NATURA IMPACT STATEMENT

Proposed Tennis Court at Washington House, Cregg, Ballincar, Rosses Point, Co. Sligo

Report prepared by

Woodrow Sustainable Solutions Ltd.

Woodrow Sustainable Solutions Ltd.,
Upper Offices, Ballisodare Centre,
Station Road,
Ballisodare,
Co Sligo,
F91 PE04.

T: +353(0)719140542

Email: info@woodrow.ie

DOCUMENT CONTROL

Document	Proposed Tennis Court at Washington House, Cregg, Ballincar, Co. Sligo.
Client	Joanna and George Mullan
Prepared by	Woodrow Sustainable Solutions Ltd., Upper Offices, Ballisodare Centre, Station Road, Ballisodare, Co Sligo, F91 PE04.
Lead Author	Nicole Flemming
Checked Internally	Róisín NigFhloinn
Reviewed by Client	18.02.2021
Approved by	Róisín NigFhloinn
Status / Version / Date	Revision / R02 / 19.02.2021

STATEMENT OF AUTHORITY

This report has been written by Nicole Fleming BSc Applicant CIEEM, with input and review by Róisín NigFhloinn B.A. Mod MSc CIEEM.

Nicole is a BSc graduate of Freshwater and Marine Biology with 3 years' experience working in the construction industry. Nicole regularly assist in report writing for Woodrow infrastructure projects including for Ecological Impact Assessment (EcIA), Appropriate Assessment and On Site Monitoring reports. Nicole also assists with ecological surveys (e.g. bats, birds and habitats), data collection and analysing, providing essential support to senior colleagues across a variety of Woodrow infrastructure and development projects. Nicole's skills range from identification of marine and freshwater species, water and soil analysis, use of Geographic Information Systems (GIS), excel and statistical programmes. She has experience working as an Ecological Clerk of Works (ECoW) for live construction projects, regularly liaising with project leads and supervisors on site, particularly where mitigation action and environmental measures are required. She provides clear and concise environmental and ecological advice to construction workers on site, while delivering site inductions and tool box talks to contractors / site workforce with the purpose of ensuring that ecological sensitivities are taken into full account, and that environmental impacts are being avoided during construction works.

The report has been reviewed and approved by Róisín NigFhloinn. Róisín is a Senior Ecologist with Woodrow Sustainable Solutions Ltd. She has completed an honours B.Sc. specialising in Botany and a M.Sc. in Ecology and Management of the Natural Environment. She is a full member of CIEEM. She regularly carries out reporting on Ecological Impact Assessment and to inform Natura Impact Assessments / Appropriate Assessments carried out by statutory authorities. Furthermore, Róisín has over ten years of experience in habitat surveys, mammal surveys, bird and bat surveys for a number of large infrastructure schemes, commercial and residential projects. Róisín has also acted as an ECoW for road maintenance schemes and wind farms under construction.

A site visit was conducted on 12 November 2020 by Róisín NigFhloinn, accompanied by experienced Ornithologist, Mike Trewby.

Mike Trewby, Senior Ecologist and Lead Ornithologist for Woodrow, is a highly experienced ecologist with over 20 year's fieldwork and research experience. He is a full member of the CIEEM and conducts detailed, technical ecological assessments of projects including for wind farm and quarry developments, as well as for other large and smaller scale infrastructure and development projects, delivering ecological reporting to a high standard. He has developed his technical expertise in conducting faunal surveys to inform detailed impact assessment and compliance monitoring reports. As a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), he employs a high degree of competence and professional standard in his approach to environmental assessment.

Nicole Fleming - Qualifications:

BSc graduate of Freshwater and Marine Biology, Galway-Mayo Institute of Technology (GMIT), 2017.

Mike Trewby – Qualifications:

B.Sc. – Zoology and Botany, University of Namibia, 1997.

Post Grad Dip – Environmental Studies, University of Strathclyde, 2002.

Róisín NigFhloinn – Qualifications:

B.A. Mod (Hons) – Natural Sciences (specialising in Botany), Trinity College, Dublin, 2008.

M. Sc. – Ecology and Management of the Natural Environment, University of Bristol, 2011.

Table of Contents

1. INTRODUCTION

1.1 Background

Woodrow Sustainable Solutions Ltd. ("Woodrow") was commissioned by the clients (Joanna and George Mullen) to collate information to inform an Appropriate Assessment (AA) by the Competent Authority (in this instance, Sligo County Council). This work assesses the potential for impacts upon Natura 2000 Sites (also known as European Sites) as a result of the Proposed Development. This proposal is located within a private landscaped garden, however it encroaches the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC boundary line which overlaps this private land, and is immediately adjacent to the Cummeen Strand SPA[1]. These are both designated European Sites. Cummeen Strand/ Drumcliff Bay is a Special Area of Conservation (SAC) for the protection of habitats and species, and the Cummeen Strand Special Protection Area (SPA) is designated for the protection of birds. The proposal is situated at Cregg, Ballincar, Rosses Point Co. Sligo. This proposal will be hereafter referred to as the "Proposed Development".

European Sites include Special Areas of Conservation (SACs) for the protection of Annex I habitats and Annex II species under the EU Habitats Directive (92/43/EEC, 1992) and Special Protection Areas (SPAs) for the protection of Annex I bird species and supporting wetland habitat under the EU Birds Directive (79/409/EEC, 1979). The Proposed Development is not "directly connected with or necessary to the management" of a European Site (in the context of Article 6(3) of Directive 92/43/EEC (The Habitats Directive)). These SACs and SPAs are designated for their Qualifying Interest (QI) habitats and species which are protected by the European Habitats Directive and European Birds Directive.

The Proposed Development, a single private tennis court, is located within the garden at Washington House. This private residence is situated off the R291 Sligo to Rosses Point road, approximately 4km north-west of Sligo town. See ***Figure 1*** below for the geographic location. The Proposed Development is located immediately adjacent to the European Site Cummeen Strand SPA (site code 004035) and the south-west corner of the proposed tennis court (and proposed surrounding mounding) encroaches the statutory boundary of the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC (site code 000627) within the Application Site (a landscaped, residential garden). See ***Figure 2*** below for the location of the Proposed Development in relation to these two European Sites. The proposal involves the construction of a tennis court and surrounding tarmacadam path within the private grounds of Washington House, see ***Figure 3*** for the proposed Application Site within the Site Boundary. This Natura Impact Statement (NIS) is submitted in support of the planning application to Sligo County Council. A site visit was undertaken on 12 November 2020. No QI habitats or species of the Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC were recorded within the footprint of the works or in the immediate vicinity during the site visit – the site is located within a regularly managed amenity area (garden space). Nor were any qualifying interest species of Cummeen Strand SPA noted within the Application Site. The potential for significant impacts upon European Sites has been considered in full, and the Qualifying Interests (QI's) / Special Conservation Interests (SCI's) which are potentially affected are detailed in **Table 3** below.

[1] NPWS has begun the process of bringing their spatial data into the ITM projection on modern OSI mapping. These ITM boundaries will be made publically available once they have been passed into legislation as Statutory Instruments (SI). This process is on-going over the next few years. It is noted on https://dahg.maps.arcgis.com/ that *"Legacy issues regarding the Cassini* [map] *projections and gaps/overlapping of site boundaries across county boundaries remain"*.

1.2 Description and features of the Proposal

1.2.1 Location

The Proposed Development is located along the coast within Sligo Bay, *c.* 4km north-west of Sligo town (see ***Figure 1*** for the geographic location). The Application Site is situated <50m from the R291 road *c.* 4km from the N4. The Proposed Development is located adjacent to Cummeen Strand SPA and encroaching within Cummeen Strand/ Drumcliff Bay SAC (see ***Figure 2***).

The proposed Tennis Court and associated infrastructure is *c.* 806m^2 in area and can be found at grid reference G66135 39398[2]. The Site location is illustrated in ***Figure 3***. The Application Site boundary encroaches the boundary of the SAC (by *c.* 302m^2 – see ***Figure 4***) and the proposed mounding works (intended to create screening) lie approx. 1m from the SPA at their closest point within the confines of the private ornamental garden (no works will encroach onto the foreshore). Following a site visit by Woodrow on 12 November 2020, it has been confirmed that there will be no direct loss of any EU Annex I habitat, and / or Qualifying Interest (QI) habitat of the nearby European Sites. All proposed works, tennis court, and tarmacadam path and proposed mounding lie within existing landscaped garden (ornamental habitat).

The Application Site comprises of amenity grassland, garden paths, planted garden trees (dominated by ash, sycamore and elder), scrub (dominated by bramble and ivy) and ornamental garden planting within flower beds along the southern boundary of the Site.

Notably, there is a considerable stand of Japanese knotweed *Fallopia japonica* within the proposed footprint for the works. The Client is currently having this Scheduled Invasive Alien Species[3] (IAS) treated by a third party to reduce its extents on the Site.

[2]Location of Application Site: https://irish.gridreferencefinder.com?gr=G6613539398|Point_s_C|1&t=Point%20C&v=r (Accessed January 2021).

[3] Irish Statutory Instrument 477/2011 – EC Birds and Natural Habitats Regulations introduced important legislation concerning invasive species in the Republic of Ireland. Article 49 prohibits the introduction, breeding, release or dispersal of certain species; and Article 50 prohibits dealing in and keeping certain species. These Alien Invasive Species (IAS) are listed on the Third schedule of the Regulations.

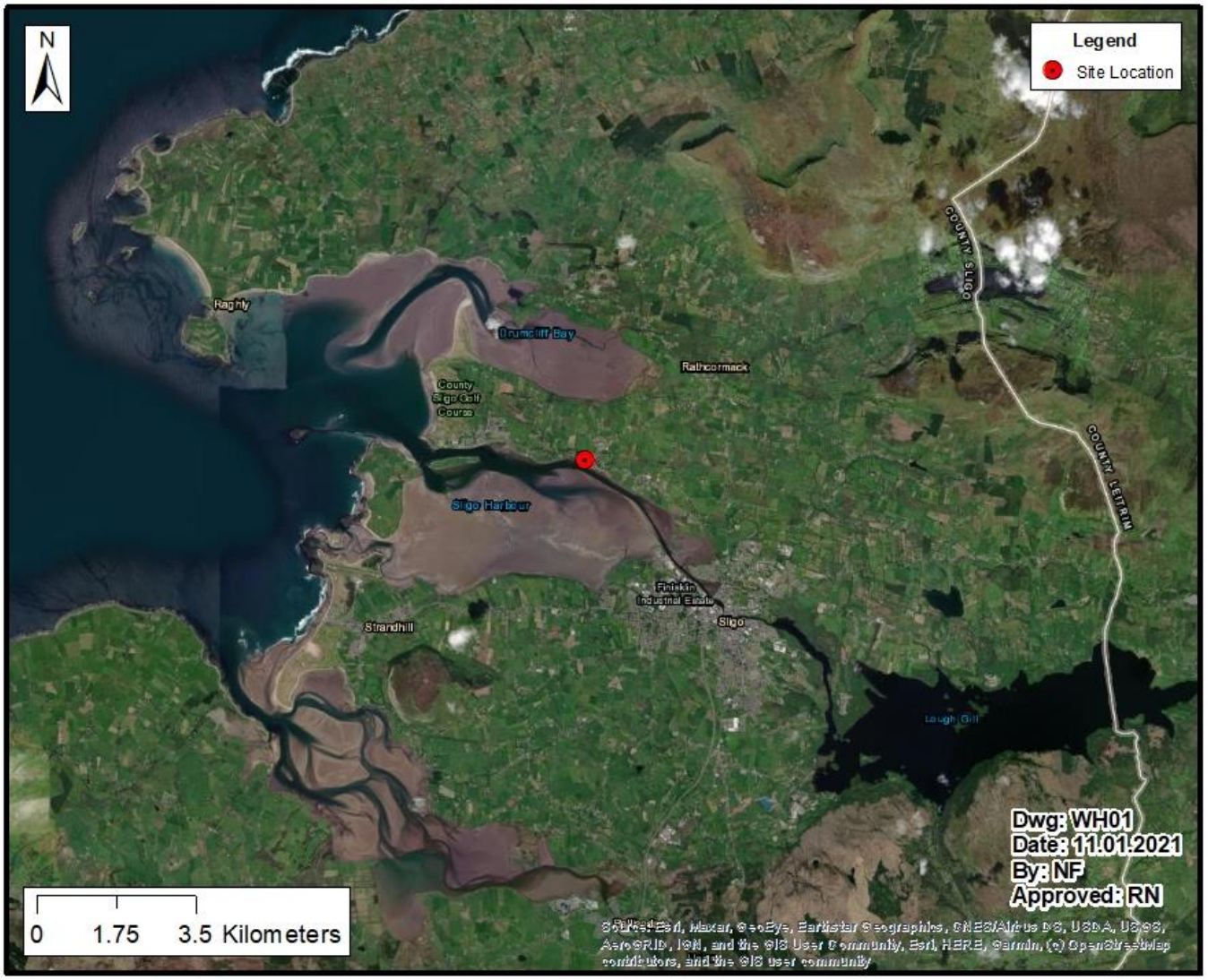


Figure 1: Geographic Location of the Proposed Development at Cregg, Ballincar, Rosses Point, Co. Sligo

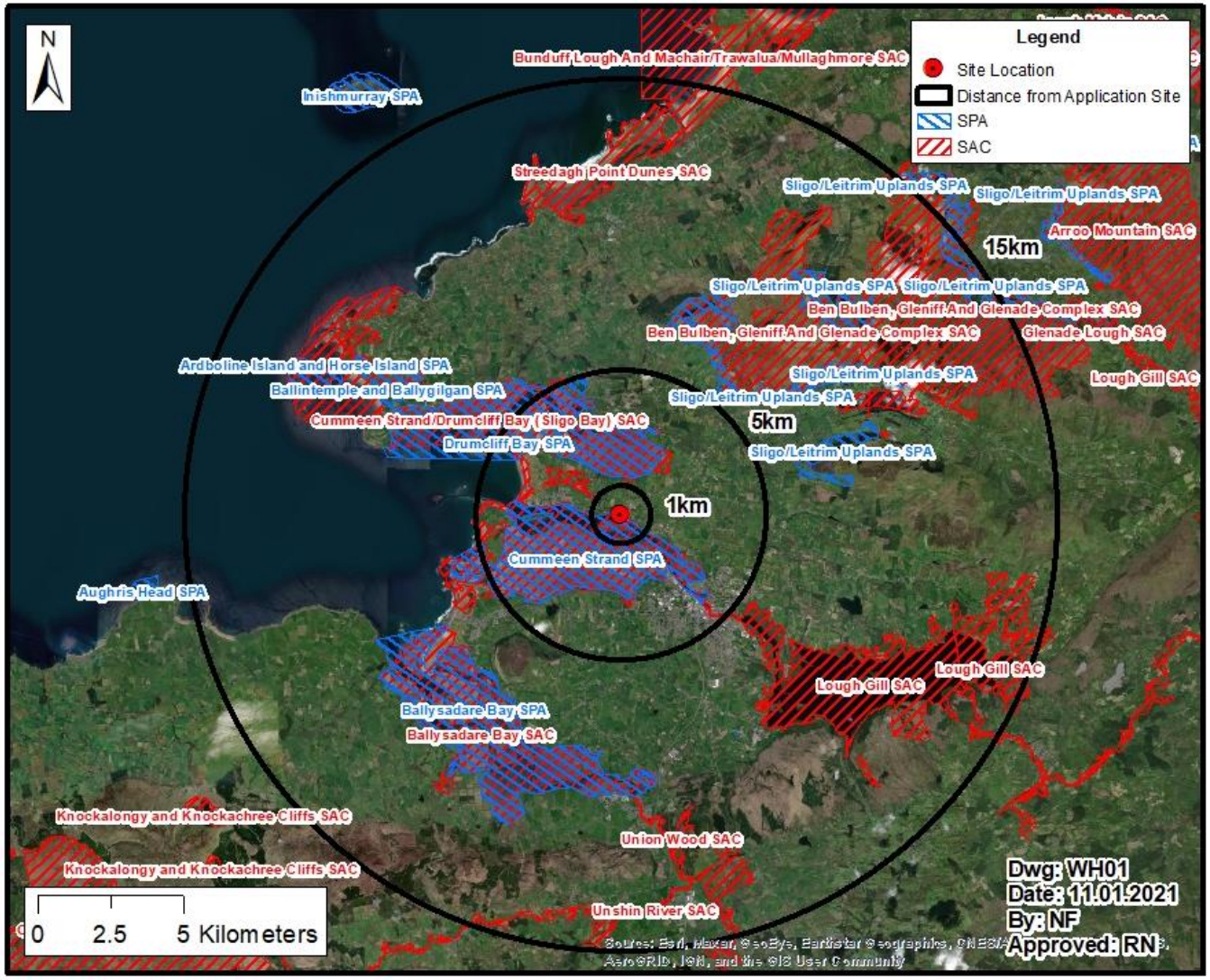


Figure 2: Location of Application Site in relation to the wider area and the Natura 2000 sites being assessed

