CLIENT: Reddy Architecture + Urbanism

PROJECT: Carrowbunnaun, Strandhill, Co. Sligo
Residential Development

Screening for Appropriate Assessment Report.

Prepared by: AONA Environmental Consulting Ltd.

Date: March 2024

REPORT CONTROL

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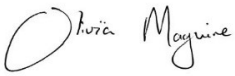
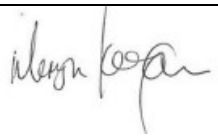
Author:	Olivia Maguire, B.Sc, M.Sc.	Signed:	
Review By:	Mervyn Keegan, B.Sc, M.Sc.	Signed:	

Issue	Date	Status	Checked for Issue
1	24/05/2023	Draft Report	OM
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4	01/03/2024	Final Report	MK

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1 INTRODUCTION

AONA Environmental Consulting Ltd. was commissioned by Reddy Architecture + Urbanism on behalf of Sligo County Council, to complete a Stage 1 Screening for Appropriate Assessment report under Article 6 of the EU Habitats Directive, for the proposed development of 51 no. residential units at Carrowbunnaun, Strandhill, Co. Sligo. The Report is prepared in the context of an application pursuant of the provisions of "*Notice of Development under Section 179A of the Planning and Development Act 2000, as amended*".

The Planning and Development and Foreshore (Amendment) Act 2022 introduced a new Section 179A into the Planning and Development Act 2000 as part of the Government's plan to streamline and accelerate the delivery of social, affordable and cost-rental housing under its Housing for All plan. Section 179A was commenced on 08 March 2023 and allows an exemption to the Part 8 planning process for local authorities once certain conditions are met.

> *(6) (a) Where a local authority proposes to undertake a housing development under Section 179A of the Act, it shall carry out in respect of the housing development a screening for appropriate assessment, to determine, using the best scientific knowledge, if the housing development, individually or in combination with other plans or projects, would be likely to have a significant effect on a European site or sites in view of the site's conservation objectives*
>
> *(b) If on the basis of a screening under sub-article (6)(a) it can be excluded, on the basis of objective information, that the proposed housing development, individually or in combination with other plans or projects, would be likely to have a significant effect on a European site or sites, the local authority shall determine that an appropriate assessment of the housing development is not required and that the housing development complies with the requirements of section 179A(1) of the Act*
>
> *c) If on the basis of a screening under sub-article (6)(a) it cannot be excluded, on the basis of objective information, that the proposed housing development, individually or in combination with other plans or projects, would be likely to have a significant effect on a European site or sites, the local authority shall determine that an appropriate assessment of the housing development is required and that the housing development does not comply with the requirements of section 179A(1) of the Act*

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site, then same shall be subject to an appropriate assessment of its implications for the site, in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site consequently the project has been subject to the Appropriate Assessment Screening process.

This document provides background information to assist the planning authority with a *Screening for Appropriate Assessment* exercise for the proposed development. It includes a description of the proposed development, a review of the site's environmental setting, details of Natura 2000 sites within the potential zone of impact, an appraisal of *source-pathway-receptor* relationships, and an assessment of potential impacts in the absence of any best practice, mitigation or preventative measures.

1.1 Statement of Authority

This report was written by Olivia Maguire (B.Sc., M.Sc.)an experienced and qualified ecologist and reviewed by Mervyn Keegan (B.Sc., M.Sc.) who is a Director with AONA Environmental Consulting Ltd. Olivia has over 17 years of experience in Environmental Consultancy. She has a B.Sc. Hons Geography and a M.Sc. in Applied Environmental Science from Queens University, Belfast and a B.Sc. in Occupational Health and Safety from Atlantic University, Sligo. Olivia is a member of the Institute of Environmental Management & Assessment and the Occupational Hygiene Society of Ireland and operates in accordance with their respective codes of professional conduct. Olivia's

role involves the delivery of a wide range of environmental and occupational health & safety consultancy services to public and private sector clients in the following areas;

- Environmental Impact Assessment in accordance with relevant legislation & guidance
- Appropriate Assessment in accordance with the Habitats Directive.
- Environmental Noise & Air Quality Surveys & Impact Assessment.
- Occupational Health Assessments including noise at work and indoor air quality surveys.

2 THE APPROPRIATE ASSESSMENT PROCESS

2.1 Legislative Context

Appropriate Assessment (AA) is an assessment of whether a plan or project, alone and in combination with other plans or projects, has the potential for significant effects on a designated European Site in view of the site's conservation objectives. The assessment of impacts on designated European sites i.e. Special Protection Areas for birds (SPAs) and Special Areas of Conservation (SACs), derives from the EU Directive on the Conservation of Habitats, Flora and Fauna (92/43/EEC), more commonly known as the '*The Habitats Directive'* which provides legal protection for habitats and species of European importance. SPAs and SACs are sites that form part of a network, known as Natura 2000 sites, designated across Europe in order to protect biodiversity within the European Union (EU).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment: *'Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or 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 implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the concerned and, if appropriate, after having obtained the opinion of the general public.'*

Article 6(4) states: '*If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.'*

2.2 Guidance and Approach

This Appropriate Assessment Screening has been prepared having regard to the following guidance documents:

European Commission Guidance:

- *Guidance document on assessment of plans and projects in relation to Natura 2000 sites: a summary*, (European Commission, 2022)
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001)
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* ((European Commission, 2019)
- *Nature and Biodiversity Cases – Ruling of the European Court of Justice* (European Commission 2006)
- *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 European Commission (European Commission, January 2007).
- *Article 6 of the Habitats Directive – Rulings of the European Court of Justice* (European Commission Final Draft September 2014

National Guidance:
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPWS 1/10 & PSSP 2/10 (NPWS, 2010)
- *Planning for Watercourses in the Urban Environment,* A Guide to the Protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate / Flood Risk and Recreational Planning (Including one-off developments) Inland Fisheries Ireland
- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal* (Chartered Institute of Ecology and Environmental Management, 2019)
- *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (EPA, August 2017)

2.2.1 Desk Study

The following documents were referenced during the desk-top study to inform the Appropriate Assessment and the baseline ecology information:
- Online data available on European sites and habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie, including conservation objectives documents.
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie, specifically related to the records recorded within the 1 km grid squares (ITM) – G6035 and (ITM) – G6135. Results found no records of any species for which Ballysadare Bay SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC , Ballysadare Bay SPA and Cummeen Strand SPA, is designated within the proposed development site[1]. Protected species and invasive species were noted.
- Birds of Conservation Concern in Ireland (Gilbert et al, 2021), available at https://birdwatchireland.ie/birds-of-conservation-concern-in-ireland/
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Information on soils, geology and hydrogeology in the area available from the Geological Survey Ireland (GSI) online Spatial Resources service. Available from https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- GeoHive online mapping (https://geohive.ie/index.html)
- Information on the proposed development supplied by Reddy Architecture + urbanism and CS Consulting Group, Dublin, consultants for the development.
- Sligo and Environs Development Plan 2010-2016. The formal preparation of the new Sligo and Environs LAP will commence after the Sligo County Development Plan 2023-2029 is adopted.
- Sligo County Development Plan 2017-2023
- Sligo County Development Plan 2017-2023, Volume 2, Chapter 32 – Strandhill Mini-Plan

2.2.2 Field Survey

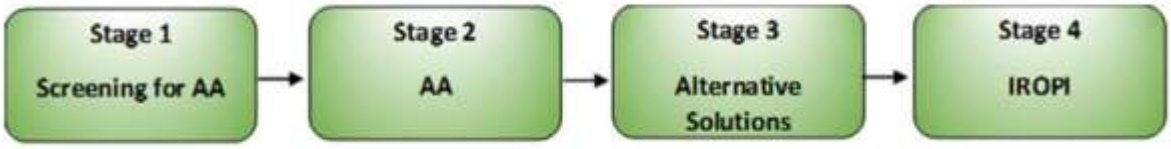
An ecological walkover was carried on 27th May 2023. The aim of the field survey was to record plant, bird and mammal species within the study area, while highlighting habitats and species of particular importance (e.g. rare or protected, invasive, etc.) and evaluating the sites potential to support protected species.

[1] www.biodiversity.ie accessed 24th May 2023

2.3 Appropriate Assessment Process

The Department of the Environment Heritage and Local Government Guidelines (DELHG, 2009), outlines the European Commission's methodological guidance (EC, 2002). This guidance promotes a four-stage process in completing an AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Appropriate Assessment Process (Source: DEHLG, 2009)



2.3.1 Stage 1: Screening

Initial screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

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

For those sites where potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

2.3.2 Stage 2: Appropriate Assessment

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

2.3.3 Stage 3: Alternative Solutions

Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

2.3.4 Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage is required where an alternative solution is not available. In this situation, the project can only proceed for Imperative Reasons of Overriding Public Interest (IROPI), despite the plan or project resulting in adverse effects on European Site(s). This stage provides for an assessment of compensation measures to maintain or enhance the overall coherence of the Natura 2000 network. The Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable, and they must be approved by the Minister.

In accordance with Section 3.2 of *Appropriate Assessment of Plans and Projects in Ireland*, a screening exercise comprises the following steps:
1. Description of the project and local site characteristics

2. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives

3. Assessment of potential impacts upon Natura 2000 sites, including:

- Direct impacts (e.g. loss of habitat area, fragmentation)
- Indirect impacts (e.g. disturbance of fauna, pollution of surface water)
- Cumulative / 'in-combination' effects associated with other concurrent projects

4. Screening Statement with conclusions

3 PROPOSED DEVELOPMENT

3.1 Description of Proposed Development

Strandhill is located 8 km to the west of Sligo city, on the western extremity of the Coolera Peninsula. The village extends along the north-western foothills of Knocknarea mountain and is surrounded on three sides by coastline – Cummeen Strand to the north, Sligo Bay to the west and Ballysadare Bay to the south. Strandhill is designated as a Gateway Satellite and is acknowledged as a settlement with special functions (i.e. tourism). The village is characterised by linear roadside development within the serviced area and ribbon development on the unserviced fringes. In recent years, consolidation of the built-up area did occur to a certain degree, with residential estates filling in some gaps and developing part of the backlands. The census in 2016 recorded a population of 1,753 persons in Strandhill.

The proposed development is located within the village of Strandhill between the national school and the golf club house. The site is an existing green field site accessed off Golf Course road, bordered to the west by Strandhill National School and to the east by residential development (Atlantic View). The surrounding area immediately north and south of the site is agricultural grassland.

