CUTHBERTENVIRONMENTAL

EU Habitats Directive

Appropriate Assessment

Screening and Natura Impact Statement

The Importation of Inert Soil and Stones

at

Derrydarragh,

Co. Sligo

Cuthbert Environmental

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Screening and Natura Impact Statement

Derrydarragh

Co. Sligo

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1 Introduction

Cuthbert Environmental has been commissioned to undertake a Habitats Directive Stage 1 screening for Appropriate Assessment of a proposal deposit inert soil and stones at a site in Derrydarragh, Co. Sligo. Further steps are to be determined by the findings of the screening assessment.

1.1 Background & Requirements for HDA (Habitats Directive Assessment)

1.1.1 Project Description

The project involves the deposition of inert soil and stones at a site in Derrydarragh, Co. Sligo (see Figure 1 for site location). The material will be used to raise existing field levels at the project site in order to increase its agricultural functionality. It is anticipated that, upon completion of the deposition of fill material, the finished surface soil will be reseeded and restored to agricultural grassland habitat.

Proposed fill area: **13,209 m^2**
Proposed fill volume: **15,890 m^3**

All fill material will be deposited within the boundaries of the project site. A closer image of the site is shown in Figure 2. As can be seen in Figure 5, a river exists along the north boundary of the site. A 1m *x* 1m earthen bund will be created at the north edge of the filling area in order to protect the river from runoff from the project site.

In addition to this design measure the following measures will also be adhered to throughout the filling operation:

- Upon completion of deposition activities exposed surface soils will be seeded so that vegetation becomes established within as short a timeframe as possible.
- No fuel or other potentially polluting material will be stored on site. A dozer will be on site infrequently to level received inert material. While on site the dozer will be restricted to the bunded area. The dozer will be inspected for fuel and oil weeps prior to accessing the project site and will only be permitted to access the site once free of such weeps. All vehicles transporting inert fill material to the site will be required to be free of fuel and oil weeps.
- During dry weather periods a water bowser will be available on site to prevent generation of dust.

Figure 1. Project Site Location (Data Source: EPA, 2019)

1.1.2 Requirement for Habitat Directive Assessment

The transposition of the EU Habitats Directive Assessment by the European Communities (Natural Habitats) Regulations 1997 – 2011 (referred to as the Habitat Regulations) provide the legal basis for the protection of habitats and species of European importance in Ireland. The legislative protection of habitats and species provided by the Habitats Directive has been implemented in Ireland and throughout Europe through the establishment of a network of designated conservation areas known as the Natura 2000 (N2K) network. The N2K network includes sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the EU Birds Directive. SACs are designated in areas that support habitats listed on Annex I and/or species listed on Annex II of the Habitats Directive. SPAs are designated in areas that support: 1% or more of the all-Ireland population of bird species listed on Annex I of the EU Birds Directive; 1% or more of the population of a migratory species; and more than 20,000 waterfowl. Under the Habitat Regulations, sites designated as SACs and SPAs are referred to as **European Sites**. It is noted that, under the Habitats Regulations, the term European Site also includes candidate SACs (cSACs) as well as SACs.

Articles 6(1) & (2) of the Habitats Directive set out provisions for the conservation management of European Sites. Articles 6(3) and 6(4) of this Directive set out a series of procedural steps that

test whether or not a plan or project is likely to affect a European Site. Article 6(3) also establishes the requirement for a HDA:
"*any plan or project not directly connected with or necessary to the management of the (Natura 2000) site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4* (i.e Article 6(4)), *the competent national authorities shall agree to the plan or project only after having ascertained that it will not affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public*".

As such, any project with the potential to result in likely significant effects, either individually or in combination with other plans or projects, upon the conservation objectives of a Natura 2000 site must undergo an assessment of its implications on relevant Natura 2000 sites. In order to establish whether or not a likely significant effect will arise as a result of the implementation of this project in Derrydarragh, a screening exercise should be undertaken.

1.1.3 Stages of the Habitats Directive Assessment

European Guidance[1] has outlined a staged process for the completion of a HDA.

- Stage 1 – Screening: This stage defines the proposed plan, establishes whether the proposed plan is necessary for the conservation management of the Natura 2000 site and assesses the likelihood of the plan to have a significant effect, alone or in combination with other plans or projects, upon a Natura 2000 site.
- Stage 2 – Appropriate Assessment: If a plan or project is likely to have a significant effect on a Natura 2000 site, Appropriate Assessment must be undertaken. In this stage the impact of the plan or project to the Conservation Objectives of the Natura 2000 site is assessed. The outcome of this assessment will establish whether the plan will have an adverse effect upon the integrity of the Natura 2000 site. The final document is referred to as a Natura Impact Statement (NIS).
- Stage 3 – Assessment of Alternative Solutions: If it is concluded that, subsequent to the implementation of mitigation measures, a plan has an adverse impact upon the integrity of a Natura 2000 site, it must be objectively concluded that no alternative solutions exist before the plan can proceed.

[1] European Commission Environment DG 2001: Assessment of plans and projects significantly affecting Natura 2000 sites

- Stage 4 – Where no alternative solutions exist and where adverse impacts remain but imperative reasons of overriding public interest (IROPI) exist for the implementation of a plan or project, an assessment of compensatory measures that will effectively offset the damage to the Natura site 2000 will be necessary.

Following on from Article 6(3) of the Habitats Directive, the objective of this assessment is to conclude whether the activities associated with the proposed project in Derrydarragh is likely to result in significant adverse effects to the integrity of European Sites.[2]

2 Stage 1: Screening Assessment

2.1 Screening Methodology

The function of the screening assessment is to identify whether or not the proposal will have a likely significant effect on European Sites. In this context "likely" refers to the presence of doubt with regard to the absence of significant effects (ECJ case C-127/02) and "significant" means not trivial or inconsequential but an effect that has the potential to undermine the site's conservation objectives (English Nature, 1999; ECJ case C-127/02). In other words, any effects that would compromise the functioning and viability of a site and interfere with achieving the conservation objectives of the site would constitute a significant effect.

The nature of the likely interactions between the proposal and the integrity of European Sites will depend upon the sensitivity of the Site's qualifying features to potential impacts arising from the proposal; the current conservation status of the Site; and the likely changes to water quality that will result from activities associated with the project, in combination with other plans and projects.

This screening exercise has been undertaken with reference to respective National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland (NPWS, 2009, amended in 2010) and *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC* and recent European and National case law (ECJ C-258/11 & High Court case ref 2014-320-JR). The following guidance documents were also of relevance during this Screening Assessment:

- The Habitats Regulations; A guide for competent authorities. Environment and Heritage Service, Sept 2002.
- Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats directive 92/43/EEC. European commission (2000). (To be referred to as MN 2000).

[2] Note - this report has taken account of the recent ECJ ruling (C-323/17): "Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site."

- Guidance 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. European Commission (2007).

The EU Guidelines (2001) outline the stages involved in undertaking a Screening Assessment of a project that has the potential to have likely significant effects on European Sites. The methodology adopted for this Screening Assessment is informed by these guidelines and was undertaken in the following stages:

1. Define the project and determine whether it is necessary for the conservation management of European Sites;
2. Identify European Sites likely to be influenced by the project;
3. Review the project to determine if it has the potential to affect European Sites and determine whether the European Sites are vulnerable to the effects; and
4. Identify other plans or projects that, in combination with the project, have the potential to affect European Sites.

2.2 The Project and N2K Baseline

2.2.1 Definition of the Project

The project has been defined in *Section 1.1.1* and it is clear from the description of the project that it is not necessary for the conservation management of European Sites.