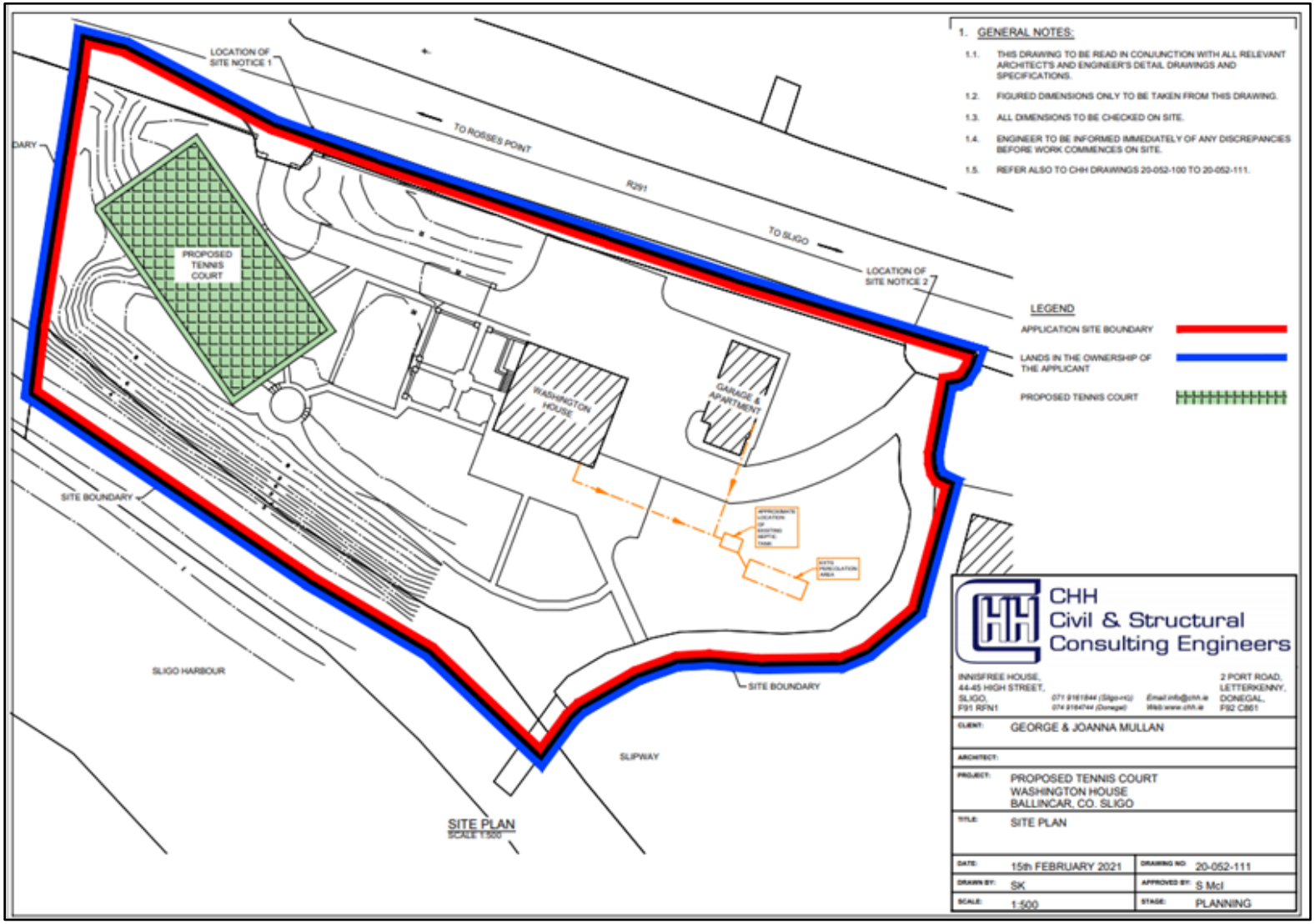


Figure 3: Proposed plan layout and boundary of the Application Site (Source: CHH)

Figure 4: Proposed location of the Tennis Court in relation to the boundaries of the closest SAC and SPA Sites

1.3 Receiving environment

The Application Site lies within a private dwelling ground. **Plate 1** illustrates the area in which the proposed development is to be constructed with the removal of garden shed seen in the centre of **Plate1**. **Plates 2-5** are also part of the footprint for the proposed development. Japanese knotweed is present within the scrub to the north-west of the proposal footprint.

Plate 1: Proposed intact modern shed for demolition

Plate 2: Scrub land in background and amenity grassland forms location of the Tennis Court

Plate 3: Area behind the garden shed (which will be removed)

Plate 4: Area of amenity grassland, garden trees and scrub (much of which will be removed)

General layout and details of the Proposed Development

The Proposed Development involves the construction of a single tennis court, tarmacadam path and associated mounding (intended for screening) within the privately owned grounds of the Client. The tennis court will be used for personal use of the Client. The proposed footprint of the court is set to be constructed partly within an area of the garden that has undergone some groundworks that has been overlaid with gravel and a small stone garden shed. The removal of the garden shed will allow the court to extend onto the improved, amenity grassland area and into the scrub area. The construction works will include ground works, levelling, drainage and the installation of artificial astro-turf. A portion of planted garden scrub and trees will be removed as part of the proposal. None of this habitat was considered to have significant ecological value, and none of the proposed trees for removal were deemed to be suitable to support any bat roosting opportunities (i.e. there were no Potential Roost Features, PRFs, noted). Full details of the proposed plan are available in **Appendix III** and Appendix IV.

Plate 5: Low rocky shoreline immediately adjacent to the Application Site

Plate 6: View looking to north, across the proposed location for the Tennis Court

According to EPA (2020) mapping this area has 'Moderate' Groundwater vulnerability, meaning that in the event of pollution the groundwater contamination is at moderate risk depending on the pollution incident itself. This has been taken into consideration when designing the mitigation section of this NIS. Groundwater Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. Groundwater vulnerability maps are based on the type and thicknesses of subsoils (sands, gravels, glacial tills (or boulder clays), peat, lake and alluvial silts and clays), and the presence of karst features. Groundwater is most at risk where the subsoils are absent or thin and, in areas of karstic limestone, where surface streams sink underground at swallow holes. All land area is assigned one of the following groundwater vulnerability categories: Rock near surface or karst (X) Extreme (E) High (H) Moderate (M) Low (L). Indicates the likelihood of groundwater contamination. This classification aids land-use management. It also helps in the choice of preventative measures and enables developments, which have a significant potential to contaminate, to be located in areas of lower vulnerability. The scoring helps to ensure that a groundwater protection scheme is not unnecessarily restrictive on human economic activity. (EPA Maps, 2020).

2. Legislation

2.1 Requirement for a Screening of the Proposed Development

The Habitats Directive was transposed into Irish law by the European Communities (Natural Habitats) Regulations 1997 and European Communities (Birds and Natural Habitats) Regulations 2011 (the Habitats Regulations), and in a planning context, through Part XAB of the Planning and Development Acts 200-2018 (as amended).

Regulation 42(1) of the 2011 Regulations requires that: *"A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site".*

Section 177U of Part XAB of the Planning and Development Act requires that: *"A screening for Appropriate Assessment of a draft Land use plan or application for consent for proposed development 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"*.

A Screening report to inform an Appropriate Assessment was completed for the project (provided in **Appendix I** of this NIS). Having gathered further information in relation to the potential for effects on European Sites as a result of this proposal, applying the Precautionary Principle, the AA Screening could not rule out the potential for a likely significant effect on Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC & Cummeen Strand SPA, based on:

- The construction period of the proposal has some low potential to result in disturbance impacts on QI bird species of Cummeen Strand SPA during construction if undertaken during the overwintering period for QI species - through noise, increase in human activity and visual impacts.
- There is considered to be no potential that the proposal would result in displacement of QI bird species of Cummeen Strand SPA foraging or roosting nearby the proposed works given the lack of optimal habitat immediately adjacent to the Application Site (as confirmed by an ornithological site visit on 12 November 2020). However, commuting waterbirds were noted within the bay (>500m from the Application Site) during the survey likely to be on route to foraging and roosting areas within the SPA e.g. 3 no. wigeon *Anas penelope* and 3 no. brent geese (light-bellied) *Branta bernicla hrota* flew past the Application Site during the brief site visit.
- The Proposed Development has some low potential to result in water quality impacts including pollution and siltation/sedimentation run-off during construction potentially affecting the aquatic QI habitats and species of Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Wetland habitats within the SPA.
- Unmitigated, the proposal has the potential to cause the Spread of a Scheduled invasive species Japanese knotweed into the nearby SAC / SPA. However, if the Client continues with the appropriate treatment of this IAS and eventual removal of this species, this could result in a positive impact on the environs of the Application Site.

Consequently, this Natura Impact Statement (NIS) has been produced, which provides information to inform an Appropriate Assessment by Sligo County Council.

2.2 Requirement for a Natura Impact Statement

Under Regulation 42(6) of the European Communities (Birds and Natural habitats) Regulations 2011 and part 177U (part XAB) of the Planning and Development Act 2000, an Appropriate Assessment is required in order to determine the potential for impact on the integrity of a European Site.

This Natura Impact Statement provides an assessment of the proposal, taking into consideration any potential impacts upon the features of conservation interest which are Qualifying Interests for the European Sites, and provides mitigation proposals which aim to avoid adverse effects upon the integrity of any European Sites. This allows for an audit trail through Article 6 of the EU Habitats Directive to facilitate an Appropriate Assessment by a Competent Authority.

2.2.1 Structure / Layout of the report

This Natura Impact Statement provides the information necessary for the Competent Authority, in this instance Sligo County Council, to undertake an Appropriate Assessment of the proposal. The report sections, paragraphs and tables relate in sequence to the process of assessing the potential impact of the project in the context of sequential requirements of Article 6 of the EU Habitats Directive.

2.2.2 Main sources of consultation and information

The following information sources were consulted:

- Department of Environment, Heritage and Local Government (DoEHLG, 2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities;
- European Community Habitats Directive (92/43/EEC) – The Habitats Directive;
- European Communities (Natural Habitats) Regulations 1997;
- European Commission Environment DG (2001). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC;
- National Parks and Wildlife Services online MapViewer[4];
- National Parks and Wildlife Service data (GIS datafiles[5]);
- Sligo County Council Planning Portal[6]; and,
- EPA online Map Viewer[7].

[4] NPWS Map Viewer http://webgis.npws.ie/npwsviewer/ (Accessed January 2021)

[5] NPWS Maps and Data https://www.npws.ie/maps-and-data (Accessed January 2021)

[6] Sligo County Council Planning Application Map Online Planning Tools (sligococo.ie) (Accessed January 2021)

[7] EPA Map Viewer https://gis.epa.ie/EPAMaps/ (Accessed January 2021)

3. SURVEY RESULTS

3.1 I-Webs Data Request Results

Given size and the nature of the Proposed Development and following a preliminary site visit by an Ornithologist on 12 November 2020, targeted bird surveys were not considered to be required to inform this Natura Impact Statement. Instead, an assessment was made by an experienced Senior Ecologist on the habitat types being affected, and it was deemed (by the ornithologist, following a site visit) that information on bird counts from I-Webs data (requested from Birdwatch Ireland and received in January 2021) was sufficient to inform the findings within this NIS. Given the scale and nature of the proposal, this ecological data is considered to be wholly sufficient to allow for any inferences to be made regarding the potential for any adverse impacts upon QI waterbirds which are using the environs of the site, or upon QI habitats in the environs of the Application Site. The type of development (small size and minimal land take within a privately used existing amenity space), its location within a used and managed garden, which lies outside of the SPA, and the fact that it does not support any important wetland habitats for use by the QI / SCI birds using the SPA, have all be taken into account when deciding on the potential zone of influence of this proposal. Applying the Precautionary Principle this NIS looks at the potential impacts across a potential zone of influence to 15km, and particularly focuses on any potential for likely impacts within up to 2km from the Application Site (with the likely zone of influence being closer to within 500m of the proposed works).

The results of Irish Wetland Bird Survey (I-Webs) by Birdwatch Ireland volunteers for this area (within relevant subsites of Sligo Harbour) in 2017/2018 are provided in **Appendix II** of this report.

3.1.1 Overall waterbird assemblage

According to the I-WeBS data reviewed for this NIS, the 3 no. QI species of the Cummeen Strand SPA have been recorded within Subsite Ballincar - 0C464 (which runs adjacent to the proposed Application Site) in the following numbers during I-WeBS counts in 2017/18: Light- Bellied Brent goose – 51; Oystercatcher – 6; and, Redshank – 3.

According to the SPA Supporting Document (NPWS, 2013) key roosting areas (as per a survey in 2013) lie greater than 500m of the Application Site (See **Appendix V**) and no suitable roosting habitat was identified adjacent to the Application Site during the site visit by Woodrow in 2020.

Table 1: 1% National & 1% International numbers of the QI species for Cummeen Strand SPA[8]

SPECIES	1% NATIONAL	1% INTERNATIONAL
LIGHT-BELLIED BRENT GOOSE	350	400
OYSTERCATCHER	610	8200
REDSHANK	240	2400

Source: I-Webs Summary Data for 0C492 Sligo Harbour (Birdwatch Ireland)

Table 2: The mean numbers of the Cummeen Strand SPA QI Species for all Subsites within Sligo Harbour over a 5 Year Period (2008/09 - 2017/18)

SPECIES	MEAN
LIGHT-BELLIED BRENT GOOSE	512
OYSTERCATCHER	749
REDSHANK	459

Source: I-Webs Summary Data for 0C492 Sligo Harbour (Birdwatch Ireland)

Overall, the collection of subsites within Sligo Harbour supports Nationally Important numbers of all 3 no. QI species of the SPA, and internationally important numbers of Light-Bellied Brent Goose (see **Table 1** and **Table 2**). The above data indicates that a small proportion of the QI species for the Cummeen Strand SPA utilise the subsite nearest to the Application Site (see **Appendix II** for further information).

Other important waterbirds species recorded in 2017/18 within Cummeen Strand SPA included; Shelduck (*Tadorna tadorna),* Wigeon (*Anas Penelope)*, Mallard (*Anas platyrhynchos)*, Cormorant (*Phalacrocorax carbo)*, Shag (*Phalacrocorax aristotelis)*, Grey Heron (*Ardea cinerea),* Ringed Plover *(Charadrius hiaticula),* Curlew *(Numenius arquata),* Greenshank *(Tringa nebularia),* Turnstone *(Arenaria interpres),* Black-headed Gull *(Chroicocephalus ridibundus),* Herring Gull *(Larus argentatus),* Great Black-backed Gull *(Larus marinus),* Mute Swan *(Cygnus olor),* Teal *(Anas crecca), Red-breasted Merganser (Mergus serrator), Great Northern Diver (Gavia immer), Great Crested Grebe (Podiceps cristatus), Little Egret (Egretta garzetta), Knot (Calidris canutus),* Dunlin *(Calidris alpine),* Bar-tailed Godwit *(Limosa lapponica), Common Gull (Larus canus),* Glaucous Gull *(Larus hyperboreus),* Golden Plover *(Pluvialis apricaria),* Sanderling (*Calidris alba)* and Red-throated Diver *(Gavia stellate).*

[8] *The mean of peak counts is used to rank wetland sites based on criteria developed by the Ramsar Convention (1971), in that a site was classified as internationally important if it regularly supported in excess of 20,000 waterbirds, or if it regularly supported internationally important numbers of waterbirds (i.e. 1% or more of the flyway population estimate of a species). A site was classified as of national importance if it regularly supported 1% or more of the all-Ireland population estimate of a species (nationally important numbers). (Birdwatch Ireland, 2018)*

3.1.2 Japanese Knotweed *Fallopia japonica* on the Application Site

Japanese knotweed, a Scheduled Invasive Species, has been recorded on the proposed site for the Tennis Court, and the roots of this plant will be excavated as part of the proposed works as it exists within the footprint of the proposed tennis court. Japanese knotweed is considered to pose a 'High Impact' risk to the environment in Ireland according to O'Flynn *et al* 2014[9]. The full extents of the plant at this site are currently unknown due to the fact that it is being treated by the Client, and the site visit was undertaken during winter time (outside of the main growing season).

Japanese knotweed is native to China and Japan. The Irish population is considered to date to be entirely female. In Ireland, Japanese knotweed is largely spread by rhizome (roots) and/or vegetatively from fragments of growing stems / rhizome. These plant fragments can be dispersed by human activity and also naturally through pathways such as watercourses. Japanese knotweed rhizomes can extend to 7m laterally from the main stem and up to 3m deep. The plant is extremely robust. The plant dies back in winter leaving only hollow standing canes which turn brown. **Plate 7** illustrates an area of this species on the Application Site.

Plate 7: Dead stem cells of Japanese knotweed within the ornamental scrub (this currently grows within and adjacent to the proposed Tennis Court location)

[9] O'Flynn, C., Kelly, J. and Lysaght, L. (2014). Ireland's invasive and non-native species – trends in introductions. National Biodiversity Data Centre Series No. 2. Ireland https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Trends-Report-2013.pdf [Assessed March 2020]

4. IMPACT ASSESSMENT

The Screening for Appropriate Assessment Report, provided in **Appendix I**, concluded that the proposal has the potential to result in significant effects on Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA. The assessment of the potential impact on the integrity of these sites, with respect to structure and function of Qualifying Interests is given in this section.

4.1 European Sites identified within the Screening Assessment

Table 3 below details the European Sites for which the proposal has the potential to result in significant effects. It includes the Qualifying Interests potentially affected as well as potential impact type. QI's highlighted in **Bold** are considered to be of particular importance, due to their potential for adverse impacts if the proposal was left unmitigated.

Table 3: Potential adverse effects matrix for European Sites within the Zone of Influence of the Proposed Development

Protected European Site	Distance from Application Site	Qualifying Interest[10] (QIs)	Impact Type
Special Areas of Conservation (SACs)			
Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC Site Code: 000627	The proposed tennis court is encroaching within the boundary of the SAC to the south	• **Estuaries [1130]** • **Mudflats and sandflats not covered by seawater at low tide [1140]** • **Embryonic shifting dunes [2110]** • **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]** • **Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]** • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (* important orchid sites) [6210] • **Petrifying springs with tufa formation *(Cratoneurion)* [7220]** • *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] • ***Petromyzon marinus* (Sea Lamprey) [1095]** • ***Lampetra fluviatilis* (River Lamprey) [1099]** • ***Phoca vitulina* (Harbour Seal) [1365]**	*During Construction:* • Water quality impacts from sedimentation run-off effecting marine species and habitats during construction. • Potential to spread an IAS (Japanese knotweed) further afield. *During Operation:* • No adverse impacts noted

[10] The Site-Specific Conservation Objectives (NPWS, 2011) of each QI is to maintain the favourable conservation condition of each QI in each Site, which is defined by a list of attributes and targets found in the Conservation Objectives Documents referenced.