The development consists of the construction of 51no. houses and duplex apartments, comprising: 6no. 2 Storey 2 Bed Mid Terrace Units; 8no. 2 Storey 3 Bed Semi-detached units; 6no. 2 Storey 3 Bed End Terrace units; 2no. 2 Storey 4 bed Semi-detached units; 1 no. 2 Storey 5 Bed Detached unit; 6no. 1 Bed over 1 Bed 2 Storey Duplexes; 2no. 1 Bed over 2 Bed 2 Storey Duplexes; 4no. 1 Bed over 2 Bed 2 Storey Duplexes; 1no. 1 Bed over 3 Bed 2 Storey Duplex; 1 no. 1 Bed over 2 Bed 2 Storey Duplex and all associated site works, landscaping and boundary treatments on a site area of c. 2 hectares at Carrowbunnaun, Strandhill, as shown in Figure 2

Small scale construction works on Golf Course road are required to facilitate the development. Road upgrade works shall be carried out on the L-7507- (Golf Course Road) to satisfy an objective in the current and draft County Development Plan. These small scale works include a footpath upgrade, public lighting upgrade and traffic calming measures in the vicinity of Scoil Asicus Naofa which incorporates many of the proposals suggested in the Green Schools "Safe Routes to Schools" report commissioned by An Taisce. The public water main and foul sewer will also be upgraded as required by Uisce Eireann.

As outlined in further detail below, the surface water drainage from the site will be attenuated via a SUDS design approach. The network connection works within the site and the small scale construction works on Golf Course road will take place concurrently with the housing development or before.

All of the above have been addressed in the Screening for Appropriate Assessment.

3.2 Construction Methodology

A Stage 1 Construction Environmental Management Plan (CEMP) undertaken by Cronin and Sutton Consulting Engineers (CS Consulting is provided in Appendix I). The purpose of this Outline Construction Environmental Management Plan (CEMP) document is to briefly outline the construction processes, site management arrangements, and environmental protection measures employed during construction. Once appointed, it will be the responsibility of the lead contractor to prepare and submit a detailed CEMP for the authority's approval. This CEMP will be a live document that will be updated throughout the project lifecycle by the lead contractor as required.

The construction phase will be 15/18 months and is anticipated to commence in June 2024, subject to planning.

All construction and demolition waste associated with the development shall be disposed of in accordance with the requirements of the national waste regulations, by a licensed/permitted waste contractor and disposal records for the duration of the construction phase maintained.

All surface water drainage from the site will be attenuated via a SUDS design approach. There is a lot of green space proposed and all exterior paving will be permeable, to minimise standing water and reduce rainwater runoff. A proposed surface water attenuation tank and 2 No. petrol interceptors are included in the surface water drainage design, as outlined in Figure 3.
The implementation of SUDS is a standard application in the CDP. P- INW-3 states "*Ensure that all proposed greenfield residential and commercial developments use sustainable drainage systems (SUDS) in accordance with best current practice, ensuring protection of the integrity of wetland sites in the adjoining area, including their hydrological regime*".

All domestic effluent and foul water generated on site shall be discharged to the Irish water sewerage network in accordance with the plans and proposals submitted to the planning authority as shown in Figure 3 below. It is noted that all water and wastewater infrastructure will be designed and constructed in accordance with the relevant Code of Practice documents

The appointed contractor shall develop a Construction Surface Water Management Plan (CSWMP) for inclusion in their detailed Construction Environmental Management Plan. The content of the contractor's CSWMP shall be agreed with Sligo County Council (SCC) prior to commencement of works.

