



HABITAT DIRECTIVE APPROPRIATE ASSESSMENT SCREENING AND NATURA IMPACT STATEMENT (STAGE 2):

**THE FILLING OF LANDS WITH IMPORTED INERT SOIL & STONE FOR
AGRICULTURAL BENEFIT AND ALL ASSOCIATED ANCILLARY WORKS
AT CARROWNAMADDOO,
BALLINTOGER, CO. SLIGO.**

Client: Mullane Plant Hire Ltd.
c/o Earth Science Partnership (Ire.) Ltd,
Tonranny,
Westport,
Co. Mayo.

Site Location: Carrownamaddoo, Ballintogher, Co. Sligo.

Prepared By: Mr. Freddie P.R. Symmons B.Env.Sc (HONS) MCIEEM
*Senior Environmental Consultant and
Full Member of the Chartered Institute of Ecology and
Environmental Management*
Kingfisher Environmental Consultants.
The Railway Cottage,
Mullanboys, Inver,
Co. Donegal.
F94 R3P9

Report Ref: AA NIS Report-ESP-Mullane-Sligo-15.11.2021

Report Date: 15th November 2021



1. Introduction

1.1 Preamble

Mr. Freddie Symmons - B.Env. Sc. (HONS) M.C.I.E.E.M *Senior Environmental Consultant and Ecologist* of Kingfisher Environmental Consultants and a *Full Member of the Chartered Institute of Ecology and Environmental Management* has been engaged by Earth Science Partnership (Ire.) Ltd. on behalf of Mullane Plant Hire Ltd. to carry out and prepare an Appropriate Assessment Screening and a Stage 2 Natura Impact Statement in relation to:

"Filling of lands (1.0 ha) with inert soil and stone (100,000 tonnes) over a 5-year period (20,000 tonnes/year)".

With the introduction of the Birds Directive in 1979 and the Habitats Directive in 1992 came the obligation to establish the Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU. In Ireland, the Natura 2000 network of European sites comprises Special Areas of Conservation (SAC's) and Special Protection Areas (SPA's).

Appropriate Assessment (AA) involves a case-by-case examination of the implications of a development for the Natura 2000 site and its conservation objectives. This may be presented in the form of a Natura Impact Statement. In general terms, implicit in Article 6(3) of the Habitats Directive is an obligation to put concern for potential effects on Natura 2000 sites at the forefront of every decision made in relation to plans and projects at all stages.

Each step in the assessment process precedes and provides a basis for other steps. The results at each step must be documented and recorded carefully so there is full traceability and transparency of the decisions made. They also determine the decisions that ultimately may be made in relation to approval or refusal of a plan or project. AA is not a prohibition on new development or activities but involves a case-by-case examination of the implications for the Natura 2000 site and its conservation objectives.

In the preparation of this report, careful attention has been made to fully document and reference all the site selection and suitability assessment procedures as they chronologically occurred. This is in accordance with the principles of Appropriate Assessment.

This report takes cognisance of the Kelly v An Bord Pleanála Case 2012 IEHC 400 which determined that conclusions must be capable of removing all reasonable scientific doubt as to whether a development may have significant effects on Natura 2000 sites.

1.2 Statement of Authority

This report has been prepared by an experienced Senior Environmental Consultant and Ecologist with over 26 years professional experience to evaluate ecological receptors in the vicinity of the site. Potential impacts from the proposed work activities, which may affect designated sites (Natura 2000) are also considered. This report details the findings of Stage 2: Appropriate Assessment Natura Impact Statement with a summary of the Stage 1 AA Screening Findings.

1.3 Methodology for Appropriate Assessment

1.3.1 Stage One - Screening for Appropriate Assessment

The Habitats Directive does not set out clear guidance on the exact format that a screening exercise for an appropriate assessment should follow. However, there is guidance provided in carrying out a Screening Report.

- Environment Heritage and Local Government: *Circular LG/08 Water Services Investment and Rural Water: Protection of Natural Heritage and National Monuments Programmes*. This is outlined on pages 30 – 35 of the Environment Heritage and Local Government publication: *Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities*, Published 10 December 2009.
- Environmental Protection Agency (n.d.) *Waste Water Discharge Licensing - Appropriate Assessment - Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007)* Wexford, EPA.
- Office of the Planning Regulator Practice Note PN01 Appropriate Assessment Screening for Development Management, March 2021

In the first document, screening for appropriate assessment involves the following:

Description of Plan or Project

The first element is a description of the plan or project, including its nature, size and location, and possible or likely effects, and draft policies, objectives, land use zonings and associated strategies in the case of plans.

Natura 2000 Sites

The second element is an examination of what Natura 2000 sites may be affected.

The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km) – (Source: *Office of the Planning Regulator Practice Note PN01 Appropriate Assessment Screening for Development Management, March 2021*).

The identification of European sites within a 15km zone has become common practice in screening projects for AA. However this approach is not based on the S-P-R model and should not be used for projects. Few projects have a zone of influence this large, but some more complex projects may require a greater zone of investigation. Instead the zone of influence of a project should be considered using the Source-Pathway-Receptor model. This should avoid lengthy descriptions of European sites, regardless of whether they are relevant to the proposed development, and a lack of focus on the relevant European sites and issues of importance.

Site synopses, which are summary descriptions of the key conservation interests of sites, and SAC datasheets with lists of qualifying interests for these sites are available from the NPWS website: www.npws.ie.

Assessment of Likely Effects

The task of establishing whether the plan or project is likely to have an effect on a Natura 2000 site or sites is based on a preliminary impact assessment using available information and data, including that outlined above, and other available environmental information (e.g. water quality data), supplemented as necessary by local site information and ecological surveys. This is followed by a determination of whether there is a risk that the effects identified could be significant. This need not be a lengthy exercise. A precautionary approach is fundamental and, in cases of uncertainty, it should be assumed the effects could be significant. Examples of significance indicators from Commission guidance (EC, 2002) are listed in the table below; this document also summarises four case study examples of assessment of significance outcomes for projects. As a guide, any element of a plan or project that has the potential to affect the conservation objectives of a Natura 2000 site, including its structure and function, should be considered significant (EC, 2006).



Impact type	Significance indicator
Loss of habitat area	Percentage of loss
Fragmentation	Duration or permanence, level in relation to original extent
Disturbance	Duration or permanence, distance from site
Species population density	Timescale for replacement
Water resource	Relative change
Water quality	Relative change in key indicative chemicals and other elements

Examples of significance indicators (from EC (2002), Box 4)

Some examples of effects that are likely to be significant are:

- Any impact on an Annex I habitat
- Causing reduction in the area of the habitat or Natura 2000 site
- Causing direct or indirect damage to the physical quality of the environment (e.g. water quality and supply, soil compaction) in the Natura 2000 site
- Causing serious or ongoing disturbance to species or habitats for which the Natura 2000 site is selected (e.g. increased noise, illumination and human activity)
- Causing direct or indirect damage to the size, characteristics or reproductive ability of populations on the Natura 2000 site
- Interfering with mitigation measures put in place for other plans or projects

As the underlying intention of the in-combination provision is to take account of cumulative effects, and as these effects often only occur over time, plans or projects that are completed, approved but uncompleted, or proposed (but not yet approved) should be considered in this context (EC, 2002). All likely sources of effects arising from the plan or project under consideration should be considered together with other sources of effects in the existing environment and any other effects likely to arise from proposed or permitted plans or projects.

Screening Conclusion and Statement

The findings and conclusions of the screening process should be documented, with the necessary supporting evidence and objective criteria. This is of particular importance in cases where the AA process ends at the screening stage because the conclusion is that no significant effects are likely. Screening can result in the following possible conclusions or outcomes:

1. AA is not required. Screening, followed by consultation and agreement with the NPWS, establishes that the plan or project is directly connected with or necessary to the nature conservation management of the site.

2. No potential for significant effects/AA is not required. Screening establishes that there is no potential for significant effects and the project or plan can proceed as proposed. However, no changes may be made after this as this will invalidate the findings of screening. Documentation of the AA screening process, including conclusions reached and how decisions were made, must be kept on file.

3. Significant effects are certain, likely or uncertain. The plan or project **must either proceed to Stage 2 (AA), or be rejected.** Rejection of a plan or project that is too potentially damaging and/or inappropriate ends the process and negates any need to proceed to Stage 2 (AA). Another possible option is to recommence the screening process with a modified plan or project that removes or avoids elements that posed obvious risks. This highlights the important process of screening a plan or project when new alternatives that may not have any



impact are being considered. However, repeated or complicated screening exercises are not recommended as they point to the risk of significant effects and the need for Stage 2 (AA).

The safeguards set out in Article 6(3) and (4) of the Habitats Directive are triggered not by certainty but by the possibility of significant effects. Thus, in line with the precautionary principle, it is unacceptable to fail to undertake an appropriate assessment on the basis that it is not certain that there are significant effects.

The following document has been used as guidance in compiling this screening report:

- Environmental Protection Agency (n.d.) *Waste Water Discharge Licensing - Appropriate Assessment - Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007)* Wexford, EPA.

In this document, screening for appropriate assessment involves the following:

Step 1: Management of the site

Is the project directly connected with or necessary to the management of the site?

Step 2: Description of the project or plan

Identify all the elements of the project or plan alone or in combination with other plans or projects that have the potential for having significant effects on the site. The geographical scope of the plan or project as well as the European Sites that may be affected must be identified. The European Site or Sites that could be affected should be described.

A project may not in itself have a significant effect on a European Site, however, in combination with other plans or projects (existing and planned) it may result in a significant effect on a European Site.

Step 3: Characteristics of the site

This step requires identification of the impacts of the project on a European Site by characterising the site as a whole or those areas where impacts are most likely to occur. In addition to consideration of the cumulative effects on a European Site, consideration must also be given to direct, indirect, short and long-term, isolated and interactive effects.

Step 4: Assessment of significance

The assessment of the likelihood of significant effects of a proposed or existing plan or project on a European Site should be completed. If no significant effects are likely then no further assessment is required prior to the authorisation of the plan or project. There must be no reasonable scientific doubt that the plan or project does not have an effect on a European Site. This decision should be reasoned and recorded. If significant effects are likely then an appropriate assessment must be carried out. In addition, if the likelihood of significant effects is in doubt then the *precautionary principle* applies and an appropriate assessment must be carried out.

1.3.2 Stage Two: Appropriate Assessment

This is the consideration of the impact of the project or plan on the integrity of the Natura 2000 site, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. The competent Authority drafts the AA.

1.3.3 Stage Three: Assessment of Alternative Solutions

This is the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.



1.3.4 Stage Four: Imperative Reasons of Overriding Public Interest (IROPI)

Stage 4 of Appropriate Assessment is the main derogation process of Article 6(4) of the Habitats Directive which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a Natura 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. This stage requires an affirmative answer to both of the questions below in order for a plan or project to go ahead in the absence of alternative solutions.

- Are there imperative reasons of overriding public interest?
- Are there human health or safety considerations or important environmental benefits?

