Planning and Environmental Consultants

Natura Impact Statement

Proposed Residential Development, Second Sea Road, Sligo

DOCUMENT DETAILS

Client:	**Carnarvon Limited**
Project Title:	**Proposed Residential Development, Second Sea Road, Sligo**
Project Number:	**210912-a**
Document Title:	**Natura Impact Statement**
Document File Name:	**NIS - 2023.08.28 - 210912 - a**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01	Final	28/08/2023	CS	CM

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1. INTRODUCTION

1.1 Background

McCarthy Keville O'Sullivan Ltd. (MKO) has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of a proposed residential development at Second Sea Road, Sligo (Grid Reference: G 66666 36575).

An Appropriate Assessment Screening Report has been prepared and is provided in **Appendix 1.** This Article 6(3) Appropriate Assessment Screening Report has identified the European Sites upon which the proposed development has the potential to result in significant effects and the pathways by which those effects may occur. It has also identified those qualifying interests/special conservation interests that have the potential to be affected by the proposed development.

This report has been prepared in accordance with the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2021) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010) and the Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin 7, Ireland OPR (2021).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.*
4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*
5. *NPWS (2019), The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3, Version 1.0. Unpublished Report,*

1.2 Statement of Authority

A field assessment was undertaken by Claire Stephens (B.Sc. Env, QCIEEM) and Kate O Donnell (B.Sc., QCIEEM) on the 5th May 2022. The site was revisited and further ecological assessments were undertaken on the 8th August, 19th September, 18th of October 2022, 23rd November 2022, 8th December 2022, 23rd January 2023 and 25th February 2023 by Claire Stephens. This report has been prepared by Claire Stephens. Claire is an experienced ecologist with over four year's professional experience. This report has been reviewed by Colin Murphy (B.Sc., M.Sc., QCIEEM) who has over 3 years' experience in ecological consultancy.

2. CONCLUSIONS OF ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING REPORT

The Article 6(3) Appropriate Assessment Screening report, that is provided as **Appendix 1** to this NIS, identified the potential for the proposed development to result in significant effects on the following European Sites:

- Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
- Cummeen Strand SPA

Each of these sites is discussed individually below in terms of the Qualifying Interests/Special Conservation Interests with the potential to be affected and the pathways by which any such effects may occur.

2.1 Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

The individual pathways for effect that were identified in Table 3.1 of the AA Screening Report (**Appendix 1**) and the QIs with the potential to be affected are described below.

The construction and operational phase of the proposed residential development may result in water pollution. A potential pathway for indirect effects on the following aquatic QI's species/habitats was identified in the form of deterioration of water quality and supporting habitats for aquatic fauna:

- 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]
- Petrifying springs with tufa formation (Cratoneurion) [7220]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Phoca vitulina* (Harbour Seal) [1365]

The potential for disturbance was also identified with regard to Harbour Seal.

2.2 Cummeen Strand SPA

The construction and operational phase of the proposed residential development may result in water pollution. A potential pathway for indirect effects on the following aquatic SCI Wetland [A999] habitat was identified in the form of deterioration of water quality and supporting habitats for SCI species.

On a precautionary basis the potential for habitat loss, disturbance and displacement of the listed SCI species was also identified:

- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Oystercatcher (*Haematopus ostralegus*) [A130]
- Redshank (*Tringa totanus*) [A162]

3. DESCRIPTION OF PROPOSED DEVELOPMENT

3.1 Site Location

The proposed development site is located east of Second Sea Road, and south-east of Gibraltar Road, Finisklin, Co. Sligo (Grid Ref: G 66666 36575) and to the north of the Aylesbury Park residential development and a residential development under construction at the time of the site visits. The site lies approximately 2km west of Sligo town. The site is accessed from the existing unused entrance located at the west end of the site.

The proposed development site is approximately 4.35 hectares and is currently a greenfield site with an existing residential development to the south and Gibraltar Point and Cummeen Strand to the north-west.

The site is located adjacent to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cumeen Strand SPA.

The site was previously cleared of all vegetation approximately 10 years ago for a proposed development. The lands currently comprise of wet and rank grasslands, including large amounts of scrub, with poor fen lands on which wet alder willow woodland are developing, swamp and marsh as well as bare and recolonised bare ground. A deep artificial and heavily modified drainage channel abuts the site. The site is bounded by grassland to the north, a hedgerow to be retained to the east, residential developments to the south and an existing coast road to the west with a stone wall, a short hedgerow and Sitka spruce linear group along the south-west.

The location of the proposed development is shown in Figure 3-1. The European Designated sites within the likely zone of impact are shown in Figure 3-2.

3.2 Characteristics of the Proposed Development

3.2.1 Description of the project

The development consists of the following a Large-Scale Residential Development of:

a) A total of 127 No. residential units consisting of
   - 11 No. – Type A– 4 Bed Semi Detached Houses
   - 4 No. – Type A1 – 5 Bed Semi Detached Houses
   - 60 No. – Type B/B1 – 3 Bed Semi Detached/Terraced/Detached Houses
   - 28 No. – Type C – 2 Bed Apartments
   - 10 No. – Type D – 2 Bed Semi Detached/Terraced Dormer Houses
   - 4 No. – Type E – 2 Bed Semi Detached Bungalow Houses
   - 10 No. – Type F/F1 – 4 Bed Detached Houses

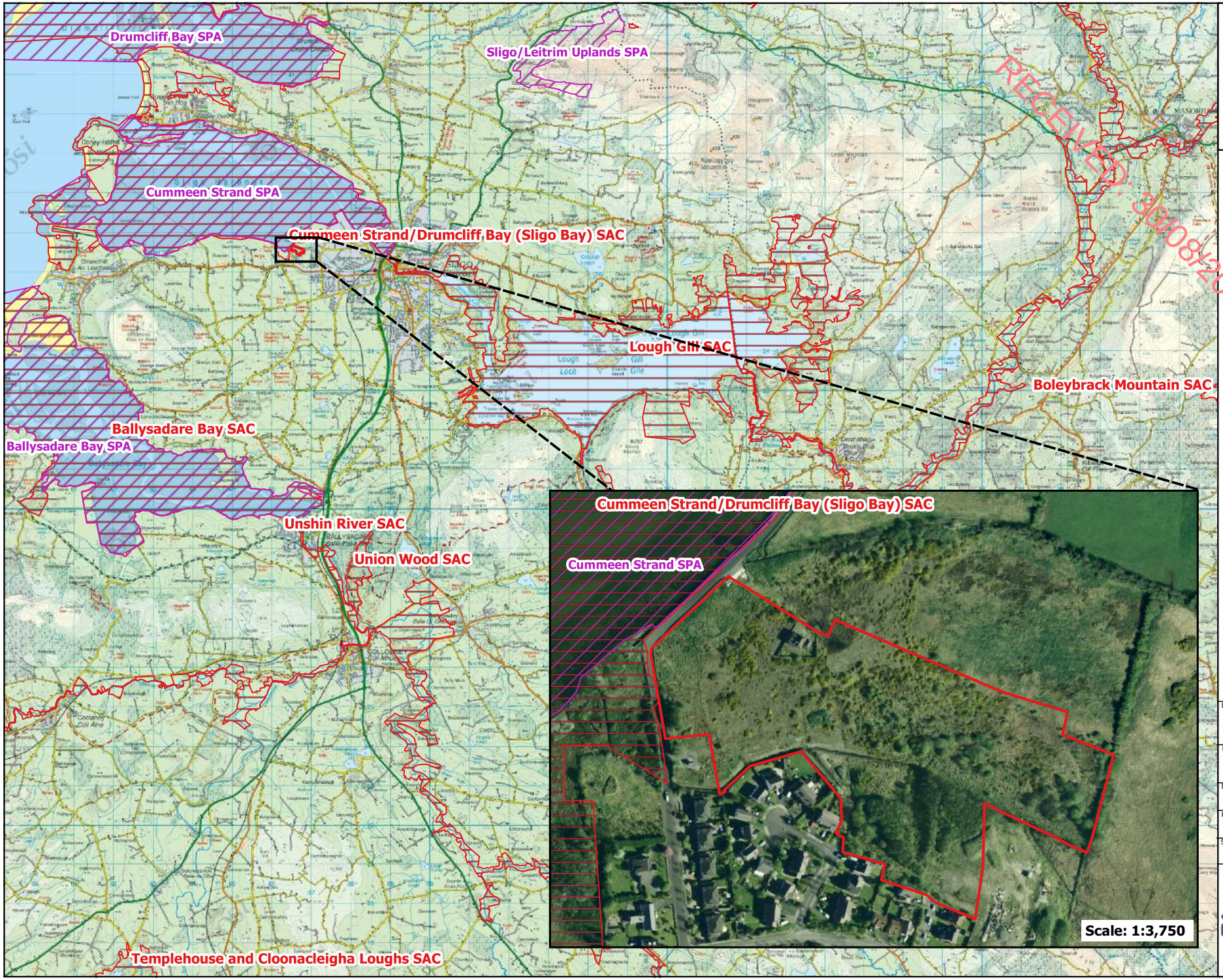
b) Demolition of 1 no. unfinished vacant house and garage.

c) Proposed Creche with associated landscaping and surface car parking,

d) On site waste water pumping station

e) All landscaping, boundary treatments, entrance improvements, public lighting, all associated site works and service connections.

The proposed site layout plan is shown in Figure 3-3.



RECEIVED: 30/08/2023

Map Legend

- Site Boundary
- Special Area of Conservation
- Special Protection Area

N

Drawing Title: Site Location - Knappagh More, Co. Sligo

Project Title: Proposed residential development at Second Sea Rd., Co. Sligo

Drawn By	Checked By
Claire Stephens	Claire Stephens
Project No.	Drawing No.
210912 - a	Figure 3-1
Scale	Date
1:125,000	25-10-2022

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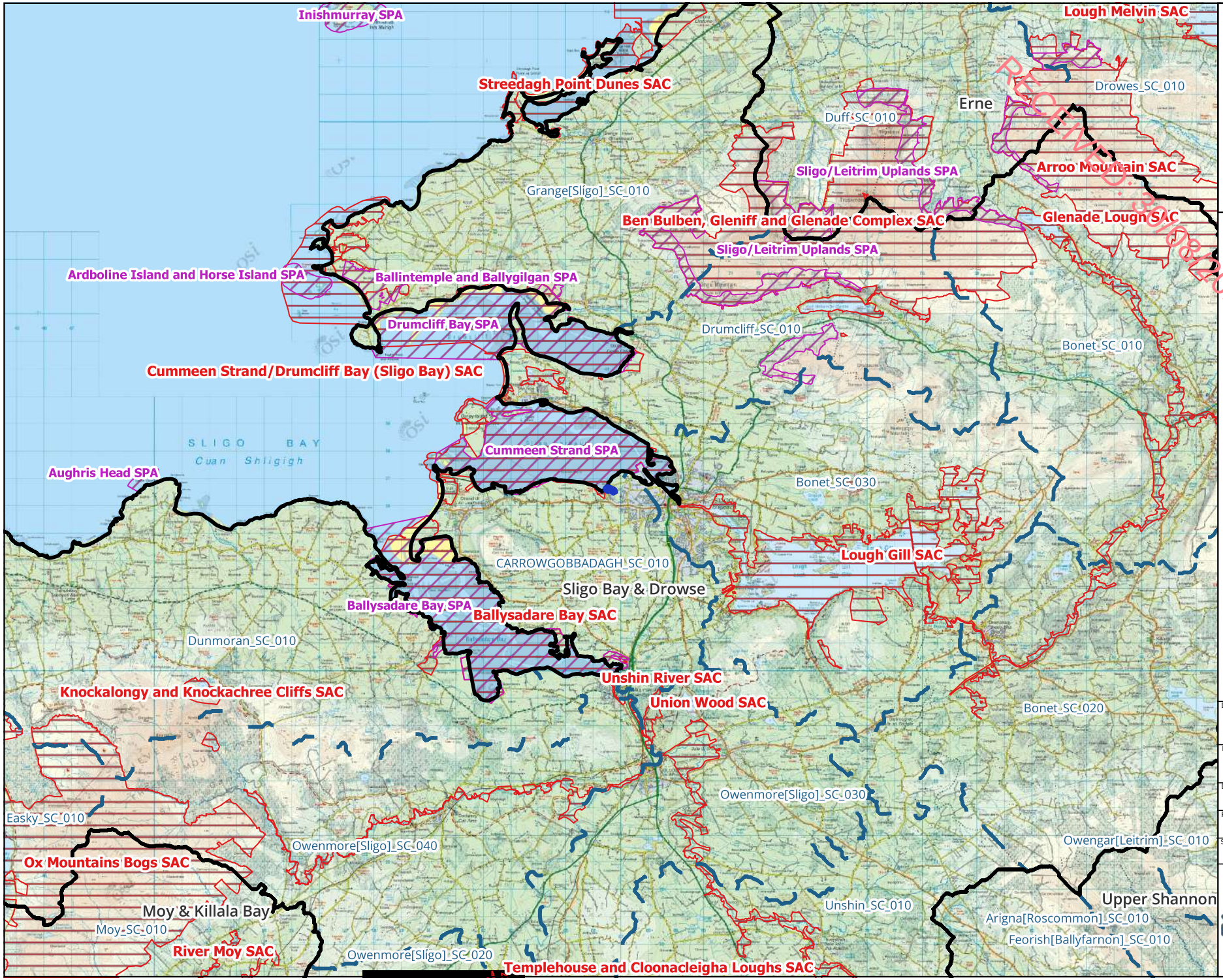

RECEIVED 30/08/2023

Map Legend

- Site Location
- Special Area of Conservation
- Special Protection Area
- WFD Catchments
- WFD Sub-catchments

N

Drawing Title: European Designated sites within the Likely Zone of Impact

Project Title: Proposed residential development at Second Sea Rd., Co. Sligo

Drawn By	Checked By
Claire Stephens	Claire Stephens
Project No.	Drawing No.
210912 - a	Figure 3-2
Scale	Date
1:180,000	25-06-2023

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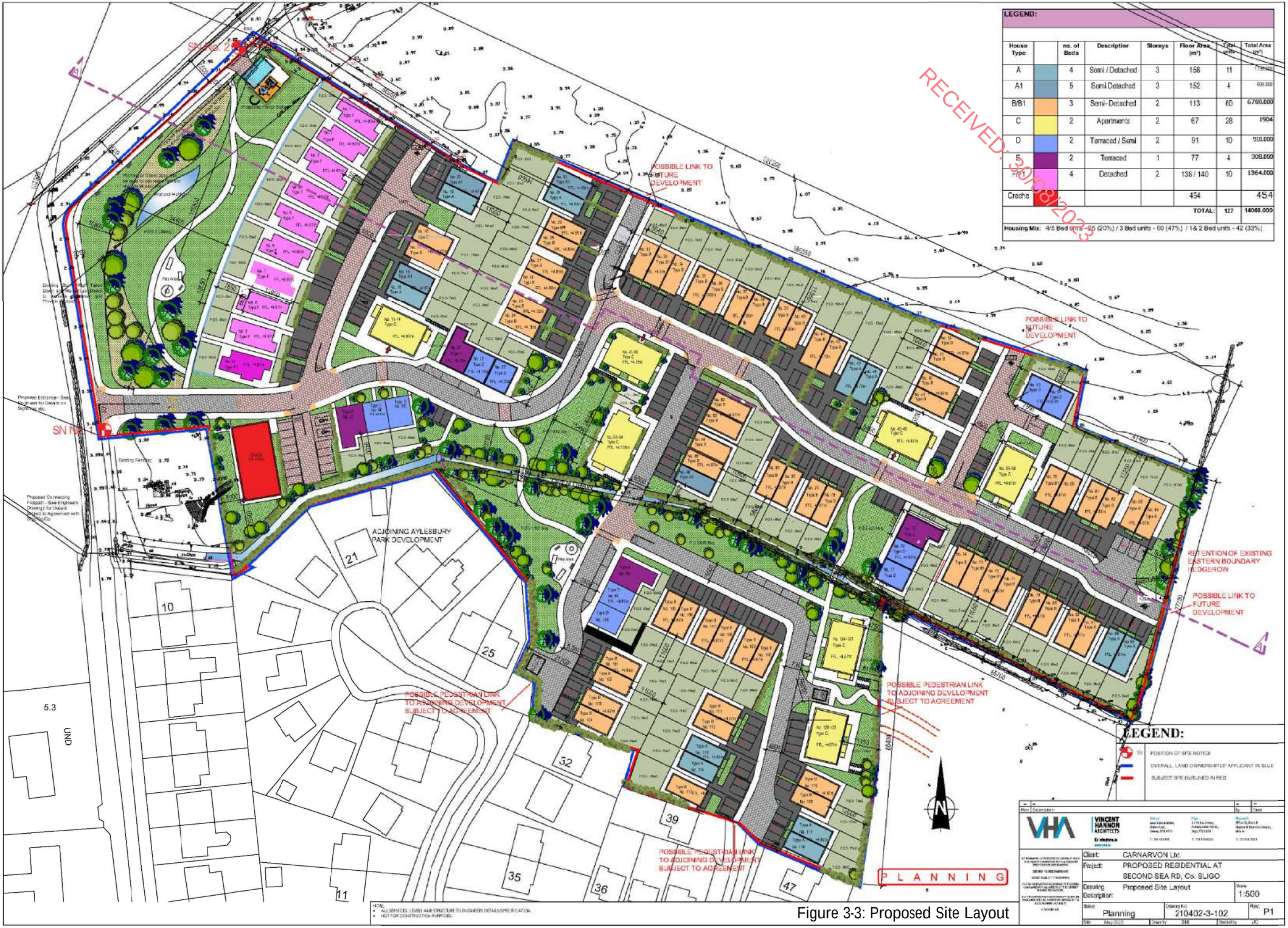


Figure 3-3: Proposed Site Layout

3.2.2 Construction Environmental Resource &Waste Management Plan

A Construction Environmental Resource &Waste Management Plan (CERWMP) has been prepared for the proposed development and details the demolition, waste management, mitigation measures and security for the proposed development, and is included as part of this planning application. As outlined within the CEMWMP the site is primarily a green field site with topsoil and subsoil being the two main site assets. There is also one building and approximately 30m of existing footpaths on the site. The material from the footpaths and inert material from the building can be reused onsite for forming of the site compound.

Any topsoil and scraw on the site will be stripped and stockpiled onsite for use for landscaping purposes onsite, for reuse for lawns etc. This material will be stored to the east of the site compound, so it is at the furthest point from any watercourse or drainage ditch. Some sections of the site have limited topsoil so the overall quantum of topsoil available onsite is representative of the amount of topsoil that will be required for landscaping on the scheme.

The site has been designed to minimise the amount of cut and fill as is reasonably practical in line with other design considerations including finished floor levels and flood risk. The average finished floor level of 4.5m is balanced in line with the average existing ground levels across the site. This utilises the existing topography to design out unnecessary waste. Where possible cut material will be used to fill rear gardens and public open spaces to vastly reduce the amount of imported material required.

The design of the scheme also intends to eliminate the need for any temporary roads and any roads to be construction throughout the site will follow the line of the site roads. The site compound location correlates to the phasing plan and the intention is that it will remain in the same location throughout the majority of the works.

Green procurement will become a key consideration in pricing and sourcing materials and suppliers on the project.

3.2.2.1 Proposed Construction Schedule & Sequence

As outlined within the CERWMP accompanying this planning application, the development is currently programmed to take 24 months to complete the construction works. This will be done on a phased basis. The start date will depend on the grant of planning permission, pre-commencement conditions and procurement. This programme takes due cognisance of the requirements of the likely planning conditions imposed. Mitigation measures in relation to the construction process are dealt with in this plan accordingly. Prior to any construction work commencing, environmental control measures will be prepared as outlined in this plan. A detailed programme and scope of works will be compiled and implemented in due course.

It is intended that the work will be undertaken in the following stages:

- Site set up and establishment.
- Marking out of site services on the ground.
- Set up environmental control measures.
- Site clearance and demolition of the existing building on the site.
- Construction of the site pumping station.
- Marking out of house locations.
- Digging foundations and groundworks.
- Importing stone and pouring foundations.
- Blockwork.
- Roofing.
- Windows and doors.

- First fix electrical, plumbing and carpentry.
- Internal and external plastering.
- Second fix electrical, plumbing and carpentry.
- Construction of culvert over drainage ditch.
- Finishing external groundworks and landscaping.
- Commissioning and decorating.

The PSCS's proposed sequence of works will take due cognisance of the requirements of any planning conditions and the PSCS's contractual obligations. Environmental control measures will be implemented and maintained during construction works. The works will follow a sequential sequence starting at Phase 1 and working through to Phase 5. The starting point will be confirmed upon review and appointment of the PSCS.

3.2.2.1.1 Resources Requirements

The resources required on the project will be similar to a housing construction project of this size and scale. In addition to the site compound plant, it is envisaged that the following plant will be required onsite:

- 1 No. 3, 8, 12 and 20-ton excavator and attachments
- 2 No. 6 and 9-ton dumpers
- 2 No. 14m teleporters
- 1 No. wheel wash power washer
- 1 No. site van/jeep
- 3 No. cement mixers
- 2 No. 6inch water pumps
- 1 No. 5ton roller
- 2 No. whacker plates
- 20-ton tipper lorries (As required for deliveries & excavation)

During construction, an estimated 2288 tons of waste material will be generated. This includes spoil, concrete, timber, blockwork waste removal and packaging. It is proposed to utilise local waste facilities as far as reasonably practical.

There is an existing drainage ditch located on the site along the southern boundary of the site. This drainage channel has been heavily modified and cleared by other landowners on numerous occasions and therefore is of reduced environmental significance. The ditch is not present on any EPA drainage maps and is only of local significance. The drain passes under the public roadway via an existing culvert.

The updated design takes account of the IFI request to maintain the ditch in its original form, as far as is reasonably practical while maintaining existing SuDS measures on the site. The spur of the drain (Splits at the location of unit 95) that runs to the rear of the existing Aylesbury development, along the south-western boundary, is to be retained. This will be retained during the construction phase and appropriate silt fencing installed. A box culvert will be installed to form the drainage ditch road crossing adjacent to unit 86.

It is proposed that the remaining open section will be left with its natural vegetation. This will prevent erosion of the bank, increase the capacity of the ditch and prevent flooding on the site, up and downstream of the site. This will also bring about biodiversity gain. The edges of the drainage ditch will be constructed as per the architects and engineer's boundary details.

The Method Statement for the Culvert over the Drainage Ditch is detailed in Section 6 of the CERWMP which will be reviewed by the project ecologist and Inland Fisheries Ireland prior to works being carried out under the supervision by a suitably qualified ecologist.

3.2.3 Site Services

3.2.4 Wastewater and Surface Water

Jennings O'Donovan & Partners Limited, Consulting Engineers prepared a Civils Design Report (August 2023) for the proposed development site, which accompanies this application. The Civils Design Report details the proposal for the foul and storm water associated with the proposed site.

Wastewater

The wastewater from the entire proposed development will be collected throughout the site in the foul sewer network and will then discharge to a newly proposed precast or reinforced concrete pumping station located within the northwestern corner of the site as shown on the Preliminary Foul & Storm Site Layout Plan – *Drawing No, 6476-JOD-XX-ZZ-DR-C-001* and also shown as Figure 3-3. The pumping station will have a pump sump and overflow tank with a storage capacity of 175m^3 will work independently from the existing neighbouring pumping station to the south-west of the site boundary and conforms with current Irish Water standards. Providing additional storage for the development future proofs any potential extensions of dwellings by residents and provides an additional factor of safety.

As shown within Figure 3-3 from the pumping station, it is intended to pump the sewage through a 620m long proposed rising main along the Second Sea Road and discharge to an existing gravity sewer located approximately 0.3km south of the site along the R292 Strandhill Rd.

The Civils Design Report which accompanies this application outlines that:

> *'The pumping station has been designed to cater for 24-hour storage of the effluent produced by the proposed development.*

The proposed storage tank was sized at 175m^3 or 175,000 litres of storage which would allow 1m^3 volume of storage per unit with an additional 47m^3, for the total number of units i.e., 128 including the creche, all proposed gradients lie within the requirements as set out in the table in section 3.6 – Hydraulic design of Gravity Sewers of the Irish Water Wastewater Infrastructure Code of Practice

The sewer network has been designed to cater for 6 times the dry weather flow rate.

Storm Water System

The stormwater drainage strategy for the proposed development utilises Sustainable Drainage Systems (SuDS) features to intercept and convey all pluvial surface water runoff. The design of the system aims to attenuate runoff and encourage infiltration.

As detailed within the Civils Design Report

Four storm drainage networks all of which will ultimately discharge into the existing drain have been incorporated into the proposed development. Four attenuation tanks have been incorporated into the storm sewer design (one designated attenuation tank for each network). Flow controls have also been incorporated into each storm network to limit discharge into the drain at or below greenfield runoff rates for numerous storm events.

These four systems as outlined within the Civils Design Report which accompanies this application outlines that these drainage network systems:

> *'have been designed to cater for the developments hardstanding areas (including roofs, footways, roadways and car parking). Of the 4 proposed storm networks, 3 will solely serve the*

development and the other will serve as a flood relief system for the surface water and occasional flooding which occurs on the Gibraltar Road. This area is not currently served by an adequately designed surface water drainage and attenuation system.'

The proposed storm water drainage system has been designed to cater for all surface water runoff from all hard surfaces within the proposed development including roadways, buildings, roofs, parking areas etc.

'Storm water run-off from the internal roads, parking bays and footpaths will be collected by precast concrete gullies including lockable cast iron grating and frames connected to a piped system. Surface water run-off from roof areas will be collected via downpipe connections to the main network.'

The existing open drain along the south-west of the-site will be retained. This drain conveys flow downstream to a bridge culvert and then to the sea. It is proposed to install a Tideflex duckbill non-return valve to the downstream side of the bridge culvert. A stoned land drain will be provided on both sides of the boundary wall (this development and existing residential dwellings) in order to take any natural surface water away from the area. This will be piped into the adjacent land drain along with any existing outfalls from these dwellings. This will also be carried out along the boundary of the creche as required to alleviate the same concern in this area north of the existing open drainage channel.

The details on the type of duckbill valve proposed to be installed on the downstream end of the bridge culvert is included in the Civil Works report which accompanies this planning application.

'This non-return valve will simultaneously prevent backflow of the proposed storm drainage network from high tides and coastal flooding while also allowing the network to continue discharging flow.'

A class 1 petrol/oil interceptor is required to be installed before the connection of all proposed storm networks and their individual outlets to the existing open drain to remove hydrocarbon pollutants. The 4 no. petrol interceptors specified for each storm network serving the development are 2 no. Klargester Bypass Separator NSBE 010 and 2 no. Klargester Bypass Separator NSBE 015 (or similar approved) as shown on the Preliminary Foul & Storm Site Layout Plan – *Drawing No, 6476-JOD-XX-ZZ-DR-C-001* and also shown as Figure 3-3.

3.2.5 Watermain

The water main has been designed in accordance with the Code of Practice for Water Infrastructure. A 100mm PE connection is proposed to be made to the existing water main dead end located to the front entrance of the site on the Second Sea Road. A 25mm PE connection will be made to each dwelling/unit.

The proposed watermain layout for the site is shown in Proposed Watermain Layout Plan *Drawing No, 6476-JOD-XX-ZZ-DR-C-005* and also shown as Figure 3-4.

3.2.6 Flood Risk Assessment (FRA)

A Flood Risk Assessment – Stage III Report (August 2023) was carried out by RPS Group Limited for the proposed development which accompanies this planning application.

This report indicates that the following mitigations will prevent flood risk including the provision of a non-return valve on the existing culvert at the Second Sea Rd to prevent tide waters backwatering the site. Having the finished floor levels designed to levels above the 0.5%AEP MRFS ICWWS levels and the FRA indicates that surface water on the Second Sea Road, caused by over topping, will be alleviated along the western and northern public roadside boundary by the gullies specified. Any water

flowing in a north direction down the Second Sea Road will flow into the existing gullies along the road. The report also states that the introduction of the non-return valve on the existing culvert will not cause an increase in flood risk elsewhere given its close proximity to Garavoge Estuary.

> *'The finished floor levels of buildings will be maintained to a minimum level of 300mm above the design flood level. The minimum proposed finished floor level at the site is 4.67mOD and satisfies the recommended finished floor level of 4.51mOD.'*

As shown on the landscape drawings prepared by The Big Space Limited (TBS) and outlined through the Engineering reports and the Sustainable Drainage Systems (SuDS) measures proposed for the site,

> *'A green open space has been designed to the west of the site which also acts as an additional buffer from coastal flooding. The site has been adequately designed to cater for emergency services. The site entrance has been located to the furthest southwest point on the site which is as far as physically possible away from the sea front."*

The FRA also explains that the proposed development will not increase flood risk elsewhere as a result of its construction or operation as the project has been designed to best practice guidance with respect to the objectives of the Sligo Development Plan (2017- 2023), and recommends that all proposals as per Jennings O'Donovan Engineers design proposals and layouts including for attenuation, appropriately sized road gullies and the installation of a duckbill valve at the outlet of the drainage channel be incorporated. As noted within the FRA, Rainwater & SuDS Management Plan prepared for the site (August 2023) and Landscaping plan further described below there is extensive use of soft landscaping throughout the site to reduce stormwater runoff and help the rain to percolate naturally into the water table and the drainage channel on the site will be utilised for surface water discharge after attenuation which ultimately greatly slows the rate of water runoff following heavy rainfall.

The FRA concludes that the justification test indicates:

> *'that the development at Second Sea Rd is acceptable as the land zoning in the county development plan suits this type of development, any potential flood risk has been sufficiently managed, and the development is compatible with the achievement of wider planning objectives.'*

3.2.7 Landscape Masterplan

All trees and scrub located within the main development area are required to be removed to facilitate the proposed development however the eastern boundary hedgerow will be retained. The Landscape Master plan is included as Figure 3-5.

A Landscape Masterplan *Drawing No. 300* and Landscape Design Strategy (August 2023) has been prepared by TBS, Landscape Architects for the proposed residential development at Second Sea Road, Co. Sligo and accompanies this planning application. The proposed plan has been designated to retain the eastern dense hedgerow boundary as a connecting linear feature to the wider environment of habitats including adjoining hedgerows and scrub north and south of the eastern boundary. The proposal includes for the planting of native hedgerows to include hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), blackthorn (*Prunus spinosa*) and field maple (*Acer campestre*) along the site boundary where space allows, as well as ornamental hedging to front gardens including beech (*Fagus sylvatica*) and Portuguese laurel (*Prunus Lusitania*).

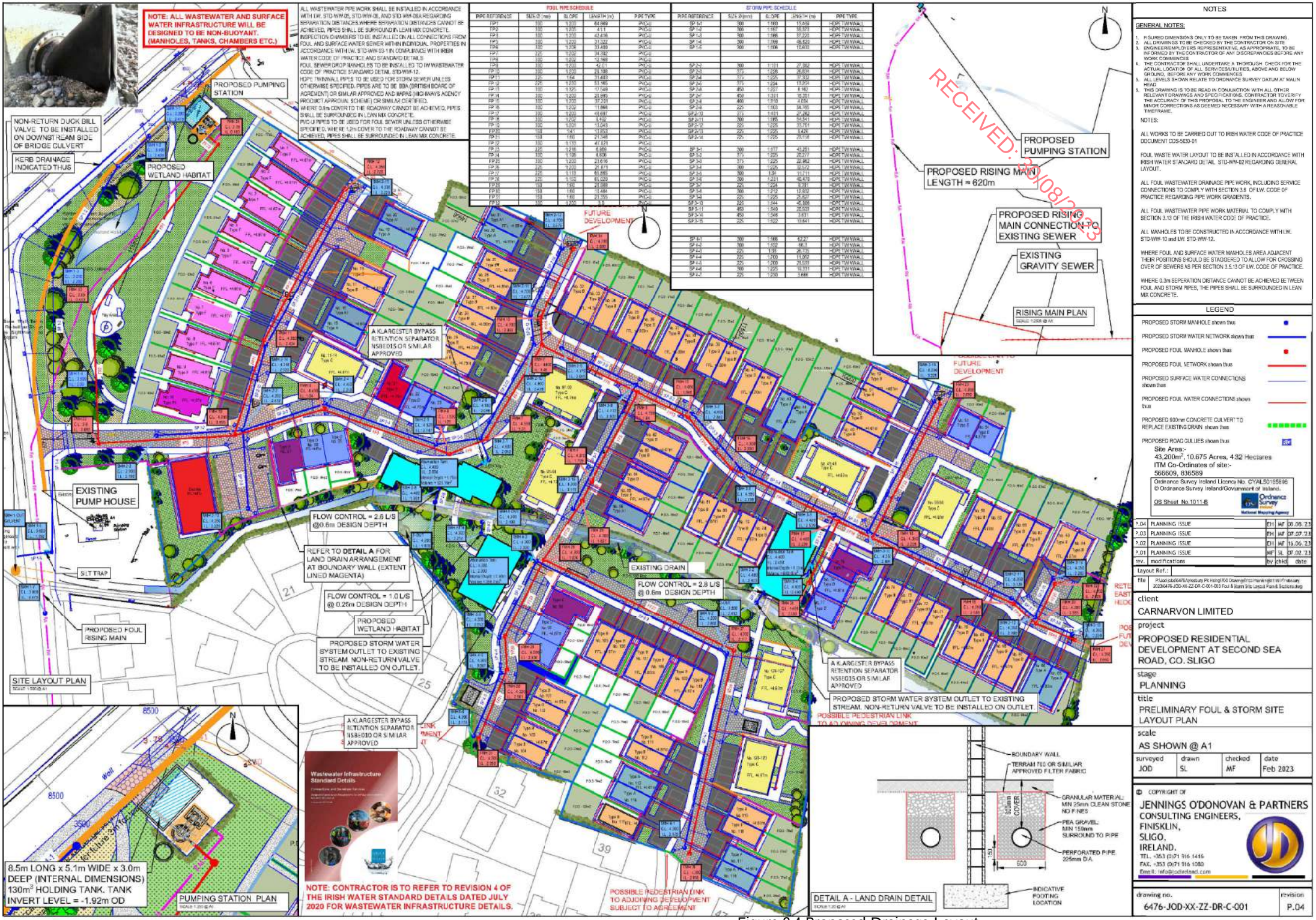
The planting of native hedgerows along the site boundaries where possible and along the drainage channel will increase the connectivity for faunal species, such as bats and birds to the wider environment.