2.2.2 Description of the Project Area

(i) Receiving Environment

The project site is located just outside the western suburbs of Sligo Town. It is located immediately south-west of Gaelscoil Chnoc na Ré and Dick Kent Park which is home to St. Mary's GAA Club. It is located just west of Oakfield Park, which is a residential area on the outskirts of Sligo Town. Mitchell Curley Park is located just over 200 metres north of the site. This park includes 3 playing pitches, a children's playground and a teenage multi-sport arena. The site is located ~2km south-west from the centre of Sligo Town. As shown in Figure 2, there is a new road (currently under construction) located immediately to the east of the site. This road will be used for site access. Apart from Sligo Town to the east, much of the surrounding landscape of the site is pastoral. The site itself is a grassland. As shown in Figures 3 and 5, there is a stream running along the north boundary of the site. This stream discharges into Cummeen Strand ~2km downstream near Gibraltar Point which is located north of the proposed site. Figure 2 provides an aerial view of the project site, showing an approximate site boundary (please refer to engineering drawings for exact site dimensions). Figure 3 shows the fill area boundary of the site.

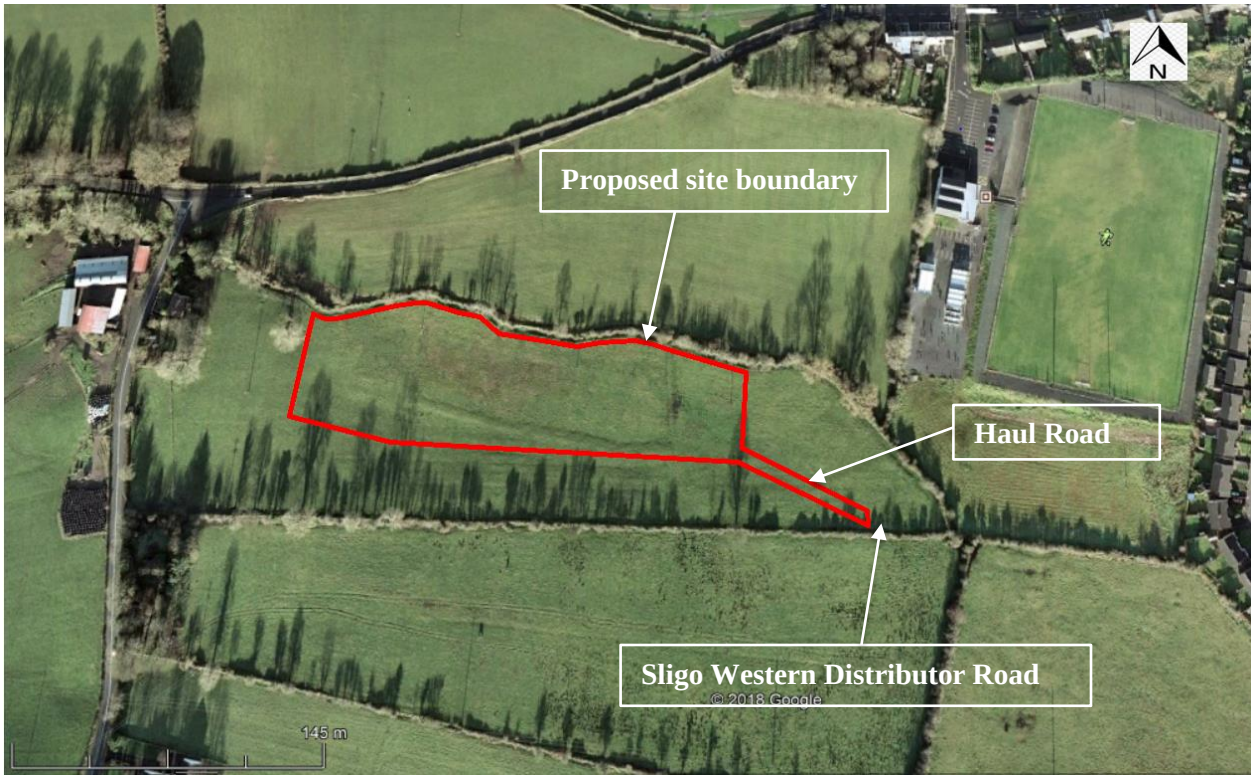

Figure 2. Proposed site aerial photograph (Data Source: Google Earth, 2019).

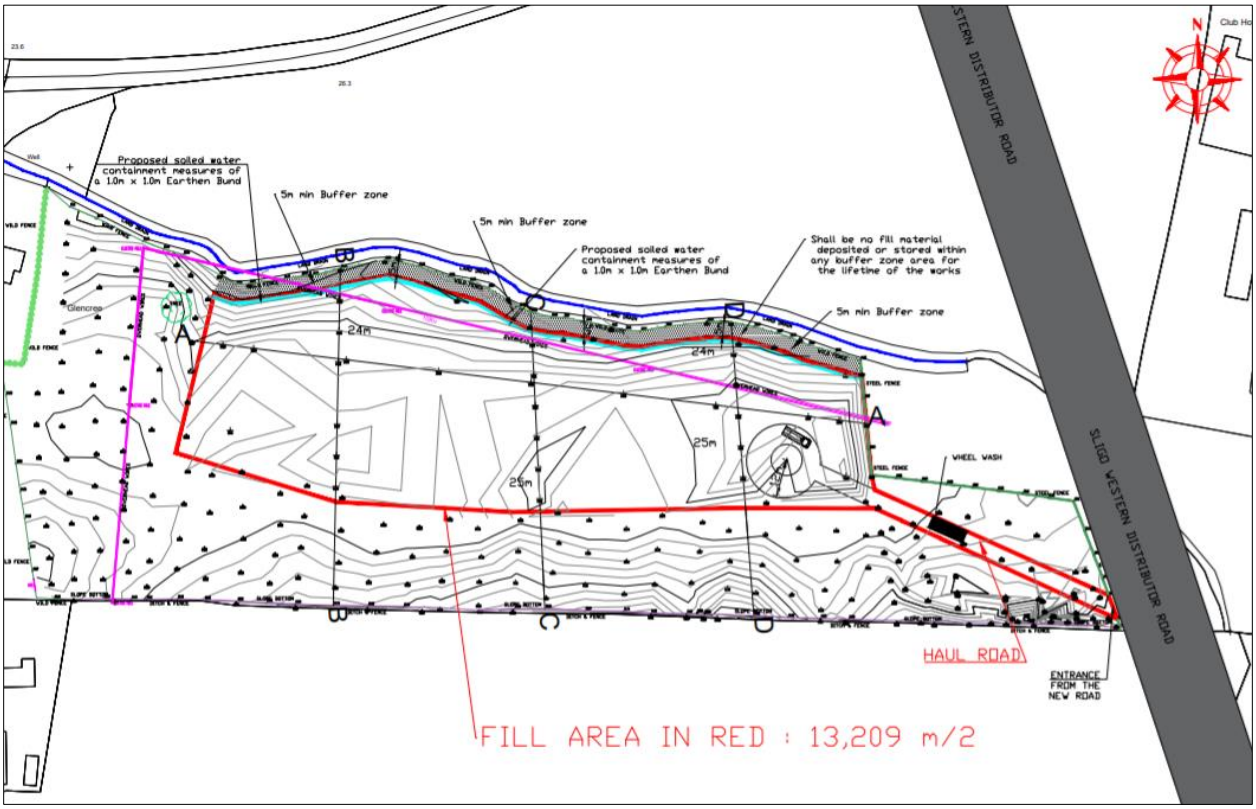

Figure 3. Proposed fill area of the site (Data source: Cuthbert Environmental, 2019)

2.2.3 **Identification of European Sites**

The approach adopted during the identification of European Sites follows that outlined in

established guidance (Scott Wilson *et al.*, 2006). An initial list of European Sites occurring within a radius of 15 km was compiled. Figure 4 shows all European Sites occurring within this radius of the project site. The following European Sites occur within this range:

1. Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
2. Cummeen Strand SPA
3. Ballysadare Bay SAC
4. Ballysadare Bay SPA
5. Unshin River SAC
6. Lough Gill SAC
7. Ben Bulben, Gleniff And Glenade Complex SAC
8. Sligo/Leitrim Uplands SPA
9. Drumcliff Bay SPA
10. Streedagh Point Dunes SAC
11. Ardboline Island and Horse Island SPA
12. Ballintemple and Ballygilgan SPA

Once all European Sites in this area were identified, an initial assessment of the project's relationship with these European Sites was undertaken to identify whether any of them will be affected by site activities. The zone of influence of the project concerns the project's potential to result in direct and indirect impacts to European Sites.

