Comhairle Contae Mhaigh Eo Mayo County Council

## PROVISION OF 9 No. UNITS

AT

A601 CARNACON

CLAREMORRIS
COUNTY MAYO

## SCREENING FOR APPROPRIATE ASSESSMENT

## FEBRUARY 2022

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## MAYO COUNTY COUNCIL <br> SCREENING FOR APPROPRIATE ASSESSMENT <br> CONTENTS

1. INTRODUCTION ..... 1
1.1 BACKGROUND .....
1.2 AUTHOR'S QUALIFICATION AND EXPERTISE .....  .1
1.3 REGULATORY CONTEXT ..... 2
1.4 THE STAGES IN AN APPROPRIATE ASSESSMENT ..... 3
1.5 SCREENING METHODOLOGY ..... 4
1.6 DESK STUDY .....  4
1.7 FIELD STUDY ..... 5
1.8 FLOODING ..... 5
2. PROJECT DESCRIPTION .....  7
2.1 SITE LOCATION .....  7
2.2 PROPOSED WORKS .....
3. RECEIVING ENVIRONMENT. ..... 9
3.1 GEOLOGY AND SOILS ..... 9
3.2 HYDROLOGY AND HYDROGEOLOGY ..... 10
3.3 HABITATS ..... 12
3.4 INVASIVE SPECIES ..... 17
4. SCREENING FOR APPROPRIATE ASSESSMENT ..... 17
4.1 EUROPEAN SITES WITHIN THE ZONE OF INFLUENCE (ZOI) OF THE PROPOSED DEVELOPMENT ..... 17
4.2 IN-COMBINATION EFFECTS ..... 39
5. SCREENING ASSESSMENT - CONCLUSION ..... 40
6. REFERENCES ..... 41

## APPENDIX A: DRAWINGS

Drawing SL01: Existing Site Survey
Drawing 5201: Site Location Map
Drawing 5202: Proposed Site layout
Drawing 5203: Proposed Site layout and boundary treatments
Drawing 5204: Proposed Site elevations
Drawing 5205: Proposed 3D Site Overview
Drawing 5206: House type dormer 2 bed - 4 person
Drawing 5207: House type dormer 3 bed - 6 person

Drawing 5208: House type gable entrance dormer 3 Bed - 6 person
Drawing 5209: Access Road Sight Lines
Drawing 5210: Site Sections
Drawing 5211: Proposed Site Services Layout

## 1. INTRODUCTION

### 1.1 BACKGROUND

Jennings O'Donovan \& Partners Limited have been commissioned by Mayo County Council to carry out a Stage I Appropriate Assessment Screening under Article 6(3) of Council Directive 92/43/EEC (Habitats Directive) for the proposed provision of 9 No. Units at A601 Carnacon, Claremorris, Co. Mayo, hereafter referred to as the 'Proposed Development'.

The purpose of this report is to assess the various elements of the project in terms of potential impacts to European Sites within the Zone of Influence (Zol) of the project site. Potential cumulative impacts of the overall Proposed Development, individually and in-combination with other plans and projects within the area of the waterbody catchment were also assessed in relation to existing, or proposed elements of the project. Locations where works will be carried out were surveyed for the presence of protected habitats and species as set out in the Birds and Habitats Directives.

This proposal is not necessary for the conservation management of a European site.

### 1.2 AUTHOR'S QUALIFICATION AND EXPERTISE

This Stage I Appropriate Assessment Screening has been prepared by Dr. Monica Sullivan, Principal Environmental Scientist and Lead Ecologist at Jennings O'Donovan \& Partners Limited. She is a full member of the Chartered Institute of Ecology and the Environmental Management. Dr. Sullivan has over 35 years' experience in the natural sciences, specialising in fisheries management, aquatic ecology and freshwater invertebrate taxonomy. She has lectured since the mid 1990's - 2017 in invertebrate zoology, ecology and environmental pollution control to both masters and degree students. She was the examiner for the freshwater biology module for the Institute of Fisheries Management, England. Monica's experience includes invasive species surveys, management plans, ecological studies, Environmental Impact Assessment (EIA) screenings, Appropriate Assessment (AA) screenings, Natura Impact Statements (NIS), otter surveys, badger surveys, freshwater macroinvertebrate and instream flora surveys.

Qualified to doctorate level, Monica previously worked as a partner in an environmental consultancy, undertaking fieldwork and specialising in Environmental Assessments of medium to large scale infrastructural projects and the coordination and management of AA and Environmental Impact Assessment processes. She has a clear understanding of the legislative framework governing the extent of environmental investigations, assessments and reports required to secure the necessary approvals on all types of projects. She has extensive experience in management of specialist sub-consultants and working in a team environment and a history of collaborating with participants on research projects. Dr. Sullivan was author and researcher on an Environmental Government Program on invasive species. She is chief author of a chapter in the book Zebra Mussels in Europe and has published many papers on the topic. She spent several years working as both English and Scientific editor for international scientific journals. In 2017, she was expert advisor for 'horizon scan' invasive species workshop.

### 1.3 REGULATORY CONTEXT

Under Section 177U (1) of the Planning Acts, a Screening for AA of the Proposed Development shall be carried out by the competent authority (in this case, Mayo County Council) to assess in view of best scientific knowledge, if that Proposed Development, individually or in combination with other plans or projects, is likely to have a significant effect(s) on any European sites.

Collectively, Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are referred to as the Natura 2000 Sites. The legal basis on which SACs are selected and designated is the EU Habitats Directive, 92/43/EEC transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), as amended. The designation features of SACs are referred to as Qualifying Interests (QI) and include both species (excluding birds) and habitats. Similarly, Special Protection Areas (SPA's) are legislated in the Birds Directive 2009/147/EC. The designation features of SPAs are referred to as Special Conservation Interests (SCIs) which comprise bird species as well as wetland bird habitats.

In general terms, SACs and SPAs are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community.
Article 6, paragraph 3 of the Habitats Directive states that:
"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in-combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public". The statutory agency responsible for the European sites is the National Parks and Wildlife Service of the Department of Culture, Heritage and the Gaeltacht.

This report has been prepared in accordance with current guideline documents:

- Assessment of plans and projects significantly effecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001)
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG 2009, Revised February 2010)
- Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG, 2009, revised 2010)
- OPR Practice Note PN01: Appropriate Assessment Screening for Development Management, March 2021, Office of the Planning Regulator
- Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg, (EC, 2000a)
- European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011).
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).
- EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (EC, 2007)
- Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)
- Strict Protection of Animal Species, NPWS, 2021

The following European Court and Irish High Court rulings have been considered:

- C-127/02 Waddenzee v Staatssecretaris
- C-258/11 Sweetman v An Bord Pleanála
- C-512/12 Briels
- C-387/12 \& C388/15 Orleans and others v Vlaams Gewest
- C-142/15 Moorbug
- C-323/17 People Over Wind and Peter Sweetman v Coillte
- C-162/17 Grace and Sweetman
- C-883/18 Holohan and others v An Bord Pleanála
- IEHC 84 (2019) - Kelly v An Bord Pleanála

Relevant plans from national to local scales are critical to inform a robust assessment of in-combination impacts; these are listed below:

- National Biodiversity Action Plan, for the period 2017-2021
- River Basin Management Plan for Ireland 2018-2021
- Draft Mayo County Development Plan 2021-2027


### 1.4 THE STAGES IN AN APPROPRIATE ASSESSMENT

There are 4 stages in an Appropriate Assessment as outlined in the European Commission Guidance document (2001). The following is a brief summary of these steps:

Stage 1 - Screening: This stage examines the likely effects of a project either alone or in- combination with other projects upon a European site and considers whether it can be objectively concluded that these effects will not be significant.
Stage 2 - Appropriate Assessment: In this stage, the impact of the project on the integrity of the European site is considered, with respect to the conservation objectives of the site and to its structure and function.

