the lowest quarry floor level of -50mOD is expected to be 286m from the quarry face. This distance does not extend as far as the Aghamore Stream, so no reduction of baseflow to the stream is predicted. Lough Gill is further away from the quarry void (c. 520m). Therefore, the probability of drawdown impacting on the surface water receptors, in particular Lough Gill, is low during the operation stage. Therefore, the overall risk to surface water receptors is 'low'.

1.70 It can be concluded that the activities associated with the proposed development are not likely to have an effect on features of interest of Lough Gill SAC, or any of the other 6 Natura 2000 sites, as a result of increased drawdown of groundwater.

Emissions to Air

1.71 The impacts and effects due to air emissions at Aghamore Quarry are discussed in detail in Chapter 8 (Air Quality) of the EIAR report. The following information has been extracted from the chapter and summarised for the purposes of this AA screening report. Fugitive dust is typically deposited within 100 to 200 m of the source, the greatest proportion of which, comprising larger particles (greater than 30 microns) is deposited within 100 m. Where large amounts of dust are deposited on vegetation over a long time-scale (a full growing season for example) there may be some adverse effects upon plants restricting photosynthesis, respiration, and transpiration.

1.72 The potential effects due to air emissions are most likely to affect features of interest of Lough Gill SAC due to its proximity to the quarry (ca. 520 m north-east). The remaining six Natura 2000 sites are not considered likely to be affected by air emissions due to the nature of the development and distance from the quarry.

1.73 Baseline dust deposition monitoring at the site indicates that the levels of dust generated are low and well below the level of 1000 mg/m^2/day, where it is considered that dust could be likely to have a significant effect on sensitive ecosystems. There are no other significant sources of emission to air within close proximity to the site and therefore no potential for cumulative effects has been identified. It can be concluded that the activities associated with deepening the quarry and ongoing quarry activities at Aghamore are not likely to have an effect on features of interest of Lough Gill SAC from the deposition of fugitive dust

1.74 The potential impacts in relation to an increase in ambient PM_{10} concentrations can be classified as 'negligible', the limited duration of conditions and the magnitude of change in the extent and scale of activities are considered to significantly reduce the generation of airborne PM_{10} beyond the site development boundary.

1.75 Significant effects on Natura 2000 sites are not considered likely as a result of emissions to air.

Emissions to Water

1.76 The impacts and effects due to emissions to water from quarry operations at Aghamore are discussed in detail in Chapter 7 (Water) of the EIAR report. The following information has been extracted from the chapter and summarised for the purposes of this AA screening report. The potential effects due to emissions to water are most likely to affect Lough Gill SAC. While Lough Gill SAC is not directly connected to the Site via any surface water pathways there is potential for effects via the Aghamore stream as the Site discharges to this stream c. 800m upsteam of Lough Gill SAC.

1.77 There is potential for spills or leaks of fuels/oils from vehicles during the operational stage, as well as increased suspended sediment in runoff, to impact on the discharge to surface water. Suspended sediment is likely to settle out over the quarry floor before reaching the sump. The water will be passed through a proposed settlement lagoon and associated hydrocarbon interceptors prior to discharge, which will minimise impact from any spills or leaks of fuels/oil.

1.78 Water quality results have been assessed to consider any potential impact on surface water receptors by the discharge. In particular, faecal bacteria can be present in both groundwater and surface water in the area as a result of agricultural activities in the lands surrounding the quarry, and the discharge of water to the Aghamore Stream could create a preferential pathway to Lough Gill. Recent sampling of surface water between the discharge and Lough Gill (See EIAR chapter 7 Appendix 7-4) shows that the concentrations of faecal bacteria in the discharge are lower than the background levels upstream, and downgradient faecal bacteria concentrations are lower than upstream due to the dilution effect of the discharge from the application site. Traces of total ammonia and orthophosphate typical of runoff from an agricultural catchment have also been reported in discharge. The chemical loading for the parameters in the discharge water from the quarry is low, and the quantitative impact of such a small loading on the mass balance of Lough Gill is considered to be negligible.

1.79 The assessment carried out in the Hydrology Chapter 7 (Water) determined that the probability of emissions to water impacting on surface waters, in particular Lough Gill, is low and the possibility of an impact to the groundwater bodies was assessed as negligible. It is therefore considered that the proposed development will not result in any significant effects on Natura 2000 due to emissions to water.