There will be no net loss of treelines and hedgerows or fragmentation of habitats for fauna including bat, bird and invertebrate populations as a result of the proposed development.

The plan also proposes the inclusion of Amenity Open Spaces which will maximise visual amenity while facilitating pedestrian safe access through the site. These areas and others throughout the site incorporate a mix of biodiversity/pollinator friendly tree, shrub species and wildflower planting areas in particular along the western portion of the site. The proposed Landscape Masterplan and associated Landscape Design Strategy as prepared by TBS (August 2023). Additional details can be found within Drawing No. 301 - '*Detail Area 1: Plan & Sections'* and Drawing No. 302 *'Detail Area 2: Plan & Sections'* and the Landscape Design Strategy as prepared by TBS.

The existing drainage ditch on the site will be retained in its natural state as far as is reasonably practical. Enhanced planting of native species will add biodiversity and naturally filter surface water which naturally flows into the drain from open green spaces. This water will filter down to ground and naturally discharge at a gradual rate. A constructed wetland habitat is proposed within the western section of the site which will provide additional habitat for amphibians including common frog and smooth newt which were recorded within pooled water within the development site boundary and along the drainage channel.

In addition to planting operations the installation of bird and bat boxes are proposed as part of the landscaping plan, the numbers of which to be determined by a suitably qualified ecologist. It is proposed that a minimum of 5 bird boxes and 3 bat boxes are erected on suitable retained trees within the Site. Swift bricks will also be incorporated into the proposed development the installation of which will be outlined by the supervising suitably qualified ecologist.



ALL WASTEWATER PIPE WORK SHALL BE INSTALLED IN ACCORDANCE WITH LW. STD-WW-05, STD-WW-06, AND STD-WW-09A REGARDING SEPARATION DISTANCES. WHERE SEPARATION DISTANCES CANNOT BE ACHIEVED, PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.
INSPECTION CHAMBERS TO BE INSTALLED ON ALL CONNECTIONS FROM FOUL AND SURFACE WATER SEWER WITHIN INDIVIDUAL PROPERTIES IN ACCORDANCE WITH LW. STD-WW-03-1 IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS.
FOUL SEWER DROP MANHOLES TO BE INSTALLED TO LW WASTEWATER CODE OF PRACTICE STANDARD DETAIL STD-WW-12.
HDPE TWINWALL PIPES TO BE USED FOR STORM SEWER UNLESS OTHERWISE SPECIFIED. PIPES ARE TO BE BBA (BRITISH BOARD OF AGREMENT) OR SIMILAR APPROVED AND IMPAS (HIGHWAYS AGENCY PRODUCT APPROVAL SCHEME) OR SIMILAR CERTIFIED.
WHERE 0.6m COVER TO THE ROADWAY CANNOT BE ACHIEVED, PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.
PVC-U PIPES TO BE USED FOR FOUL SEWER UNLESS OTHERWISE SPECIFIED. WHERE 1.2m COVER TO THE ROADWAY CANNOT BE ACHIEVED, PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.

FOUL PIPE SCHEDULE

PIPE REFERENCE	SIZE Ø (mm)	SLOPE	LENGTH (m)	PIPE TYPE
FP1	150	1.200	64.999	PVC-U
FP2	150	1.200	41.1	PVC-U
FP3	150	1.200	42.496	PVC-U
FP4	150	1.200	31.322	PVC-U
FP5	150	1.200	33.499	PVC-U
FP7	225	1.200	34.852	PVC-U
FP8	150	1.200	12.198	PVC-U
FP9	150	1.200	40.01	PVC-U
FP10	150	1.200	33.108	PVC-U
FP11	225	1.94	31.403	PVC-U
FP12	225	1.200	53.965	PVC-U
FP13	150	1.200	57.649	PVC-U
FP14	150	1.200	23.699	PVC-U
FP15	150	1.200	57.201	PVC-U
FP16	150	1.200	11.668	PVC-U
FP17	150	1.200	44.697	PVC-U
FP18	150	1.200	9.492	PVC-U
FP19	150	1.201	13.043	PVC-U
FP20	150	1.94	31.853	PVC-U
FP21	150	1.60	21.348	PVC-U
FP22	150	0.133	47.121	PVC-U
FP23	225	1.216	6.956	PVC-U
FP24	150	1.196	9.806	PVC-U
FP25	150	1.200	23.619	PVC-U
FP26	225	1.200	61.671	PVC-U
FP27	225	1.111	61.886	PVC-U
FP28	225	1.150	65.020	PVC-U
FP30	150	1.60	21.688	PVC-U
FP31	150	1.60	19.484	PVC-U
FP32	150	1.60	21.355	PVC-U
FP33	150	1.200	3.5	PVC-U

SURFACE WATER PIPE SCHEDULE

PIPE REFERENCE	SIZE Ø (mm)	SLOPE	LENGTH (m)	PIPE TYPE
SP1-1	300	1.166	13.029	HDPE TWINWALL
SP1-2	300	1.167	58.371	HDPE TWINWALL
SP1-3	300	1.166	57.220	HDPE TWINWALL
SP1-4	300	1.166	68.529	HDPE TWINWALL
SP1-5	300	1.166	10.631	HDPE TWINWALL
SP2-2	300	1.131	27.382	HDPE TWINWALL
SP2-3	375	1.226	26.834	HDPE TWINWALL
SP2-4	375	1.225	57.312	HDPE TWINWALL
SP2-5	375	1.224	13.204	HDPE TWINWALL
SP2-6	450	1.227	7.160	HDPE TWINWALL
SP2-7	450	1.311	16.751	HDPE TWINWALL
SP2-8	450	1.310	4.854	HDPE TWINWALL
SP2-9	225	1.160	34.760	HDPE TWINWALL
SP2-10	225	1.431	21.262	HDPE TWINWALL
SP2-11	300	1.185	58.541	HDPE TWINWALL
SP2-12	225	1.225	33.751	HDPE TWINWALL
SP2-13	225	1.225	1.425	HDPE TWINWALL
SP2-14	225	1.225	25.118	HDPE TWINWALL
SP3-1	300	1.117	43.251	HDPE TWINWALL
SP3-2	375	1.225	20.277	HDPE TWINWALL
SP3-3	375	1.225	22.862	HDPE TWINWALL
SP3-4	300	1.226	32.572	HDPE TWINWALL
SP3-5	300	1.34	31.711	HDPE TWINWALL
SP3-6	300	1.231	40.478	HDPE TWINWALL
SP3-7	225	1.224	6.281	HDPE TWINWALL
SP3-8	300	1.212	12.832	HDPE TWINWALL
SP3-9	225	1.225	25.827	HDPE TWINWALL
SP3-10	225	1.144	46.306	HDPE TWINWALL
SP3-11	450	1.149	20.523	HDPE TWINWALL
SP3-14	450	1.346	3.631	HDPE TWINWALL
SP3-15	225	1.122	10.641	HDPE TWINWALL
SP4-1	300	1.166	42.27	HDPE TWINWALL
SP4-2	300	1.122	66.1	HDPE TWINWALL
SP4-3	225	1.138	26.103	HDPE TWINWALL
SP4-4	225	1.200	11.992	HDPE TWINWALL
SP4-5	225	1.200	21.559	HDPE TWINWALL
SP4-6	300	1.225	19.331	HDPE TWINWALL
SP4-7	225	1.216	1.668	HDPE TWINWALL

NOTES

GENERAL NOTES:

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE.
3. ENGINEER/EMPLOYERS REPRESENTATIVE, AS APPROPRIATE, TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES.
4. THE CONTRACTOR SHALL UNDERTAKE A THOROUGH CHECK FOR THE ACTUAL LOCATION OF ALL SERVICES/UTILITIES, ABOVE AND BELOW GROUND, BEFORE ANY WORK COMMENCES.
5. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD.
6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO VERIFY THE ACCURACY OF THIS PROPOSAL TO THE ENGINEER AND ALLOW FOR MINOR CORRECTIONS AS DEEMED NECESSARY WITH A REASONABLE TIMEFRAME.

NOTES:

ALL WORKS TO BE CARRIED OUT TO IRISH WATER CODE OF PRACTICE DOCUMENT CDS-5030-01

FOUL WASTE WATER LAYOUT TO BE INSTALLED IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-02 REGARDING GENERAL LAYOUT.

ALL FOUL WASTEWATER DRAINAGE PIPE WORK, INCLUDING SERVICE CONNECTIONS TO COMPLY WITH SECTION 3.8 OF LW. CODE OF PRACTICE REGARDING PIPE WORK GRADIENTS.

ALL FOUL WASTEWATER PIPE WORK MATERIAL TO COMPLY WITH SECTION 3.13 OF THE IRISH WATER CODE OF PRACTICE.

ALL MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH LW. STD-WW-10 and LW. STD-WW-12.

WHERE FOUL AND SURFACE WATER MANHOLES AREA ADJACENT THEIR POSITIONS SHOULD BE STAGGERED TO ALLOW FOR CROSSING OVER OF SEWERS AS PER SECTION 3.5.13 OF LW. CODE OF PRACTICE.

WHERE 0.3m SEPERATION DISTANCE CANNOT BE ACHIEVED BETWEEN FOUL AND STORM PIPES, THE PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.

LEGEND

- PROPOSED STORM MANHOLE shown thus
- PROPOSED STORM WATER NETWORK shown thus
- PROPOSED FOUL MANHOLE shown thus
- PROPOSED FOUL NETWORK shown thus
- PROPOSED SURFACE WATER CONNECTIONS shown thus
- PROPOSED FOUL WATER CONNECTIONS shown thus
- PROPOSED 900mm CONCRETE CULVERT TO REPLACE EXISTING DRAIN shown thus
- PROPOSED ROAD GULLIES shown thus

Site Area:-
43,200m², 10.675 Acres, 4.32 Hectares
ITM Co-Ordinates of site:-
566609, 836589

OS Sheet No.1011-B

rev.	modifications	by	chkd	date
P.04	PLANNING ISSUE	EH	MF	08.08.23
P.03	PLANNING ISSUE	EH	MF	07.07.23
P.02	PLANNING ISSUE	EH	MF	16.06.23
P.01	PLANNING ISSUE	MF	SL	07.02.23

Layout Ref.: :

file P:\Jod\job\6476\Aylesbury PR Hsng\700 Drawings\703 Planning\1 WIP\February 2023\6476-JOD-XX-ZZ-DR-C-001-003 Foul & Storm Site Layout Plans & Sections.dwg

client
CARNARVON LIMITED

project
PROPOSED RESIDENTIAL DEVELOPMENT AT SECOND SEA ROAD, CO. SLIGO

stage
PLANNING

title
PRELIMINARY FOUL & STORM SITE LAYOUT PLAN

scale
AS SHOWN @ A1

surveyed	drawn	checked	date
JOD	SL	MF	Feb 2023

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drawing no. 6476-JOD-XX-ZZ-DR-C-001

revision P.04

Figure 3-4 Proposed Drainage Layout

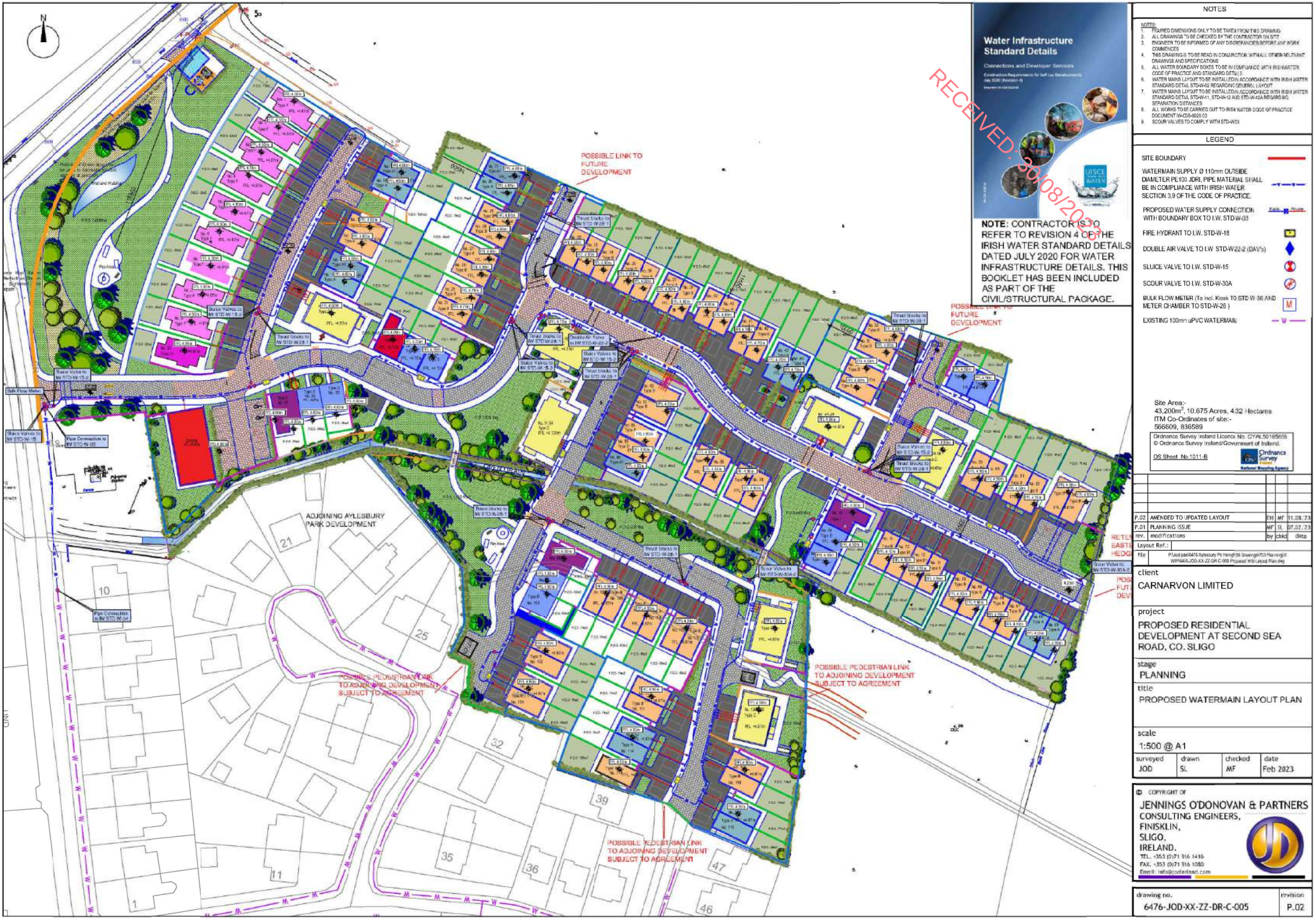

Figure 3-5 Proposed Watermain Layout

Figure 3-6 Proposed Landscape Masterplan

4. CHARACTERISTICS OF THE RECEIVING ENVIRONMENT

The ecological surveys that were undertaken to inform this NIS are fully described in this section. A general description of the ecology of the site of the proposed development is provided in the AA Screening Report in **Appendix 1.** The specific surveys that were undertaken to assess the potential effects on the identified European Sites are described below.

4.1 Ecological Survey Methodologies

4.1.1 Desk study

The desk study undertaken for this assessment included a thorough review of the available ecological data associated with the study area of the proposed development. Sources of data included the following:

- Review of NPWS Conservation Objectives supporting documents, site synopsis, standard data forms and supporting documents for EU Designated Sites,
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), Environmental Protection Agency (EPA)
- Review of the publicly available National Biodiversity Data Centre (NBDC) web-mapper,
- Review of NPWS Article 17 reporting, metadata and GIS database,
- Review of NPWS Article 12 reporting.

4.1.2 Ecological Multidisciplinary Walkover Survey

A multi-disciplinary ecological walkover survey was undertaken in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009). This survey provided baseline data on the ecology of the study area and assessed whether further detailed habitat or species-specific ecological surveys were required. The multi-disciplinary ecological walkover survey comprehensively covered the entire study area.

Habitats were classified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011). Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010), while mosses and liverworts nomenclature follows 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010).

The walkover survey was designed to detect the presence, or suitable habitat for a range of protected faunal species that may occur in the vicinity of the proposed development. During the multidisciplinary survey, a search for Invasive Alien Species (IAS), with a focus on those listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011), was also conducted.

A multidisciplinary walkover survey was conducted on the 5th May 2022 by Claire Stephens and Kate O' Donnell of MKO in line with NRA (2009) guidelines. The habitat classifications and codes correspond to those described in '*A Guide to Habitats in Ireland*' (Fossitt, 2000). All habitats within and adjacent to the works area were readily identifiable during the site visit.

Following on from the multidisciplinary survey there was a requirement for additional dedicated floral or faunal surveys to be undertaken due to the nature of the habitats within the sites and the nature and scale of the proposed development, located adjacent to the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cumeen Strand SPA. Additional multidisciplinary walkover surveys, including Marsh

Fritillary surveys, otter surveys, bird surveys, and wintering bird surveys were undertaken on the 30th August 2022, 19th September 2022, 18th October 2022, 23rd November 2022, 8th December 2022, 23rd January 2023 and the 25th February 2023 by Claire Stephens. The winter bird survey report is included in **Appendix 2.**

4.2 Desk Study Results

4.2.1 Water Quality

The EPA web-mapper (https://gis.epa.ie/EPAMaps/) was consulted on the 02/11/2022, 15/03/2023 and on the 25/08/2023 regarding the water quality and status of waterbodies that are located downstream of the site of the proposed development. Figure 3-2 illustrates the proposed development site in relation to the hydrological catchment and European designated sites.

There are no mapped EPA watercourses within the proposed development site. A drainage channel flows which abuts a portion of the southern boundary and outfalls to the Garavoge Estuary through a culvert under the Second Sea Rd.

The Knappagh 35 river is located approximately 20m north of the proposed development site. This watercourse discharges to the Garavoge Estuary north- west of the development site boundary.

The site is located within theCarrowgobbadagh_SC_010 hydrological sub-catchment and the Drumcliff-Strandhill groundwater body.

The Garavoge Estuary (IE_WE_470_0100) lies 2m west of the proposed development site and is designated as part of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA. The Garavoge Estuary was assigned 'moderate' status in the Water Framework Directive monitoring program for the period 2013-2018 and 'unpolluted' in the Transitional Water Quality 2018-2020.

The site is located within the Drumcliff-Strandhill groundwater body and lies in an area of high groundwater vulnerability. The Water Framework Directive (WFD) Groundwater Monitoring Programme (2013-2018) assigned this groundwater body as having 'good' status.

4.2.2 Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

A potential pathway for indirect effects on the following aquatic QI's species/habitats was identified in the form of deterioration of water quality and supporting habitats for aquatic fauna:

- 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]
- Petrifying springs with tufa formation (Cratoneurion) [7220]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Phoca vitulina* (Harbour Seal) [1365]

On a precautionary basis the potential for disturbance was also identified with regard to Harbour Seal.

4.2.2.1 Review of conservation objectives

The relevant QIs and the associated conservation objectives are presented in Table 4-1.

Table 4-1 Qualifying Interest and Conservation Objectives

Qualifying Interest	Conservation Objective
Estuaries [1130]	To maintain the favourable conservation condition of Estuaries in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Mudflats and sandflats not covered by seawater at low tide [1140]	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Embryonic shifting dunes [2110]	To maintain the favourable conservation condition of Embryonic shifting dunes in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]	To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Petrifying springs with tufa formation (Cratoneurion) [7220]	To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion)* in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Petromyzon marinus (Sea Lamprey) [1095]	To restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Lampetra fluviatilis (River Lamprey) [1099]	To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
Phoca vitulina (Harbour Seal) [1365]	To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

4.2.2.2 Review of site-specific pressures and threats

As per the Natura 2000 Data Form (End 2021 – 06/10/2022) accessed online at the following link https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0000627&release=13&form=Clean on the 28th August 2023, the site-specific threats, pressures, and activities with the potential to impact on the SAC were reviewed and considered in relation to the proposed development. These are provided in Table 4-2.

Table 4-2 Site-specific threats, pressures and activities of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

Negative Impacts		
Rank	Threats and Pressures	
H	F01.01	intensive fish farming, intensification
L	E03.03	disposal of inert materials
L	G02.08	'Camping and caravans
L	G05.01	Trampling, overuse,
L	J01.01	burning down
L	J02.11.01	Dumping, depositing of dredged deposits
L	J02.12.01	sea defence or coast protection works, tidal barrages
M	A02.01	agricultural intensification

Negative Impacts		
Rank	Threats and Pressures	
M	D03	shipping lanes, ports, marine constructions
M	D03.01	port areas
M	E01.03	Dispersed habitation
M	G01.02	walking, horse-riding, and non-motorised vehicles
M	G01.03.02	off-road motorized driving
M	G02.01	'Golf course
M	101	invasive non-native species

A pathway for impact with regard to the site-specific threat/pressures *Sea defence or coast protection works, tidal barrages (J02.12.01)* and *Dispersed habitation (E01.03)* was identified.

4.2.2.3 Qualifying Interests

4.2.2.3.1 *Estuaries [1130]*

According to the site-specific conservation objectives document (NPWS, 2013), the habitat area was estimated as 1258ha using OSi data and the defined Transitional Water Body area under the Water Framework Directive. The community extent was sourced based on intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012) and subtidal survey in 2010 (Aquafact, 2011).

According to the Article 17 reporting (NPWS, 2019) most of the pressures on estuaries come from various sources of pollution, including domestic wastewater, agriculture and marine aquaculture. Alien invasive species such as the naturalised Pacific oyster (*Magallana gigas*) are also recognised as a significant pressure. The Overall Status of the habitat is inadequate and deteriorating. This status is the same as the 2013 assessment; however the trend has changed, due to more accurate data, from improving to declining. This decline is considered to have been on-going since before the last assessment.

4.2.2.3.2 *Mudflats and sandflats not covered by seawater at low tide [1140]*

According to the site-specific conservation objectives document (NPWS, 2013), the habitat area within the SAC was estimated using OSi data as 2288ha. The community extent was sourced based on intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012).

According to the Article 17 reporting (NPWS, 2019) the overall status of the habitat is inadequate and deteriorating, the change in trend from improving to deteriorating due to a genuine decline in the habitat since 2013. This was caused partly by pollution from agricultural, forestry and wastewater sources, as well as impacts associated with marine aquaculture, particularly the Pacific oyster (*Magallana gigas*).

4.2.2.3.3 *Embryonic shifting dunes [2110]*

According to the site-specific conservation objectives document (NPWS, 2013), the habitat area within the SAC has been estimated based on data from the Coastal Monitoring Project (CMP) (Ryle et al.,

2009). This habitat is very difficult to measure in view of its dynamic nature. It was recorded at four sub-sites, giving an estimated total area of 33.95ha. The habitat extent has been estimated at four mapped sub-sites Coney Island - 0.67ha, Rosses Point - 32.27ha, Strandhill - 0.18ha and Yellow Strand - 0.83ha. The SSCO document states that further unsurveyed areas maybe present within this SAC.

According to the Article 17 reporting (NPWS, 2019) the overall status is assessed as inadequate with a stable trend due to pressures associated with recreation and coastal defences, which can interfere with sediment dynamics. This assessment is unchanged since the 2013 assessment.

4.2.2.3.4 *Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]*

According to the site-specific conservation objectives document (NPWS, 2013), the habitat area within the SAC has been estimated based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009). This habitat is very difficult to measure in view of its dynamic nature. It was recorded at four sub-sites, giving an estimated total area of 1.20ha. The habitat extent has been estimated at four mapped sub-sites Coney Island – 0.46ha, Rosses Point – 0.17ha, Strandhill - 0.10ha and Yellow Strand - 0.47ha. The SSCO document states that further unsurveyed areas maybe present within this SAC.

According to the Article 17 reporting (NPWS, 2019), the overall status of this habitat is assessed as inadequate with a stable trend mainly because of pressures associated with recreation and coastal defences, which may interfere with local sediment dynamics. This assessment is unchanged since the 2013 assessment.

4.2.2.3.5 *Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]*

According to the site-specific conservation objectives document (NPWS, 2013), the habitat area within the SAC has been estimated based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009). It was recorded at four sub-sites, giving an estimated total area of 96.26ha. The habitat extent has been estimated at four mapped sub-sites Coney Island – 15.06ha, Rosses Point – 21.89ha, Strandhill – 40.14ha and Yellow Strand – 19.16ha. The SSCO document states that further unsurveyed areas maybe present within this SAC.

According to the Article 17 reporting (NPWS, 2019), the overall status of this habitat is assessed as bad, as in the 2013 report, due to pressures associated with recreation and ecologically unsuitable grazing practices. The trend is deteriorating due to poor results for structure and functions, but this is largely attributed to use of a different methodology and decline is considered to have been on-going since before the last assessment.

4.2.2.3.6 *Petrifying springs with tufa formation (Cratoneurion) [7220]*

According to the site-specific conservation objectives document (NPWS, 2013), the area of this habitat at Ballincar is recorded as 150m^2 along c.200m of cliff (internal NPWS files). The SSCO document states that further unsurveyed areas maybe present within this SAC.

This habitat occurs along a seepage line in low (generally less than 10m in height) clay sea cliffs near Ballincar (internal NPWS files). Lyons and Kelly (2013) recognise three main subtypes of spring. This site falls into the coastal springs subtype (the other two being woodland springs and inland non-wooded springs). The hydrological regime is currently unknown at this site. Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources. This site appears to be fed from water seeping through clay sea cliffs.

According to the Article 17 reporting (NPWS, 2019), the overall status of this habitat is assessed as inadequate, which is unchanged since the last reporting period. The trend is assessed as deteriorating

(reported as stable in 2013), which is due to improved knowledge, and decline is considered to have been on-going since before the last assessment.

4.2.2.3.7 *Petromyzon marinus (Sea Lamprey) [1095]*

According to the site-specific conservation objectives document (NPWS, 2013), this SAC only covers marine/estuarine habitat and it is not anticipated that it contains suitable spawning or nursery habitat. Migrating adult lamprey pass through the site en route to/from the Garavoge River, which flows out of Lough Gill. Lough Gill SAC (site code: 1976), which is adjacent to this SAC, encompasses the freshwater elements of sea lamprey habitat. Potential barriers for migrating lamprey include anthropogenic physical barriers and chemical barriers e.g. oxygen depletion or discharge of noxious pollutants.

According to the Article 17 reporting (NPWS, 2019), the overall conservation status of *P. marinus* has remained unchanged since the previous reporting period and is assessed as bad. The range is assessed as bad as it is more than 10% below the favourable reference range. The population is assessed as bad as it is estimated to be more than 25% below the favourable reference population. The habitat is assessed as inadequate as the area is not considered large enough to ensure the future long--term viability of sea lamprey. This assessment has changed since the previous reporting period and is based on new data and best expert judgement.

4.2.2.3.8 *Lampetra fluviatilis (River Lamprey) [1099]*

According to the site-specific conservation objectives document (NPWS, 2013), this SAC only covers marine/estuarine habitat and it is not anticipated that it contains suitable spawning or nursery habitat. Migrating adult lamprey pass through the site en route to/from the Garavoge River, which flows out of Lough Gill. Lough Gill SAC (site code: 1976), which is adjacent to this SAC, encompasses the freshwater elements of river lamprey habitat. Potential barriers for migrating lamprey include anthropogenic physical barriers and chemical barriers e.g. oxygen depletion or discharge of noxious pollutants.

According to the Article 17 reporting (NPWS, 2019), '*Given the large area of habitat availability and the likelihood that, in certain flow conditions, river lamprey are able to ascend many of the significant weirs on Irish rivers, it is possible that, in reality, they have a favourable conservation status. The inability to distinguish between L. fluviatilis and L. planeri larvae, however, and the challenges associated with sampling for adult river lamprey, means that an evaluation of their actual range and population size cannot be undertaken and status is assessed as unknown for the current reporting period*'.

4.2.2.3.9 *Phoca vitulina (Harbour Seal) [1365]*

According to the site-specific Conservation objectives supporting document-Marine habitats and specie (NPWS, 2013), Harbour seals in Cummeen Strand/Drumcliff Bay(Sligo Bay) SAC occupy both aquatic habitats and intertidal shorelines that become exposed during the tidal cycle. The species is present at the site throughout the year during all aspects of its annual life cycle which includes breeding (May to July approx.), moulting (August to September approx.) and non-breeding foraging and resting phases (October to April). Comparatively limited information is available for this site from the moult period in the annual cycle spanning the months of August and September. In acknowledging the limited understanding of aquatic habitat use by the species within the site it should be noted that all suitable aquatic habitat is considered relevant to the species range and ecological requirements at the site and is therefore of potential use by harbour seals.

Current information on locations selected by harbour seals in Cummeen Strand/Drumcliff Bay SAC during the breeding season is comparatively limited. Current sites are broadly within the following areas: sandbank areas south of Lissadell Strand and Ballygilgan Strand.

Current information on resting locations selected by harbour seals in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC outside the breeding season is comparatively limited. Current sites are broadly in the following areas: sandbanks to the north of Rosses Point, south of Ballygilgan Strand and Lissadell Strand.

According to the Article 17 reporting (NPWS, 2019), based on the assessments for range, population, habitat and future prospects parameters, the overall conclusion is that the conservation status of harbour seal in Ireland is considered favourable. This overall result and the results for the three assessment parameters are the same as in the previous two Article 17 assessments (i.e. favourable).

4.2.3 Cummeen Strand SPA

The construction and operational phase of the proposed residential development may result in pollution to surface water via the existing drainage channel which abuts the site, as well as along the south-western and partially along the southern boundary and via groundwaters via the percolation of polluting materials through the bedrock underlying the site. A potential pathway for indirect effects on the SCI 'Wetlands [A999]' habitat was identified in the form of deterioration of water quality and supporting habitats for SCI species.

On a precautionary basis the potential for habitat loss and disturbance of the listed SCI species was also identified:

- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Oystercatcher (*Haematopus ostralegus*) [A130]
- Redshank (*Tringa totanus*) [A162]

4.2.3.1 Review of Conservation Objectives

The relevant SCIs and the associated conservation objectives are presented in Table 4-3.

Table 4-3 Qualifying Interest and Conservation Objectives

Special Conservation Interest (SCI)	Conservation Objective
Wetlands and waterbirds [A999]	To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it.
Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]	To maintain the favourable conservation condition of Light-bellied Brent Goose in Cummeen Strand SPA.
Oystercatcher (*Haematopus ostralegus*) [A130]	To maintain the favourable conservation condition of Oystercatcher in Cummeen Strand SPA.
Redshank (*Tringa totanus*) [A162]	To maintain the favourable conservation condition of Redshank in Cummeen Strand SPA.

4.2.3.2 Review of site-specific pressures and threats

As per the Natura 2000 Data Form (End 2021 - 06/10/2022), accessed online at the following link https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0004013&release=13&form=Clean on the 28th August 2023, the site-specific threats, pressures and activities with potential to effect on the SPA were reviewed and considered in relation to the proposed development. These are provided in Table 4-4.

Table 4-4 Site-specific threats, pressures and activities of Cummeen Strand SPA

Negative Impacts		
Rank	Threats and Pressures	
Medium	A08	Fertilization
High	A08	Fertilization
High	A04	Grazing
High	F01	Marine and freshwater aquaculture
High	A04	Grazing
Medium	E01.03	Dispersed habitation
Low	G01.02	walking, horse-riding, and non-motorised vehicles

A pathway for impact with regard to the site-specific threat/pressure *Dispersed habitation (E01.03)* was identified.

4.2.3.3 Special Conservation Interests (SCIs)

4.2.3.3.1 *Light-bellied Brent Goose (Branta bernicla hrota) [A046]*

According to the NPWS Conservation Objectives Supporting document (NPWS, 2013) during winter the site regularly supports 1% or more of the biogeographic population of Light-bellied Brent Goose (*Branta bernicla hrota*). The mean peak number of this species within the SPA during the baseline period (1995/96 –1999/00) was 223 individuals. Light-bellied Brent Goose has a favourable population trend for this site. According to the Article 12 reporting both the short-term and long-term population trend for this species is increasing.

4.2.3.3.2 *Oystercatcher (Haematopus ostralegus) [A130]*

According to the NPWS Conservation Objectives Supporting document (NPWS, 2013) during winter the site regularly supports 1% or more of the all-Ireland population of Oystercatcher (*Haematopus ostralegus*). The mean peak number of this species within the SPA during the baseline period (1995/96 –1999/00) was 680 individuals. Oystercatcher has a favourable population trend for this site. According to the Article 12 reporting the short-term population trend for this species is stable and the long-term trend is unknown.

4.2.3.3.3 *Redshank (Tringa totanus) [A162]*

According to the NPWS Conservation Objectives Supporting document (NPWS, 2013), during winter the site regularly supports 1% or more of the all-Ireland population of Redshank (*Tringa totanus*). The mean peak number of this species within the SPA during the baseline period (1995/96 –1999/00) was 408 individuals. Redshank has an unfavourable population trend for this site. According to the Article 12 reporting the short-term population trend (past 12 years) for this species is stable and the long-term trend is increasing (since 1980).

4.2.3.3.4 *Wetlands*

According to the NPWS Conservation Objectives Supporting document (NPWS, 2013), the wetland habitats contained within Cummeen Strand SPA are identified as of conservation importance for non-breeding (wintering) migratory waterbirds. Therefore, the wetland habitats are considered to be an additional Special Conservation Interest.