Stage 3 - Assessment of Alternative Solutions: Should the Appropriate Assessment determine that adverse impacts are likely upon the European site, this stage examines alternative ways of implementing the project that, where possible, avoid these adverse impacts.
Stage 4 - Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider
whether compensatory measures will or will not effectively offset the damage to the European site will be necessary.

As part of this Screening for Appropriate Assessment, a desk-based study of the European site within the zone of influence (Zol) of the Proposed Development is required.

### 1.5 SCREENING METHODOLOGY

The function of the Screening Assessment is to identify whether or not the proposal will have a likely significant effect on any European Site. In this context "likely" refers to the presence of doubt with regard to the absence of significant effects (ECJ case C-127/02) and "significant" means not trivial or inconsequential but an effect that has the potential to undermine the site's conservation objectives (ECJ case $\mathrm{C}-127 / 02$ ). In other words, any effect that compromises the functioning and viability of a site and interferes with achieving the conservation objectives for the site would constitute a significant effect.

The nature of the likely interactions between the project and the integrity of a European Site will depend upon the sensitivity of the European Site's qualifying features to potential impacts arising from the project; the current conservation status of the European Site and its qualifying features; and any likely changes to key environmental indicators (e.g. water quality) that underpin the conservation status of European Sites and their qualifying features, in-combination with other plans and projects.

The European Commission (2018) Guidelines outline the stages involved in undertaking a Screening Assessment of a project that has the potential to have likely significant effects on European Sites. The methodology adopted for this Screening Assessment is informed by these guidelines and was undertaken in the following steps:

1. Define the project and determine whether it is directly connected with or necessary for the conservation management of European Sites
2. Identify other plans or projects that, in-combination with the project, have the potential to effect European Sites
3. Assess whether or not the project is likely to have significant effects on European Sites in the view of its conservation objectives.

### 1.6 DESK STUDY

A desk study was carried out to collate the available information on the ecological environment of the proposed site. The National Parks and Wildlife Service (NPWS) database was consulted concerning designated conservation areas and records of rare and protected plant and animal species in the vicinity of the Proposed Development. The EPA Geoportal website was used when researching European designated sites and watercourses. Similarly, EPA Water Maps was accessed Dec 20th, 2021. The National Biodiversity Data Centre (NBDC) website was also consulted. One kilometre Grid square 'M1976' incorporated the majority of the Proposed Development site and does not support any records of lesser horseshoe bat (Rhinolophus hipposideros) (Figure 1.1). Adjacent and directly south of this

Grid, a further $1 \mathrm{~km}{ }^{2}$ area was investigated (Grid 'M1975'). Similarly, no records of any bat species were noted in this area.


Figure $1.11 \mathrm{~km}^{2}$ Grid for species investigation from the National Biodiversity Data Centre (NBDC) website

The Draft Mayo County Development Plan 2021-2027 and the Mayo County Council planning enquiry website were reviewed to identify any proposed plans or projects which may have a direct, indirect or cumulative impact with this project.

### 1.7 FIELD STUDY

A site visits were carried out on Jan 7, 2022. The survey involved walking all aspects of the site and identifying habitats and surveying for small mammals along the treeline/hedgerows. Habitat classification followed Fossitt (2000) and the floral nomenclature used followed Parnell and Curtis (2012) and Scannell and Synnott (1987).

### 1.8 FLOODING

Office of Public Works (OPW) website and the CFRAM study were accessed (Jan 04, 2021) to determine flood areas within and near the Proposed Development. Figure 1.2 shows the probability of flooding at the site, along with records of past flood events. The Proposed Development site itself has no surface or groundwater record of a flooding event (including winter 2015/2016 Geological Survey Ireland surface water flooding records). The nearest historical previous flood events include two
turloughs, namely Carrownacon, located $>500 \mathrm{~m}$ northeast of the Proposed Development site and Burriscarra, also located over 500m northwest of the site; both sites are north of local road L1604.


Figure 1.2 Flood Map for the Proposed Site (Source: FloodInfo.ie, 2022)
The Geological Survey Ireland flood probability mapping was examined (Jan, 2022) to determine if there was an existing risk from groundwater flooding at the site. Given that the main bedrock is Crossbedded peloidal limestone and calcareous shale, with underlying limestone till (Carboniferous) soils, there is little or no risk from groundwater flooding. The groundwater flood mapping confirmed that the site is not at risk from groundwater flooding. In addition, there is no risk of tidal or pluvial flooding. The site is in an area of a regionally important aquifer that is noted as being highly vulnerable. The associated ground waterbody (GWB) is the Ballyhean (EPA Code: IE_WE_G_0022) which covers an area of 6pprox.. 160km². The Water Framework Directive (WFD) latest status for the Ballyhean GWB (2013-2018) is 'Good', indicating no change from the previous 2007-2012 and 2010-2015 records held. Status for near surface and sub surface nitrate susceptibility (IE_WE_30A340980) at the Site is 4 and 5 respectively, while the status for near surface phosphate susceptibility (IE_WE_30A340980) at the Site is 2 . There are no drinking water rivers or lakes in the local area and the Site is also not within a GSI public or group water scheme source protection area.

## 2. PROJECT DESCRIPTION

### 2.1 SITE LOCATION

The Proposed Development ( 0.82 ha ) is located in Carnacon, Claremorris, Co. Mayo. It is approx. 370 m south of Local road L1604 and approx. 4.7km east of National Road N84 (Figure 2.1). The eastern boundary of the property is located along local road L1605. Burriscarra / Carnacon National School and local Parish Centre are located north of the Proposed Development Site. (Figure 2.1).

The Site slopes in a general easterly direction from 29.5 m in the west to 22.0 m in the east (Drawing SL01; Exiting Site Survey, Appendix A). There is a moderate slope in the western part of the site (approx. 14\%); no Units are proposed in this section. The eastern section of the site and proposed 5 no. Unit development area is relatively flat with a slope of approx. $1.5 \%$. There is no hard boundary (e.g. fence line, treeline, hedgerow) along the northeastern property line.


Figure 2.1 Location of the Proposed Development Site

### 2.2 PROPOSED WORKS

It is proposed to construct a new housing development with associated services, access roads and car parking at the proposed site. The site is currently a greenfield site. The proposed construction is envisaged to consist of conventional foundations and pavement make up, with some local excavations for services and plant.

The proposed housing development will consist of 09 Units at A601 Carnacon, Claremorris, County Mayo.

### 2.3 The Proposed Development

The proposal is for a residential development on a net site area of c. 0.82 ha. The proposal consists of the following:

- Construction of 9 no. dormer residential Units comprising as follows:
- Five (numbers 01, 04, 05, 06 and 08) will have two bedrooms
- Four (numbers 02, 03, 07, \& 09) will have three bedrooms
- It is proposed that Unit 02 will have an entrance and windows to the southern gable and Unit 03 will have an entrance and windows on the northern gable. (Drawing 5202; Proposed Site layout, Appendix A).
- All associated site development works including landscaping, boundary treatments, public lighting, site services, drainage works and all associated infrastructure.