Ballysadare Bay SAC **Site Code: 000622**	*c.*8km to the south	• 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] • Humid dune slacks [2190] • *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] • *Phoca vitulina* (Harbour Seal) [1365]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.
Union Wood SAC **Site Code: 000638**	*c.*10.5km to the south	• Old sessile oak woods with Ilex and *Blechnum* in the British Isles [91A0]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.
Ben Bulben, Gleniff and Glenade Complex SAC **Site Code: 000623**	*c.*6.5km to the north	• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] • Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (* important orchid sites) [6210] • Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and sub-mountain areas, in Continental Europe) [6230] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Transition mires and quaking bogs [7140]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.

		• Petrifying springs with tufa formation *(Cratoneurion)* [7220] • Alkaline fens [7230] • Siliceous scree of the montane to snow levels *(Androsacetalia alpinae and Galeopsietalia ladani)* [8110] • Calcareous and calcshist screes of the montane to alpine levels *(Thlaspietea rotundifolii)* [8120] • Calcareous rocky slopes with chasmophytic vegetation [8210] • *Vertigo geyeri* (Geyer's Whorl Snail) [1013] • *Lutra lutra* (Otter) [1355]	
Lough Gill SAC **Site Code: 001976**	*c.* 4km to the south-east	• Natural eutrophic lakes with *Magnopotamion or Hydrocharition* - type vegetation [3150] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (* important orchid sites) [6210] • Old sessile oak woods with Ilex and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*) [91E0] • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355]	Given the size, nature and downstream location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.

Streedagh Point Dunes SAC **Site Code: 001680**	*c.*12.7km to north-west	• 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]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.
Unshin River SAC **Site Code: 001898**	*c.*13.5km to south	• Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation [3260] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (* important orchid sites) [6210] • Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae)* [91E0] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.

Special Areas of Conservation (SACs)			
Cummeen Strand SPA **Site Code: 004035**	The proposed mounding around the tennis court is located within *c.*1m the boundary of the SPA to the south	• **Light-bellied Brent Goose *(Branta bernicla hrota)* [A046]** • **Oystercatcher *(Haematopus ostralegus)* [A130]** • **Redshank (*Tringa totanus)* [A162]** • **Wetland and Waterbirds** [A999]	*During Construction:* • Water quality impacts from sedimentation run-off potentially affecting waterbird species and habitats. • Noise disturbance from groundworks. During Operation • The operation of a single private tennis court in this location within the garden is not considered to pose any significant impacts on this European Site (e.g. through disturbance or surface water runoff for example).
Drumcliff Bay SPA **Site Code: 004013**	*c.*2km to the north (*c.*5km via waterbody connectivity)	• Sanderling *(Calidris alba)* [A144] • Bar-tailed Godwit *(Limosa lapponica)* [A157] • Wetland and Waterbirds [A999]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.
Ballysadare Bay SPA **Site Code: 004129**	*c.*8.3km to the south	• 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]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.
Ballintemple and Ballygilgan SPA	*c.*8.48km to the north-west	• Barnacle Goose *(Branta leucopsis)* [A045]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.

Site Code: 004234			
Ardboline Island and Horse Island SPA **Site Code: 004135**	11.62km to the north-west	• Cormorant *(Phalacrocorax carbo)* [A017] • Barnacle Goose *(Branta leucopsis)* [A045]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.
Sligo/Leitrim Uplands SPA **Site Code: 004187**	12.09 km to the north-east	• Peregrine *(Falco peregrinus)* [A103] • Chough *(Pyrrhocorax pyrrhocorax)* [A346]	Given the size, nature and location the proposal – there is considered to be no potential for impacts upon this particular European Site and / or its Qualifying Interest habitats / species.

4.1.1 Description of Natura 2000 sites within the Zone of Influence

As shown in ***Table 3*** and illustrated in ***Figure 3*** above, the Proposed Development is located in close proximity to Cummeen Strand SPA and Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC. There is potential for disturbance of the Qualifying Interests (QI) species of Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA during the construction phase due to the proximity of the Proposed Development. See ***Table 3*** for QI species / habitats which are considered to have the potential to be adversely impacted by the proposal.

Description of Cummeen Strand SPA

Cummeen Strand SPA is of high significance for wintering and breeding bird species. It supports a number of important wintering waterfowl species including some of international and national importance. According to NPWS (2014) Cummeen Strand is a large shallow bay that stretches from Sligo town west to Coney Island. It is situated between Drumcliff Bay to the north and Ballysadare Bay to the south, it is one of the three estuaries bays within Sligo Bay. The Garavogue River flows into the bay and forms a permanent channel. Wintering waterfowl are supported by a diverse food source of macro-invertebrates found within the large mud and sand flats that are exposed during low tide. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. Herbivorous wildfowl are also supported with the presences of eelgrass (*Zostera noltii and Z. angustifolia*) beds as food source. The habitats that Cummeen Strand provides are of high conservation significance and are listed on Annex I of the E.U. Habitats Directive. Salt marsh fringe some of the areas of the bay provide important roosting sites for birds during high tides. According to NPWS (2014) Cummeen Strand SPA has the Light bellied Brent Goose occur in numbers of international importance. 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.

QIs of Cummeen Strand SPA being assessed further include:

- **Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]**
- **Oystercatcher (*Haematopus ostralegus*) [A130]**
- **Redshank (*Tringa totanus*) [A162]**
- **Wetland and Waterbirds [A999]**

Site-specific conservation objectives and favourable conservation status

A site-specific conservation objective aims to define favourable conservation conditions for a particular habitat or species at that Site (NPWS, 2013). According to Articles 1(e) and 1(i) of the Habitats Directive (EC, 1992) and as cited in NPWS (2013), *favourable conservation status of a habitat is achieved when:*

- *Its natural range, and area it covers within that range, are stable or increasing;*
- *The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and,*
- *The conservation status of its typical species is favourable.*

According to NPWS (2013), *favourable conservation status of a species is achieved 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;*
- *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.*

The generic conservation objective for the site is:

"*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA" and "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 ".*

Threats and Pressures on Cummeen Strand SPA

Table 4 lists the threats, pressures and activities impacting Cummeen Strand SPA (Source: NPWS, 2018).

Table 4: Threats, pressures and activities impacting on Cummeen Strand SPA.

Code	Threats & Pressures	Rank	+/-	Inside/Outside
A08	***Agriculture;*** Fertilisation	M	-	O
D01.02	***Transportation and service corridors;*** roads, motorways all paved roads	M	-	o
D03.02	***Transportation and service corridors;*** shipping lanes includes canals	H	-	i
E01	***Urbanisation, residential and commercial development***; urbanised areas, human habituation	M	-	o
E02	***Urbanisation, residential and commercial development;*** industrial or commercial areas	H	-	i
E02	***Urbanisation, residential and commercial development;*** industrial or commercial areas	H	-	o
F01	***Biological resource use other than agriculture & forestry;*** marine and freshwater aquaculture	H	+	I
F02.03	***Biological resource use other than agriculture & forestry;*** Leisure fishing other than bait-fishing	L	-	o
H	***Pollution***	M	-	I
J02.01.02	***Natural system modification;*** reclamation of land from sea, estuary or marsh	H	+	i

Rank: H = high, M = medium, L = low; I= inside, O = outside, B = both; +/- = Positive/Negative Impact

Source: http://cdr.eionet.europa.eu/help/natura2000

4.1.2 Description of Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC

According to NPWS (2016) this site is a Special Area of Conservation due to the habitats and species listed as Annex I / II of the E.U. Habitats Directive which exist here. The dominant habitats on the site are estuaries and intertidal sand and mud flats. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. The intertidal flats support a diverse macrofauna, with invertebrate species such as lugworm (*Arenicola marina*), common cockle (*Cerastoderma edule*), sand mason worm (*Lanice conchilega*), Baltic tellin (*Macoma balthica*), spire shell (*Hydrobia ulvae*) and common mussel (*Mytilus edulis*) being frequent. Of particular note is the presence of the eelgrasses *Zostera noltii* and *Z. angustifolia* beds in both bays. Areas of saltmarsh fringe both bays in places. Cummeen Strand/Drumcliff Bay (Sligo Bay) is an important site of high conservation significance, which includes a wide variety of habitat types, including several listed-on Annex I of the E.U. Habitats Directive, several species listed on Annex II of this Directive, large and important populations of waterfowl and seabirds, and several rare plant species.

QIs of Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC being assessed further:

- **Estuaries [1130]**
- **Mudflats and sandflats not covered by seawater at low tide [1140]**
- **Embryonic shifting dunes [2110]**
- **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]**
- **Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]**
- *Juniperus communis* formations on heaths or calcareous grasslands [5130]
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]
- **Petrifying springs with tufa formation (*Cratoneurion*) [7220]**
- *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
- ***Petromyzon marinus* (Sea Lamprey) [1095]**
- ***Lampetra fluviatilis* (River Lamprey) [1099]**
- ***Phoca vitulina* (Harbour Seal) [1365]**

Site-specific conservation objectives and favourable conservation status

Site-specific Conservation Objectives have been developed for Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC which aim to define favourable conservation conditions for each particular habitat and species QI at that site (NPWS, 2013). Conservation Objectives for each include the general objective '*To maintain the favourable conservation condition of any habitat or species in Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC, which is defined by a detailed list of attributes and targets'* listed in NPWS 2013 and ***Table 5*** below.

Table 5: Conservation Objectives for each of the QIs being assessed

To maintain the favourable conservation condition of Estuaries in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	Area stable or increasing, subject to natural processes	Habitat area was estimated as 1258ha using OSi data and the defined Transitional Water Body area under the Water Framework Directive
Community extent	Hectares	Maintain the extent of the *Zostera*-dominated community and the *Mytilidae*-dominated community complex, subject to natural processes.	Based on intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012) and subtidal survey in 2010 (Aquafact, 2011).
Community structure: *Zostera* density	Shoots/m²	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes	Estimated during intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012).
Community structure: *Mytilus edulis* density	Individuals/m²	Conserve the high quality of the *Mytilidae*-dominated community complex, subject to natural processes	Estimated during intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012) and subtidal survey in 2010 (Aquafact, 2011).
Community distribution	Hectares	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	Based on intertidal and subtidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012; Aquafact, 2011) and an intertidal walkover undertaken in 2013

		oligochaetes community complex; Fine sand with *Angulus* spp. and *Nephtys* spp. community complex; Sand to mixed sediment with amphipods community; Intertidal reef community.	
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, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes	Habitat area was estimated using OSi data as 2288ha
Community extent	Hectares	Maintain the extent of the *Zostera*-dominated community and the *Mytilidae*-dominated community complex, subject to natural processes.	Based on intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012).
Community structure: *Zostera* density	Shoots/m²	Conserve the high quality of the Zostera-dominated community, subject to natural processes	Estimated during intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012).
Community structure: *Mytilus edulis* density	Individuals/m²	Conserve the high quality of the *Mytilidae*-dominated community complex, subject to natural processes	Estimated during intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012)
Community distribution	Hectares	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 crustaceans and *Scololepis (Scololepis) squamata* community complex; Fine sand with *Angulus* spp. and *Nephtys* spp. community complex.	Based on intertidal surveys undertaken in 2007 and 2010 (ASU, 2007, 2012).

To maintain the favourable conservation condition of Embryonic shifting dunes in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For subsites mapped: Coney Island - 0.67ha, Rosses Point - 32.27ha, Strandhill - 0.18ha, Yellow Strand - 0.83ha.	Based on data from the Coastal Monitoring Project (CMP) (Ryle *et al.*, 2009). 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. NB further un-surveyed areas maybe present within this SAC. S
Habitat distribution	Occurrence	No decline, subject to natural processes	Based on data from Ryle *et al.* (2009). Additional dune habitats noted to occur at Lissadell Strand and on Maguin's Island.
Physical structure: functionality and sediment supply	Presence/absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Ryle *et al.* (2009). Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. There are coastal protection works at both Strandhill and Rosses Point
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Ryle *et al.* (2009). At Rosses Point, saltmarsh habitats occur in association with sand dune habitats.
Vegetation composition: plant health of foredune grasses	Percentage cover	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)	Based on data from Ryle *et al.* (2009).
Vegetation composition: typical species and subcommunities	Percentage cover	Maintain the presence of species-poor communities with typical species: sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*)	Based on data from Ryle *et al.* (2009).

Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-native species) to represent less than 5% cover	Based on data from Ryle *et al.* (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Seabuckthorn (*Hippophae rhamnoides*) should be absent or effectively controlled. This species has not been recorded from this SAC.
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, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	Area 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.	Based on data from the Coastal Monitoring Project (CMP) (Ryle *et al.*, 2009). 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. NB further un-surveyed areas maybe present within this SAC.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.	Based on data from Ryle *et al.* (2009). Additional dune habitats noted to occur at Lissadell Strand and on Maguin's Island. S
Physical structure: functionality and sediment supply	Presence/ absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Ryle *et al.* (2009). Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Marram grass (*Ammophila arenaria*) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. There are hard coastal protection works at both Strandhill and Rosses Point
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Gaynor (2008) and Ryle *et al.* (2009). At Rosses Point, saltmarsh habitats occur in association with sand dune habitats.

Vegetation composition: plant health of dune grasses	Percentage cover	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)	Based on data from Ryle *et al.* (2009).
Vegetation composition: typical species and subcommunities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lymegrass (*Leymus arenarius*)	Based on data from Ryle *et al.* (2009).
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle *et al.* (2009). Negative indicators include non-native species; species indicative of changes in nutrient status and species not considered characteristic of the habitat. Seabuckthorn (*Hippophae rhamnoides*) should be absent or effectively controlled. This species has not been recorded from this SAC.
To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Coney Island - 15.06ha; Rosses Point -	Based on data from Coastal Monitoring Project (CMP) (Ryle *et al.*, 2009). Habitat was recorded at four sub-sites, giving an estimated total area of 96.26ha.

		21.89ha; Strandhill - 40.14ha; Yellow Strand - 19.16ha.	NB further un-surveyed areas maybe present within this SAC.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.	Based on data from Ryle *et al.* (2009). Additional dune habitats noted to occur at Lissadell Strand and on Maguin's Island.
Physical structure: functionality and sediment supply	Presence/ absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Ryle *et al.* (2009). Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. There are coastal protection works at both Strandhill and Rosses Point
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Gaynor (2008) and Ryle *et al.* (2009). At Rosses Point, saltmarsh habitats occur in association with sand dune habitats.
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	Based on data from Gaynor (2008) and Ryle *et al.* (2009). At both Yellow Strand and Coney Island, overgrazing and rabbit burrowing have contributed to creating large areas of bare sand.
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from Gaynor (2008) and Ryle *et al.* (2009). Vegetation is quite rank in places at Strandhill and Rosses Point due to under grazing, while at Coney Island and Yellow Strand, overgrazing is an issue.
Vegetation composition: typical species and subcommunities	Percentage cover at a representative sample of monitoring stops	Maintain range of subcommunities with typical species listed in Ryle *et al.* (2009)	Based on data from Gaynor (2008) and Ryle *et al.* (2009).
Vegetation composition: negative indicator species (including *Hippophae rhamnoides*)	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle *et al.* (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Seabuckthorn (*Hippophae rhamnoides*) should

			be absent or effectively controlled. This species has not been recorded from this SAC. The main negative indicators recorded are creeping thistle (*Cirsium arvense*), spear thistle (C. vulgare), ragwort (Senecio jacobaea) and perennial rye grass (*Lolium perenne*) (Ryle *et al.*, 2009).
Vegetation composition: scrub/trees	Percentage cover	No more than 5% cover or under control	Based on data from Ryle *et al.* (2009). At Strandhill, pine trees planted at low density occur within the fixed dune habitat. Isolated individual sycamore (*Acer pseudoplatanus*) trees are present in the northern part of the fixed dunes at Rosses Point.
To restore the favourable conservation condition of *Juniperus communis* formations on heaths or calcareous grasslands in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Formation areas	Hectares	Area stable or increasing, subject to natural processes	Four areas of juniper vegetation were identified within the SAC (three at Rosses Point and one at Knocklane- SO01, SO04, SO08, SO16) by a national juniper survey (Cooper *et al.*, 2012), although not all are classified as formations (see below). NB Further unsurveyed areas maybe present within the SAC
Habitat distribution	Occurrence	No decline	Map shows sites identified in Cooper *et al.* (2012)- SO01, SO04, SO08, SO16. NB Further unsurveyed areas maybe present within the SAC
Juniper population size	Number	At least 50 plants per population	To classify as a juniper formation, at least 50 plants should be present (Cooper *et al.,* 2012). Further work is required to confirm which sites, identified by Cooper *et al.* (2012) at Rosses Point, should be classified as formations. These three sites probably form a single breeding population (J. Cross, pers. comm.). The Knocklane

			population (SO04) is not currently classified as a formation (Cooper *et al.,* 2012)
Formation structure: cover and height	Hectares	Appropriate community diversity and extent	See Cooper *et al.* (2012) for further details
Formation structure: cone-bearing plants	Percentage	At least 10% of plants bearing cones	Target based on Cooper *et al.* (2012). 55% of the SO01 population was bearing cones at time of survey (Cooper *et al.*, 2012)
Formation structure: seedling recruitment	Percentage	At least 10% of juniper plants within the formation are seedlings	Target based on Cooper *et al.* (2012). 21% of the SO01 population were seedlings according to Cooper *et al.* (2012)
Formation structure: amount of each plant dead	Mean percentage	Mean percentage of each juniper plant dead not more than 10%	Target based on Cooper *et al.* (2012)
Vegetation composition: typical species	Occurrence	A variety of typical native species with a minimum of 10 species present (excluding negative indicator species	According to Cooper *et al.* (2012), juniper stands within the SAC fall into either vegetation group 4 (*Calluna vulgaris-Erica cinerea* group) or 5 (*Galium verum-Pilosella officinarum* group). See Cooper *et al.* (2012) for typical species
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control	Non-native cotoneaster (*Cotoneaster integrifolius*) was recorded at Rosses Point by Cooper *et al.* (2012)
To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion*) in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Habitat distribution	Square meters	Area stable or increasing, subject to natural processes	The area of this habitat at Ballincar is recorded as 150m2 along c.200m of cliff (internal NPWS files). NB further areas of the habitat may occur within this SAC