Figure 1: Site Location

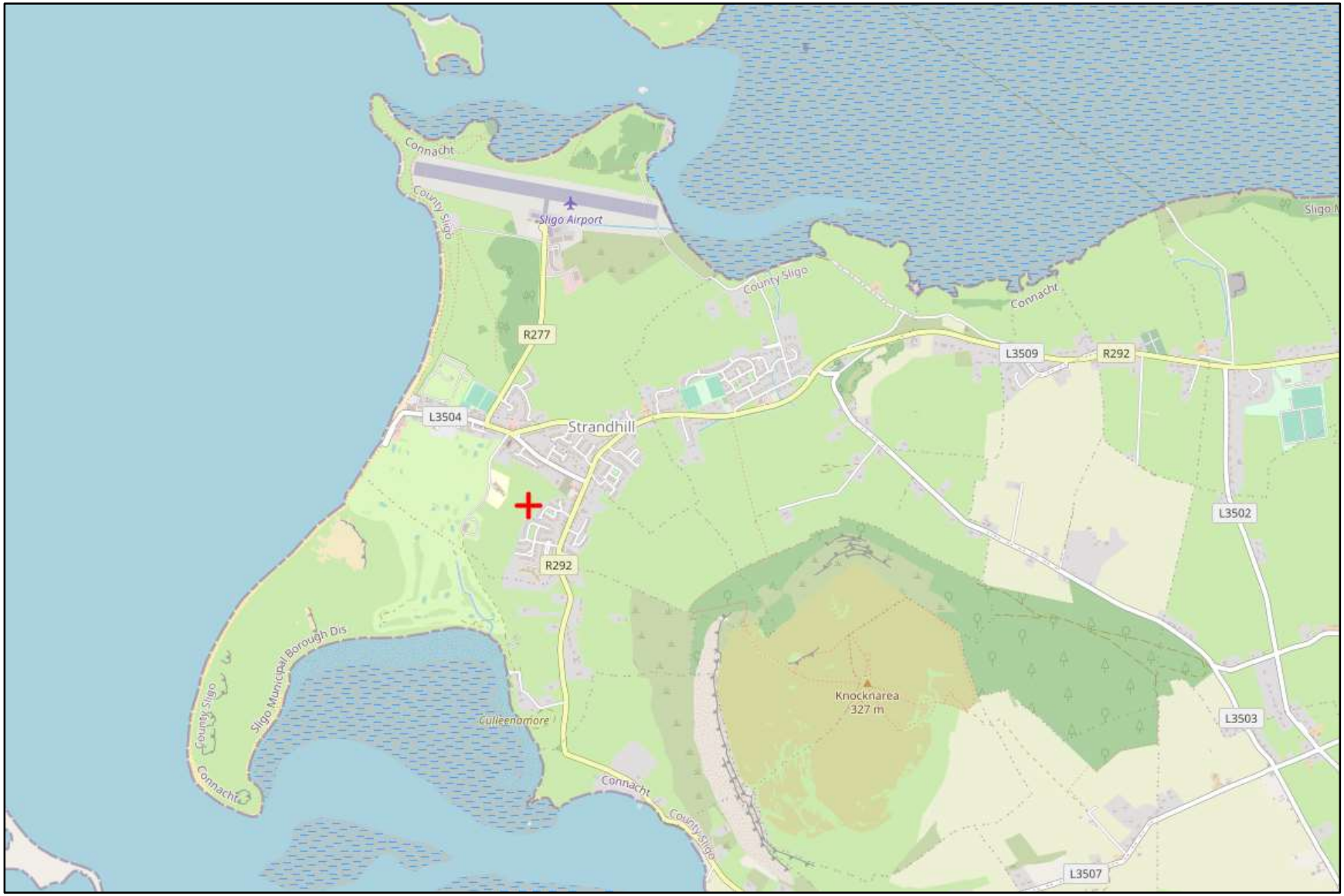


Figure 2: Proposed Site Layout

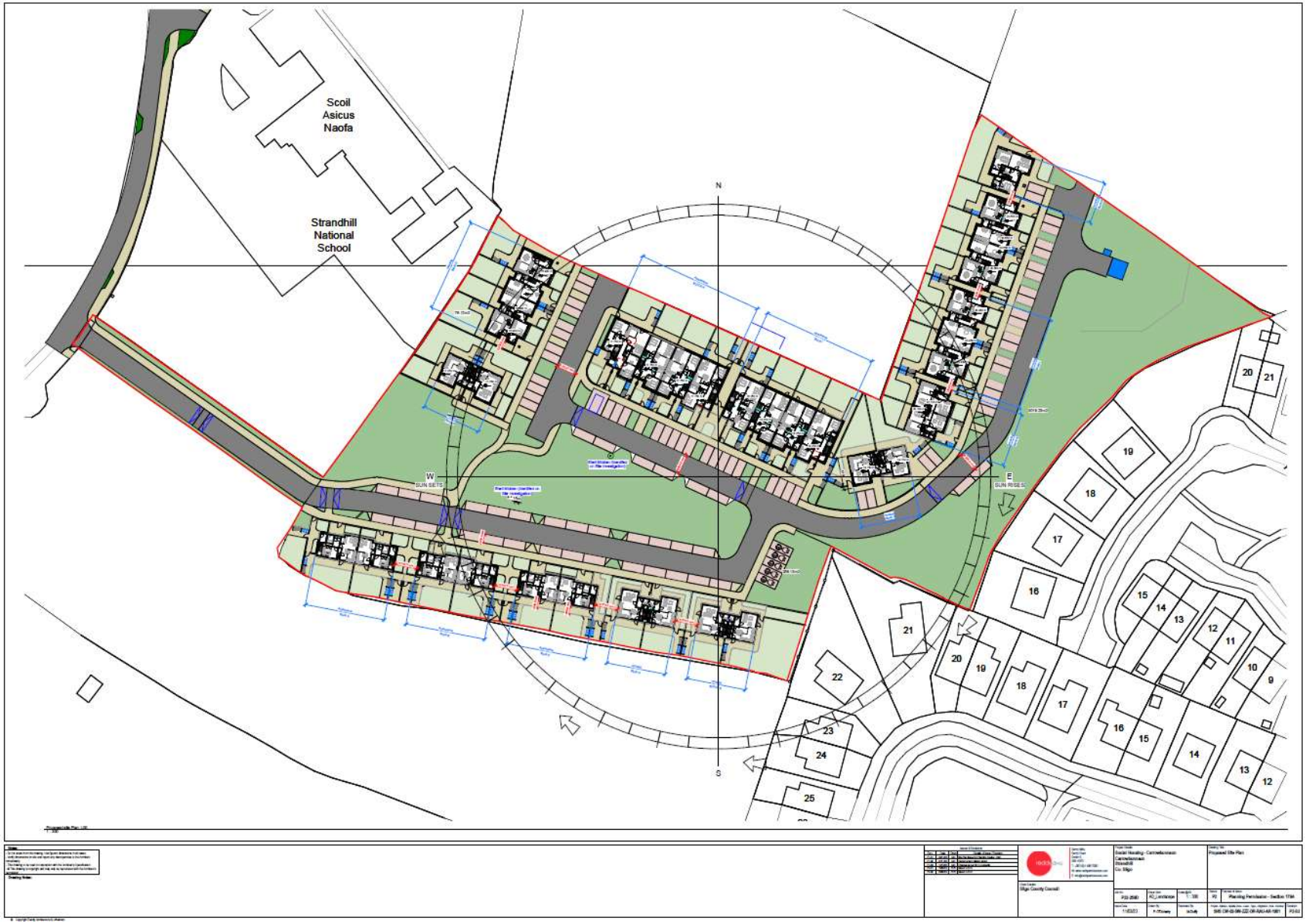
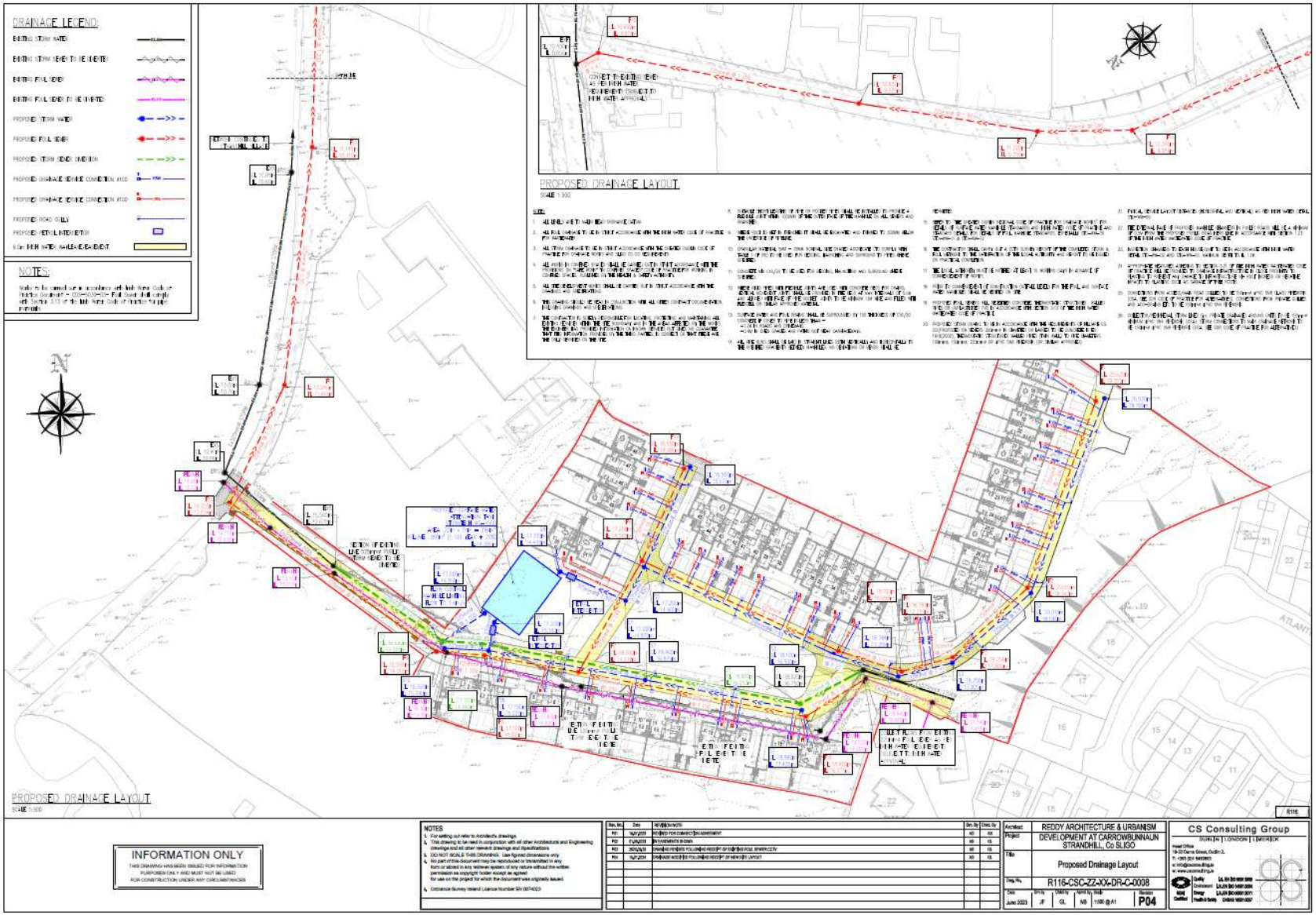


Figure 3: Drainage Layout

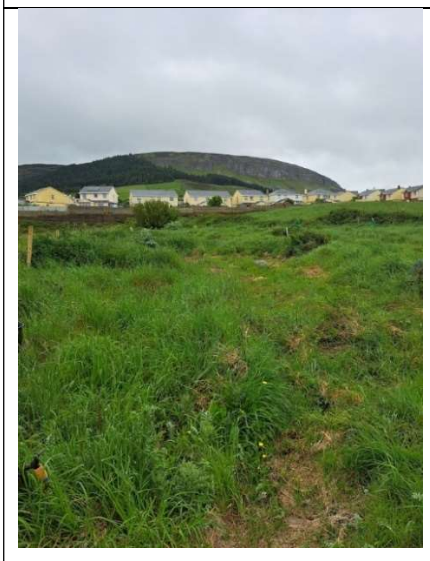


4 DESCRIPTION OF RECEIVING ENVIRONMENT

A site survey of the proposed development site was undertaken on 27th May 2023 in which habitats on site were assessed and the suitability of the site to support plants, animals or habitats of note was also considered. Findings of the site survey were augmented by desktop research and review of available information. The ecological survey did not identify any habitat which corresponds with Annex I habitat, nor were any rare, protected or invasive species recorded in the course of the current survey.

4.1 Field Survey Findings

<table>
<tr><td>Plate 1</td><td></td></tr>
<tr><td>  </td><td>The proposed entrance road to the development is a stone lane south of the national school. This narrow lane as shown in Plate 1 is fringed by grassy verge vegetation, containing grasses and herbs with occasional bramble(Rubus fructicosus), willow (Salix sp.) and young sycamore (Acer pseudoplatanus).

The surrounding vegetation is semi-improved/improved grassland dominated by grasses. An historic monument is recorded in the field to the north, Ref: SL013-033, as shown in Figure 2. Situated on a slight rise, in gently undulating pasture is a raised circular area (diam. 19m), enclosed by an earthen scarp (ext. H1.6m). This feature has been partially eroded by livestock. The original entrance is not recognisable.</td></tr>
<tr><td>Plate 2</td><td>Plate 3</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">The proposed site is fenced into two distinct areas. To the south of the site is a strip of defunct horticultural land, with evidence of being previously used as allotments. This area of semi-natural grassland is dominated with grasses and herbs. Common grasses include bents (Agrostis spp.), meadow-grasses (Poa spp.), fescues (Festuca spp.), Cock's-foot (Dactylis glomerata) and Yorkshire-fog (Holcus lanatus) with Downy Oat-grass (Avenula pubescens). Herbs present, include clovers (Trifolium spp.), nettle (Urtica doica), horsetail (Equisetum sp.), buttercup (Ranunculus spp.) and vetch (Vicia spp.), with tickets of bramble. Previous allotment use is</td></tr>
</table>

evident with sleepers and partition netting dispersed throughout, and plants such as raspberry (*Rubus idaeus)*, blackcurrant (*Ribes nigrum*), artichoke (*Cynara cardunculus var. scolymus*) and fennel (*Foeniculum vulgare)* present.

The eastern boundary, which separates the proposed site from the adjacent residential development comprises a dense thicket of bramble and raspberry alongside a high retaining block wall. The southern boundary is fencing with frequent thickets of bramble. It is proposed to maintain and strengthen this boundary.

Plate 4	**Plate 5**
	
Plate 6	**Plate 7**
	

Plate 8	**Plate 9**
	
The larger part of the proposed site, immediately north of above area, is a relatively flat, heavily grazed agricultural grassland dominated by grasses and frequently occurring agricultural herbs including buttercup, plantains (*Plantago* spp.), nettle, thistles (*Cirsium arvense, Cirsium vulgare*), docks (*Rumex* spp.) and localised patches of rushes and willowherb (*Epilobium* spp). The northern boundary is comprised of fencing with dense thickets of bramble and hedge bindweed *(Calystegia sepium).* It is proposed to maintain and strengthen this boundary. A steep westerly sloping bank along the eastern boundary, as shown in plate 7 is similarly vegetated, supporting abundant grasses and a wide range of broadleaved herbs such as, buttercup, vetch, plantain, bindweed and horsetail. It is proposed to conserve this boundary bank as in the current form. Hybrid Knotweed (*Fallopia Bohemica)* was noted on the adjacent site (outside the redline boundary) as shown in the background of Plate 9. Sligo County Council has a programme in place to deal with this invasive plant on this site. It is believed that 1st treatment took place in September 2022 as evident in Plates 8 and 9. No sign of regrowth was found on the proposed site as would be expected in June. However, this cannot be ruled out, as knotweed can spread easily when its underground rhizomes are disturbed. Rhizomes can penetrate ground to a depth of 3 metres and radiate 7 metres from each plant. Treatment also took place in September 2023.	

Invasive Species

No invasive alien species as listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations , 2011 (S.I No 477 of 2011) Part 1 or 2 were recorded within the proposed redline boundary of the site.

Hybrid Knotweed (a hybrid of Japanese Knotweed and Giant Knotweed) was observed within the adjacent site, northeast of the proposed site boundary along the embankment leading up to the Atlantic View housing estate. Sligo County Council started a treatment programme in September 2022 to eradicate this invasive plant. Treatment also took place in September 2023. No evidence of it occurring within the proposed site was noted on the day of survey.

Terrestrial Mammals

No sightings of terrestrial mammals were recorded on day of survey. Mammal paths were evident in numerous places along the hedgerows. No badger setts were observed on-site. It is assumed typical species likely to occur in the vicinity, include badger *(Meles meles*), Pine martin (*Martes martes*), fox (*Vulpes vulpes*), wood mouse (*Apodemus sylvaticus*) and hedgehog (*Erinaceus europaeus*).

Pathways from Human activity were also observed traversing the site, linking gateways/access points.

Bats
No evidence of bat was recorded during the survey . There is no potential for bats using the site for roosting. However the linear habitats such as the bramble hedges may be used to fly through the landscape. Hedges are like roadways for bats, allowing them to commute through the landscape from their roosting sites to important foraging habitats such as woodlands and waterways. Hedges can also be a very valuable resource for providing insect prey for bats.

Birds
No evidence of bird nesting was noted at the time of survey. But birds are likely to use these dense bramble hedges to nest in. A great many species of bird's nest in hedges deep down, tucked away under the vegetation, making the nests hard to find. They like to nest behind thorns and brambles so they feel secure from predators like foxes, cats, hawks, squirrels, and rats who find it difficult to get access.