According to the site synopsis (NPWS, 2014), '*Cummeen Strand is a large shallow bay stretching from Sligo Town westwards to Coney Island. It is one of three estuarine bays within Sligo Bay and is situated between Drumcliff Bay to the north and Ballysadare Bay to the south. The Garavogue River flows into the bay and forms a permanent channel. At low tide, extensive sand and mud flats are exposed. These support a diverse macro-invertebrate fauna which provides the main food supply for the wintering waterfowl. Invertebrate species such as Lugworm (Arenicola marina), Ragworm (Hediste diversicolor), Cockles (Cerastoderma edule), Sand Mason (Lanice conchilega), Baltic Tellin (Macoma balthica), Spire Shell (Hydrobia ulvae) and Mussels (Mytilus edulis) are frequent. Of particular note is the presence of eelgrass (Zosteranoltii and Z. angustifolia) beds, which provide a valuable food stock for herbivorous wildfowl. The estuarine and intertidal flat habitats are of conservation significance and are listed on Annex I of the E.U. Habitats Directive. Areas of salt marsh fringe the bay in places and provide roosting sites for birds during the high tide periods. Sand dunes occur at Killaspug Point and Coney Island, with a shingle spit at Standalone Point near Sligo Town*'.

4.3 Ecological Survey results

4.3.1 Habitats

The site is accessible via the existing blocked up access gate off Second Sea Road to the west classified as ***buildings and artificial surfaces (BL3).*** The site is bounded to the west by an existing stone wall, classified as ***stone walls and other stonework (BL1)*** (Plate 4-1). The western boundary contains a group of sitka spruce (*Picea sitchensis*) trees (T1 to T8 as per the Tree Survey report) with a small section of hawthorn (*Crataegus monogyna)* hedging categorised as ***hedgerow (WL1)*** with an ivy (*Hedera helix*), common hogweed (*Heracleum sphondylium*), hart's-tongue fern (*Asplenium scolopendrium*) and spear thistle (*Cirsium vulgare*) understory along the existing ***stone wall (BL1)*** road boundary.

The majority of the site is made up of a mosaic of rank grassland classified as ***dry meadows and grassy verges (GS2)*** with ***wet grassland (GS4), scrub (WS1)*** and scrub transitioning into immature woodland. Some poor fen ***poor fen and flush (PF2)*** qualities remain however the development site has greatly changed and deteriorated since the original *Low* value wetland habitat evaluation as per Wilson et al. (2009) as part of the National Wetland surveys of Ireland. An existing bare area along the drainage channel partially marking the southern boundary is classified as ***spoil and bare ground (ED2)*** and ***recolonising bare ground (ED3)*** with wet grassland species including sharp flowered rush (*Juncus acutiflorus*), hard rush (*Juncus inflexus*) and yellow flag iris (*Iris pseudacorus*) (Plate 4-2). Species recorded in these rank areas included butterbur (*Petasites hybridus*), smooth sow thistle (*Sonchus oleraceus*), Yorkshire fog (*Holcus lanatus*), false oat grass (*Arrhenatherum elatius*), rosebay willowherb (*Chamaenerion angustifolium*). curled dock *(Rumex crispus* ssp. *Crispus*), dandelion (*Taraxacum officinale*), common centaury (*Centaurium erythyraea*), ragwort (*Senecio jacobaea*), selfheal (*Prunella vulgaris*), knapweed (*Centaurea nigra*), clovers (*Trifolium* spp.), cock's-foot (*Dactylis glomerata*), wild angelica (*Angelica sylvestris*), ribwort plantain (*Plantago lanceolata*), yarrow (*Achillea millefolium*), devils bit scabious (*Succisa pratensis*), lesser stitchwort (*Stellaria graminea*) and black medick (*Medicago lupulina*). fairy flax (*Linum catharticum)* was also recorded in the western half of the site both in dry and wetter habitats.

Wetter rank areas and species included meadowsweet (*Filipendula ulmaria*), silverweed (*Potentilla anserina*), carnation sedge (*Carex panicea*), common sorrel (*Rumex acetosa),* common sedge (*Carex nigra*) and brookweed (*Samolus valerandi*) and moss species.

A number of calcicole species were recorded in small areas within the disturbed ground within the western half of the site. Recolonising vegetation included oxeye daisy (*Leucanthemum vulgare*), quaking grass (*Briza media)*, glaucous sedge (*Carex flacca*) and common spotted orchid (*Dactylorhiza fuchsia*).

Scrub formed numerous stands throughout the site particularly on higher ground which was drier than the surrounding wet grassland which in the past may have been classified as a poor fen habitat. The scrub was predominantly composed of gorse (*Ulex europaeus*) and willow (*Salix* sp..). Bittersweet (*Solanum dulcamara*), cleavers (*Galium aparine*) and hedge bindweed were recorded trailing through some areas of scrub. Areas of what were once identified as ***poor fen and flush (PF2)*** habitat which now most closely identifies as ***wet willow-alder-ash woodland (WN6)*** and upon which groupings of young naturally regenerated and semi-mature unmanaged trees are also present within the scrub close to the south-eastern boundary which is transitioning into ***wet willow-alder-ash woodland (WN6)*** of the site includes goat willow/great sallow (*Salix caprea*) and alder (*Alnus glutinosa*) (Plate 4-3).

Extensive poaching associated with driven tracks in areas of wet ground had created areas of ***spoil and bare ground (ED2).*** A number of pooled areas within the grassland habitats were identified with yellow flag and branched bur-reed (*Sparganium erectum*) with small patches corresponding with ***marsh (GM1)*** habitat as well two swamp areas dominated by common reed (*Phragmites australis*) and bulrush (*Typha latifoli*a) along the northern boundary which most closely identify as ***reed and large sedge swamps (FS1)*** (Plate 4-4 and Plate 4-7). Additional species recorded included along the edges of the marshy ground included marsh foxtail (*Alopecurus geniculatus*), marsh woundwort (*Stachys palustris*), marsh willowherb (*Epilobium palustre*), meadow vetchling (*Lathyrus pratensis*), water mint (*Mentha aquatica),* great horsetail (*Equisetum telmateia*), marsh helleborine (*Epipactis palustris*), perennial sow thistle (*Sonchus arvensis*), lesser spearwort (*Ranunculus flammula*), creeping buttercup (*Ranunculus repens*), yellow rattle (*Rhinanthus minor*), perforate St John's-wort (*Hypericum perforatum*), common valerian (*Valeriana officinalis*) and redshank (*Persicaria maculosa*). (*Sonchus arvensis)* and grass-of-parnassus (*Parnassia palustris*) was also recorded in small patches of drier ground at the edge of these damp habitats.

A dense ***hedgerow (WL1)/treeline (WL2)*** exists along the eastern boundary dominated by hawthorn, willows and bramble *(Rubus fruticosus agg.)* and an individual ash (*Fraxinus excelsior*) (Plate 4-6). Common nettle (*Urtica dioica*) was also abundant along the eastern boundary hedgerow.

An unfinished derelict dwelling and garage which is to be demolished, is present at the northern boundary of the proposed development site. The house, garage, surrounding wall and driveway is classified as ***buildings and artificial surfaces (BL3).*** Its surrounding area includes a small overgrown garden classified as ***dry meadows and grassy verges (GS2)*** (Plate 4-8). Habitats surrounding the existing dwelling included willow and gorse dominated scrub with species including hedge bindweed (*Calystegia sepium*), as well as rush species including saltmarsh rush (*Juncus gerardii*).

An existing drain abuts a portion of the southern boundary and outfalls to the Garavoge Estuary through a culvert under the Second Sea Rd. The drainage channel is partially culverted along the eastern third of the site with an open drainage channel with a low perceptible flow in a westerly direction categorised as a ***drainage ditch (FW4)*** was recorded along the southern and south-western boundary of the development site. With the exception of minor land drainage channels within the southern half of the site, no other watercourses were identified within the proposed development site (Plate 4-2). Species recorded in the wet grassland habitat listed above as well as ragged robin (*Silene flos-cuculi),* sweet vernal-grass (*Anthoxanthum odoratum),* purple loosestrife (*Lythrum salicaria),* alder and willow seedlings as, gorse encroachment from the north occur along the rank vegetation north of the drainage channel which abuts the southern boundary of the site.

Small areas of ***ornamental/non-native shrubs (WS3)*** including box (*Buxus sempervirens),* butterfly bush (*Buddleia davidii*) and garden escapes occur within the site boundary in particular within the southern and south-eastern boundaries which back onto existing residential developments.

No protected flora listed on Annex II of the Habitats Directive were recorded within or adjacent to the proposed development site boundary.

No Third Schedule Invasive Alien Species (IAS) of the European Communities Regulations 2011 (S.I. 477 of 2015) were recorded within the study site. Butterfly bush (*Buddleia davidii*), which is non-native but not listed on the third schedule was recorded within the southern half of the site and a small stand of montbretia (*Crocosmia x crocosmiiflora*) also an invasive species but not listed on the Third Schedule, was recorded north of the existing dwelling house to be demolished.

Plate 4-1 Rank grassland and wet grassland habitat to the west, bounded by the existing stone wall. Second Sea Road and Cummeen Strand to the west of the development site boundary.

Plate 4-2 Southern boundary, culverted drainage channel to the east along the site boundary of an ongoing construction of a residential development to the south and open drainage channel to the west with a low perceptible flow in a westerly direction Wet grassland/marshy habitat and spoil and bare ground along drainage channel

Plate 4-3 Areas of dense gorse and willow dominated scrub throughout the site, with areas of scrub transitioning into wet willow-alder-ash woodland (WN6) includes willow and alder.

Plate 4-4 Pooled areas within the grassland habitats, with marshy areas classified as reed and large sedge swamps dominated by common reed (Phragmites australis). Poached areas were classified as spoil and bare ground

Plate 4-5 Marsh habitat within willow scrub understory towards the south of the site

Plate 4-6 Dense hedgerow (WL1)/treeline (WL2) along the eastern boundary

Plate 4-7 Wet grassland habitat with small areas of reed and large sedge swamp habitat along the northern boundary of the site

Plate 4-8 Dwelling and garage to be demolished

4.3.2 Fauna

No evidence of Annex II protected species associated with Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC was recorded within or adjacent to the site boundary. The detailed Conservation Objectives for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC were reviewed as part of this assessment.

The nearby Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC is designated for the following species

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

The partially culverted drainage channel which abuts the site and along the southern boundary of the proposed development site offers no supporting habitat for these species. There is no suitable habitat for *Vertigo angustior* (Narrow-mouthed Whorl Snail) within the proposed development site. Optimal habitat for this species within the SAC is defined as fixed dune and species-rich grassland dominated with a vegetation height of 10-30cm.

There is no suitable habitat for Harbour seal within the proposed development site. This marine mammal species occurs in estuarine, coastal and offshore waters but also utilises a range of intertidal and terrestrial habitats for important life history functions such as breeding, moulting, resting and social activity. When hauling out ashore harbour seals tend to prefer comparatively sheltered locations and use sheltered bays, inlets and enclosed estuaries.

An assemblage of common bird species was recorded during the field survey. No species listed as a Special Conservation Interest species of Cummeen Strand SPA were recorded within the site boundary during any of the site visits undertaken. No significant foraging or roosting habitat for the listed SCI

bird species was recorded within the proposed works site boundary. However due to the proximity of the development to the designated site additional dedicated wintering bird surveys were deemed necessary. Special Conservation Interest species of the SPA were identified utilising Cummeen Strand, and its associated marine habitats and a Wintering Bird Survey Report (MKO, 2023) accompanies the planning application and is appended to this NIS as **Appendix 2.**

The Wintering Bird Survey report concludes that:

> *'Based on the wintering bird assemblages recorded over the five wintering bird surveys carried out between October 2022 to February 2023 it can be concluded that the proposed development site does not support important assemblages of Red listed species, wintering wildfowl, waders, or SCI species for which Cummeen Strand SPA is designated. The scrub, transitional woodland habitats, hedgerow and treeline habitat within the site provide suitable habitat for common passerine species, however, these habitats are common and widespread within the local area. Any clearance of such habitat will be undertaken in accordance with the Wildlife Act 1976-2022.*
>
> *No species listed as an SCI of Cummeen Strand SPA, were recorded within the development site and it is not anticipated that the development site represents a significant supporting habitat for these SCI species which are considered coastal. Whilst birds may leave the estuary/bay for nearby inland sites to feed on grassland terrestrial invertebrates, the proposed development site is widely vegetated, common and widespread in the local area. The loss of this habitat as a result of the development would not negatively impact on the conservation objectives of the SCIs of Cummeen Strand SPA.*
>
> *The survey results indicate that there will be no potential for loss of supporting habitat or displacement for SCI species for which the Cummeen Strand SPA are designated for.*
>
> *No potential for adverse effects on the SCI species Cummeen Strand SPA has been designated have been identified. For this reason, there is not considered to be potential for adverse effects alone or in-combination with other developments within the environs of the Cummeen Strand SPA.'*

No QI's or SCI's associated with any other European site were recorded within the proposed development site boundary.

5. ASSESSMENT OF POTENTIAL ADVERSE EFFECTS

5.1 Potential for Direct Effects on the European Sites

The development site lies entirely outside of the boundary of any European Site. There is no potential for direct effects.

5.2 Potential for Indirect Effects on the European Sites

5.2.1 Deterioration of water quality

The proposed development site lies within an area of high groundwater vulnerability (as per the EPA maps). The construction and operational phase of the proposed residential development may result in surface water pollution via the drainage channel through the site and along the southern and south-western boundary and pollution to groundwaters via the percolation of polluting materials through the bedrock underlying the site. A potential pathway for indirect effects on the on the surface water dependent Qualifying Interests of Cummeen Strand SAC/Drumcliff Bay (Sligo Bay) SAC and the Special Conservation Interests (SCIs) of Cummeen Strand SPA was identified in the form of deterioration of water quality and supporting habitats for aquatic fauna.

5.2.1.1 Preventative measures to avoid impact on water quality.

The pathway that would allow potential impacts to occur was considered in the design of the project. The Construction Environmental Resource & Waste Management Plan (CERWMP) accompanying this application, and section 5.2.1.1.1 of this report, sets out the environmental management framework to be adhered to during the proposed construction works and it incorporates the mitigating principles to ensure no adverse impact on the integrity of European Sites. The CERWMP includes comprehensive detail regarding site set up, pollution prevention, hydrocarbon management, construction monitoring and biosecurity. The best practice mitigation and environmental control measures that have been incorporated into the proposal are summarised in section 5.2.1.1.1.

5.2.1.1.1 *Construction Phase Control Measures and Assessment*

A Construction Environmental Resource &Waste Management Plan (CERWMP) has been prepared for the proposed development and accompanies this application. The pathway that would allow potentially adverse impacts to occur was considered in the design of the proposed development.

The excavation phase of the development has the potential to encounter sub-surface and ground water during the works although it is not anticipated that this will be significant as the excavation does not include a basement. In the event of encountering groundwaters during excavation, the excavation will be de-watered using a pump equipped with a silt bag on the outlet to capture any silty material prior to subsequent natural percolation to ground. Alternatively, this water will be tankered off site if required. In order to avoid hydrocarbons encountering groundwaters onsite, the below section presents mitigation measures to avoid the release of hydrocarbons onsite.

There is a drainage channel along the southern boundary, through the site and the Knappagh river is located approximately 20m north of the proposed development site. The following Pollution Prevention Measure will be adopted for the protection of watercourses. A silt fence will be erected between the

proposed development and the drainage channel on either bank for the duration of the works to prevent any runoff entering during the construction work, along the western boundary and along the northern boundary to protect the Knappagh river. This will comprise wooden posts and a geotextile membrane that is buried below the ground (approx. 200mm). The silt fence will secure the development site and prevent potential run off and siltation during the construction works. The fence will remain in place after the works are completed and until the exposed earth has re-vegetated.

The proposed development will adhere to the best practice mitigation and environmental control measures outlined in the CERWMP (2023) which include the following measures:

Site Set up -Drainage and Surface Water Mitigation

- Prior to commencement 2.4m high hoarding will be erected around the perimeter of the construction footprint, leaving a natural vegetation buffer between the construction footprint and the adjacent watercourses and designated sites. A silt fence will also be erected within the inner perimeter of the solid barrier prior to works commencing to protect adjacent habitats and to prevent any egress of machinery outside of the site during construction activities.
- A site compound will be established within the site boundary a minimum of 50m from any watercourses. The exact location of the site compound will be established by the contractor. Access routes will be clearly marked / identified. Access during construction to any working areas will be restricted to land within the outlined works area.
- A silt fence will be erected along the perimeter of the discharge area of the silt bag to avoid any preferential flow of silt laden water offsite. This will comprise wooden posts and a geotextile membrane that is buried below the ground (approx. 200mm). The silt fence will secure the development site and prevent potential run off and siltation during the construction works. The fence will remain in place after the works are completed and until the exposed earth has re-vegetated.
- Works shall not take place at periods of high rainfall, and shall be scaled back or suspended if heavy rain is forecast;
- Machinery deliveries shall be arranged using existing structures along the existing road;
- Any excess construction material shall be immediately removed from the area and sent to an authorized waste recovery facility;
- Spill kits shall be available in each item of plant required;
- Prior to the commencement of earthwork silt fencing will be placed down-gradient of the construction areas where drains or drainage pathways are present.
- If groundwater is encountered during excavations, will be pumped to a localised settlement pond to allow sediment to settle out prior to natural discharge onto ground via a silt bag which will filter any remaining sediment from the pumped water. The entire discharge area from silt bags will be enclosed by a perimeter of silt fencing as an additional measure to avoid any preferential flow of silt-laden water offsite.

Demolition

- A dust suppression system consisting of a fine mist water spray will be available on site.
- All waste products from demolition will be disposed of at a licenced waste facility.
- The site access track will be regularly inspected by site management for cleanliness and cleaned as necessary.
- The transport of crushed stone or other material, which has significant potential to cause dust, will be undertaken in tarpaulin-covered vehicles where necessary.
- When necessary, sections of approach roads to the site will be swept using a street cleaner and / or damped down with water.

Fuel and Oil Control & Pollution Prevention

- All plant and machinery will be serviced before being mobilised to site.
- No refueling of machinery or overnight parking of machinery is permitted in areas adjacent to or on-site drainage infrastructure.
- On-site refueling will only take place at distances greater than 50 metres from nearest site drainage infrastructure.
- On-site refueling of machinery will be carried out using an oil company vehicle sourced from a local supplier. Only dedicated trained and competent personnel will carry out refueling operations. A spill kit and drip tray shall be on site at all times and available for all refueling operations. Equipment shall not be left unattended during refueling.
- Spill kits shall be available in each item of plant required.
- Care will be taken at all times to avoid contamination of the environment with contaminants other than hydrocarbons, such as uncured concrete or other chemicals. The plant refuelling procedures described above shall be detailed in the contractor's method statements.
- Ready-mixed supply of wet concrete products and where possible, emplacement of pre-cast elements, will take place. No batching of wet-cement products will occur on site.
- No washing out of any plant used in concrete transport or concreting operations will be allowed on-site.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site.
- Vehicles will never be left unattended during refuelling. Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements to prevent discharge to ground and any potential effects on ground water.
- Fuels, lubricants and hydraulic fluids for equipment used on the site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.
- Potential impacts caused by spillages etc. during the construction phase will be reduced by keeping spill kits and other appropriate equipment on-site.

Earth Works

- In all circumstances, excavation depths and volumes will be minimised.
- All excavated spoil will be stockpiled and contained within the works area (site boundary), contained with silt fencing surrounding the stockpiles which will be entirely within the curtilage of the bounds of the existing rank grassland within its stone wall boundary to the west, and treelines and hedgerows to the east or transported off site to a designated waste facility.
- Earthworks will be carried out during periods of dry weather to avoid impacts to groundwater.
- All excavated material which is not required for future landscaping works or for backfill of excavations will be removed to an authorised waste recovery facility.

Waste Management

- All waste will be collected in skips and the site will be kept tidy and free of debris at all times.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or recycling.
- All construction waste materials will be stored within the confines of the site, prior to removal from the site to a permitted waste facility.

- The removal and disposal of wastewater from site welfare facilities, will be carried out by a fully permitted waste collector holding valid Waste Collection Permits as issued under the Waste Management (Collection Permit) Regulations, 2007.

Environmental Monitoring

- The contractor will assign a member of the site staff as the environmental officer with the responsibility for ensuring the environmental measures prescribed in this document are adhered to. Any environmental incidents or non-compliance issues will immediately be reported to the project team.

Invasive Species Control Measures

No invasive species listed on the Third Schedule were recorded during any of the site visits undertaken during 2022 and 2023. Nonetheless, the following best practice biosecurity measures will be adhered to during the construction stage of the proposed residential development to ensure that there is introduction of invasive species to the site. These measures will also be included in the contractor's method statement and are included within the CERWMP which accompanies the planning application.

- A pre-construction invasive species will be carried out by a qualified ecologist prior to commencement of the construction works to ensure that no invasive species are present.
- All employees will be briefed on the potential for spread of invasive species and made aware of the importance of adhering to biosecurity measures to prevent their introduction and/or spread.
- Should any invasive alien species be recorded within the site, these shall be fenced off to prevent disturbance and will be dealt with in accordance with established non-native species control guidelines issued by Transport Infrastructure Ireland (TII), formerly the National Roads Authority (NRA), titled, The Management of Invasive Alien Plant Species on National Roads – Technical Guidance (TII 2020). Japanese knotweed is a common invasive species in Ireland and will be prevented from establishing, or removed if identified on site, in accordance with the Environment Agency 'Managing Japanese knotweed on development sites. The knotweed code of practice' (2013).
- Throughout the construction phase should any invasive alien species be introduced to site or become established within the site, the areas where invasive species are present will be fenced off to prevent their disturbance. Signage will be erected to ensure employees are aware of the presence of invasive species. The services of an invasive species specialist will be employed and any invasive species that are introduced will be treated in accordance with the guidance listed above.
- All vehicles and tools will arrive on site clean. Any vehicles and equipment arriving at the site will be checked for attached debris or plant fragments and will be thoroughly cleaned down using a power washer unit prior to arrival on site to prevent the spread of invasive plant species. Wheel washing facilities will be provided.
- Work boots will be dipped in or scrubbed with a disinfectant solution and thoroughly dried afterwards before being used on the site for the first time. All PPE will be visually inspected, and any attached vegetation or debris removed. PPE and tools will remain on site for the duration of the work.
- All plant and equipment employed on the development site (e.g. excavator, hand tools, footwear, etc.) will be checked for attached debris or plant fragments, and will be thoroughly cleaned down using a power washer unit prior to arrival on site to prevent the spread of invasive plant species. Wheel washing facilities will be provided. All washing must be undertaken in areas with no potential to result in the spread of invasive species. This process will be detailed in the contractor's method statement.

- Good construction site hygiene will be employed to prevent the introduction and spread of problematic invasive alien plant species (e.g. Himalayan Balsam, Japanese Knotweed etc.) and all plant and equipment will be similarly checked prior to leaving the site, and subsequently properly cleaned if required.
- Any soil and topsoil that may be required on the site will be sourced from a stock that has been screened for the presence of any invasive species and where it is confirmed that none are present.
- Where possible all material used for site reinstatement will be material from the site set aside during initial excavation.
- On backfilling or restoring the site, where there is a requirement to import additional soil to form the restoration layer, this will be clean soil from a known and reputable source which has been screened for the presence of invasive species and confirmed that none are present.

Post implementation of best practice and preventive measures as described above, there is no potential for adverse impact on the listed water dependent QIs/SCIs of Cummeen Strand SAC/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA as a result of deterioration in water quality arising from surface or groundwater pollution.

The measures described in Section 5.2.1.1.1, ensure that the proposed development does not prevent or obstruct any of the qualifying interests from reaching favourable conservation status as per Article 1 of the EU Habitats Directive. The measures described in Section 5.2.1.1.1, ensure that the proposed development does not adversely affect the integrity of European sites.

5.2.1.2 Operational Phase Control Measures and Assessment

Assuming the proposed development is adequately constructed as designed the proposed pumping station will have adequate storage capacity for a 24 hour period. As outlined within the Pumping Station Operation & Maintenance Requirements (JOD, 2023)

> *'A telemetry system will be installed and fitted with an alarm and messaging alert function to notify relevant personnel. There will be no overflow discharge constructed as part of the pumping station'*

Indirect effects during the operational stage of the development are not anticipated and there will be no deterioration in water quality as a result of the proposed development assuming the drainage systems both foul and surface waters as shown in Figure 3-4 work adequately as described in Section 3.2.3 and the Civils Design Report which accompanies the planning application.

No indirect effects on water quality during the operational stage of the development are anticipated. There is no potential for adverse impact on the listed water dependent QIs/SCIs of Cummeen Strand SAC/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA as a result of deterioration in water quality.

The measures described ensure that the proposed project does not prevent or obstruct any of the QIs or SCIs from reaching Favourable Conservation Status as per Article 1 of the EU Habitats Directive.

5.2.2 Disturbance *Phoca vitulina* (Harbour Seal) [1365] (QI of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC)

Taking an extremely precautionary approach, the potential for indirect impact to Harbour Seal in the form of disturbance during construction and due to an increase in anthropogenic disturbance in the area was considered.

According to the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC *Conservation Objectives Supporting Document for Marine Habitats and Species* (NPWS, 2013), harbour seal occurs in estuarine, coastal, and offshore waters but also utilises a range of intertidal and terrestrial habitats for important life history functions such as breeding, moulting, resting and social activity. When hauling out ashore harbour seals tend to prefer comparatively sheltered locations where exposure to wind, wave action and precipitation are minimised.

Harbour seals in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC occupy both aquatic habitats and intertidal shorelines that become exposed during the tidal cycle. The species is present within the SAC throughout the year during all aspects of its annual life cycle which includes breeding (May to July approximately), moulting (August to September approximately) and non-breeding foraging and resting phases (October to April). Comparatively limited information is available for this site from the moult period in the annual cycle spanning the months of August and September. In acknowledging the limited understanding of aquatic habitat use by the species within the site it should be noted that all suitable aquatic habitat is considered relevant to the species range and ecological requirements at the site and is therefore of potential use by harbour seals (NPWS, 2013).

According to Map 8 of the site-specific conservation objectives document there are no known resting or breeding sites in within the Garavoge Estuary. The closest known resting or breeding sites are located in Drumcliffe Bay/Drumcliffe Estuary, approximately 4.9km north of the proposed development site (see Map 8, NPWS 2013).

There is no suitable habitat for harbour seal within or immediately adjacent to the proposed development site. The habitats within the footprint of the development are dominated by rank wet grassland and scrub habitat. The proposed development site is set back at least 7m from the shoreline of the Garavoge Estuary. The site is separated from any potential seal habitat within the SAC by an existing road network.

The proposed development is medium scale in nature and require minimal excavations or earthworks. The following best practice disturbance limitation measures will be adhered to during the construction phase:

- All plant and equipment for use will comply with Statutory Instrument No 359 of 1996 “European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996”.
- Plant machinery will be turned off when not in use.
- Operating machinery will be restricted to the proposed development site area.
- Construction works will be limited to daylight hours and artificial lighting to facilitate works will not be permitted.

No potential for significant disturbance related impact during construction exists.

The potential for indirect impacts due to disturbance of harbour seal due to lighting and the potential increase in anthropogenic disturbance in the area during the operational phase was also considered. The proposed development site is set back 7m from the shoreline of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and is buffered from the shoreline by a road network. Due to the separation distance of the site from the shoreline and the shielding effect of the neighbouring properties there is no potential for lighting disturbance or visual disturbance of any suitable seal habitat along the shoreline. The lighting used during the operational phase will be directional, which will ensure that there is no light spill outside of the development footprint. External lighting within the development will include low intensity bulkhead light, installed over the front and rear doors which will be activated by a close-range motion sensor.

The potential for disturbance due to an increase in anthropogenic activity in the wider area was also considered. There will be no access to the foreshore as a result of the proposed development. The

development does not in any way provide any additional access to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and does not encourage access. The proposed development site is accessed from the west via a local road off the Second Sea Road, and south-east of Gibraltar Road. This road does not offer access to the foreshore. There is no public right of way between this land and the foreshore. There will be no increase in recreational activity/anthropogenic disturbance to the foreshore as a result of the proposed development.

Based on the size, scale, location and nature of the proposed development; no complete source-pathway-receptor chain for significant impact during the construction or operational phase of the development has been identified.

The measures ensure that the proposed development do not prevent or obstruct harbour seal from reaching favourable conservation status as per Article 1 of the EU Habitats Directive.

5.2.3 Bird Disturbance/Displacement and Habitat Loss

Disturbance/Displacement

Due to the proximity of Cummeen Strand SPA to the proposed development, the potential for adverse effects as a result of disturbance and displacement of the SCI species during the construction and operational phases of the development, has been considered.

Cummeen Strand SPA is designated for Light-bellied Brent Goose (*Branta bernicla hrota*), Oystercatcher (*Haematopus ostralegus*) and Redshank (*Tringa totanus*). These species are designated for their wintering populations within the SPA however no species associated with the SPA were utilising habitats within the development site during any of the field surveys. The habitats within the site do not provide optimum feeding habitats for these species.

As outlined above none of the listed SCI species of Cummeen Strand SPA were recorded utilising habitats within the development site during any of the field surveys. The proposed development site boundary is set back 7m from the boundary of Cummeen Strand SPA and is buffered from the shoreline by an existing road. There will be no works or works access undertaken within 7m of the intertidal habitat. All works will be confined to the footprint of the proposed development and there will be no access to the foreshore. Due to the separation distance of the site from the shoreline, hoarding proposed along the perimeter of the site and the shielding effect of the neighbouring properties there is no potential for visual disturbance of SCI bird species within the intertidal bird habitat The shoreline of the SPA will not be illuminated as a result of the proposed development. The lighting used during the operational phase will be directional, which will ensure that there is no light spill outside of the development footprint. External lighting within the development will include low intensity bulkhead light, installed over the front and rear doors which will be activated by a close-range motion sensor.

The potential for disturbance due to an increase in anthropogenic activity in the wider area was also considered. The proposed development site is located in an area with existing residential housing in the wider area including along the shoreline, therefore SCI species are likely to be habituated to some degree of general visual and/or noise stimuli in the area.

There will be no access to the foreshore as a result of the proposed development. The development does not in any way provide any additional access to Cummeen Strand SPA and does not encourage access. The proposed development site is accessed from the west via a local road off the Second Sea Road, and south-east of Gibraltar Road. This road does not offer access to the foreshore. There will be no increase in recreational activity/anthropogenic disturbance to the foreshore as a result of the proposed development.

In consultation with published advice on the typical types and magnitudes of noise sources associated with construction activities (Cutts et al. 2013), it is considered that general construction activities, will not

result in disturbance of any of the listed SCI species, given the set-back distance of the proposed development construction works from the intertidal zone and the proposed hoarding will also block noise pollution from the site.

The proposed development is medium scale in nature and require minimal excavations or earthworks during the construction phase. The following best practice disturbance limitation measures will be adhered to during the construction phase:

- All plant and equipment for use will comply with Statutory Instrument No 359 of 1996 "European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996".
- Plant machinery will be turned off when not in use.
- Operating machinery will be restricted to the proposed development site area.
- Construction works will be limited to daylight hours and artificial lighting to facilitate works will not be permitted.
- All works will be confined to the site footprint and there will be no access to the foreshore.

Based on the size, scale, location and nature of the proposed development; no complete source-pathway-receptor chain for significant impact during the construction or operational phase of the development has been identified.

Due to the nature, scale and location of the proposed small-scale development there will be no disturbance or displacement of the listed SCI species of Cummeen Strand SPA.

Habitat loss

Cummeen Strand SPA is designated for Light-bellied Brent Goose (*Branta bernicla hrota*), Oystercatcher (*Haematopus ostralegus*) and Redshank (*Tringa totanus*). According to the site-specific conservation objectives supporting document, the principle supporting habitats for these species within the site is intertidal mud and sandflats (NPWS, 2013). SCI species are highly reliant on the habitats within the site but are likely to utilise alternative habitats at certain times (e.g. high tide).

No species associated with the SPA were utilising habitats within the development site during any of the field surveys. The habitats within the site do not provide optimum feeding habitats for these species. The dominant habitat within the proposed development site is a mosaic of rank grassland classified as ***dry meadows and grassy verges (GS2)*** with ***wet grassland (GS4)*** and ***scrub (WS1)***. Oystercatchers forage primarily on tidal flats although the species can also be found foraging along non-estuarine coastline or terrestrially. Brent geese may also occasionally forage on terrestrial grassland habitats however they prepare well managed parks/pitches of amenity grassland. Redshank may use terrestrial habitats to roost in. Rank grassland habitat is common and widespread in the wider area of the site. The loss of a small area of grassland and scrub with transitional wet willow alder woodland within the proposed development site would not have an adverse effect on the conservation status of these species.

The proposed development will not have an adverse effect on the conservation status of any the listed SCI species of this SPA.

6. ASSESSMENT OF RESIDUAL EFFECTS

The sections provided below detail the site-specific residual impact assessment in relation to the relevant QIs of the above EU sites in light of their site-specific targets and attributes.

6.1 Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

6.1.1 Estuaries [1130]

The conservation objective for Estuaries [1130] is:

'To maintain the favourable conservation condition of Estuaries in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for Estuaries as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-1.

Table 6-1 Targets and attributes of Estuaries [1130]

Attribute	Target	Assessment
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	There will be no decline in habitat area associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Community extent	Maintain the extent of the Zostera-dominated community and the Mytilidae-dominated community complex, subject to natural processes.	There will be no impacts on the community extent, community structure or distribution associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Community structure: Zostera density	Conserve the high quality of the Zostera-dominated community, subject to natural processes	
Community structure: Mytilus edulis density	Conserve the high quality of the Mytilidae-dominated community complex, subject to natural processes	
Community distribution	Conserve the following community types in a natural condition: Intertidal fine sand with Peringia ulvae and Pygospio elegans community complex; Estuarine mixed sediment to sandy mud with Hediste diversicolorand oligochaetes community complex; Fine sand with Angulus spp. and Nephtys spp. community complex; Sand to mixed sediment with	

Attribute	Target	Assessment
	amphipods community; Intertidal reef community.	