Habitat distribution	Occurrence	No decline	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) NB further areas of the habitat may occur within this SAC
Hydrological regime: height of water table; water flow	Metres; metres per second	Maintain appropriate hydrological regimes	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 (internal NPWS files)
Water quality	Water chemistry measures	Maintain oligotrophic and calcareous conditions	Water chemistry is currently unknown for this site. Characteristically, petrifying spring water has high values for pH, alkalinity and dissolved calcium and is oligotrophic (Lyons and Kelly, 2013)
Vegetation composition: typical species	Occurrence	Maintain typical species	The bryophytes Palustriella commutata (*Cratoneuron commutatum*) and *Eucladium verticillatum* are diagnostic of this habitat (EC, 2007). Both are found at the location described above (internal NPWS files). Other bryophyte species listed here are *Didymodon tophaceus* and *Trichostomium crispulum* (internal NPWS files)
To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Distribution: occupied sites	Number	No decline. There is one known location for this species in this SAC (which overlaps two 1km squares).	From Moorkens and Killeen (2011) (site code Va CAM21)

Presence on transect	Occurrence	Adult or sub-adult snails are present in four of the grassland zones on the transect where optimal or sub-optimal habitat occurs (minimum 5 samples)	Transect established as part of condition assessment monitoring at this site (Moorkens and Killeen, 2011). See habitat extent target below for definition of optimal and sub-optimal habitat
Presence	Occurrence	Adult or sub-adult snails are present in at least 6 other places at the site with a wide geographical spread (minimum of 8 sites or 75% of sites sampled)	From Moorkens and Killeen (2011)
Transect habitat quality	Metres	At least 75m of habitat along the transect is classed as optimal and 150m of habitat along the transect is classed as suboptimal or optimal	From Moorkens and Killeen (2011). See habitat extent target below for definition of optimal and sub-optimal habitat
Transect optimal wetness	Metres	Soils, at time of sampling, are damp (optimal wetness) and covered with a layer of humid thatch for more than 130m along the transect	From Moorkens and Killeen (2011)
Habitat extent	Hectares	12-15ha of the site optimal and a further 11-14ha suboptimal. Optimal habitat is defined as fixed dune, species-rich grassland dominated by red fescue (*Festuca rubra*), with sparse marram grass (*Ammophila arenaria*), lady's bedstraw (*Galium verum*), eyebright (*Euphrasia* sp.), mouseear-hawkweed (*Pilosella officinarum*) and other low growing herbs. Vegetation height 10-30cm. Habitat growing on damp, friable soil covered with a layer of humid, open structured thatch. Sub-optimal habitat is defined as for optimal but either vegetation height is less than 10cm or between 30 and 50cm; or the vegetation contains mounds of moss or willow (Salix spp.) scrub; or the soil is dry and sandy; or the thatch is wetter with a denser structure	From Moorkens and Killeen (2011)

To restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Distribution: extent of anadromy	% of estuary accessible	No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa	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 Garavogue 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
To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Distribution: extent of anadromy	% of estuary accessible	No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa	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 Garavogue 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
To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is defined by the following list of attributes and targets:			
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use	See marine supporting document for further details

Breeding behaviour	Breeding sites	Conserve the breeding sites in a natural condition.	Attribute and target based on background knowledge of Irish breeding populations, review of data summarised by Summers *et al.* (1980), Warner (1983), Harrington (1990), Lyons (2004), and unpublished NPWS records
Moulting behaviour	Moult haul-out sites	Conserve the moult haul-out sites in a natural condition.	Attribute and target based on background knowledge of Irish populations, review of data from Lyons (2004), Cronin *et al.* (2004), and unpublished NPWS records.
Resting behaviour	Resting haul-out behaviour	Conserve the resting haul-out sites in a natural condition	Attribute and target based on background knowledge of Irish populations, review of data from Lyons (2004) and unpublished NPWS records.
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the harbour seal population at the site	See marine supporting document for further details

5. ASSESSMENT OF POTENTIAL EFFECTS ON NATURA 2000 SITES

To inform the impact assessment process, a site visit was undertaken on 12 November 2020 in order to identify any potential for Annex habitats or species of the **Cummeen Strand SPA** and **Drumcliff Bay SPA, Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC** in the vicinity of the Application Site. The surveys also provided an opportunity to investigate the presence of invasive species and any hydrological connections in further detail to ascertain the potential impacts of the Proposed Development upon these features, for instance impacts resulting in potential effects on water quality within the European Sites.

No Qualifying Interest bird species from the SPA were recorded on, or within <500m, of the Application Site during the site visit on 12 November 2020. There is no QI wetland habitat located within the Application Site and therefore, there will be no loss of this QI habitat. All QI species of the SPA (along with the QI species and habitats of the SAC), that are sensitive to water quality impacts are assessed further within this NIS for any potential adverse effect (as a result of water quality impacts). All QI species of the SPA and SAC sensitive to disturbance impacts are also assessed within this NIS for any potential adverse effect.

5.1 Assessment of effects on Cummeen Strand SPA

5.1.1 Potential Disturbance Impacts to Terrestrial Birds

Construction

Disturbance impacts (including noise and visual effects during construction) have the potential to adversely affect QI bird species of the SPA during the overwintering season. Construction impacts can result in different disturbance effects depending on the noise levels, types of construction activity and the species involved. According to Cayford, (1993), disturbance varies in its magnitude, frequency, predictability, spatial distribution and duration. Moreover, species (and individuals within species groups) vary greatly in their susceptibility to disturbance and this susceptibility is likely to vary with age, season, weather and the degree of previous exposure (habituation). Cutts *et al.*, (2009), describes disturbance as discrete events which disrupt ecosystems, communities or population structure or alter resource levels, i.e. food and space, but may also influence the survival of individual birds and reduce the function of a site either for roosting or feeding. The degree of disturbance to avifauna on a site depends on a number of variables including the type of disturbance stimuli, avifaunal community present, avifaunal function/activity, extent and topography of site (spatial), time of year (temporal), level of third-party disturbance, weather conditions and degree of previous exposure (Cutts *et al.*, 2009).

Research shows that birds respond to human presence in a similar way to how they would respond to a predator (by walking or flying away from the assumed threat) (Blumstein *et al.*, 2003). Avoidance behaviours (i.e., taking flight) incur energetic costs to birds. According to Stillman and Goss-Custard (2002), the response of foraging animals to human disturbance can be considered as a trade-off between the increased perceived predation risk of tolerating disturbance and the increased starvation risk of not feeding and avoiding disturbance. According to Blumstein (2003), the distances at which birds will initiate flight (flight initiation distance or “FID”) in response to disturbance is species-specific, with some species reacting more strongly than others. According to Blumstein (2003), sanderling show 100% disturbance response to humans when they are 30 m or closer, while larger birds have greater alert distances. Figure

5 taken from Cutts *et al.* (2009) shows distances that can be used as guidelines which should be used in conjunction with a suitable monitoring programme if being used to implement mitigation measures during construction activities. In general, foraging birds are negatively affected by the presence of humans. The severity of these effects is dependent on the number of people present, type of activity, spatial variables, temporal variables and inter-specific distances.

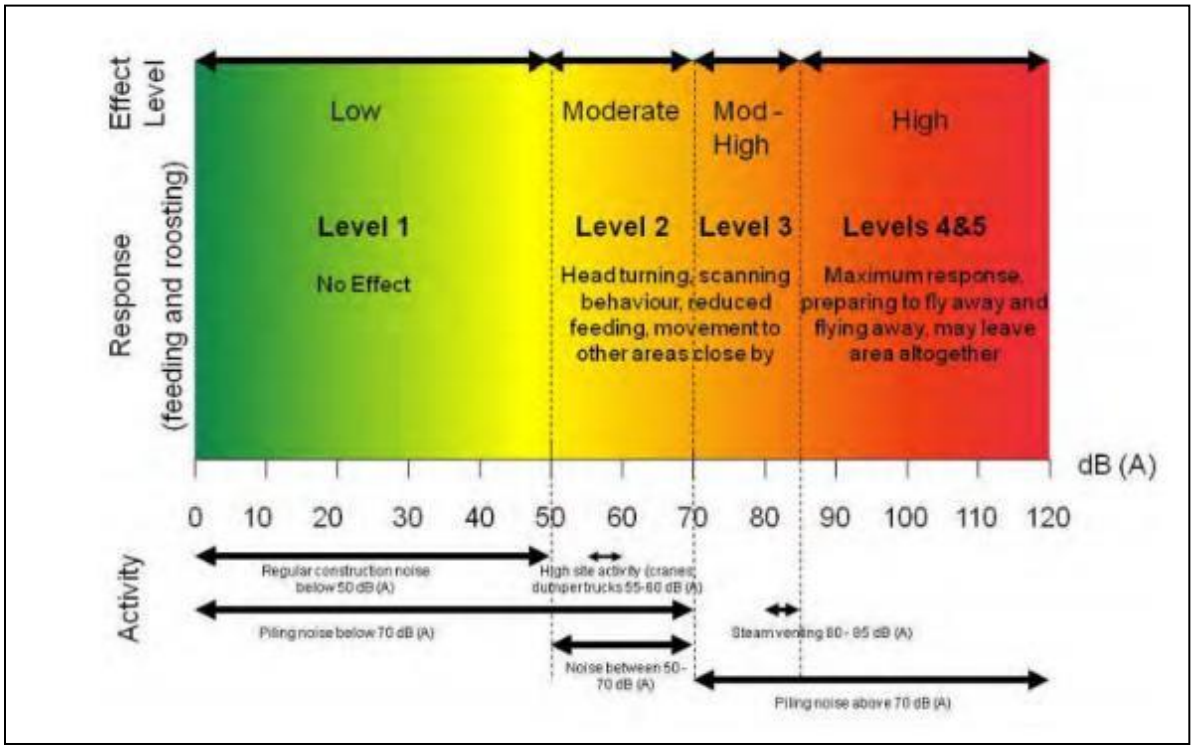


Figure 5: Disturbance responses and activities (Source: Cutts et al., 2009).

The estimated potential disturbance activities during construction for the Proposed Development are provided below:

Types: Human movement (*c.* 4 operatives).
Movement of machinery (excavators, rollers, dumpers, lorries etc.).
Noise of construction (occasionally very loud > 100 dB).

Scale: Small scale (< 0.09 ha)

Frequency: Frequent (daily/working week) over a constrained period (i.e. during approximately a 3-week period). It is estimated that loud, disturbing works will be undertaken over max approx. 12 days and for max 8 hours per day.

Seasonality: Conduct any construction work (excavation / ground works) in appropriate weather conditions (dry weather spells are optimal) ideally in March to September (aiming to avoid winter season when wintering bird numbers are high). **Clear site vegetation outside of the bird breeding season (which is March to August inclusive).** Management of Invasive Alien Species (IAS) Japanese knotweed needs to be taken into consideration – and any cleared material treated appropriately – will require a licenced waste facility if removing off site.

There was no suitable habitat for the QI bird species of SPA noted within the footprint of the works. However, suitable foraging habitat is located nearby along the shoreline of the bay, and as such there is the potential for temporary disturbance to occur to birds which might forage along the shoreline. This is particularly the case during the over wintering bird season (October to March inclusive), but any potential impacts are likely to be short-term and temporary during construction.

The proposal has the potential to result in some of the disturbance activities detailed above during construction. Given that the habitat immediately adjacent (within 20 -30m of the footprint of the works) is considered to be suboptimal for foraging and/or roosting waterbirds, the potential for adverse effects through disturbance on the QI species during construction would be negligible. However, taking a precautionary approach – mitigation has been advised to remove the potential for any impacts upon over-wintering birds (QI species of the SPA) which could be present during October to March.

Unmitigated, there is potential for the proposed development to result in an impact on the local water quality during construction. Without the correct mitigation measures (such as silt fencing) the quality of the water could be impacted from surface run-off and sedimentation from any groundworks, particularly if carried out during poor weather conditions. This in turn could disturb macro-invertebrates present along the shoreline, on which waterbirds might forage. This is discussed further below in Section 5.1.2.

Due to the reasons mentioned above, appropriate mitigation measures need to be put in place so that there will be no adverse effect on QI species or habitats of the SPA through disturbance impacts during construction, and/or adverse impacts upon local water quality.

Operation

Disturbance during operation could be caused by human movement adjacent to the shoreline. However, the scale of this disturbance is predicted to be negligible and similar to existing levels.

Due to the small-scale nature and type of disturbance effect of the proposal, there will be no adverse effect on the QI bird species of Cummeen Strand during the operation of the project and therefore, no mitigation measures are required in this respect.

5.1.2 Potential Water Quality Impacts to Birds

Construction

Waterbirds of the SPA

During construction of the Proposed Development, potential water quality impacts to Cummeen Stand SPA include non-toxic contamination (sedimentation/siltation e.g. from groundworks/excavation and temporary drainage) and toxic contamination (pollution, chemicals and hydrocarbons e.g. from equipment, machinery and vehicles). It is considered to unlikely, due to the adjacent habitats immediately beside the Application Site, but there is a low possibility that this may result in the indirect loss (degredation) of supporting foraging habitat for water dependent QI bird species of the SPA. An increase in suspended solid concentrations has the potential to affect aquatic invertebrates through increased turbidity (inhibiting respiration e.g., through gills) and increased siltation affecting composition of riverbed substrate. As a result, this could indirectly affect waterbirds, for example oystercatchers, redshank and light-bellied brent goose, feeding within this SPA. Suspended solids often hold nutrients such as phosphorus or hydrocarbons that can also result in eutrophication and reduced oxygen levels, another potential impact that is discussed further in this section. Release of hydrocarbons during the months of

October to March into the drains and subsequently into the wetland habitat of Cummeen Strand also has the potential to adversely affect the wintering waterbirds of the SPA. In the absence of mitigation, protected habitats and species, could be degraded during the construction phase of such a project through pollution and/or disruption (SEPA, 2015). This effect would result from various impacts on surface water quality from the Proposed Development. The SPA QI 'Wetlands and waterbirds' includes various bird groups such as *Gaviidae* (divers), *Podicipedidae* (grebes), *Anatidae* (swans, geese and ducks), *Rallidae* (Water Rail, Moorhen & Coot), *Haematopodidae* (oystercatchers), *Charadriidae* (plovers and lapwings), *Scolopacidae* (sandpipers and allies) and Laridae (gulls and terns) plus *Phalacrocoracidae* (Cormorants), *Ardeidae* (Herons) and *Alcedinidae* (Kingfisher) which feed on various resources such as invertebrates, aquatic vegetation and fish. Significant adverse water quality impacts have the potential to affect foraging areas of all waterbird species using the SPA. This effect could result from various impacts on surface water quality from the Proposed Development during construction, for example in times of heavy rain and during the winter months, when sediments or hydrocarbons have the potential to enter the drain adjacent to the Application Site (in the north-west) and consequently the adjacent European Sites.

The birds species of the relevant sites, which are being assessed in this NIS, in terms of potential for water quality impacts include the over-wintering populations of shelduck, wigeon, teal, mallard, red-breasted merganser, golden plover, lapwing, knot, sanderling, dunlin, bar-tailed godwit, curlew, greenshank, turnstone – which all rely on the wetland habitats that this European Site supports. All of these species are sensitive to changes in water quality. As described above, although the footprint of the works lies outside of the SPA boundary, given the proximity of the proposed tennis court, and the existence of a drain into the bay which lies to the north of the Application Site, overland flow during periods of heavy rainfall could occur due to the close proximity of the site and the decline towards the SPA where these species occur.

Diets of waterbird species include fish, aquatic invertebrates including cockle mussels, shrimps, crabs, mud snails and worms. Aquatic vegetation is also eaten for example by species such as whooper swan and to a lesser extent, greylag goose (Cramp *et al.*, 1977) – however, the latter two species are unlikely to occur in the zone of influence of this proposed development.

The aforementioned ecological features all have the potential to be affected by adverse water quality impacts if the Proposed Development goes unmitigated, particularly during construction. This could occur via sedimentation/siltation and/or hydrocarbon pollution. Due to the numbers of waterbirds which regularly use Cummeen Strand SPA to feed and roost and the proximity of the Proposed Development to the bay, in the absence of mitigation, there is considered to be some potential for an adverse effect on the waterbird species mentioned above.

In the absence of mitigation, this proposal has the potential to contravene the objective *"To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".* Section 7 provides pollution prevention mitigation measures which will be implemented to prevent any adverse effects on waterbird species as a result of water quality impacts which might occur during construction.

Operation

Waterbirds of the SPA

Given the scale and nature of the proposal, it is considered that there is no potential for any significant pollution to occur from the development and/or from the run-off of the proposed development during operation. Therefore, it is believed that there is no threat posed from surface water entering Cummeen strand SPA from the Application Site during the operational phase of the single private tennis court.

There will be no impacts on water quality during the operational phase of the development and as such, there is no potential of breaching the conservation objective target as a result of this in particular.

