

Response to Request for Further Information

NATURA IMPACT STATEMENT

**Planning application for continued use and
operation of the existing permitted quarry at
Aghamore, Co. Sligo.
(Planning Reference 18/345)**

Prepared for: Lagan Bitumen Ltd.



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SLR 

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FIGURE 1.....LOCATION OF NATURA 2000 RELATIVE TO AGHAMORE QUARRY

INTRODUCTION

- 1.1 SLR Consulting Ireland (SLR) was commissioned by Lagan Bitumen Ltd. in 2018 to prepare the response to a Request for Further Information (RFI) from Sligo County Council (Planning Reference No. 18/345) for the proposed continued use and deepening of the existing permitted quarry at Aghamore, Co. Sligo.

Background to the Commission

- 1.2 Lagan Bitumen submitted an application for permission for continuation of use and deepening of the existing quarry at Aghamore Near, Co. Sligo on 30 August 2018. Sligo County Council issued an RFI on 22 October 2018. This report sets out the response to the Natura Impact Schedule requesting provision of a stage 2 Appropriate Assessment, in the form of a Natura Impact Statement (NIS).
- 1.3 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 land use in the surrounding area being pasture for grazing animals.
- 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 post & wire / 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. 2,830m²).
- 1.6 Upon the cessation of extraction operations it is proposed to return the worked lands to natural habitat¹ 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.

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

Aims of the Report

- 1.7 This aim of this report is to provide supporting information to assist the competent authority to carry out appropriate assessment to determine if there will be an adverse effect on the integrity of Natura 2000 sites as a result of the proposed development at Aghamore Near and Carrownamaddoo townlands, Co. Sligo.
- 1.8 This NIS will address the Natura Impact Schedule of the RFI issued by Sligo County Council.

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 appropriate assessment (stage 2) 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 This Natura Impact Statement (NIS) was prepared by Elaine Dromey MCIEEM with input from Owen Twomey.
- 1.11 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 quarries, large wind farms, single turbine developments, power lines, pit developments, anaerobic digesters, industrial development and single small developments.
- 1.12 Owen Twomey has worked in ecological consultancy since 2016. Owen holds a BSc in Environmental Science (Zoology) and a Postgraduate Diploma in Ecological Assessment. Owen has prepared ecological reports including Appropriate Assessment (AA) screening reports and Natura Impact Statements (NIS) for a wide range of projects, including other quarry developments within Co. Sligo.

RELEVANT LEGISLATION

European Nature Directives (Habitats and Birds)

- 1.13 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.

- 1.14 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.
- 1.15 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".*

European Communities (Birds and Natural Habitats) Regulations 2011

- 1.16 Part 5 of the European Communities (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.'*
- 1.17 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. Similarly Section 177T states that a competent authority may give a notice in writing to the applicant concerned, directing him or her to furnish a Natura impact statement and the applicant shall furnish the statement within the period specified in the notice.
- 1.18 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.

- 1.19 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'*.

METHODS

Desk Study

- 1.20 A desk study was carried out to support the preparation of the NIS. Information available on Natura 2000 sites within the potential zone of influence of the proposed works were collated. The Site and the surrounding area were viewed using satellite imagery². Sligo County Council planning portal³ was accessed for information on other planning applications. The National Parks and Wildlife Service (NPWS) website⁴ was accessed for information on Natura 2000 sites. Environmental Protection Agency (EPA) Maps⁵ was accessed for other environmental information relevant to preparation of this report.
- 1.21 The Chapters prepared for the Environmental Impact Assessment (EIA) submitted with this planning application; such as Chapter 2 (Project Description), Chapter 7 (Water), Chapter 10 (Noise) and Chapter 13 (Landscape) for the proposed project at the existing permitted quarry at Aghamore Near and Carrownamaddoo townlands were also reviewed to inform this report.