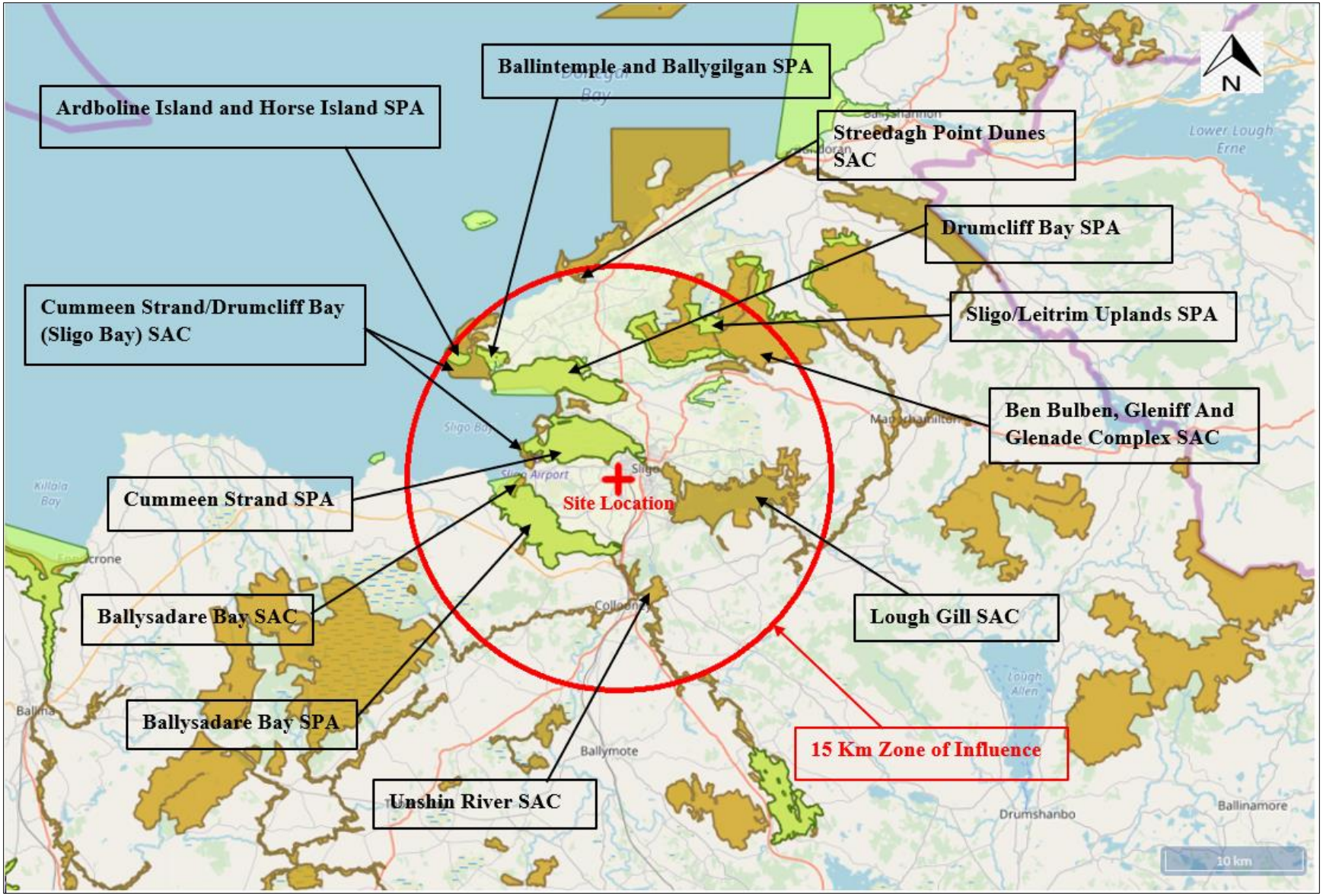

Figure 4. 15-km sensitivity radius around project site (Data Source: EPA, 2019).

2.2.4 Impacts on European Sites

Direct Impacts are impacts which occur within or immediately adjacent to European Sites and result in the:

- Physical loss of Qualifying Features of Interest through habitat loss, habitat fragmentation, species disturbance or mortality. Note that impacts to qualifying mobile species outside the boundary of their European Site are considered under indirect impacts below; and
- Physical damage to Qualifying Features of Interests through habitat degradation, habitat fragmentation, severance/barrier effects and edge effects.

The location of the proposed site is such that direct impacts are not an issue in this scenario.

Indirect Impacts are:

- Secondary impacts which occur as a result of direct impacts e.g. the effects of displaced species on the occupancy of alternative habitats),
- Impacts that occur away from the project sites e.g. downstream to species and habitats as a result of perturbations to water quality; and
- The interaction of effects e.g. the interaction of siltation and chemical pollution to water quality.

As previously stated, there is a stream on the north side of the proposed site boundary. This stream discharges into Cummeen Strand about 2 km downstream. Cummeen Strand contains 2 European sites including Cummeen Strand SPA and Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC. From here water flows another ~7 km before reaching Drumcliff Bay SPA, which is a European site located in Drumcliff Bay. There is thus an inherent risk of indirect impacts to the integrity of these 3 European sites. This will be discussed shortly.

The other 9 European Sites, while within the 15km sensitivity radius illustrated in Figure 4, are either too far removed or are not linked to the site in any way so as to warrant environmental concern. They will not be discussed any further in this report.

2.2.5 Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA

The following tables (overleaf) outline the qualifying features (the characteristics of a site that led to its designation) and conservation objectives of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA.

Table 1. Qualifying Features and Conservation Objectives – Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

Site Name and Code	Qualifying Interests [Natura 2000 Code] *Denotes priority habitat	Conservation Objectives
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC [000627]	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] *Juniperus communis* formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] Petrifying springs with tufa formation (*Cratoneurion*) [7220] *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] *Petromyzon marinus* (Sea Lamprey) [1095] *Lampetra fluviatilis* (River Lamprey) [1099] *Phoca vitulina* (Harbour Seal) [1365]	To maintain or restore the favourable conservation condition of the species and habitats listed to the left.

Table 2. Qualifying Features and Conservation Objectives - Cummeen Strand SPA

Site Name and Code	Qualifying Interests [Natura 2000 Code] *Denotes priority habitat	Conservation Objectives
Cummeen Strand SPA [004035]	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999]	To maintain the favourable conservation condition of the species and habitat listed in the column to the left.

Table 3. Qualifying Features and Conservation Objectives - Drumcliff Bay SPA

Site Name and Code	Qualifying Interests [Natura 2000 Code] *Denotes priority habitat	Conservation Objectives
Drumcliff Bay SPA [004013]	Sanderling (Calidris alba) [A144] Bar-tailed Godwit (Limosa lapponica) [A157] Wetland and Waterbirds [A999]	To maintain the favourable conservation condition of the species and habitat listed in the column to the left.

(i) Surface Water

There is an inherent risk that surface water runoff may pick up pollutants from the proposed filling area and transport them to Cummeen Strand via the stream that is located along the north boundary of the site (see Figure 5). Cummeen Strand contains the 2 European sites of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA. As seen in Figure 6, rivers and streams which enter Cummeen Strand, including the stream coming from the proposed site area, flow in the direction of Drumcliff Bay. Therefore, There is a further possibility that this contaminated water could pass through Cummeen strand and be transported onto Drumcliff Bay SPA. In order to assess the significance of this risk, one needs to be aware of the following:

- The proposed fill material is inert soil and stones. No other fill material will be permitted to enter the site
- The proposed site is ~2 km upstream from the boundary of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA. It is ~9 km from the boundary of Drumcliff Bay SPA. Any material that enters the stream along the north boundary of the proposed site will undergo dilution before reaching any of the three European Sites downstream, especially Drumcliff Bay SPA.