5.2 Assessment of impacts and effects on Cummeen Strand/ Drumcliff (Sligo Bay) SAC

During construction of the Proposed Development, potential water quality impacts to Cummeen Strand/ Drumcliff (Sligo Bay) SAC include non-toxic contamination (sedimentation/siltation) and toxic contamination (pollution, chemicals, hydrocarbons). During operation, there is considered to be no potential for water quality impacts as a result of the proposed development.

5.2.1 Water Quality Impacts to Aquatic Habitats and Species

Construction

Protected habitats and species, can be indirectly lost during the construction phase and operational phase of projects through pollution and/or disruption (SEPA, 2015). During construction of the Proposed Development, potential water quality impacts to Cummeen Strand/ Drumcliff (Sligo Bay) SAC include non-toxic contamination (sedimentation/siltation) and toxic contamination (pollution, chemicals and hydrocarbons). The potential for mixing in the bay is considered to be high and dilution would likely result in no impact upon the foraging habitat for QI species such as lamprey and/or harbour seal – however, as a precaution this has been taken into consideration to ensure that any doubt is removed by providing appropriate mitigation. The potential for an indirect effect on any listed water-dependent QI habitats such as estuaries, mudflats and dunes etc. of this SAC is also considered to be highly unlikely due to the scale and nature of the development. However, one of the threats identified for this SAC site is *"diffuse pollution to surface waters due to household sewage and wastewaters"* and *"siltation rate changes"* and as a precaution, this has been taken into consideration with the proposed drainage for the development.

In the absence of mitigation, the Proposed Development has some low potential to affect the ability to achieve various water quality targets of Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC, quoted in **Table 5** from the Conservation Objective document (NPWS, 2013) – mainly as a result of the potential for in-combination impacts alongside other proposals which might be detrimental to local water quality. **Table 5** lists water quality impacts during construction as being relevant to the attributes and targets of estuaries, narrow mouthed snail, sea and river lamprey and harbour seal through potential. As a result, in the absence of mitigation, the Proposed Development also has some low potential to contravene the Conservation Objectives for all the QI's discussed above as a result of the potential for in-combination effects alongside other developments in the area, while still noting that there is limited potential for impacts on water quality during construction as a result of this proposal. The harbour seal is a water dependant species with its main food source being fish. The potential for water quality impacts during construction could have an effect on

the food source of the harbour seal through sedimentation, the lack of prey due to these impacts can be a contributing factor in the decline of such a species.

Impacts on water quality in the absences of mitigation measures could potentially impact estuarine and coastal habitats and in turn species within these habitats. However, largescale mixing within the Bay and the size and nature of the work mean that this impact would be highly localised (<500m) and would not have any significant adverse effect on habitats or species upstream of this location.

Due to the potential impacts on water quality (albeit low risk) from the proposed works, in the absence of mitigation, the Proposed Development has the potential to cause adverse impacts on QI species and habitats within this SAC.

Section 7 provides the mitigation measures which will be implemented to prevent any adverse effects through water quality impacts on these QI species and habitats during construction.

5.3 Conclusion of Assessment of Effects

5.3.1 Context and procedure

A Screening for Appropriate Assessment (**Appendix I**) was conducted to ascertain (in view of best scientific knowledge and with consideration the Conservation Objectives of European Sites within the zone of influence, while applying the 'Precautionary Principle') if the project, either individually or in combination with other plans or projects, is likely to have significant effects on a European Site. Following that assessment, it was considered that, in the absence of appropriate mitigation, there was potential for significant effects (albeit low) on the Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA, as a result of disturbance and water quality impacts. As a result, an Appropriate Assessment is required to be conducted by the Competent Authority to establish (in view of best scientific knowledge, taking consideration of the Conservation Objectives for the affected European Sites, and applying the 'Precautionary Principle') if there is likely to be any adverse effects upon the integrity of any European Site as a result of the proposed development. This Natura Impact Statement is provided to facilitate such a decision.

5.3.2 Scientific knowledge

Information gathered by way of research, data gathering, and field survey was referred to for this proposal under the permission of the Client. It is considered that the scientific knowledge within this Natura Impact Statement is robust and sufficient for the purposes of this NIS.

5.3.3 Conclusions

The proposed development is within a private amenity space (managed ornamental garden). No direct loss of any QI habitat will be encountered due to the location and the small scale nature of the proposed development. It is considered possible (potentially as a result of boundary discrepancies caused by legacy issues regarding boundary demarcation and the projection of Cassini mapping) that the boundary of both the Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and the Cummeen Strand SPA was intended to follow the shoreline in this location and that the intention would have been to exclude private gardens from this boundary line.

It is considered that the Proposed Development **will not** result in a barrier to movement of birds between roosting and foraging areas, and will not result in a change in the nature of these European Sites. During construction there is the potential for disturbance and water quality impacts as a result of the proposal. These impacts are not considered likely to occur during operation of the proposed single, privately owned tennis court. Considering issues such as the size, position and nature of the proposal it is deemed that the risk of the proposal resulting in the reduction in the level of usage of this area by SPA waterbird species is insignificant.

The proposed mitigation measures put in place will remove any uncertainties regarding water quality and the potential for disturbance impacts upon the Cummen Strand SPA, and/or the QI species supported within the Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC. These measures will include seasonal constraints on the construction works, and inclusion of pollution prevention and suitable controls during construction in the form of silt fencing before and during construction.

The incorporation of these measures will ensure that there will be no significant effects, either individually or in combination with other plans or projects affecting the conservation interests or conservation objectives of Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and/or Cummeen Strand SPA.

It is therefore concluded that, with the full implementation of the appropriate mitigation as outlined in Section 7, the proposal will not, beyond reasonable scientific doubt, adversely affect the integrity of any European Site (Natura 2000 Site) either directly or indirectly.

6. ASSESSMENT OF POTENTIAL IN-COMBINATION EFFECTS ON NATURA 2000 SITES

Proposals with the potential to result in In-combination effects on Natura 2000 Sites are outlined below.

6.1 Additive/Incremental Impacts

Additive incremental impacts consider multiple activities/projects (each with potentially insignificant effects) but which added together can give rise to a significant effect due to their proximity in time and space (CIEEM, 2018).

In the case of the current Planning Application, other activities/projects are considered in relation to potential water quality impacts on both the Qualifying Interests of Cummeen Strand SPA and Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC.

The potential water quality impacts (albeit low risk) identified were: non-toxic contamination (sedimentation/siltation); and toxic contamination (pollution, chemicals, and hydrocarbons) during construction.

In addition, there is low potential for some disturbance of waterbirds if the works are carried out during the overwintering season.

The first step in ascertaining the potential for in-combination effects in this regard is to identify other recently consented proposals in the vicinity. Following a search on the Sligo County Council Planning Application Map[11], there were a limited number of planning applications within the wider area which have the potential to act in-combination with the current Proposed Development to result in significant cumulative effects on the QIs identified within the Zone of Influence of the Proposed Development (Sligo County Council, 2021). **Table 6** below show the development applications, or consented developments, in the surrounding area.

[11] Sligo County Council Planning Application Map Available at: Location Publisher (sligococo.ie)
(As accessed January 2021)

Table 6: Recent proposals or consented developments (since 2012) in the surrounding area of the Application Site (some of these developments are already in existence/operation – others are currently being considered, or have been approved (with conditions) / declined).

Planning Ref. No.	Location	Proposed Development
2053	Washington Lodge, Cregg, Rosses Point, Co Sligo	Development consisting of the material change of use of an existing private residential apartment to short-term lettings accommodation. The apartment is located above our domestic garage. **2020**
19103	Cregg, Rosses Point Co. Sligo	Development consisting of the construction of a dwelling with a waste water treatment system, packaged tertiary treatment system and distribution area, soak away for storm drainage and all ancillary site works. A Natura Impact Statement is submitted to the planning authority with the application. **2019**
1224	St. Helens, Cregg, Rosses Point, Co Sligo	Retention of extension (39m2) and retention of septic tank and percolation area. **2013**
1267	Cregg, Co Sligo	Revision of proposed development granted under PL 08/265 and PL 11/29. The revisions will consist of (a) revised house design and (b) revised site boundary at St Helens. **2012**
12408	Cregg, Ballincar, Co Sligo	Erection of a dwelling, proprietary effluent treatment system, percolation area and domestic garage. **2013**
13215	Cregg, Rosses Point Road, Co Sligo	Construction of a two-storey replacement dwelling and detached single storey domestic garage and proprietary wastewater treatment system. The project will also consist of a new entrance to the public road, demolition of existing dwelling and all associated site works and landscaping (a Natura Impact Statement will be submitted as part of the application). **2014**
20408	Rosses Upper, Ballyweelin, Cregg, Ballincar and Shannon Eighter, Co. Sligo	development consisting of the following (1) upgrade of the existing Wastewater Pumping Station (PSE3) at Rosses Upper including: remedial works to existing underground pumping chamber, new underground stormwater storage tank with associated kiosks, pipelines, ducting and vent stack, new emergency overflow to connect to existing outfall pipeline, new prefabricated welfare cabin, new gabion retaining wall structure and a 2.4m high weld mesh fence internal to the site, replace existing masonry front boundary with a new 2.4m high stone-faced boundary wall incorporating a railing and new vehicle access gates, together with all associated site development works (2)

		decommission existing wastewater treatment plant and construction of new Pumping Station (PS2) at Ballyweelin including: demolish existing single storey building, decommission existing septic tank, replace existing boundary fence with new 2.4m weld mesh fence. Construction of underground pumping chamber with associated valve chambers, manholes, kiosks, pipelines, ducting and vent stack, new emergency overflow to connect to existing outfall pipeline, together with all associated site development works. Upgrade works to existing access road together with replacement of existing access road fence with 1.2m high concrete post and chain link fence, and all associated site development works. (3) construction of a new 90mm diameter rising main from Pumping Station PS2 at Ballyweelin to connect to the existing gravity sewer on Regional Road R291, overall length 250m approximately. (4) construction of new 225mm diameter sewer on Colmcille Drive in Rosses Upper to replace existing 150mm diameter sewer, overall length 150m approximately. (5) construction of new 375mm diameter foul sewer, overall length 115m approximately and new 450mm diameter foul sewer, overall length 590m approximately between Colmcille Drive and existing Pumping Station (PSE3) on the Main Street in Rosses Point. Decommissioning of approximately 460m of existing Cast Iron watermain and transfer of associated service connections to the existing uPVC watermain. A Natura Impact Statement (NIS) accompanies this Planning Application. (PLEASE NOTE THAT THE FULL COMPREHENSIVE DESCRIPTION IS AVAILABLE FOR VIEWING ON FILE OR ON EPLAN SYSTEM, UNDER HEADING CORRESPONDENCE - DESCRIPTION). **2021**
1597	Cregg, Rosses Point, Co Sligo	Development consisting of the retention of a dormer window to the front elevation of existing dwelling house. **2015**

A number of the applications listed in ***Table 6*** above are in a similar situation to this application in terms of their close proximity to the SAC & SPA boundaries. As there will be no permanent loss of QI habitats of conservation importance as a result of the construction of the tennis court, the potential for in-combination impacts from the above developments in relation to the Proposed Development will only be of concern to the water quality during the construction phase and any low potential for disturbance of bird species during the overwintering season.

Mitigation to avoid the potential for any significant impacts is advised below in Section 7.

7. MITIGATION

This Section aims to mitigate for any potential effects (identified in Section 5) caused by the Proposed Development on Cummeen Strand SPA and Cummeen Strand / Drumcliff Bay SAC.

7.1 Mitigation of water quality impacts on Cummeen Strand SPA and Cummeen Strand/Drumcliff Bay SAC

7.1.1 Mitigation to prevent any potential for disturbance impacts upon birds using the SPA

The Application Site is in close proximity to Cummeen Strand SPA shoreline. The proposed work has some low potential to cause disturbance during the construction phase to QI bird species using the shoreline for foraging and breeding during the overwintering period. However, due to the small scale of the works and short-term nature of any potential disturbance during the construction phase, this is deemed to be low. No works, personnel, vehicles, machinery, equipment, spoil etc. will encroach onto the shoreline or within the boundary of the SPA. All spoil heaps must be covered over and kept to the northern extents of the Application Site (away from the shoreline).

To remove any uncertainty of adverse impacts arising, the noise/vibration creating works of excavation / ground works must be conducted outside of the overwintering bird season (October to March inclusive) so as to avoid any impacts upon SPA birds – i.e. **ground breaking / excavation works / breaking of concreate must only occur during mid-April to early September inclusive.** *It should be noted that any vegetation clearance works should avoid the bird breeding season, as such clearance of vegetation (without breaking ground) should be conducted outside of March to August inclusive. See Section 7.1.3 regarding IAS Mitigation and appropriate vegetation clearance.*

During the operational phase the proposed development is likely to have max 1-4 people using the area at one time and this is not considered to pose any risk of significant adverse impact upon the SPA, with species more likely to habituate to this, particularly as key roosting and foraging areas lies >500m from the Application Site (see **Appendix V**).

7.1.2 Mitigation of Water Quality Impacts on Aquatic QI Species and Habitats during Construction

Standard best practice guidance

The construction stage of the Proposed Development has some low potential for adverse effects on the water quality of Cummeen Strand SPA and Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC. Standard best practice guidance on working near water and standard mitigation measures for controlling of pollution and sediments from construction sites include the following documents:

- IFI (2016) Guidelines on protection of fisheries during construction works in and adjacent to waters - Guidance for consultants and contractors;
- CIRIA (2006) Control of water pollution from linear construction projects. Site guide;
- SEPA (2010) Engineering in the water environment good practice guide sediment management;
- SEPA (2009) Engineering in the Water Environment Good Practice Guide: Temporary Construction Methods; and,
- SEPA (2017) Works and maintenance in or near water. GPP 5.

In order to ensure that water quality impacts from surface run off during construction do not affect the integrity of the Cummeen Strand SPA and/ or Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC, best practice mitigation measures are put in place before the construction phase begins. **A brief, site specific Construction Environmental Management Plan (CEMP) by the Appointed Contractor for the proposed works will include all mitigation measures that may be required during construction works.**

Control of run-off and pollution during construction

There is potential that during the constructions works that the water quality impacts may include toxic contamination (chemical and hydrocarbon pollution) and non-toxic contamination (generation of silt and sediments). The following recommendations are advised:

- Works involving the accumulation of silt are to be conducted during dry periods wherever possible.
- Silt fencing/traps are to be erected around construction works in order to prevent silt sediment entering the SPA or SAC.
- Spoil is to be stored at least 10m away from drains or a sloping gradient to the bay, to avoid run-off of suspended solids from entering the drainage watercourse, and/or flowing directly into the SAC or SPA (particularly during inclement weather). High suspended solids within the run-off material will vary depending on the weather and topography conditions on site.
- If high levels of run-off are anticipated and if any such silted water is likely to enter the bay (if unmitigated) then the material is to be diverted away from shoreline and trapped onsite within a silt trap before being pumped out into a high vegetation area to allow for filtration to ground (>30m from the shoreline).
- Placing silt traps/fencing downstream of the construction drain will prevent silt reaching the shorelines of the SAC and SPA. See: https://www.hy-tex.co.uk/docs/geotextiles/Terrastop/T_Terrastop_03.pdf for more information on installing silt fences.
- Waste concrete will be disposed of through a waste management sub-contractor as outlined in the waste documentation to be provided by the Appointed Contactor.

Mitigation of Water Quality Impacts on Aquatic QI Species and Habitats during Operation

During operation, there is no potential for significant adverse water quality impacts anticipated due to the size and nature of the proposed tennis court development. The proprietor must ensure that any drains from the proposed tennis court are regularly checked for blockages to ensure that they are working appropriately.

7.1.3 Mitigation of the Spread of Invasive Species during Construction

Invasive species can colonise an area in a short period of time through contaminated machinery, movement of vehicles and personnel and via waterways. In terms of this particular site all machinery is to be washed thoroughly (off site) using disinfectant (bio-degradable) and rinsed with clean water to ensure no cross contamination before entering the site (and washed clean on site before leave the site). This is of great importance when/ if machinery has been used for previous for in stream works or in areas of where invasive species have been removed or in close proximity and due to the Scheduled invasive weed that exists on this Application Site. This will eliminate the possibility of the machinery introducing invasive species or other contaminants elsewhere or bringing new IAS on to the Applications Site, and subsequently potentially resulting in a spread of IAS into the adjacent SAC and SPA.

On-going chemical treatment (already being undertaken by the Client) should occur ahead of and during the proposed works in order to secure the most successful outcome in relation to management of IAS at this site.

If areas of the Invasive Alien Species (IAS) are unable to be avoided during the works there are two potential options to be undertaken when dealing with the IAS management onsite. (1) The IAS can be excavated and removed offsite or to a deep burial onsite or (2) it can be excavated and the contaminated material left *in situ*. These options will have to take into consideration the amount of material being excavated, the type of works being carried out and the following advice from the Competent Licensing Authority (NPWS or EPA).

Growing Season Survey of IAS

A Specialist IAS contractor / Invasive Species Control Specialist should carry out a survey of the Japanese Knotweed at this site during the growing season prior to the works. The optimal time for this survey would be late May – August. An accurate map of the IAS extents on the site must be drawn up to inform the subsequent mitigation outlined here. This is particularly important given the close proximity of the Application Site to European Sites. Appropriate IAS management as a result of this proposal has the potential to remove the risk of spreading scheduled invasive weeds from this site into the environs. A positive potential outcome of this proposal would be full removal of the IAS at this Application Site.

Chemical Treatment of IAS

Chemical control should continue to be implemented throughout the Application Site by a Specialist IAS contractor / Contracted Invasive Species Control Specialist with the correct permits for use. The herbicides that are used to treat Japanese Knotweed need to be appropriate for the species and treatments **must** be approved for use near water given the proximity to the SAC and SPA. Ideally Japanese knotweed should be re-treated up to five years after the first application to ensure it has been effective, or monitored for minimum 2 years during which no regrowth is recorded.