Birds noted on the day of survey included Wren (*Troglodytes troglodytes)*, Song Thrush (*Turdus philomelos)*, Blackbird (*Turdus merula*) and Skylark *(Alauda arvensis)*. The birds observed are considered to be common within the wider landscape. No species are SCIs of any European site.

4.2 Geology and Soils

The underling bedrock is a dark fine limestone & Calcareous shale of the 'Gencar Limestone ' formation, which is locally important aquifer. Subsoils are well drained .till derived from limestones.

4.3 Hydrology

The proposed development site is located within the Water Framework Development (WFD) catchment area of Sligo Bay, covering approx. 1665 km^2 (Hydrometric Area 35), the Carrowgobbadagh_SC_10 sub catchment and the Knappagh (Sligo)_10 River sub basin.

There is no direct hydrological connection via any watercourse within/adjacent to the proposed development site to Ballysadare Bay SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC , Ballysadare Bay SPA and Cummeen Strand SPA via a stream or river from the site area. Both Sligo Bay to the west and Ballysadare Estuary to the south are located approx. 685 metres and 567 metres respectively from the proposed development site.

The Drumcliff-Strandhill waterbody (IE_WE_G_0044) which underlies the proposed development site currently has a water classification of 'Good' (EPA. 2016-2021). Currently the groundwater in the areas has no significant underlying pressures, including waste abstraction, agriculture, anthropogenic, aquaculture, atmospheric, extractive industry, hydromorphology, invasive species, urban runoff or otherwise (EPA Water Maps accessed 25th May 2023). Pollution Impact Potential (PIP) maps for Nitrogen (N) and Phosphorous (P) have been generated by EPA to show the highest risk areas in the landscapes for losses of N and P to waters. The PIP model estimates the annual nutrient losses from agricultural land at specific locations, using spatial data from farm management, soils and hydrogeology. The proposed development site does not have any Phosphorous or Nitrate ranking. The area immediately adjoining the site to the north has phosphorus and nitrate rankings of 7 (7 is the lowest impact ranking).

Office of Public Works (OPW) and the CFRAM study was assessed to show the probability of flooding at the site along with records of past flood events. The proposed development site has no surface or groundwater record of a flooding event.

5 SCREENING ASSESSMENT

This stage of the process identifies any likely significant effects upon European Sites from the proposed project, either alone or in combination with other projects or plans.

5.1 Identification of Relevant Natura 2000 Sites

In accordance with guidance from the *Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities* (2010), all designated sites (SACs and SPAs) within a distance of 15km from the proposed project site were identified to assess for potential impacts as displayed in Figure 5.1. It is common practise to use a 15 km buffer around the proposed project to screen potential off-site impacts on Natura 2000 sites (see DEHLG, 2009). However, this is an arbitrary limit and, if there is potential for secondary impacts to occur at greater distances, then such impacts must be assessed. It has been evaluated that a wider radius was not required in the absence of pathways identified by which sites outside of this radius could potentially be affected.

A standard source-receptor-pathway conceptual model was used to identify 'relevant' European sites (i.e. those which could be potentially affected). For significant effects to arise, there must be a risk enabled by having a:

- Source(s) – e.g. sediment run-off from construction works at proposed development site
- Receptor(s) – e.g. qualifying habitats and/or species of European Sites
- Pathway(s) – e.g. a watercourse connecting proposed project site to a European site

The identification of a pathway does not automatically mean that significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (e.g. duration of construction works), the characteristics of the pathway (e.g. water quality status of watercourse receiving run-off from construction) and the characteristics of the receptor (e.g. the sensitivities of the European site and its qualifying interests).

Sixteen Natura 2000 sites within an area extending 15km around the proposed project have been considered for potential impacts following the guidance published by DoEHLG (2009). It has been evaluated that a wider radius was not required in the absence of pathways identified by which sites outside of this radius could potentially be affected. These sites, their conservation interests and the potential for interactions leading to significant adverse effects arising from the proposed project are considered for each site and are exhibited in Table 5.1.

In addition to Natura 2000 sites some habitats and species are included in the Irish Red Data book, which lists species that are under threat and are legally protected. Under the Flora Protection Order plants cannot be wilfully picked, uprooted or damaged. Natural Heritage Area (NHA) is the basic designation for wildlife. A NHA is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. They may also be selected on the basis of their geology or geomorphology. NHAs are legally protected from damage from the date they are formally proposed for designation. NHA's were first entered into European Law under the 1976 Wildlife Act which was transposed into Irish law with the 1997 Natural Habitats Regulations (S.I. No. 94 of 1997). This gained full statutory backing in Ireland with the passing of the Wildlife (Amendment) Act 2000.

NHA's located within the 15km Zone of Influence from the proposed development are:

- Slieveward Bog NHA – 8.19km
- Crockauns/Keelogyboy Bogs NHA – 12.51km

Given the separation distances of the above NHAs, these are excluded from further assessment.

Table 1: Designated Natura 2000 sites which are located within a 15km radius of the proposed site. The potential for impacts affecting the qualifying interests is identified

NATURA 2000 SITE [SITE CODE]	DISTANCE FROM PROPOSED PROJECT (KM)		POTENTIAL FOR IMPACTS IDENTIFIED
Ballysadare Bay SPA [0014129]	0.49 KM	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Grey Plover (*Pluvialis squatarola*) [A141] Dunlin (*Calidris alpina*) [A149] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999]	Potential for disturbance of qualifying features during construction and operation
Cummeen Strand/ Drumcliff Bay SAC (00627)	0.52 KM	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] Petrifying springs with tufa formation *(Cratoneurion*) *[7220] Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] Sea Lamprey (*Petromyzon marinus*) [1095] River Lamprey (*Lampetra fluviatilis*) [1099] Common Seal (*Phoca vitulina*) [1365]	Potential for disturbance of qualifying features during construction and operation
Ballysadare Bay SAC [000622]	0.62 KM	Estuaries [1130] Tidal Mudflats and Sandflats [1140] Embryonic Shifting Dunes[2110] Marram Dunes (White Dunes) [2120] Fixed Dunes (Grey Dunes)* [2130] Humid Dune Slacks [2190] Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] Common (Harbour) Seal (*Phoca vitulina*) [1365]	Potential for disturbance of qualifying features during construction and operation
Cummeen Strand SPA	1.33 KM	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999]	Potential for disturbance of qualifying features during construction and operation

Drumcliff Bay SPA (004013	5.87 KM	Sanderling (*Calidris alba*) [A144] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999]	There are no potential pathways for impacts identified regarding the proposed development.
Unshin River SAC [001898]	8.03 KM	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]	There are no potential pathways for impacts identified regarding the proposed development.
Lough Gill SAC	8.04 KM	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Austropotamobius pallipes (White-clawed Crayfish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]	There are no potential pathways for impacts identified regarding the proposed development.
Ballintemple and Ballygiligan SPA (004234)	8.13 KM	Barnacle Goose (Branta leucopsis) [A045]	There are no potential pathways for impacts identified regarding the proposed development.
Ardboline Island and Horse Island SPA	9.48 KM	Cormorant (Phalacrocorax carbo) [A017] Barnacle Goose (Branta leucopsis) [A045]	There are no potential pathways for impacts identified regarding the proposed development.
Union Wood SAC	9.55 KM	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	There are no potential pathways for impacts identified regarding the proposed development.
Knockalongy and Knockachree Cliffs SAC	10.47 KM	Trichomanes speciosum (Killarney Fern) [1421]	There are no potential pathways for impacts identified regarding the proposed development.

Aughris Head SPA	10.84KM	Kittiwake (*Rissa tridactyla*) [A188]	There are no potential pathways for impacts identified regarding the proposed development.
Sligo Leitrim Uplands SPA	11.68 KM	Peregrine (*Falco peregrinus*) [A103] Chough (*Pyrrhocorax pyrrhocorax*) [A346]	There are no potential pathways for impacts identified regarding the proposed development.
Benbulben Gleniff and Glenade Complex SAC (000623)	11.68 KM	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] 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] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140] Petrifying springs with tufa formation (Cratoneurion) [7220] Alkaline fens [7230] Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110] Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii) [8120] Calcareous rocky slopes with chasmophytic vegetation [8210] Vertigo geyeri (Geyer's Whorl Snail) [1013] Lutra lutra (Otter) [1355]	There are no potential pathways for impacts identified regarding the proposed development.
Ox Mountains Bog SAC	13.03 KM	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140] Depressions on peat substrates of the Rhynchosporion [7150] Vertigo geyeri (Geyer's Whorl Snail) [1013] Saxifraga hirculus (Marsh Saxifrage) [1528]	There are no potential pathways for impacts identified regarding the proposed development.

Streedagh Point Dunes SAC	14.2 KM	Mudflats and sandflats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Vertigo angustior (Narrow-mouthed Whorl Snail) [1014]	There are no potential pathways for impacts identified regarding the proposed **project.**

5.2 Conservation Objectives

A Natura 2000 site's conservation objectives are defined by NPWS and are, "*intended to ensure that the relevant Annex I habitats and Annex II species present on a site are maintained in a favourable condition*" (DEHLG, 2010). The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest.

Favourable conservation status of a habitat can be described as being achieved when: "*its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable*".

Favourable conservation status of a species can be described as being achieved when: "*population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."*

Full Site Synopsis, Conservation Objectives and associated reports for these Natural 2000 sites are available on www.npws.ie.

6 ASSESSMENT OF POTENTIAL IMPACTS

This section documents the final stage of the screening process. It is vital that an assessment of potential source-pathway-receptor links is undertaken to assess potential impact links between the receptor (European Sites) and source (proposed works) to establish the risk of any likely significant effects. It used the information collected on the sensitivity of the Qualifying Interests (QIs) of the European Site and describes any likely significant effects from the site preparation, construction and operation stages of the proposed works. This assumes the absence of mitigation measures with the exception of those incorporated in the design stage. The proposed development is not directly connected with or necessary for the management of the sites considered in the assessment and therefore, potential impacts must be identified and considered.

The following potential impacts as a result of the construction and/or operation of the proposed development is discussed:

- Habitat loss or fragmentation
- Disturbance of keys species or species fragmentation
- Potential changes in water quality
- In-combination effects

6.1 Habitat Loss or Fragmentation

The proposed project is not located within the boundary of a Natura site with no qualifying interest habitats adjacent to or contiguous to the development site. The proposed development site is located (as the crow flies) 495m from Ballysadare Bay SAC, 520m from Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, 550m from Ballysadare Bay SPA and 1.35km from Cummeen Strand SPA.