6.1.2 Mudflats and sandflats not covered by seawater at low tide [1140]

The conservation objective for Mudflats and sandflats not covered by seawater at low tide [1140] is:

'To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide [1140] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for Mudflats [1140] as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-2.

Table 6-2 Targets and attributes of Mudflats and Sandflats [1140]

Attribute	Target	Assessment
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	There will be no decline in habitat area associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Community extent	Maintain the extent of the Zostera-dominated community and the Mytilidae-dominated community complex, subject to natural processes.	There will be no impacts on the community extent, community structure or distribution associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Community structure: Zostera density	Conserve the high quality of the Zostera-dominated community, subject to natural processes	
Community structure: *Mytilus edulis* density	Conserve the high quality of the Mytilidae-dominated community complex, subject to natural processes	
Community distribution	Conserve the following community types in a natural condition: Intertidal fine sand with *Peringia ulvae* and *Pygospio elegans* community complex; Estuarine mixed sediment to sandy mud with *Hediste diversicolor* and oligochaetes community complex; Fine sand with *Angulus* spp. and *Nephtys* spp. community complex;	

6.1.3 Embryonic shifting dunes [2110]

The conservation objective for embryonic shifting dunes [2110] is:

'To maintain the favourable conservation condition of Embryonic Shifting Dunes [2110] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for embryonic shifting dunes [2110] as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-3.

Table 6-3 Targets and attributes of Embryonic Shifting Dunes [2110]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Coney Island - 0.67ha, Rosses Point - 32.27ha, Strandhill - 0.18ha, Yellow Strand - 0.83ha.	There will be no decline in habitat area or habitat distribution associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Habitat distribution	No decline, subject to natural processes.	
Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions.	There will be no impacts on the physical structure, vegetation structure or vegetation composition associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
Vegetation composition: plant health of foredune grasses	More than 95% of sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	
Vegetation composition: typical species and sub-communities	Maintain the presence of species-poor communities with typical species: sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*)	
Vegetation composition: negative indicator species	Negative indicator species (including non-native species) to represent less than 5% cover	

6.1.4 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]

The conservation objective for Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] is:

'To restore the favourable conservation condition of Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-4

Table 6-4 Targets and attributes of Shifting Dunes [2120]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Coney Island – 0.46ha, Rosses Point – 0.17ha, Strandhill – 0.10ha, Yellow Strand - 0.47ha.	There will be no decline in habitat area or habitat distribution associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Habitat distribution	No decline, or change in habitat distribution, subject to natural processes.	
Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions.	There will be no impacts on the physical structure, vegetation structure or vegetation composition associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
Vegetation composition: plant health of foredune grasses	95% of marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	
Vegetation composition: typical species and sub-communities	Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*)	
Vegetation composition: negative indicator species	Negative indicator species (including non-native species) to represent less than 5% cover	

6.1.5 Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]

The conservation objective for Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] is:

'To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this habitat is - provided in Table 6-5

Table 6-5 Targets and attributes of Fixed Coastal Dunes [2130]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Coney Island - 15.06ha; Rosses Point - 21.89ha; Strandhill - 40.14ha; Yellow Strand - 19.16ha.	There will be no decline in habitat area or habitat distribution associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Habitat distribution	No decline, or change in habitat distribution, subject to natural processes.	
Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions.	There will be no impacts on the physical structure, vegetation structure or vegetation composition associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
Vegetation structure: bare ground	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	
Vegetation structure: sward height	Maintain structural variation within sward	
Vegetation composition: typical species and sub-communities	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	
Vegetation composition: negative indicator species (including *Hippophae rhamnoides*)	Negative indicator species (including non-native species) to represent less than 5% cover	
Vegetation composition: scrub/trees	No more than 5% cover or under control	

6.1.6 Petrifying springs with tufa formation (Cratoneurion) [7220]

The conservation objective for Petrifying springs with tufa formation (*Cratoneurion*) [7220] is:

'To restore the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion) [7220] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC"

The attributes and targets for Petrifying springs with tufa formation (*Cratoneurion*) [7220] as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-6.

Table 6-6 Targets and attributes of Petrifying springs with tufa formation (Cratoneurion) [7220]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes.	There will be no decline in habitat area or habitat distribution associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Habitat distribution	No decline.	
Hydrological regime: height of water table; water flow	Maintain appropriate hydrological regimes.	There will be no impacts on the physical structure, vegetation structure or vegetation composition associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Water quality	Maintain oligotrophic and calcareous conditions.	
Vegetation composition: typical species	Maintain typical species.	

6.1.7 *Phoca vitulina* (Harbour Seal) [1365]

The conservation objective for Harbour seal (*Phoca vitulina*) is:

'To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for Harbour seal (*Phoca vitulina*) [1365] as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this species is provided in Table 6-7.

Table 6-7 Targets and attributes of Harbour Seal [1365]

Attribute	Target	Assessment
Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use.	There will be no decline in habitat area or habitat distribution or access to suitable breeding, Moulting or resting habitat associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Breeding behaviour	Conserve the breeding sites in a natural condition.	

Attribute	Target	Assessment
Moulting behaviour	Conserve the moult haul-out sites in a natural condition.	There will be no impacts on the physical structure, vegetation structure or vegetation composition associated with the proposed development Indirect pathways that would allow impacts to occur via water pollution and disturbance were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.
Resting behaviour	Conserve the resting haul-out sites in a natural condition.	
Disturbance	Human activities should occur at levels that do not adversely affect the harbour seal population at the site	

6.1.8 *Lampetra fluviatilis* (River Lamprey) [1099]

The conservation objective for River Lamprey *(Lampetra fluviatilis)* is:

'To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for River Lamprey *(Petromyzon marinus)* as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this Species is provided in Table 6-8.

Table 6-8 Targets and attributes for River Lamprey (Lampetra fluviatilis) [1099]

Attribute	Target	Assessment
Distribution: extent of anadromy	No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa	There will be no impact on distribution as a result of the proposed development. There will be no migration barriers associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.

6.1.9 Sea Lamprey *(Petromyzon marinus)* [1095]

The conservation objective for Sea Lamprey *(Petromyzon marinus)* is:

'Restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC'

The attributes and targets for Sea Lamprey *(Petromyzon marinus)* as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and an assessment of the proposed development against the attributes and targets for this Species is provided in Table 6-9.

Table 6-9 Targets and attributes for Sea Lamprey (Petromyzon marinus) [1095]

Attribute	Target	Assessment
Distribution: extent of anadromy	No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa	There will be no impact on distribution as a result of the proposed development. There will be no migration barriers associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.

6.2 Cummeen Strand SPA

6.2.1 Wetlands [A999]

The conservation objective for *Wetlands [A999]* within Cummeen Strand SPA is:

'To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it'.

The attributes and targets for Wetlands as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand SPA and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-10.

Table 6-10 Targets and attributes of Wetlands [A999]

Attribute	Target	Assessment
Habitat area	The permanent area occupied by the wetland habitat should be stable and not significantly less than 1732 hectares, other than that occurring from natural patterns of variation	There will be no decline in habitat area associated with the proposed development. Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed development.

6.2.2 Brent Goose (*Branta bernicla hrota*) [A046]

The conservation objective for this species within Cummeen Strand SPA is:

'*To maintain the favourable conservation condition of Light-bellied Brent Goose in Cummeen Strand SPA*'.

The attributes and targets for Brent goose as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand SPA and an assessment of the proposed development against the attributes and targets for this species is provided in Table 6-11.

Table 6-11 Targets and attributes for Brent Goose (Branta bernicla hrota) [A046]

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. There will be no effect in terms of loss of supporting habitat or disturbance. The dominant habitat within the proposed development site is dry meadows and grassy verges (GS2) with wet grassland (GS4) and scrub (WS1) and no Brent goose were recorded during the surveys carried out. According to the site-specific conservation objectives supporting document, the principle supporting habitats for this species within the site is intertidal mud and sandflats (NPWS, 2013). As outlined in section 5.2.3 of this report there is no potential for the proposed development to result in disturbance of this SCI species within the SPA. The works are medium scale in nature and short term in duration. Mitigation measures, outlined in Section 5.2.3 of this report, will be adhered to avoid disturbance during the construction stage of the proposed development. The proposed development site is set back 7m from the boundary of Cummeen Strand SPA and is buffered from the shoreline by an existing road network. There will be no works or works access undertaken within 7m of the intertidal habitat. All works will be confined to the footprint of the proposed development and there will be no access to the foreshore. Due to the separation distance of the site from the shoreline and the shielding effect of the neighbouring properties there is no potential for visual disturbance of SCI bird species within the intertidal bird habitat. The shoreline of the SPA will not be illuminated as a result of the proposed development. The lighting used during the operational phase will be directional and will be
Distribution	No significant decrease in the range, timing and intensity of use of areas by light-bellied brent goose, other than that occurring from natural patterns of variation	

Attribute	Target	Assessment
		controlled by the use of motion sensors which will ensure that there is no light spill outside of the development footprint. The proposed development site is located in an area with existing residential housing in the wider area including along the shoreline, therefore SCI species are likely to be habituated to some degree of general visual and/or noise stimuli in the area. There will be no increase in recreational activity/anthropogenic disturbance to the foreshore as a result of the proposed development. There will be no access to the foreshore as a result of the proposed development. The proposed development site is accessed via and existing access, east of Second Sea Road, and south-east of Gibraltar Road. This road does not offer access to the foreshore. As described in section 5.2.3 in consultation with published advice on the typical types and magnitudes of noise sources associated with construction activities (Cutts et al. 2013), construction activities will not result in disturbance of this species, given the set-back distance of the proposed development site from the intertidal zone and there is no potential for impact in terms of noise disturbance.

6.2.3 Oystercatcher (*Haematopus ostralegus*) [A130]

The conservation objective for this species within Cummeen Strand SPA is:

'*To maintain the favourable conservation condition of Oystercatcher in Cummeen Strand SPA*'.

The attributes and targets for Oystercatcher as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand SPA and an assessment of the proposed development against the attributes and targets for this species is provided in Table 6-12.

Table 6-12 Targets and attributes for Oystercatcher (Haematopus ostralegus) A130

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the

Attribute	Target	Assessment
Distribution	No significant decrease in the range, timing and intensity of use of areas by oystercatcher, other than that occurring from natural patterns of variation	SPA. There will be no effect in terms of loss of supporting habitat or disturbance. The dominant habitat within the proposed development site is dry meadows and grassy verges (GS2) with wet grassland (GS4) and scrub (WS1). According to the site-specific conservation objectives supporting document, the principle supporting habitats for this species within the site is intertidal mud and sandflats (NPWS, 2013). Oystercatchers forage primarily on tidal flats although the species can also be found foraging along non-estuarine coastline or terrestrially. Dry meadows and grassy verges (GS2), wet grassland (GS4) and scrub (WS1) habitat is common and widespread in the wider area of the site. The loss of a small area of these habitats within the proposed development site would not have an adverse effect on the conservation status of this species. As outlined in section 5.2.3 of this report there is no potential for the proposed development to result in disturbance of this SCI species within the SPA. The works are medium scale in nature and short term in duration. Mitigation measures, outlined in Section 5.2.3 of this report, will be adhered to avoid disturbance during the construction stage of the proposed development. The proposed development site is set back 7m from the boundary of Cummeen Strand SPA and is buffered from the shoreline by an existing road network. There will be no works or works access undertaken within 7m of the intertidal habitat. All works will be confined to the footprint of the proposed development and there will be no access to the foreshore. Due to the separation distance of the site from the shoreline and the shielding effect of the neighbouring properties there is no potential for visual disturbance of SCI bird species within the intertidal bird habitat. The shoreline of the SPA will not be illuminated as a result of the proposed development. The lighting used during the operational phase will be directional and will be controlled by the use of motion sensors which will ensure that there is no light spill outside of the development footprint. The proposed development site is located in an area with existing residential housing in the wider area including along the shoreline, therefore SCI species are likely to be habituated to some degree of general visual and/or noise stimuli in the area. There will be no increase in recreational activity/anthropogenic disturbance to the foreshore as a result of the proposed development. There will be no access to the foreshore as a result of the proposed development. The proposed development site is accessed via and existing access, east of Second Sea Road, and south-east of Gibraltar Road. This road does not offer access to the foreshore.

Attribute	Target	Assessment
		As described in section 5.2.3 in consultation with published advice on the typical types and magnitudes of noise sources associated with construction activities (Cutts et al. 2013), construction activities will not result in disturbance of this species, given the 7m set-back distance of the proposed development site from the intertidal zone and there is no potential for impact in terms of noise disturbance.

6.2.4 Redshank (Tringa totanus) [A162]

The conservation objective for this species within Cummeen Strand SPA is:

'*To maintain the favourable conservation condition of Redshank in Cummeen Strand SPA'*.

The attributes and targets for Wetlands as per the Site-Specific Conservation Objectives (SSCOs) for Cummeen Strand SPA and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6-13.

Table 6-13 Targets and attributes for Redshank (Tringa totanus) [A162]

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing.	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. There will be no effect in terms of loss of supporting habitat or disturbance. The dominant habitat within the proposed development site is rank wet grassland and scrub. According to the site-specific conservation objectives supporting document, the

Attribute	Target	Assessment
Distribution	No significant decrease in the range, timing and intensity of use of areas by oystercatcher, other than that occurring from natural patterns of variation.	principle supporting habitats for this species within the site is intertidal mud and sandflats (NPWS, 2013). Redshank may use terrestrial habitats to roost in. Rank wet grassland habitat is common and widespread in the wider area of the site. The loss of a small area of rank grassland within the proposed development site would not have an adverse effect on the conservation status of these species. As outlined in section 5.2.3 of this report there is no potential for the proposed development to result in disturbance of this SCI species within the SPA. The works are medium scale in nature and short term in duration. Mitigation measures, outlined in Section 5.2.3 of this report, will be adhered to avoid disturbance during the construction stage of the proposed development. The proposed development site boundary is set back 7m from the boundary of Cummeen Strand SPA and is buffered from the shoreline by an existing residential house, and a residential house that is currently under construction. There will be no large scale works or works access undertaken within 7m of the intertidal habitat. All works will be confined to the footprint of the proposed development and there will be no access to the foreshore. Due to the separation distance of the site from the shoreline and the shielding effect of the neighbouring properties there is no potential for visual disturbance of SCI bird species within the intertidal bird habitat. The shoreline of the SPA will not be illuminated as a result of the proposed development. The lighting used during the operational phase will be directional and will be controlled by the use of motion sensors which will ensure that there is no light spill outside of the development footprint. The proposed development site is located in an area with existing residential housing in the wider area including along the shoreline, therefore SCI species are likely to be habituated to some degree of general visual and/or noise stimuli in the area. There will be no increase in recreational activity/anthropogenic disturbance to the foreshore as a result of the proposed development. There will be no access to the foreshore as a result of the proposed development. The proposed development site is accessed via a local road. This road does not offer access to the foreshore. As described in section 5.2.3 in consultation with published advice on the typical types and magnitudes of noise sources associated with construction activities (Cutts et al. 2013), construction activities will not result in disturbance of this species, given the 7m set-back distance of the proposed development site from the intertidal zone and there is no potential for impact in terms of noise disturbance.

6.3 Conclusion of Residual Impact Assessment

Based on the above, in view of best scientific knowledge, on the basis of objective information, the proposed development will not adversely affect any QI/SCI as a result of deterioration in water quality, habitat loss or disturbance during either construction or operation of the proposed development. There is no potential for adverse effect on the identified QIs/SCIs and their associated targets and attributes, or on any European Site. All identified pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design.

Taking cognisance of measures to avoid impacts and best practice/mitigation measures incorporated into the project design which are considered in the preceding section, the Proposed project will not have an adverse effect on the integrity of any European site.

The proposed project will not prevent the QIs/SCIs of European Sites from achieving/maintaining favourable conservation status in the future as defined in Article 1 of the EU Habitats Directive. A definition of Favourable Conservation Status is provided below:

> *'conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2;*

The conservation status will be taken as 'favourable' when:

> *'Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
>
> *'The natural range of the species is neither being reduced nor is 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.'*

Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the proposed development will not adversely affect the Qualifying Interests/Special Conservation Interests associated with the following EU sites:

- Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
- Cummeen Strand SPA

7. CUMULATIVE EFFECTS

A search and review in relation to plans and projects that may have the potential to result in cumulative and/or in-combination impacts on European Sites was conducted. This assessment focuses on the potential for cumulative in-combination effects on the European Sites where potential for adverse effects was identified at the screening stage (**Appendix 1**). This included a review of online Planning Registers, development plans and other available information and served to identify past and future plans and projects, their activities and their predicted environmental effects.

7.1.1 Plans

The following development plans have been reviewed and taken into consideration as part of this assessment:

- Sligo County Development Plan 2017 – 2023
- Northern and Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032
- National Biodiversity Action Plan 2017-2021
- Draft Ireland's 4th National Biodiversity Action Plan 2023-2027

The review focused on policies and objectives that relate to Natura 2000 sites and natural heritage. Policies and objectives relating to sustainable land use were also reviewed.

Table 7-1 Review of plans

Key Policies/Issues/Objectives Directly Related to European Sites In The Zone of Influence	Assessment of Potential Impact on European Sites
Sligo County Development Plan 2017 - 2023	
P-NH-1 Protect, sustainably manage and enhance the natural heritage, biodiversity, geological heritage, landscape and environment of County Sligo in recognition of its importance for nature conservation and biodiversity, and as a non-renewable resource, in association with all stakeholders.	The Sligo County Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network and other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified. There will be no impact on designated sites as a result of deterioration in surface/groundwater quality. The proposed development has been designed to 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. As outlined in this report, and the CERWMP accompanying this application, best practice/mitigation measures will be implemented to avoid effects on surface/groundwater quality. There will be no adverse effects on sensitive aquatic ecological receptors listed as features of interest of any designated sites, as a result of protected habitat loss or disturbance to species as a result of the proposed development.
P-NH-3 Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under the EU Habitats Directive, EU Birds Directive, the Wildlife Act and the Flora Protection Order.	
P-NH-4 Take full account of the precautionary principle where uncertainty exists regarding the potential impact of a proposed development on the natural heritage resource	
P-DSNC-1 Protect and maintain the favourable conservation status and conservation value of all natural heritage sites designated or proposed for designation in accordance with European and national legislation and agreements. These include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs), Ramsar Sites, Statutory Nature Reserves. In addition, the Council will identify, maintain and develop non-designated areas of high nature conservation value which serve as linkages or 'stepping stones' between protected sites in accordance with Article 10 of the Habitats Directive.	
P-DSNC-2 Promote the maintenance and, as appropriate, achievement of 'favourable conservation status' of habitats and species in association with the NPWS.	
P-DSNC-3 Carry out an appropriate level of assessment for all development plans, land-use plans and projects that the Council authorizes or proposes to undertake or adopt, to determine the potential for these plans or projects to impact on designated sites, proposed designated sites or associated ecological corridors and linkages in accordance with the Habitats Directive, All appropriate assessments shall be in compliance with the provisions of Part XAB of the Planning and Development Act 2000.	

Key Policies/Issues/Objectives Directly Related to European Sites In The Zone of Influence	Assessment of Potential Impact on European Sites
O-DSNC-1 Identify and protect local areas of high nature conservation value and support the management of landscape features which are of major importance for wild fauna and flora in accordance with Article 10 of the Habitats Directive.	
P-PPAS-1 Ensure that development does not have a significant adverse impact, incapable of satisfactory mitigation on plant, animal or bird species protected by law.	
P-PPAS-2 Consult with the National Parks and Wildlife Service (DAHG) and take account of any licensing requirements when undertaking, approving and authorising development which is likely to affect plant, animal or bird species protected by law.	
P-NCODS-2 Ensure that development proposals, where relevant, improve the ecological coherence of the Natura 2000 network and encourage the retention and management of landscape features that are of major importance for wild fauna and flora as per Article 10 of the Habitats Directive.	
P- INW-3 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.	
P- INW-4 Ensure that floodplains and wetlands within the Plan area are retained for their biodiversity and flood protection value.	
P- INW-5 Ensure that proposed developments do not adversely affect groundwater resources and groundwater-dependent habitats and species.	
O- INW-2 Require that runoff from a developed area does not result in deterioration of downstream watercourses or habitats, and that pollution generated by a development is treated within the development area prior to discharge to local watercourses.	

Key Policies/Issues/Objectives Directly Related to European Sites In The Zone of Influence	Assessment of Potential Impact on European Sites
Northern and Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032	
Regional Policy Objective (RPO) 5.4: Encourage the prioritisation of Site-Specific Conservation Objectives (SSCO) for all sites of Conservation Value, designated in EU Directive (i.e. SACs, SPAs) to integrate with the development objectives of this Strategy.	The spatial and economic strategy was comprehensively reviewed, with particular reference to Policies and Objectives that relate to biodiversity, the Natura 2000 network and other natural heritage interests. The integrity and objectives of designated EU sites are being upheld as there will be no impact on biodiversity as a result of the development. Best practice preventative measures will be implemented to avoid effects on biodiversity as outlined in section 6 of this report.
RPO 5.5: Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is no net contribution to biodiversity loss arising from development supported in this strategy. Conserve and protect designated areas and natural heritage area. Conserve and protect European sites and their integrity.	
RPO 5.7: Ensure that all plans, projects and activities requiring consent arising from the RSES are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate.	
National Biodiversity Action Plan 2017-2021	
Target 6.2 - Sufficiency, coherence, connectivity, and resilience of the protected areas network substantially enhanced by 2020.	The Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to biodiversity. No potential for cumulative impacts when considered in conjunction with the current proposal were identified. There will be no impact on designated sites or biodiversity as a result of the development. Best practice preventative measures will be implemented to avoid effects on biodiversity as outlined in section 6 of this report.
Draft Ireland's 4th National Biodiversity Action Plan 2017-2021	

Key Policies/Issues/Objectives Directly Related to European Sites In The Zone of Influence	Assessment of Potential Impact on European Sites
Objective 2: Meet urgent conservation and restoration needs	The Draft Biodiversity Action Plan was comprehensively reviewed for targets and objectives relating to the Natura 2000 network and other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified. There will be no impact on designated sites or biodiversity as a result of the development. Due to the large scale of the development, best practice preventative measures will be implemented to avoid effects on biodiversity as outlined in section 6 of this report.
Outcome 2A: The protection of existing designated areas and species is strengthened and conservation and restoration within the existing protected are network are enhanced	
Outcome 2B: Biodiversity and ecosystem services in the wider countryside are conserved	

7.1.2 Other Projects

The proposed development was considered in-combination with other plans and projects in the area that could result in cumulative impacts on designated Sites. The online planning system for Sligo County Council was consulted on the 25/08/2023. Additional projects identified in the last 5 years for Knappagh More, Finisklin, Cummeen, Rathonoragh and Ballydoogan, and parts of Rathedmond and Knappagh Beg comprised permissions for the following:

- Permission for a development consisting of the erection of a one and a half storey dwelling house with all associated site works. A Natura Impact Statement (NIS) shall be submitted to the planning authority with the planning application (Planning Ref: 17495).
- Permission for a development consisting of the erection of a one and a half storey dwelling house, site entrance and access road to be shared with an adjoining site and all associated site works. A Natura Impact Statement (NIS) shall be submitted to the planning authority with the planning application (Planning Ref: 17496).
- Permission for development consisting of the construction of 2 no. semi-detached 2 storey dwelling houses, to be numbered 45 & 46 on vacant plot, Phase 6, with connection to public services and all associated works (Planning Ref.: 18238).
- Permission for a development consisting of (1) Demolish (A) Unhabitable dwelling and sheds plus (B) Existing office/hut and container (C) Courier store/toilet block (E) Accessories store/fireplace showroom/workshop. (2) Erect two block of two storey semi-detached dwellings plus block of two storey three terrace houses and all associated site works (Planning Ref: 18263).
- Permission for a development consisting of (1) retention of partially completed extension consisting of ground foundation and rear gable wall, (2) planning permission to complete a ground floor extension to rear and side corner consisting of a sunroom and bathroom utility (28.8m2) (Planning Ref: 18359).
- Permission for the extension of the existing dwelling to include: a first floor extension to the front of the dwelling above the existing single story projection, demolition of the existing conservatory to the rear of the dwelling and construction of a 2 story extension to the rear of the dwelling and all associated site works (Planning Ref: 18393).
- Permission for a development consisting of the retention of a single storey extension (10.7m2) containing an entrance area and shower room (Planning Ref: 18432).
- Permission for a development consisting of retention of a single storey bay window extension to front of dwelling house and all associated site works (Planning Ref: 18438).
- Permission for a development consisting of the demolition of a cold store extension (217 sqm gross floor area) to the rear of existing mixed use building (1,426 sqm gross floor area) with elevation alterations including a new entrance, reconfigured existing entrance with new canopies over both, new window opes, and new exterior finishes to the mixed use building, site works to include reconfigured surface car park to front and rear of building with proposed total of 42 no. car park spaces and 20 no cycle spaces along with all associated site development and landscaping works (Planning Ref: 18458).
- Permission for a development consisting of alterations to the existing dwelling house, including an overall increase to the roof ridge height, changes to external elevations, internal layout changes, minor alterations to the existing foul and surface water drainage systems, minor landscaping and ancillary site works. (Planning Ref.: 18462).
- Permission for a development consisting of a proposed two-storey extension to existing bungalow. Works will also include refurbishment and alterations to existing house with new site entrance and all associated ancillary site works (Planning Ref: 18283).

- Permission for a development consisting of the demolition of existing domestic garage and porch and construction of a new two-storey extension and part single storey extension to existing dwelling house with all associated site works (Planning Ref: 19108).
- Permission for a development consisting of a new Advance Office Building. Permission is sought for signage, new timber post-and-rail site boundaries, car parking, cycle shelter, bin store, landscaping, gas tanks, underground water storage tank, underground pumping station, ESB substation/switch room and all associated site works. A Natura Impact Assessment has been submitted to the Planning Authority with the Planning Application (Planning Ref: 19117).
- Permission for a development consisting of a change of house design to the dwelling previously granted planning permission under reference number PL17/496 (Planning Ref: 19143).
- Permission for a development consisting of a change of house design to the dwelling previously granted planning permission under reference number PL17/495 (Planning Ref: 19144).
- Permission for a development consisting of the erection of a one and a half storey domestic garage (first floor for storage use) and all associated site works. A Natura Impact Statement (NIS) shall be submitted to the planning authority with the planning application (Planning Ref: 19145).
- Permission for a development consisting of the erection of a one and a half storey domestic garage and all associated site works. A Natura Impact Statement (NIS) shall be submitted to the planning authority with the planning application (Planning Ref: 19146).
- Permission for a development consisting of the construction of 1 no. double glazed frosted window in the gable wall at second floor level of the existing end of terrace dwelling (Planning Ref: 19155).
- Permission for a development consisting of a change of use of part of the existing office premises (60m2), for use as a creche, (to connect internally to the adjacent Little Peoples Playworld Creche, application PL 12/70052 refers), and carry out all ancillary site works (Planning Ref: 19166).
- Permission for a development at this site of 4.5 hectares consisting of 1. Refurbishment works to a protected structure listed as No. 43 Ursuline Convent, Finisklin Road, Finisklin in the Sligo and Environs Development Plan 2010 - 2016 Record of Protected Structures. The work will include internal modifications to facilitate a change of use from convent to 16 No. Apartments consisting of 4 no. 1 bedroom units, 7 no. 2 bedroom units and 5 no. 3 bedroom units. Works will also include demolition of a later single storey additions to the south of the convent building, remodellling and landscaping of internal courtyards, elevational upgrade works and provision of a new lift access to all floors. 2. A new 3 storey, 93 bed nursing home and associated ancillary accommodation and circulation. 3. A total of 75 no. residential units consisting of 16 no. - type A - 3 bed semi detached houses, 13 no - type A1 - 2 bed mid terrace houses, 4 no - type A2 - 3 bed semi detached houses, 4 no - type A3 - 2 bed semi detached houses, 16 no - typeB - 3 bed semi detached houses, 9 no - type B1 - 4 bed mid terrace houses, 4 no - type B2 - 4 bed semi detached houses, 3 no - type B3 - 3 bed mid terrace houses, 2 no - type C - 5 bed detached houses, 4 no-type- D - 4 bed semi detached houses. 4. All surface car parking, landscaping, entrance improvements and all associated site works. 5. Refurbishment works to the existing single storey gate lodge which is a protected structure listed as No. 41 and the school building which is a protected structure listed as No. 42. works include change of use to day-centre, demolition of existing single storey extension and construction of extensions circa 270m2 giving a total building area circa 543m2, landscaping and associated site works (Planning Ref: 19183).
- Planning for a development consisting of (i) The construction of an ESB sub-station, (ii) The construction of an external yard/plant area to the rear of the existing building, (iii) The provision of a bicycle storage shed, (iv) The provision of a smoking hut, (v)

Extension to, and completion of access roads to the site, (vi) Demolition of small out-building, (vii) The provision of public lighting on the site, (viii) An underground surface water sewer network including on-site attenuation and petrol/oil interceptor(s) and connections to existing surface water infrastructure, (ix) Corporates signage, (x) 3 no.flagpoles, (xI) 2 no. automated traffic barriers & site fencing/gates, (xii) Elevational changes to existing industrial unit, (xiii) Additional floor space to first floor, (xiv) Porches, and connections to services and all ancillary works (Planning Ref: 19189).

- Permission for a development consisting of (1) construction of a single storey extension to rear and 2 storey extension to the side of existing dweling house with associated works. (2) Retention of porch constructed to front of existing dwelling house with associated works (Planning Ref: 19250).
- Permission for a development consisting of the reconstruction of existing dwelling to include demolition of parts of existing dwelling and construction of new extensions to north, south and east elevations of dwelling (Planning Ref.: 19284).
- Permission for a development consisting of the demolition of an existing side garage and outbuildings, alterations to existing windows and the construction of a new single storey side extension together with all associated site works (Planning Ref: 193).
- Permission for a development consisting of retention of alterations comprised of a) 23 additional carparking spaces at south east site, and b) alterations to south east facade of QA2 Building to north east corner of site (PP 15193 refers), on the site of their existing factory (Planning Ref: 19305).
- Permission for a development consisting of construction of a single storey link corridor extension to the existing Animal Health Facility (Planning Ref: 1932).
- Permission for a development consisting of the erection of a two storey extension to the rear of dwelling house (Planning Ref: 19352).
- Permission for a development consisting of (a) make alterations to elevations on existing dwelling house, including window and door alterations to side and rear elevations (b) build a two storey extension to the side of existing dwelling house, 98 sq.m. (c) upgrade existing wastewater treatment system on site, together with all ancillary site works and services (Planning Ref: 19394).
- Permission for retention of development consisting of one freestanding Totem sign (Planning Ref: 1946).
- Permission for a development consisting of (1) Construct a single-story retail unit, for use as a garden centre, to the northern corner of the existing main 'Brooks' warehouse building with covered horticulture and nursery areas to the rear. (2) Lower boundary wall along Rathedmond Road to the front of the proposed retail unit. (3) Construct a new vehicular entrance onto the Rathemond Road to serve as delievery access to the rear of the new retail unit. (4) Reposition the existing builder's yard entrance and construct a new canopy over the existing security hut serving this entrance, to create additional parking spaces. (5) Install new porch to front entrance of existing retail section at the front of the 'Brooks' main warehouse building. (6) All associated site works (Planning Ref: 19476).
- Permission for the development consisting of the completion of an unfinished housing development on a site of 1.176 hectares forming part of the overall estate of Aylesbury Park, Knappagh More, Sligo. The proposed development consisting of 34 no. terraced houses and 4 no. maisonettes, all ancillary site development works, landscaping and boundary treatments including the provision of public and private open space at Aylesbury Park. Previously granted permission was for PL 17/63 which consisted of 27 no. houses. A Natura Impact Statement has been submitted (Planning Ref.: 19483).
- Permission for a development consisting of the construction of 88 new dwelling units, comprising of; 55 no. 3 bedroom semi-detached houses, 17 no. 4 bedroom semi-detached houses, 2 no. 4 bedroom detached houses, 4 no. 1 bedroom apartments, 8 no. 2 bedroom apartments, and 2 no. 3 bedroom apartments, together with connection to existing public sewer system, creation of public open space, works to

site boundaries, and all other associated site works and services including a pedestrian link to Knappagh Road/Strandhill Road (Planning Ref: 1949).

- Permission for a development consisting of (1) Change of use of the groundfloor of an existing garage to a self-contained apartment (i.e. a granny flat). (2) All associated elevational changes and (3) All associated site works and site services (Planning Ref: 19499).
- Permission for a development consisting of (1) retention of ballstop netting. (2) retention of floodlighting poles (3) retention of boundary fencing and (4) permission for completion of floodlighting (Planning Ref: 19523).
- Permission for a development consisting of retention of conversion of domestic garage to habitable accommodation (Planning Ref: 1961).
- Permission for a development consisting of the retention of a single storey extension (10.7m2) containing an entrance area and shower room (Planning Ref: 1990).
- Permission for a development consisting of the retention of existing detached two storey dwelling house as constructed and also to apply to install a waste water treatment system and associated percolation area (Planning Ref: 20112).
- Permission for a development consisting of the demolition of an existing two storey building and the construction of a new two storey residential building comprising 4 no. apartments and all associated site works and services (Planning Ref: 20113).
- Permission for a development consisting of permission for the following; 1. Retention of conversion of attic space to use as habitable space (bedroom and ensuite) with all associated works. 2. Permission to install frosted window on gable of end of terrace dwelling house at second floor level with associated works (Planning Ref: 20139).
- Permission for a development consisting of permission for retention of the following: 1. Single storey extension to the rear (north western elevation) of existing house as constructed. 2. Reconnection to existing site services & 3. Associated site development works (Planning Ref: 202).
- Permission for a development consisting of the Material Change of Use from Office use to Medical Clinic (Planning Ref: 20267).
- Permission for a development consisting of the demolition and replacement of existing dwelling with new storey dwelling house and associated site works (Planning Ref: 20288).
- Permission for a development consisting of amendments to the previously approved refurbishment and alterations of the existing bungalow planning reference number PL 18/283 (Planning Ref: 20290).
- Permission for a development consisting of the retention of an extension to the rear elevation of an existing dwelling house. The extension comprises a new kitchen and utility, new main ensuite bedroom with built in cupboards and minor changes to interior to accommodate new lounge (Planning Ref: 20302).
- Permission for a development consisting of the construction of a domestic garage to the rear of dwelling (Planning Ref: 20305).
- Permission for a development consisting of demolition of existing garage and rebuilding to house habitable accommodation and construction of a new extension to the rear of existing dwelling house, and all associated site development works (Planning Ref: 20338).
- Permission for a development consisting of retention of a single storey extension constructed to side of dwelling house and also to retain the conversion of the integral garage to living accommodation (Planning Ref: 2034).
- Permission for a development consisting of construction of a single domestic dwelling, detached garage, wastewater treatment system with polishing filter and all associated site works (Planning Ref: 20364).
- Permission for a development consisting of retention of side extension to existing dwelling house (Planning Ref: 20367).
- Permission for a development consisting of a single storey extension to the existing dwelling and all associated site works (Planning Ref: 2037).