1.3.5. References

The following references and source material have been referred to our used in the preparation of this screening assessment and Stage 2: Natural Impact Statement (NIS):

- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (2001)
- Birds Directive (79/409/EEC)
- Environment Heritage and Local Government (10 December 2009) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities, Dublin.
- Environment Heritage and Local Government (March 11 2010) Circular NPW 1/10 & PSSP 2/10: Appropriate Assessment under Article 6 of the Habitats Directive: guidance for Planning Authorities, Dublin.
- Environment Heritage and Local Government: Circular LG/08 Water Services Investment and Rural Water: Protection of Natural Heritage and National Monuments Programmes
- Environmental Protection Agency (n.d.) Waste Water Discharge Licensing - Appropriate Assessment - Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) Wexford, EPA.
- Environmental Protection Agency (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Wexford, EPA.
- European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997) (which has been amended twice, S.I. No. 233 of 1998 & S.I. No. 378 of 2005).
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: Alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission (2007)
- The European Commission published guidance on Article 6 of the Habitats Directive, including on Appropriate Assessment Screening. Assessment of plans and projects significantly affecting Natura 2000 sites (November 2001) and Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive (2018).
- Habitats Directive (92/43/EEC)
- National Parks and Wildlife Service Website – www.npws.ie: Site Synopsis and Mapping Data for Natura 2000 Sites.
- Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) High Court:
- *Uí Mhuirín v. MHPLG* [2019] IEHC 824
- *Sweetman v ABP* [2020] IEHC 39
- *Kelly v. An Bord Pleanála (Aldi Stores)* [2019] IEHC 84
- *Heather Hill Management v. An Bord Pleanála and Burkeway Homes* [2019] IEHC 186 and 450 Court of Justice of the European Union (CJEU):
- C-258/11 - *Sweetman and Others v ABP (Galway Bypass)*
- C-258/11 - AG opinion, *Sweetman and Others v ABP (Galway Bypass)*
- C-127/02 - *Waddenzee*



- C-521/12 - T.C. Briels and Others v Minister van Infrastructuur en Milieu
- C-323/17 - People Over Wind and Sweetman v. Coilte Teoranta
- Managing Natura 2000 Sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (updated 2018)
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (2009)
- Office of the Planning Regulator Practice Note PN01 Appropriate Assessment Screening for Development Management, March 2021

2. SCREENING FOR APPROPRIATE ASSESSMENT

2.1 Introduction

Screening for Appropriate Assessment is the first stage and critical test of Appropriate Assessment and the question is asked whether the development is considered to have a significant impact on a designated Natura 2000 site. The purpose of screening is to determine, on the basis of a preliminary assessment and objective criteria, whether:

- i) a plan or project is directly connected to or necessary for the management of the site, and
- ii) whether a plan or project, alone and in combination with other plans or projects, could have significant effects on a Natura 2000 site in view of the site's conservation objectives.

As most projects will not be related to point (i) above, this will virtually always be irrelevant but with regards to point (ii) if the answer is no then the process is complete and full appropriate assessment is not required. Screening therefore is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the Habitats Directive.

Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. This report takes cognisance of the Kelly v An Bord Pleanála Case 2012 IEHC 400 which determined that conclusions must be capable of removing all reasonable scientific doubt as to the effects on Natura 2000 sites.

2.2 Screening Process

2.2.1 Step 1: Management of the site

Question: Is the plan or project directly connected with or necessary to the management of the Natura 2000 site?

Answer: No

2.2.2 Step 2: Description of the project or plan

The development will consist of the filling of lands with imported inert material consisting of soil & stone for agricultural benefit and all associated ancillary works including a lorry wheel wash at Carrownamaddoo, Ballintogher, Co. Sligo within an area of 1.0 hectares.

The proposal consists of the filling of lands 100,000 tonnes of inert soil and stone material over a 5-year period (20,000 tonnes/year).

It is confirmed by the applicant that the land reclamation activity will not exceed 25,000 tonnes per annum of soil and stones being recovered and the proposed development will not require a mandatory EIAR nor an EIA is required. The site will also not require an EIAR as a Sub-Threshold project.

The existing site consists of poor quality agricultural land (GS4 – Wet Grassland) at present and is subject to livestock grazing. The purpose of this application is for land restoration and improvement of land for agriculture.

The Site Location Map is shown as **Figure 2.2.2.1**. The site is situated approximately 2.5 km south of the outskirts of Sligo Town and approximately 3.7 km northeast of Ballysadare. Access to the site is via a private road which connects onto the L7602 road approximately 0.7 m north of the site.

The reclamation of agricultural land is a soil material recovery activity and not a waste disposal activity. Uncontaminated, inert soil and stones will be delivered to the site in rigid trucks for use as fill material for re-contouring and land reclamation purposes at the site. The site will be restored to productive agricultural use.

It should be noted that all material imported will be pre-approved, i.e. inspected and found suitable for use, before it arrives at the site. This is standard operational procedures for such a facility. It is intended that the site will also operate under a Waste Facility Permit for EWC 17 05 04 only so only one type of material, inert soil and stone (Article 27 declared or EWC 17 05 04) will be handled on site.

The site is adjacent to an existing fill site operated by the applicant (Planning Reference P18/49) which operates under a Certificate of Registration (CoR). The proposed development will not commence until the CoR has been fully extinguished.

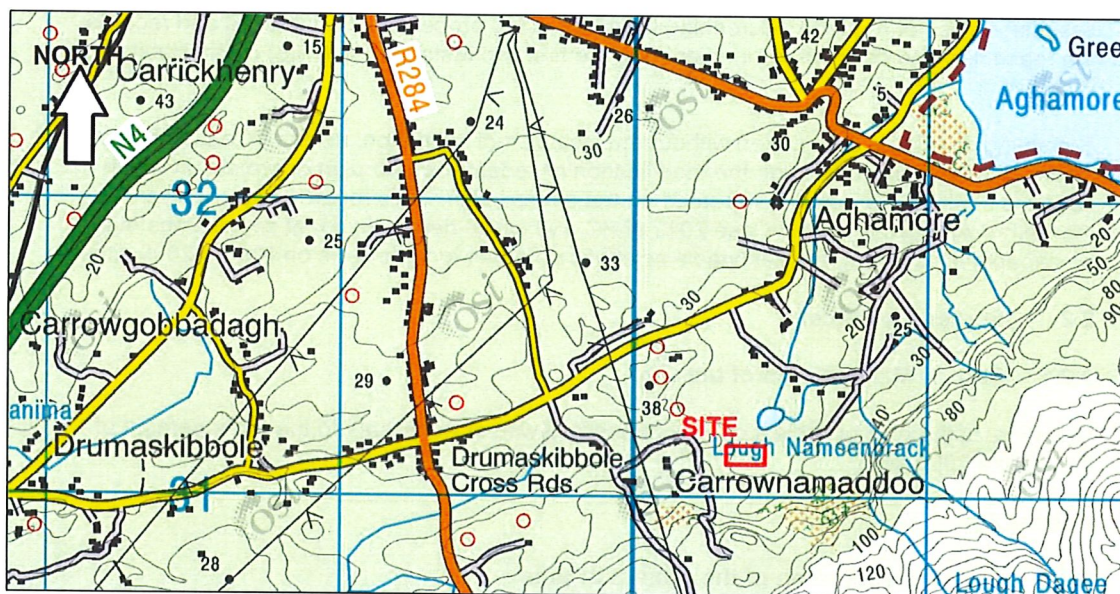


Figure 2.2.2.1: Regional Site Location Map

There is a small stream which flows along the north-east boundary of the site. This stream is one of several which enter into the small Lough Nameenbrack to the north-east of the site. The discharge from this small 0.48 ha lake is via a concrete pipe which then flows into a stream which eventually flows into Lough Gill some 1.1 km downstream. See **Figure 2.2.2.2** and **Figure 2.2.2.3** which are the local hydrology maps.