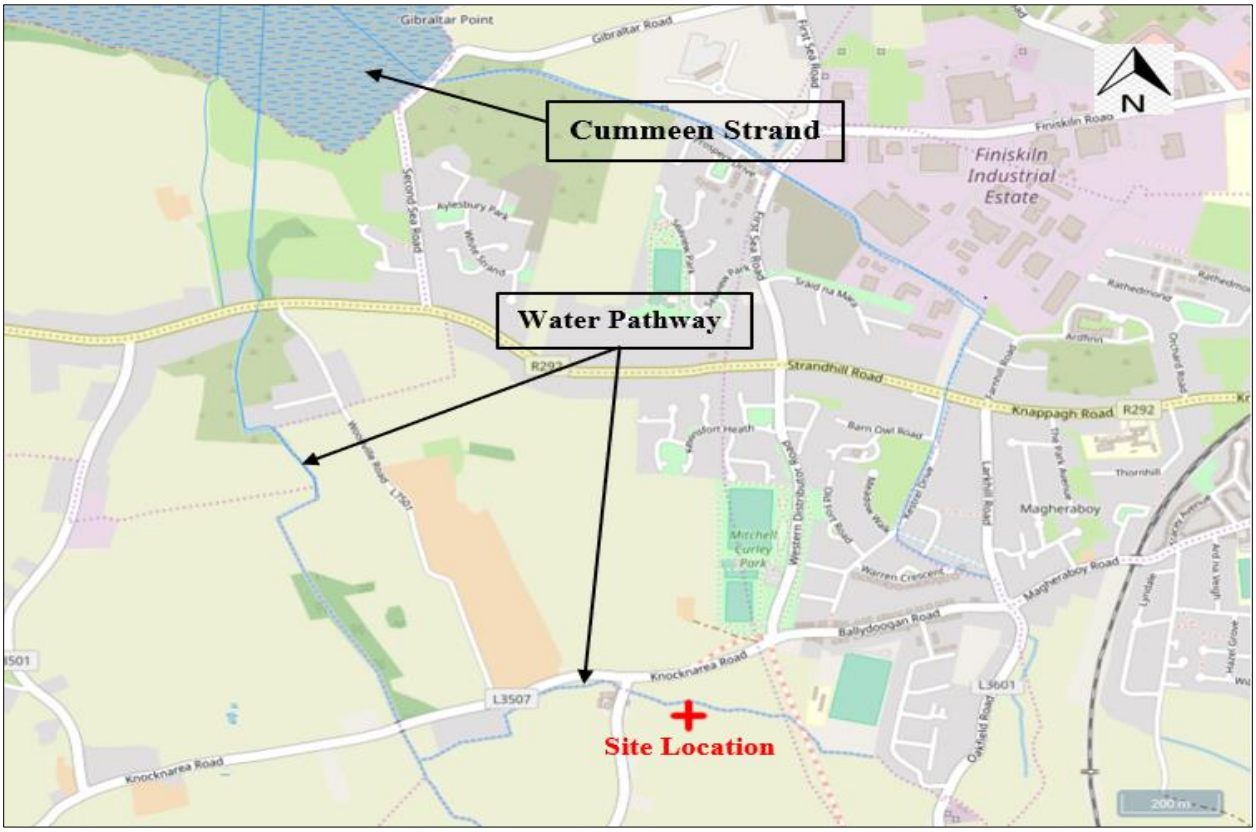

Figure 5. River pathway between proposed site and Cummeen Strand (Source: EPA Maps, 2019)

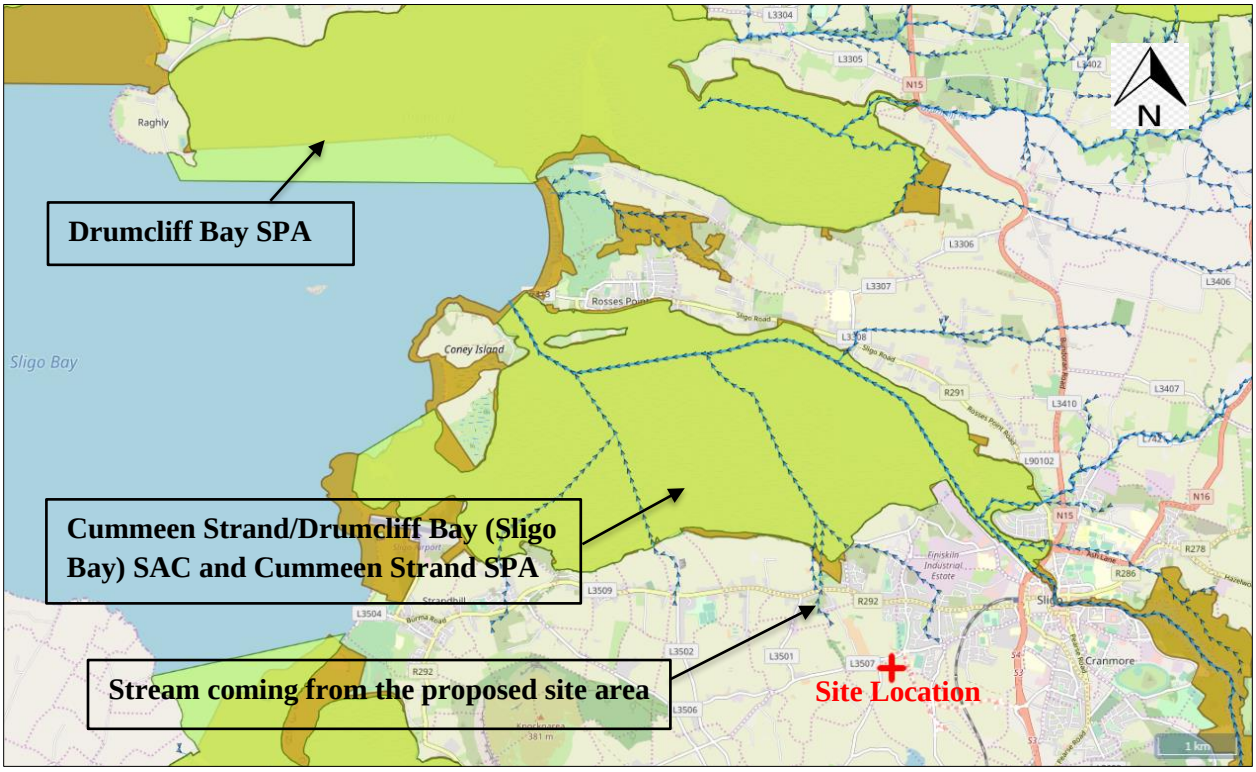

Figure 6. Flow direction of rivers/streams entering Cummeen strand (Source: EPA Maps, 2019)

Despite the above, there is some inherent uncertainty surrounding the quality of the incoming fill material (ie. whether hazardous fill material is accidentally admitted to the site). There is also uncertainty surrounding the extent of the dilution that would take place as material from the proposed site travels downstream. The consequences of surface water contamination may or may not be significant. In this scenario the precautionary principle is employed, and the consequences are assumed to be significant in the absence of rigid alternative evidence.

Surface Water Containment Measures

As described in Section 1.1.1, the project design has accounted for the importance of the protection of the watercourse. A 1m *x* 1m earthen bund will ensure that all surface water runoff will be contained onsite. However, according to the recent ECJ ruling (see footnote on page 5), these protective measures cannot be taken into account at the screening stage. This screening report will therefore proceed as though these features were not part of the project design.