The habitats recorded within the proposed development boundary and adjacent environs do not correspond to habitats listed on Annex I of the Habitats Directive. The ecological field survey did not identify any qualifying habitat for which these Natura 2000 sites are designated within the proposed site boundary or surrounding environs. Habitats within the proposed site are common within the wider landscape. Therefore, the proposed development will not result in the loss or fragmentation of any habitat supporting Special Conservation Interests of Ballysadare Bay SAC,

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

Removal of vegetation should not significantly impact on linear landscape features. The design of the development has allowed for the retention of linear boundary features and the proposed landscaping for the site outlines that additional native vegetation will be planted. The proposed works are unlikely to cause any significant habitat fragmentation.

6.2 Disturbance of Key Species or Species Fragmentation

There will be no direct effects on the QIs of the EU Designated Sites identified in this AA. The EU Designed Sites are located entirely outside of the proposed development and no evidence of QI species or suitable habitat for these species were recorded during the ecological site survey. No suitable supporting habitat for QI species were recorded within the site and none of the QI habitats were recorded within or adjacent to the site.

The proposed works are located (as the crow flies) 495 m from Ballysadare Bay SAC, 520m from Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC , 550m from Ballysadare Bay SPA and 1.35km from Cummeen Strand SPA

The species of Special Conservation Interest (SCI) designated in Ballysadare Bay SPA utilise mudflats for feeding. Mudflats are also a qualifying interest of Cummeen Strand/ Drumcliff Bay SAC (00627) and Ballysadare Bay SAC. The nearest area of designated mudflats is highly utilised by the public as walkways provide direct access to the beach. It is unlikely waders will be disturbed as the timing of works will be carried out during daylight hours when pedestrian traffic is along the shoreline, any birds utilising these areas will be accustomed to human disturbance and traffic from nearby promenade, carpark, playground, caravan park and airport.

Cummeen Strand SPA is located approx. 1.35km from the proposed development site. Due to the intervening distance, in addition to a highly modified landscape the potential for disturbance to SCIs is limited.

There could be indirect disturbance to birds and bats. Foraging loss may be periodically lost but this should be minimal and there is plenty of similar habitat in the surrounding area to be utilised. The design of the development has allowed for the retention of linear boundary features, some trimming of vegetation may occur, and works will be carried outside of the nesting season (the bird nesting season is 1st March-31st August and bats engage in foraging and breeding activity April -September). Therefore, with strict adherence to timings it is not envisaged there will be any significant loss of potential feeding areas for birds or bats.

There is no direct or indirect impact on the aquatic QIs associated with Ballysadare Bay SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, as they are confined to the estuaries, mudflats and sand flats not covered by seawater at low tide, are aquatic or have very specific habitat requirements. Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] is a qualifying interest of Ballysadare Bay SAC, and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC No evidence of Narrow mouthed Whorl Snail was observed on the day of survey. The field survey did not identify any supporting habitat within/adjacent to the proposed development site.

No streams, drains or watercourses are present on, or contiguous to the development site with no in stream or along stream works required or proposed. There are no proposed discharges from the development site that will negatively impact water quality post construction as it is proposed to connect to Strandhill WWTP which has excess capacity to cater for the development, having been upgraded in 2021.

During construction the development will be subject to a CEMP that must be agreed with Sligo County Council. The CEMP will ensure that surface water quality will not be negatively impacted

during construction with strict controls on hydrocarbon management and protection of freshwater systems from suspended solids and cementitious material for example.

6.3 Potential Changes in Water Quality

There is no direct discharge to surface water features therefore no direct impact on any European designated site. The development will not have a negative impact on water resources either qualitatively or quantitatively as there are no direct discharge to ground water or abstraction from it. . No negative changes to surface water quality (microbiologically, chemically, physically or quantitatively) are anticipated given that there are no direct discharges to or abstraction from surface water with the proposed development to connect to appropriate petrol interceptors and attenuation. The only discharge to consider is storm water which will not indirectly impact on the water quality with the storm water from surrounding areas being maintained via existing routes.

A Construction Environment Management Plan (CEMP) has been prepared by CS Consulting Group as detailed in Appendix 1. This has been prepared taking cognisance of the Inland Fisheries Ireland, *Guidelines on Protection of Fisheries during Construction Works in and adjacent to Waters*. The CEMP outlines measures to control surface water impacts, and all works will be undertaken with reference to the guidelines listed in the CEMP. The foundation method has also been considered when assessing the potential effects on water quality during construction.

With strict adherence to best practice measures inherent in the design and outlined in the CEMP and its referenced guidance documents, along with standard operating procedures, and in addition to the distance of separation to the qualifying interests of the Natura 2000 sites, there will be no discharge of pollutants into the environment during the works and water quality will not be negatively impacted during the construction phase or in the long-term during operations.

6.4 Spread of Invasive Species

The proposed works are located (as the crow flies) 495 m from Ballysadare Bay SAC, 520m from Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC , 550m from Ballysadare Bay SPA and 1.35km from Cummeen Strand SPA.

The ecological survey noted the invasive plant species, Hybrid Knotweed which is listed as a Third Schedule species on the adjoining site. It is evident Knotweed was present in the NE corner of the proposed site but has undergone a programme of eradication carried out by SCC. No evidence of the plant regrowth was noted at the time of survey, considering given the current time of year (June) the plant should be easily identifiable and considering it is growing quite vigorously on the adjoining site. However it cannot be ruled out, as knotweed can spread easily when its underground rhizomes are disturbed. Rhizomes can penetrate ground to a depth of 3 metres and radiate 7 metres from each plant. During construction there is potential for disturbance of rhizomes (machinery, human disturbance). During operation there is also potential for disturbance of knotweed (e.g. machinery during landscaping activities, human disturbance).

In accordance with S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011, measures must be taken to avoid the spread of any Third schedule species. These measures are being currently taken by SCC and additional measures should be considered as part of a CEMP for the proposed development.

These measures are not considered mitigation in the context of this AA Screening as they are not included to reduce or avoid any effect to a European site. The chances of knotweed spreading to a Natura 2000 site is minimal given the significant distance and lack of hydrological connectivity to the proposed site and considering the knotweed is currently undergoing a planned programme of eradication.

6.5 Potential in-combination effects

In accordance with the EU guidance document on Appropriate Assessment, "Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites", other plans and projects in the area must be considered at the screening stage. This is required in order to identify any possible cumulative or in combination impacts of the proposed project with other plans or developments on the relevant Natura 2000 sites.

Sligo Council planning portal was consulted to identify proposed or permitted projects which may give rise to in-combination effects within the last 5 years. EPA online mapping portal was consulted to review any potential activities in the vicinity of the proposed development which may result in an in combination effect (e.g., licenced discharges, industrial facilities, extraction activities and/or waste disposal sites). The Department of Housing, Local Government and Heritage EIA portal was consulted to search for any development within the area that required an EIA.

6.4.1 Planning Portal

A review of the planning portal shows that the site previously got planning permission in January 2002 (Planning Ref: 001186) for the construction of 12 no. two-bed semi-detached houses, 14 no. three-bed semi-detached houses, 4 no. four-bed semi-detached houses, 3 no. apartment blocks each containing 4 no. apartments, 1 no. elderly persons group home, 1 no. community building and associated site works.

A review of planning applications within 500 metres of the site for the past 3 years was assessed. These are as follows:

Ref: 20342 -Development consisting of (1) Construct new extension (overall floor area = 134sq.m) comprising of 1 No. mainstream classroom including associated sanitary and ancillary accommodations, universal WC, store, boiler house and link corridor; (2) Carry out alterations to existing floor plans and elevations to accommodate the proposed works; (3) Connect to existing site services - including upgrade works; (4) Carry out all associated ancillary site works

This application at the adjacent Strandhill Primary School received planning permission, subject to conditions. Following Habitats Directive Assessment Screening it was concluded that having regard to the scale of the proposed development and its removal from Natura 2000 sites, the proposed development on its own or in combination with other projects will not have any impact on such sites and accordingly an AA was not required.

Ref 21138: Development consisting of a second floor extension to a first floor apartment at No. 6 Cois Ri, Top Rad, Carrowbunaun, Strandhill.

This application at the adjacent residential area to the east of the proposed development site received planning permission subject to conditions. It was concluded there was no impact on surrounding Natura 2000 sites.

Ref 22160: Development consisting of modifications to course, internal road and car parking, construction of new practice areas and bunker, modifications to 10th and 12th greens and 11th tee, realignment of private road and creation of replacement parking spaces to the side and rear of the clubhouse, together with all ancillary works at Strandhill Golf Club which is located <100m west of the proposed development site.

This application which is located <100m west of the proposed development site received planning permission subject to conditions. An Appropriate Assessment Screening report carried out to assess the impacts of the proposed modification works to Strandhill Golf Club in April 2022 concluded that the proposed development at Strandhill Golf Club individually or in combination with other plans and projects will not have a significant effect on any European Site and a Stage 2 NIS was not required. Sligo county Council concurred with the Screening Report decision.

Ref 22422: Development consisting of the installation of toilet facilities 'Dryloos' to the existing golf course together with all ancillary works . These works are proposed for the western half of

the golf course, near the coastline >500m from the proposed development site. A decision in respect of planning is due in June 2023.

In conclusion, there are no significant development proposals within the vicinity of the site that could act in cumulation with the proposed development. The proposed development will have no significant effects upon any designated site when considered in combination with other developments that have been properly screened or where mitigation is required following AA.

Any future application in the area that has the potential to impact upon Natura 2000 site within the zone of influence, will be subjected to Appropriate Assessment as required under Articles 6(3) of the Habitats Directive. This current development will have no cumulative impacts upon the SACs / SPAs identified when considered in combination with any other development that has been screened for no impacts themselves (Stage 1) or where potential impacts have been mitigated against (Stage 2 AA / NIS).

6.4.2 Other Plans

Sligo County Development Plan 2017 – 2023

A number of objectives and policies are outlined in the plan to protect and maintain the favourable conservation status and conservation value of all-natural heritage sites and to promote the maintenance and, as appropriate, achievement of 'favourable conservation status' of habitats and species in association with the NPWS.

In addition objectives/policies included in the CDP will ensure that impacts on Natura 2000 sites arising from water supply or from wastewater discharge are avoided.