Table 2: Potential Impacts and Likelihood of Significant Effects

Natura 2000 Site	Potential Impacts		Cumulative effects	Likely Significant Effects	Rationale
	Direct	Indirect		(Alone or Cumulative)	
Lough Gill SAC 001976	No	Yes	No	No	The deepening of the quarry has the potential to indirectly impact Lough Gill SAC through drawdown of water. However, the hydrogeological studies carried out at the quarry show that the effects of deepening will not extend beyond 286 m which does not include Aghamore Stream or Lough Gill. There are no effects on Lough Gill predicted as a result of drawdown. The proposed works has the potential to indirectly impact Lough Gill through increased emissions to water. The proposed development will include a settlement lagoon and associated hydrocarbon interceptors prior to discharge. The hydrological studies carried out on the quarry determined that the possibility of this impacting surface water was low and groundwater bodies as negligible. There are no likely significant effects on Lough Gill predicted as a result of emissions to water.
Union Wood SAC 000638	No	No	No	No	The SAC is sufficiently distant from the quarry and is not connected via landscape features or surface water pathways to the quarry. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SAC.
Ballysadare Bay SAC 000622	No	No	No	No	The SAC is sufficiently distant from the quarry and is not connected via landscape features or surface water pathways to the quarry. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SAC.
Ballysadare Bay SPA 004129	No	No	No	No	The SPA is sufficiently distant from the quarry and is not connected via landscape features or surface water pathways to the quarry. The bird species listed as features of interest are not likely to be found within or

Natura 2000 Site	Potential Impacts		Cumulative effects	Likely Significant Effects	Rationale
	Direct	Indirect		(Alone or Cumulative)	
					in close proximity to the quarry as they rely on estuarine habitats for feeding and roosting. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SPA
Unshin River SAC 001898	No	No	No	No	The SAC is sufficiently distant from the quarry and is not connected via landscape features or surface water pathways to the quarry. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SAC.
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC 000627	No	No	No	No	The SAC is sufficiently distant from the quarry to exclude any direct impacts. There is potential hydrological pathway through surface water to this SAC via the Aghamore Stream and Lough Gill. However, the dilution factor of Lough Gill, proposed settlement pond and hydrocarbon interceptors reduce any potential impacts to this SAC through hydrological pathways. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SAC.
Cummeen Strand SPA 004035	No	No	No	No	The SPA is sufficiently distant from the quarry to exclude any direct impacts. There is potential hydrological pathway through surface water to this SAC via the Aghamore Stream and Lough Gill. However, the dilution factor of Lough Gill, proposed settlement pond and hydrocarbon interceptors reduce any potential impacts to this SPA through hydrological pathways. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SPA .The bird species listed as features of interest are not likely to be found within or in close proximity to the quarry as they rely on estuarine habitats for feeding and roosting. The potential impacts of the quarry operation are therefore unlikely to result in effects on this SPA

Cumulative Effects

1.80 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

1.81 Other plans and projects that should be considered when establishing cumulative effects are:

- proposals for which consent has been applied but which are awaiting determination;
- projects which have been granted consent, but which have not yet been started or which have been started but are not yet completed (i.e. under construction);
- proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined;
- constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
- developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

1.82 Potential impacts on water quality, as a result of the quarrying activities Aghamore, have been identified and other plans and projects (as described above) were considered in – combination with the quarry at Aghamore for cumulative effects on water quality.

1.83 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

1.84 The planning applications within the surrounding area are largely confined to single dwellings and small developments. When considered together with the quarry there is no pathway for cumulative effects to arise.

1.85 As significant effects to Natura 2000 sites as a result of the proposed works are not considered likely to occur there is no pathway for significant effects to occur cumulatively when considered with the quarry at Aghamore. There are no policies or objectives within the Sligo County Development Plan that when considered with the quarry proposal could give rise to cumulative effects on Natura 2000 sites.

1.86 Cumulative effects are not considered likely to occur due to continued use and deepening of the existing permitted quarry, Aghamore, Co. Sligo when considered with other plans and projects.

Likelihood of Significant Effects

1.87 It is considered that there is no potential for impacts on the seven Natura 2000 sites within the 5 km potential zone of influence due to continued use and deepening of the existing permitted quarry at Aghamore and Carrownamaddoo, Co. Sligo. Therefore, there is no likelihood of significant effects on these Natura 2000 sites either alone or in-combination with other plans and projects.

Consideration of Findings

1.88 This screening report for Appropriate Assessment, based on the best available scientific information, shows that continued use and deepening of the existing permitted quarry in the townlands of Aghamore and Carrownamaddoo, Co. Sligo poses no risk of likely significant effects on Natura 2000 sites.

1.89 It is considered that the project does not require progression to second stage Appropriate Assessment.

1.90 Based on this information, we submit that the competent authority can determine that an appropriate assessment is not required, as it can be concluded, based on objective scientific information, that the proposed development, individually or in combination with other plans or projects, will not have a significant effect on any European sites.

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