The proposed location of the wastewater treatment percolation area will be in the south western part of the Site to ensure maximum distance from the proposed Units.

## Surface Water Sewer

There is no public surface water systems adjacent (or close to) the subject site. As a result infiltration tests to BRE365 were carried out and these tests determined that the existing ground is suitable for infiltration of the surface water from the proposed development. An infiltration tank with a storage capacity of 66 m 3 will be provided as indicated on the Proposed Site Services Layout Drawing, 5211, Appendix A.

To ensure the water being discharged to the ground is free of any contaminants the following are being provided:

- All surface water from roadways and adjacent footpaths will be collected via road gullies which provide an initial leaf/debris guard and silt trap.
- All surface water from roofed areas and hardstanding areas will be collected via rainwater gullies which provide an initial leaf/debris guard and silt trap.
- A Class 1 Petrol/Oil Interceptor, designed and installed in accordance with IS EN 858, including high oil level alarm, will be provided just prior to the last manhole before the attenuation tank. This will ensure that all surface water from the site will be cleansed by the interceptor prior to entering the attenuation tank.
- The last manhole prior to the infiltration tank will be provided with a 400 mm deep silt trap, to further reduce any fine materials reaching the infiltration tank.

An additional manhole at the far end of the infiltration tank from the inlet pipe to the infiltration tank, will also be provided with a 400 mm deep silt trap, to facilitate the cleaning out of the attenuation tank, as required, during a pre-planning maintenance regime.

## Wastewater Sewer

There is no public wastewater sewer system adjacent (or close) to the subject site. As a result an EPA Site Suitability Report was carried out and this test determined that the subject site was suitable for a wastewater treatment and percolation area as described following:

- A Secondary Wastewater Treatment System will initially treat the wastewater. The proposed system is a Graf Klaro Easy 50PE Wastewater Treatment Plant.
- After being treated, the wastewater will be pumped via pump station constructed to Irish Water standards, to a suitable location on site.
- The wastewater will then be treated by a Tertiary Treatment system. The proposed system are Chieftain Coconut Treatment Units, suitable for 45PE.
- The treated wastewater will then be gravity fed to a gravel distribution area, which will be in accordance with EPA Code of Practice 2021.

Additional detail on the proposed wastewater treatment system is provided on the Proposed Site Services Layout Drawing, 5211, Appendix A.

## Watermain

The subject site is to be served by an existing watermain which runs approximately parallel to the western site boundary. This watermain is under the authority of the Lough Carra Group Water Scheme and permission has been obtained to connect to the scheme.

## 3. RECEIVING ENVIRONMENT

### 3.1 GEOLOGY AND SOILS

The quaternary sediments at the site of the Proposed Development are classified as 'marine shelf facies' and 'limestone and calcareous shale'.

The main bedrock is Dinantian Pure Bedded Limestones (DPBL) with underlying limestone till (Carboniferous) soils. A report carried out by Ground Investigations Ireland (GII) in April 2021 noted that the sequence of strata encountered were consistent across the site and generally comprised of
topsoil, cohesive deposits, granular deposits, weathered bedrock and bedrock (bedrock encountered was grey limestone).

### 3.2 HYDROLOGY AND HYDROGEOLOGY

The Proposed Development site is located within the Water Framework Directive (WFD) wider catchment area of the Corrib, covering approx. 3,114km² (Hydrometric Area 30), the Aghinish_SC_010 sub catchment (c.107.78km²) and the Annies_010 River Sub basin, covering an area of approx. $28 \mathrm{~km}^{2}$.

There is no hydrological connection to any watercourse within/adjacent to the project site. The nearest watercourse is located approx. 94 metres southeast of the project site and is separated by local road L1605, stone walls, hedgerow and agricultural farmland.

This watercourse is a source, order 1 stream, known as the Lawarreen stream (Segment Code: 30_3071). It initially flows southwest from its source for approx. 100m before turning in a general southeasterly direction for approx. 1.9 km and merging into the order 3 Annies River (Segment Code: 30_3257). This River flows for approx. 750m before entering the eastern shores of Lough Carra which is part of Lough Carra/Mask Complex SAC and Lough Carra SPA, located approx. 2.5 km and 2.7 km respectively from the initial watercourse source. The Aghinish River (order 4) discharges from south Lough Carra and flows approx. 2.2km before entering Lough Mask and Lough Mask SPA (approx. 11km downstream of source). The River Cong (Canal) (Segment Code: 30_3400) discharges from southeast Lough Mask and flows for approx. 6km and into Lough Corrib which is part of Lough Corrib SAC and SPA (both located approx. 32km downstream of initial watercourse source). Exiting Lough waters discharge via the River Corrib (Segment Code: 30_729), which flows for approx. 9.3km before discharging into Galway Bay (and Galway Bay Complex SAC and Inner Galway Bay SPA, located approx. 75 km downstream of initial watercourse course) and subsequently into the Atlantic Ocean.

The Owenriff Margaritifera SAC catchment is located approx. 32km southwest of the Proposed Development site, in a separate (upstream) River Sub basin, namely the Owenriff (Corrib)_020.


Figure 3.1 Watercourses and waterbodies adjacent to the Proposed Development

The site overlies bedrock which is classified as a 'Regionally Important Aquifer - Karstified (conduit)'. The groundwater vulnerability at the site is classified as 'High' ' $H$. The Ballyhean Waterbody (IE_WE_G_0022) which underlies the Proposed Development site currently has a water quality classification of 'Good'. There are no springs or wells within the vicinity of the site.

The design proposes a wastewater treatment percolation area in the south western part of the site to collect the wastewater.

Currently, the groundwater in the area has no significant underlying pressures, including waste abstraction, agriculture, anthropogenic, aquaculture, atmospheric, extractive industry, hydro morphology, invasive species, urban runoff or otherwise (EPA Water Maps, accessed Dec 20th 2021). The EPA Maps (Water) was also accessed (Dec 2021) to examine the Proposed Development Site and local area for nitrate and phosphorus loading and Pollutant Impact Potential (PIP). PIP maps for Nitrogen ( $N$ ) and Phosphorus ( P ) have been generated by the EPA to show the highest risk areas in the landscape for losses of $N$ and $P$ to waters. The PIP model estimates the annual nutrient losses from agricultural land at specific locations, using spatial data from farm management, soils and hydrogeology. This model estimates loads at an annual temporal resolution.

The Development Site is located in a landscape largely given to individual residential dwellings with accompanying improved agricultural grasslands.

The grasslands associated with the Development Site have been intensely modified. The Development Site is denoted as having the following Phosphorus rankings; the centre strip running north-south has a lower PIP ranking range of 4 and also 7 ( 7 is the lowest impact ranking) while the outer Development Site boundaries due west and east have a higher PIP ranking of 3. The overall ranking likely reflects fertiliser use on the land in the past with possible livestock. Adjacent lands due east are ranked 7 and 3 respectively, with a general consistency of a 3-4 ranking moving southward, as land has been modified over the years. Lands due west of the Development Site have also been grossly modified and rank higher at 2 and 1. Further west, lands rank 6 and 7 near a local road.

PIP N for the Proposed Development Site has a ranking of 4 in the centre strip (as above) with marginal lands ranking the lowest impact at 7. Adjacent lands moving southward are also generally low ranking, at 6-7.

Overall, the Critical Source Areas Maps for the Proposed Development Site and adjacent lands do not indicate a Site where either phosphorus or nitrates are a significant issue and there is no focused delivery flow path from the site. There is a significant mature treeline along the southern and western boundary of the Development Site.