(ii) Noise

During the raising of the field, fill material will be delivered to the site by tipper trucks. Normally a track machine or similar plant machinery remains onsite to disperse the material across the site surface. Once the field is raised, it will be restored to an agricultural grassland. The only source of noise during this phase will be livestock and farm tractors that will occasionally visit the field. There are other farms located in the vicinity of the project site, as well as a busy road (N4), and Sligo Town itself, all of which already contribute their own noise. It is not believed that work carried out at the proposed site (particularly during filling operations) will significantly exceed the noise levels that already exist in the area – certainly not in a way that could negatively impact the integrity of any European Sites.

(iii) Dust

The proposed activities are likely to create a certain amount of dust, the levels of which are expected to increase during periods of dry weather. European Sites are too far removed from the proposed site to be at risk of direct dust infiltration, but some dust particles may be deposited in the stream located along the north boundary of the site.

As with surface water contamination (see Section (i) above), the significance of dust particle infiltration of the stream is uncertain. In the absence of evidence to the contrary, it is assumed to be significant.

Dust Suppression Measures

As described in Section 1.1.1, the importance of the protection of the watercourse from dust infiltration has been accounted for. A water bowser will be maintained onsite, and surfaces will be dampened during dry weather periods. However, according to the recent ECJ ruling (see footnote on page 5), this protective measure cannot be taken into account at the screening stage. This screening report will therefore proceed as though this measure were not part of the project design.

In summary, Table 4 below details the likely effects the proposed project will have on the European Sites within the 15-km sensitivity zone.

Table 4. Likely changes to the integrity of European Sites by virtue of proposed project

Site Name	Reduction in habitat area	Disturbance to key species	Habitat or species fragmentation	Reduction in species density	Changes in key indicators of conservation value	Climate change
Ballysadare Bay SAC	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Ballysadare Bay SPA	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Unshin River SAC	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Lough Gill SAC	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Ben Bulben, Gleniff And Glenade Complex SAC	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Sligo/Leitrim Uplands SPA	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Ardboline Island and Horse Island SPA	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Streedagh Point Dunes SAC	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Ballintemple and Ballygilgan SPA	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged	None envisaged
Cummeen Strand SPA	Possible	Possible	Possible	Possible	Possible	None envisaged
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Possible	Possible	Possible	Possible	Possible	None envisaged
Drumcliff Bay SPA	Possible	Possible	Possible	Possible	Possible	None envisaged

2.2.6 **Other Plans or Projects in the Area**

In assessing the potential for "in-combination" effects, the research undertaken for this screening exercise took note of the following documentation:

- Sligo County Council Development Plan, 2017
- Sligo City and environs Local Area Plan, 2018
- Existing planning applications.

Figure 7 shows all the planning applications (current and historical) in the vicinity of the proposed site. Recent applications in the area include application numbers 16321 and 18263. Application number 16321 involves a development consisting of 3 prefabricated classrooms (each 80 sqm in floor area) including associated site works. Another recent planning application in the area includes application number 18263. This is an application for a development which consists of demolishing an uninhabitable dwelling and sheds, an existing office/hut and container, a courier store/toilet block and an accessories store/fireplace and erecting two blocks of two-storey semi-detached dwellings plus a block of two-storey three terrace houses and all associated site works. It is not believed that these planning applications will have any negative interaction with the proposed site that could result in deleterious effects on nearby European sites.

Figure 7. Planning applications in the vicinity of the proposed site

The Local Area Plan has the following information (see overleaf) on Sligo Town and it´s environs which is the nearest population agglomeration to the proposed site:

Issues — housing

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The new Sligo and Environs plan needs to facilitate housing for an additional 2,500 persons in the period up to 2023, as outlined in the CDP. This will require the zoning of approximately 53 hectares of land for residential development. Originally, the SEDP included 582 hectares of zoned residential/mixed-use land, but 539 ha were rezoned to 'Strategic Land Reserve' (SLR) in 2011, in response to the requirements of the Border Regional Planning Guidelines 2010. Just 43 hectares were retained for residential uses.

Fig. 9 Extent of lands included in the SLR

Household diversity

In addition to the amount of housing required, there is a wide range of specific housing needs to be met (e.g. a growing social housing list).

The composition of households in the Sligo urban area is changing, with a trend towards smaller households. According to the 2006 census, the percentage of one-person households in private housing was 28%. This figure rose to 32% in 2011 and was at 33% in 2016.

Location of future housing

Whilst it is important to meet demands in terms of the volume and range of housing types, it is also vital that housing is provided at suitable locations.

The zoning of housing land should be guided by the concept of sustainable residential development, which aims to:

- deliver a good quality of life and minimise the need for the use of private cars
- provide variety in terms of ancillary uses and supporting facilities
- promote social integration between diverse household types and age groups
- ensure efficient use of land and energy
- create an attractive living environment which respects its context.

At the core of this concept is the principle of sequential development, whereby areas closer to settlement centres will be prioritised for development in advance of lands further from settlement centres.

Questions

- In advance of regional housing land allocations, how much land should we zone for residential use?
- Where are the most appropriate locations to zone land for housing? What range and mix of house types are appropriate for these location?
- Is there a demand for specific types of accommodation? (e.g. student accommodation, sheltered housing for the elderly etc.)

Building beyond the urban edge, while a substantial amount of in-between land remains in a greenfield state, is not sustainable. Such "leapfrogging" leads to an uncontrolled spread of the built-up area, resulting in disjointed blocks of developments, which harm the character of the town and the countryside.

In order to avoid this, careful phasing of urban extensions is required as part of the new plan. Furthermore it is an objective of the NPF to deliver at least 40% of all new homes nationally, within the built-up envelope of existing urban settlements.

One of the opportunities for Sligo is the current availability and potential future provision of good quality housing for prospective investors and employees at a much lower price when compared to larger cities such as Dublin, Cork and Galway.

Issues — economic development

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The national economy has started to recover and is set to register a steady growth in the short term. Whilst the potential impact of 'Brexit' is unclear at this stage, Sligo should be prepared to share in the predicted return to growth over the following years by putting in place a robust economic development framework.

Sligo's ability to attract investment continues to be restricted by certain infrastructural deficiencies which act as barries to economic development.

Planning, development and the provision of local infrastructure are core functions that are vital for economic development. Industry, enterprise, tourism and retail are the sectors that generate most of Sligo's jobs and income.

A land use plan with strong economic development policies regarding all of the above is a pre-requisite for further economic growth and employment.

This requires a multi-pronged approach, which involves the following key elements:

- ensuring that Sligo City and Environs is attractive to investors by offering a good quality of life to those who live and work here;
- providing or supporting the provision of essential infrastructure, including improved energy, telecommunications and transport infrastructure;
- reserving sufficient land in suitable locations for industry and enterprise uses;
- capitalising on the tourism potential of the area;
- developing a strong and vibrant retail sector.

Industry and enterprise

The IDA industrial estate at Finisklin is now nearing maximum capacity and there is a clear need for additional land in the area. In this context the potential development of additional lands at Oakfield has been identified subject to the provision of appropriate road infrastructure in the form of the Western Distributor Route (see Figure 15). There is also additional land for expansion to the north of the City around the existing Abbott/Abbvie plants.

Tourism

Sligo benefits from a unique landscape setting which favours the development of tourism. The protection of the area's natural and built heritage through planning and environmental services is integral to the tourism offering. Culturally, Sligo is associated with archaeology, the Yeats family, traditional Irish music, soccer, surfing, walking – all having significant potential for tourism development.

Retailing

In the national retail hierarchy, Sligo is placed on the "Regional" (second) tier, together with other urban centres performing important regional retailing functions. The Retail Strategy for the county, prepared as part of the CDP 2017-2023, highlights some of the challenges with regard to retailing in Sligo City:

- a consistently high rate of vacancy in the city centre and edge of centre areas;
- a relatively poor public realm standard;
- lack of progress on the Wine Street centre block;
- an over-provision of supermarkets to the east of the city centre;
- parking and vehicular circulation;
- the recent shift in comparison retail focus to the north-west of the city centre;
- pressure for retail development outside the city centre.