Strandhill Mini-plan

The proposed development area is in land zoned for 'Residential Use' within the plan. Relevant policies and objectives in the plan include:
32.1.A. Maintain and enhance the conservation value of the Natura 2000 sites surrounding the village. Ensure that Appropriate Assessment Screening is carried out for any plan or project within the Mini-Plan area with potential to impact on Ballysadare Bay SAC, Cummeen Strand/Drumcliff Bay SAC, Cummeen Strand SPA and Ballysadare Bay SPA.
32.1.C. Apply the precautionary principle in relation to development proposals with potential to impact on the County Biodiversity Site within the buffer zone by requiring an ecological impact assessment to ensure that any proposed development will not affect the integrity and conservation value of the site.

Water Framework Directive
The Water Framework Directive (WFD) obliges member states to manage their waters in an integrated and sustainable way. They must ensure that their waters achieve at least good status, generally by 2027 at the latest, and that current status doesn't deteriorate in any waters. To achieve good status and preserve the best waters, management plans have been prepared for districts around the country.

In order to achieve this **Strandhill Wastewater Treatment Plant (WWTP)**was upgraded in 2021. The works in Strandhill included the construction of a new inlet works, storm water holding tank, secondary biological treatment, settlement tanks, a control building, sludge thickening facility as well as an upgrade to the existing Caravan Park Pumping Station. The capacity of the upgraded wastewater treatment plant in Strandhill has more than doubled and can now serve a population equivalent of 3,700. The upgraded works ensure that wastewater is treated and discharged in compliance with the Urban Wastewater Treatment Regulations and with the conditions of the Wastewater Discharge Licence (WWDL) issued by the Environmental Protection Agency (EPA).

The potential impact of these other plans or projects on the proposed development is deemed to be positive. The numerous measures which will directly and/or indirectly contribute to the conservation of Natura 2000 sites. They will assist in the implementation of the requirements of the Habitats Directive and will ensure that the proposed development will not have a significant impact on Natura 2000 sites in view of their conservation objectives.

7 CONCLUSIONS

To determine the potential impacts, if any, of the proposed development on nearby Natura 2000 sites, a screening process for Appropriate Assessment was undertaken.

The AA screening process considered potential impacts which may arise during the preparation, construction and operational phases of the proposed development. This assessment comprised an evaluation of the pathways for effects on the qualifying interests of designated European Sites, with reference to the location, size, scale, and duration (construction and operation) associated with the proposal. The effects on nearby NHAs and pNHAs were also considered. Given the separation distances of the NHAs identified, it is envisaged that none of these designated sites would be impacted on.

Following a source-pathway-receptor model the potential impacts of the proposed development have been considered in the context of the Qualifying Interests and the conservation objectives for Ballysadare Bay SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC , Ballysadare Bay SPA and Cummeen Strand SPA.
It is considered that the proposed development does not include any element that has the potential to significantly alter the favourable conservation objectives associated with the species and habitats or interfere with the key relationships that define the structure or function, either alone or in combination with other impacts, of Ballysadare Bay SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC , Ballysadare Bay SPA and Cummeen Strand SPA. This is provided that strict adherence to design measures, appropriate construction methods, measures outlined in the CEMP and standard operating procedures are undertaken. In accordance with the OPR 2021 guidance, we note that no mitigation measures have been considered when reaching this conclusion.

In conclusion, this Screening Assessment demonstrated that the proposed development will not pose significant threat to the integrity of Ballysadare Bay SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Ballysadare Bay SPA and Cummeen Strand SPA, and their conservation objectives will remain the same as before the development. Consequently, this proposed development does not require a Natura Impact Statement or need to advance in the Appropriate Assessment process. However, a determination of the need for a Stage 2 'Appropriate Assessment and the preparation of a Natura Impact Statement will be decided upon by the Competent Authority (Sligo County Council).

8 REFERENCES

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APPENDIX 1

Construction Environmental Management Plan (CEMP)

CS CONSULTING

GROUP

DUBLIN | LONDON | LIMERICK

Stage 1 Construction Environmental Management Plan

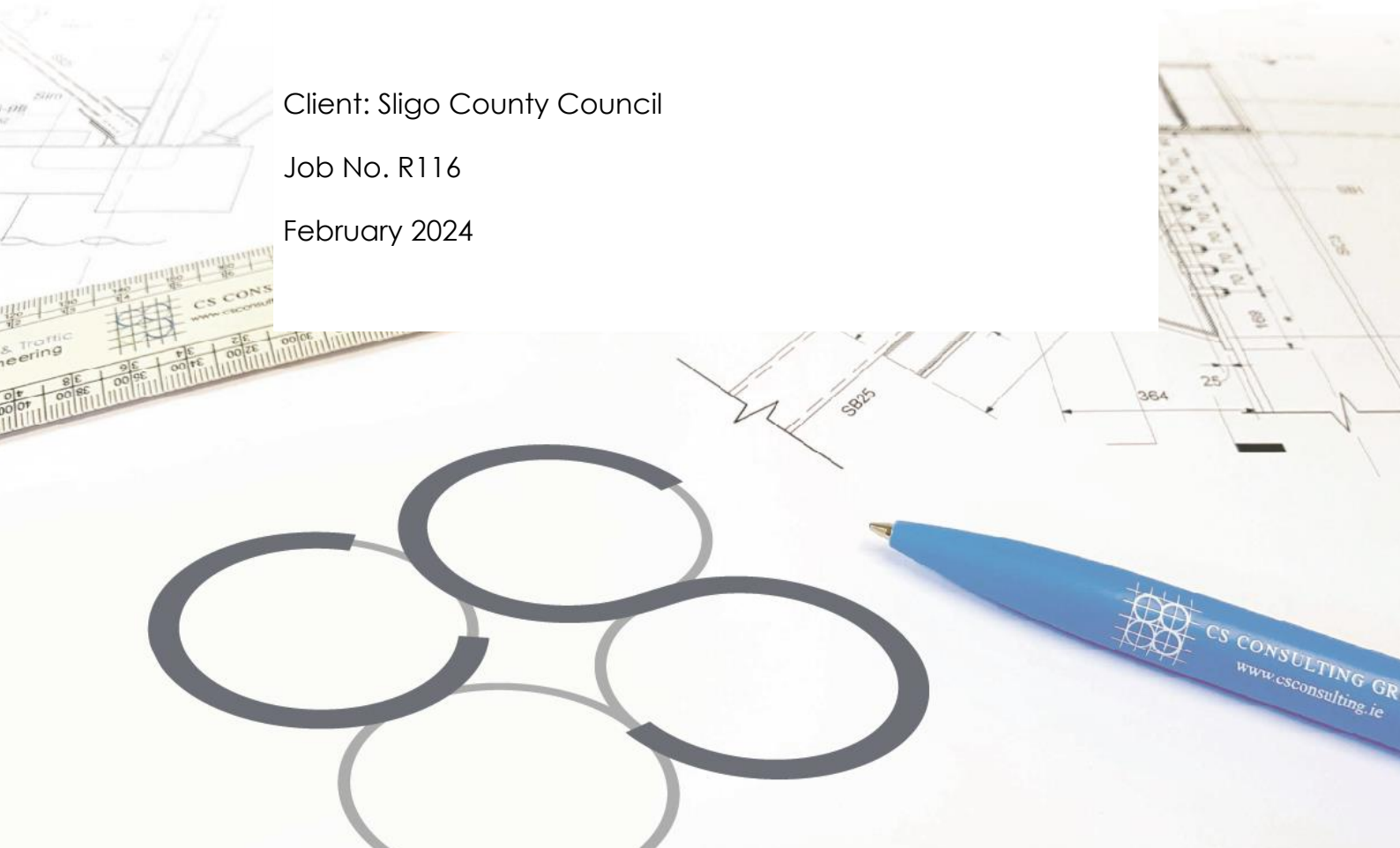
Proposed Development

Carrowbunnaun, Strandhill, Co. Sligo

Client: Sligo County Council

Job No. R116

February 2024



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STAGE 1 CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

PROPOSED DEVELOPMENT, CARROWBUNNAUN, STRANDHILL, CO. SLIGO

CONTENTS

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1.0 INTRODUCTION

Cronin and Sutton Consulting Engineers (CS Consulting) have been commissioned by Sligo County Council to prepare a Stage 1 Construction Environmental Management Plan (CEMP) for a proposed development at Carrowbunnaun, Strandhill, Co. Sligo consisting of 51 no. houses and duplex apartments that shall be accessed from the Golf Course Road. In order to satisfy an objective in the current and draft Sligo County Development Plans, upgrade works to the existing Golf Course Road shall be carried out, please see Section 2.2 for further details.

This Stage 1 CEMP is a preliminary plan. This provides a framework within which all final construction processes, site management arrangements, and environmental protection measures employed during construction are to be specified. Construction of the proposed development shall be under the control of a lead contractor. Upon appointment, once familiar with the site and having developed a final detailed methodology for construction, the lead contractor shall expand upon the Stage 1 CEMP to produce a detailed Construction Environmental Management Plan (CEMP). The content of the contractor's CEMP shall be agreed with Sligo County Council (SCC) prior to commencement of works.

The contractor's detailed Construction Management Plan shall give greater detail of construction management arrangements and processes, while adhering to the stipulations of this Stage 1 CEMP. It shall also incorporate the following:

- an Operational Health & Safety (OH&S) Management Plan;
- an Environmental Management Plan (including a Waste Management Plan); and
- a Construction Traffic Management Plan (including a Pedestrian Management Plan).

The contractor's Construction Management Plan shall be strictly adhered to throughout the development's construction stage, to ensure the following:

- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- To ensure that all waste materials generated by site activities, which cannot be reused on site, are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved licensed facilities in compliance with the Waste Management Act 1996, the Waste Management (Amendment) Act 2001, and the Protection of the Environment Act 2003.
- To manage and control any environmental impacts (noise, vibration, dust, water) that construction activities may have on the local receiving environment, in particular on receptors and properties adjacent to the construction site.

The Stage 1 CEMP demonstrates how the appointed contractor, and the appointed Project Supervisors (Site Manager, Health & Safety Officer, and Project Ecologist) shall comply with the following relevant legislation and best practice guidelines:

- Integrated Pollution Prevention and Control Directive (1996/61/EC)
- The Waste Framework Directive (Directive 2008/98/EC)
- Environmental Protection Agency Act 1992
- Waste Management Act 1996, the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003
- Waste Management (Collection Permit) (Amendment) (No.2) Regulations 2016
- Waste Management (Permit) Regulations 1998 (SI No. 165 of 1998)

- Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – June 2006
- Local Government Water Pollution Act 1977
- Wildlife Act 1976 (as amended by the Wildlife (Amendment) Acts 2000 to 2012)
- Environmental Protection Agency (EPA) – Draft Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects – April 2021.

2.0 SITE LOCATION AND EXISITNG LAND USE

2.1 Site Location

The site of the proposed development is located to the east of Golf Course Road in Carrowbunnaun, Strandhill, Co. Sligo. The development site is in the operational area of Sligo County Council.