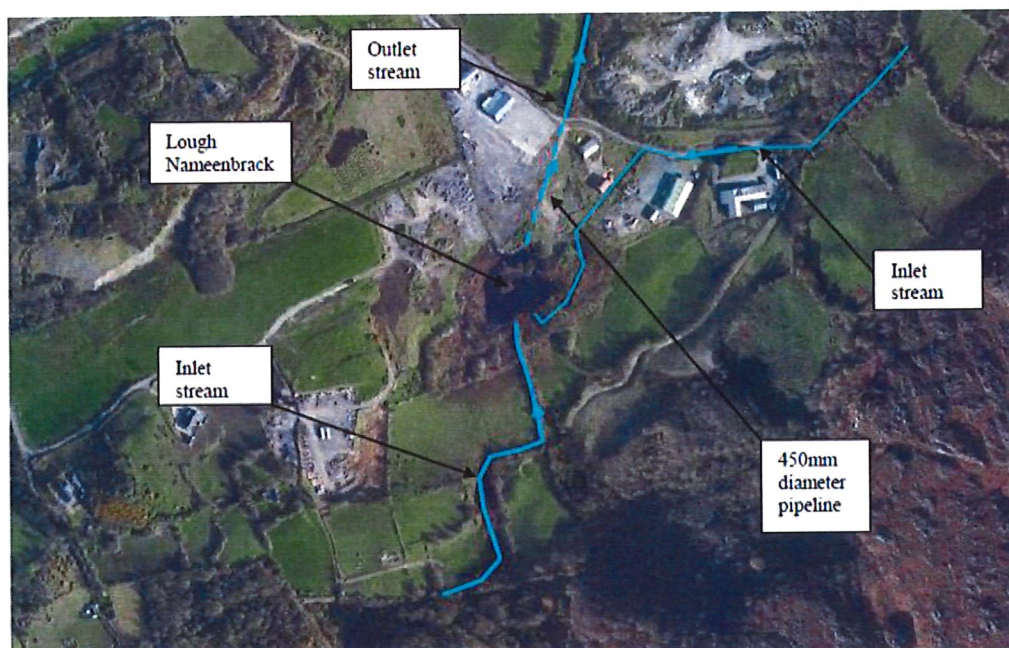


Figure 2.2.2.2: Drainage Map from the Flood Risk Assessment Report

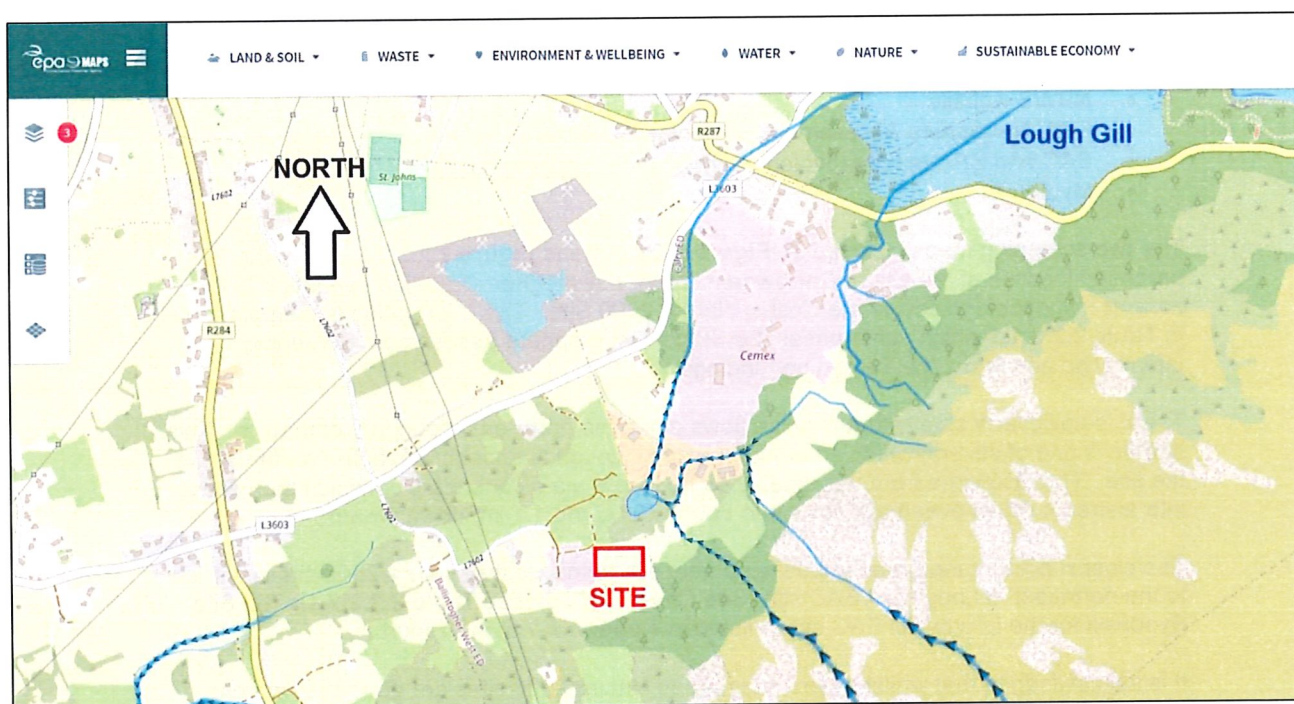


Figure 2.2.2.3: Hydrology Map of local area showing main drainage in the immediate vicinity of the Site (Source: EPA)



2.2.2 Step 3: Characteristics of the Site

2.2.2.1 Zone of Influence

The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km) – (Source: *Office of the Planning Regulator Practice Note PN01 Appropriate Assessment Screening for Development Management, March 2021*).

The identification of European sites within a 15km zone has become common practice in screening projects for AA. However this approach is not based on the S-P-R model and should not be used for projects. Few projects have a zone of influence this large, but some more complex projects may require a greater zone of investigation. Instead the zone of influence of a project should be considered using the Source-Pathway-Receptor model. This should avoid lengthy descriptions of European sites, regardless of whether they are relevant to the proposed development, and a lack of focus on the relevant European sites and issues of importance.

The zone of influence used in this screening statement is the local catchment area of the site any Natura 2000 sites within this immediate catchment – i.e. Lough Gill. This extends to a distance of ca. 2 km downstream from the site.

2.2.2.2 Screening Findings

The proposed development site is **not** located either within or immediately adjacent to a Natura 2000 site (i.e. SAC or SPA). This has been confirmed through consultation with:

- NPWS website
- EPA Appropriate Assessment Screening GeoTool
- SAC and SPA maps provided at www.biodiversityireland.ie.
- Myplan.ie

The two screening maps included as **Figure 2.2.2.2.1** and **Figure 2.2.2.2.2** shows the proposed location of the site at Carrownamaddoo, Ballintogher, Co. Sligo in relation to the zone of influence and shows the closest Natura 2000 Site. This information is then presented in **Table 2.2.2.1.1** which summarises the Stage 1 Appropriate Assessment Screening information and forms the Screening Findings.

There is however a small stream which flows along the north-east boundary of the site. This stream is one of several which enter into the small Lough Nameenbrack to the north-east of the site. The discharge from this small 0.48 ha lake is via a concrete pipe which then flows into a stream which eventually flows into Lough Gill some 1.1 km downstream.

The closest point of the proposed development site to the closest Natura 2000 site is 1.1 km to the northeast to Lough Gill SAC site (Site Code 001976) -see **Table 2.2.2.1.1**. The Site Synopsis for the Lough Gill SAC site is listed in **Appendix 1** of this report.

It is acknowledged that whilst other water based Natura 2000 sites are downstream from Lough Gill and are within 10 km of the development site, these are excluded as they are considered outside of the zone of influence and are screened out from screening due to the large intervening distance, dilution effect upon waters and the assessment that there will be no likely significant effects upon these sites. Divergence to assess these sites removes the focus on assessing any potential impacts upon the closest Natura 2000 site – Lough Gill SAC which is within the Source-Pathway-Receptor model due to potential hydraulic linkage.

The other Natura 2000 sites which are screened out of further assessment are:

- Site Code 000622 – Ballysadare Bay SAC located >3.1 km away from the site.
- Site Code 004129 – Ballysadare Bay SPA located .3.1 km away from site
- Site Code 000627 - Cumeen Strand/Drumcliff Bay (Sligo Bay) SAC located 5km away from site
- Site Code 0004035 – Cumeen Strand SPA located 5.4 km away from the site.

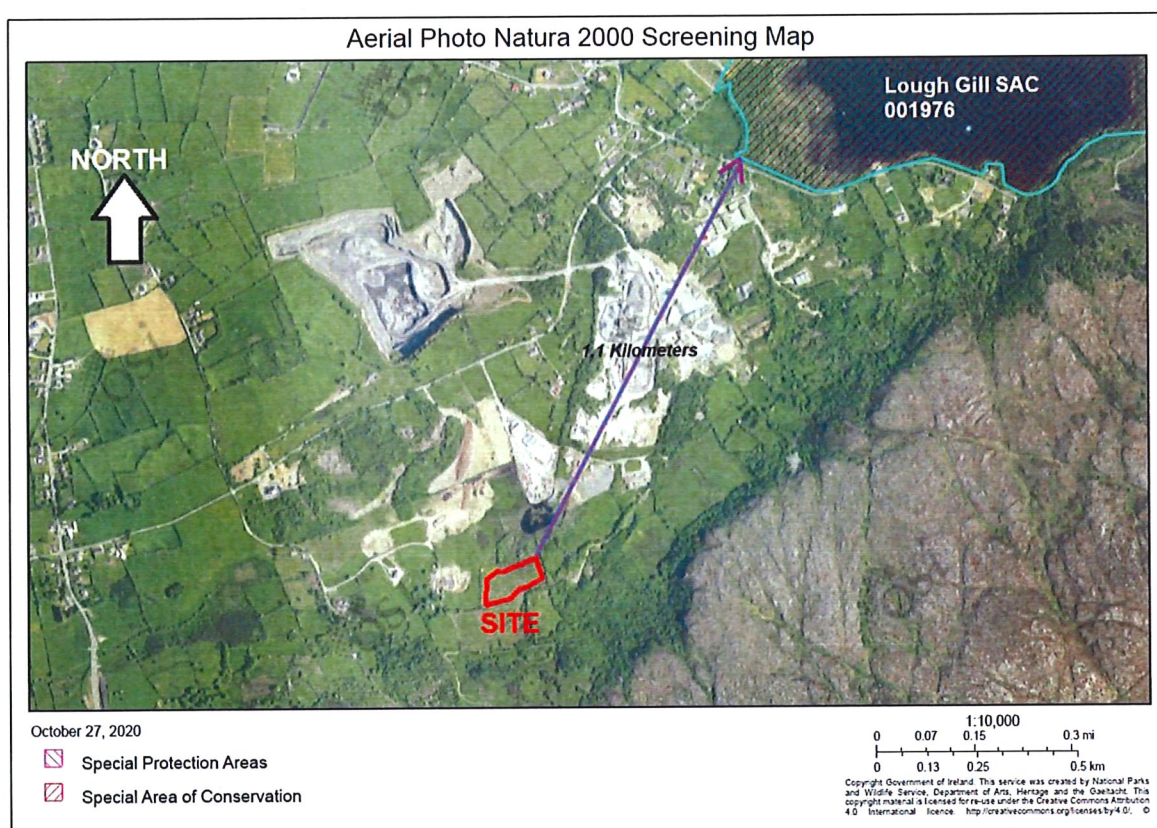


Figure 2.2.2.2.1: Natura 2000 Screening Aerial Map for Proposed Development at Carrownamaddoo, Ballintogher, Co. Sligo.

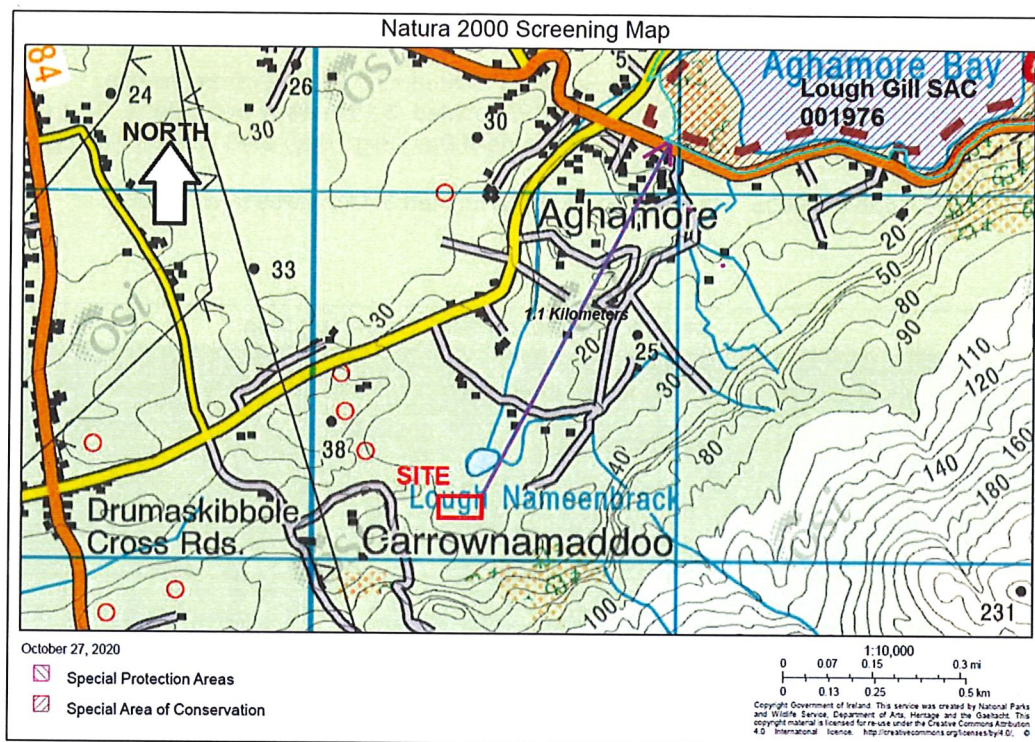


Figure 2.2.2.2.2 Natura 2000 Screening OS Map for Proposed Development at Carrownamaddoo, Ballintogher, Co. Sligo.