The County Retail Strategy estimates that there will be an additional requirement for approximately 1,250 sq.m net convenience floorspace in Sligo City by 2023.

In terms of comparison retail floorspace, there is scope for further development of some 4,338 sq.m (net). In accordance with the sequential approach, the preferred location for future retail development is within the existing City Centre and Neighbourhood Centres. However, there is sometimes considerable pressure for the development of out-of-town retail units.

Questions

- What land is suitable to accommodate further industry and enterprise?
- What infrastructure is needed to facilitate future economic development?
- How can Sligo best capitalise upon its tourism potential?
- How can the retail environment and performance of Sligo be improved?

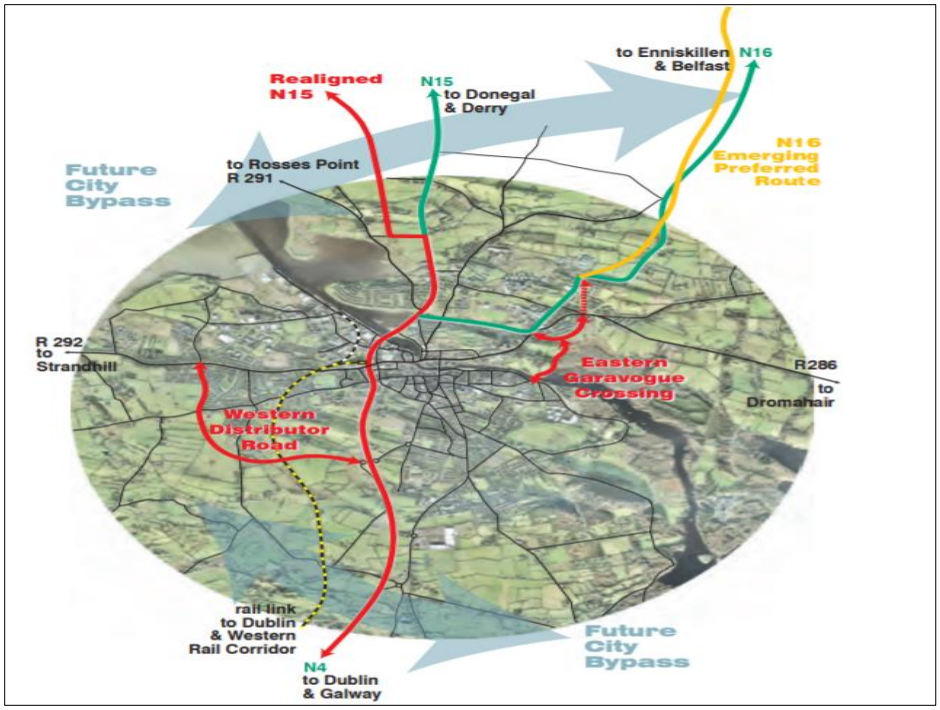

Figure 8. Strategic road proposals in Sligo

The Local Area Plan does not appear to contain evidence of any plan or project that will interact in any significant way with this project. It outlines the importance of new housing developments in the outskirts of the town. It also states that there is a need for additional land to develop industries due to the IDA industrial estate at Finliskin nearing maximum capacity. Land in Oakfield/Derrydarragh has been identified as a suitable place to develop more industries. This involves much of the land in the surrounding area of the proposed site. This development is subject to the provision of appropriate road infrastructure in the form of the Western Distributor Road which is a priority development for Sligo County Council (see Figure 7). This road is currently under construction and will offer an access route to and from the proposed site. The new industries and roads may bring more traffic into the area of the project site but it is not believed that they will interact with the site in any way that could negatively affect nearby European sites.

There does not appear to be anything of significance in the Development Plan.

Given the nature of the proposed activities described in this report, no other plans or projects are expected to interact with this project in any way that may have a negative impact on the integrity of any European Sites.

2.2.7 Potential Impacts on European Sites within the Project's Sensitivity Zone

Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA are at risk of indirect negative impacts by way of surface water contamination (as per Section 2.2.5). As discussed, mitigation measures to this end have already been included in the project design, but they cannot be accounted for at the screening stage of Appropriate Assessment.

3 Screening Conclusion

As per Section 2.2.7 above, this screening exercise has found potential for significant negative impacts to 2 European Sites occurring within the zone of influence of the project site.

For this reason, Stage 2 – Appropriate Assessment, must be carried out.

4 Stage 2 - Natura Impact Statement (NIS)

In accordance with Section 1.1.3 of the screening report (see Page 4) and with the NPWS guidance document (2009), as the proposed project has the potential to have significant negative impacts on a Natura 2000 site (European Site), Appropriate Assessment must be carried out. NPWS guidance (2009) states the following:

"At Stage 2, the impact of a project or plan alone and in combination with other projects or plans on the integrity of the Natura 2000 site is considered with respect to the conservation objectives of the site and to its structure and function."

This NIS will contain the following sections:

1. Qualifying Features and Conservation Objectives of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA
2. Description of Potential Impacts
3. Mitigation Measures
4. Conclusion Statement

4.1 Qualifying Features and Conservation Objectives of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA

The screening report identified three European Sites within the proposed project's 15-km zone of influence - Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA . All of these sites are located downstream from the project site. The qualifying features and conservation objectives of these sites are shown once again in the tables overleaf. A site synopsis (produced by the NPWS) for each site is available in Appendices I, II and III.

Table 5. Qualifying Features and Conservation Objectives – Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

Site Name and Code	Qualifying Interests [Natura 2000 Code] *Denotes priority habitat	Conservation Objectives
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC [000627]	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] *Juniperus communis* formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] Petrifying springs with tufa formation (*Cratoneurion*) [7220] *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] *Petromyzon marinus* (Sea Lamprey) [1095] *Lampetra fluviatilis* (River Lamprey) [1099] *Phoca vitulina* (Harbour Seal) [1365]	To maintain or restore the favourable conservation condition of the species and habitats listed to the left.

Table 6. Qualifying Features and Conservation Objectives - Cummeen Strand SPA

Site Name and Code	Qualifying Interests [Natura 2000 Code] *Denotes priority habitat	Conservation Objectives
Cummeen Strand SPA [004035]	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999]	To maintain the favourable conservation condition of the species and habitat listed in the column to the left.

Table 7. Qualifying Features and Conservation Objectives - Drumcliff Bay SPA

Site Name and Code	Qualifying Interests [Natura 2000 Code] *Denotes priority habitat	Conservation Objectives
Drumcliff Bay SPA [004013]	Sanderling (*Calidris alba*) [A144] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999]	To maintain the favourable conservation condition of the species and habitat listed in the column to the left.

4.2 Description of Potential Impacts

As described in the screening report, the proposed project involves the importation of inert soil and stones into the proposed site which is an agricultural field. There is a stream to the north of the proposed fill area. This represents a potential pathway for surface water and dust contamination to be transported into Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA and Drumcliff Bay SPA. The following is considered a worst-case scenario: If, for the sake of argument, a large quantity of hydrocarbon-contaminated soil were admitted to the site, it could leach out of the soil (particularly during periods of heavy rainfall) and infiltrate the adjacent stream, from where it could make its way to Cummeen strand and Drumcliff Bay. If the concentration were high at this point, it is expected that many of the protected bird species seen in table 6 and 7 would be negatively impacted owing to the consumption of contaminated food items, which includes aquatic plants, invertebrates and small fish. Consequences of hydrocarbon ingestion include (Leighton, 1993):

- Reduced fertility
- Abandonment of reproductive effort
- Impairment of red blood cells' oxygen-carrying capacity.

Cummeen Strand/Drumcliff Bay SAC has a very rich and diverse flora, on account of the wide variety of habitats found, and the presence of both basic and acidic substrates. Several rare, Red Data Book species have been recorded from the site, including Rough Poppy (*Papaver hybridum*) which is also listed under the Flora (Protection) Order, 2015, Hoary Whitlowgrass and Yellow Saxifrage (*Saxifraga aizoides*). Eelgrasses *Zostera noltii* and Z. angustifolia beds are present in both bays (NPWS, 2016). Hydrocarbons that come into contact with these plants would be expected to have a negative impact on that plant, potentially resulting in their death. The habitats that are protected in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC exist as a function of their plant assemblages. That is to say, if certain plant assemblages are eradicated, some habitats may cease to exist in the area.