Irish Water's Standard Operating Procedure Manual for Japanese knotweed states that:

"The most effective time to apply Glyphosphate is from July to September (or before cold weather causes leaves to discolour and fall). The majority of herbicides are not effective during the winter dormant stage because they require living foliage to take up the active ingredient. It is essential that a competent and qualified person carries out the herbicide treatment.[12]"

The method of application is determined by the on-site features and the location of the IAS in relation to watercourse and/or sensitive features onsite.

[12] IW Information and Guidance Document on Japanese Knotweed

Excavations

Where breaking of ground is to occur, if it takes place within 10m or less of the known Japanese knotweed strand, it should occur in a controlled manner and be supervised by the Specialist IAS contractor / Contracted Invasive Species Control Specialist. The following should be implemented on Site:

- Strict biosecurity isolation to be installed within the zones noted to have IAS present within the working site.
- The excavator (and all machinery/equipment in contact) is to be cleaned and free from other materials prior to works.
- A secure barrier must be in place between the machinery tracks and ground surface at all times to prevent the recontamination of other areas within the site. If no rhizome materials are encountered within the soil layers then this material can be excavated as required to reach the contaminated areas.
- No spoil will be left in close proximity to known areas of IAS as this could be mistakenly redistributed throughout the Site as reused soils on Site.

Removal

Works within proximity or within known areas of knotweed species will be subjected to strict biosecurity controls. Removal of material to landfill or a secure bund will therefore only be undertaken if material is known or suspected to be contaminated with knotweed rhizomes, as advised on by the Specialist IAS contractor / Contracted Invasive Species Control Specialist.

1. If removal is required to landfill this will be undertaken to an appropriate facility under license from National Parks and Wildlife Service (NPWS). Any movement of spoil off the Site which is potentially contaminated with IAS rhizomes /growing stem will only be undertaken under license from NPWS.
2. If removal of Japanese knotweed to landfill is required on plants that have already been subjected to chemical treatment, such as persistent herbicide, then this excavated material may fall into a different waste stream category such as hazardous waste and will be subjected to different licensing for removal. Consultation with the Environmental Protection Agency (EPA) will be required to determine if the waste is to be categorised as hazardous or non-hazardous before removal to the determined waste operator.
3. Waste acceptance analysis will be carried out by a specialist spoil expert to ensure its acceptability to the appointed operator and the appropriate classification of the contaminated waste prior to haulage.

Removal to landfill for burial or disposal facility for incineration

For the removal of Japanese knotweed to a designated landfill / incinerator, a license from the National Parks and Wildlife Service must be sought prior to this activity commencing. This is implemented following the Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species. The NPWS is responsible for the enforcement of the Wildlife Acts and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011), both of which prohibit the spreading of invasive species.

1. Haulage lorries for the transport of any contaminated material will be fitted with a tight seal tailgate and a trailer hood. This will prevent the spillage or loss of material during transit to the appointed

landfill. Haulier drivers will be briefed on the material that they are hauling and the importance of safe transfer. Lorries will not be permitted to hold their loads overnight. The transfer from the Site to the landfill must be completed on the same day. In addition to this, a pre-planned route will be considered for the haulier to take to the appointed landfill. This route must be adhered to by all drivers and no deviations from this route are permitted. This will ensure strict biosecurity during the chain of custody of the knotweed material.

2. Prior to the removal of contaminated material, a membrane sheeting will be rolled out on the hard-standing area where the lorry will drive onto. This will help with the loading of material and in the event of material spilling out of the bucket it will be contained on the membrane where it can be brushed back into the excavation for removal. No personnel will be allowed within the excavation area when this is still considered to be contaminated, except while supervised and/or under the strict advice of the appointed IAS specialist. A biosecurity zone will be erected around the works to ensure no entry to this area is possible by contractors.
3. Contaminated material will only be handled once by the machine operator. One movement from the excavation to the lorry trailer for removal to the appointed landfill operator. Machine buckets will not be over filled with material to prevent spillages during the delivery into the trailer.
4. Once all the contaminated material is removed from the excavation area and care is taken as not to overfill the trailer, then the trailer hood must be closed to secure the material within. The lorry will then be checked by the on-site invasive species specialist to ensure that no loose or adherent material has become attached to the lorry during the removal of contaminated material. Any materials encountered will be brushed off and placed within the bucket of the machine and put into the trailer for transportation.
5. A brush down area will also be placed beside the excavation for the dedicated member of the works team that will brush off the lorries and membrane sheeting. This operator must not leave the membrane sheeting until they have brushed their footwear of any adherent material.
6. Construction workers that need entry to the excavated area must apply the strict biosecurity measures to ensure no spread of material (as advised by the appointed IAS Specialist). Any worker that must enter the excavation will only be allowed to leave the site through a decontamination area comprising of a brush down area. This area will have only one entry and exit point so complete control of the movement of workers is possible.
7. A root barrier will be fitted to the manufacturer's specifications within the excavation trench. Back filling of the trench will also be as soon as practically possible to secure the excavation areas that were subject to the removal of contaminated material.

Removal to bund for onsite burial

For the onsite burial of Japanese knotweed within an onsite bund then a license or permit may be required under the Waste Management Act 1996 as amended on the advice of the Environmental Protection Agency.

1. The vehicle used to haul contaminated material to the onsite bund must be a secure contained vehicle that can haul material without the possibility of losing its load.
2. Prior to the removal of contaminated material, a membrane sheeting will be rolled out on the hard-standing area where the vehicle will drive onto. This will help with the loading of material and in the event of material spilling out of the bucket, it will be contained on the membrane where it can be brushed back into the excavation for removal. No personnel will be allowed within the excavation area when this is still considered to be contaminated, except while supervised and/or under the

strict advice of the appointed IAS specialist. A biosecurity zone will be erected around the works to ensure no entry to this area is possible by contractors.
3. Contaminated material will only be handled once by the machine operator. One movement from the excavation to the vehicle for removal to the onsite bund for burial. Machine buckets will not be over filled with material to prevent spillages during the handling of contaminated material.
4. The onsite burial bund must be excavated to a depth that once filled with all contaminated material and wrapped in a root membrane fitted to the manufacturer's specifications, it can be backfilled with inert material creating a coverage of at least 5m.
5. The site must be sign posted along its entire perimeter to ensure no future excavations or unwanted machine access can occur.

Removal to shallow bund for ongoing treatment

For the onsite burial of Japanese knotweed within an onsite bund then a license or permit may be required under the Waste Management Act 1996 as amended on the advice of the Environmental Protection Agency.

1. The vehicle used to haul contaminated material to the onsite bund must be a secure contained vehicle that can haul material without the possibility of losing its load.
2. Prior to the removal of contaminated material, a membrane sheeting will be rolled out on the hard-standing area where the vehicle will drive onto. This will help with the loading of material and in the event of material spilling out of the bucket, it will be contained on the membrane where it can be brushed back into the excavation for removal. No personnel will be allowed within the excavation area when this is still considered to be contaminated, except while supervised and/or under the strict advice of the appointed IAS specialist. A biosecurity zone will be erected around the works to ensure no entry to this area is possible by contractors.
3. Contaminated material will only be handled once by the machine operator. One movement from the excavation to the vehicle for removal to the onsite bund for burial. Machine buckets will not be over filled with material to prevent spillages during the handling of contaminated material.
4. The onsite burial bund must be excavated to a depth of at least 5m and wrapped in a root membrane fitted to the manufacturer's specifications. The bund edging must be 1m high to prevent the loss of any material from the bund.
5. The contaminated material will be placed within the shallow bund and must not overspill the bund, contractors must ensure there is sufficient depth and width to hold the material without over filling the bund. The rhizome material should not be buried too deep as they will avoid herbicide during the treatment process if too deep in the bund.
6. Herbicide will be applied during the growing season preferably from July to September just before the plant dies back and repeated for a period of 5 years or monitored for at least 2 years where no regrowth as taken place.
7. The material must be capped with a cover outside of the treatment period to prevent the mobilisation of contaminated vegetation during winter months.
8. The site must be sign posted and secured with perimeter fencing to avoid any unwanted access along its entire perimeter.

8. POTENTIAL EFFECTS AFTER MITIGATION

Table 7: Potential effects after mitigation on any QI's which are likely to be affected

Qualifying Interest	Impact Type	Potential for Adverse Effect before mitigation?	Mitigation measures	Potential for Adverse Effect after Mitigation
Cummeen Strand SPA				
Light-bellied Brent Goose Oystercatcher Redshank	Water quality impacts affecting food source during construction.	Possible	Pollution prevention measures (see Section 7).	No
	Disturbance during construction.	Possible	Seasonal working constraints (see Section 7).	No
Wetland and Waterbirds	Water quality impacts during construction and operation.	Possible	Pollution prevention measures (see Section 7).	No
	Disturbance during construction.	Possible	Seasonal working constraints (see Section 7).	No
Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC				
QI Habitats	Water quality impacts during construction.	Possible	Pollution prevention measures (see Section 7).	No
QI Species	Water quality impacts during construction.	Possible	Pollution prevention measures (see Section 7).	No
	Disturbance during construction.	Unlikely	No disturbance mitigation deemed necessary for these QI species of the SAC due to the small scale nature of the development and its location within an existing amenity garden space.	No
Both SAC and SPA				
QI Species and Habitats	Potential for the spread of IAS into European Sites which could impact habitat quality within affected areas.	Possible	IAS Mitigation options are outlined in Section 7. These should be agreed with an Appointed Specialist IAS Contractor.	No

9. CONCLUSIONS

A Screening for Appropriate Assessment was conducted to ascertain (in view of best scientific knowledge and with consideration the Conservation Objectives of European Sites within the zone of influence, while applying the 'Precautionary Principle') if the project, either individually or in combination with other plans or projects, is likely to have significant effects on a European Site (See **Appendix I**).

Following that assessment, it was considered that, in the absence of appropriate mitigation, there was potential for significant effects on the Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and/or the Cummeen Strand SPA.

There was conserved to be a low potential for impacts such as disturbance and adverse water quality impacts, as well as the potential for spread of IAS. Subsequently, an Appropriate Assessment is required to be conducted by the Competent Authority to establish (in view of best scientific knowledge, taking consideration of the Conservation Objectives for the affected European Sites, and applying the 'Precautionary Principle') if there is likely to be any adverse effects upon the integrity of any European Sites as a result of the proposed development. This Natura Impact Statement provides information which can be used to inform this process.

Mitigation measures have been set out in Section 7 of this NIS. The incorporation of these measures in full will ensure that there will be no significant effects, either individually or in combination with other plans or projects affecting the conservation interests or conservation objectives of Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC or Cummeen Strand SPA, i.e. the integrity of the European Sites / Natura 2000 sites.

It is therefore objectively concluded that if the above proposed mitigation measures are implemented in full – the proposed construction of a tennis court at Washington house and its operation, will have no potential for any adverse effects upon the integrity of any European Sites (Natura 2000 Sites), either alone or in combination with any other plans or projects.

REFERENCES

- Birdwatch Ireland (2018) Irish Wetland Bird Survey: Results of Waterbird Monitoring in Ireland in 2015/16. Available at: https://birdwatchireland.ie/our-work/surveys-research/research-surveys/irish-wetland-bird-survey/ (Accessed January 2021)
- Blumstein D.T, Anthony L.L, Harcourt R, Ross G (2003) Testing a key assumption of wildlife buffer zones: is flight initiation distance a species-specific trait? Biological Conservation 110 (2003) 97–100.
- Cayford, J. T. 1993. Wader disturbance: a theoretical overview. Wader Study Group Bulletin 68' 3-5. https://sora.unm.edu/sites/default/files/journals/iws/n005/p00003-p00005.pdf (Accessed January 2021)
- Chartered Institute for Ecology and Environmental Management [CIEEM], 2018. Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Available online at: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-Sept-2019.pdf (Accessed January 2021)
- CIRIA (2001) Control of water pollution from construction sites. Guidance for consultants and contractors.
- Cramp, S. & Perrins, C.M. Eds. (1977). *Handbook of the birds of Europe, the Middle East and North Africa: The birds of Western Palearctic. Volume 1: Ostrich to Ducks*. Oxford University Press, Oxford.
- Cutts, N. Phelps, A, and Burdon, D. (2009) *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance.* Report to Humber INCA. Available at:
- https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010001/EN010001-005116-HPC-NNBPEA-XX-000-RET-000089%201.pdf (Accessed January 2021)
- DoEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities.
- Environmental Protection Agency (2017) Water Quality in Ireland 2010-2015.
- European Community Habitats Directive (92/43/EEC) – The Habitats Directive.
- European Communities (Natural Habitats) Regulations 1997.
- European Commission (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. January 2007. Available online at: http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en.pdf (Accessed January 2021)
- European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000
- Floodinfo.ie available at: http://www.floodinfo.ie/map/floodmaps/?X=7068153.421823602&Y=-883204.1485378639&Z=15# . (Accessed January 2021)
- Geohive data available at: http://map.geohive.ie/. (Accessed January 2021)
- NPWS (2013) Conservation Objectives: Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC 000627. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000627.pdf (Accessed January 2021)
- NPWS (2020) Conservation objectives for Lough Gill SAC [001976]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht.
- https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001976.pdf (Accessed January 2021)
- NPWS (2013) Conservation Objectives: Ballysadare Bay SAC 000622. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000622.pdf (Accessed January 2021)
- NPWS (201o) Conservation Objectives: Streedagh Point Dunes SAC 001680. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Available at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001680.pdf (Accessed January 2021)

- NPWS (2020) Conservation objectives for Unshin River SAC [001898]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001898.pdf (Accessed January 2021)
- NPWS (2021) Conservation Objectives: Union Wood SAC 000638. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000638.pdf (Accessed January 2021)
- NPWS (2020) Conservation objectives for Ben Bulben, Gleniff and Glenade Complex SAC [000623]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000623.pdf (Accessed January 2021)
- NPWS (201o) Conservation Objectives: Streedagh Point Dunes SAC 001680. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001680.pdf (Accessed January 2021)
- NPWS (2014) Conservation Objectives: Cummeen Strand SPA 004035. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004035.pdf (Accessed January 2021).
- NPWS (2013) Conservation Objectives: Drumcliff Bay SPA 004013. Version 1.National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004013.pdf (Accessed January 2021)
- NPWS (2013) Conservation Objectives: Ballysadare Bay SPA 004129. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004129.pdf (Accessed January 2021)
- NPWS (2020) Conservation objectives for Ballintemple and Ballygilgan SPA [004234]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004234.pdf (Accessed January 2021)
- NPWS (2020) Conservation objectives for Ardboline Island and Horse Island SPA [004135]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004135.pdf (Accessed January 2021)
- NPWS (2020) Conservation objectives for Sligo/Leitrim Uplands SPA [004187]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht. https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004187.pdf (Accessed January 2021)
- NPWS online MapViewer; http://webgis.npws.ie/npwsviewer/ (Accessed January 2021)
- O'Neill, F.H., Martin, J.R., Devaney, F.M. & Perrin, P.M. (2013) The Irish semi-natural grasslands survey 2007-2012. Irish Wildlife Manuals, No. 78. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.
- Perrin, P., Martin, J., Barron, S., O'Neill, F., McNutt, K., and Delaney, A (2008) National Survey of Native Woodlands 2003-2008. Volume 1: Main report. https://www.npws.ie/sites/default/files/publications/pdf/Perrin_et_al_2008_NSNW_V1.pdf (Accessed January 2021)
- Roden, C and Oliver, G (2012) Monitoring and Assessment of Irish Lagoons for the purpose of the EU Water Framework Directive, 2011. Draft 1.
- SEPA (2010) Engineering in the water environment good practice guide sediment management.
- SEPA (2009) Engineering in the Water Environment Good Practice Guide: Temporary Construction Methods First edition, March 2009. https://www.sepa.org.uk/media/150997/wat_sg_29.pdf (Accessed January 2021)
- Stillman, R.A., Poole, A.E., Goss-Custard, J.D., Caldow, R.W.G., Yates, M.G., Triplet, P., 2002. Predicting the strength of interference more quickly using behaviour-based models. Journal of Animal Ecology 71, 532–541.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC.

APPENDIX I: Screening for Appropriate Assessment report

Background

This section provides information on the European Sites (Also known as Natura 2000 Sites) within in the vicinity of the Proposed Development which have the potential to exist within the zone of influence of the proposal, shown in ***Figure 1*** below. A standard 15km distance from the proposal site is used as the potential zone of influence within which European Sites are to be screened for potential impacts. However, the potential impacts on site are determined by the nature of the impacts arising, the sensitivity of the receptors, and the casual links and conduits, rather than distance. The zone of influence can be less than 15km (for example noise and airborne pollution), while the potential zone of influence can be greater than 15km if there is a direct water connection. Identifying these potential pathways for impact to the European Sites will establish the zone of influence of the proposal. These can then be assessed based on factors such as the proximity to the Proposed Development, the Qualifying Interests (QI's) of the European Sites and their conservation status. Table 1 below is a screening matrix illustrating the potential impacts and any significant effects of the Proposed Development on these European Sites. Given the nature, size and location of the Proposed Development, the perceptible impacts are not considered likely to have a zone of influence larger than 1-2km from the Site (and it is considered more likely, that any potential impacts will only be notable within up to *c.*500m from the proposed Tennis Court location). This screening matrix highlights 2 no. European Sites that are within the zone of influence these are; Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA, (see ***Figure 2***). Both Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA are located immediately adjacent to the proposed Application Site (and there is a *c.*302m^2 encroachment of the proposed tennis court and associated path into the SAC boundary) and the QIs of the both Sites are sensitive to the potential impacts of the proposal. For each Site, the QIs are listed, the conservation objectives are referenced, the potential for the proposal to affect them is considered and a conclusion on the potential for the Proposed Development to have a significant effect on the QIs (and therefore the European Site) is made.