- Permission for a development consisting of revisions to previously approved planning application P19/49. The revisions include change of unit types and design on sites 36-53 from 3 bedroom two storey, semi-detached houses to 4 bedroom, three storey, semi-detached houses (Planning Ref: 20397).
- Permission for a development consisting of amendments to previously granted Planning Permission Reference No. PL20/288 for demolition and replacement of existing dwelling with new two-storey dwelling house and associated site works. Amendments include reduction in footprint of dwellinghouse to increase separation distance from Eastern Boundary by one metre and relocation of garage (Planning Ref: 20407).
- Permission for a development consisting of the erection of a single storey extension to the side and a two-storey extension to the rear of existing dwelling, and make alterations to the existing vehicular entrance (Planning Ref: 20425).
- Permission for a development consisting of (a) demolition of existing dwelling house on site, (b) construction of a dwelling house, proprietary effluent treatment unit and soil polishing filter on site, together with all ancillary site works and services (Planning Ref: 2062).
- Permission for a development consisting of the construction of a new link road at the IDA Finisklin Business Park, in the townland of Finisklin, Sligo, Co. Sligo. The works will consist of the construction of a new section of road that will link two existing cul de sacs with all ancillary works including footpaths, street lighting, ducting and drainage (Planning Ref: 2063).
- Permission for a development consisting of the proposed alteration, demolition to part of, and extensions to existing dwelling and garage, and all associated site works and landscaping (Planning Ref: 21108).
- Permission for a development consisting of retention of an existing detached two storey dwelling house as constructed (Planning Ref: 2118).
- Permission for a development consisting of redevelopment at this site of our existing school. Part of the site is in the curtilage of the Ursuline Convent, a protected structure (FPS 43). The proposed development will consist of: - Demolition of ca. 1,556m2 of existing additions, extensions and temporary accommodation buildings; - Construction of New 4,357 m2 part 3-, and 2-, secondary school building, connected to existing 2006 2-storey extenion and Sports Hall building which is to be reconfigured, upgraded and its roof replaced; - Demolition of ca. 341m2 of additions and extensions adjoining historic buildings to be retained; - Refurbishment of and alterations to existing 1,506m2 1930 3-storey building with new lift extension and accessibility interventions; - Conservation works to existing 1860's Chapel and its repurposing as a music room; - Holding works for future use to 1860's building elements adjoining the Convent, a protected structure; - Holding works for future use to the 1860's building, which is proposed to return to being a stand-alone building after demolitions of additions and extensions thereto; - Separate staff car-park with vehicular access from existing northern gate to be modified and associated traffic works; - Upgrade to existing student vehicular drop-off, set-down and parking provisions to east; - Associated hard-surface play areas, landscaping, boundary treatments; - Associated surface water attenuation, foul and surface water drainage connections, site works and ancillary services; - Associated phased construction proposals to facilitate continuance of eduation provision during the works (Planning Ref: 21186).
- Permission for a development consisting of the construction of a single storey extension to side of dwelling house and to retain attic storage area constructed above flat roof of shower room/utility/garage area (Planning Ref: 21188).
- Permission for a development consisting of (A) retain extension to rear of existing dwelling house, (B) retain elevation changes, (C) proposed decommissioning of existing septic tank and upgrade of wastewater treatment system with all ancillary site works and services (Planning ref: 21295).

- Permission for a development consisting of construction of new entrance onto the Western Distributor Road, including a right turn lane off the Western Distributor Road (Planning Ref: 21356).
- Permission for a development consisting of the proposed building extension comprising of an additional 267.08m2 of manufacturing space, the demolition of an existing substation and construction of a new relocated substation with an area of 22.49m2 including all other associated site ancillary works (Planning Ref: 21364).
- Permission for a development consisting of a Sub-division of a part of unit 10 and change of use from light industrial to warehouse with the inclusion of ancillary trade counters (for the sale of building related products principally to trade) the remainder of the building will remain light industrial. Proposed works are as follows: internally the mezzanine level in the rear return will be removed. There would be trade counters inserted along with a proposed new access to the south of the unit. Externally and to the north of the building new bollards on "goods in" entrance; new mechanical plant area; on the south elevation new opening and access doors to service the trade counters and some levelling works along the footpath as well as remarking parking spaces to create a " clear area" and disabled space to the south of the building; block up the entrance on the east elevation. Proposed signage on the south elevation. All other ancillary works to complete the development (Planning Ref: 21386).
- Permission for a development consisting of the construction of a new Waste holding facility comprising of the construction of 2No 50,000l liquid storage tanks, 390sqm of hard standing and a new internal access route including all other associated site ancillary works and landscaping (Planning Ref: 21392).
- Permission for a development consisting of the construction of a 1722 sqm single storey extension to its existing factory premises to comprise the following: (a) re-location of existing storage area to the rear (south west) of the proposed extension which will also facilitate an increase in production floor space (b) the construction of a 278 sqm single storey enclosed service link corridor lean-to structure built along the north west elevation of the main building connecting the extension with the existing production spaces (c) 43 sqm extension to existing free standing ESB MV sub/switchroom block (d) extension to the rear (south west) concrete hardstanding, relocation of rear entrance and the provision of additional car parking and associated site services (Planning Ref: 21403).
- Permission for a development consisting of the following: 1. Removal of existing small store and construction of a new three-bay extension to the rear of our existing factory for Assembly Area/Storage use (floor area - 487.7m2), 2. Connection to existing foul, storm and watermain services, 3. Provision of additional carparking, landscaping and all associated site works (Planning Ref: 21406).
- Permission for a development consisting of (1) the construction of a new garage (2) relocation of existing front entrance (3) and all associated site works (Planning Ref: 21455).
- Permission for a development consisting of replacement of 2 no perimeter wall mounted flood lit signs with 2 no internally illuminated free standing podium signs on lands (Planning Ref: 21471).
- Permission for a development consisting of change of use from warehouse to offices and clean room, floor area 1,080 sq.m. in existing factory. The development will include alterations to the north elevation to provide glazing (Planning Ref: 21473).
- Permission for a development consisting of an extension and alterations to existing factory to provide a warehouse and store. Floor area of proposed extensions: 466sqm. Permission is sought for associated site works at Good4U factory premises (Planning Ref: 21495).
- Permission for a development consisting of the following (1) to retain 4 no. 5m High Canopy Legs, (2) Retain location of 4 no. forecourt pumps (3no. 4 Hose & 1 no. 6 Hose), (3) remove 2no. Pumps, (4) remove 2no. Shipping containers ancillary to existing car wash, (5) remove two-storey portacabin (2no. x 36m2) in use as

temporary seating and offices sited against the south boundary fence, (6) remove 2no. 50,000L overground tanks (Kerosene & Diesel) and 1no. 40,000L overground tank (MGO) and bunding, (7) retain the change of use of the existing building (89.20m2) from light commercial to retail and café, (8) construct first floor (89.20m2) over existing shop to provide ancillary offices and construct 2 storey extension (181.80m2) to provide café and extra seating (9) retail to include off-licence for sale of intoxicating liquor, (10) proposed 4 no. 90,000L underground fuel tanks (2 no. Diesel tanks, 1 no, Kerosene tank and 1 no. Marked Gas Oil Tank), (11) proposed new 24m x 15m canopy at a height of 6m on existing canopy legs, (12) proposed 2no. fuel pumps (1no. 4 hose and 1 no. 6 hose), (13) proposed lighting to canopy and forecourt (14) proposed 6m tall Totem Sign, (15) proposed air, water and vacum service machine, (16) proposed vapour vent pipes on the east boundary, (17) proposed car wash, (18) car parking to facilitate the development, (19) all associated signage to the building and canopy and (20) all ancillary site works (Planning Ref: 21521).

- Permission for a development consisting of the following; (1) the removal of 4 No. existing floodlight pylons, (2) the erection of 2 No. new floodlight pylons with LED type lighting, (3) the upgrade of existing floodlighting to LED type, together with all associated site works (Planning Ref: 2158).
- Permission for a development consisting of the construction of dwelling house and domestic garage and all associated siteworks at junction (Planning Ref: 2162).
- Permission for a development consisting of the demolition of an existing external waste water compound with an area of 43.35m2, a proposed waste compound with an area of 45.92m2, and a bicycle shelter with an area of 49.68m2, to construct a new 1-storey extension on the North elevation of the main building, consisting of gross ground floor manufacturing area of 208.00m2 (Planning Ref: 2182).
- Permission for the a development consisting of the following (1) alterations to existing bungalow of 127.5 sq m (2) demolition of existing rear kitchen, utility, wc and external boiler room consisting of 15.5 sq m (3) provision of a new single-storey extension of 182 sqm, to side of existing bungalow (4) all necessary ancillary & site works to facilitate this development (Planning Ref: 2198).
- Permission for a development consisting of the replacement of existing septic tank serving existing dwelling with new proprietary effluent treatment system and percolation area (Planning Ref: 21350).
- Permission for a development consisting of the demolition of existing attached garage and garden shed. Construction of new garage and extension to existing dwelling house (Planning Ref: 2212).
- Permission for a development consisting of: 1) demolition of existing sun room and 2) erection of single storey extension to the side and to the rear of existing dwelling, 3) retention of existing attic conversion and existing roof light on rear roof, 4) installation of new (additional) rooflight on rear roof, 5) construction of new front porch with ramped access and 6) retention and completion works carried out to site entrance previously granted under Planning Reference Number PP26/01 (Planning Ref: 22148).
- Permission for a development consisting of a proposed two storey office building (gross floor area of 1774.4 m2), adjacent bike shelter (10.5 m2) and a car park comprising 224 parking spaces and all other associated site ancillary and infrastructure works including carpark lighting (Planning Ref: 22151).
- Permission for a development consisting of the repositioning of pedestrian and vehicular access onto Strandhill road, along with new driveway and associated landscaping (Planning Ref: 22179).
- Permission for a development consisting of construction of two-storey extension to rear comprising kitchen on ground floor and shower room on first floor and associated site works (Planning Ref: 22187).
- Permission for a development consisting of erection of single-storey extension to the rear and to the side of existing dwelling, and convert attic space of single storey portion of the dwelling to provide a bedroom, to insert new window openings on the

side elevation and to make alterations to the existing front elevation in order to update the visual appearance of the dwelling, and carry out ancillary site works (Planning Ref.: 22237).

- Permission for a development consisting of construction of glazed porch to front of dwelling house together with all ancillary site works and services (Planning Ref: 22247).
- Permission for a development consisting of change of use of dwelling house for use for short term letting with all associated works (Planning Ref: 22272).
- Permission for a development to the Lyons Mill building, protected structure - NIAH ref: 32006043 consisting of: (1) provision of a single storey removable extension to the south elevation of the Lyons Mill building. The extension consists of a retractable roof with downward opening glazed sides (2) existing service hatch to north elevation onto Lyons Terrace (3) all associated site works including signage (Planning Ref: 22277).
- Permission for a development consisting of the following: amendments to previously granted planning permission reference no PL20/288 for demolition and replacement of existing dwelling with new two-storey dwelling house and associated site works. Amendments include rendered party wall and garage in lieu of brick finish, reduction in height of chimneys, and minor alteration to front elevation (Planning Ref: 22287).
- Permission for a development consisting of a new replacement vehicular entrance and access road (to replace existing substandard entrance/access road) including all associated siteworks (Planning Ref: 22310).
- Permission for a development consisting of the construction of a detached garage to the rear of existing dwelling house, together with all associated site works (Planning Ref: 22313).
- Permission for a development consisting of (1) retention of an existing detached domestic garden shed to the rear of my property with a gross internal floor area of 35m2, (2) permission for the erection of a separate detached domestic shed to the rear of property with a gross internal floor area of 18 m2 (Planning Ref: 2236).
- Permission for a development consisting of (a) single storey sun room extension to side of house (b) roof window to front of house and (c) detached storage shed/fuel store (Planning Ref: 22372).
- Permission for a development consisting of demolition of existing structures on site and the construction of the following: 1) New Spectator Stand at the Church Hill Road end comprising facilities that are ancillary to the function of the football club such as reception, shop, catering facilities, kitchen, hospitality areas, gym, offices, meeting rooms, toilets and storage. 2) New spectator stand in place of the existing Jinks Avenue Stand comprising changing rooms, shop, laundry, toilets and storage. 3) New roof to existing spectator stand at the Railway end and provision of new toilets underneath. 4) Minor amendments to the existing Tracey Avenue stand to accommodate new TV gantry position, screening to the side elevations and toilets. 5) New turnstiles to the rear of the Jinks Avenue stand. 6) New pedestrian access gate to Church Hill Road. 7) Re-configured carparking area with new site lighting, together with all associated landscaping, site services, signage and site works (Planning Ref: 22400).
- Permission for a development consisting of the modification to previously granted planning permission reg ref 19/183 for 93 bed nursing home to consist of modifications to internal layout to suit operational needs and statutory guidelines; omission of ground floor zinc canopy walkway; minor elevational and roof alterations; addition of 3 no twin bedrooms and 6 no single bedrooms and associated works. The development site is within the curtilage of a Protected Structure (Planning Ref: 2262).
- Permission for a development consisting of the installation of external insulation and render, changes to front porch, changing and extending side porch and changing and extending rear of existing dwelling house incorporating a new balcony (Planning Ref: 2267).

- Permission for a development consisting of a change of design of the creche on site 35 as previously approved under Planning Application PL19/49 (Planning Ref: 2280).
- Permission for a development consisting of first floor extension over garage, with conversion of ground floor garage to bedroom, with alterations to the façade consisting of at ground level extension of the low horizontal brick band and at first floor level a Flemish bond brick façade with screening over front facing windows, brick façade continues to the side and rear, main roof to be extended, solar panels to front roof and all ancillary site works (Planning Ref: 2292).
- Permission for a development consisting of rear single and two storey extension to existing dwelling (Planning Ref: 2299).
- Permission for a development consisting of construction of a single storey extension to an existing dwelling and all ancillary works (Planning Ref: 2310).
- Permission for a development consisting of a domestic extension to the rear of the house, modifications and internal re-arrangement of the ground and first floors of the existing dwelling, changes to all existing elevations including new windows, new zinc clad dormers to the front at first floor level, new roof lights and all ancillary site development works (Planning Ref: 2356).
- Permission for construction of detached 2-storey dwelling house, to be numbered 46 on vacant plot, Phase 6, Whitestrand, Aylesbury Park with connection to public services and all associated works at Aylesbury Park, Knappaghmore, Second Sea Road Sligo (Planning Ref: 2360049).
- Permission for, a) Extension & renovation to existing house to include a small extension to the porch, additional floor area to the rear at ground level and a new bedroom at first floor level, b) The removal of the existing hipped roofs and construct new gable ended roofs, c) Elevational changes to all sides of the house, d) Demolition of small storage shed to the rear of the house, e) Widening of existing vehicular entrance to dwelling. 2. Retention permission of existing domestic shed. 3. And all associated site works at Saint Anthony, Knappagh Beg, Knappagh Road, Sligo, Co. Sligo, F91 R82K (Planning Ref: 2360075).
- Permission for the construction of a proposed spectator stand (area circa. 200 sqm) and all associated site works (Planning Ref: 2360156).

The cumulative assessment has taken account of all the above projects but that, in addition we are aware that there are a number of other residential developments likely to be proposed on the adjacent sites. As the details of those potential applications are not currently known, they cannot be fully assessed. Any subsequent application should take account of this proposed development in its own cumulative assessment.

The currently proposed project does not have the potential to result in adverse effects on any European Site when considered on its own and taking into account the measures that are in place to avoid effects on these sites. It therefore, cannot contribute to any cumulative effect, when considered alongside any other permitted, planned or notional developments in the area.

Groundwater

The proposed development is located in an area of high groundwater vulnerability as per the Environmental Protection Agency mapping (https://gis.epa.ie/EPAMaps/) and the Geological Survey Ireland Spatial Resources mapping.

The proposed development will not contribute to any effect on the hydrological regime in the area or to any water pollution effects. Following the detailed assessment provided in the preceding sections, it is concluded that, the proposed development will not result in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the proposed development to contribute to any cumulative adverse effects on any European Site when considered in combination with other plans and projects.

Lighting

Due to the separation distance of the site from the shoreline and the shielding effect of the road and neighbouring properties there is no potential for visual disturbance of SCI bird species within the intertidal bird habitat, nor is there any potential for visual/lighting disturbance to Harbour Seal. The shoreline of the SAC/SPA will not be illuminated as a result of the proposed development. The lighting used during the operational phase as designed by Electric Skys (2023) will be directional, which will ensure that there is no light spill outside of the development footprint. External lighting within the development will include low intensity bulkhead light, installed over the front and rear doors which will be activated by a close-range motion sensor.

The proposed development will not contribute to any lighting disturbance effects on the nearby European Sites. It is concluded that, the proposed development will not result in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the proposed development to contribute to any cumulative adverse effects on any European Site when considered in combination with other plans and projects.

7.1.3 Conclusion of Cumulative Assessment

Following the detailed assessment provided in the preceding sections, it is concluded that, the proposed development will not result in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the proposed development to contribute to any cumulative adverse effects on any European Site when considered in-combination with other plans and projects.

In the review of the projects that was undertaken, no connection, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the proposed development.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified with regard to any European Site.

8. CONCLUDING STATEMENT

This NIS has provided an assessment of all potential direct or indirect adverse effects on European Sites

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction, operation and decommissioning of the proposed development does not adversely affect the integrity of European sites.

Therefore, it can be objectively concluded that the proposed development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site.

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APPENDIX 1

APPROPRIATE ASSESSMENT SCREENING REPORT

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Appropriate Assessment Screening Report

Proposed Residential Development, Second Sea Road, Sligo

DOCUMENT DETAILS

Client:	**Carnarvon Limited**
Project Title:	**Proposed Residential Development, Second Sea Road, Sligo**
Project Number:	**210912-a**
Document Title:	**Appropriate Assessment Screening Report**
Document File Name:	**AASR – 2023.08.25 - 210912 - a**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01	Final	25/08/2023	CS	CM

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1. INTRODUCTION

1.1 Background

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of a proposed residential development at Second Sea Road, Sligo (Grid Reference: G 66666 36575).

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.

The assessment in this report is based on a desk study and field surveys undertaken during May and August – December 2022 and during January and February 2023. It specifically assesses the potential for the proposed development to result in significant effects on European sites in the absence of any best practice, mitigation or preventative measures.

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2021) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010) and the Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin 7, Ireland OPR (2021).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.*
4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*
5. *NPWS (2019), The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3, Version 1.0. Unpublished Report,*

1.2 Appropriate Assessment

1.2.1 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. As per Section 177U of the Planning and Development Act, 2000, as amended 'A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site'. The Competent Authority's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

Where an Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation[1]. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

This Article 6(3) Appropriate Assessment Screening Report has been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 as amended.

1.3 Statement of Authority

A field assessment was undertaken by Claire Stephens (B.Sc. Env, QCIEEM) and Kate O Donnell (B.Sc., QCIEEM) on the 5th May 2022. The site was revisited, and further ecological assessments were undertaken on the 8th August, 19th September, 18th of October 2022, 23rd November 2022, 8th December 2022, 23rd January 2023 and 25th February 2023 by Claire Stephens. This report has been prepared by Claire Stephens. Claire is an experienced ecologist with 5 years professional experience. This report has been reviewed by Colin Murphy (B.Sc., M.Sc., QCIEEM) who has over 3 years' experience in ecological consultancy.

[1] As defined in Section 177T of the Planning and Development Act, 2000 as amended, an NIS means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own and in combination with other plans and projects, for a European site in view of its conservation objectives. It is required to include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for the European site in view of its conservation objectives

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Location

The proposed development site is located east of Second Sea Road, and south-east of Gibraltar Road, Finisklin, Co. Sligo (Grid Ref: G 66666 36575) and to the north of the Aylesbury Park residential development and a residential development under construction at the time of the site visits. The site lies approximately 2km west of Sligo town. The site is accessed from the existing unused entrance located at the west end of the site.

The proposed development site is approximately 4.35 hectares and is currently a greenfield site with an existing residential development to the south and Gibraltar Point and Cummeen Strand to the north-west.

The site is located adjacent to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cumeen Strand SPA.

The site was previously cleared of all vegetation approximately 10 years ago for a proposed development. The lands currently comprise of wet rank grassland, including large amounts of scrub.

The location of the proposed development is shown in Figure 2-1.

2.2 Characteristics of the Proposed Development

2.2.1 Description of the project

The development consists of the following a Large-Scale Residential Development of:

a) A total of 127 No. residential units consisting of
   - 11 No. – Type A– 4 Bed Semi Detached Houses
   - 4 No. – Type A1 – 5 Bed Semi Detached Houses
   - 60 No. – Type B/B1 – 3 Bed Semi Detached/Terraced/Detached Houses
   - 28 No. – Type C – 2 Bed Apartments
   - 10 No. – Type D – 2 Bed Semi Detached/Terraced Dormer Houses
   - 4 No. – Type E – 2 Bed Semi Detached Bungalow Houses
   - 10 No. – Type F/F1 – 4 Bed Detached Houses

b) Demolition of 1 no. unfinished vacant house and garage.
c) Proposed Creche with associated landscaping and surface car parking,
d) On site waste water pumping station
e) All landscaping, boundary treatments, entrance improvements, public lighting, all associated site works and service connections.

The proposed site layout plan is shown in Figure 2-2.

2.2.1.1 Proposed Construction Schedule & Sequence

As outlined within the Construction Environmental Resource &Waste Management Plan (CERWMP) accompanying this planning application, the development is currently programmed to take 24 months to complete the construction works. This will be done on a phased basis. The start date will depend on the grant of planning permission, pre-commencement conditions and procurement. This programme takes due cognisance of the requirements of the likely planning conditions imposed.

As outlined within the CEMWMP the site is primarily a green field site with topsoil and subsoil being the two main site assets. There is also one building and approximately 30m of existing footpaths on the site. The material from the footpaths and inert material from the building can be reused onsite for forming of the site compound.

Any topsoil and scraw on the site will be stripped and stockpiled onsite for use for landscaping purposes onsite, for reuse for lawns etc. This material will be stored to the east of the site compound so it is at the furthest point from any watercourse or drainage ditch. Some sections of the site have limited topsoil so the overall quantum of topsoil available onsite is representative of the amount of topsoil that will be required for landscaping on the scheme.

The site has been designed to minimise the amount of cut and fill as is reasonably practical in line with other design considerations including finished floor levels and flood risk. The average finished floor level of 4.5m is balanced in line with the average existing ground levels across the site. This utilises the existing topography to design out unnecessary waste. Where possible cut material will be used to fill rear gardens and public open spaces to vastly reduce the amount of imported material required.

The design of the scheme also intends to eliminate the need for any temporary roads and any roads to be construction throughout the site will follow the line of the site roads. The site compound location correlates to the phasing plan and the intention is that it will remain in the same location throughout the majority of the works.

Green procurement will become a key consideration in pricing and sourcing materials and suppliers on the project.

A detailed programme and scope of works will be compiled and implemented in due course.

It is intended that the work will be undertaken in the following stages:

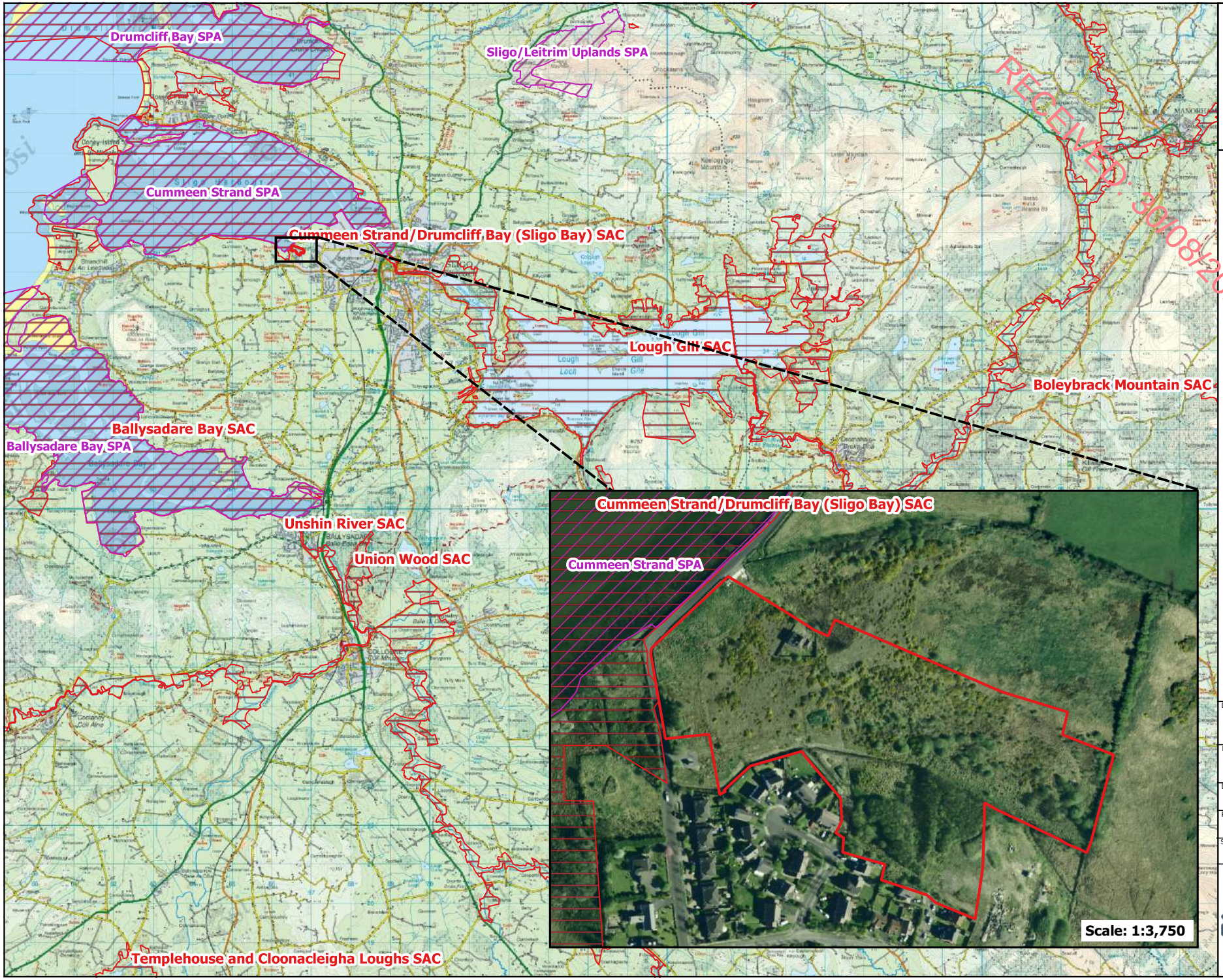
- Site set up and establishment.
- Marking out of site services on the ground.
- Set up environmental control measures.
- Site clearance and demolition of the existing building on the site.
- Construction of the site pumping station.
- Marking out of house locations.
- Digging foundations and groundworks.
- Importing stone and pouring foundations.
- Blockwork.
- Roofing.
- Windows and doors.
- First fix electrical, plumbing and carpentry.
- Internal and external plastering.
- Second fix electrical, plumbing and carpentry.
- Construction of culvert over drainage ditch.
- Finishing external groundworks and landscaping.
- Commissioning and decorating.

The PSCS's proposed sequence of works will take due cognisance of the requirements of any planning conditions and the PSCS's contractual obligations. Environmental control measures will be implemented and maintained during construction works. The works will follow a sequential sequence starting at Phase 1 and working through to Phase 5. The starting point will be confirmed upon review and appointment of the PSCS.

There is an existing drainage ditch located on the site along the southern boundary of the site. This drainage channel has been heavily modified and cleared by other landowners on numerous occasions

and therefore is of reduced environmental significance. The ditch is not present on any EPA drainage maps and is only of local significance. The drain passes under the public roadway via an existing culvert.

The updated design takes account of the IFI request to maintain the ditch in its original form, as far as is reasonably practical while maintaining existing SuDS measures on the site. A box culvert will be installed to form the drainage ditch road crossing adjacent to unit 86. It is proposed that the remaining open section will be left with its natural vegetation. This will prevent erosion of the bank, increase the capacity of the ditch and prevent flooding on the site, up and downstream of the site. The Method Statement for the Culvert over the Drainage Ditch is detailed in Section 6 of the CERWMP.



RECEIVED: 30/08/2023

Map Legend

- Site Boundary
- Special Area of Conservation
- Special Protection Area

N

Drawing Title	Site Location - Knappagh More, Co. Sligo
Project Title	Proposed residential development at Second Sea Rd., Co. Sligo
Drawn By: Claire Stephens	Checked By: Claire Stephens
Project No.: 210912 - a	Drawing No.: Figure 2-1
Scale: 1:125,000	Date: 25-10-2022

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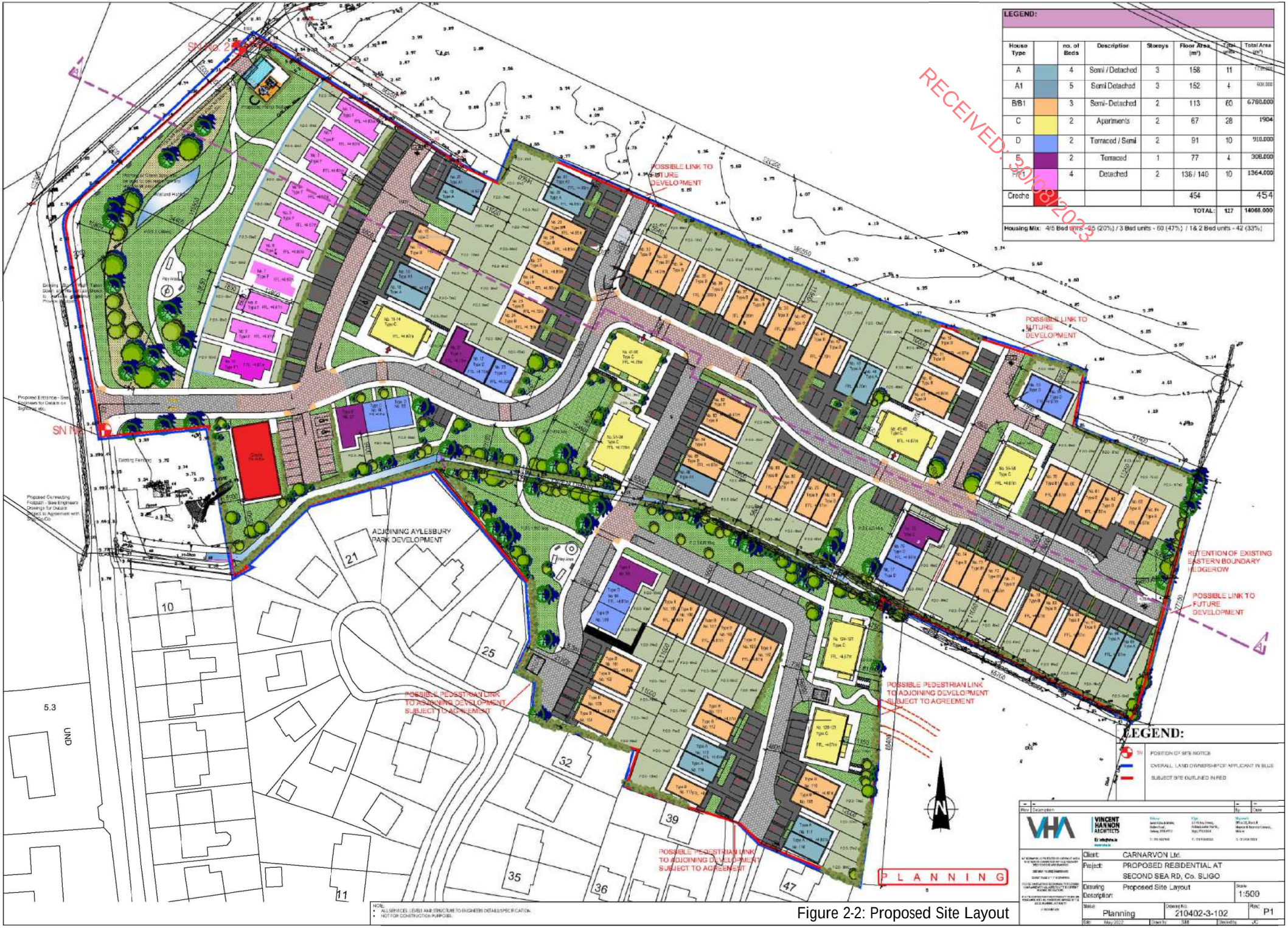


Figure 2-2: Proposed Site Layout

2.3 Site Services

2.3.1 Wastewater and Surface Water

Jennings O'Donovan & Partners Limited, Consulting Engineers prepared a Civils Design Report (August 2023) for the proposed development site, which accompanies this application. The Civils Design Report details the proposal for the foul and storm water associated with the proposed site.