The protected Narrow-mouthed Whorl Snail requires damp/wet habitats. Suitable habitat includes floodplains of Cummeen Strand/ Drumcliff bay SAC. This species is very sensitive to hydrological changes. Therefore, if contaminated material enters these floodplains it could negatively impact the health and wellbeing of this species (OPW, 2011). Harbour seals may also become affected from food sources becoming contaminated in the bay.

It is important to note that contamination of the magnitude described above is considered unlikely. Owing to the distance upstream of the project site from the three European Sites, any substance that enters the nearby watercourse will undergo dilution before discharging into Cummeen Strand. The extent of this dilution is very difficult to quantify, so one cannot rule out significant negative impacts. It would in any case be careless and neglectful to disregard the effects of such an event on the surrounding environment.

4.3 Mitigation Measures

As mentioned in the screening report, the project design has accounted for the importance of the protection of the stream to the north of the site boundary. These measures cannot be considered at the screening stage, but can be addressed in this section.

4.3.1 **Surface Water Containment**

It is proposed to create an earthen bund (1m breadth *x* 1m height) along the north boundary of the filling area. This bund will be offset from the stream by a 5 metre buffer zone (see Figure 3). All surface water runoff from the filling area will be intercepted by this bund. Surface water runoff will thus be contained onsite and will not have the potential to infiltrate the stream which flows towards Cummeen Strand.

4.3.2 **Dust Suppression**

It is proposed that a water bowser will be maintained onsite, which will be used to periodically spray down the fill material, particularly during dry weather periods. The dampening of surfaces in this way is a common dust suppression technique, and is considered adequate in this scenario to minimise the risk of contaminating the adjacent stream.

If the above-mentioned mitigation measures are employed in the proposed project, it is considered that there will be no risk of contamination of the adjacent stream. As such, it is considered that with these measures in place, the integrity of the qualifying features and conservation objectives of Cummeen Strand/Drumcliff Bay AC, Cummeen Strand SPA and Drumcliff Bay SPA will not be negatively impacted.

4.4 Conclusion Statement

The project discussed in this report proposes to import 15,890 m^3 of inert soil and stones onto a site for the purpose of land improvement and increased agricultural output.

The proposed project is an agricultural field. It is surrounded by agricultural grassland – presumably used as pasture. A stream runs along the north boundary of the proposed site and discharges into Cummeen Strand approximately 2 km downstream. Cummeen Strand consists of two Natura 2000 sites (Cummeen strand/Drumcliff Bay SAC and Cummeen Strand SPA). Another Natura 2000 site (Drumcliff Bay SPA) is a further 7 km downstream from Cummeen Strand. The stream located along the north boundary of the site was found to be vulnerable to infiltration by surface water runoff and dust from the proposed fill area, which poses an inherent risk to the integrity of the European sites downstream.

Mitigation measures of an earthen bund and a commitment to periodically dampen the fill material are considered adequate to avoid these risks entirely.

The proposed activities, incorporating the above-mentioned mitigation measures, are deemed to pose **no likely significant risks** to the integrity of any Natura 2000 sites.

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APPENDIX I

SITE SYNOPSIS

SITE NAME: Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

SITE CODE: [000627]

SITE SYNOPSIS

Site Name: Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

Site Code: 000627

This large coastal site extends from Cullamore in the north-west to Killaspug in the south-west, and from Sligo town in the south-east to Drumcliff village in the north-east. It encompasses two large, shallow bays, Drumcliff Bay and Sligo Harbour, and both Ardboline and Horse Island. Sand dunes and sand hills at Rosses Point, Killaspug, Yellow Strand and Coney Island are included, as are grasslands at Ballintemple and Ballygilgan (Lissadell), along with a variety of other habitats such as woodland, saltmarsh, sandy beaches, boulder beaches, shingle, fen, freshwater marshes, rocky sea cliffs and lakes. The site is largely underlain by Carboniferous limestone, but acidic rocks are also found on the Rosses Point peninsula. At Serpent Rock in the north-western section of the site the most complete section of the north-western Carboniferous strata is exposed. Here are found an excellent series of fossilised corals which, in some strata, stand out from the rock matrix.

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):

[1130] Estuaries
[1140] Tidal Mudflats and Sandflats
[2110] Embryonic Shifting Dunes
[2120] Marram Dunes (White Dunes)
[2130] Fixed Dunes (Grey Dunes)*
[5130] Juniper Scrub
[6210] Orchid-rich Calcareous Grassland*
[7220] Petrifying Springs*

[1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)
[1095] Sea Lamprey (*Petromyzon marinus*)
[1099] River Lamprey (*Lampetra fluviatilis*)
[1365] Common (Harbour) Seal (*Phoca vitulina*)

The dominant habitats on the site are estuaries and intertidal sand and mud flats. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. The intertidal flats support a diverse macrofauna, with invertebrate species such as lugworm (*Arenicola marina*), common cockle

(*Cerastoderma edul*e), sand mason worm (*Lanice conchilega*), Baltic tellin (*Macoma balthica*), spire shell (*Hydrobia ulvae*) and common mussel (*Mytilus edulis*) being frequent. Of particular note is the presence of the eelgrasses *Zostera noltii* and *Z. angustifolia* beds in both bays. Areas of saltmarsh fringe both bays in places.

Sand dune habitats are rare and threatened in Europe and three types are found in this site - embryonic dunes, Marram (*Ammophila arenaria*) dunes and fixed dunes. Embryonic dunes, with characteristic species including Sand Couch (*Elymus farctus*), occur at the southern end of the sand spit at Rosses Point. Shifting Marram dunes are found in a number of locations, including Rosses Point, Strandhill, Coney Island and Yellow Strand. In the latter three areas, the areas of shifting dunes are linked at least to some extend to recent disturbance (e.g. erosion, storm breaches, etc.).

Fixed dune grassland is found behind Yellow Strand, and the main species are Sand Sedge (*Carex arenaria*) and Smooth Meadow-grass (*Poa pratensis*), with associated species including Lady's Bedstraw (*Galium verum*), Mouse-ear Hawkweed (*Hieracium pilosella*), Common Milkwort (*Polygala vulgaris*), Common Dog-violet (*Viola riviniana*), Mountain Everlasting (*Antennaria dioica*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Early Marsh-orchid (*D. incarnata*), Frog Orchid (*Coeloglossum viride*) and Autumn Lady's-tresses (*Spiranthes spiralis*). Some areas of fixed dune at the site are suffering from under-grazing (e.g. north of Strandhill), and have a rank vegetation dominated by Marram, with species such as Red Fescue (*Festuca rubra*), Creeping Willow (*Salix repens*), Daisy (*Bellis perennis*) and Wild Thyme (*Thymus praecox*) also occurring. A relatively species-poor example of the habitat is found at Rosses Point, but typical species like Marram, Red Fescue, Lady's Bedstraw, Harebell (*Campanula rotundifolia*), Kidney Vetch (*Anthyllis vulneraria*) and Common Mouse-ear (*Cerastium fontanum*) do occur here.

An area with Juniper (*Juniperus communis*) scrub is found on a gravel hill with species-rich fixed dune vegetation. Other species present in this area include Marram, Autumn Gentian (*Gentianella amarella*), Red Fescue, Lady's Bedstraw, Common Bird's-foot-trefoil, Harebell, Yellow-wort (*Blackstonia perfoliata*), Thyme-leaved Sandwort (*Arenaria serpyllifolia*), Common Whitlowgrass (*Erophila verna*), Hoary Whitlowgrass (*Draba incana*), Devil's-bit Scabious (*Succisa pratensis*) and Early Hair-grass (*Aira praecox*). An area of approximately 3.7 hectares of Orchid-rich Calcareous Grassland, a habitat listed with priority status on Annex I of the E.U. Habitats Directive, is reported to occur near Rosses Point, according to the Irish Semi-natural Grasslands Survey, 2010.