Table 2.2.2.2.1: Natura 2000 Sites Screened against the Proposed Development Site Carrownamaddoo, Ballintogher, Co. Sligo

Name	Site Code	Designation	Qualifying Interests	Distance from the site (km)	Screen in/out/uncertainty
Lough Gill SAC	001976	SAC	3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)* 1106 Salmon (<i>Salmo salar</i>) 1099 River Lamprey (<i>Lampetra fluviatilis</i>)	1.1 km northeast and downstream of Proposed Site	Screen In Site distance is significantly removed at over 1.1 km. No direct impacts upon SAC. No qualifying interests are within the proposed development site. However, a small field drain to the north-east of the site flowing into Lough Nameenbrack and from there onto Lough Gill is a potential pathway from the site to



			1096 Brook Lamprey (<i>Lampetra planeri</i>) 1355 Otter (<i>Lutra lutra</i>) 1095 Sea Lamprey (<i>Petromyzon marinus</i>) 1092 White-clawed Crayfish (<i>Austropotamobius pallipes</i>)		Lough Gill for potentially silt laden run-off water Therefore Screen In as It is uncertain whether the proposal will have a significant effect on a European site.
--	--	--	---	--	--

2.2.2.3 Assessment of Potential In-Combination Effects and Cumulative Impacts

In the preparation of this Appropriate Assessment screening due regard has been made to other developments within the geographical area, both existing, finished and proposed to assess any in combination and cumulative impacts. To enable an assessment a screening was done of the Sligo Local Authority Planning Maps for this area. The proposed site is adjacent to other sites and developments which have been granted planning permission by Sligo County Council to the same applicant. These are listed below:

05916: Retention and continuation of the use of land (previous use agricultural) for the deposit of waste, i.e. soil, stone and construction and demolition waste. Mr. John Mullane. Granted 8/1/2006.

11251: Retention of existing building materials storage compound area (4000m²). Mr. John Mullane. Granted 16/5/2012

1849: Development consisting of the filling of lands with construction and demolition waste (application area = 1.0 Ha, volume = 24,950 tonnes) together with screening berms and all associated ancillary works. Mullane Plant Hire Ltd. Granted 29/6/2018.

18175: Development consisting of Retention Permission for the extension to a storage yard previously granted Planning under reference PL11/251, screening berms and all associated ancillary works. Mullane Plant Hire Ltd. Granted 8/7/2018

The proposed site is adjacent to an existing fill site operated by the applicant (Planning Reference P1849) which operates under a Certificate of Registration (CoR). The proposed development will not commence until the CoR has been fully extinguished.

In addition the following permission was found downgradient of the proposed development:

07704: Construction of (1) a single storey warehouse for storage purposes, area 702 sq.m (2) proposed site entrance improvements (3) remove existing septic tank and provide new septic tank with associated percolation area at revised location, together with all associated site works. Granted 26/2/2008. Eamonn Duffy.

By virtue of these being granted planning permission, Sligo County Council will have undertaken appropriate assessment screening as the competent authority in allowing these to proceed.

In addition to those sites granted planning permission, there is also a current planning permission lodged with Sligo County Council for the following development:

21236: Development consisting of the recommencement of quarry operations within previously permitted quarry extraction area (c. 10.9ha), deepening of the previously permitted



quarry area by 2 no. extractive benches from c. - 21m OD to -50m OD, recommencement of aggregate processing (crushing and screening) within the existing processing area, located to the east of the local road that bisects the site, provision of a settlement lagoon (c. 2,830m²), provision of a 2 no. wheelwashes, provision of a double stacked portacabin office; provision of a wastewater treatment system, additional stockproof/trespass proof boundary fencing, all within an application area of c. 22.5 hectares. The Planning application is accompanied by an Environmental Impact Assessment report (EIAR) and a Natura Impact Statement (NIS). Lagan Materials Ltd. No Decision as of 1511/2021.

The above proposal is subject to an Appropriate Assessment Natura Impact Statement and will only be granted if it can demonstrate that it will not have significant impacts upon Lough Gill SAC.

Taking account of the above factors, it is considered that all in-combination impacts have been taken into account of any potential for in-combination impacts in this appropriate assessment screening.

2.2.2.4 Conservation Objectives

The following are the general Conservation Objectives of the Lough Gill SAC:

1. To maintain the Annex I habitats for which the SAC and SPA has been selected at favourable conservation status.
2. To maintain the Annex II species for which the SAC and SPA has been selected at favourable conservation status.
3. To establish the extent, species richness and biodiversity of the entire sites.
4. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

2.2.2.5 Existing land Use and Ecology at Proposed Site

The ecology of the proposed development site at Carrownamaddoo has been described in accordance with *Fossit, J.A., 2000. A Guide to Habitats in Ireland, The Heritage Council, Kilkenny.*

In addition, the following references have been used in the preparation of this habitat description:

- Devlin, Z. 2014. The Wildflowers of Ireland – A Field Guide: The Collins Press, Cork.
- Harrap, S. 2013. Harrap's Wild Flowers – A Field Guide to Wild Flowers of Britain & Ireland. Bloomsbury, London.
- Hubbard, C. E. 1992. Grasses: A Guide to their Structure, Identification, Uses and Distribution in the British Isles.
- Jermy, A. C., Chater, A. O. & R. W. David. 1982. Sedges of the British Isles: BSBI Handbook No. 1. BSBI, London.
- Joyce, P. M. 1998. Growing Broadleaves – Silvicultural Guidelines for Ash, Sycamore, Wild Cherry, Beech & Oak in Ireland. Coford, Dublin.
- Smith, A. J.E. 1978. The Moss Flora of Britain & Ireland. Cambridge University Press, Cambridge.
- Stace, C. A. 1991. New Flora of the British Isles.
- Streeter, D. 2016. Collins Wild Flower Guide 2nd Edition – The Most Complete Guide to the Wild Flowers of Britain and Ireland. William Collins, London.
- Webb, D. A. Parnell J. & D. Doogue. 1996. An Irish Flora. Dundalgan Press Ltd., Dundalk.
- www.wildflowersireland.ie



The existing site consists of poor quality agricultural land (GS4 – Wet Grassland) at present and is subject to livestock grazing. The purpose of this application is for land restoration and improvement of land for agriculture.

The development location consists of non-annexed habitat type – and is segregated from Lough Gill which is the nearest Natura 2000 site by a minimum of 1.1 km. In the intervening area there are quarries, dwellings, commercial buildings, regional and local access roads which all form artificial boundaries between the proposed site and Lough Gill.

The habitat types found within the site at Carrownamaddoo, Ballintogher, Co. Sligo and in the immediate vicinity are non-priority habitats and none of the habitats or species found within the proposed site boundary are worthy of specific conservation. The on-site habitat is a non-priority habitat consisting of wet grassland that has no particular ecological conservation value and does not form the basis of designation of the Lough Gill SAC site and therefore does not form a part of this Natura 2000 site in terms of feeding grounds; species regeneration or nesting.

2.2.3 Appropriate Assessment Screening Conclusion

Having considered the pathway from the small field boundary stream and the linkage to Lough Gill SAC, the prohibition of screening using mitigation measures, it is considered that this proposed development cannot therefore be screened out for appropriate assessment.

The AA Screening has ascertained that it is not possible to exclude, as a matter of scientific certainty (without the inclusion of any mitigation measures) that the proposed development will not have an effect on any Natura 2000 site, individually or together with other plans and projects.

This is due principally to the uncertainty as to whether the proposal will have a significant effect upon Lough Gill SAC – a European Site and the potential impact upon water quality and designated species.

The potential for impacts upon Lough Gill SAC are summarised as follows:

- Surface Water quality due to use of hydrocarbons on site;
- Surface water quality due to contaminated material inadvertently being deposited;
- Surface Water quality, travelling on site of vehicles;
- Potential for land slippage during infilling works and slope stability
- Surface water quality due to sediment migration, with associated effect on riverine and lake habitats and species;
- Increased flood risk due to increased surface water flows from site
- Potential for inadvertent introduction and spread of invasive plant species from the proposal site to Lough Gill SAC by hydrological link.
- Potential impact upon Otter habitat.

Based on the zone of the zone of influence, the following qualifying interests of Lough Gill SAC are considered those that potentially could be impacted upon by the above impacts without mitigation measures:

3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
1106 Salmon (*Salmo salar*)
1099 River Lamprey (*Lampetra fluviatilis*)
1096 Brook Lamprey (*Lampetra planeri*)
1355 Otter (*Lutra lutra*)
1095 Sea Lamprey (*Petromyzon marinus*)
1092 White-clawed Crayfish (*Austropotamobius pallipes*)

Therefore the project should proceed to Stage 2 and a Natura Impact Statement should be prepared as a precautionary measure to inform and assist the competent authority in carrying out the Appropriate Assessment.

3. NATURA IMPACT STATEMENT

3.1 Findings of Appropriate Assessment Screening

The AA Screening has ascertained that it is not possible to exclude, as a matter of scientific certainty (without the inclusion of any mitigation measures) that the proposed development will not have an effect on any Natura 2000 site.

This is due principally to the uncertainty as to whether the proposal will have a significant effect upon Lough Gill SAC – a European Site and the potential impact upon water quality and designated species.

3.2 Consideration of Any Likely Significant Effects upon Natura 2000 Sites before any Mitigation Measures are adopted

As the site is outside of any Natura 2000 there are **no likely direct impacts** upon Lough Gill SAC. The Potential for cumulative or in-combination impacts have been discussed in the Appropriate Assessment Screening Stage with no likely cumulative impacts predicted.

The potential for indirect impacts from the operational phase of the proposed project before any mitigation measures are considered are summarised below and in further detail in **Table 3.2.1**, using the headings discussed under the criteria for determination of impacts (EPA, 2018).

The key activities include infilling using inert soil, subsoil and stone. The potential indirect impacts to the hydrological environment arising from such activities and therefore posing potential impacts upon Lough Gill SAC are summarised as follows:

- Surface Water quality due to use of hydrocarbons on site;
- Surface water quality due to contaminated material inadvertently being deposited;
- Surface Water quality, travelling on site of vehicles;
- Potential for land slippage during infilling works and slope stability
- Surface water quality due to sediment migration, with associated effect on riverine and lake habitats and species;
- Increased flood risk due to increased surface water flows from site
- Potential for inadvertent introduction and spread of invasive plant species from the proposal site to Lough Gill SAC by hydrological link.
- Potential impact upon Otter habitat.

In summary the potential impacts are considered to be upon surface water and therefore the potential receptors are the water quality of Lough Gill and the species that depend upon good water quality such as Salmon (*Salmo salar*), River Lamprey (*Lampetra fluviatilis*), Brook Lamprey (*Lampetra planeri*), Sea Lamprey (*Petromyzon marinus*) and White-clawed Crayfish (*Austropotamobius pallipes*).

Otter (*Lutra lutra*) is considered for the purposes of ruling out whether the site provides suitable feeding or breeding habitat for this species and whether any disturbance will occur to otters.