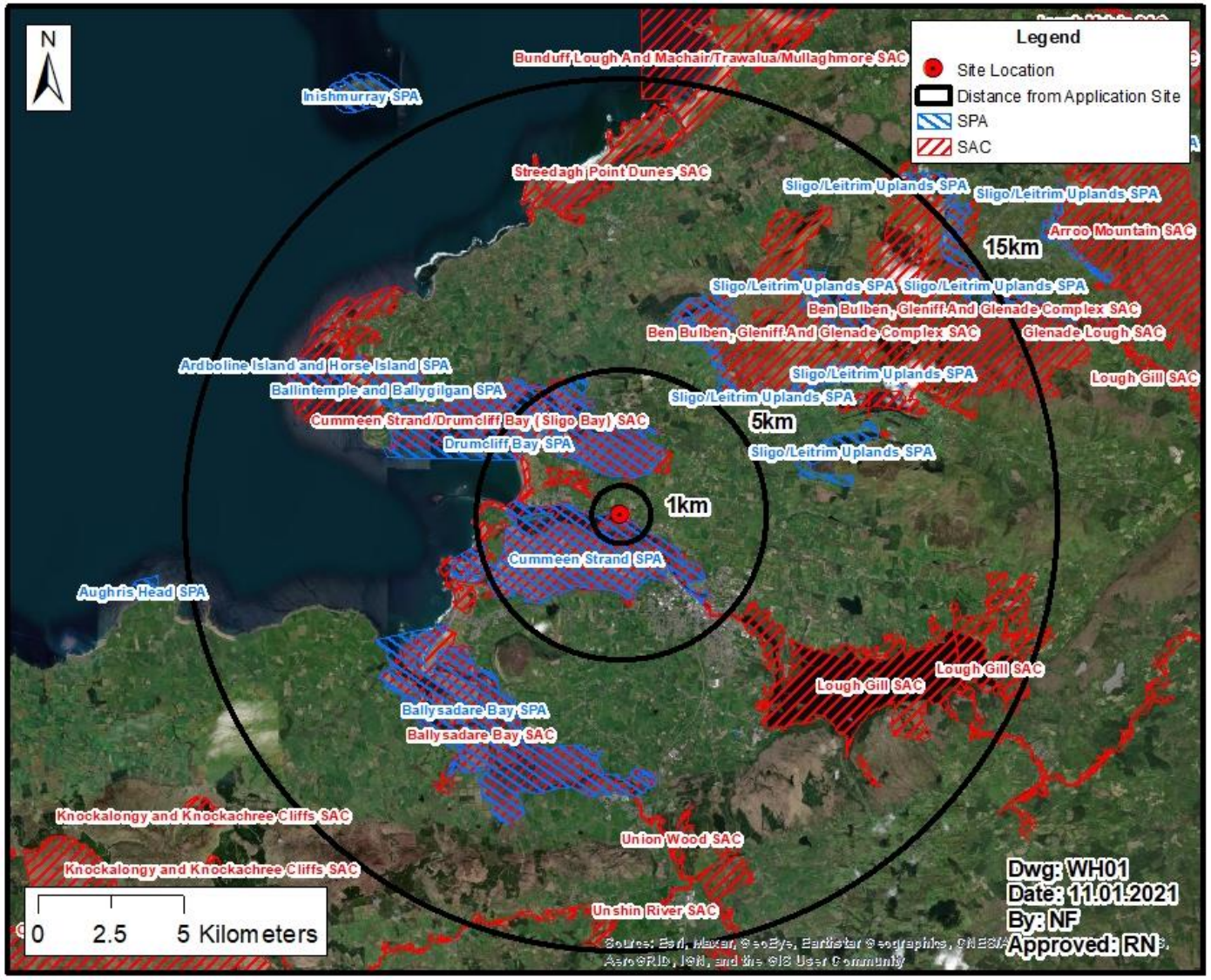


Figure1: Natura 2000 sites in the environs of the Proposed Development, Washington House, Cregg, Ballincar, Co. Sligo

Table 1: Screening Matrix of all Natura 2000 Sites in the vicinity of the Proposed Development.

*Sites highlighted in grey, and QIs in **bold,** have the potential to be impacted by the Proposed Development.*

Natura 2000 Site Name and Code	Qualifying Interests (QI's) / Special Conservation Interests (SCI's)	Distance	Within the ZoI?	Potential Impacts and Effects	Conservation Objectives
Special Areas of Conservation (SACs)					
Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC **Site Code: 000627**	• **Estuaries [1130]** • **Mudflats and sandflats not covered by seawater at low tide [1140]** • **Embryonic shifting dunes [2110]** • **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]** • **Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]** • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia) (**	The proposed tennis court is encroaching within the boundary of the SAC	Yes. Part of the proposed Application Site is encroaching the boundary of the SAC with a decreased gradient leading to the SAC which includes QIs which are sensitive to water quality impacts.	**Possible Significant Effect.** Impacts: water quality impacts have the potential to affect water-dependent species and habitats of the SAC via surface water run-off during construction (there will be no such effect during operation). Potential water quality impacts might include pollution and sedimentation/siltation during the construction phase. Without mitigation, there is a potential for significant effect on QI's for this SAC site. Therefore, this needs to be assessed further within a Natura Impact Statement. Effects: These impacts have the potential for a significant effect on the QI habitats and species highlighted in bold which are sensitive to changes in water quality. Effects can include indirect loss of supporting habitat for water-dependent QI species and effects on water-dependent QI habitats due to potential for changes in water quality during construction.	NPWS, 2013[13]

13 NPWS (2013) Conservation Objectives: Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000627.pdf

	important orchid sites) [6210] • **Petrifying springs with tufa formation *(Cratoneurion)* [7220]** • *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] • ***Petromyzon marinus* (Sea Lamprey) [1095]** • ***Lampetra fluviatilis* (River Lamprey) [1099]** • ***Phoca vitulina* (Harbour Seal) [1365]**				
Ballysadare Bay SAC Site Code: 000622	• 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] • Humid dune slacks [2190]	*c.*8km	No	**No Likely Significant Effect exist.** There is a source-pathway-receptor through the connection between the two bays. However, due to the significant distance and localised and minor nature of the proposed works, the QI's and the SAC itself will not be affected in any way by this proposal.	NPWS, 2013[14]

14NPWS (2013) Conservation Objectives: Ballysadare Bay SAC https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000622.pdf

	• *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014] • *Phoca vitulina* (Harbour Seal) [1365]				
Union Wood SAC **Site Code: 000638**	• Old sessile oak woods with Ilex and *Blechnum* in the British Isles [91A0]	*c.* 10.5km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SAC and, due to the distance and localised nature of the works, this SAC will not be affected by the proposal.	NPWS, 2021[15]
Ben Bulben, Gleniff and Glenade Complex SAC **Site Code: 000623**	• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] • Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • Juniperus communis formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (*	*c.*6.5km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SAC and, due to the distance and localised nature of the works, this SAC will not be affected by the proposal.	NPWS, 2020[16]

15NPWS (2021) Conservation Objectives: Union Wood SAC https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000638.pdf

[16]NPWS (2020) Conservation Objectives: Ben Bulben, Gleniff and Glenade Complex SAC https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000623.pdf

	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] • Transition mires and quaking bogs [7140] • Petrifying springs with tufa formation *(Cratoneurion)* [7220] • Alkaline fens [7230] • Siliceous scree of the montane to snow levels *(Androsacetalia alpinae and Galeopsietalia ladani)* [8110] • Calcareous and calcshist screes of the montane to alpine levels *(Thlaspietea rotundifolii)* [8120] • Calcareous rocky slopes with chasmophytic vegetation [8210] • *Vertigo geyeri* (Geyer's Whorl Snail) [1013] • *Lutra lutra* (Otter) [1355]				

Lough Gill SAC **Site Code: 001976**	• Natural eutrophic lakes with *Magnopotamion or Hydrocharition* - type vegetation [3150] • Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (* important orchid sites) [6210] • Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*) [91E0] • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106]	*c.* 4km	No	**No Likely Significant Effect exists.** There is a hydrological linkage from the Application Site to this SAC, however the works lie downstream of the SAC, and are not considered likely to impact in any way on the QI habitats or species for this SAC in particular. Any potential impacts (although highly unlikely) upon lamprey species as a result of the proposal will be considered in relation to their potential for effects on this species utilising Cummeen Strand SAC. There is considered to be no potential for the impacts of this development to be perceptible past 500m (and as a precaution a Zone of Influence of 1 -2 km will be considered. Due to the distance and localised nature of the works, this SAC will not be affected by the proposal in any way.	NPWS, 2020[17]

[17]NPWS (2020) Conservation Objectives: Lough Gill SAC https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001976.pdf

	• *Lutra lutra* (Otter) [1355]				
Streedagh Point Dunes SAC **Site Code: 001680**	• 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]	*c.*12.7km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SAC and, due to the distance and localised nature of the works, this SAC will not be affected by the proposal.	NPWS, 2015
Unshin River SAC **Site Code: 001898**	• Water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation [3260]	*c.*13.5km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SAC and, due to the distance and localised nature of the works, the QI habitats will not be affected.	NPWS, 2020[18]

[18]NPWS (2020) Conservation Objectives: Unshin River SAC https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001898.pdf

	• Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (* important orchid sites) [6210] • Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae)* [91E0] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355]				
Special Protection Areas (SPAs)					
Cummeen Strand SPA **Site Code: 004035**	• **Light-bellied Brent Goose *(Branta bernicla hrota)* [A046]** • **Oystercatcher *(Haematopus ostralegus)* [A130]** • **Redshank (*Tringa totanus)* [A162]** • **Wetland and Waterbirds** [A999]	The proposed mounding around the tennis court is located within *c.*1m the boundary of the SPA to the south	Yes. The proposed Application Site is located within *c.*1m of the SPA boundary with a decreased gradient leading to the SPA.	**Possible Significant Effect.** ***Impacts:*** Surface water quality impacts have the potential to affect water-dependent species and wetland habitat of the SPA due to the direct hydrological connection via the run-off from a surface water drain. Water quality impacts include the potential for pollution and sedimentation/siltation from the construction phase. Without mitigation, there is potential for significant effect. Therefore, this needs to be assumed under the Precautionary Principle. ***Effects:*** These impacts have the potential for a significant effect on the QI's / SCI's highlighted in bold which are	NPWS, 2013[19]

[19]NPWS (2013) Conservation Objectives: Cummeen Strand SPA https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004035.pdf

				sensitive to changes in water quality. Effects can include indirect loss of supporting foraging habitat for water-dependent QI bird species. Following a site visit by the Woodrow ornithologist on 12 November 2020, there is considered to be no potential for significant effects on these species as a result of potential construction related disturbance due to the lack of suitable foraging and/or roosting habitat immediately adjacent to the Application Site – however, this will be covered within the NIS via precautionary mitigation to ensure there is no likelihood of any impact on over-wintering birds.	
Drumcliff Bay SPA **Site Code: 004013**	• **Sanderling *(Calidris alba)* [A144]** • **Bar-tailed Godwit *(Limosa lapponica)* [A157]** • **Wetland and Waterbirds [A999]**	*c.*2km (*c.*5km via waterbody connectivity)	No	**No Likely Significant Effect exist.** There is a source-pathway-receptor through the connection between the two bays. However, due to the significant distance and localised and minor nature of the proposed works, the QI's and the SAC itself will not be affected in any way by this proposal.	NPWS, 2013[20]
Ballysadare Bay SPA **Site Code: 004129**	• **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]**	*c.* 8.3km	No	**No Likely Significant Effect exist.** There is a source-pathway-receptor through the connection between the two bays. However, due to the significant distance and localised and minor nature of the proposed works, the QI's and the SAC itself will not be affected in any way by this proposal.	NPWS, 2013[21]

[20]NPWS (2013) Conservation Objectives: Drumcliff Bay SPA https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004013.pdf

[21] NPWS (2013) Conservation Objectives: Ballysadare Bay SPA https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004129.pdf

Ballintemple and Ballygilgan SPA **Site Code: 004234**	• Barnacle Goose *(Branta leucopsis)* [A045]	*c.* 8.48km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SPA and due to the distance and localised nature of the works, the QI species will not be affected.	NPWS 2020[22]
Ardboline Island and Horse Island SPA **Site Code: 004135**	• Cormorant *(Phalacrocorax carbo)* [A017] • Barnacle Goose *(Branta leucopsis)* [A045]	*c.* 11.62km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SPA and due to the distance and localised nature of the works, the QI species will not be affected.	NPWS 2020[23]

[22] NPWS (2020) Conservation Objectives: Ballintemple and Ballygilgan SPA https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004234.pdf

[23] NPWS (2020) Conservation Objectives: Ardboline Island and Horse Island SPA https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004135.pdf

Sligo/Leitrim Uplands SPA **Site Code: 004187**	• Peregrine *(Falco peregrinus)* [A103] • Chough *(Pyrrhocorax pyrrhocorax)* [A346]	*c.* 12 km	No	**No Likely Significant Effect exists.** There is no source-pathway-receptor. The Application Site is not connected to this SPA and due to the distance and localised nature of the works, the QI species will not be affected.	NPWS 2020[24]

Explanation of terms used in Significance of Impact Matrix:

Likely Significant Effect - Where a plan or project is likely to undermine any of the site's conservation objectives; **Possible Significant Effect** - Where a plan or project has an indicated potential to undermine any of the site's conservation objectives, but where doubt exists about the risk of a significant effect in the current context. Nevertheless, where doubt exists about the risk of a significant effect, use of the Precautionary Principle requires this effect to be considered appropriately within the Article 6 assessment process.

[24] NPWS (2020) Conservation Objectives: Sligo/Leitrim Uplands SPA https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004187.pdf

Conclusions of Screening Assessment

The Proposed Development involves the construction of a tennis court at Washington House, Cregg, Ballincar Co. Sligo (*c.* 806m^2) described in more detail in Section 1.2 of the main report. The Application Site lies immediately adjacent to (or encroaching within):

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

Following a site visit by an ornithologist on 12 November 2020, it was considered that there is negligible potential for disturbance impacts to affect waterbird species of Cummeen Strand SPA. However, a precautionary approach will be undertaken with these species being assessed for noise disturbance impacts due to the close distance between the proposed works and the shoreline of the SPA. Consideration will also be given to the potential for impacts via effects on water quality as a result of the proposal.

Potential water quality impacts during construction could occur which might affect habitats and species utilising both the Cummeen Strand /Drumcliff Bay (Sligo Bay) SAC and/or the Cummeen Strand SPA. These could include surface water pollution (hydrocarbon and chemical) and sedimentation/siltation, which may affect aquatic birds of the SPA and water dependent habitats and species of the SAC.

Without the correct mitigation measures put in place, there is potential for the spreading of the invasive Japanese knotweed species present on site into nearby SPA/SAC. Therefore the client has the options to continue with the treatment or the removal of the species in order to enhance the biodiversity within the Application Site.

Consideration of the operation of this Tennis Court Application Site:

The potential for water quality impacts during operation such as run-off from the surface water are deemed to be imperceptible given that the Application Site will comprise of a single tennis court. In addition, the operation of the tennis court (which would have a likely maximum of 4 people playing at any one time, behind a fenced screen surrounding the court, it considered highly unlikely to have any perceptible impact on the environs. In addition, it was noted during the site visit that the adjacent habitat is sub-optimal for roosting and/or foraging waterbirds – and no QI or wetland habitat is included within the land take for this development.

Based on the above information the potential for significant effects to occur on the following designated sites and QI / SCI's is to be considered further within an NIS:

Cummeen Strand SPA:

- **Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Wintering**
- **Oystercatcher (*Haematopus ostralegus*) [A130] - Wintering**
- **Redshank (*Tringa totanus*) [A162] - Wintering**
- **Wetland and Waterbirds [A999]**

Cummeen Strand /Drumcliff Bay (Sligo Bay) SAC:

- **Estuaries [1130]**
- **Mudflats and sandflats not covered by seawater at low tide [1140]**
- **Embryonic shifting dunes [2110]**
- **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]**
- **Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]**
- *Juniperus communis* formations on heaths or calcareous grasslands [5130]
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]
- Petrifying springs with tufa formation (*Cratoneurion*) [7220]
- *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
- ***Petromyzon marinus* (Sea Lamprey) [1095]**
- ***Lampetra fluviatilis* (River Lamprey) [1099]**
- ***Phoca vitulina* (Harbour Seal) [1365]**

Following the screening process above, the screening matrix (***Table 1***) ruled out sites for further assessment based on significant distance, presence of a significant waterbody removing any likelihood of connectivity from the proposal due to the size, nature and location of the Proposed Development, the lack of a source-pathway-receptor linkage and the QIs and their specific sensitivities.

Following the Precautionary Principle, Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA are the only 2 no. European Sites which have been highlighted as having any perceptible potential to be significantly affected by the Proposed Development. For an illustration of the location of the Proposed Development in relation to the European Sites, see ***Figure 2*** of the main report. For a full description of these Sites please refer to the main NIS report.

Taking a Precautionary Approach, the screening assessment has concluded that there is some potential for Likely Significant Effects to occur upon the Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA as a result of the Proposed Development. As such, a Natura Impact Statement (NIS) is required as part of the Appropriate Assessment process.