Wastewater

The wastewater from the entire proposed development will be collected throughout the site in the foul sewer network and will then discharge to a newly proposed precast or reinforced concrete pumping station located within the northwestern corner of the site as shown on the Preliminary Foul & Storm Site Layout Plan – *Drawing No, 6476-JOD-XX-ZZ-DR-C-001* and also shown as Figure 2-3. The pumping station will have a pump sump and overflow tank with a storage capacity of 175m^3 will work independently from the existing neighbouring pumping station to the south-west of the site boundary and conforms with current Irish Water standards. Providing additional storage for the development future proofs any potential extensions of dwellings by residents and provides an additional factor of safety.

As shown within Figure 2-3 from the pumping station, it is intended to pump the sewage through a 620m long proposed rising main along the Second Sea Road and discharge to an existing gravity sewer located approximately 0.3km south of the site along the R292 Strandhill Rd.

The Civils Design Report which accompanies this application outlines that:

> *'The pumping station has been designed to cater for 24-hour storage of the effluent produced by the proposed development.*

The proposed storage tank was sized at 175m^3 or 175,000 litres of storage which would allow 1m^3 volume of storage per unit with an additional 47m^{3,} for the total number of units i.e., 128 including the creche, all proposed gradients lie within the requirements as set out in the table in section 3.6 – Hydraulic design of Gravity Sewers of the Irish Water Wastewater Infrastructure Code of Practice

The sewer network has been designed to cater for 6 times the dry weather flow rate.

Storm Water System

The stormwater drainage strategy for the proposed development utilises Sustainable Drainage Systems (SuDS) features to intercept and convey all pluvial surface water runoff. The design of the system aims to attenuate runoff and encourage infiltration.

As detailed within the Civils Design Report

Four storm drainage networks all of which will ultimately discharge into the existing drain have been incorporated into the proposed development. Four attenuation tanks have been incorporated into the storm sewer design (one designated attenuation tank for each network). Flow controls have also been incorporated into each storm network to limit discharge into the drain at or below greenfield runoff rates for numerous storm events.

These four systems as outlined within the Civils Design Report which accompanies this application outlines that these drainage network systems:

> *'have been designed to cater for the developments hardstanding areas (including roofs, footways, roadways and car parking). Of the 4 proposed storm networks, 3 will solely serve the*

development and the other will serve as a flood relief system for the surface water and occasional flooding which occurs on the Gibraltar Road. This area is not currently served by an adequately designed surface water drainage and attenuation system.'

The proposed storm water drainage system has been designed to cater for all surface water runoff from all hard surfaces within the proposed development including roadways, buildings, roofs, parking areas etc.

'Storm water run-off from the internal roads, parking bays and footpaths will be collected by precast concrete gullies including lockable cast iron grating and frames connected to a piped system. Surface water run-off from roof areas will be collected via downpipe connections to the main network.'

The existing open drain along the south-west of the-site will be retained. This drain conveys flow downstream to a bridge culvert and then to the sea. It is proposed to install a Tideflex duckbill non-return valve to the downstream side of the bridge culvert. A stoned land drain will be provided on both sides of the boundary wall (this development and existing residential dwellings) in order to take any natural surface water away from the area. This will be piped into the adjacent land drain along with any existing outfalls from these dwellings. This will also be carried out along the boundary of the creche as required to alleviate the same concern in this area north of the existing open drainage channel.

The details on the type of duckbill valve proposed to be installed on the downstream end of the bridge culvert is included in the Civil Works report which accompanies this planning application.

'This non-return valve will simultaneously prevent backflow of the proposed storm drainage network from high tides and coastal flooding while also allowing the network to continue discharging flow.'

A class 1 petrol/oil interceptor is required to be installed before the connection of all proposed storm networks and their individual outlets to the existing open drain to remove hydrocarbon pollutants. The 4 no. petrol interceptors specified for each storm network serving the development are 2 no. Klargester Bypass Separator NSBE 010 and 2 no. Klargester Bypass Separator NSBE 015 (or similar approved) as shown on the Preliminary Foul & Storm Site Layout Plan – *Drawing No, 6476-JOD-XX-ZZ-DR-C-001* and also shown as Figure 2-3.

2.3.2 Watermain

The water main has been designed in accordance with the Code of Practice for Water Infrastructure. A 100mm PE connection is proposed to be made to the existing water main dead end located to the front entrance of the site on the Second Sea Road. A 25mm PE connection will be made to each dwelling/unit.

The proposed watermain layout for the site is shown in Proposed Watermain Layout Plan *Drawing No, 6476-JOD-XX-ZZ-DR-C-005* and also shown as Figure 2-4.

2.3.3 Flood Risk Assessment (FRA)

A Flood Risk Assessment – Stage III Report (August 2023) was carried out by RPS Group Limited for the proposed development which accompanies this planning application.

This report indicates that the following mitigations will prevent flood risk including the provision of a non-return valve on the existing culvert at the Second Sea Rd to prevent tide waters backwatering the site. Having the finished floor levels designed to levels above the 0.5%AEP MRFS ICWWS levels and the FRA indicates that surface water on the Second Sea Road, caused by over topping, will be alleviated along the western and northern public roadside boundary by the gullies specified. Any water

flowing in a north direction down the Second Sea Road will flow into the existing gullies along the road. The report also states that the introduction of the non-return valve on the existing culvert will not cause an increase in flood risk elsewhere given its close proximity to Garavoge Estuary.

> *'The finished floor levels of buildings will be maintained to a minimum level of 300mm above the design flood level. The minimum proposed finished floor level at the site is 4.67mOD and satisfies the recommended finished floor level of 4.51mOD.'*

As shown on the landscape drawings prepared by The Big Space Limited (TBS) and outlined through the Engineering reports and the Sustainable Drainage Systems (SuDS) measures proposed for the site,

> *'A green open space has been designed to the west of the site which also acts as an additional buffer from coastal flooding. The site has been adequately designed to cater for emergency services. The site entrance has been located to the furthest southwest point on the site which is as far as physically possible away from the sea front.'*

The FRA also explains that the proposed development will not increase flood risk elsewhere as a result of its construction or operation as the project has been designed to best practice guidance with respect to the objectives of the Sligo Development Plan (2017- 2023), and recommends that all proposals as per Jennings O'Donovan Engineers design proposals and layouts including for attenuation, appropriately sized road gullies and the installation of a duckbill valve at the outlet of the drainage channel be incorporated. As noted within the FRA, Rainwater & SuDS Management Plan prepared for the site (August 2023) and Landscaping plan further described below there is extensive use of soft landscaping throughout the site to reduce stormwater runoff and help the rain to percolate naturally into the water table and the drainage channel on the site will be utilised for surface water discharge after attenuation which ultimately greatly slows the rate of water runoff following heavy rainfall.

The FRA concludes that the justification test indicates:

> *'that the development at Second Sea Rd is acceptable as the land zoning in the county development plan suits this type of development, any potential flood risk has been sufficiently managed, and the development is compatible with the achievement of wider planning objectives.'*

2.3.4 Landscape Masterplan

All trees and scrub located within the main development area are required to be removed to facilitate the proposed development however the eastern boundary hedgerow will be retained.

A Landscape Masterplan *Drawing No. 300* and Landscape Design Strategy (August 2022) has been prepared by TBS, Landscape Architects for the proposed residential development at Second Sea Road, Co. Sligo and accompanies this planning application. The proposed plan has been designated to retain the eastern dense hedgerow boundary as a connecting linear feature to the wider environment of habitats including adjoining hedgerows and scrub north and south of the eastern boundary. The proposal includes for the planting of native hedgerows to include hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), blackthorn (*Prunus spinosa*) and field maple (*Acer campestre*) along the site boundary where space allows, as well as ornamental hedging to front gardens including beech (*Fagus sylvatica*) and Portuguese laurel (*Prunus Lusitania*).

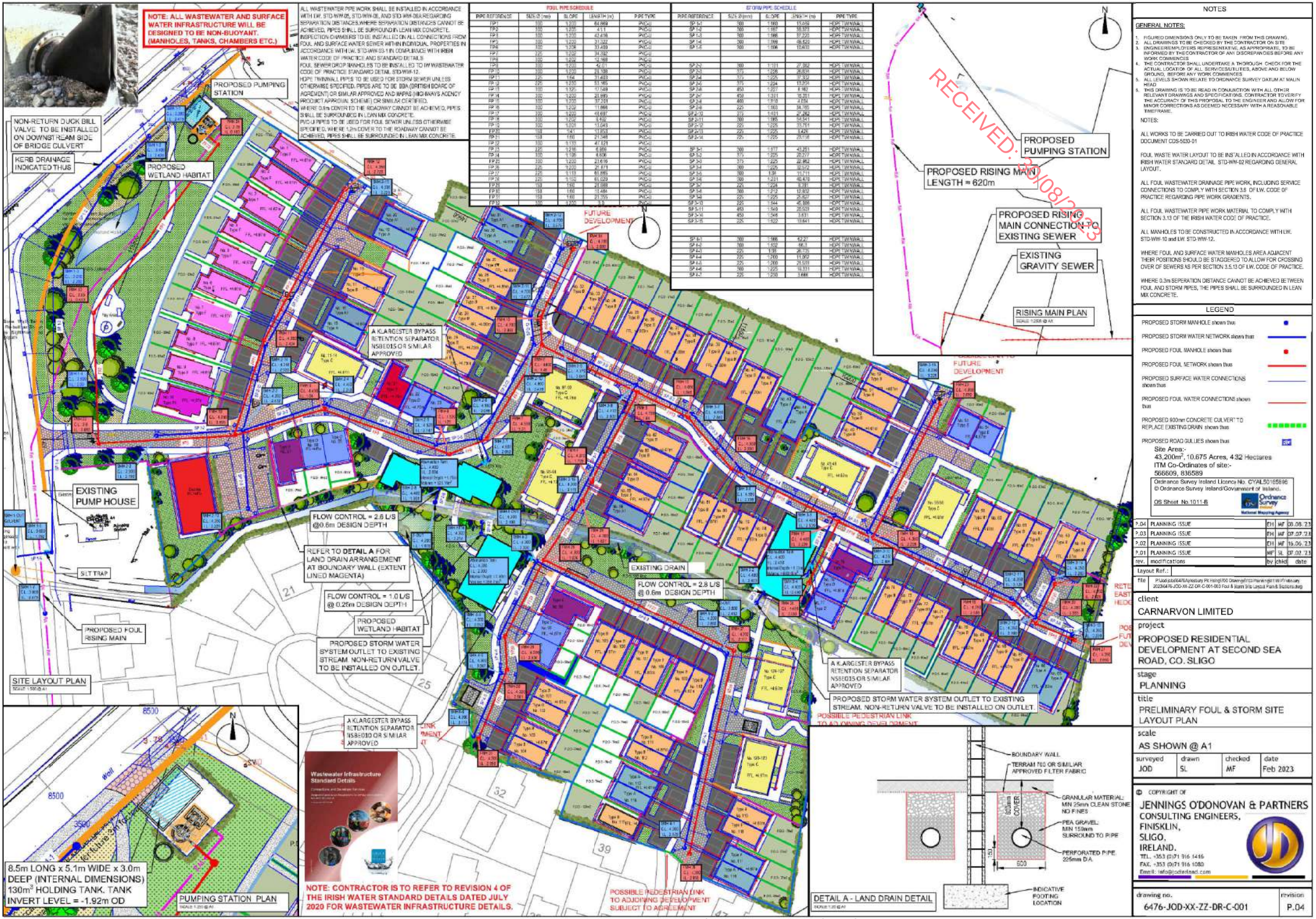
The planting of native hedgerows along the site boundaries where possible and along the drainage channel will increase the connectivity for faunal species, such as bats and birds to the wider environment.

There will be no net loss of treelines and hedgerows or fragmentation of habitats for fauna including bat, bird and invertebrate populations as a result of the proposed development.

The plan also proposes the inclusion of Amenity Open Spaces which will maximise visual amenity while facilitating pedestrian safe access through the site. These areas and others throughout the site incorporate a mix of biodiversity/pollinator friendly tree, shrub species and wildflower planting areas in particular along the western portion of the site. The proposed Landscape Masterplan and associated Landscape Design Strategy as prepared by TBS (August 2023). Additional details can be found within Drawing No. 301 - '*Detail Area 1: Plan & Sections'* and Drawing No. 302 *'Detail Area 2: Plan & Sections'* and the Landscape Design Strategy as prepared by TBS.

The existing drainage ditch on the site will be retained in its natural state as far as is reasonably practical. Enhanced planting of native species will add biodiversity and naturally filter surface water which naturally flows into the drain from open green spaces. This water will filter down to ground and naturally discharge at a gradual rate. A constructed wetland habitat is proposed within the western section of the site which will provide additional habitat for amphibians including common frog and smooth newt which were recorded within pooled water within the development site boundary and along the drainage channel.

In addition to planting operations the installation of bird and bat boxes are proposed as part of the landscaping plan, the numbers of which to be determined by a suitably qualified ecologist. It is proposed that a minimum of 5 bird boxes and 3 bat boxes are erected on suitable retained trees within the Site. Swift bricks will also be incorporated into the proposed development the installation of which will be outlined by the supervising suitably qualified ecologist.



ALL WASTEWATER PIPE WORK SHALL BE INSTALLED IN ACCORDANCE WITH LW. STD-WW-05, STD-WW-06, AND STD-WW-09A REGARDING SEPARATION DISTANCES. WHERE SEPARATION DISTANCES CANNOT BE ACHIEVED, PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.
INSPECTION CHAMBERS TO BE INSTALLED ON ALL CONNECTIONS FROM FOUL AND SURFACE WATER SEWER WITHIN INDIVIDUAL PROPERTIES IN ACCORDANCE WITH LW. STD-WW-03-1 IN COMPLIANCE WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS.
FOUL SEWER DROP MANHOLES TO BE INSTALLED TO LW WASTEWATER CODE OF PRACTICE STANDARD DETAIL STD-WW-12.
HDPE TWINWALL PIPES TO BE USED FOR STORM SEWER UNLESS OTHERWISE SPECIFIED. PIPES ARE TO BE BBA (BRITISH BOARD OF AGREMENT) OR SIMILAR APPROVED AND IMPAS (HIGHWAYS AGENCY PRODUCT APPROVAL SCHEME) OR SIMILAR CERTIFIED.
WHERE 0.6m COVER TO THE ROADWAY CANNOT BE ACHIEVED, PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.
PVC-U PIPES TO BE USED FOR FOUL SEWER UNLESS OTHERWISE SPECIFIED. WHERE 1.2m COVER TO THE ROADWAY CANNOT BE ACHIEVED, PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.

FOUL PIPE SCHEDULE

PIPE REFERENCE	SIZE Ø (mm)	SLOPE	LENGTH (m)	PIPE TYPE
FP1	150	1:150	64.999	PVC-U
FP2	150	1:225	41.1	PVC-U
FP3	150	1:200	47.496	PVC-U
FP4	150	1:200	31.322	PVC-U
FP5	150	1:175	33.499	PVC-U
FP6	150	1:200	34.852	PVC-U
FP7	225	1:225	12.198	PVC-U
FP8	150	1:225	12.198	PVC-U
FP9	150	1:200	40.01	PVC-U
FP10	150	1:200	33.108	PVC-U
FP11	225	1:94	31.403	PVC-U
FP12	225	1:200	53.965	PVC-U
FP13	150	1:175	57.569	PVC-U
FP14	150	1:200	23.699	PVC-U
FP15	150	1:200	57.201	PVC-U
FP16	150	1:200	11.666	PVC-U
FP17	150	1:200	44.697	PVC-U
FP18	150	1:200	9.492	PVC-U
FP19	150	1:201	13.043	PVC-U
FP20	150	1:94	11.853	PVC-U
FP21	150	1:150	21.348	PVC-U
FP22	150	1:133	47.121	PVC-U
FP23	225	1:216	6.956	PVC-U
FP24	150	1:196	9.806	PVC-U
FP25	150	1:200	23.619	PVC-U
FP26	225	1:200	61.671	PVC-U
FP27	225	1:115	65.895	PVC-U
FP28	225	1:150	66.020	PVC-U
FP29	150	1:150	21.888	PVC-U
FP30	150	1:150	19.484	PVC-U
FP31	150	1:150	21.355	PVC-U
FP32	150	1:200	3.5	PVC-U

SURFACE WATER PIPE SCHEDULE

PIPE REFERENCE	SIZE Ø (mm)	SLOPE	LENGTH (m)	PIPE TYPE
SP1-1	300	1:150	15.029	HDPE TWINWALL
SP1-2	300	1:167	58.371	HDPE TWINWALL
SP1-3	300	1:166	57.220	HDPE TWINWALL
SP1-4	300	1:166	66.529	HDPE TWINWALL
SP1-5	300	1:166	10.631	HDPE TWINWALL
SP2-2	300	1:131	27.382	HDPE TWINWALL
SP2-3	375	1:225	26.834	HDPE TWINWALL
SP2-4	375	1:225	9.312	HDPE TWINWALL
SP2-5	375	1:224	13.201	HDPE TWINWALL
SP2-6	450	1:227	7.160	HDPE TWINWALL
SP2-7	450	1:311	16.151	HDPE TWINWALL
SP3-4	450	1:310	4.854	HDPE TWINWALL
SP2-8	225	1:160	34.760	HDPE TWINWALL
SP2-9	225	1:131	21.262	HDPE TWINWALL
SP2-11	300	1:185	58.541	HDPE TWINWALL
SP2-12	225	1:225	33.751	HDPE TWINWALL
SP2-13	225	1:225	4.425	HDPE TWINWALL
SP2-14	225	1:225	25.118	HDPE TWINWALL
SP3-1	300	1:117	43.251	HDPE TWINWALL
SP3-2	375	1:225	20.277	HDPE TWINWALL
SP3-3	375	1:225	22.862	HDPE TWINWALL
SP3-4	300	1:226	32.572	HDPE TWINWALL
SP3-5	300	1:34	31.771	HDPE TWINWALL
SP3-6	300	1:231	46.478	HDPE TWINWALL
SP3-7	225	1:224	8.281	HDPE TWINWALL
SP3-8	300	1:212	12.832	HDPE TWINWALL
SP3-9	225	1:225	25.827	HDPE TWINWALL
SP3-10	225	1:144	46.306	HDPE TWINWALL
SP3-11	450	1:149	20.523	HDPE TWINWALL
SP3-14	450	1:346	3.631	HDPE TWINWALL
SP3-15	225	1:122	10.641	HDPE TWINWALL
SP4-1	300	1:166	42.27	HDPE TWINWALL
SP4-2	300	1:122	66.1	HDPE TWINWALL
SP4-3	225	1:138	26.103	HDPE TWINWALL
SP4-4	225	1:200	11.992	HDPE TWINWALL
SP4-5	225	1:200	21.559	HDPE TWINWALL
SP4-6	300	1:225	19.331	HDPE TWINWALL
SP4-7	225	1:218	1.668	HDPE TWINWALL

NOTES

GENERAL NOTES:

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE.
3. ENGINEER/EMPLOYERS REPRESENTATIVE, AS APPROPRIATE, TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES.
4. THE CONTRACTOR SHALL UNDERTAKE A THOROUGH CHECK FOR THE ACTUAL LOCATION OF ALL SERVICES/UTILITIES, ABOVE AND BELOW GROUND, BEFORE ANY WORK COMMENCES.
5. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD.
6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS. CONTRACTOR TO VERIFY THE ACCURACY OF THIS PROPOSAL TO THE ENGINEER AND ALLOW FOR MINOR CORRECTIONS AS DEEMED NECESSARY WITH A REASONABLE TIMEFRAME.

NOTES:

ALL WORKS TO BE CARRIED OUT TO IRISH WATER CODE OF PRACTICE DOCUMENT CDS-5030-01

FOUL WASTE WATER LAYOUT TO BE INSTALLED IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-02 REGARDING GENERAL LAYOUT.

ALL FOUL WASTEWATER DRAINAGE PIPE WORK, INCLUDING SERVICE CONNECTIONS TO COMPLY WITH SECTION 3.8 OF LW. CODE OF PRACTICE REGARDING PIPE WORK GRADIENTS.

ALL FOUL WASTEWATER PIPE WORK MATERIAL TO COMPLY WITH SECTION 3.13 OF THE IRISH WATER CODE OF PRACTICE.

ALL MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH LW. STD-WW-10 and LW. STD-WW-12.

WHERE FOUL AND SURFACE WATER MANHOLES AREA ADJACENT THEIR POSITIONS SHOULD BE STAGGERED TO ALLOW FOR CROSSING OVER OF SEWERS AS PER SECTION 3.5.13 OF LW. CODE OF PRACTICE.

WHERE 0.3m SEPERATION DISTANCE CANNOT BE ACHIEVED BETWEEN FOUL AND STORM PIPES, THE PIPES SHALL BE SURROUNDED IN LEAN MIX CONCRETE.

LEGEND

- PROPOSED STORM MANHOLE shown thus
- PROPOSED STORM WATER NETWORK shown thus
- PROPOSED FOUL MANHOLE shown thus
- PROPOSED FOUL NETWORK shown thus
- PROPOSED SURFACE WATER CONNECTIONS shown thus
- PROPOSED FOUL WATER CONNECTIONS shown thus
- PROPOSED 900mm CONCRETE CULVERT TO REPLACE EXISTING DRAIN shown thus
- PROPOSED ROAD GULLIES shown thus

Site Area:-
43,200m², 10.675 Acres, 4.32 Hectares
ITM Co-Ordinates of site:-
566609, 836589

OS Sheet No.1011-B

rev.	modifications	by	chkd	date
P.04	PLANNING ISSUE	EH	MF	08.08.23
P.03	PLANNING ISSUE	EH	MF	07.07.23
P.02	PLANNING ISSUE	EH	MF	16.06.23
P.01	PLANNING ISSUE	MF	SL	07.02.23

Layout Ref.: :

file P:\Jod\Jobs\6476\Aylesbury Pl Hsngl\100 Drawings\03 Planning\11 Rl P\February 2023\6476-JOD-XX-ZZ-DR-C-001-003 Foul & Storm Site Layout Plans & Sections.dwg

client
CARNARVON LIMITED

project
PROPOSED RESIDENTIAL DEVELOPMENT AT SECOND SEA ROAD, CO. SLIGO

stage
PLANNING

title
PRELIMINARY FOUL & STORM SITE LAYOUT PLAN

scale
AS SHOWN @ A1

surveyed	drawn	checked	date
JOD	SL	MF	Feb 2023

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Email: info@jodireland.com

drawing no. 6476-JOD-XX-ZZ-DR-C-001

revision P.04

Figure 2-3 Proposed Drainage Layout

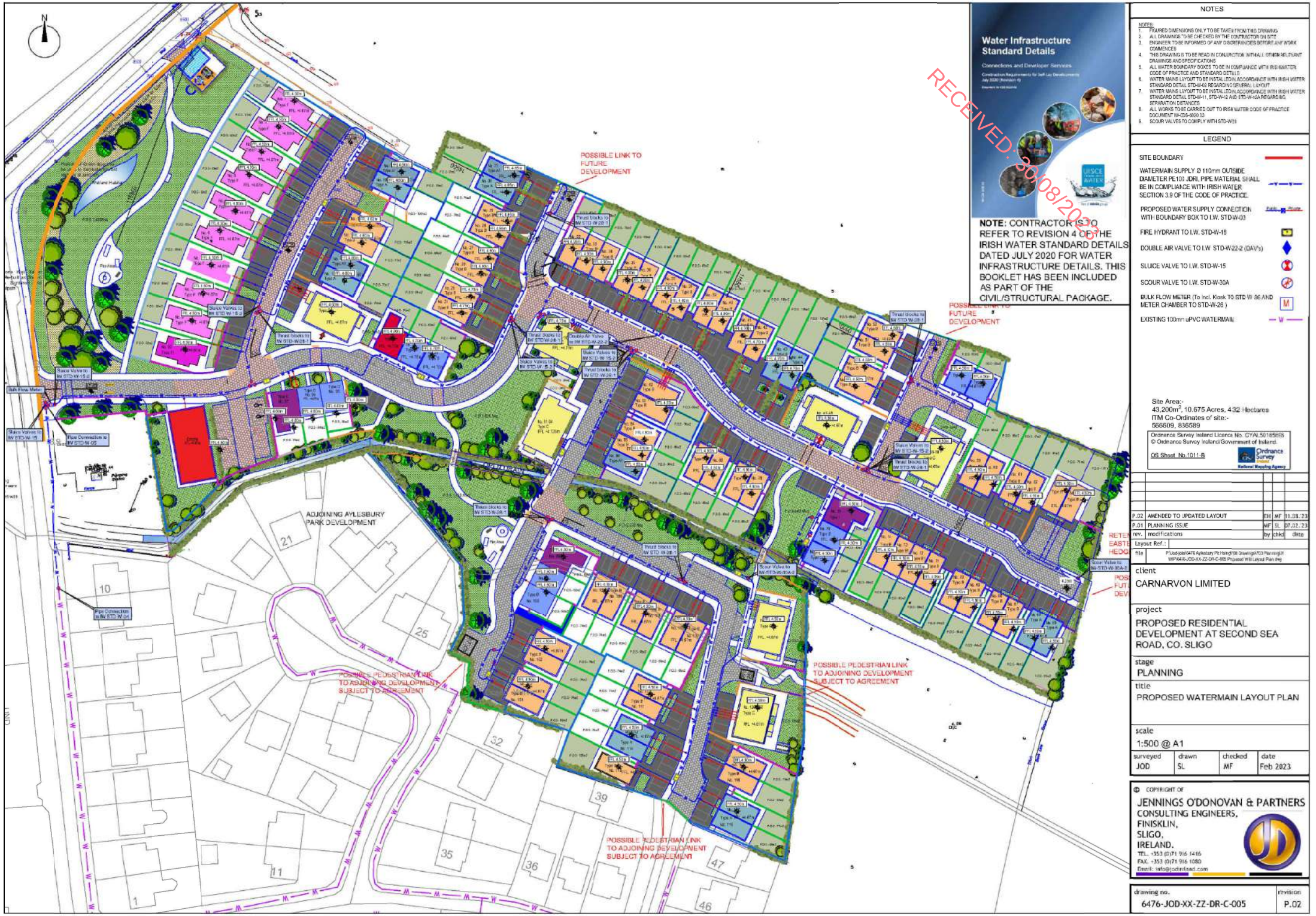


Figure 2-4 Proposed Watermain Layout

2.3.5 Description of the Baseline Ecological Environment

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological Baseline conditions are those existing in the absence of proposed activities (CIEEM, 2018 V1.1, updated September 2019).

A multidisciplinary walkover survey was conducted on the 5th May 2022 by Claire Stephens and Kate O' Donnell of MKO in line with NRA (2009) guidelines. The habitat classifications and codes correspond to those described in '*A Guide to Habitats in Ireland*' (Fossitt, 2000). All habitats within and adjacent to the works area were readily identifiable during the site visit. During the survey, the site was also searched for species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011).

Following on from the multidisciplinary survey there was a requirement for additional dedicated floral or faunal surveys to be undertaken due to the nature of the habitats within the sites and the nature and scale of the proposed development, located adjacent to the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA.

The site was revisited, and multi-disciplinary ecological walkover surveys were conducted in accordance with NRA Guidelines on Ecological Surveying. Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009). These further ecological assessments were undertaken on the 8th August, 19th September, 18th of October 2022, 23rd November 2022, 8th December 2022 , 23rd of January 2023 and 25th February 2023 by Claire Stephens. The surveys for the Proposed Development were undertaken at different times of the year, therefore cover the optimal survey periods for different ecological receptors. The survey undertaken in May, August and September 2022 fall within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith et al., 2011). The multi-disciplinary ecological walkover surveys comprehensively covered the entire study area.

Habitats were classified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011).

The site is accessible via the existing blocked up access gate off Second Sea Road to the west classified as ***buildings and artificial surfaces (BL3).*** The site is bounded to the west by an existing stone wall, classified as ***stone walls and other stonework (BL1)*** (Plate 2-1). The western boundary contains a group of Sitka spruce (*Picea sitchensis*) trees (T1 to T8 as per the Tree Survey report) with a small section of hawthorn (*Crataegus monogyna)* hedging categorised as ***hedgerow (WL1)*** with an ivy (*Hedera helix*), common hogweed (*Heracleum sphondylium*), hart's-tongue fern (*Asplenium scolopendrium*) and spear thistle (*Cirsium vulgare*) understory along the existing ***stone wall (BL1)*** road boundary.

The majority of the site is made up of a mosaic of rank grassland classified as ***dry meadows and grassy verges (GS2)*** with ***wet grassland (GS4), scrub (WS1)*** and scrub transitioning into immature woodland. Some poor fen ***poor fen and flush (PF2)*** qualities remain however the development site has greatly changed and deteriorated since the original *Low* value wetland habitat evaluation as per Wilson et al. (2009) as part of the National Wetland surveys of Ireland. An existing bare area along the drainage channel partially marking the southern boundary is classified as ***spoil and bare ground (ED2)*** and ***recolonising bare ground (ED3)*** with wet grassland species including sharp flowered rush (*Juncus acutiflorus*), hard rush (*Juncus inflexus*) and yellow flag iris (*Iris pseudacorus*) (Plate 2-2). Species recorded in these rank areas included butterbur (*Petasites hybridus*), smooth sow thistle (*Sonchus oleraceus*), Yorkshire fog (*Holcus lanatus*), false oat grass (*Arrhenatherum elatius*), rosebay willowherb (*Chamaenerion angustifolium*). Curled dock *(Rumex crispus* ssp. *Crispus*), dandelion (*Taraxacum officinale*), common centaury (*Centaurium erythyraea*), ragwort (*Senecio jacobaea*), selfheal (*Prunella vulgaris*), knapweed (*Centaurea nigra*), clovers (*Trifolium* spp.), cock's-foot (*Dactylis glomerata*), wild

angelica (*Angelica sylvestris*), ribwort plantain (*Plantago lanceolata*), yarrow (*Achillea millefolium*), devils bit scabious (*Succisa pratensis*), lesser stitchwort (*Stellaria graminea*) and black medick (*Medicago lupulina*). Fairy flax (*Linum catharticum)* was also recorded in the western half of the site both in dry and wetter habitats.

Wetter rank areas and species included meadowsweet (*Filipendula ulmaria*), silverweed (*Potentilla anserina*), carnation sedge (*Carex panicea*), common sorrel (*Rumex acetosa),* common sedge (*Carex nigra*) and brookweed (*Samolus valerandi*) and moss species.

A number of calcicole species were recorded in small areas within the disturbed ground within the western half of the site. Recolonising vegetation included oxeye daisy (*Leucanthemum vulgare*), quaking grass (*Briza media)*, glaucous sedge (*Carex flacca*) and common spotted orchid (*Dactylorhiza fuchsia*).

Scrub formed numerous stands throughout the site particularly on higher ground which was drier than the surrounding wet grassland which in the past may have been classified as a poor fen habitat. The scrub was predominantly composed of gorse (*Ulex europaeus*) and willow (*Salix* sp..). Bittersweet (*Solanum dulcamara*), cleavers (*Galium aparine*) and hedge bindweed were recorded trailing through some areas of scrub. Areas of what were once identified as ***poor fen and flush (PF2)*** habitat which now most closely identifies as ***wet willow-alder-ash woodland (WN6)*** and upon which groupings of young naturally regenerated and semi-mature unmanaged trees are also present within the scrub close to the south-eastern boundary which is transitioning into ***wet willow-alder-ash woodland (WN6)*** of the site includes goat willow/great sallow (*Salix caprea*) and alder (*Alnus glutinosa*) (Plate 2-3).

Extensive poaching associated with driven tracks in areas of wet ground had created areas of ***spoil and bare ground (ED2).*** A number of pooled areas within the grassland habitats were identified with yellow flag and branched bur-reed (*Sparganium erectum*) with small patches corresponding with ***marsh (GM1)*** habitat as well two swamp areas dominated by common reed (*Phragmites australis*) and bulrush (*Typha latifoli*a) along the northern boundary which most closely identify as ***reed and large sedge swamps (FS1)*** (Plate 2-3, 2-4 and 2-5). Additional species recorded included along the edges of the marshy ground included marsh foxtail (*Alopecurus geniculatus*), marsh woundwort (*Stachys palustris*), marsh willowherb (*Epilobium palustre*), meadow vetchling (*Lathyrus pratensis*), water mint (*Mentha aquatica),* great horsetail (*Equisetum telmateia*), marsh helleborine (*Epipactis palustris*), perennial sow thistle (*Sonchus arvensis*), lesser spearwort (*Ranunculus flammula*), creeping buttercup (*Ranunculus repens*), yellow rattle (*Rhinanthus minor*), perforate St John's-wort (*Hypericum perforatum*), common valerian (*Valeriana officinalis*) and redshank (*Persicaria maculosa*). (*Sonchus arvensis)* and grass-of-parnassus (*Parnassia palustris*) was also recorded in small patches of drier ground at the edge of these damp habitats.

A dense ***hedgerow (WL1)/treeline (WL2)*** exists along the eastern boundary dominated by hawthorn, willows and bramble *(Rubus fruticosus agg.)* and an individual ash (*Fraxinus excelsior*) (Plate 2-6). Common nettle (*Urtica dioica*) was also abundant along the eastern boundary hedgerow.

An unfinished derelict dwelling and garage which is to be demolished, is present at the northern boundary of the proposed development site. The house, garage, surrounding wall and driveway is classified as ***buildings and artificial surfaces (BL3).*** Its surrounding area includes a small overgrown garden classified as ***dry meadows and grassy verges (GS2)*** (Plate 2-8). Habitats surrounding the existing dwelling included willow and gorse dominated scrub with species including hedge bindweed (*Calystegia sepium*), as well as rush species including saltmarsh rush (*Juncus gerardii*).