Table 3.2.1: Summary of Indirect Significant Impacts upon Lough Gill SAC Site before Mitigation Measures

Activity	Attribute	Character of potential impact	Importance of attribute	Magnitude of potential impact	Term	Significance of potential impact
Enabling Phase						
Stripping Works, Haul Road Construction	Surface water quality	Silt-laden runoff from workings	Medium	Minor adverse	Temporary	Slight
Operational Phase						
Stockpiling of imported material.	Surface water quality	Silt-laden runoff from stockpiled material in infill area. The increased silt content in site runoff has potential to impact upon local surface water quality and Lough Gill some 1.1 km away.	Medium	Moderate adverse	Brief	Moderate
Trafficking on internal access route and lorry movements	Surface water quality	Silt-laden runoff from compacted hardcore surface. The increased silt content in runoff has potential to degrade local surface water quality.	Medium	Moderate adverse	Medium-term	Moderate
Deposition of infill material	Surface Water quality	Contaminated infill material has potential to degrade local surface water quality.	Medium	Major adverse	Long-term	Significant
Deposition of infill material	Stability of Infill and faces upon Surface Waters	Potential slippage and impact upon Surface Waters	Medium	Minor adverse	Long-Term	Significant
Deposition of infill material	Surface water quality	Suspended sediment mobilised on exposed fill surface has potential to degrade local surface water quality.	Medium	Moderate adverse	Brief	Moderate



Activity	Attribute	Character of potential impact	Importance of attribute	Magnitude of potential impact	Term	Significance of potential impact
Storage of Fuels and Refuelling of Machinery	Surface water quality	Runoff may contain hydrocarbons.	Medium	Moderate adverse	Brief	Moderate
Deposition of infill material	Flood Risk	Changes in Ground Levels could lead to increased flood risk downstream impacting upon Lough Gill SAC	Medium	Moderate adverse	Long-Term	Moderate
Deposition of Infill Material	Invasive Species Introduction and Spread	Potential for introduction of invasive species in infill material and spread to Lough Gill	Medium	Moderate adverse	Long-Term	Moderate
Disturbance due to Machinery and Human Activity	Otter	Potential disturbance to breeding and feeding area of otter	Medium	Moderate adverse	Short Term	Moderate



3.3 Mitigation of Potential Impacts

The indirect impacts that may potentially occur, as identified in Table 3.2.1, are resolved under the mitigation measures set out under Table 3.3.1 and as Shown in Figure 3.3.1 which is the Site Layout Plan with adopted Mitigation Measures. .

The following Mitigation Measures will be adopted at the site:

a) Fuel Storage and Refuelling

Diesel fuel for the machinery will not be stored on site but will rather be brought onto site in leak proof containers as required (i.e. mobile fuel bowsers). An emergency spill kit will be maintained on-site

b) Waste Acceptance Procedures

The objective of this Procedure is to ensure that all waste that is delivered to site does not contain hazardous waste and is deposited of in an appropriate manner. This Procedure has been prepared to ensure that only suitable wastes are accepted at the facility. It is based on best practice applied in the deposition of waste material including the Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities issued by (2020) by the EPA.

Scope

This procedure will apply to all personnel working on-site whether employees or contractors who will be made aware of the significance of efficient waste deposition. The facility manager will be responsible for ensuring that waste is removed and disposed in a sufficient manner. Waste handling operations are in accordance with hours of operation as detailed in the Waste Facility Permit applicable to the Site. At all other times other than Bank Holiday weekends, all waste for disposal shall be placed in the facility within 48 hours of its arrival on-site; at Bank holiday weekends such waste should be placed in the facility within 72 hours of its arrival on- site. Only waste in accordance with the Facility Permit for the facility will be accepted. Most of the materials delivered will be in accordance with the COR. However, it is probable that occasional stray wastes not suitable for processing will be present in the waste accepted.

The majority of the materials will be delivered in tipper trucks by waste contractors who have a valid and up to date waste collection permit, or those exempt from the permit process. A register of the Waste Contractors who use the site will be kept and will include the details of the Waste Collection Permits. Casual deliveries from individuals will not be accepted. This will minimise the risk of the delivery of unsuitable material.

Procedure

Waste Acceptance

Delivery vehicles carrying waste that arrive on site will be visually inspected by the machine operator. Any accompanying documentation will be verified. Where the visual inspection confirms appropriate inert material, the vehicle will be cleared to proceed to the waste deposition area. Where there is evidence from the visual inspection that there are unacceptable wastes in the vehicle, the load will be turned away from the site.

In such cases the operator will record the name of the waste delivery contractor, the driver, the registration number of the vehicle and the nature and origin of the waste. The operator will instruct

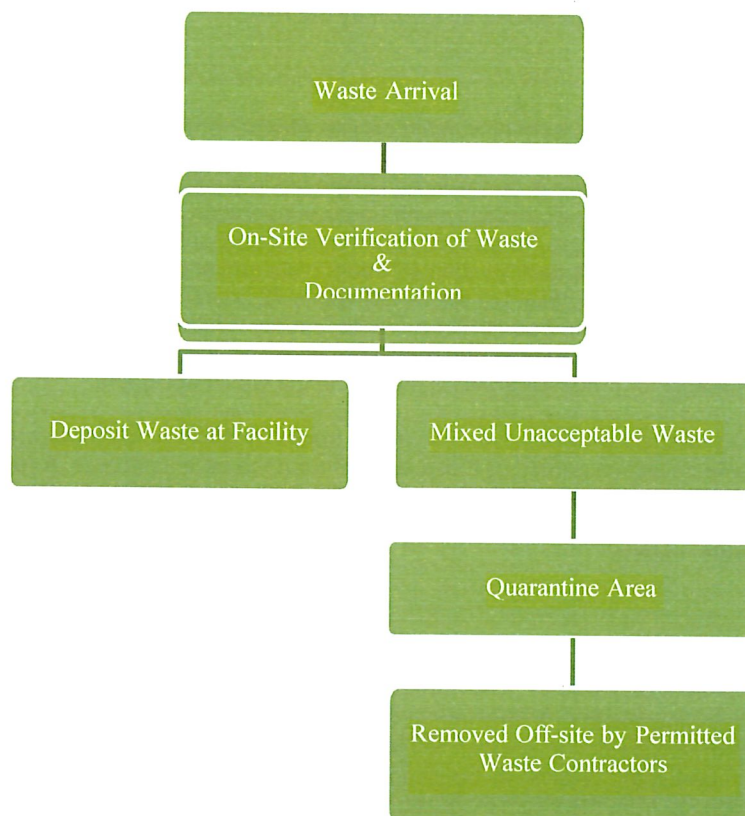


the vehicle driver to return the waste to the producer. Records of any such incidents will be maintained on-site and reported to the Local Authority.

Where the operator is unable to ascertain the nature of the materials in a load, he will instruct the driver to off-load the materials at the waste inspection/quarantine area where they will be inspected. Any materials identified as not suitable will be immediately removed and, where practical, returned to the delivery vehicle. If this is not possible the material will, depending on its nature be stored in the inspection/quarantine area for collection.

Waste which is deemed appropriate after the initial visual inspection is directed to the deposition area. Visual inspections are necessary to ensure that all wastes comply with the requirements of the WFP. Only after visual inspection can the waste be processed for disposal. Should waste which is not in accordance with the WFP be discovered subsequent to tipping, it will be transported to the quarantine area. Mullane Plant Hire Ltd will ensure that these stray contaminants are removed from the incoming materials and sent to appropriate off-site recovery/disposal facilities. Records of the waste type, quantity and destination of the materials are maintained at the site.

Graph 1: Waste Acceptance & Deposition



The following records will be maintained at the facility:



- The names and collection permit numbers of the carriers and the vehicle registration numbers
- The names of the producers of the waste as appropriate, source of the waste,
- A description of the waste including the associated EWC codes,
- The quantities of waste accepted at the site recorded in tonnes
- The name of the person checking the load,
- Where loads of waste are removed or rejected details of the date of occurrence; the types of waste and the facility to which they were removed to,
- The dates and times of all waste delivered to the site.

Responsibilities

The Facility Manager is responsible for establishing, with the relevant personnel, a suitable procedure for accepting and handling waste at the facility. The Facility Manager must ensure that all personnel involved in waste handling are made aware of this procedure and are given adequate training. The Facility Manager is also responsible for ensuring that detailed records of each load of waste arriving at and departing from the facility are being maintained.

c) Siltation of Watercourses due to movement of Truck on Internal Roadways

To prevent muck or silt being deposited on site haul roads which could enter surface water drains, the applicant is providing a drive through wheel wash for trucks. This ensures the wheels of trucks are kept clean and do not result in sedimentation of surface waters.

d) Assessment for Slope stability on the Site

In the absence of any other methodology the operator will use the Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008, Section 52 - Appraisal and site investigation of excavations, tips and lagoons (Regulation 54).

The requirements are set out as follows; -

- (1) The operator shall ensure that, before fill operations commence or re-commence in a particular area, a suitable appraisal of all proposed and existing works in that particular area is undertaken by a competent person in order to determine whether any such works represents a significant hazard, or a potential significant hazard.
- (2) Where the face height of a fill area planned to be worked exceeds 20 metres, the operator shall ensure that, before works commence or re-commence in that particular area, a geotechnical assessment is carried out in accordance with Regulation 55 of the Health and Welfare at Work (Quarries) Regulations 2008
- (3) Where an appraisal by a competent person under paragraph (1) identifies a significant hazard that cannot be rectified immediately in a safe manner, the operator shall ensure that the provisions of subparagraphs (a) to (c) of paragraph (5) are complied with.
- (4) Where an appraisal by a competent person under paragraph (1) identifies a potential significant hazard that cannot be rectified immediately in a safe manner, the operator shall ensure that -
 - (a) the provisions of subparagraphs (a) and (b) of paragraph (5) are complied with, and
 - (b) a geotechnical specialist carries out a site investigation to determine whether a geotechnical assessment under Regulation 55 is required.