As noted earlier in Section 3.2, the Proposed Development Site is within the WFD sub basin Annies_010. Currently, there are no significant pressures from the Development Site on this River sub basin.

### 3.3 HABITATS

Five habitats (according to Fossitt, 2000) were noted in the vicinity of the proposed project area where construction activities will be undertaken, namely GA1: Improved Agricultural Grassland, WL2: Treeline, WL1: Hedgerow, WS1: Scrub and BL1: Stone/Mortar walls. There is no Annex I habitat occurring within the area proposed for works.

No rare, threatened or protected species of plants as per the Red Data Book (Curtis and McGough, 1988) were found. No species listed in the Flora Protection Order (2015) were found growing within the site. No such species were recorded within the area of works.

## GA1: Improved Agricultural Grassland

The main field and site for the proposed development is Improved Agricultural Grassland habitat (Plate 3.1). Species diversity is poor, as the site has been used for intensively managed or highly modified agricultural grassland that has been reseeded and/or regularly fertilised, and is now heavily grazed and/or used for silage making. It is largely a monoculture grassland. The site is uneven, showing signs of stock grazing. Grasses dominate the short swards on site with daisy (Bellis perennis), clovers (Trifolium spp.), dandelion (Taraxacum sp.), creeping buttercup (Ranunculus repens), plantains (Plantago spp.), Nettle (Urtica dioica), thistles (Cirsium spp.) and docks (Rumex spp.) present. The
area close to the gate entrance is trampled and colonised by greater plantain (Plantago major) and pineapple weed (Matricaria discoidea).


Plate 3.1 GA1 Improved Agricultural Grassland habitat

## WL2: Treeline

A mature, linear, single treeline habitat exists for approx. 100 m along the southern boundary of the site (Plate 3.2) and includes beech and sycamore species reaching up to 20 m in height, separated by several meters. This treeline delineates a farmland boundary in an intense agricultural landscape. Adjacent lands are farmed and managed for grassland and stock. This treeline was originally planted in the adjacent field, however the trunks, branches and the root systems are now overreaching into the site boundary (See top left insert image, Plate 3.1). A tall mature beech tree (Fagus sy/vatica) approx. 20 m in height is rooted in the south west corner of the property.

There is wire stock fencing with intermediate posts (wooden and cement) along this boundary, topped with several rows of horizontal barbed wire. There are some young saplings of native tress inside the property line and include Holly (Ilex aquifolium), elder (Sambucus nigra) and blackthorn (Prunus spinosa). Bramble (Rubus fruitcosus), Dog Rose (Rose canina) and ivy (Hedera sp.) were also recorded, being supported by /climbing the fence (Plate 3.1 bottom right image insert). Non-native young samplings include sycamore (Acer pseudoplatanus) approx. 2 m in height.


Plate 3.2 WL2: Treeline along the adjacent southern boundary

A discontinuous semi-mature treeline exists along the western boundary for approx. 55m. Similar to the southern treeline, these trees are rooted in the adjacent field with root systems, tree trunks and branches overreaching into the property (Plate 3.3). Trees include native hawthorn (Crataegus monogyna) approx. 3-4m tall and elder (Sambucus nigra) approx. 4-5m tall and young, non-native sycamore (Acer pseudoplatanus) and two conifers in the northwest corner. The trees in general are heavily encroached with climbing ivy (Hedera sp.). Young holly (Ilex aquifolium) saplings grow inside the property boundary with the herbaceous perennial Lords and ladies (Arum maculatum) in the shade, at their base.

A discontinuous treeline WL2/hedgerow WL1 exists along the northwestern boundary for approx. 40 m . It supports a mature non-native sycamore tree (Acer pseudoplatanus) approx. 8-10m tall and native hawthorn (Crataegus monogyna), approx. $4-5 \mathrm{~m}$ in height and elder (Sambucus nigra); the latter has been heavily cut back over the years (Plate 3.4). The majority of this mixed habitat feature has been planted in the adjacent property due north, but overhangs into the site. This accompanying site boundary has wire mesh fencing.


Plate 3.3 WL2: Discontinuous treeline along the adjacent western boundary.


Plate 3.4 WL2/WL1: Discontinuous treeline/hedgerow along the adjacent northwestern boundary.

## WS2: Scrub

There are two small areas of scrub (in general $2-3 \mathrm{~m}$ in height) on the site, namely adjacent to the western boundary and close to the northern boundary. The former scrub stretches approx. 5 m east of the western treeline and is predominantly comprised of bramble (Rubus fruitcosus) intertwined with nettles (Urtica dioica), thistles (Cirsium spp.), willowherb (Epilobium sp.) and ivy (Hedera hibernica).

Cleavers (Galium aparine) and bush vetch (Vicia sepium) are common climbers. There are also patches of young holly (Ilex aquifolium). Similarly, the northern scrub supports a dense impenetrable area (up to 10 m in places), dominated by bramble with some native blackthorn (Prunus spinosa) 2-3m tall. This scrub area stretches for approx. 45 m in a general west to east direction, then terminates mid-field.


Plate 3.5 WS2: Impenetrable Scrub habitat along the northwestern boundary.

## BL1: Stone/Mortar wall

There are two stone/mortar walls on site that delineate land boundaries, namely the eastern site boundary, stretching approx. 60 m in length along the adjacent external footpath and the south western wall approx. $2 m$ in height stretching approx. 25 m from the southwest corner.

The eastern wall is briefly discontinued where a gateway entrance to the site exists, while the southwestern wall terminates after approx. 25 m and is a shared wall with local residence.

Structurally, the walls are comprised of stone mixed with mortar and are intact. Overall, the walls support a limited floral diversity and largely unvegetated; the eastern wall is relatively abundant in lichens.

Associated ferns include maidenhair spleenwort (Asplenium trichomanes) and rusty-back fern (Asplenium ceterach) on the eastern wall which is topped with mosses and patches of individual bittercress (Cardamine sp.) and creeping bramble from the adjacent field. Common buttercup (Ranunculus acris) is also located at the base of the wall on the western side. The taller southern wall has dense moss growth along the lower margin of the wall adjacent to the field (Plate 3.6 insert). Other flora which have gained a foothold include creeping ivy (Hedera hibernica) and herb-Robert (Geranium robertianum).


Plate 3.6 BL1: Stone/mortar wall delineating the eastern boundary; southern wall insert.

### 3.4 INVASIVE SPECIES

No invasive alien species as listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) Part 1 or 2 were recorded within the site under survey at Carnacon.
4. SCREENING FOR APPROPRIATE ASSESSMENT

This AA Screening examined the likely significant effects of the Proposed Development, either alone or in-combination with other projects or plans on European sites, that were situated within a zone of influence (Zol), or a distance that has a potential source-pathway-receptor (SPR), both direct and indirect with the Proposed Development.

### 4.1 EUROPEAN SITES WITHIN THE ZONE OF INFLUENCE (ZOI) OF THE PROPOSED DEVELOPMENT

The European Sites identified as being within the Proposed Development's Zol's using the SPR principle will be assessed (Table 4.1, Figures 4.1 and 4.2) to examine the likelihood of significant effects of the Proposed Development either alone or in-combination with other plans or projects, on any European Sites.


Figure4.1 SPAs within the Zone of Influence of the Proposed Development


Figure 4.2 SACs within the Zone of Influence of the Proposed Development

The Proposed Development is not located within the boundary of any European Site, with the nearest such site being Towerhill House SAC (Site Code 002179), approximately 846 metres east of the Proposed Development (Figure 4.2). Moore Hall (Lough Carra) SAC Site Code (000527) is located approx. 1.6 km south of the Proposed Development.