An existing drain abuts a portion of the southern boundary and outfalls to the Garavoge Estuary through a culvert under the Second Sea Rd. The drainage channel is partially culverted along the eastern third of the site with an open drainage channel with a low perceptible flow in a westerly direction categorised as a ***drainage ditch (FW4)*** was recorded along the southern and south-western boundary of the development site. With the exception of minor land drainage channels within the southern half of the site, no other watercourses were identified within the proposed development site (Plate 2-2). Species recorded in the wet grassland habitat listed above as well as ragged robin (*Silene flos-cuculi),* sweet vernal-grass (*Anthoxanthum odoratum),* purple loosestrife (*Lythrum salicaria),* alder and willow seedlings as, gorse

encroachment from the north occur along the rank vegetation north of the drainage channel which abuts the southern boundary of the site.

Small areas of ***ornamental/non-native shrubs (WS3)*** including box (*Buxus sempervirens*), butterfly bush (*Buddleia davidii*) and garden escapes occur within the site boundary in particular within the southern and south-eastern boundaries which back onto existing residential developments.

No protected flora listed on Annex II of the Habitats Directive were recorded within or adjacent to the proposed development site boundary.

No Third Schedule Invasive Alien Species (IAS) of the European Communities Regulations 2011 (S.I. 477 of 2015) were recorded within the study site. Butterfly bush (*Buddleia davidii*) which is non-native but not listed on the third schedule was recorded within the southern half of the site and a small stand of montbretia (*Crocosmia x crocosmiiflora*) also an invasive species but not listed on the Third Schedule, was recorded north of the existing dwelling house to be demolished.

Plate 2-1 Rank grassland and wet grassland habitat to the west, bounded by the existing stone wall. Second Sea Road and Cummeen Strand to the west of the development site boundary. Sitka spruce treeline along the south-western roadside boundary.

Plate 2-2 Southern boundary, culverted drainage channel to the east along the site boundary of an ongoing construction of a residential development to the south and open drainage channel to the west with a low perceptible flow in a westerly direction Wet grassland/marshy habitat and spoil and bare ground along drainage channel

Plate 2-3 Areas of dense gorse and willow dominated scrub throughout the site, with areas of scrub transitioning into wet willow-alder-ash woodland (WN6) includes willow and alder.

Plate 2-4 Pooled areas within the grassland habitats, with marshy areas classified as Marsh/Bare ground (GM1/ED2) and areas of reed and large sedge swamps dominated by common reed (Phragmites australis) and bulriush/reedmace. Poached areas were classified as spoil and bare ground (ED2)

Plate 2-5 Marsh (GM1) habitat within willow scrub understory towards the south of the site facing south

Plate 2-6 Dense hedgerow (WL1)/treeline (WL2) along the eastern boundary

Plate 2-7 Wet grassland habitat with small areas of reed and large sedge swamp habitat along the northern boundary of the site

Plate 2-8 Dwelling and garage to be demolished surrounded by overgrown lawn and concrete walls

2.3.6 Fauna

No evidence of Annex II protected species associated with Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC was recorded within or adjacent to the site boundary. The detailed Conservation Objectives for Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC were reviewed as part of this assessment.

The nearby Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC is designated for the following species

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

The partially culverted drainage channel which abuts the site and along the southern boundary of the proposed development site offers no supporting habitat for these species. There is no suitable habitat for *Vertigo angustior* (Narrow-mouthed Whorl Snail) within the proposed development site. Optimal habitat for this species within the SAC is defined as fixed dune and species-rich grassland dominated with a vegetation height of 10-30cm.

There is no suitable habitat for Harbour seal within the proposed development site. This marine mammal species occurs in estuarine, coastal and offshore waters but also utilises a range of intertidal and terrestrial habitats for important life history functions such as breeding, moulting, resting and social activity. When hauling out ashore harbour seals tend to prefer comparatively sheltered locations and use sheltered bays, inlets and enclosed estuaries.

An assemblage of common bird species was recorded during the field survey. No species listed as a Special Conservation Interest species of Cummeen Strand SPA were recorded within the site boundary

during any of the site visits undertaken. No significant foraging or roosting habitat for the listed SCI bird species was recorded within the proposed works site boundary. However due to the proximity of the development to the designated site additional dedicated wintering bird surveys were deemed necessary. Special Conservation Interest species of the SPA were identified utilising Cummeen Strand, and its associated marine habitats and a Wintering Bird Survey Report (MKO, 2023) accompanies the planning application.

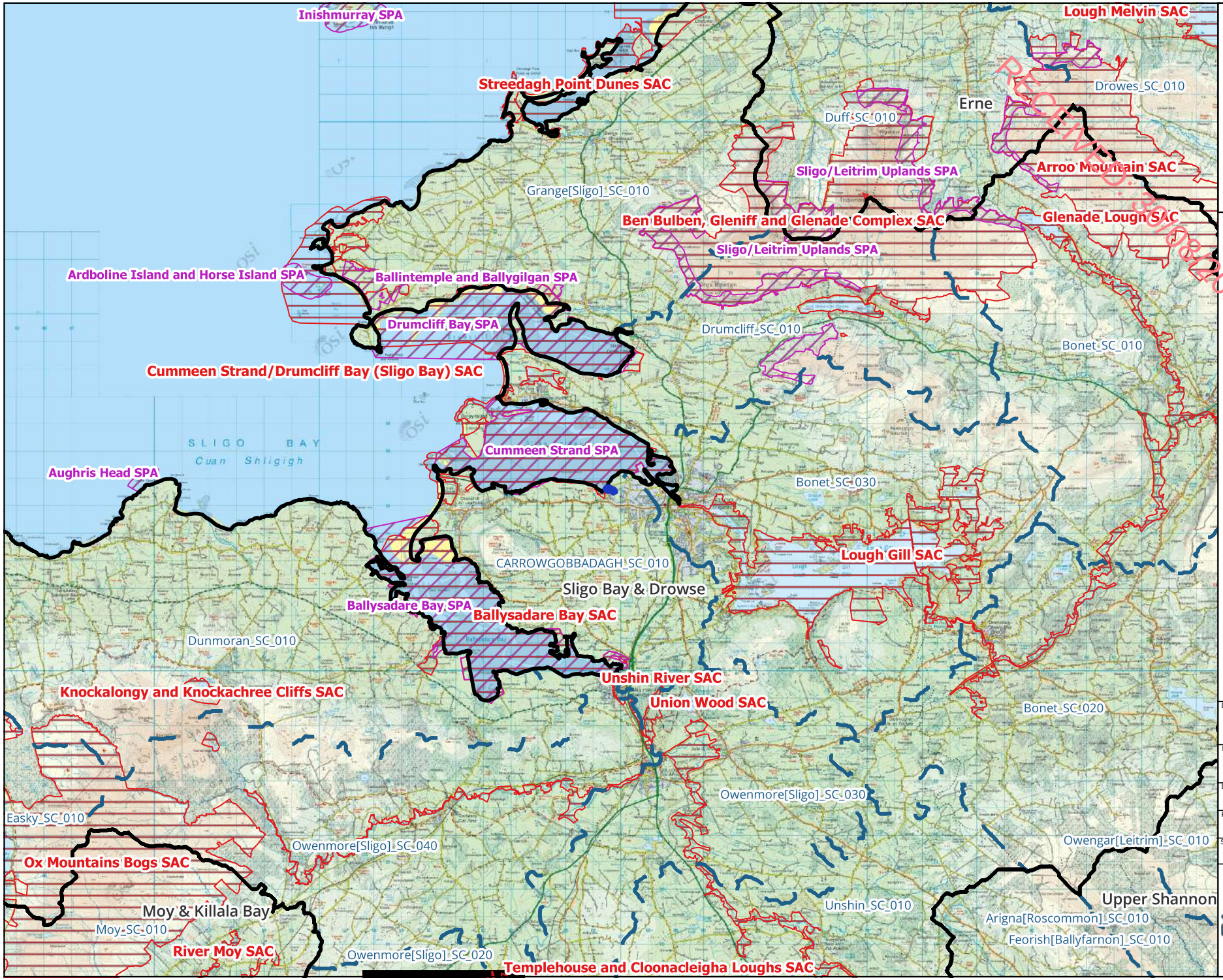
No QI's or SCI's associated with any other European site were recorded within the proposed development site boundary.

3. IDENTIFICATION OF RELEVANT EUROPEAN SITES

3.1 Identification of the European Sites within the Likely Zone of Impact

The following methodology was used to establish which European Sites are within the Likely Zone of Impact of the proposed development:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) on the 25/08/2023. The datasets were utilized to identify European Sites which could feasibly be affected by the proposed development.
- All European Sites that could potentially be affected were identified using a source-pathway -receptor model. To provide context for the assessment, European Sites surrounding the development site are shown on Figure 3-1. Information on these sites according to the site-specific conservation objectives is provided in Table 3-1. Sites that were further away from the proposed development were also considered and in this case no complete source-pathway-receptor chain for significant effect was identified for any other European site.
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the proposed development and any European Sites. The hydrological catchments are also shown in Figure 3-1.
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation to the identification of connectivity between proposed development and Special Protection Areas. The guidance takes into consideration the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects.
- Table 3-1 provides details of all relevant European Sites as identified in the preceding steps and assesses which are within the likely Zone of Impact. The assessment considers any likely direct or indirect impacts of the proposed development, both alone and in combination with other plans and projects, on European Sites by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this screening assessment.
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report 25/08/2023.
- The potential for the proposed development to result in cumulative impacts on any European Sites in combination with other plans and projects was considered in the Assessment that is presented in Table 3-1. Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact and further assessment is required.



RECEIVED 30/08/2023

Map Legend

- Site Location
- Special Area of Conservation
- Special Protection Area
- WFD Catchments
- WFD Sub-catchments

N

Drawing Title: European Designated sites within the Likely Zone of Impact

Project Title: Proposed residential development at Second Sea Rd., Co. Sligo

Drawn By	Checked By
Claire Stephens	Claire Stephens
Project No.	Drawing No.
210912 - a	Figure 3-1
Scale	Date
1:180,000	25-06-2023

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Table 3-1 Identification of Designated sites within the Likely Zone of Impact

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Special Areas of Conservation (SAC)			
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC **Distance:** Immediately adjacent to the development site	› 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] › *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] › *Petromyzon marinus* (Sea Lamprey) [1095] › *Lampetra fluviatilis* (River Lamprey) [1099] › *Phoca vitulina* (Harbour Seal) [1365]	Detailed conservation objectives for this site, (Version 1, September 2013), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect. There are no Annex I habitats in the footprint of the proposed development. Indirect impacts on the following QIs can be ruled out due to the terrestrial nature of the habitats/species, the distance from the proposed development area and the absence of a complete source-pathway-receptor chain: *Juniperus communis* formations on heaths or calcareous grasslands [5130] *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] The construction and operational phase of the proposed development may result in pollution to surface and waters via the drainage channel along the southern boundary which provides potential surface water connectivity to the SAC and percolation of polluting materials through the bedrock underlying the site. A potential pathway for indirect effects on the following aquatic QI's species/habitats was identified in

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			the form of deterioration of water quality and supporting habitats for aquatic fauna: 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] Petrifying springs with tufa formation (Cratoneurion) [7220] *Petromyzon marinus* (Sea Lamprey) [1095] *Lampetra fluviatilis* (River Lamprey) [1099] *Phoca vitulina* (Harbour Seal) [1365] The potential for disturbance was also identified with regard to Harbour Seal. **The potential for significant effects on these habitats and species is therefore considered further in this document.**
Lough Gill SAC **Distance:** 2.4km	› Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150]	Detailed conservation objectives for this site, (Version 1, December	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect.

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› 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]	2021), were reviewed as part of the assessment and are available at www.npws.ie	This SAC is located 2.4km east of the proposed works area. Indirect impacts can be ruled out due to the development being located in a separate hydrological sub-catchment and groundwater catchment to the SAC, the distance from the proposed development area and the absence of a complete source-pathway-receptor chain. No source-pathway-receptor chain for impact was identified between the site of the proposed development site and the habitats and species for which this site has been designated. Potential for direct or indirect impact on the European Site can be excluded. **This site is not within the likely zone of impact and no further assessment is required.**
Ballysadare Bay SAC **Distance:** 5.3km	› Estuaries [1130] › Mudflats and sandflats not covered by seawater at low tide [1140] › Embryonic shifting dunes [2110]	Detailed conservation objectives for this site, (Version 1, November 2013), were reviewed as part of the assessment and	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect.

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] › Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] › Humid dune slacks [2190] › *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] › *Phoca vitulina* (Harbour Seal) [1365]	are available at www.npws.ie	This SAC is located 5.3km south and southwest of the proposed works area. No source-pathway-receptor chain for impact was identified between the site of the proposed development site and the habitats and species for which this site has been designated. Potential for direct or indirect impact on the European Site can be excluded. **This site is not within the likely zone of impact and no further assessment is required.**
Unshin River SAC **Distance:** 6.8km	› 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]	Detailed conservation objectives for this site, (Version 1, December 2021), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect. This SAC is located 6.8km south of the proposed works area. No source-pathway-receptor chain for impact was identified between the site of the proposed development site and the habitats and species for which this site has been designated. Potential for direct or indirect impact on the European Site can be excluded. **This site is not within the likely zone of impact and no further assessment is required.**

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› *Salmo salar* (Salmon) [1106] › *Lutra lutra* (Otter) [1355]		
Union Wood SAC **Distance:** 7.2km	› Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]	Detailed conservation objectives for this site, (Version 1, January 2021), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect. This SAC is located 7.2km south of the proposed works area. This site is designated for a terrestrial habitat. No source-pathway-receptor chain for impact was identified between the site of the proposed development site and the habitat for which this site has been designated. Potential for direct or indirect impact on the European Site can be excluded. **This site is not within the likely zone of impact and no further assessment is required.**
Ben Bulben, Gleniff and Glenade Complex SAC **Distance:** 7.5km	› 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]	Detailed conservation objectives for this site, (Version 1, December 2021), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect. This SAC is located 7.5km north and north-east of the proposed works area. No source-pathway-receptor chain for impact was identified between the site of the proposed works area and the habitats and species for which this site has been designated. Potential for direct

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› *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]		or indirect impact on the European Site can be excluded. **This site is not within the likely zone of impact and no further assessment is required.**

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› Calcareous rocky slopes with chasmophytic vegetation [8210] › *Vertigo geyeri* (Geyer's Whorl Snail) [1013] › *Lutra lutra* (Otter) [1355]		
Streedagh Point Dunes SAC **Distance:** 12.9km	› 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]	Detailed conservation objectives for this site, (Version 1, March 2015), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SAC and there is no potential for direct effect. This SAC is located 12.9km north of the proposed works area. No source-pathway-receptor chain for impact was identified between the site of the proposed development site and the habitats/species for which this site has been designated. Potential for direct or indirect impact on the European Site can be excluded. **This site is not within the likely zone of impact and no further assessment is required.**
Special Protection Area (SPA)			

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Cummeen Strand SPA (004035) **Distance:** approx. 7m	› Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] › Oystercatcher (*Haematopus ostralegus*) [A130] › Redshank (*Tringa totanus*) [A162] › Wetland and Waterbirds [A999] ›	Detailed conservation objectives for this site, (Version 1, September 2013), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SPA and there is no potential for direct effect. The construction and operational phase of the proposed development may result in pollution to surface and waters via the drainage channel which runs through the site which provides potential surface water connectivity to the SAC, and along the southwestern boundary and percolation of polluting materials through the bedrock underlying the site. A potential pathway for indirect effects on the SCI wetland habitat was identified in the form of deterioration of water quality and supporting wetland habitat for the listed SCI species. Given the proximity of the proposed site to the SPA, the potential for disturbance, displacement and habitat loss to SCI species was also identified. **The potential for significant effects on these SCI habitats and species is therefore considered further in this document.**

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Drumcliff Bay SPA (004013) **Distance:** 4km	› Sanderling (*Calidris alba*) [A144] › Bar-tailed Godwit (*Limosa lapponica*) [A157] › Wetland and Waterbirds [A999] ›	Detailed conservation objectives for this site, (Version 1, September 2013), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SPA and there is no potential for direct effect. This SPA is located 4km north of the proposed development site. Given the intervening distance between the proposed development site and this SPA, the potential for habitat loss, displacement and disturbance related impacts to the listed SCI populations can be ruled out. Given the distance between the proposed development site and this SPA, there is no potential pathway for impact in the form of deterioration of water quality during the construction and operational phase, therefore there will be no effect on the 'wetland' habitat. **This site is not within the likely zone of impact and no further assessment is required.**
Ballysadare Bay SPA (004129) **Distance:** 5.3km	› Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] › Grey Plover (*Pluvialis squatarola*) [A141] › Dunlin (*Calidris alpina*) [A149]	Detailed conservation objectives for this site, (Version 1, October 2013), were reviewed as part of the assessment and are available at www.npws.ie	The proposed development is located outside the boundary of this SPA and there is no potential for direct effect. This SPA is located 5.3km south and southwest of the proposed development site. Given the intervening

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
	› Bar-tailed Godwit (*Limosa lapponica*) [A157] › Redshank (*Tringa totanus*) [A162] › Wetland and Waterbirds [A999] ›		distance between the proposed development site and this SPA, the potential for habitat loss/disturbance related impacts to the following SCI populations can be ruled out: Grey Plover (*Pluvialis squatarola*) [A141] Dunlin (*Calidris alpina*) [A149] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] This site lies within the core foraging range of Light-bellied Brent Goose (*Branta bernicla hrota*) (core range of 5-8km, SNH 2016). Light-bellied Brent Goose may potentially use rank grassland for foraging during the winter. However, during the wintering bird surveys carried out during 2022 and 2023, no Light-bellied Brent were recorded utilizing the habitats within the development site boundary. Given the widespread occurrence of this common habitat in the wider locality, the loss of this habitat within the proposed development site would not have a significant effect on this species. As such, due to the absence of a complete source-pathway receptor chain, and the buffering distance of approx. 5.3km from the project footprint to this SPA, there is no potential for ex situ disturbance or displacement related impacts to the Light-bellied Brent Goose (*Branta bernicla hrota*) populations of the

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			Ballysadare Bay SPA during the construction and operation of the proposed project. Given the distance between the proposed development site and this SPA, there is no potential pathway for impact in the form of deterioration of water quality during the construction and operational phase, therefore there will be no effect on the 'wetland' habitat. **This site is not within the likely zone of impact and no further assessment is required.**
Sligo/Leitrim Uplands SPA (004187) **Distance:** 6.9km	› Peregrine (*Falco peregrinus*) [A103] › Chough (*Pyrrhocorax pyrrhocorax*) [A346] ›	This designated site has the generic conservation objective, '*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'* NPWS (2022) First Order Site Specific Conservation Objectives Version .1.0.	The proposed development is located outside the boundary of this SPA and there is no potential for direct effect. This SPA is located 6.9km north and north-east of the proposed development site. Given the intervening distance between the proposed development site and this SPA, the potential for disturbance related impacts to SCI populations during construction works can be ruled out. There is no suitable habitat for the listed SCI species of this SPA, therefore the potential for habitat loss can also be ruled out. **This site is not within the likely zone of impact and no further assessment is required.**

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
Ballintemple and Ballygilgan SPA (004234) **Distance:** 6.9km	› Barnacle Goose (*Branta leucopsis*) [A045]	This designated site has the generic conservation objective, '*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'* NPWS (2022) First Order Site Specific Conservation Objectives Version 1.0.	The proposed development is located outside the boundary of this SPA and there is no potential for direct effect. This SPA is located 6.9km north-west of the proposed development site. This site lies within the core foraging range of Barnacle goose (core range of 15km, SNH 2016). Barnacle Geese (*Branta leucopsis*) may on occasion use rank grassland for foraging during the winter. However, during the wintering bird surveys carried out during 2022 and 2023, no Barnacle Geese (*Branta leucopsis*) were recorded utilizing the habitats within or adjacent to the site. Given the widespread occurrence of this common habitat in the wider locality, the loss of this habitat within the proposed development site would not have a significant effect on this species. As such, due to the absence of a complete source-pathway receptor chain, and the buffering distance of approx. 6.9km from the project footprint to this SPA, there is no potential for ex situ disturbance or displacement related impacts to the Barnacle Goose (*Branta leucopsis*) during the construction and operation of the proposed project.

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			This site is not within the likely zone of impact and no further assessment is required.
Ardboline Island and Horse Island SPA (004135) **Distance:** 12.4km	› Cormorant (*Phalacrocorax carbo*) [A017] › Barnacle Goose (*Branta leucopsis*) [A045] ›	This designated site has the generic conservation objective, '*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'* NPWS (2022) First Order Site Specific Conservation Objectives Version .1.0.	The proposed development is located outside the boundary of this SPA and there is no potential for direct effect. This SPA is located 12.4km north-west of the proposed development site. Given the intervening distance between the proposed development site and this SPA, the potential for habitat loss/disturbance related impacts to the Cormorant SCI population can be ruled out. This site lies within the core foraging range of Barnacle goose (core range of 15km, SNH 2016). Barnacle Geese (*Branta leucopsis*) may on occasion use rank grassland for foraging during the winter. However, during the wintering bird surveys carried out during 2022 and 2023, no Barnacle Geese (*Branta leucopsis*) were recorded utilizing the habitats within or adjacent to the site. Given the widespread occurrence of this common habitat in the wider locality, the loss of this habitat within the proposed development site would not have a significant effect on this species. As such, due to the absence of a complete source-pathway

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 25/08/2023	Conservation Objectives	Identification of Source-Pathway-Receptor chain and Likely Zone of Impact Determination
			receptor chain, and the buffering distance of approx. 6.9km from the project footprint to this SPA, there is no potential for ex situ disturbance or displacement related impacts to the Barnacle Goose (*Branta leucopsis*) during the construction and operation of the proposed project. **This site is not within the likely zone of impact and no further assessment is required.**

3.2 European Sites with the Potential to be Significantly Affected by the Proposed Development

The European Sites that are within the Zone of Likely Impact are:

- Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
- Cummeen Strand SPA

3.2.1 Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

The construction and operational phase of the proposed residential development may result in water pollution. A potential pathway for indirect effects on the following aquatic QI's species/habitats was identified in the form of deterioration of water quality and supporting habitats for aquatic fauna:

- 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]
- Petrifying springs with tufa formation (Cratoneurion) [7220]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Phoca vitulina* (Harbour Seal) [1365]

The potential for disturbance was also identified with regard to Harbour Seal.

3.2.2 Cummeen Strand SPA

The construction and operational phase of the proposed residential development may result in water pollution. A potential pathway for indirect effects on the SCI Wetland [A999] habitat was identified in the form of deterioration of water quality and supporting habitats for SCI species.

On a precautionary basis the potential for habitat loss, disturbance and displacement of the listed SCI species was also identified:

- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Oystercatcher (*Haematopus ostralegus*) [A130]
- Redshank (*Tringa totanus*) [A162]

4. ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING STATEMENT AND CONCLUSIONS

The findings of this Screening Assessment are presented following the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010).

4.1 Data Collected to Carry Out Assessment

In preparation of the report, the following sources were used to gather information:

- Review of NPWS Site Synopses, Conservation Objectives for the European Sites
- Review of 2019, 2013 and 2007 EU Habitats Directive (Article 17) Reports.
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), EPA, Water Framework Directive (WFD),
- Review of OS maps and aerial photographs of the site of the proposed project.
- Site visits carried out on the 5th May, 30th August, 19th September, 18th October 2022, 23rd November 2022, 8th December 2022, 23rd January 2023 and 25th February 2023, by MKO ecologists, Claire Stephens and Kate O' Donnell.

4.2 Concluding Statement

It cannot be concluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development, individually or in combination with other plans and projects, would not be likely to have a significant effect on Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA.

As a result, it is recommended to the competent authority that an Appropriate Assessment is required, and a Natura Impact Statement will be prepared in respect of the proposed development.

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APPENDIX 2

WINTER BIRD SURVEY REPORT

Planning and Environmental Consultants

Winter Bird Survey Report

Proposed Residential Development, at Second Sea Road/Gibraltar Rd, Knappagh More, Co. Sligo

DOCUMENT DETAILS

Client:	**Carnarvon Limited**
Project Title:	**Proposed Residential Development, at Second Sea Road/Gibraltar Rd, Knappagh More, Co. Sligo**
Project Number:	**210912-a**
Document Title:	**Winter Bird Survey Report**
Document File Name:	**BR- 2023.08.28- 210912-a**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01	Final	28/08/2023	CS	CM

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1. INTRODUCTION

MKO has been appointed by Carnarvon Limited to undertake dedicated wintering bird surveys throughout October 2022 to February 2023 for a proposed residential development, at Second Sea Road/Gibraltar Rd., Knappagh More, Co. Sligo. The proposed development site is located east of Second Sea Road, and south-east of Gibraltar Road, Finisklin, Co. Sligo (Grid Ref: G 66666 36575) and to the north of the Aylesbury Park residential development and a residential development under construction at the time of the site visits. The site lies approximately 2km west of Sligo town. The site is accessed from the existing unused entrance located at the west end of the site.

The proposed development site is approximately 4.35 hectares and is currently a greenfield site with an existing residential development to the south and Gibraltar Point and Cummeen Strand to the north-west.

The site is located within 10m of Cummeen Strand SPA and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC.

The site was previously cleared of all vegetation approximately 10 years ago for a proposed development. The lands currently comprise of wet and rank grasslands, including large amounts of scrub, with poor fen lands on which wet alder willow woodland are developing, swamp and marsh as well as bare and recolonised bare ground. A deep artificial and heavily modified drainage channel abuts the site. The site is bounded by grassland to the north, a hedgerow to be retained to the east, residential developments to the south and an existing coast road to the west with a stone wall, a short hedgerow and Sitka spruce linear group along the south-west.

The location of the proposed development is shown in Figure 1-1.

The objective of the wintering bird surveys is to assess the suitability of the proposed development site to support a variety of wintering wildfowl and waders, including the bird species listed as Special Conservation Interests (SCIs) for the Cummeen Strand SPA.

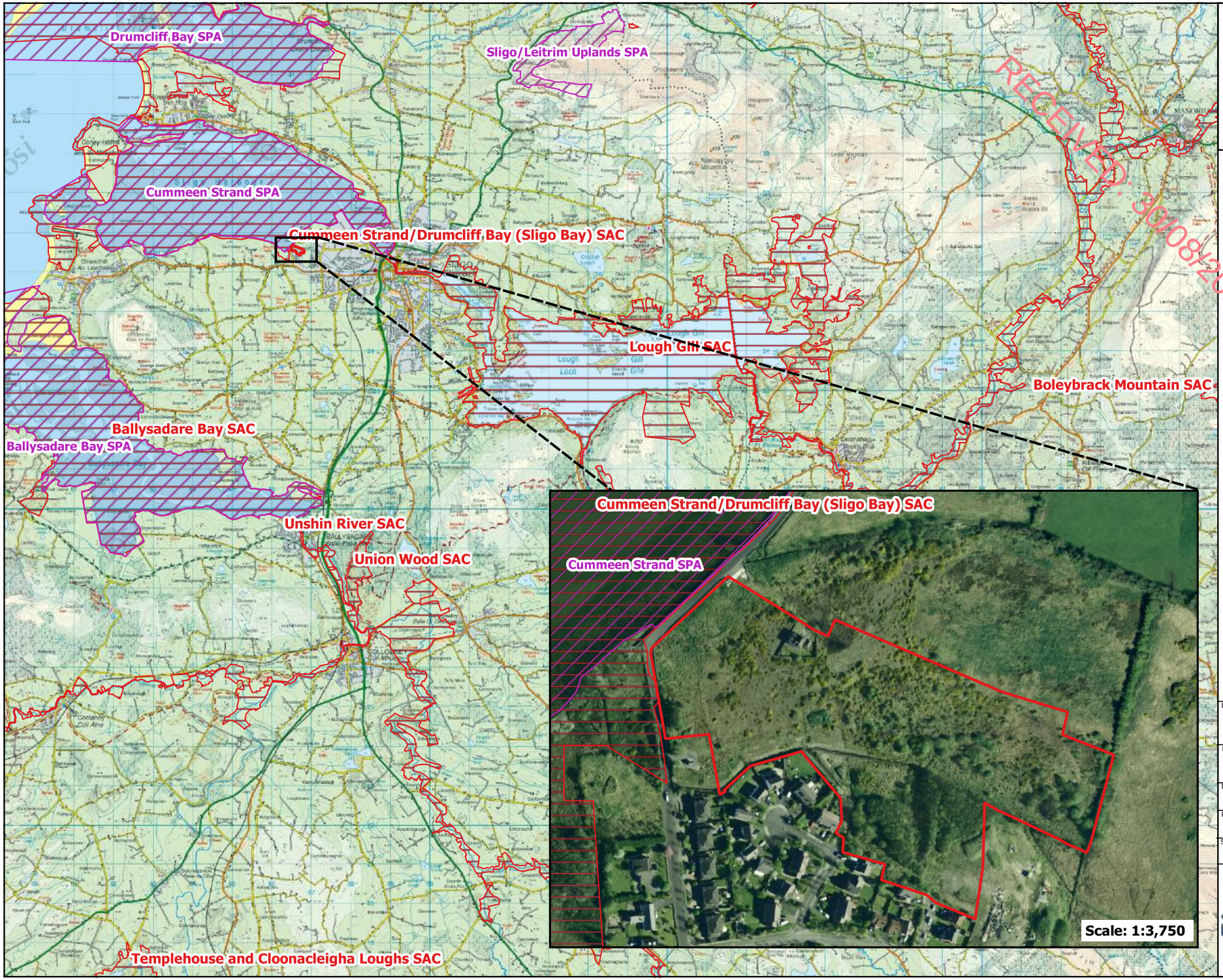
The assessment objectives can be summarised as follows:

- To undertake field surveys to assess for the presence of suitable habitat and the occurrence of wintering bird species within and adjacent to the development site.
- To identify and assess the direct, indirect, and cumulative effects of the proposed development on wintering bird species, in particular the Special Conservation Interest bird species of the Cummeen Strand SPA.
- The study seeks to determine the distribution of the species within and adjacent to the proposed development site and to determine the presence of feeding/roosting areas within/adjacent to the proposed development site.

Section two of this report provides the methodology, constraints, survey information, weather conditions and survey coverage. The results of the desk study and field surveys are presented in section three of this report. An evaluation and discussion of the results is provided in Section four. The concluding section of the report considers the findings and potential impacts of the proposal in-combination with other developments within the environs of designated sites.

1.1 Statement Of Authority

Wintering bird surveys were undertaken by Claire Stephens (B.Sc. Env, QCIEEM) from September 2022 to February 2023.
This report has been prepared by Claire Stephens who has 5 years' professional consultancy experience. This report has been reviewed by Colin Murphy (B.Sc., MSc). Colin is an experienced project ecologist and has over 3 years' professional consultancy experience.



RECEIVED: 30/08/2023

Map Legend

- Site Boundary
- Special Area of Conservation
- Special Protection Area

N

Drawing Title	Site Location - Knappagh More, Co. Sligo
Project Title	Proposed residential development at Second Sea Rd., Co. Sligo
Drawn By: Claire Stephens	Checked By: Claire Stephens
Project No.: 210912 - a	Drawing No.: Figure 1-1
Scale: 1:125,000	Date: 25-10-2022

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2. METHODLOGY

2.1 Desk Study

A number of sources were assessed to determine the likely usage of both breeding and wintering bird species, including Bird Atlases, National Biodiversity Data Centre (NDBC), birdwatch Ireland and Conservation Objectives Supporting Documents from the National Parks and Wildlife Service (NPWS) for nearby Special Protection Areas (SPAs). Results of the desk study are provided in Section 3.1.

2.2 Field Survey Methodology

The wintering bird surveys were carried out on the proposed development boundary throughout October, November and December 2022 and during January and February 2023.

Prior to the commencement of surveys, MKO undertook a daytime walkover to assess the habitats and a dusk bat activity survey within the site of the proposed works on 5th May 2022 was undertaken as well as two visits during August and September 2022 to undertake multidisciplinary surveys to assess the habitats on site and plan the surveys, as well as to identify suitable vantage points. The survey area covered the development site and the area of shoreline within Cummeen Strand SPA, west of the proposed development site. The surveys were undertaken on the following five dates: 18th October 2022, 23rd November 2022, 8th December 2022, 23rd January 2023 and 25th February 2023, by Claire Stephens (B.Sc. Env., QCIEEM).

The wintering bird surveys were undertaken monthly at alternate high/low tides, within three hours and after three hours of high/low tide. A combination of low and high tide counts has been used due to the differences in behaviour and site use between tidal states, with different species likely to be foraging and roosting in different areas of Cummeen Strand SPA and the surrounding terrestrial habitats, depending on the stage of the tidal cycle.

The surveys were undertaken by an appropriately qualified ornithologist. All observations were recorded, and detailed point data was gathered for each species observation, with all bird species denoted using standard British Trust for Ornithology (BTO) codes and with the number of each species recorded next to each registration. The species recorded in the surveys were those covered by Irish Wetlands Bird Survey (I-WeBS) counts, i.e., all divers, grebes, cormorant, shag, herons, swans, geese, ducks, rails, crakes, waders, gulls, and kingfisher. However, in addition to this, all other bird species, including all common and widespread passerines, were also recorded from within the proposed development site.

2.2.1 Method for Identification of Target Species

Following a comprehensive desk study and initial site visit, a list of "Target species" likely to occur at the site was compiled. The observation/survey work carried out on the site was specifically designed to survey for these identified target species in accordance with SNH guidance (2014). The target species list was drawn from:

- Bird species that are susceptible to impacts from this type of development.
- Annex I of the Birds Directive.
- Special Conservation Interests (SCI) of Special Protection Areas (SPA) within the zone of likely significant effects
- Species protected under the fourth schedule of the Wildlife Acts 1976-2022.
- Red-listed birds of Conservation Concern.