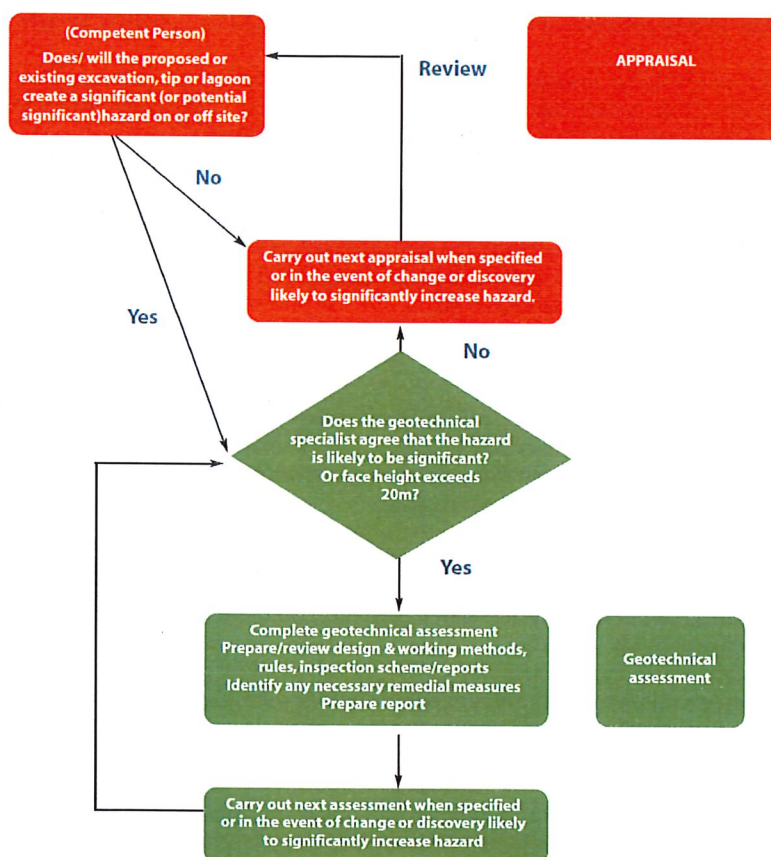


(5) Where the conclusion reached by the geotechnical specialist, following a site investigation made under this Regulation, is that the tip represents a significant hazard, the operator shall ensure that -

(a) appropriate protective measures are taken, including informing all persons affected by it, (b) only work that can be carried out safely is undertaken at the, tip and (c) a geotechnical assessment is carried out in accordance with Regulation 55.

(6) The operator shall ensure that - (a) any significant findings, and (b) any conclusions reached and the reasons for those conclusions made under an appraisal or a sit investigation are recorded by the competent person or the geotechnical specialist, as the case may be.

An appraisal is intended to be an exercise to determine which fill site, proposed or existing, would pose a significant risk if they failed or move significantly more than that allowed, and so merit an assessment by a geotechnical specialist. The relationship between the appraisal and assessment are illustrated in the flow chart below;-



Flowchart of the Appraisal & Assessments of Excavations, Tips and Lagoons
The Appraisal



The appraisal should be carried out with enough detail and sufficient expertise to decide on the basis of the guidance in this section, if the placed material poses a significant risk from collapse or movement. It is not normally necessary for appraisals to be carried out by a geotechnical specialist, though advice from one is appropriate where the level of hazard is unclear.

When carrying out an appraisal there is no need to duplicate work already done, as long as all the matters detailed in this section are adequately addressed.

In some instances, there may be areas where no one (person) is at risk from a collapse or slope failure. However, this area still needs to be assessed in the appraisal because failure in such areas could affect the stability of the remainder of the fill site.

Among other things, the appraisal should take account of the proposed fill material, especially its structure, water content, drainage ability, proximity to watercourses, roadways, workplaces and any evidence or history failures.

Significant Hazard

To determine if the hazard is significant or potentially significant it is necessary to consider how certain materials structure might feasibly fail and the likely consequences of any such failure. The likely consequences are crucial when deciding if a particular hazard is significant. The probability of such a failure happening is not relevant in this context. The consequences depend on the likely scale of the failure and the area that could be affected by it, and whether people are likely to be injured.

The hazard should be considered significant or potentially significant if such a failure would directly or indirectly, be: liable to endanger premises, roadways, or other places where people are likely to be found offsite. Or likely to cause serious or fatal injuries to persons on or off-site.

If the degree of hazard is significant, then the advice of a geotechnical specialist should be sought. Properly validated analytical techniques for calculating the hazard created may also be used to determine the significance of the hazard. Such techniques can also be useful in prioritising work.

Where an appraisal of any fill site identifies a potential significant hazard, the operator must engage a geotechnical specialist to carry out a site investigation to establish if a full geotechnical assessment is required.

The following list gives examples of where this may be necessary:

- (a) if the material is in a wholly, or mainly, solid state and not in solution or suspension, (i.e. viscous state – the ability to flow if not contained); and –
- (i) if the area of the land covered exceeds 10,000 square metres, or
- (ii) if the height of the material exceeds 20 metres, or
- (iii) if the average gradient of the land covered by the fill material exceeds 1 in 12

Competency

The assessment will be carried out by Patrick O'Donnell. Mr. O'Donnell is a chartered engineer with an honour's degree in Structural Engineering (Trinity College - 1981) and a higher diploma in Highway & Geotechnical Engineering (Trinity College – 1990). Mr O'Donnell has over 30 year's on-site experience.



Site Inspection and Appraisal

An inspection of the fill site should be carried out at regular intervals and the inspection should show that the material being deposited is; -

- In a solid state
- The existing ground does not exceed 1 in 12 slopes
- The total height of the material does not exceed 2.5 meters at any time
- The material that is unloaded in the designated area is always levelled and maintained at a slope of less than 1 in 3 prior to final levelling & final grading.
- The total area being filled at any one time is less than 5,000 square meters.
- There are no structures or objects within the fill area which may be in danger

As none of the criteria requiring further assessment by a geotechnical expert has been met, the assessment by a competent person is sufficient.

It is evident that the ground conditions do not pose any significant risk from collapse or movement and the hazard is deemed not to be significant or potentially significant it is not necessary to consider any further action. A copy of the site inspection sheet to be attached to the report.

Recommendations

General Site Inspections

Periodical walkover assessments by a competent person should be carried out to assess the conditions of the fill area and any potential hazards.

The side slope areas that have been affected by surface water erosion should be regraded and surface water run off diverted from the area.

Temporary Stockpiles

If stockpiling of material on site is necessary, then the stockpiles should be maintained to not exceed 20 metres height without further Geotechnical Assessment.

Tipping rules have been developed as appropriate for the imported material and available plant. These are attached below:

To ensure safety of working face excavations at the site the following measures are recommended.

- Based on the tracked excavator proposed to be used at the site we would recommend that working slopes are not more than 1 in 3.
- The working faces should be left stable and evenly trimmed with no overhangs left at the end of a working day.
- Periodical walkover assessments by a competent person should be carried out to assess the conditions of the site and any potential hazards. Any evidence of slope movement such as cracking or slumping will require suitable immediate action to prevent access to the toe and crest of the face until the hazards have been evaluated by a Geotechnical Specialist.



Tipping Rules

1. Only authorised materials are to be deposited in quarry tips (e.g.) clay /stone waste sauced and developed as part of normal quarrying operations.
2. All material deposited on the tip are to be laid down in horizontal layers of approximately 0.5 meters thickness.
3. As soon as possible following the deposition of new materials these are to be levelled and compacted by dozer.
4. The levelling shall be done in such a way to preventing/ discourage the collection and holding of runoff water on the surface of the tip during or following rainfall.
5. The surface of the tip is to be contoured so that runoff water does not escape onto the surrounding land formation but is directed to the formalised drainage systems within the tip.
6. Where appropriate edge protection is to be installed being made of waste/scalping type materials and a minimum of 1.5 meters in height.
7. Upon arriving at the tipping location, trucks drivers will ensure they are on ground conditions that allow them to discharge their payloads safely and must do so tipping on top of existing fill material depositing the new material just short of the advancing new edge.
8. Newly deposited waste materials are then pushed, levelled and the tip advanced using a dozer.
9. During the operations to move waste materials to the tip and when climatic conditions dictate all roadways used for this propose must be treated by water bowser to minimise potential air borne dust nuisance.
10. Once at the tip, trucks must make all attempts to ensure they travel on a different track to the previous truck or material movement, doing so not to encourage or cause deep rutting and damage of access roadways.
11. Compaction of tipped material will be achieved by the traversing with the dozer activity.
12. There will be occasions were a dozer is not always available, in this event materials are tipped in mounds and left on top of previously layered material.
13. This will temporally limit the tidiness of the tip and causes minor ponding during rainfall, this is not an ideal situation, but at times unavoidable because; either the dozer is not available or the inclement weather conditions make it difficult to operate equipment on the wet and soft surfaces.
14. Order will then be brought back into the tip when the dozer is available or weather conditions allow.
15. Tipping activities are to be monitored under the inspection scheme in accordance with Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008.



KINGFISHER
ENVIRONMENTAL CONSULTANTS

The Railway Cottage,
Mullanboys, Inver,
Co. Donegal. F94 R3P9
Mobile: 087 2641979
www.wastepermitireland.com
freddiesymmons@hotmail.com



Figure 3.3.1: Site Layout Plan with adopted Mitigation Measures (Source: ESP)



e) Flood Risk Assessment and Prevention of Increased Flood Risk from Infilling

A comprehensive flood risk assessment by John Casserly of Flood Risk Ireland. This report accompanies this planning application. As part of the flood risk assessment, it is stated:

"The fill area will flood during a significant short term rainfall event equivalent to the 100-year return event. A flow path will be provided into the downstream channel along a route overground, limiting the maximum possible extent of the flood area to a surface level of approximately 11.2m OD, this allows for a maximum flood depth of 200mm above the maximum surface level on the flow path to the stream. The downstream fill level (11.0m OD) with a 200mm flood depth can therefore be used as a baseline datum for the area being proposed for fill as part of this development. A freeboard allowance of 0.3m can be added to the minimum level in order to ensure that no storage is removed from the lake catchment and a reasonable allowance is made for flood levels exceeding the minimum fill level."

It is concluded in section 6 of the report that;

1. *It is important that this proposed development does not increase the potential for flooding and should not fill any location with a ground level that is beneath the downstream fill area surface level (thus removing storage from the current floodplain). A reasonable freeboard above this minimum level should also be provided to the proposed development fill level, which has been proposed as being 0.3m. The minimum proposed fill level associated with this development is therefore be 11.5m OD.*

And

2. *It has been demonstrated in Section 5.3 of this report that the potential impact of the proposed development on the existing catchment runoff rate is negligible. The infill material (based on table 27 page 93 of the TII Drainage Design Manual for National Road Schemes) has the potential to reduce the existing runoff rate from the proposed development site. The total site area (1.0 hectares) represents 0.36% of the total catchment area (2.772km²) and represents a negligible potential impact on the existing runoff rate from the catchment. It should also be noted that the proposed fill areas (minimum level 11.5m OD) are 300mm above any perceivable potential flood level. The filled site is going to largely reduce existing site surface gradients thereby reducing runoff rates from the proposed development area.*

The site layout plan which is included as **Figure 3.3.1** specifically excludes any infilling of the specified area as determined by the flood risk assessment. It ensures that there is no additional flood risk downstream that could impact upon other properties or upon Lough Gill SAC.

f) Prevention of Siltation of Boundary Stream

Distinct Mitigation Measures have been incorporated into the design of the site to protect the drainage stream which flows along the north-eastern boundary of the site and which flows into Lough Nameenbrack and then eventually Lough Gill some 1.1 km north of the site. These are shown on the Site Layout Plan as **Figure 3.3.1** and specifically include:

1. A no fill zone associated with the recommendations of the Flood Risk Assessment
2. A 5 metre buffer zone along the north-eastern boundary to the field stream where no fill will be placed – thus acting as a protection zone to the stream.
3. A 2:1 slope of fill with slope stability measures incorporated into the fill design.