Figure 1 – Location of proposed development site
(*map data and imagery: EPA, NTA, OSM Contributors, Google*)

The location of the proposed development site is shown in **Figure 1** above; the indicative extents of the development site and the area subject to this application are shown in more detail in **Figure 2**.

Figure 2 – Site extents and environs
(*map data and imagery: NTA, OSM Contributors, Google*)

The proposed development is approx. 250m south of Buenos Ayres Drive. Strandhill Golf Course is approx. 150m to the south.

The development site is bound to the north and south by greenfield, to the west by Golf Course Road and to the east by existing residential properties.

2.2 Description of Proposed Development

The construction of 51 no. houses and duplex apartments with associated ancillary car parking spaces, new vehicular estate roads accessed from the Golf Course Road with new connections to existing foul network and surface water network that shall be diverted within the development lands, a new on-site surface water network and attenuation system and associated landscaping works.

Road upgrade works shall ne carried out on the L-7507-0 (Golf Course Road) to satisfy an objective in the current and draft Sligo County Development Plans. These small-scale works include a footpath upgrade, public lighting upgrade and traffic calming measures in the vicinity of Scoil Asicus Naofa which incorporates many of the proposals suggested in the Green School "Safe Routes to Schools" report commissioned by An Taisce. The public watermain and foul sewer shall be upgraded as required by Uisce Eireann (Irish Water).

3.0 LOGISTICS

It is intended for the works to commence in Q3 2024. The proposed development is anticipated to be constructed over 12-18-month period.

The development is proposed to be constructed on the following basis:

- Set up site perimeter hoarding, maintaining existing pedestrian and traffic routes around the site.
- Site clearance.
- Reduced level excavations and foundation construction.
- Site services installations (drainage, power, water).
- Building superstructure and roof construction.
- Finish interior and exterior landscaping.

3.1 Vehicular Access to Site

The subject site shall be accessed via Golf Course Road at its western boundary. It is anticipated that for all the duration of the works all access and egress for deliveries shall be via the Golf Course Road. In addition, it may also be beneficial to install a pedestrian only entrance to the site to segregate vehicular and pedestrian movements to and from site.

Security personnel shall be present at the entrance/exit of the site to ensure all egressing traffic shall do so safely. A wheel wash shall be installed at the exit from the site to prevent any dirt being carried out into the public road. A road sweeper shall be employed as required to keep the public road around the site clean.

3.2 Protection of Public Areas from Construction Activity

Perimeter hoarding shall be provided around the site to provide a barrier against unauthorized access from the public areas. Controlled access

points to the site, in the form of gates or doors, shall be kept locked at any time that these areas are not monitored (e.g., outside working hours).

The hoarding shall be well-maintained, painted, and may contain graphics portraying project information.

3.3 Site Security

The site shall be secured with a hoarding. This shall be branded using the appointed Contractors' logos. Some marketing images or information boards may also be placed on the hoarding. Access to site shall be controlled and monitored outside of site working hours.

All personnel working on site must have a valid Safe Pass card.

3.4 Material Hoisting and Movement Throughout the Site

Hoists and teleporters may be utilised as required during the project to facilitate material movement into the structures and waste movements out. Hoists and teleporters shall be used in order to minimise the use of mobile cranes. With the commencement of the fit-out activities, hoists strategically positioned shall play a key role for successful project delivery.

3.5 Deliveries and Storage Facilities

It is proposed that unloading bays are provided for deliveries to the site within the hoarding perimeter. They should be accessible by forklifts. Appropriately demarcated storage zones shall be used to separate and segregate materials.

All deliveries to site shall be scheduled to ensure their timely arrival and avoid need for storing large quantities of materials on site. Deliveries shall be scheduled outside of background peak traffic hours (within the

permitted site working hours) to avoid disturbance to pedestrian and vehicular traffic in the vicinity of the site.

3.6 Site Accommodation

On-site facilities shall consist of:

- Materials storage area
- Site office & meeting room
- Staff welfare facilities including but not limited to toilets, drying room, canteen.

Electricity shall be provided to the site via the national grid, subject to restrictions and requirements of ESB Networks.

Water supply to the site shall be provided by means of a temporary connection to the public watermain. The location and size of the temporary connection shall be determined through consultation with Uisce Eireann/Irish Water and the contractor and shall be subject to any restrictions and requirements they may impose.

3.7 Site Parking

Enough car parking shall be provided for staff and visitors in and around the subject site. Car sharing among construction personnel shall be encouraged, especially from areas where construction personnel may be clustered in order to reduce the proportion of construction personnel driving to the site and minimise the potential traffic impact on the surrounding road network.

3.8 Site Working Hours

Construction operations and deliveries on site shall generally be between the hours of 07:00 and 19:00, Monday to Friday, and 08:00 to 14:00 on Saturdays. There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times. Any such deliveries shall be made with the advance agreement of Sligo County Council.

However, it may be necessary for some construction operations to be undertaken outside these times, for example, service diversions and connections, concrete finishing and fit-out works.

4.0 GENERAL ENVIRONMENTAL PROTECTION MEASURES

4.1 Surface Water and Wastewater Management

The contractor shall ensure that storm water and wastewater runoff is managed and that there is no off-site environment impact caused by overland storm water flows.

The Contractor's environmental management plan shall be developed in detail to include:

- Silt control on the roads
- Discharge water from dewatering systems
- Connection and flushing of clean water
- Treatment and disposal of wastewater from general clean-up of tools and equipment
- Spills control
- Refuelling of machinery off-site or at a designated bunded refuelling area.

The following documents/guidelines shall be implemented in the contractor's CEMP:

- CIRIA C532: Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (Masters-Shalliams et al.,2010)
- CIRIA C692: Environmental Good Practice on Site, (Audus et al., 2010)
- BPGCS005: Oil Storage Guidelines;
- CIRIA C648: Control of Water Pollution from Linear Construction Projects: Site Guide (Murnane et al., 2006a)

- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI 2016)
- Guidelines for Planning and Authorities – Architectural Heritage Protection
- Guidance on Part IV of the Planning and Development Act 2000. (Part 2, Chapter 7) and ICOMOS Principles.
- Transport Infrastructure Ireland (TII)'s 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan.

4.2 Noise

The Contractor shall implement measures to eliminate where possible and reduce noise levels where not.

All construction activities shall be carried out in compliance with the recommendations of BS 5228, Noise Control on Construction and open site's part 1 and comply with BS 6187 Code of Practice for Demolition.

Potential sources of noise impact include construction activities on site which may involve the use of heavy machinery.

All works on site shall comply with BS 5228 2009 which gives detailed guidance on the control of noise and vibration from construction activities. In general, the contractor shall implement the following protection measures during the proposed infrastructure works:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together.

More specifically the Contractor shall ensure that:

- In accordance with Best Practicable Means, plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose.
- Hoarding and sound barriers are provided and, where required, improved sound reduction methods are used (e.g., enclosures).
- Site equipment is located away from noise sensitive areas.
- Loading and unloading shall occur within designated loading areas as far from noise receptors as possible.
- Equipment shall be fitted with appropriate silencers where possible.
- Regular and effective maintenance by trained personnel is carried out to reduce noise and / or vibration from plant and machinery.
- Hours are limited during which site activities likely to create high levels of noise and vibration are carried out – no noisy activities shall be carried out outside of the permitted construction hours.

A site representative responsible for matters relating to noise and vibration shall be appointed prior to construction on site. This individual shall be responsible for engagement with local residents, advance notice for noisy activities and the maintenance of a complaints register/record.

A noise and vibration monitoring specialist shall be appointed to carry out independent monitoring of noise and vibration during critical periods at sensitive locations.

4.3 Air Quality and Dust Monitoring

Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall monitor dust levels in the vicinity of the site. Records shall be kept of such monitoring for review by the Planning Authority. There are currently no national or European Union standards of air quality with which levels of dust deposition can be

compared. The minimum criteria to be maintained shall be in accordance with the *German Standard Method for determination of dust deposition rate (VDI 2119)*, which is a maximum deposition of 350mg/m^2/day as measured using Bergerhoff type dust deposit gauges.

The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project. Potential sources of dust impact are present due to construction activities on site.

4.4 Dust and Dirt Pollution Control

The Contractor shall ensure that all construction vehicles that exit the site onto the public roads shall not transport dust and dirt to pollute the external roadways. This shall be achieved through a combination of the following measures:

- Ensuring construction vehicles have a clean surface to travel on within the site (i.e., haul road).
- Providing a "Full-Body Self Contained" wheel wash, constructed and located within the site confines.
- Ensuring an appropriate wheel or road washing facility is provided as and when required throughout the construction stage on site. If conditions require it then a manned power washer shall be put in place to assist the wheel wash system.

The use of appropriate water-based dust suppression systems shall greatly reduce the amount of dust and windborne particulates as a result of the construction process. This system shall be closely monitored by site management personnel particularly during extended dry periods and in accordance with site management methods.

4.5 Harmful Materials

Harmful material shall be stored on site for use in connection with the construction works only. These materials shall be stored in a controlled manner. Where on-site facilities are used there shall be a bunded filling area using double bunded steel tank at a minimum.

4.5.1 Potentially Hazardous Wastes to be Produced

Contaminated Soil

It is not envisaged but if any contaminated material is encountered, it shall need to be segregated from clean/inert material, tested and classified as either non-hazardous or hazardous in accordance with the EPA publication entitled 'Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous' using the HazWasteOnline application (or similar approved classification method). The material shall then need to be classified as clean, inert, non-hazardous or hazardous in accordance with the EC Council Decision 2003/33/EC, which establishes the criteria for the acceptance of waste at landfills.

Fuel/Oils

As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points shall be bunded and located in a dedicated, secure area of the site. Provided that these requirements are adhered to and site crew are trained in the appropriate refuelling techniques, it is not expected that there shall be any fuel/oil wastage at the site.

Other known Hazardous Substances

Paints, glues, adhesives and other known hazardous substances shall be stored in designated areas. They shall generally be present in small volumes only and associated waste volumes generated shall be kept

to a minimum. Wastes shall be stored in appropriate receptacles pending collection by an authorised waste contractor. In addition, WEEE (containing Construction and Demolition Waste Management Plan 11 hazardous components), printer toner/cartridges, batteries (Lead, Ni-Cd or Mercury) and/or fluorescent tubes and other mercury containing waste may be generated during construction activities. These wastes (if encountered) shall be stored in appropriate receptacles in designated areas of the site pending collection by an authorised waste contractor.