Table 4.1 List of Relevant European Sites within a 15 km Zone of Influence radius

| Designated Site | Distance from Development (km) |
| :--- | :--- |
| SACs | approx. 0.8km east |
| Towerhill House SAC (002179) | approx. 1.6km southwest |
| Lough Carra/Mask Complex SAC (001774) | approx. 1.6km south |
| River Moy SAC (002298) | approx. 5.3km north |
| Ballinafad SAC (002081) | approx. 6.5km northeast |
| Balla Turlough SAC (000463) | approx. 12.10.5km northeast |
| Carrowkeel Turlough SAC (000475) | approx. 13.0km southeast |
| Kilglassan/Caheravoostia Turlough Complex SAC <br> (000504) | approx. 13.7km southeast |
| Skealoghan Turlough SAC (000541) | approx. 1.6km south |
| SPAs | approx. 6.1km south |
| Lough Carra SPA (004051) | Lough Mask SPA (004062) |

Table 4.2 Relevant European Sites, reason for designation and data for Screening

| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
| SPECIAL AREAS OF CONSERVATION (SACs) |  |  |  |
| Towerhill House SAC (002179) | Species <br> 1303 Lesser Horseshoe Bat (Rhinolophus hipposideros) <br> According to this SAC's site Conservation Objectives document | The project site occurs at a distance of 795m northwest of roost site ID 668 and 1.2 km west of roost site ID 682 (Map 2, <br> Towerhill House | [1303] There is no possibility for significant effects on Lesser Horseshoe Bat in this SAC due to: <br> - given the separation distance from the identified roost sites, there will be no decline in the condition of winter or summer roosts as there is no potential for damage or disturbance to these roosting sites or the habitats |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  | (Version 1. <br> Department of Housing, Local Government and Heritage, 2018), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex II species for which the SAC has been selected. | SAC, NPWS, 2018). | immediately surrounding them. (Map 2, Towerhill House SAC, NPWS, 2018). <br> - similarly, there will be no decline in the number or condition of auxillary roosts as there is no potential for damage or disturbance to these roosting sites or the habitats immediately surrounding them. $R$. hipposideros is not recorded within $1 \mathrm{~km}^{2}$ of the Proposed Development (NBDC, accessed Jan 04, 2022). <br> - the Proposed Development is not proximate to, or located along a favoured commuting foraging route (Map 2 Towerhill House SAC, NPWS, 2018). There are pockets of woodland, scrub, hedgerows and walls present in the landscape between roost sites and favoured foraging areas. These features will not be impacted by the project and will maintain landscape connectivity within 2.5 km of the roost site. The project will not result in an adverse impact on the SAC bat population. Therefore, there will be no significant decline of favoured foraging sites in woodlands and scrub (or linear commuting routes to these sites). <br> - since the Proposed Development is not proximate to, or located along a favoured commuting foraging route, there will be no significant increase in artificial light intensity adjacent to identified roosts or along commuting routes within 2.5 km of the roost sites as outlined in Map 2 Towerhill House SAC, NPWS, 2018. <br> Currently, there is street lighting along the eastern roadside boundary of the site. Proposed lighting will adhere to the best practice lighting standards provided in the Institute of Lighting Professionals (ILP) guidance document Guidance Note 08/18 - Bats and Artificial Lighting in the UK (2018). |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
| Moore Hall (Lough Carra) SAC (000527) | Species <br> 1303 Lesser <br> Horseshoe Bat <br> (Rhinolophus <br> hipposideros) <br> According to this <br> SAC's site <br> Conservation <br> Objectives document <br> (Version 1. <br> Department of Housing, Local Government and Heritage, 2018), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex II species for which the SAC has been selected. | The project site occurs at a distance of approx. 1.6 km southwest of roost site ID 684 (Map 2, Moore Hall (Lough Carra SAC, NPWS, 2018). | [1303] There is no possibility for significant effects on Lesser Horseshoe Bat in this SAC due to: <br> - given the separation distance from the identified roost site (ID 684, Map 2, Moore Hall (Lough Carra) SAC, NPWS, 2018), there will be no decline in the condition of the internationally important winter or summer roosts as no potential for damage or disturbance to these roosting sites or the habitats immediately surrounding them. (Map 2, Moore Hall (Lough Carra) SAC, NPWS, 2018). <br> - similarly, there will be no decline in the number or condition of qualifying roosts as no potential for damage or disturbance to these roosting sites or the habitats immediately surrounding them. R. hipposideros is not recorded within $1 \mathrm{~km}^{2}$ of the Proposed Development (NBDC, accessed Jan 04, 2022). <br> - the Proposed Development is not proximate to, or located along a favoured commuting foraging route (Map 2 Moore Hall (Lough Carra) SAC, NPWS, 2018). There are pockets of woodland, scrub, hedgerows and walls present in the landscape between the summer and winter roost sites and favoured foraging areas. These features will not be impacted by the project and will maintain landscape connectivity within 2.5 km of the roost sites. There are areas of open farmland proximate to the Proposed Project Development which are not favoured foraging areas for this species. The project will not result in an adverse impact on the Moore Hall SAC bat population. <br> - since the Proposed Development is not proximate to, or located along a favoured commuting foraging route, there will be no significant increase in artificial light intensity adjacent to |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | identified roost or along commuting routes within 2.5 km of the roost site as outlined in Map 2, Moore Hall (Lough Carra) SAC, NPWS, 2018). Currently, there is street lighting along the eastern roadside boundary of the site. Proposed lighting will adhere to the best practice lighting standards provided in the Institute of Lighting Professionals (ILP) guidance document Guidance Note 08/18 - Bats and Artificial Lighting in the UK (2018). |
| Lough <br> Carra/Mask <br> Complex SAC <br> (001774) | Species <br> 1303 Lesser <br> Horseshoe Bat <br> (Rhinolophus <br> hipposideros) <br> 6216 Slender Green <br> Feather-moss <br> (Drepanocladus vernicosus) <br> 1355 Otter (Lutra <br> /utra) <br> Habitats <br> 3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) <br> 3130 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea <br> 3140 Hard oligomesotrophic waters with benthic vegetation of Chara spp. <br> 4030 European dry heaths <br> 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) | The project site occurs at a distance of approx. 1.6 km south of the SAC and a further approx. $11 \mathrm{~km}, 14 \mathrm{~km}$, ad 20km to Rhinolophus hipposideros roost sites, ID 667, 669 and 686 respectively (Map 8, Lough Carra/Mask Complex SAC, NPWS, 2021). | [1303] There is no possibility for significant effects on Lesser Horseshoe Bat due to: <br> - a minimum terrestrial separation distance of approx. 11 km between the Proposed Development and this SAC <br> - no significant decline of foraging habitat within 2.5 km of qualifying roosts <br> - no significant decline of linear features within 2.5 km of qualifying roosts <br> - no significant increase in artificial lighting adjacent to roosts or along commuting routes within 2.5 km . <br> Proposed lighting will adhere to the best practice lighting standards provided in the Institute of Lighting Professionals (ILP) guidance document Guidance Note 08/18 Bats and Artificial Lighting in the UK (2018). <br> [6216] There is no possibility for significant effects on Slender Green Feather moss due to: <br> - unsuitability of the site to support this species. No record of this species within $1 \mathrm{~km}^{2}$ of the site (NBDC records, accessed Jan 05, 2022) |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  | (* important orchid sites) <br> 7210 Calcareous fens with Cladium mariscus and species of the Caricion davallianae* <br> 7230 Alkaline fens <br> 8240 Limestone pavements* <br> 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* <br> According to this SAC's site Conservation Objectives document (Version 1. <br> Department of Arts, Heritage and the Gaeltacht, 2021), for the listed Qls, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. |  | - no hydrological connection to this SAC from the Proposed Development site <br> - a terrestrial separation distance of approx. 17.5 km (southwest) to the mapped location of this QI within the SAC (Map 10, Lough Carra/Mask Complex SAC, NPWS, 2021). <br> - proposed Development works will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [1355] There is no possibility for significant effects on Otter due to: <br> - unsuitability of the site to support this species. No record of otter within $1 \mathrm{~km}^{2}$ of the site (NBDC records, accessed Jan 05, 2022) <br> - No hydrological connection to this SAC from the Proposed Development site (Map 9, Lough Carra/Mask Complex SAC, NPWS, 2021). <br> - no potential for water quality impacts that may affect prey availability <br> - a minimum terrestrial separation distance of approx. 1.6 km between the Proposed Development and this SAC <br> - no potential for disturbance effects <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [3110] There is no possibility for significant effects on Oligotrophic isoetid lake habitat due to: |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | - no hydrological connection to this SAC from the Proposed Development site (Map 3, Lough Carra/Mask Complex SAC, NPWS, 2021). <br> - no change in the hydrological site characteristics <br> - no impact on shallow oligotrophic waters <br> - no impact on shallow oligotrophic soils of lake and/or pond banks <br> - no impact on vegetative zones dominated by Littorella, Lobelia dortmanna or Isoetes <br> - a minimum terrestrial separation distance of 1.6 km between the Proposed Development and this SAC <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
|  |  |  | [3130] There is no possibility for significant effects on Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or IsoetoNanojuncetea due to: <br> - no hydrological connection to this SAC from the Proposed Development site <br> - no potential for impact on the hydrological regime supporting the habitat <br> - no potential for diffuse groundwater or hydrologically-linked surface water pollution due to project works <br> - a minimum terrestrial separation distance of approx. 1.6 km between the Proposed Development and this SAC |



| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
|  |  |  | [6210] There is no possibility for significant effects on Calcareous grassland due to: <br> - a terrestrial separation distance of 3.7 km between the Proposed Development and this SAC (Map 5, Lough Carra/Mask Complex SAC, NPWS, 2021). <br> - no potential for habitat loss or degradation <br> - no potential for physical disturbance of this species-rich plant community <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
|  |  |  | [7210] There is no possibility for significant effects on the Cladium fens due to: <br> - no hydrological connection to this SAC from the Proposed Development site. <br> - no potential for impact on the hydrological regime supporting the habitat <br> - no potential for diffuse groundwater pollution due to project works <br> - a terrestrial separation distance of approx. 1.6 km between the Proposed Development and this SAC <br> - no infringement on this habitat or threat of trampling on characteristic |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | species as a result of the project works <br> - no potential for loss of habitat or habitat fragmentation <br> - no depletion of habitat or threat from invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
|  |  |  | [7230] There is no possibility for significant effects on Alkaline fens due to: <br> - no hydrological connection to this SAC from the Proposed Development site. <br> - no modification to existing drainage networks <br> - no potential for diffuse groundwater pollution from Proposed Development activities <br> - no infilling of ditches, dykes, ponds, pools, marshes or pits <br> - a minimum terrestrial separation distance of approx. 1.6 km between the Proposed Development and this SAC <br> - no depletion of habitat or threat from invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of 0.82 hectares |
|  |  |  | [8240] There is no possibility for significant effects on Limestone pavements due to: <br> - a minimum terrestrial separation distance of approx. 3.7 km between |



| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
| River Moy SAC (002298) | Species <br> 1096 Brook Lamprey (Lampetra planeri) <br> 1095 Sea Lamprey (Petromyzon marinus) <br> 1106 Salmon (Salmo salar) <br> 1355 Otter (Lutra lutra) <br> 1092 White-clawed <br> Crayfish <br> (Austropotamobius pallipes) <br> Habitats <br> 7110 Active raised bogs* <br> 7120 Degraded raised bogs still capable of natural regeneration <br> 7150 Depressions on peat substrates of the Rhynchosporion <br> 7230 Alkaline fens <br> 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles <br> 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) <br> According to this SAC's site Conservation Objectives document (Version 1 Department of Housing, Local Government and Heritage, 2016), for the listed Qls, the | approx. 5.3 km north from the project site | [1096], [1095], [1106], [1355] and [1092] There is no possibility for significant effects on brook lamprey, sea lamprey, salmon, otter or whiteclawed crayfish due to: <br> - No hydrological connection to this SAC from the Proposed Development site. <br> - a terrestrial separation distance of approx. 5.3 km between the project site and this SAC <br> - the Proposed Development will be contained within the project site <br> - no potential for disturbance effects <br> - the size and scale of the works within a project area of approx. 0.82 hectares <br> [7110] There is no possibility for significant effects on Active raised bogs due to: <br> - a terrestrial separation distance of approx. 5.3 km between the Proposed Development and this SAC <br> - the terrestrial nature of this habitat, fed by rainwater <br> - no potential for drainage effects <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares <br> [7120] There is no possibility for significant effects on Degraded raised bogs still capable of natural regeneration due to: <br> - a terrestrial separation distance of approx. 5.3 km between the Proposed Development and this SAC |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  | Conservation Objective is to maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. |  | - no potential for habitat loss or threat from invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
|  |  |  | [7230] There is no possibility for significant effects on Alkaline fens due to: <br> - no hydrological connection to this SAC from the Proposed Development site. <br> - no modification to existing drainage networks <br> - no potential for diffuse groundwater pollution from the Proposed Development activities <br> - no infilling of ditches, dykes, ponds, pools, marshes or pits in this SAC <br> - a minimum terrestrial separation distance of approx. 5.3 km between the project site and this SAC <br> - no depletion of habitat or threat from invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [91A0] There is no possibility for significant effects on Old oak woodland due to: <br> - a minimum terrestrial separation distance of approx. 5.3 km between the proposed development and this SAC (Map 6, River Moy SAC, NPWS, 2016) |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | - no potential for loss of habitat or habitat fragmentation <br> - no threat from invasive native or non-native species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
|  |  |  | [91E0] There is no possibility for significant effects on Alluvial woodlands due to: <br> - no hydrological connection to this SAC from the Proposed Development site. <br> - no changes to the hydrological regime supporting the habitat <br> - no potential for water pollution impacts due to project works <br> - a minimum terrestrial separation distance of approx. 5.3 km between the Proposed Development and this SAC (Map 6, River Moy SAC, NPWS, 2016) <br> - no potential for loss of habitat or habitat fragmentation, or threats from invasive native or non-native species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
| Ballinafad SAC (002081) | Species <br> [1303] Lesser Horseshoe Bat (Rhinolophus hipposideros) <br> According to this SAC's site | approx. 6.5 km northeast of the project site | [1303] There is no possibility for significant effects on Lesser Horseshoe Bat due to: <br> - a minimum terrestrial separation distance of approx. 6.5 km to the SAC and summer roost site (ID 683, |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  | Conservation <br> Objectives document (Version 1. <br> Department of Housing, Local Government and Heritage, 2018), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex II species for which the SAC has been selected. |  | Map 2, Ballinafad SAC, NPWS, 2018) <br> - no significant decline of foraging habitat within 2.5 km of the qualifying roost site <br> - no significant decline of linear features within 2.5 km of the qualifying roost <br> - no significant increase in artificial lighting adjacent to roosts or along commuting routes within 2.5 km . Proposed lighting will adhere to the best practice lighting standards provided in the Institute of Lighting Professionals (ILP) guidance document Guidance Note 08/18 Bats and Artificial Lighting in the UK (2018). |
| Balla <br> Turlough SAC (000463) | Habitats <br> 3180 Turloughs* <br> According to this <br> SAC's site <br> Conservation <br> Objectives document <br> (Version 1. <br> Department of Housing, Local Government and Heritage, 2021), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitat for which the SAC has been selected. | approx. 10.5 km northeast from the project site | [3180] There is no possibility for significant effects on Turloughs due to: <br> - no hydrological connection to this SAC or QI (Map 2, Balla Turlough SAC, NPWS, 2021) from the Proposed Development site. <br> - no modification to existing drainage network <br> - no potential for diffuse groundwater pollution from Proposed Development activities <br> - a minimum terrestrial separation distance of approx. 10.5 km between the Proposed Development and this SAC <br> - no potential for habitat loss or threat from invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
| Carrowkeel Turlough SAC (000475) | Habitats <br> 3180 Turloughs* <br> According to this SAC's site Conservation Objectives document (Version 1. <br> Department of Arts, Heritage and the Gaeltacht, 2021), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitat for which the SAC has been selected. | approx. 12.1 km southeast from the project site | [3180] There is no possibility for significant effects on Turloughs due to: <br> - no hydrological connection to this SAC or QI (Map 2, Carrowkeel Turlough SAC, NPWS, 2021) from the Proposed Development site. <br> - no modification to existing drainage network <br> - no potential for diffuse groundwater pollution from proposed development activities <br> - a minimum terrestrial separation distance of approx. 12.1 km between the Proposed Development and this SAC <br> - no potential for habitat loss or threat of invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
| Kilglassan <br> /Caheravoosti <br> a Turlough <br> Complex SAC <br> (000504) | Habitats <br> 3180 Turloughs* <br> According to this SAC's site Conservation Objectives document (Version 1. <br> Department of Housing, Local Government and Heritage, 2021), for the listed QI, the Conservation Objective is to restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected. | approx. 13km southeast from the project site | [3180] There is no possibility for significant effects on Turloughs due to: <br> - no hydrological connection to this SAC or QI (Map 3, Kilglassan /Caheravoostia Turlough Complex SAC, NPWS, 2021) from the Proposed Development site. <br> - no modification to existing drainage network <br> - no potential for diffuse groundwater pollution from proposed development activities <br> - a terrestrial separation distance of approx. 13km between the Proposed Development and this SAC |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | - no potential for habitat loss or threat from natural regeneration of conifers or invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
| Skealoghan Turlough SAC (000541) | Habitats <br> 3180 Turloughs* <br> According to this SAC's site Conservation Objectives document (Version 1. <br> Department of Housing, Local Government and Heritage, 2021), for the listed QI, the Conservation Objective is to restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected. | approx. 13.7 km southeast from the project site | [3180] There is no possibility for significant effects on Turloughs due to: <br> - no hydrological connection to this SAC or QI (Map 2, Skealoghan Turlough Complex SAC, NPWS, 2021) from the Proposed Development site. <br> - no modification to existing drainage network <br> - no potential for diffuse groundwater pollution from proposed development activities <br> - a terrestrial separation distance of approx. 13.7 km between the proposed development and this SAC <br> - no potential for habitat loss or threat from natural regeneration of conifers or invasive species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares |
| SPECIAL PROTECTION AREAS (SPAs) |  |  |  |
| Lough Carra SPA (004051) | Birds <br> A182 Common Gull (Larus canus) <br> According to this SPA's site Generic Conservation Objectives document | approx. 1.6 km south from the project site | [A182] There is no possibility for significant effects on Common Gull due to: <br> - no hydrological connection to the SPA from the Proposed Development site |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance from Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  | (Department of Arts, Heritage and the Gaeltacht, 2021) for the listed SCI, the Conservation Objective is to maintain or restore the favourable conservation condition of the bird species for which the SPA has been selected. |  | - a terrestrial separation distance of 1.6 km between the proposed development and this SPA with intervening agricultural lands, residential dwellings, local roads, boglands, forestry etc. <br> - unsuitability of the site to support this species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
| Lough Mask SPA (004062) | Habitats <br> Wetlands <br> Birds <br> A179 Black-headed Gull(Chroicocephalus ridibundus) <br> A193 Common Tern(Sterna hirundo) <br> A061 Tufted Duck (Aythya fuligula) <br> A182 Common Gull (Larus canus) <br> A395 Greenland White-fronted Goose (Anser albifrons flavirostris) <br> A183 Lesser Blackbacked Gull (Larus fuscus) <br> According to this SPA's site generic Conservation Objectives document (Department of Arts, Heritage and the Gaeltacht, 2021), for each of the listed SCIs and QI, the | approx. 6.1 km south from the project site | [A999] There is no possibility for significant effects on Wetlands and waterbirds due to: <br> - no hydrological connection <br> - no potential for change in the hydrological site characteristics <br> - no potential for water pollution impacts due to project works <br> - a terrestrial separation distance of approx. 6.1 km between the Proposed Development and this SPA <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the project works within a project area of approx. 0.82 hectares <br> [A179] There is no possibility for significant effects on Black-headed Gull due to: <br> - no hydrological connection <br> - a terrestrial separation distance of approx. 6.1 km between the proposed development and this SPA <br> - unsuitability of the site to support this species |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  | Conservation Objective is to maintain or restore the favourable conservation condition of the of the bird species for which the SPA has been selected. |  | - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [A193] There is no possibility for significant effects on Common Tern due to: <br> - no hydrological connection <br> - a terrestrial separation distance of approx. 6.1 km between the Proposed Development and this SPA <br> - unsuitability of the site to support this species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [A061] There is no possibility for significant effects on Tufted Duck due to: <br> - no hydrological connection <br> - a terrestrial separation distance of approx. 6.1 km between the Proposed Development and this SAC <br> - unsuitability of the site to support this species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [A182] There is no possibility for significant effects on Common Gull due to: |


| Designated Site | Reasons for designation (information correct as of $12^{\text {th }}$ May 2021) (*denotes a priority habitat) | Distance <br> from <br> Proposed Development (km) | Potential adverse effect: Source-Pathway-Receptor Linkage |
| :---: | :---: | :---: | :---: |
|  |  |  | - no hydrological connection <br> - a terrestrial separation distance of 6.1 km between the Proposed Development and this SPA <br> - unsuitability of the site to support this species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of 0.82 hectares |
|  |  |  | [A395] There is no possibility for significant effects on Greenland White-fronted Goose due to: <br> - no hydrological connection <br> - a terrestrial separation distance of approx. 6.1 km between the Proposed Development and this SPA <br> - unsuitability of the site to support this species <br> - the Proposed Development will be contained within the project site <br> - the size and scale of the works within a project area of approx. 0.82 hectares |
|  |  |  | [A183] There is no possibility for significant effects on Lesser Blackbacked Gull due to: <br> - no hydrological connection <br> - a terrestrial separation distance of approx. 6.1 km between the Proposed Development and this SPA <br> - unsuitability of the site to support this species <br> - the Proposed Development will be contained within the project site |


| Designated <br> Site | Reasons for <br> designation <br> (information <br> correct as of 12 <br> May <br> May 2021) <br> (*denotes a priority <br> habitat) | Distance <br> from <br> Proposed <br> Development <br> (km) | Potential adverse effect: <br> Source-Pathway-Receptor <br> Linkage |
| :--- | :--- | :--- | :--- |
|  |  |  | - the size and scale of the works <br> within a project area of approx. 0.82 <br> hectares |

The storm drainage for the entire development will be designed in accordance with the Recommendations for Site Development Works for Housing Areas and also the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS). The proposed location of the wastewater treatment percolation area will be in the south western part of the Site to ensure maximum distance from the proposed Units.