4. The placement of a silt-fence along the length of the boundary stream in the buffer zone area between the stream and the start of the fill. This will ensure no silt can enter the boundary stream during high rainfall events – see **Figure 3.3.1** and **Figure 3.3.2**.

The above mitigation measures are deemed suitable and sufficient to ensure that there is no potential for any silt-laden waters entering the boundary stream and reaching Lough Gill SAC.

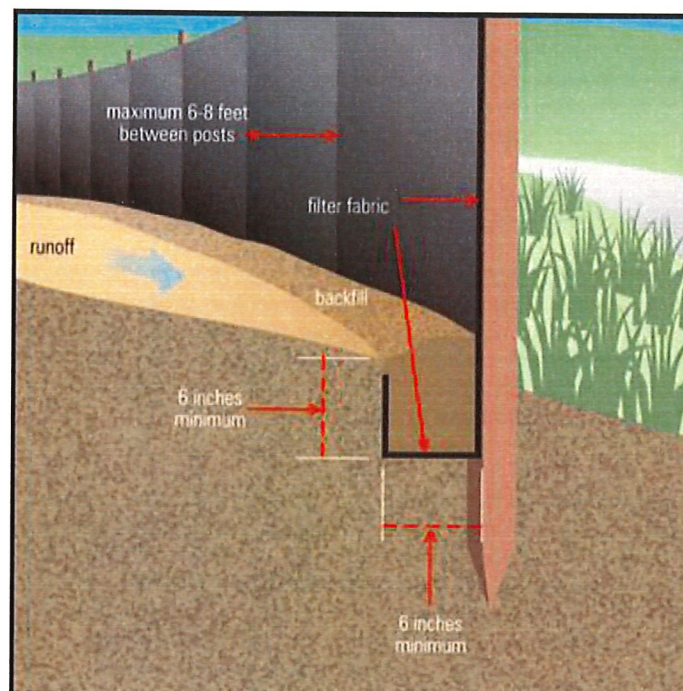


Figure 3.3.2: Example of EPA approved silt fence detail – temporary fence used during site works.

g) Prevention of Invasive Species

To prevent the spread and introduction of invasive species such as Japanese knotweed and Indian Balsam and noxious weeds to the subject site, the producer (Clerk of works/Site Manager) of the soil and stones at the construction site/s must undertake certification that the material that they intend to export off site and to be recovered at an approved site is free from any invasive species.

This will be in the form of a pre-construction invasive species survey and then certification that any load of soil and stones is free of any known invasive plant species. All paper work (load dockets) accompanying each load of soil and stones should certify that it is free from invasive species. The applicant will ensure that this appropriate certification is provided.

There are appropriate method statements listing management measures which should be adopted at any construction project sites by the producer of the soil and stones for export which are listed below:



- Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads, National Roads Authority, 2010 (Annex I).
- Best Practice Management Guidelines, Japanese Knotweed (*Fallopia japonica*), Invasive species Ireland, 2015 (Annex II).
- Himalayan Balsam, Invasive Species Ireland, date not provided – accessible online at <http://invasivespeciesireland.com> (Annex III).

In addition to the above measures, vehicles entering the site will be inspected and a record of each load and its origin will be recorded. Vehicles will proceed down towards the unloading and turning area where the inert soil and stones is tipped and is ready to be incorporated into the proposed design of the site restoration.

If any soils entering the site do not comply with the acceptance criteria they will be rejected, reloaded and sent off-site and returned to the producer. Any rejected loads will be recorded and logged as part of the site environmental management. A skip will be kept on site as a quarantine area for any extraneous matter which may arrive in any load, as is best practise.

h) Bird and Pest Control

The type of soil material which will be accepted for land reclamation is inert & inorganic and will not attract birds such as crows or seagulls or vermin such as rats. Therefore no control measures are proposed.

i) Litter Control

Litter will not be tolerated on site and should not arise. Any litter (i.e. plastic or paper) which may arrive on site within consignments will be removed on reception and thereafter will be sent to an approved facility for appropriate treatment/disposal. The site operator will be responsible for the day to day monitoring of the operation and is responsible for the overall appearance of the site. This will include twice weekly inspections of site boundaries for litter. A Skip will be maintained on-site upon a hardstanding quarantine area for any litter and any extraneous items such as plastic or steel which could arrive in a clean load of soil and stones.

j) Emissions – Monitoring and Control

Dust

Several measures will be implemented to suppress dust generated from traffic movement associated with the waste permit site:

- A drive through wheel wash will be installed.
- The applicant will utilise his existing adjacent farm water supply for supplying water to the wheel wash and for dust suppression.
- The site haul road between the unloading area and the public road will be maintained in an acceptable condition to prevent mud being deposited on the public road and to allow road sweeping to occur.
- The working areas and site access roads will be sprayed with clean water during periods of dry weather if dust is being generated to such an extent as to reasonably present a risk of nuisance to neighbouring properties.
- A tractor-mounted brush sweeper will be used at the site and if necessary will sweep the immediate area on the public road.



- Dust generated by vehicle movement will be further controlled by reducing vehicle speed.

Dust monitoring is not proposed as the measures outlined above will ensure that there is no dust nuisance associated with the proposed activity.

Noise

The only noise source on the site will be machinery noise. All activities will take place during the stated daylight working hours.

The applicant will take all adequate steps to minimise noise and ensure where possible that site operations adhere to BS 5228, 1997 Noise Control on Construction and Open Sites.

k) Emergency Response and Notification Procedures

This outlines the steps which will be taken in case of an emergency. The site entrance gates will be locked outside of working hours to eliminate fly-tipping. Emergencies although highly unlikely could include: fire; discharge into watercourse; unauthorised dumping. It is of course prudent to realise that not all eventualities can be predicted. All reports of emergencies will be the responsibility of the applicant and he should be made aware of any emergency immediately. All incidents, which require an emergency response or notification, are to be recorded in an Incident Log. The following are to be notified immediately by telephone/fax following any emergency:

Sligo County Council - Environment Section.

The Local Authority is the most important contact source because of their local knowledge and their emergency response capabilities. Full written details of any emergency will be forwarded to Sligo County Council on the next working day.

l) Corrective Action and Review of Procedures

In the course of the day to day running of the land reclamation site the machinery operator may become aware of aspects of the operation that require corrective action. While this may not require an immediate response it should be noted in the Incident Log in any event so that corrective action may be instigated.

m) Reporting

The operation of the land reclamation site will be subject to a Waste Facility Permit being granted by Sligo County Council. As part of a Permit, The site operator will maintain a register of the following records on site:

- The quantities and composition of soil materials received at the site.
- The quantities and composition of materials not accepted at the site, and details of where these materials were forwarded.
- The dates and times of all deliveries to the site.
- The names and carriers and the vehicle registration numbers.
- The origin of each delivery of fill material.



n) Potential for Impact Upon Otters

Whilst it is acknowledged that otter territory may exceed well outside of the designated site in which they may inhabit (Lough Gill), the small stream to the north-east of the proposed land reclamation site is not a fish bearing stream for otter feeding and does not provide suitable habitat for the construction of holts for breeding. Furthermore there are numerous impediments for otters reaching these lands including public roads; industrial estates; quarries; and a culverted outlet from the nearby lake.

As all works will occur well away from the down-gradient lough and the boundary stream; and all works will occur during the stated daylight working hours with the mitigation measures outlined, there is no likely significant impacts envisaged upon Otters associated with Lough Gill SAC.

o) Potential for Long Term Impacts

The land reclamation activity will be temporary in nature and will have a consequential benefit to agriculture. Following completion of the recovery activity, topsoil will be spread evenly over the site to a minimum depth, after firming, of at least 300 mm. Any topsoil which is delivered to the site during the recovery activity will be stockpiled separately for this purpose. The site will then be prepared for seeding by raking or harrowing, and by rolling. The site will then be restored for agriculture. There will be no long-term impacts as the land is currently agricultural and will be returned to agricultural grazing lands when completed.

3.4 Consideration of Any Likely Significant Effects upon Natura 2000 Sites Following Adoption of Mitigation Measures.

3.4.1 Summary of Potential Impacts and Assessment

The following table is based on a table taken from the Box 4 of EC (2002) and sets out examples of significance indicators. This is being used as an impact prediction to assess the potential for significant impacts upon the Lough Gill SAC site from the proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo.

This takes into account the project location; the project description; mitigation and precautionary measures as set out in Table 3.3.1 which have been incorporated; and the status and ecology of the existing site for development:

Impact Type	Significance Indicator for this Site
Loss of Habitat Area	No Loss to any part of Natura 2000 Site
Fragmentation	No fragmentation to Natura 2000 Site
Disturbance	No Direct or Indirect disturbance to Natura 2000 Site
Species Population Density	No Change or Replacement of Species Population
Water Resource	No relative change to surface waters
Water Quality	No significant direct or indirect impact

The conclusions of the assessment of impacts upon the listed Natura 2000 site has shown that there will be no likely significant impacts upon the Lough Gill SAC site

Table 3.3.1: Summary of Mitigation Measures to Prevent any Impacts upon Lough Gill SAC Site

Activity	Attribute	Character of potential impact	Mitigation measure	Predicted Impact
Enabling Phase				
Stripping Haul Construction	Surface water quality	Silt-laden runoff from workings	Silt fences between fill site and streams. Wheel Wash to be installed. Storage of stockpiles away from any surface waters. Exclusion area as part of Flood Risk Assessment. Adoption of Tipping Rules	Imperceptible
Operational Phase				
Stockpiling of imported material.	Surface water quality	Silt-laden stockpiled material in runoff area. The increased silt content in site runoff has potential to impact upon local surface water quality and Lough Gill some 1.1 km away.	Silt fences between fill site and streams. Wheel Wash to be installed. Storage of stockpiles away from any surface waters. Exclusion area as part of Flood Risk Assessment. Safe stockpiling. Adoption of Tipping Rules	Imperceptible
Trafficking on internal access route and site compound	Surface water quality	Silt-laden runoff from compacted hardcore surface. The increased silt content in runoff has potential to degrade local surface water quality. Increased runoff rates potential to increase flood risk	Wheel Wash to be installed.	Imperceptible
Deposition of infill material	Surface Water quality	Contaminated infill material has potential to degrade local surface water quality.	All material used for infilling will be inert and subject to waste acceptance criteria. All material entering site will be visually inspected prior at point of loading and upon arrival to site. Any unsuitable/unauthorised material will be temporarily stored in the designated quarantine area and removed off-site by an authorised waste contractor and sent to an unauthorised waste disposal site. Adoption of Tipping Rules	Imperceptible