4.6 Existing Storm Water Network or Water Course

- Over Ground Oil / Diesel Storage – Only approved storage system for oil / diesel within the site shall be permitted, (i.e., all oil / diesel storage to be located within a designated area placed furthest away from existing storm water network or watercourses and contained within constructed bunded areas e.g., placed on 150mm concrete slab with the perimeter constructed with 225mm solid blockwork rendered internally). The bunded area shall accommodate the relevant oil / diesel storage capacity in case of accidental spillage. Any accidental spillages shall be dealt with immediately on site however minor by containment/removal from site.
- Re-fuelling shall be contained within a designated area adjacent to the storage area.
- Concrete Washout – The washing out of concrete trucks on site shall not be permitted as they are a potential source of high alkalinity in watercourses. Consequently, it is a requirement that all concrete truck washout takes place back in the ready-mix depot.
- Disposal of Wastewater off Site – The Site Management Team shall maintain a record of all receipts for the removal of toilet or interceptor waste off site to insure its disposal in a traceable manner.

- Road Sweepers / Cleaning – The cleaning of public roads in and around the subject site shall be undertaken to reduce environmental impacts and care shall be taken to prevent any pollution of watercourses from this activity.
- Maintenance of existing gullies on existing roads used for site access.

5.0 TRAFFIC MANAGEMENT

5.1 Access to Site

Construction traffic shall access the site via Golf course Road. The proposed development site is connected to Burmah Road (R292) to the north via Golf Course Road which provides easy access to the N4 for delivers and extraction to and from the site. The precise designated route shall be determined by the Contractor at a later stage and agreed with Sligo County Council as part of the final Construction Traffic Management Plan (CTMP).

Security personnel shall be present at the entrance/exit of the site to ensure all exiting traffic shall do so safely. A self-contained wheel wash system shall be installed at the exit from the site, to minimise dirt being carried out into the public road, and a road sweeper shall be employed as required to keep public roads around the site clean.

5.2 Site Traffic, Traffic and Pedestrian Management

The anticipated truck movements from and to the site in relation to preliminary programme for the works shall be specified in the construction methodology by the main contractor.

The construction site shall be delineated by means of hoardings and lockable gates with screened fencing at the entry and exit points. The Contractor shall pay particular attention to pedestrian traffic and safety at the entrances.

Pedestrian shall have right of way. If required, alternate pedestrian routes around the site shall be created and clearly signed. Depending on the progress of the works and temporary constraints imposed by the construction methodology, the location of access and exit points may vary.

5.3 Minimising Construction Vehicle Movements

Construction vehicle movements shall be minimised through:

- Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak periods.
- Use of precast/prefabricated materials where possible.
- 'Cut' material generated by the construction works shall be re-used on site where possible, through various accommodation works.
- Adequate storage space on site shall be provided.
- A strategy shall be developed to minimise construction material quantities as much as possible.
- Construction staff vehicle movements shall also be minimised by promoting the use of public transport and or car share use.

5.3.1 Cycling

Cycle parking spaces shall be provided on the site for construction personnel. In addition, lockers shall be provided to allow cyclists to store their cycling clothes.

5.3.2 Car Share

Car sharing among construction personnel shall be encouraged, especially from areas where construction personnel may be clustered. The contractor shall aim to organize shifts in accordance with personnel origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction personnel driving to the site and shall minimise the potential traffic impact on the surrounding road network.

5.3.3 Protection of Public Roads

A Visual Condition Survey (VCS) shall be carried out of all surrounding streets prior to any site works commencing. The Contractor shall liaise with Sligo County Council Roads and Traffic Department to agree any changes to load restrictions and construction access routes for the site. Measures shall be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment.

All entrances and temporary roads shall be continuously maintained for emergency vehicle access.

The following measures shall be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

- A regular programme of site tidying shall be established to ensure a safe and orderly site.
- Scaffolding shall have debris netting attached to prevent materials and equipment being scattered by the wind.
- Food waste shall be strictly controlled on all parts of the site.
- Mud spillages on roads and footpaths outside the site shall be cleaned regularly and shall not be allowed to accumulate.
- Wheel wash facilities shall be provided for vehicles exiting the site.

6.0 PROVISIONS FOR CONSTRUCTION

6.1 Hoarding, Set-up of Site, and Access/Egress Points

The site area shall be enclosed with hoarding details of which are to be agreed with SCC. Hoarding panels shall be maintained and kept clean for the duration of the project.

This shall involve erecting the hoarding around the proposed site perimeter in line with the finished development description.

6.2 Removal of Services

Prior to any works a utility survey shall be carried out to identify existing services. All services on site shall be disconnected, diverted or removed as agreed with service providers.

6.3 Excavation

This development shall involve excavation and removal of material from site for foundations and regrading of the site profile.

It is not envisaged that rock shall be encountered during the excavation works. The appointed contractor shall engage with the project archaeologist prior to the commencement of excavation on site. Excavation shall be carried out under the supervision of the project archaeologist.

The Contractor must prepare a Construction Waste Management Plan in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" (Department of Environment, Heritage and Local Government, 2006) and ensure that all material is disposed of at an appropriately licensed land fill site. The

Contractor must also outline detailed proposals within the Construction and Environmental Management Plan to accommodate construction traffic.

6.4 Site Service Installations

Drainage, power, water shall be installed to serve the proposed development. These services shall be installed in accordance with the following documents:

- Uisce Eireann (Irish Water) Code of Practice for Wastewater
- Uisce Eireann (Irish Water) Code of Practice for Water
- Great Dublin Regional Code of Practice for Drainage Works
- Guidebook for ESB Networks Standards for Electrical Services (Housing Schemes).
- The New Build Handbook by Virgin Media.
- Recommendations for Site Development Works for Housing Areas by the Department of the Environment and Local Government.

6.5 Construction Stage

Following on from site clearance and excavations, foundations shall be laid, and the external buildings envelope and roof constructed. The building frames shall most likely consist of load bearing masonry walls with reinforced concrete cores. Floors shall likely be constructed using hollow core precast slabs overlaid with structural screed but with some localised elements of reinforced concrete slabs are also likely for transfer slabs and larger cantilevers.

Works to the façade shall commence following partial completion of the external envelope. Once the buildings are weather sealed, the internal fit out and completion works shall take place.

6.6 Superstructure

The construction of the superstructure shall involve a coordinated sequencing of activities, and various construction methodologies could be adopted to deliver the Contract. As noted, the construction methodology and therefore the programme of the construction activities shall be dictated by the Contractor. The following outlines a general construction sequence for the superstructure.

- Building Structure
- Envelope/ Cladding
- Mechanical & Electrical fit-out
- General fit-out
- Commissioning

The above is an indicative construction sequence. The final sequence shall be dictated by the Contractor. The Contractor must issue a detailed construction programme outlining the various stages prior to commencement of works.

6.7 Construction Protection Measures

Upon appointment and been familiar with the site and having developed a final detailed methodology for construction, the lead contractor shall generate a detailed Construction Stage CEMP. This CEMP shall include detailed protection measures including method statements, plans etc in regards to site and the wider surrounding area.

The following measures shall be taken to ensure that the site, public roads and surrounding area etc are kept clean and tidy:

- All entrances and temporary roads shall be continuously maintained for emergency vehicle access.

- a regular program of site tidying shall be established to ensure a safe and orderly site;
- scaffolding shall have debris netting attached to prevent materials and equipment being scattered by the wind;
- food waste shall be strictly controlled on all parts of the site;
- mud spillages on roads and footpaths outside the site shall be cleaned regularly and shall not be allowed to accumulate; (in the event of any fugitive solid waste escaping the site, it shall be collected immediately and removed by the contractor)
- wheel wash facilities shall be provided for vehicles exiting the site;
- The Contractor shall implement measures to eliminate and reduce noise levels where possible.
- Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall monitor dust levels in the vicinity of the site in accordance the requirements of the Local Authority.

The appointed Contractor shall be responsible for the monitoring and reporting during the period of the construction works. The Contractor shall coordinate and detail what works have happened on site and any affects (if any) on the surrounding road network and surrounding area etc and detail what remedial or protection measures were put in place etc and modify and re-issue the CEMP if necessary to all relevant parties, as the project progresses. These reports shall be drawn up and issued to the local authority at an agreed timeframe (i.e. weekly, fortnightly, monthly etc). These reports shall have a log to ensure that if any items are raised there is a clear and concise response confirming the respective item has been actioned and is closed out as required.

7.0 CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

The appointed contractor shall develop a Construction Surface Water Management Plan (CSWMP) for inclusion in their detailed Construction Environmental Management Plan. The content of the contractor's CSWMP shall be agreed with Sligo County Council (SCC) prior to commencement of works.

7.1 Proposed Construction Works.

Site Preparation;

- Erection of security fencing/perimeter fencing;
- Setting up a secure site compound including secure wash down area;
- Site clearance including erection of silt fences for site delineation and site boundaries during topsoil stripping and storage/mounding;
- Construction of infrastructure including roads, drainage, and services;
- Construction of 51 number residential units.

The following documents/guidelines shall be implemented in the contractor's CEMP/CSWMP to protect the natural drainage systems of the Carrowbunnaun area during the above referenced construction works:

- CIRIA C532: Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (Masters-Shalliams et al.,2010)
- CIRIA C692: Environmental Good Practice on Site, (Audus et al., 2010)
- BPGCS005: Oil Storage Guidelines;

- CIRIA C648: Control of Water Pollution from Linear Construction Projects: Technical Guidance (Murnane et al.,2006a)
- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI 2016)
- Guidelines for Planning and Authorities – Architectural Heritage Protection
- Guidance on Part IV of the Planning and Development Act 2000. (Part 2, Chapter 7) and ICOMOS Principles.
- Transport Infrastructure Ireland (TII)'s 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan.

7.2 Management of Environmental Impacts

Construction is envisaged to commence in 2024. It is anticipated that the development shall be constructed over a period of 18-24 months. All Works shall be carried out in accordance with the standard documents listed in Section 7.1 above.

7.3 Roles and Responsibilities

The main Contractor shall have overall responsibility for the implementation of the project Construction Surface Water Management Plan (CSWMP) during the construction phase. The appointed person from the Main Contractors team shall be appropriately trained and assigned the authority to instruct all site personnel to comply with the specific provisions of the CSWMP. At the operational level, a designated person from each sub-contractor on the site shall be assigned the direct responsibility to ensure that the operations stated in the CSWMP are performed on an ongoing basis.

Copies of the Construction Surface Water Management Plan shall be made available to all relevant personnel on site. All site personnel and sub-contractors shall be instructed about the objectives of the CSWMP and informed of the responsibilities which fall upon them because of its provisions.

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