Natura Impact Statement

- 1.22 The report prepared for the second stage of AA is referred to as NIS and the approach taken to preparing the NIS is as follows: -
- Set out information on the Natura 2000 sites identified at screening stage as likely to be significantly affected by the project.
 - Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the environment.
 - Set out the conservation objectives of the site.
 - Describe how the project or plan will affect key species and key habitats. Acknowledge uncertainties and gaps in information.
 - Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project or plan (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes and geological changes, etc.). Acknowledge also uncertainties and any gaps in information.
 - The appropriate assessment is carried out by the competent authority and is supported by the NIS⁶.
- 1.23 The approach taken in preparing the NIS is based on standard methods and guidance, as listed in the references section of this report.

² <https://www.google.ie/maps> & <http://www.bing.com/maps/> (last accessed 06 March 2019)

³ <http://www.sligococo.ie/planning/SearchPlanningApplications/> (last accessed 06 March 2019)

⁴ <https://www.npws.ie/protected-sites> (last accessed 07 March 2019)

⁵ <http://gis.epa.ie/> (last accessed 07 March 2019)

⁶ Page 28 https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf

DETAILED DESCRIPTION OF THE DEVELOPMENT

- 1.24 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. 2,830m²).
- 1.25 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.
- 1.26 Aggregate extracted from the quarry will be processed within the quarry void and transported by HGV's to the existing manufacturing / processing area located on the Eastern side of the Local road, where further processing will be carried out.
- 1.27 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, with the exception of the area required to facilitate the installation of the proposed settlement lagoon.
- 1.28 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.
- 1.29 Dewatering of the site and discharge to the stream leading into Lough Gill have been occurring for more than 15 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.
- 1.30 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 currently 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 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.
- 1.31 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.
- 1.32 During operation groundwater and stormwater / surface water run-off entering the quarry void will be intercepted separately and will be diverted to different sumps located on the quarry floor. Surface water run-off and storm water will be directed from a dedicated sump to the proposed settlement lagoon, prior to discharge to the Aghamore Stream. Groundwater inflows will be directed to a separate sump and discharged directly to the Aghamore Stream via a sediment trap.

- 1.33 An Environmental Clerk of Works (EnvCoW) will be appointed by the quarry operator prior to works commencing to monitor surface waters and receiving waters. Daily monitoring of surface waters will be carried out. The quarry operator will keep a record of this monitoring and will be notified of any issues by the EnvCow.
- 1.34 The proposed c 2,830 m² water settlement lagoon will be constructed and fully operational prior to the recommencement of quarrying activities within the Site. The proposed settlement lagoon will be positioned east of the quarry void within improved grassland within the existing quarry lands. Settlement lagoons are standard quarry development features and typical 'designed-in' mitigation features which allow suspended solids to be removed from water prior to discharge.
- 1.35 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. Further processing will take place within the processing area to the east of the quarry. 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.
- 1.36 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.
- 1.37 The only hydrocarbons that will be stored on site while the quarry is operational, that have the potential to cause water pollution are lubricating oils, hydraulic oils and diesel fuel. All of these hydrocarbons will continue to be stored in the existing workshop located within the processing area of the east of the quarry. Bunded areas and spill trays are provided in the workshop to contain all oils and lubricants.
- 1.38 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 will be submitted to Sligo County Council on an annual basis.
- 1.39 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.
- 1.40 A restoration plan has been prepared for the planning application area – refer to EIAR Figure 2.2. 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.

NATURA IMPACT STATEMENT

- 1.41 The screening for appropriate assessment carried out by Sligo County Council concluded that the screening report provided as part of the documentation to support the planning application did not provide sufficient detail to allow them to determine the likelihood of significant effects on the Natura 2000 network.
- 1.42 The Planner's Report of 18 October 2018 mirrors comments made by NPWS via Development Applications Unit (DAU) on 4 October 2018. The planners comments with respect to appropriate assessment are as follows:

"The AA screening report provides that in-combination effects of the proposed development were examined and that no effects were determined. No list or determination is provided for that plans or projects examined for the purpose of assessing in-combination effects. Particular regard should be made to water quality and quantity as they relate to Lough Gill SAC. In addition, there is an in-combination effect arising from the processing plant and any associated discharges to the Aghamore Stream/Lough Gill SAC. This needs to be considered at screening stage and if required further considered a Natura Impact Statement (NIS).