Activity	Attribute	Character of potential impact	Mitigation measure	Predicted Impact
Deposition of infill material	Stability of Infill and faces upon Surface Waters	Potential slippage and impact upon Surface Waters	Slope Stability Works and following Methodology with 2:1 slope and buffer zones to streams and exclusion zone.	Imperceptible
Deposition of infill material	Surface water quality	Suspended sediment mobilised on exposed fill surface has potential to degrade local surface water quality.	Silt fences between fill site and streams and buffer zones. Wheel Wash to be installed. Storage of stockpiles away from any surface waters. Exclusion area as part of Flood Risk Assessment. Safe stockpiling	Imperceptible
Leakages from machinery; spillages during refuelling	Groundwater quality; surface water quality	Runoff/recharge may contain hydrocarbons.	All runoff from the wheelwash area shall pass through a newly installed interceptor.	Imperceptible
Storage of Fuels and Refuelling of Machinery	Surface water quality	Runoff may contain hydrocarbons.	There will be no storage of fuels, lubricants or hazardous substances on site. Refuelling will be carried out by using a mobile fuel tanker. Haulage vehicles will be refuelled off-site. An adequate supply of spill kits and hydrocarbon absorbent packs shall be stored in this area and staff shall be trained in the appropriate use of same.	Imperceptible
Deposition of infill material	Flood Risk	Changes in Ground Levels could lead to increased flood risk downstream impacting upon Lough Gill SAC	Full Flood Risk Assessment carried out and an exclusion area applied to the site where no filling will take place	Imperceptible
Deposition of Infill Material	Invasive Species Introduction and Spread	Potential for introduction of invasive species in infill material and spread to Lough Gill	Follow Procedures for the prevention of spread of invasive species as outlined in mitigation measures	Imperceptible



Activity	Attribute	Character of potential impact	Mitigation measure	Predicted Impact
Disturbance due to Machinery and Human Activity	Otter	Potential disturbance to breeding and feeding area of otter	No likely disturbance. The site does not contain habitats suitable for feeding or breeding otters and significant obstructions for otters to move inland to this site with roads, industrial estates and quarries between the site and Lough Gill SAC	Imperceptible



3.4.2 Impact Prediction & Conservation Objectives

3.4.2.1 Any impact on an Annex I habitat

The proposed soil recovery facility will occur outside of any Annex 1 designated habitat and there will be no direct significant impacts on the Natura 2000 site or its Annex 1 habitats. The method statement for the infilling works as set out in the project description which includes mitigation and precautionary measures eliminates any potential for indirect impacts through site drainage or siltation potentially impacting upon the adjacent stream and therefore the Lough Gill SAC.

Therefore it can be concluded that the proposed development will not compromise the maintenance of Annex I habitats for which the Lough Gill SAC has been selected at favourable conservation status.

3.4.2.2 Causing reduction in the area of the habitat or Natura 2000 site

The proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo, will occur on non-priority habitats which are located over 1.1 km away from the Lough Gill SAC Natura 2000 site boundary.

There will be no loss of any area of Natura 2000 sites as a consequence of the proposed development and the proposed development will not result in any impact on any Annex II species of flora or fauna.

3.4.2.3 Causing direct or indirect damage to the physical quality of the environment (e.g. water quality and supply, soil compaction) in the Natura 2000 site

There will be no direct or indirect damage to the physical quality of the environment with the proposed development site. The proposed site is outside of any Annex 1 designated habitat and there will be no significant impacts on any Natura 2000 site or their Annex 1 habitats.

The method statement for the infilling works and which includes mitigation and precautionary measures eliminates any potential for indirect impacts through site drainage or siltation potentially impacting upon the adjacent stream and therefore the Lough Gill SAC.

Distinct Mitigation Measures have been incorporated into the design of the site to protect the drainage stream which flows along the north-eastern boundary of the site and which flows into Lough Nameenbrack and then eventually Lough Gill some 1.1 km north of the site.

There will be no significant impacts via indirect means by surface water discharges as these have been carefully mitigated against to create no possibility of significant impacts upon the Lough Gill SAC.

3.4.2.4 Causing serious or ongoing disturbance to species or habitats for which the Natura 2000 site is selected (e.g. increased noise, illumination and human activity)

The proposed development of a soil recovery facility will cause no significant disturbance during infilling works. The site is physically removed from the Lough Gill SAC by over 1.1 km and in the intervening area there are quarries, dwellings, commercial buildings, regional and local access roads which all form artificial boundaries between the proposed site and Lough Gill.

The method statement for the proposed works which includes mitigation and precautionary measures eliminates any potential for indirect impacts through dust and noise. The



development poses no potential new impact or significant impact upon the maintenance of species or habitats at the Natura 2000 site.

3.4.2.5 Causing direct or indirect damage to the size, characteristics or reproductive ability of populations on the Natura 2000 site

The proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo will have no direct or indirect damage to the size, characteristics or reproductive ability of populations on the Lough Gill SAC Natura 2000 site.

The proposed development will not compromise or negatively impact upon water quality, which could impact upon fish populations and plant species and invertebrates upon which the birdlife feed. This is confirmed through the adoption of appropriate and suitable precautionary and mitigation measures. The site does not offer suitable feeding or breeding areas for otters associated with Lough Gill.

3.4.2.6 Interfering with mitigation measures put in place for other plans or projects

The proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo will have no direct or indirect impacts upon mitigation measures put in place for other plans or projects. The proposed development is considered reasonable and well thought out and sensitive to the existing site.

3.4.2.7 Potential Cumulative Effects from Other Plans or Projects upon Natura 2000 Site

The site at Carrownamaddoo, Ballintogher, Co. Sligo will not commence operations until the adjoining Certificate of Registration site activity has been completed. The proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo will have no significant negative direct or indirect impacts upon the Lough Gill SAC site. The development will not create a cumulative impact upon the Natura 2000 site in combination with any other plans or projects. This has been examined during the AA Screening Stage.

3.4.2.8. Have the Conservation Objectives Been Met

It is reasonable to determine that the conservation objectives of a European Site will be met if its habitats and species are maintained at a favourable conservation status. Given that the proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo will not have a negative impact upon the Annex 1 Habitats or Annex II Species, nor upon surface waters through the implementation of precautionary and mitigation measures; it is concluded that the conservation objectives of the Lough Gill SAC site will be met by allowing the proposed development works to proceed.


3.5. Conclusions of Natura Impact Statement Report

The findings and conclusions of the Appropriate Assessment Natura Impact Statement have been documented, with the necessary supporting evidence and objective criteria. The NIS conclusions are that the development of a proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo will:

1. Have no significant impact upon surface water quality either during the infilling phase or the post construction phase. The proposed development will not cause deterioration of water quality, which would have a negative impact upon the Lough Gill SAC Natura 2000 site. This is confirmed through the precautionary and mitigation measures incorporated into the Method Statement for the infilling works.
2. There will no loss of any Natura 2000 site area. There will be no loss of Annex I habitats; or Annex II species upon which any Natura 2000 site qualifies for its conservation status as a consequence of permitting the proposed development to proceed.
3. There will be no cumulative impact upon any Natura 2000 sites in combination with other plans or projects.
4. The proposed soil recovery facility at Carrownamaddoo, Ballintogher, Co. Sligo will not compromise the maintenance of Annex I habitats for which any Natura 2000 site has been selected at favourable conservation status.
5. It is concluded that the conservation objectives of the Lough Gill SAC site will be met as the habitats and species will be maintained at a favourable conservation status. **The NIS findings and conclusions remove all reasonable scientific doubt as to the effects that the works proposed may have on the Natura 2000 sites.**

Therefore, there is no reason why the proposed development should be precluded from proceeding.

Yours sincerely,



FREDDIE P.R. SYMMONS B.Env. Sc. (HONS) M.C.I.E.E.M
Senior Environmental Consultant
Full Member of the Chartered Institute of Ecology and Environmental Management

APPENDIX 1: SITE SYNOPSIS FOR LOUGH GILL SAC



SITE SYNOPSIS

Site Name: 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.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[3150] Natural Eutrophic Lakes
[6210] Orchid-rich Calcareous Grassland*
[91A0] Old Oak Woodlands
[91E0] Alluvial Forests*
[1092] White-clawed Crayfish (*Austropotamobius pallipes*)
[1095] Sea Lamprey (*Petromyzon marinus*)
[1096] Brook Lamprey (*Lampetra planeri*)
[1099] River Lamprey (*Lampetra fluviatilis*)
[1106] Atlantic Salmon (*Salmo salar*)
[1355] Otter (*Lutra lutra*)

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.). A number of interesting tree species occur. Strawberry Tree (*Arbutus unedo*) is found in its most northerly site in the world. Yew (*Taxus baccata*) occurs in abundance. Bird Cherry (*Prunus padus*), a Red Data Book species, is also found, as is the nationally scarce Rock Whitebeam (*Sorbus rupicola*). Some areas of conifer plantation occur in association with these woodlands.



There is a fringe of deciduous woodland along most of the length of the Garvoge River. In parts it is dense and impenetrable, with a very wet marshy underlayer. Some areas are dominated by Rusty Willow (*Salix cinerea* subsp. *oleifolia*), with Alder (*Alnus glutinosa*) also occurring commonly. Other tree species present include Goat Willow (*Salix caprea*), Hazel (*Corylus avellana*), Rhododendron (*Rhododendron ponticum*) and Cherry Laurel (*Prunus laurocerasus*). Both of the latter species are invasive aliens. In the understorey, species such as Guelder-rose (*Viburnum opulus*), Gipsywort (*Lycopus europaeus*) and Skullcap (*Scutellaria galericulata*) are found. Reedswamp is also common along the river. Another area of alluvial wet woodland is found at the mouth of the Bonet River. Here there is dense willow (*Salix* sp.) scrub, along with Reed Canary-grass (*Phalaris arundinacea*), and also areas where Alder and Goat Willow are dominant.

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. Heath-covered hillsides above the woods are dominated by Heather (*Calluna vulgaris*).

The site also supports several rare plant species, including Yellow Bird's-nest (*Monotropa hypopitys*), the lady's-mantle species *Alchemilla glaucescens*, Ivy Broomrape (*Orobancha hederaceae*), Black Bryony (*Tamus communis*), Intermediate Wintergreen (*Pyrola media*) and Bird's-nest Orchid (*Neottia nidus-avis*). There is also an unconfirmed record for Melancholy Thistle (*Cirsium helenioides*) from the eastern side of the site.

Both the woods and the mountains are used by a large herd of Fallow Deer. 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*). The Lough Gill system gets a very early run of spring salmon, while the Bonet holds stocks of salmon from spring right through to the end of the season. White-clawed Crayfish (*Austropotamobius pallipes*), Otter and Pine Marten are well established on this site, the first two are both Annex II species. The woodlands have a fauna which includes several rare snail species.

Lough Gill supports low numbers of wintering waterfowl, mostly Mallard (<150), Tufted Duck (20-30) and Goldeneye (<20). A small colony of Common Tern breed on the islands (20 pairs in 1993), while Kingfisher are found on the lake and rivers. Both of these species are listed on Annex I of the E.U. Birds Directive. A colony of Black-headed Gulls (63 pairs in 1992) occurs with the terns. The woods support a good diversity of bird species including Jay, Woodcock and Blackcap.

The site is of importance for four habitats listed on Annex I of the E.U. Habitats Directive, including two with priority status. It is also noted for the high number of rare or scarce animal and plant species.