APPENDIX II: I-Webs Request Results (Source: Birdwatch Ireland)

Wintering Year	Species common name	Latin name	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Total
Subsite: Ballincar - 0C464 – (Beside Application Site)										
2017/18	Light-bellied Brent Goose	*Branta bernicla hrota*						51		*51*
2017/18	Shelduck	*Tadorna tadorna*						1		*1*
2017/18	Wigeon	*Anas penelope*						4		*4*
2017/18	Mallard	*Anas platyrhynchos*		76			2	4		*82*
2017/18	Cormorant	*Phalacrocorax carbo*					104			*104*
2017/18	Shag	*Phalacrocorax aristotelis*		3						*3*
2017/18	Grey Heron	*Ardea cinerea*		1						*1*
2017/18	Oystercatcher	*Haematopus ostralegus*					5	1		*6*
2017/18	Ringed Plover	*Charadrius hiaticula*						16		*16*
2017/18	Curlew	*Numenius arquata*		3			2	4		*9*
2017/18	Greenshank	*Tringa nebularia*		14				2		*16*
2017/18	Redshank	*Tringa totanus*		1				2		*3*
2017/18	Turnstone	*Arenaria interpres*		6			15			*21*
2017/18	Black-headed Gull	*Chroicocephalus ridibundus*						64		*64*
2017/18	Herring Gull	*Larus argentatus*		2			3	9		*14*
2017/18	Great Black-backed Gull	*Larus marinus*		2				1		*1*
Subsite: Cummeen Strand East and Gibraltar - 0C420										
2017/18	Mute Swan	*Cygnus olor*		133						*133*
2017/18	Light-bellied Brent Goose	*Branta bernicla hrota*					16	16		*32*
2017/18	Shelduck	*Tadorna tadorna*					77			*77*
2017/18	Wigeon	*Anas penelope*					42			*42*
2017/18	Teal	*Anas crecca*		41			30			*71*

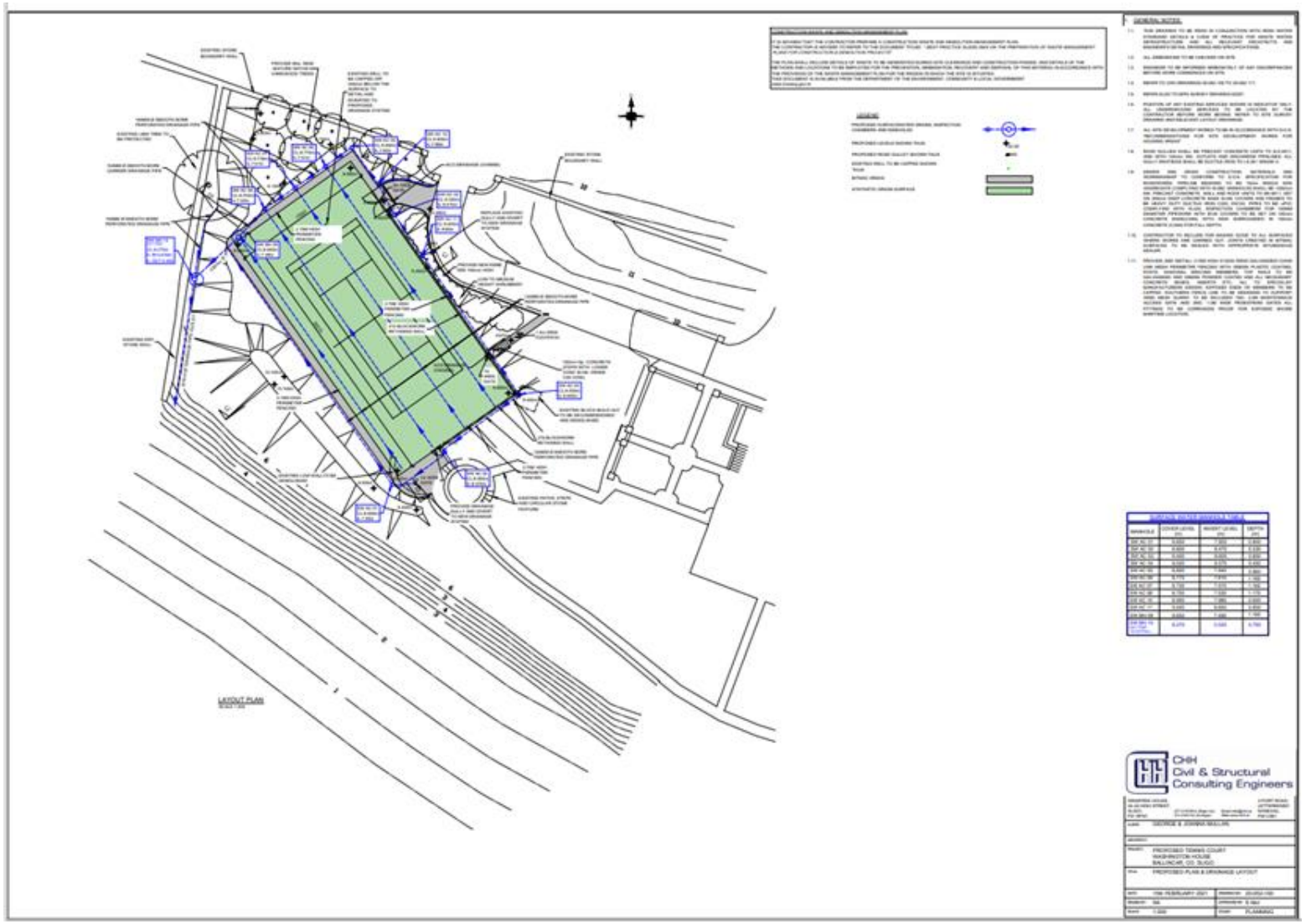
2017/18	Mallard	*Anas platyrhynchos*					14			*14*
2017/18	Red-breasted Merganser	*Mergus serrator*					6			*6*
2017/18	Great Northern Diver	*Gavia immer*		2			1			*3*
2017/18	Great Crested Grebe	*Podiceps cristatus*					15			*15*
2017/18	Cormorant	*Phalacrocorax carbo*		14			1			*16*
2017/18	Little Egret	*Egretta garzetta*					3	1		*4*
2017/18	Grey Heron	*Ardea cinerea*		149			2			*151*
2017/18	Oystercatcher	*Haematopus ostralegus*					454	223		*677*
2017/18	Knot	*Calidris canutus*		10			111			*121*
2017/18	Dunlin	*Calidris alpina*		86			543			*543*
2017/18	Bar-tailed Godwit	*Limosa lapponica*		86			231			*317*
2017/18	Curlew	*Numenius arquata*					156	119		*275*
2017/18	Greenshank	*Tringa nebularia*					5	1		*6*
2017/18	Redshank	*Tringa totanus*					227	117		*344*
2017/18	Turnstone	*Arenaria interpres*		5			41	29		*75*
2017/18	Black-headed Gull	*Chroicocephalus ridibundus*		1			7	8		*16*
2017/18	Common Gull	*Larus canus*		43			3	18		*64*
2017/18	Herring Gull	*Larus argentatus*					40	37		*77*
2017/18	Glaucous Gull	*Larus hyperboreus*		2			1			*3*
2017/18	Great Black-backed Gull	*Larus marinus*		2			1			*3*
Subsite: Cummeen west from Coney Island Road - 0C478										
2017/18	Light-bellied Brent Goose	*Branta bernicla hrota*		50			1	10		*61*
2017/18	Shelduck	*Tadorna tadorna*					25	15		*40*
2017/18	Wigeon	*Anas penelope*		70						*70*
2017/18	Red-breasted Merganser	*Mergus serrator*						1		*1*
2017/18	Great Northern Diver	*Gavia immer*						1		*1*
2017/18	Grey Heron	*Ardea cinerea*					3			*3*
2017/18	Oystercatcher	*Haematopus ostralegus*		269			122	290		*681*
2017/18	Ringed Plover	*Charadrius hiaticula*		148						*148*
2017/18	Golden Plover	*Pluvialis apricaria*		25						*25*
2017/18	Sanderling	*Calidris alba*		120				77		*197*
2017/18	Dunlin	*Calidris alpina*		18						*18*
2017/18	Bar-tailed Godwit	*Limosa lapponica*		2						*2*
2017/18	Curlew	*Numenius arquata*		223			76	178		*477*
2017/18	Greenshank	*Tringa nebularia*					1	1		*2*
2017/18	Redshank	*Tringa totanus*					15	8		*23*

2017/18	Black-headed Gull	*Chroicocephalus ridibundus*		10			29	10		*49*
2017/18	Common Gull	*Larus canus*		20			120	24		*164*
2017/18	Herring Gull	*Larus argentatus*					22	1		*23*
2017/18	Great Black-backed Gull	*Larus marinus*		3			1			*4*
Subsite: Rosses Point Harbour - 0C485										
2017/18	Light-bellied Brent Goose	*Branta bernicla hrota*					6	31		*37*
2017/18	Red-breasted Merganser	*Mergus serrator*					3	2		*5*
2017/18	Red-throated Diver	*Gavia stellata*						2		*2*
2017/18	Great Northern Diver	*Gavia immer*					1	3		*4*
2017/18	Cormorant	*Phalacrocorax carbo*		4			10	4		*18*
2017/18	Shag	*Phalacrocorax aristotelis*		12			7	5		*24*
2017/18	Little Egret	*Egretta garzetta*		1			2	1		*4*
2017/18	Grey Heron	*Ardea cinerea*		1			2			*3*
2017/18	Oystercatcher	*Haematopus ostralegus*		10			12	15		*37*
2017/18	Curlew	*Numenius arquata*		4			34			*38*
2017/18	Greenshank	*Tringa nebularia*		7			1			*8*
2017/18	Redshank	*Tringa totanus*		34			10	5		*49*
2017/18	Turnstone	*Arenaria interpres*		1			1			*2*
2017/18	Black-headed Gull	*Chroicocephalus ridibundus*					1	1		*2*
2017/18	Lesser Black-backed Gull	*Larus fuscus*		1						*1*
2017/18	Herring Gull	*Larus argentatus*		1			17	28		*46*

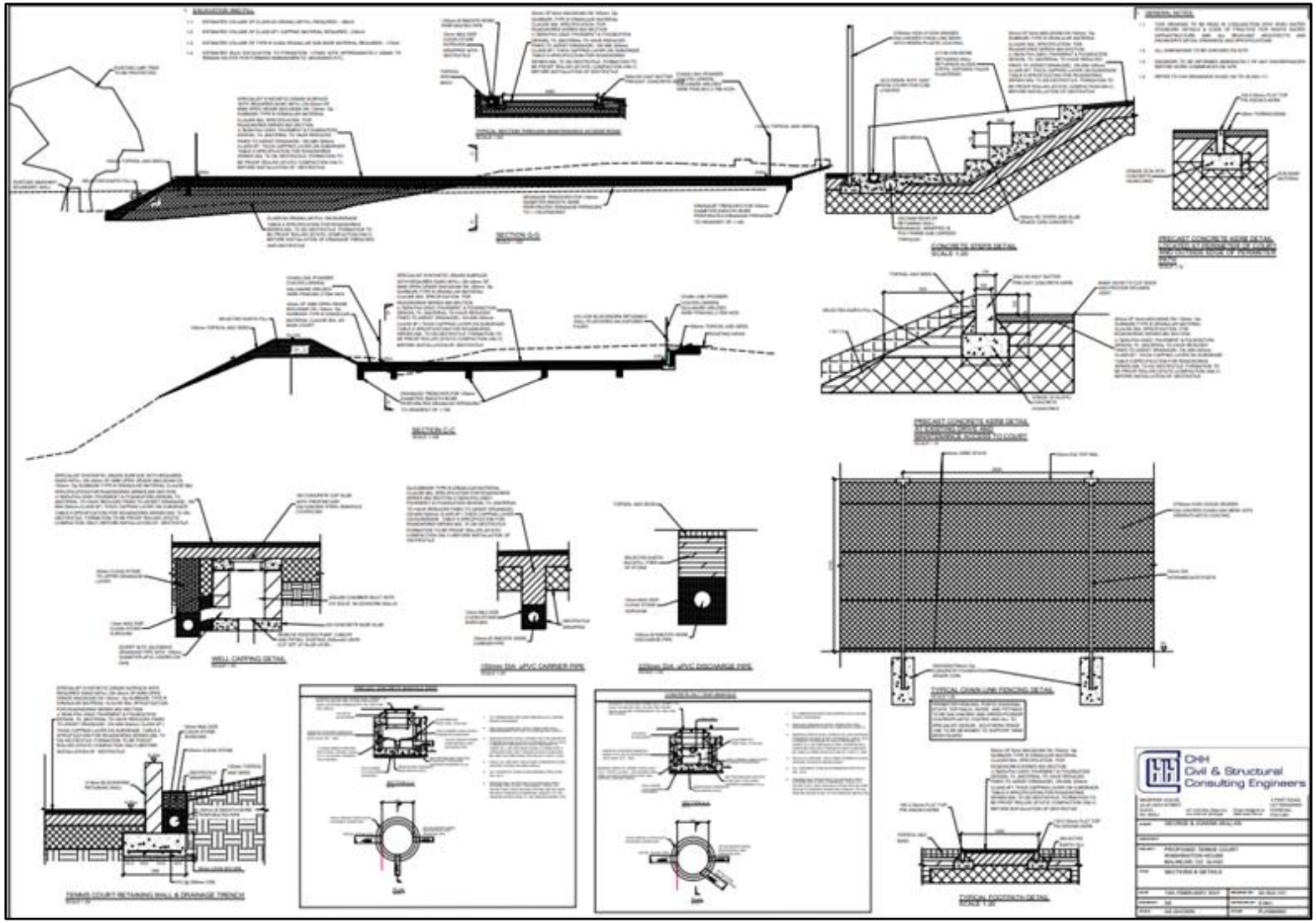
I-Webs Subsite Details – Red Star is location of the Application Site

(Source of Information: Birdwatch Ireland https://bwi.maps.arcgis.com/)

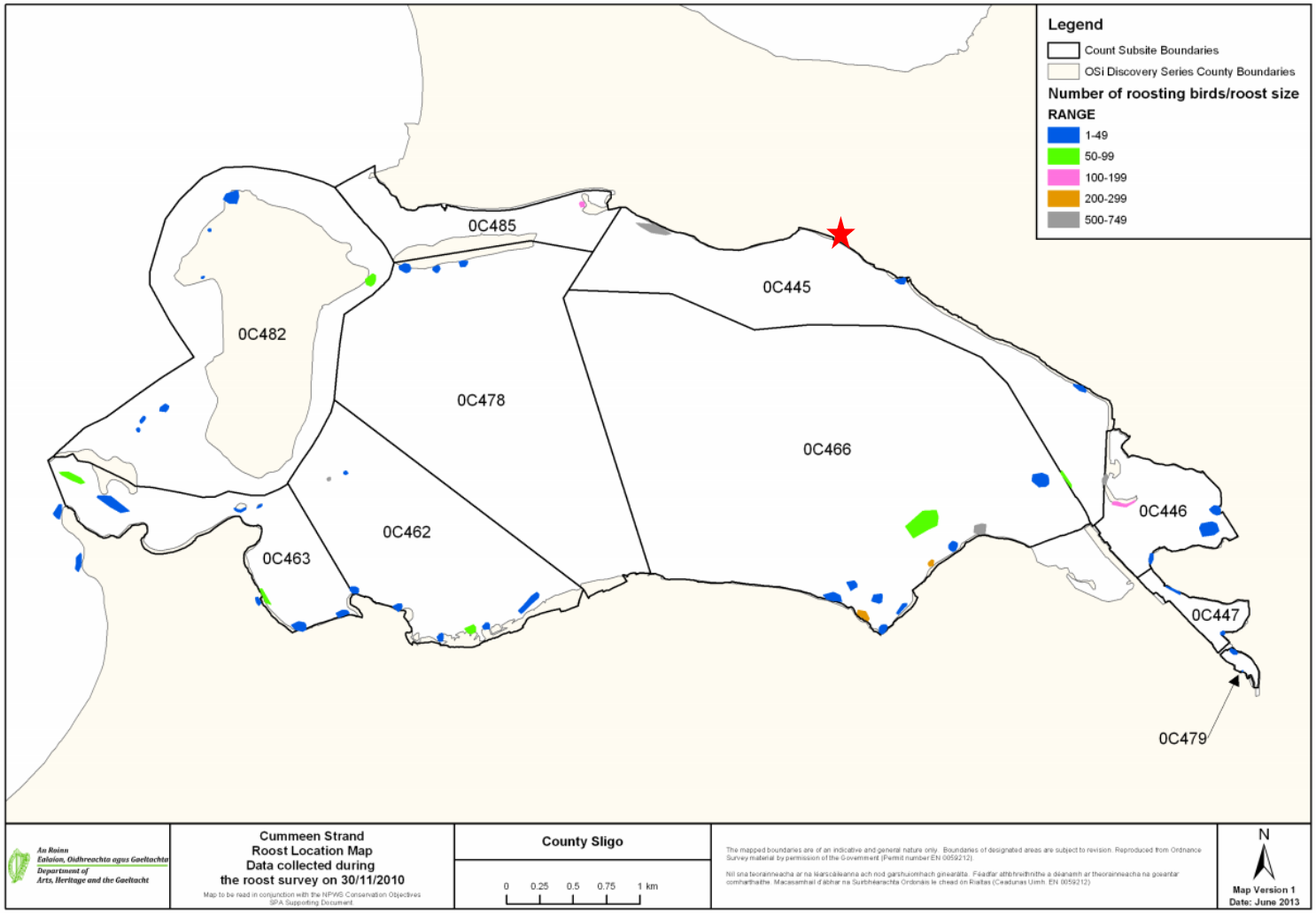
APPENDIX III: Proposed Plan and Drainage Layout (Source: CHH)



APPENDIX IV: SECTIONS & DETAILS (Source: CHH)



APPENDIX V: Key Roosting Sites in the SPA (Source: NPWS, 2013)



[Red star is approx. location of Application Site]