Dewatering of the quarry and subsequent discharge to the Aghamore Stream occurs 800m upstream of Lough Gill. The AA screening report Table 2 (p22) provides that the proposed works have the potential to indirectly impact on Lough Gill through increased emissions to water. Accordingly, as the proposed works have the potential to impact on Lough Gill, an assessment on the indirect impacts as associated mitigation measures are required to be undertaken within a Natura Impact Statement (NIS). It is not possible under the Habitats Directive to take account of mitigation measures at screening stage that are intended to reduce or avoid any harmful effects arising from the proposed development"

- 1.43 The Competent Authority, in this case Sligo County Council, will be required to carry out an appropriate assessment to determine whether the proposed development would adversely affect the integrity of Lough Gill SAC (001976). The 'integrity of the site' can be defined as 'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and / or populations of species for which the site is or will be classified'⁷.

Assessment of the Effects of the Project or Plan on the Integrity of Lough Gill SAC

- 1.44 The headings within the appropriate assessment report template provided in the European Commission guidance document 'Assessment of plans and projects significantly affecting Natura 2000 sites'⁸ have been used to provide a framework to examine the potential impacts of the proposed project on Lough Gill SAC.
- 1.45 This section of the report sets out the potential implications of the plan or project (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 site with respect to the conservation objectives of the site and to its structure and function. The precautionary principle should be applied when considering the potential implications and the focus should be on

⁷ http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf

⁸ Page 32 http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of Lough Gill SAC. Where this is not the case, adverse effects must be assumed.

Description of European (Natura) 2000 site

- 1.46 The screening for appropriate assessment carried out by Sligo County Council concluded that Lough Gill SAC is required to be assessed within this NIS. Lough Gill SAC is approximately 520 m east of Aghamore Quarry when measured in a straight line. The following description of Lough Gill SAC is summarised from information within the Natura 2000 Standard Data Form for the site.

"Lough Gill is a moderate to large sized lake lying immediately east of Sligo town. It is fed by the River Bonet and drains into the sea via the Garvogue River, a short, wide and slow flowing river which passes through Sligo town. The lake lies along the junction between old metamorphic rocks to the south and limestone to the north. The water of the lake is thus influenced by both acidic and alkaline inputs, although nearly all the basin lies over limestone. The lake is 8 km by 2-3 km and has an area of 1,400 ha. It is a deep lake, with maximum depth at 31 m. Islands are a feature of the lake. Much of the shoreline is wooded and there is also some swamp vegetation, wet grassland and scrub along the shoreline. The lake is an important salmonid and coarse fishery and is used for a range of recreational activities. The site also includes the Shanvans and Owenmore rivers.

*An important example of a lake which appears to be naturally eutrophic. Quality generally good though blooms of blue-green algae in recent years indicate some artificial enrichment. Significant areas of alluvial forest occur along the Garvogue River (*Osmunda - Salicetum atrocinerea* type) and at the mouth of the River Bonet (*Carici remotae - Fraxinetum* type). Old oak woodland of varying quality is well scattered along the shoreline and on some of the islands and is an important example of this habitat for western Ireland. At least six Red Data Book plant species have been recorded from site. Site has three species of lamprey and *Austropotamobius pallipes*. The lake and its associated rivers support an important population of *Salmo salar*. *Lutra lutra* has a good population within the site. Of minor importance for birds though the site has a small breeding colony of *Sterna hirundo*. A wide range of rare or scarce invertebrates are known from the site, as well as several Red Data Book mammal species, including *Martes martes*"*

Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the environment.