Wetlands on the site include Doonweelin Lake, a freshwater lake on the Rosses Point peninsula, which supports interesting vegetation communities that reflect the juxtaposition of the underlying acidic and basic rocks. Ardtermon Fen, a small, floristically-rich area of freshwater marsh, swamp, wet grassland and fen is situated at the back of the Yellow Strand sand hills.

The site includes small areas of Hazel (*Corylus avellana*) and Ash (*Fraxinus excelsior*) woodland on limestone (e.g. Cummeen Wood), and several other stands of mixed woodland and wet willow (*Salix* spp.) woodland (as at Ardtermon Fen).

Cliff-top grassland is common in the north-western part of the site. This is typically dominated by Red Fescue and White Clover (*Trifolium repens*), with associated species including Daisy, Common Bird's-foot-trefoil (*Lotus corniculatus*), plantains (*Plantago coronopus, P. lanceolata* and *P. maritima*), Bulbous Buttercup (*Ranunculus bulbosus*), Common Scurvygrass (*Cochlearia officinalis*), Field Wood-rush (*Luzula campestris*) and Spring Sedge (*Carex caryophyllea*).

The site has a good example of petrifying springs with tufa formations, with several species of bryophyte typical of the *Cratoneurion*. The springs occur along seepage zones in clay sea cliffs on the northern side of Sligo Harbour.

The site has a very rich and diverse flora, on account of the wide variety of habitats found, and the presence of both basic and acidic substrates. Several rare, Red Data Book species have been recorded from the site, including Rough Poppy (*Papaver hybridum*) which is also listed under the Flora (Protection) Order, 2015, Hoary Whitlowgrass and Yellow Saxifrage (*Saxifraga aizoides*).

Both Drumcliff Bay and Cummeen Strand are important for the large numbers of waterfowl which use them in autumn/winter, including Ringed Plover, Redshank, Lapwing, Knot, Bar-tailed Godwit, Oystercatcher, Curlew, Golden Plover, Dunlin, Turnstone, Brent Goose, Grey Heron, Teal, Wigeon, Mallard, Shelduck and Red-breasted Merganser. The fields at Lissadell and Ballintemple support one of the largest populations of Barnacle Goose in the country (*c.* 2,000 in winters of 1995/96 and 1996/97). Both Drumcliff Bay and Cummeen Strand have been designated as Special Protection Areas under the E.U. Birds Directive. The important feeding site for Barnacle Goose at Lissadell is a Statutory Nature Reserve.

The islands in the north-western section of the site hold important seabird colonies. A Cormorant colony of national importance occurs on Ardboline and Horse Islands, with a total of 261 pairs in 1998. Herring Gull and Great Black-backed Gull also breed on both islands. Common Tern formerly bred on both islands. The islands are also used by Barnacle Goose from the adjacent mainland, which roost or seek refuge here. The low sea cliffs on the adjacent mainland at Ballyconnell and Roskeeragh Points also support small numbers of seabirds, and both Black Guillemot and Fulmar nest there. Choughs feed in the sandy/grassy areas of the site and one pair is known to nest. Several of the bird species that use the site are listed on Annex I of the E.U. Birds Directive, i.e. Barnacle Goose, Chough, Golden Plover and Bar-tailed Godwit.

At least five species listed on Annex II of the E.U. Habitats Directive are found within this site. Drumcliff Bay is important for the presence of a breeding population of Common Seal. Ardboline and Horse Islands on the western side of the site are also important as haul-out areas for this species. A minimum population of 12–15 individuals was estimated from counts made in various month in 2007 and 2008. Sea

Lamprey and River Lamprey have been recorded in the Garavogue River, and River Lamprey are also known from further upstream in the tributaries of Lough Gill. The Marsh Fritillary butterfly is found at Rosses Point, while the rare snail *Vertigo angustior* has recently been recorded from sand dunes at Killaspugbrone.

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

APPENDIX II

SITE SYNOPSIS

SITE NAME: Cummeen Strand SPA

SITE CODE: [004035]

SITE SYNOPSIS

SITE NAME: CUMMEEN STRAND SPA

SITE CODE: 004035

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

At low tide, extensive sand and mud flats are exposed. These support a diverse macro-invertebrate fauna which provides the main food supply for the wintering waterfowl. Invertebrate species such as Lugworm (*Arenicola marina*), Ragworm (*Hediste diversicolor*), Cockles (*Cerastoderma edul*e), Sand Mason (*Lanice conchilega*), Baltic Tellin (*Macoma balthica*), Spire Shell (*Hydrobia ulvae*) and Mussels (*Mytilus edulis*) are frequent. Of particular note is the presence of eelgrass (*Zostera noltii* and *Z. angustifolia*) beds, which provide a valuable food stock for herbivorous wildfowl. The estuarine and intertidal flat habitats are of conservation significance and are listed on Annex I of the E.U. Habitats Directive. Areas of salt marsh fringe the bay in places and provide roosting sites for birds during the high tide periods. Sand dunes occur at Killaspug Point and Coney Island, with a shingle spit at Standalone Point near Sligo Town.

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

Cummeen Strand supports important concentrations of wintering waterfowl, including an internationally important Light-bellied Brent Goose flock (223) and nationally important populations of Oystercatcher (680) and Redshank (408). Other species occurring include Shelduck (86), Wigeon (149), Teal (54), Mallard (145), Red-breasted Merganser (15), Golden Plover (428), Lapwing (695), Knot (165), Sanderling (14), Dunlin (539), Bar-tailed Godwit (85), Curlew (430), Greenshank (13) and Turnstone (62) - all figures are mean peak counts for 4 of the 5 winters between 1995/96 and 1999/2000. Whooper Swan (7) also uses the site, though not regularly.

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

7.7.2014

APPENDIX III

SITE SYNOPSIS

SITE NAME: Drumcliff Bay SPA

SITE CODE: [004013]

SITE SYNOPSIS

SITE NAME: DRUMCLIFF BAY SPA

SITE CODE: 004013

Drumcliff Bay, Co. Sligo is the most northerly of Sligo Bay's three estuarine inlets. The bay comprises an inner area of sheltered estuarine habitat and an outer area of shallow seawater. It extends 9 km east to west from Drumcliff village to Raghly Point. Drumcliff Bay is the estuary of the Drumcliff River, a substantial river flowing from Glencar Lough to the east. The inner part of Drumcliff Bay is sheltered by a sandy/grassy peninsula extending north from Rosses Point. The northern part of the bay is fringed by fine sandy beaches - Ballygilgan Strand, Lissadell Strand and Ardtermon Strand. Salt marsh occurs in the most sheltered areas and at low tide, extensive inter-tidal flats are exposed. A bed of Dwarf Eelgrass (*Zostera noltii*) occurs near the south-eastern corner of the bay.

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

Drumcliff Bay SPA is of importance as it supports nationally important populations of two species of wintering waterfowl: Sanderling (237) and Bar-tailed Godwit (336) – all figures are four year mean peaks for four of the five winters between 1995/96 and 1999/2000.

Other species that occur regularly include Whooper Swan (45), Light-bellied Brent Goose (74), Shelduck (75), Wigeon (138), Teal (57), Long-tailed Duck (14), Red-breasted Merganser (20), Great Northern Diver (13), Oystercatcher (356), Ringed Plover (139), Lapwing (155), Knot (107), Dunlin (559), Curlew (177) and Redshank (138).

Drumcliff Bay SPA is of national importance for its winter populations of Sanderling and Bar-tailed Godwit, and the site supports a good diversity of other waterfowl species. Of note is that three of the species which occur regularly (Whooper Swan, Great Northern Diver and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Part of Drumcliff Bay SPA is a Wildfowl Sanctuary.

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