2.2.2 I-WeBS Surveys

The winter bird surveys at the nearby SPA followed the Irish Wetland Bird Survey (I-WeBS) methodology; the simple 'look-see' method, whereby all birds present within a predefined area are counted (Gilbert et al., 1998; Birdwatch Ireland, 2018). The surveys were carried out at suitable vantage points, located overlooking sections of Cummeen Strand SPA in close proximity to the proposed development site. Vantage points were chosen to have as large as possible a view of the identified wetland site and potential adjacent daytime foraging habitat in the vicinity of the proposed development. Vantage points focused on areas which were deemed to be of likely significance to wintering waterbirds of Cummeen Strand SPA.

Details of the surveys carried out including date, time, duration, location, and weather conditions are provided in Table 2-1. A map of the vantage point locations used during the surveys is presented in Figure 2-1.

2.2.3 Transects

Surveys were carried out on the proposed development boundary throughout 2022 and into 2023.

During the surveys, species of note were recorded both within the development boundary and on the lands adjacent to the development site over the surveying periods of October 2022 to February 2023 as listed above. Due to the topography of the site, vantage points were taken at multiple locations west of the site before completing the walked transects. The purpose of doing this was to scan the site to identify if bird species were foraging before completing the walked transect. All bird species were denoted using standard British Trust for Ornithology (BTO) codes and with the number of each species recorded next to each registration. Transects walked in are shown in Figure 2-2.

Map Legend

- Site Boundary
- Special Protection Area
- Vantage point

N

Drawing Title

Vantage Point Locations

Project Title: Proposed residential development at Second Sea Rd., Co. Sligo	
Drawn By: Claire Stephens	Checked By: Claire Stephens
Project No.: 210912 - a	Drawing No.: Figure 2-1
Scale: 1:3,000	Date: 30-01-2023

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Map Legend

- Site Boundary
- Special Protection Area

Transects

- 18th October 2022
- 23rd November 2022
- 8th December 2022
- 23rd January 2023

N

Drawing Title
Route of transects walked during surveys

Project Title
Proposed residential development at Second Sea Rd., Co. Sligo

Drawn By	Checked By
Claire Stephens	Claire Stephens
Project No.	Drawing No.
210912 - a	Figure 2-2
Scale	Date
1:2,000	30-01-2023

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2.2.4 Survey Details

Details of the surveys including survey dates, weather conditions and survey duration are provided in Table 2-1 below.

Table 2-1 Survey Effort

Date	Survey duration	3 hours before&after Tide	Weather conditions
18/10/2022	6 hours	High tide	Wind speed: Gentle breeze Cloud cover: 40% Visibility: Good Rain: No Frost: No Snow: No
23/11/2022	6 hours	Low tide	Wind speed: Light breeze Cloud cover: 66% Visibility: Good Rain: Light Drizzle Frost: No Snow: No
08/12/2022	6 hours	High tide	Wind speed: Gentle breeze Cloud cover: 50% Visibility: Good Rain: No Frost: No Snow: No
23/01/2023	6 hours	Low tide	Wind speed: Gentle breeze Cloud cover: 66% Visibility: Good Rain: No Frost: No Snow: No
25/02/2023	6 hours	Low Tide	Wind speed: Gentle – moderate breeze Cloud cover: 45% Visibility: Good Rain: No Frost: No Snow: No

2.2.5 Survey Constraints

No significant survey constraints limited the survey approach, and a comprehensive assessment was undertaken.

Surveys were undertaken during optimal weather conditions where possible as poor weather conditions and high wind can lead to decreased bird movements and hinder surveyor visibility.

All lands within the proposed development site and the lands adjacent to the development site were accessible during the survey visits. Surrounding private lands were not accessed. However, these lands were scanned using a spotting scope from elevated vantage points along the public road. Any significant flocks of wintering wildfowl or waders would be recorded using such an approach.

3. RESULTS

3.1 Desk Study

3.1.1 Breeding and Wintering Bird Atlases

The Bird Atlas 2007-11: The breeding and wintering birds of Britain and Ireland (Balmer et al., 2013) provides the most up-to-date information regarding the distribution and relative abundance of bird species in Britain and Ireland, based on surveys carried out between 2007 and 2011.The atlases show data for breeding and wintering birds respectively in individual 10 km x 10 km squares (hectads). Table 3-1 shows those species found in the relevant hectad (G63) which are recorded as breeding in the most recent atlas. It also provided species that have been recorded within the relevant tetrad (G63T) on National Biodiversity Data Centre (NBDC) datasets as well as those listed in Annex I of the EU Birds Directive recorded on the BoCCI Red List. Birds listed under Annex I are offered special protection by the EU Birds Directive. Those listed on the Birds of Conservation Concern in Ireland (BoCCI) Red List meet one or more of the following criteria:

- IUCN: Global conservation status (Critically Endangered (CE), Endangered (E)or Vulnerable (V), but not Near Threatened. These species are recognised as the highest priorities for action at a global scale and are thus priorities at an all-Ireland level.
- European conservation status. The conservation status of all European species was assessed most recently by Birdlife International (2004), one of the main changes in the revision being to include the IUCN criteria. These species are those of global conservation concern (including those classified as Near Threatened) and are Red listed.
- The Irish breeding population has undergone significant historical decline since 1800.
- The Irish non-breeding population has undergone a significant decline of 50% in the last 25 years.
- The Irish breeding range has undergone a decline of 70% or more in the last 25 years.

Two species listed under Annex I of the EU Birds Directive have been recorded within the relevant tetrad (G63T) A further seven red-listed birds of conservation concern have been recorded breeding within the relevant tetrad.

Table 3-1 NBDC Bird data and Bird Atlas data (Tetrad G63T)

Common Name	Scientific name	Bird Atlas		Designation
		Breeding 2008-2011	Wintering 2007-2011	
Little Egret	*Egretta garzetta*	No	Present	Protected EU Birds Directive Annex I Bird Species
Peregrine	*Falco peregrinus*	Present (Possible - breeding)	Present	
Meadow Pipit	*Anthus pratensis*	Confirmed	Present	Birds of Conservation Concern – Red list
Swift	*Apus apus*	Confirmed	No	
Kestrel	*Falco tinnunculus*	Present (Possible - breeding)	Present	
Oystercatcher	*Haematopus ostralegus*	No	Present	
Curlew	*Numenius arquata*	No	Present	
Redshank	*Tringa totanus*	No	Present	
Lapwing	*Vanellus vanellus*	No	Present	

3.1.2 Sites designated for Wintering Bird Species within 15km of the Proposed Development Site

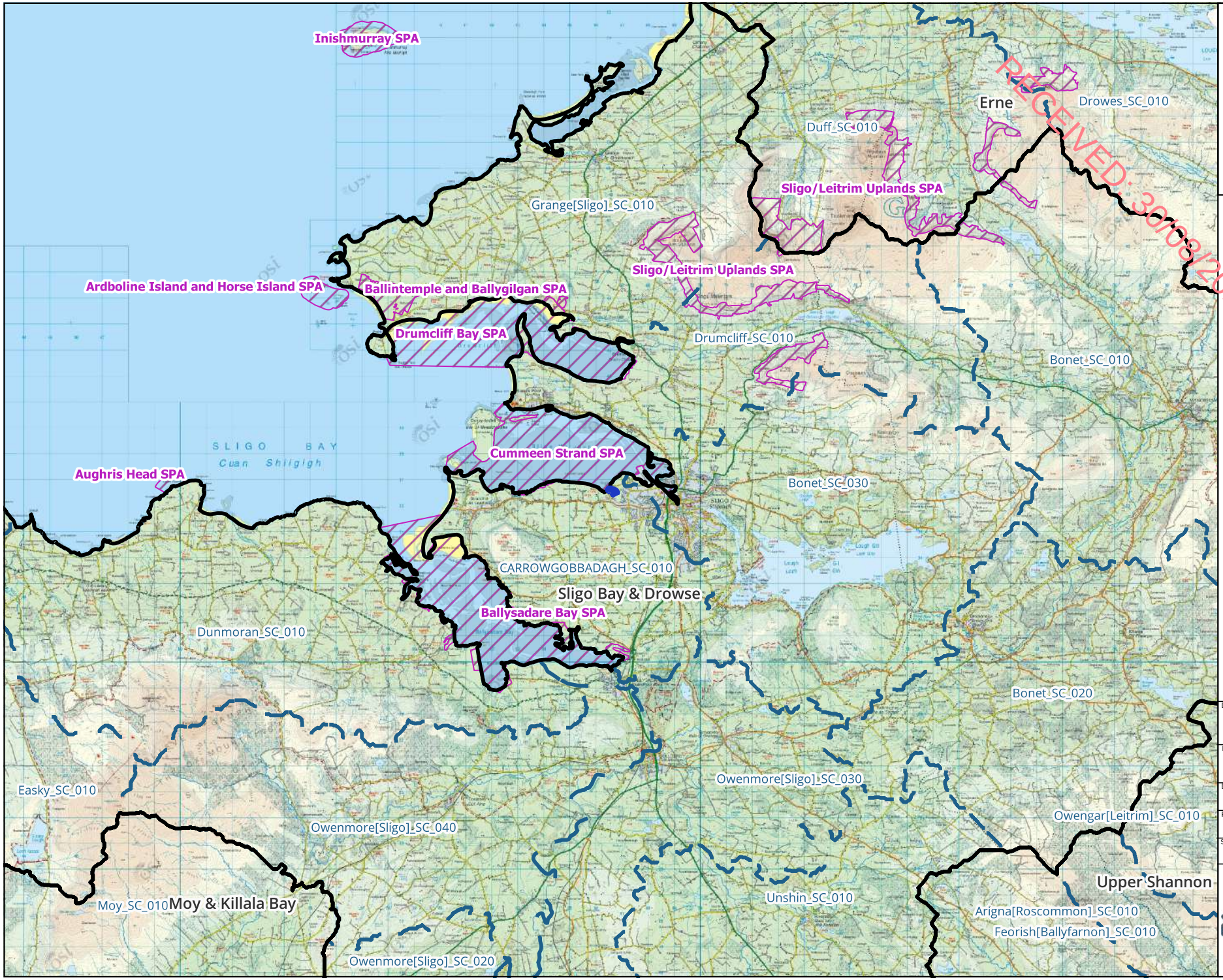
Using QGIS Software (Version 3.16.5) designated sites within a 15km radius of the proposed development site were identified. The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were considered at the time of preparation of this report (28/08/2023). Details of these sites, including their distance from the proposed development site, are provided in Table 3-2. Figure 3-1 shows the location of the proposed works in relation to all sites designated for wintering bird species within 15 km. Sligo/Leitrim Uplands SPA located 6.9km north and north-east of the proposed development site is only designated for breeding bird species, is not included in the table below however it is shown in Figure 3-1.

Table 3-2 European Designated sites within the Likely Zone of Impact

European Designated Site	Distance from Proposed development site	Special Conservation Interests for which the Natura 2000 Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 28/08/2023	Conservation Objective
Cummeen Strand SPA (004035)	approx. 7m	› Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] › Oystercatcher (*Haematopus ostralegus*) [A130] › Redshank (*Tringa totanus*) [A162] › Wetland and Waterbirds [A999]	This site has site specific conservation objectives (Version 1, 2013). Each species has the conservation objective to: "*Maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*" This site has the additional conservation objective: "*To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it,"* (Version 1, NPWS, 2013)
Drumcliff Bay SPA (004013)	4km	› Sanderling (*Calidris alba*) [A144] › Bar-tailed Godwit (*Limosa lapponica*) [A157] › Wetland and Waterbirds [A999]	This site has site specific conservation objectives (Version 1, 2013). Each species has the conservation objective to: "*Maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*"

European Designated Site	Distance from Proposed development site	Special Conservation Interests for which the Natura 2000 Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 28/08/2023	Conservation Objective
			This site has the additional conservation objective: "*To maintain the favourable conservation condition of wetland habitat in Drumcliff Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it,"* (Version 1, NPWS, 2013)
Ballysadare Bay SPA (004129)	5.3km	› 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]	This site has site specific conservation objectives (Version 1, 2013). Each species has the conservation objective to: "*Maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*" This site has the additional conservation objective: "*To maintain the favourable conservation condition of wetland habitat in Ballysadare Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it,"* (Version 1, NPWS, 2013)
Ballintemple and Ballygilgan SPA (004234)	6.9km	› Barnacle Goose (*Branta leucopsis*) [A045]	This site has a site-specific conservation objective to: "*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA,"* (First Order Site-specific Conservation Objectives Version 1.0, NPWS 12/10/2022).
Ardboline Island and Horse Island SPA (004135)	12.4km	› Cormorant (*Phalacrocorax carbo*) [A017] › Barnacle Goose (*Branta leucopsis*) [A045]	This site has a site-specific conservation objective to:

European Designated Site	Distance from Proposed development site	Special Conservation Interests for which the Natura 2000 Site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 28/08/2023	Conservation Objective
			"*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA,"* (First Order Site-specific Conservation Objectives Version 1.0, NPWS 12/10/2022).



Map Legend

- Site Location
- Special Protection Area
- WFD Hydrological Catchments
- WFD Hydrological Subcatchments

N

Drawing Title: Special Protection Areas within the likely Zone of Impact

Project Title: Proposed residential development at Second Sea Rd., Co. Sligo

Drawn By	Checked By
Claire Stephens	Claire Stephens
Project No.	Drawing No.
210912 - a	Figure 3-1
Scale	Date
1:190,000	30-01-2023

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3.1.3 I-WeBS Data

A data request was submitted to the Irish Wetland Bird Survey on the 10/10/2022 for one of the I-WeBS subsites of Sligo Harbour (0C492), (Cummeen Strand East and Gibraltar (subsite code 0C420) which is adjacent to the west of the project area. The results obtained from the I-WeBS subsite received on the 11/10/2022 are summarised below in Table 3-3.

Table 3-3 I-WeBS data for Cummeen Strand East and Gibraltar (0C420)

Subsite	Species	1% National	1% International	2016/17	2017/18	Peak
Cummeen Strand East and Gibraltar	Light-bellied Brent Goose	350	400	305	133	305
Cummeen Strand East and Gibraltar	Mute Swan	90	100		2	2
Cummeen Strand East and Gibraltar	Shelduck	100	2500	76	77	77
Cummeen Strand East and Gibraltar	Wigeon	560	14000	30	42	42
Cummeen Strand East and Gibraltar	Mallard	280	53000	96	41	96
Cummeen Strand East and Gibraltar	Pintail	20	600	1		1
Cummeen Strand East and Gibraltar	Teal	360	5000	102	30	102
Cummeen Strand East and Gibraltar	Red-breasted Merganser	25	860	4	6	6
Cummeen Strand East and Gibraltar	Great Crested Grebe	30	6300	6	15	15
Cummeen Strand East and Gibraltar	Oystercatcher	610	8200	363	454	454
Cummeen Strand East and Gibraltar	Grey Plover	30	2000	4		4
Cummeen Strand East and Gibraltar	Ringed Plover	120	540	70		70

Subsite	Species	1% National	1% International	2016/17	2017/18	Peak
Cummeen Strand East and Gibraltar	Curlew	350	7600	110	156	156
Cummeen Strand East and Gibraltar	Bar-tailed Godwit	170	1500	130	25	130
Cummeen Strand East and Gibraltar	Turnstone	95	1400	130	41	130
Cummeen Strand East and Gibraltar	Knot	160	5300	240	25	240
Cummeen Strand East and Gibraltar	Dunlin	460	13300	190	450	450
Cummeen Strand East and Gibraltar	Redshank	240	2400	356	227	356
Cummeen Strand East and Gibraltar	Greenshank	20	3300	1	5	5
Cummeen Strand East and Gibraltar	Black-headed Gull			55	8	55
Cummeen Strand East and Gibraltar	Common Gull			83	18	83
Cummeen Strand East and Gibraltar	Great Black-backed Gull			1	2	2
Cummeen Strand East and Gibraltar	Herring Gull			66	43	66
Cummeen Strand East and Gibraltar	Great Northern Diver	20	50		1	1
Cummeen Strand East and Gibraltar	Cormorant	110	1200		1	1
Cummeen Strand East and Gibraltar	Grey Heron	25	5000	1	2	2
Cummeen Strand East and Gibraltar	Little Egret	20	1100	15	14	15

3.1.4 Cummeen Strand SPA (0004035)

A detailed conservation objectives document is available for Cummeen Strand SPA (004035) (Version 1, 2013) (www.npws.ie), accessed on 28/08/2023. The Special Conservation Interests of Cummeen Strand SPA and the conservation objective for each species is listed in Table 3-4 below.

Table 3-4 SCIs of Cummeen Strand SPA (Version 1, September 2013)[1]

Special Conservation Interests	Conservation Objectives
Brent Goose (*Branta bernicla hrota*) [A046]	To maintain the favourable conservation condition of Light-bellied Brent Goose in Cummeen Strand SPA
Oystercatcher (*Haematopus ostralegus*) [A130]	To maintain the favourable conservation condition of Oystercatcher in Cummeen Strand SPA
Redshank (*Tringa tetanus*) [A162]	To maintain the favourable conservation condition of Redshank in Cummeen Strand SPA
Wetland and Waterbirds [A999]	To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

A review of desktop literature pertaining to the SPA was conducted. The Site Synopsis, as updated in the 2014 [2]states:

> *'Cummeen Strand is a large shallow bay stretching from Sligo Town westwards to Coney Island. It is one of three estuarine bays within Sligo Bay and is situated between Drumcliff Bay to the north and Ballysadare Bay to the south. The Garavogue River flows into the bay and forms a permanent channel.*
>
> *At low tide, extensive sand and mud flats are exposed. These support a diverse macro-invertebrate fauna which provides the main food supply for the wintering waterfowl. Invertebrate species such as Lugworm (Arenicola marina), Ragworm (Hediste diversicolor), Cockles (Cerastoderma edule), Sand Mason (Lanice conchilega), Baltic Tellin (Macoma balthica), Spire Shell (Hydrobia ulvae) and Mussels (Mytilus edulis) are frequent. Of particular note is the presence of eelgrass (Zostera noltii and Z. angustifolia) beds, which provide a valuable food stock for herbivorous wildfowl. The estuarine and intertidal flat habitats are of conservation significance and are listed on Annex I of the E.U. Habitats Directive. Areas of salt marsh fringe the bay in places and provide roosting sites for birds during the high tide periods. Sand dunes occur at Killaspug Point and Coney Island, with a shingle spit at Standalone Point near Sligo Town.*
>
> *Cummeen Strand supports important concentrations of wintering waterfowl, including an internationally important Light-bellied Brent Goose flock (223) and nationally important populations of Oystercatcher (680) and Redshank (408). Other species occurring include Shelduck (86), Wigeon (149), Teal (54), Mallard (145), Redbreasted Merganser (15), Golden Plover (428), Lapwing (695), Knot (165), Sanderling (14), Dunlin (539), Bar-tailed Godwit (85), Curlew (430),*

[1] *NPWS (2013) Conservation Objectives: Cummeen Strand SPA 004035. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Available online at: www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004035.pdf*
[2] *NPWS (2014) Site Synopsis Site Name: Cummeen Strand SPA Site Code: 004035. Available online at: www.npws.ie/sites/default/files/protected-sites/synopsis/SY004035.pdf*

Greenshank (13) and Turnstone (62) - all figures are mean peak counts for 4 of the 5 winters between 1995/96 and 1999/2000. Whooper Swan (7) also uses the site, though not regularly.

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

The Natura 2000 Standard Data Form updated October 2022 [3]states that:

'Cummeen Strand SPA comprises the greater part of Sligo Harbour, the middle one of the three 'arms' forming Sligo Bay. The site extends for up to 7 km from east to west and has an average width of c.2.5 km. The site is the estuary of the Garavoge River, a short slow-flowing river which flows from Lough Gill. The harbour is very enclosed, with the mouth of the harbour being sheltered by two islands (Coney Island and Oyster Island). A large proportion of the estuary is intertidal (> 80%). Sediments are predominantly sands or coarser materials, though muddy sands or muds also occur. Zostera beds are present. The intertidal sand and mud flats are fringed by salt marshes in places but mostly stony shoreline. Sligo Harbour is a regional port for the town of Sligo.

Quality and importance

Cummeen Strand is of importance for the diversity of wintering waterfowl and is an integral part of the larger unit of Sligo Bay. The site has an internationally important population of Branta bernicla hrota and supports nationally important numbers of Haematopus ostralegus and Tringa totanus. Both Pluvialis apricaria and Limosa lapponica utilise the site though in relatively low numbers. The intertidal flats, which have well-developed macro-invertebrate communities and Zostera beds, provide good feeding grounds for the wintering birds. Birds roost on the salt marshes and upper shoreline though on high tides some may leave the site to roost elsewhere.'

[3] *Natura 2000 – Standard Data Form - Site IE0004035, Sitename -Cummeen Strand SPA Available online at: https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0004035*

3.2 Field Survey Results

The following section provides the results of the site visits undertaken during the wintering bird survey period (October 2022 – February 2023, inclusive), within the development boundary and on the lands adjacent to the development boundary, within public land ownership.

3.2.1 Walked transect results

The below section provides an overview of the target species of conservation interest recorded during the surveys carried out between October 2022 to February 2023. Non-target bird species recorded during the surveys are presented in Table 3-5 along with their Birds of Conservation Concern in Ireland (BoCCI) status.

During the surveys species of note were recorded both within the development site and on the lands adjacent to the development site over the surveying periods of October 2022 to February 2023. During each of the site visits undertaken, there were observations of Special Conservation Interests species associated with the Cummeen Strand SPA and Birds of Conservation Concern-Red list species.

Species of interest, including Herring Gull (*Larus argentatus)*, Common Gull (*Larus canus*) and Black-headed gull (*Larus ridibundus*), were recorded flying over the development site from east to west and back on several occasions throughout all survey dates from October 2022 to February 2023.

A total of four Snipe listed as a Bird of Conservation Concern-Red list species were flushed during the transect surveys on the 23/11/2022, 08/12/2022 and 25/02/2023, two from the north-eastern section of the site, one in the scrub habitat adjacent to the northern boundary of the site and the fourth from a bramble scrub habitat immediately south of the open drainage channel towards the south-eastern boundary with the construction site.

No Special Conservation Interests species associated with the Cummeen Strand SPA were recorded utilising the habitats within the site during the 2022 and 2023 site visits within the development area. Other than Snipe, no Birds of Conservation Concern-Red list species were recorded or observed within the site during the 2022 and 2023 site visits within the development area.

Table 3-5 Non-target bird species recorded at Knappagh More (within and adjacent to the development site).

Species	Scientific name	BoCCI Status	Date
Blackbird	*Turdus merula*	Green	23/01/2023
Blue Tit	*Cyanistes caeruleus*	Green	23/11/2022 25/02/2023
Dunnock	*Prunella modularis*	Green	18/10/2022
Chaffinch	*Fringilla coelebs*	Green	08/12/2022 25/02/2023
Hooded crow	*Corvus cornix*	Green	18/10/2022 23/11/2022 08/12/2022 23/01/2023

Species	Scientific name	BoCCI Status	Date
			25/02/2023
Goldcrest	*Regulus regulus*	Green	23/11/2022
Goldfinch	*Carduelis carduelis*	Green	08/12/2022 25/02/2023
Great tit	*Parus major*	Green	08/12/2022 23/01/2023 25/02/2023
Jackdaw	*Corvus monedula*	Green	18/10/2022 23/11/2022 08/12/2022
Long-tailed tit	*Aegithalus caudatus*	Green	23/11/2022 08/12/2022
Robin	*Erithacus rubecula*	Green	18/10/2022 23/11/2022 08/12/2022 23/01/2023 25/02/2023
Rock Dove	*Columba livia*	Green	08/12/2022
Rook	*Corvus frugilegus*	Green	18/10/2022 23/11/2022 08/12/2022 23/01/2023 25/02/2023
Siskin	*Carduelis spinus*	Green	23/01/2023
Skylark	*Alauda arvensis*	Amber	08/12/2022
Song thrush	*Turdus philomelos*	Green	08/12/2022 23/01/2023
Starling	*Sturnus vulgaris*	Green	23/01/2023

Species	Scientific name	BoCCI Status	Date
			25/02/2023
Treecreeper	*Certhia familiaris*	Green	18/10/2022 23/11/2022 25/02/2023
Wren	*Troglodytes' troglodytes*	Green	18/10/2022 23/11/2022 08/12/2022 23/01/2023 25/02/2023
Wood pigeon	*Columba palumbus*	Green	23/01/2023 25/02/2023

3.2.2 Cummeen Strand SPA VP Results

A section of the Cummeen Strand SPA, west of the development site was surveyed. The vantage points overlooked an area of tidal mudflat and sandflat, the associated estuarine and salt meadow habitats in order to record bird distribution during high and low tide and was undertaken to determine whether birds listed as Special Conservation Interests of the Cummeen Strand SPA flew in the direction of the development site. During the surveys there were no movements of wintering wildfowl between the development site and this SPA, however common gull and herring gulls were observed on occasion flying up from their feeding position within the salt meadow habitats and along the mudflats and flying in a south easterly direction over the development site. Table 3-6 provides records an overview of species recorded.

Table 3-6 Bird survey results for Cummeen Strand SPA

Species	Approximate Number of Individuals	Notes	Date and Tidal Conditions
Herring Gull (*Larus argentatus)*	50	Feeding and occasionally flying	18/10/2022 - High Tide
Oystercatcher (*Haematopus ostralegus*)	50	Feeding	
Redshank (*Tringa tetanus*)	20	Feeding	
Light-bellied Brent Goose (*Branta bernicla subsp. Hrota*)	14	Feeding	
Common Gull (*Larus canus*)	10	Feeding and occasionally flying	
Hooded crow (*Corvus cornix)*	10	Flying and Feeding	
Mallard (*Anas platyrhynchos*)	4	Feeding	
Dunlin (*Calidris alpina*)	2	Feeding	
Curlew (*Numenius arquata*)	2	Feeding	
Little Egret (*Egretta garzetta*)	2	Feeding	
Bar-tailed Godwit (*Limosa lapponica*)	2	Feeding	
Great Black-backed Gull (*Larus marinus*)	1	Feeding	
Oystercatcher (*Haematopus ostralegus*)	50	Feeding	23/11/2022 - Low Tide
Herring Gull (*Larus argentatus*	40	Feeding and occasionally flying	

Species	Approximate Number of Individuals	Notes	Date and Tidal Conditions
Common Gull (*Larus canus*)	16	Feeding and occasionally flying	
Light-bellied Brent Goose (*Branta bernicla subsp. Hrota*)	9	Feeding	
Wigeon (Anas Penelope)	6	Feeding	
Redshank (*Tringa tetanus*)	5	Feeding	
Hooded crow (*Corvus cornix)*	3	Flying and Feeding	
Mute swan (*Cygnus olor*)	3	Feeding	
Mallard (*Anas platyrhynchos*)	2	Feeding	
Curlew (*Numenius arquata*)	2	Feeding	
Dunlin (*Calidris alpina*)	1	Feeding	
Little Egret (*Egretta garzetta*)	1	Feeding	
Oystercatcher (*Haematopus ostralegus*)	88	Feeding	8/12/2022- - High Tide
Herring Gull (*Larus argentatus*	30	Feeding and occasionally flying	
Light-bellied Brent Goose (*Branta bernicla subsp. Hrota*)	21	Feeding	
Redshank (*Tringa tetanus*)	10	Feeding	
Common Gull (*Larus canus*)	20	Feeding and occasionally flying	
Hooded crow (*Corvus cornix)*	8	Flying and Feeding	
Wigeon (*Anas Penelope*)	8	Feeding	
Mallard (*Anas platyrhynchos*)	6	Feeding	
Great Northern Diver *(Gavia immer*)	4	Flushed and Flew North	

Species	Approximate Number of Individuals	Notes	Date and Tidal Conditions
Curlew (*Numenius arquata*)	2	Feeding	
Little Egret (*Egretta garzetta*)	2	Feeding	
Snipe (*Gallinago gallinago)*	1	Flushed and Flew West	
Bar-tailed Godwit (*Limosa lapponica*)	1	Feeding	
Grey heron (*Ardea cinerea*)	1	Flying	
Rock Pipit (*Anthus petrosus)*	1	Feeding	
Oystercatcher (*Haematopus ostralegus*)	125	Feeding	23/01/2023 - High Tide
Herring Gull (*Larus argentatus*	50	Feeding and occasionally flying	
Light-bellied Brent Goose (*Branta bernicla subsp. Hrota*)	20	Feeding	
Redshank (*Tringa tetanus*)	20	Feeding	
Common Gull (*Larus canus*)	8	Feeding and occasionally flying	
Hooded crow (*Corvus cornix)*	8	Flying and Feeding	
Curlew (*Numenius arquata*)	2	Feeding	
Black-headed gull (*Larus ridibundus*)	2	Feeding	
Oystercatcher (*Haematopus ostralegus*)	80	Feeding	25/02/2023- Low Tide
Black-headed gull (*Larus ridibundus*)	40	Feeding and flying	
Common Gull (*Larus canus*)	10	Feeding and occasionally flying	
Turnstone (*Arenaria interpres*)	10	Feeding	

Species	Approximate Number of Individuals	Notes	Date and Tidal Conditions
Hooded crow (*Corvus cornix)*	8	Flying and Feeding	
Sanderling (*Calidris alba*)	6	Feeding	
Mallard (*Anas platyrhynchos*)	2	Feeding	
Curlew (*Numenius arquata*)	1	Feeding	

4. SUMMARY OF FIELD SURVEY AND DISCUSSION

The surveys undertaken over the winter period October 2022 to February 2023 provide an understanding of the usage of the proposed development by wintering bird species. No SCI species of Cummeen Strand SPA were recorded utilizing the habitats within the proposed development site during any of the surveys carried out. A total of 4 target bird species were recorded flying over or within the proposed development boundary.

Most of the birds recorded were within the lands adjacent to the site boundary and in the surrounding habitat during the site visit and were an assemblage of common passerines birds that are typical of the grassland, woodland and hedgerow habitats found within the wider area. The hedgerow, treeline, scrub and immature woodland habitat within the site provide suitable habitat for these species, however, these habitats are common and widespread within the local area. Any clearance of vegetation will be done outside of the breeding season in accordance with the Wildlife Act 1976-2022, however if there is a requirement to clear any vegetation, scrub and individual trees during the nesting bird season, standard best practice measures will be followed, with a nesting bird survey undertaken by a suitably qualified ecologist. All woody vegetation to be retained will be fenced off and no machinery ingress or material storage will be permitted in these areas. The vegetation outside the construction footprint will be protected at all times.

Rank wet grassland habitat is widespread and abundant in the areas surrounding the site of the proposed development. Therefore, the SCI species and wetland species are not in any way dependant on the site and the loss of this habitat within the development site would not significantly affect the conservation objects of the species, listed as a Special Conservation Interests of Cummeen Strand SPA.

A total of 3 snipe were flushed during the walked transects surveys in November, December 2022 and February 2023 along the north-eastern section of the site, within the south-eastern section of the site south of the drainage channel within scrub and in the lands adjacent to the development boundary. The Snipe were flushed from a species poor wet grassland and covered scrub habitat, which is widespread and common in the surrounding area. Therefore, the loss of this habitat within the development site would not result in significant habitat loss for wintering snipe in the Sligo region. Common Snipe are currently listed as a Red-List species on the Birds of Conservation Concern in Ireland 2020-2026 (Gilbert et al., 2021). Compared to the breeding population, wintering Snipe are widely distributed in Ireland during the winter season as the population is bolstered from northern regions such as the Faroe Islands, Iceland, and Northern Scotland. 1 Snipe was flushed from along the salt meadow habitat west of the site boundary during the December Vantage Point winter bird surveys. There will be no loss of this habitat as a result of the proposed development.

The rank grassland (GS2) habitat within the development site may provide some suitable foraging habitat or forage in the form of invertebrates for the species listed as Special Conservation Interests for Cummeen Strand SPA, however, none of these species were recorded within the development site during the bird surveys carried out during 2022 and 2023.

Based on the findings, and the habitat composition, the site and the surrounding habitats do not provide a significant supporting habitat for wintering wildfowl or waders associated with Cummeen Strand SPA. The site also does not provide significant supporting habitat for BoCCI Red-List species. Habitats within the development site are predominately comprised of a mosaic of rank grassland classified as ***dry meadows and grassy verges (GS2)*** with ***wet grassland (GS4), spoil and bare ground (ED2)*** and ***recolonising bare ground (ED3)*** towards the west of the site, with ***scrub (WS1), wet willow-alder woodland (WN6)*** and ***reed and large sedge swamps (FS1)*** are more dominant within the eastern and southern half of the proposed development site boundary.

The SCI and Red Listed species recorded on the site are not dependant on the habitats therein, which are common and widespread in the local area. The site was not used extensively by these species.

5. CONCLUSION

Based on the wintering bird assemblages recorded over the five wintering bird surveys carried out between October 2022 to February 2023 it can be concluded that the proposed development site does not support important assemblages of Red listed species, wintering wildfowl, waders, or SCI species for which Cummeen Strand SPA is designated. The scrub, transitional woodland habitats, hedgerow and treeline habitat within the site provide suitable habitat for common passerine species, however, these habitats are common and widespread within the local area. Any clearance of such habitat will be undertaken in accordance with the Wildlife Act 1976-2022.

No species listed as an SCI of Cummeen Strand SPA, were recorded within the development site and it is not anticipated that the development site represents a significant supporting habitat for these SCI species which are considered coastal. Whilst birds may leave the estuary/bay for nearby inland sites to feed on grassland terrestrial invertebrates, the proposed development site is widely vegetated, common and widespread in the local area. The loss of this habitat as a result of the development would not negatively impact on the conservation objectives of the SCIs of Cummeen Strand SPA.

The survey results indicate that there will be no potential for loss of supporting habitat or displacement for SCI species for which the Cummeen Strand SPA are designated for.

No potential for adverse effects on the SCI species Cummeen Strand SPA has been designated have been identified. For this reason, there is not considered to be potential for adverse effects alone or in-combination with other developments within the environs of the Cummeen Strand SPA.

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