- 1.47 The elements of the project identified as having potential to affect Lough Gill SAC are as follows:
- Dewatering of the quarry – effects on surface water
 - Deepening of the quarry – effects on ground water
 - In-combination effects with inactive processing area east of the Site.
- 1.48 TMS Environment Ltd. in 2019 (refer to response to Further Information Item 5) carried out a groundwater assessment and determined that the discharge of ground water from the quarry to Aghamore Stream will not change the existing hydrological system in the area. This assessment also determined that the quality of the current quarry discharge water is better than that of the Aghamore Stream. The water quality of the Aghamore Stream will not be reduced by discharge of water from the quarry during dewatering as the water being discharged is of better quality than that of the stream. The discharge of water from the quarry during dewatering is not likely to affect water quality in the Aghamore stream and therefore there will be no effect on the water quality of Lough Gill SAC and significant effects are not likely.
- 1.49 During the construction of the water settlement lagoon, any surface water generated by rainfall will be directed away from the Aghamore Stream to the quarry void. There will be no discharge of surface water run-off to Aghamore stream during construction of the settlement ponds. Surface

water run-off and stormwater will be pumped from a dedicated sump on the quarry floor to the water settlement lagoon prior to discharge to the Aghamore stream during operation of the quarry. The settlement lagoon will reduce the volume of suspended solids within the discharge water to level comparable with or better than that of the receiving waters. Groundwater inflows into the quarry void will be directed to a separate quarry sump for dewatering clean groundwater, prior to discharge off site directly to the Aghamore Stream via a sediment trap. There will be no deterioration to the water quality of Aghamore Stream or Lough Gill SAC due to the proposed project.

- 1.50 There will be a negligible 0.14% increase in the groundwater catchment to Lough Gill as a result of the proposed deepening of the quarry. This will not result in significant effects to the SAC. Both the Aghamore Stream and Lough Gill are outside of the estimated drawdown area radius (286 m) of the deepened quarry. As a result there will be no reduction inflow within the Aghamore Stream or effect on water levels within Lough Gill. There will be no significant effects on Lough Gill SAC as a result of changes in water quantity.
- 1.51 There is currently no point discharge arising from the processing area to the east of the Site as this area is inactive. There will be no point discharges from the processing area in the future. As the processing area east of the site is inactive and there are no water discharges from this area there is no pathway for the project to act in-combination with it resulting in cumulative effects on Lough Gill SAC. Cumulative effects as a result of the proposed project are not likely to give rise to significant effects on Lough Gill SAC.
- 1.52 The continuation of use and deepening of Aghamore is not likely to give rise to significant effects on Lough Gill SAC either alone or in-combination with other projects or plans.

Set out the conservation objectives of the site

- 1.53 The detailed conservation objectives for Lough Gill SAC are not yet available so a generic conservation objective has been supplied by NPWS⁹.
- 1.54 The generic conservation for Lough Gill SAC is as follows:
- 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:*
- 1.55 These Annex I habitats and Annex II species are;
- (3150) Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
 - (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites)
 - (91A0) Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
 - (91E0) Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)*
 - (1092) White-clawed Crayfish *Austropotamobius pallipes*
 - (1095) Sea Lamprey *Petromyzon marinus*
 - (1096) Brook Lamprey *Lampetra planeri*

⁹ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001976.pdf
(last accessed 08/03/2019)

- (1099) River Lamprey *Lampetra fluviatilis*
- (1106) Salmon *Salmo salar*
- (1355) Otter *Lutra lutra*

Describe how the project or plan will affect key species and key habitats. Acknowledge uncertainties and gaps in information

- 1.56 The project, the continuation of use and deepening of the existing quarry at Aghamore Near and Carrownamaddoo townlands, Co. Sligo, is set at a distance of ca. 520 m from Lough Gill SAC. The terrestrial key habitats and species of Lough Gill SAC, such as grassland and woodland habitats, will not be affected by the proposed project as they are at a distance of over 2 km from the Site and lack any ecological connectivity¹⁰ with the quarry. As the Site and the SAC boundary do not overlap there is no risk that the project could cause direct impacts resulting in effects on the habitats and species listed as feature of interest for Lough Gill SAC.
- 1.57 There will no indirect effect on the key species, such as otter, crayfish, salmon and lamprey, listed as features of interest of Lough Gill SAC as a result of the degradation of water quality as a result of discharge of surface water and groundwater to the Aghamore Stream.
- 1.58 The proposed project will not result in a deterioration of the water quality of Lough Gill. There will be no indirect effects to the aquatic habitat Natural Eutrophic Lakes (3150) though frequently recorded impacts such as pollution to surface waters, changes in water bodies condition and fertilisation in agriculture¹¹
- 1.59 The proposed project is not likely to affect key species and key habitats of Lough Gill SAC.

Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project or plan (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes and geological changes, etc.). Acknowledge also uncertainties and any gaps in information.

- 1.60 The terrestrial habitats for which the SAC is designated for will not be affected by the proposed project as they are set at a distance from the Site and there is no ecological connectivity between them and the Site.
- 1.61 The key species and habitats of Lough Gill SAC are not likely to be affected as a result of the proposed project.
- 1.62 The integrity of Lough Gill SAC will not be affected by the proposed project as there are no likely effects to either the key habitats or species for which it has been designated as a European site of importance for nature conservation.

¹⁰ Structural connectivity is equal to habitat continuity and is measured by analysing landscape structure, independent of any attributes of organisms. This definition is often used in the context of metapopulation ecology. Functional connectivity is the response of the organism to the landscape elements other than its habitats (i.e. the non-habitat matrix). This definition is often used in the context of landscape ecology. (Kettunen *et al.* 2007)

¹¹ According to Reporting under the Article 17 of the Habitats Directive during the Period 2007-2012

Describe what mitigation measures are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the site. Acknowledge uncertainties and any gaps in information.

- 1.63 While no adverse effects on the integrity of Lough Gill SAC are anticipated as a result of the proposed project the following mitigation measures are included as 'designed-in' mitigation and provide certainty that the SAC will not be affected by the proposal to resume quarrying operations at Aghamore Quarry.
- In advance of resuming quarrying operations at Aghamore a water settlement lagoon of c. 2,830m² will be installed to treat surface water run-off and stormwater pumped from a dedicated sump on the quarry floor, before discharge to the Aghamore Stream. The settlement lagoon will have a water depth of 1.5m, a minimum freeboard of 0.5m and will be lined to prevent leakage.
 - Hydrocarbon Interceptors will be installed close to areas of potential risk such as the fuel storage area and refuelling station.
 - Ground water entering the quarry void will be intercepted and directed to a dewatering sump for clean groundwater via a system of drains along the toe of the excavation faces. These drains will be maintained separate from the quarry floor. Water from the groundwater dewatering sump will be discharged directly off site to the Aughamore Stream via a sediment trap.
 - All water (stormwater and groundwater inflows) pumped from the quarry void will be discharged in compliance with the requirements of discharge licence ref no DI (W) 139 and emission limit values specified under the discharge licence.
 - Hydrocarbon and chemical storage will continue at their current location within the workshop located in the processing area to the east of the Site. The only hydrocarbons that will be stored on site during operation of the will be limited to lubricating oils, hydraulic oils and diesel fuel. All of these hydrocarbons will continue to be stored in bunded areas and on spill trays in the workshop area. Bulk fuels will be stored in the existing bunded fuel storage area on site.
- 1.64 The Quarry Manager will be responsible for implementation of good working practice during construction and mitigation measures as set out in this document. The measures set out above are used as standard to manage discharge of water from quarry developments and are accepted to be effective in preventing emissions of pollutants to surface water receptors.

CONSIDERATION OF FINDINGS

- 1.65 The continuation of use and deepening of Aghamore is not likely to give rise to significant effects on Lough Gill SAC either alone or in-combination with other projects or plans. The above measures are standard “designed in” mitigation typical of quarry developments and provide certainty that the SAC will not be affected by the proposal to resume quarrying operations at Aghamore Quarry. No additional specific mitigation measures are deemed necessary.
- 1.66 It is considered that, there will be no adverse effects on the integrity of Lough Gill SAC as a result of the proposed continuation of use and deepening of Aghamore quarry, at Aghamore Near and Carrownamaddoo townlands, Co. Sligo.
- 1.67 Based on the information set out in this report we submit that the competent authority has sufficient information to allow them to determine that the proposed project, individually or in combination with other plans or projects, will not have an adverse effect on any European sites.

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National Parks and Wildlife Services Protected Sites

<https://www.npws.ie/protected-sites>

Google Maps

<https://www.google.ie/maps>

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FIGURES