During the construction of the percolation area, Mayo County Council will ensure the required depth of 900 mm of unsaturated subsoil is reached before reaching the bedrock, and the effluent is treated to the standards set out in the Code of Practice (CoP), EPA Wastewater Treatment and Disposal systems serving single houses. Wastewater emanating from the construction works associated with the overall development will be treated in the percolation area as per Drawing 5211 Proposed Site Services Layout, Appendix A.

There is no SPR direct or indirect linkage from the Proposed Development to any European site. Due to the scale and scope of the Proposed Development, lack of a hydrological link and intervening distances, it is considered that negative impacts would not occur on any European Site.

There will be no SPR linkage from the Proposed Development to any European Site during the construction and operation phases.

Therefore, with due consideration, impacts on the conservation objectives of the designated European Sites outlined above in Table 4.1 were not considered likely.

### 4.2 IN-COMBINATION EFFECTS

## Planning Permission Applications

While effects on European Sites were not expected as a result of the construction and operation of the Proposed Development, the potential for cumulative effects on these designated sites due to other plans and projects acting in-combination with the Development were considered. The Mayo County Council on-line planning application portal was used to search planning applications close to the Proposed Development. A five-year search timeframe was assessed. Retention, refused and withdrawn planning applications were excluded. Table 4.2 shows the planning applications in close proximity to the Proposed Development (circa 1000m).

Table 4.3 Planning applications in close proximity to the Proposed Development.

| Planning <br> Reference | Description of Development | Site Address | Decision <br> Date | Distance from Site |
| :---: | :---: | :---: | :---: | :---: |
| 20314 | Change of use of an existing educational workshop to a childcare facility and will include for minor internal and external alterations and connection to existing on-site effluent treatment system. | Knockacurreen, Carnacon, Ballyglass, Co. Mayo | 10/12/2020 | approx. 108 <br> metres from <br> proposed <br> development |
| 18262 | Retain a conservatory and a garage and for permission to connect a 2 bedroomed house to a new effluent treatment system | Carrownagreggaun, Ballyglass, Claremorris, Co. Mayo | 24/01/2019 | approx. 386 <br> metres from <br> the <br> proposed <br> development |
| 17335 | Demolish an existing hayshed and barn and construct a concrete floor sheep shed and a slatted cattle shed with ancillary site development | Drumnashinnagh, <br> Ballyglass, Co. Mayo | 15/12/2017 | approx. 790 <br> metres from <br> the <br> proposed <br> development |

There were no other planning applications in the area at the time of writing (February 2022).

EPA Maps (Water) was accessed (Dec 2021) to examine the Proposed Development and local area for nitrate and phosphorus loading and Pollutant Impact Potential (PIP). PIP maps for Nitrogen (N) and Phosphorus ( P ) have been generated by the EPA to show the highest risk areas in the landscape for losses of N and P to waters. The PIP model estimates the annual nutrient losses from agricultural land at specific locations, using spatial data from farm management, soils and hydrogeology. This model estimates loads at an annual temporal resolution.

The Proposed Development is located in a landscape largely given to individual residential dwellings with accompanying improved agricultural grasslands.

The grasslands associated with the Proposed Development have been intensely modified. The Site is denoted as having the following Phosphorus rankings; the centre strip running north-south has a lower PIP ranking range of 4 and also 7 (7 is the lowest impact ranking) while the outer Development Site margins due west and east have a higher PIP ranking of 3 . The ranking likely reflects fertiliser use on the land in the past with possible livestock. Adjacent lands due east are ranked 7 and 3 respectively, with a general consistency of a 3-4 ranking moving southward, as land has been modified over the years. Lands due west of the Development Site have also been grossly modified and rank higher at 2 and 1. Further west, lands rank 6 and 7 near a local road.

Pollution Impact Potential for Nitrate (PIP N) of the Proposed Development has a ranking of 4 in the centre strip (as above) with marginal lands ranking the lowest impact at 7. Adjacent lands moving southward are also generally low raking, at 6-7.

Overall, the Critical Source Areas Maps for the Development Site and adjacent lands do not indicate a Site where either phosphorus or nitrates are a significant issue and there is no focused delivery flow path from the site. There is a significant mature treeline along the southern and western boundary of the Development Site.

As noted earlier in Section 3.2, the Proposed Development is within the WFD sub basin Annies_010. Currently, there are no significant pressures from the Proposed Development on this River sub basin.

The AA Screening assessment has shown there will be no likely significant effects to any European Site during the construction or operations phases of the Proposed Development. Therefore, there will be no in-combination effects with local planning applications.

## 5. SCREENING ASSESSMENT - CONCLUSION

It can be objectively concluded that there are not likely to be significant effects on any European Site as a result of the Proposed Development, namely the development at Carnacon, Co. Mayo. Therefore, an Appropriate Assessment is not required.

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APPENDIX A
DRAWINGS

| SITE BOUNDARY OUTLINED IN RED. <br> AREA APPROX 7740M2 (0.774)HA |  |
| :--- | :--- |
|  |  |
| ITM COORDINATES : |  |
| 519461 E, 776033 N |  |
| OS MAP NR. $=2271$ |  |

$50 \mathrm{~km} / \mathrm{h}$
$80 \mathrm{~km} / \mathrm{h}$
SITE NOTICE LOCATION

## LEGEND

| SITE BOUNDARY OUTLINED IN RED. |  |
| :--- | :--- |
| AREA APPROX 7740M2 (0.774)HA |  |
| ITM COORDINATES : | Density = 11.6 units per Hectare |
| 519461 E, 776033 N | Percentage Green Area = 12\% |
| OS MAP NR. = 2271 | Total No Units 9 |
|  |  |
|  |  |

## PART 8 APPLICATION

SITE LOCATION PLAN

50m

Architects Department





Architects Department Mayo Countr Council

## PART 8 APPLICATION

| LEGEND |  |
| :---: | :---: |
|  |  |
| ITM COORDINATES 519461 E, 776033 N <br> OS MAP NR. $=227$ | Density $=11.6$ units per Hectare Percentage Green Area $=12 \%$ Total No Units 9 |
| Locationo f ste notice | 0 |


$\frac{\text { UNIT } 01-05 \text { STREET ELEVATION }}{\text { SCALE } 1: 100}$


| SITE BOUNDARY OUTLINED IN RED. |  |
| :--- | :--- |
| AREA APPROX 7740M2 ( (0.774)HA |  |
| ITM COORDINATES : | Density $=11.6$ units per Hectare |
| 519461 E, 776033 N | Percentage Green Area $=12 \%$ |
| OS MAP NR. $=2271$ | Total No Units 9 |
| LOCATION OF SITE NOTICE |  | para dimensions.

Notify architect of tany dimensional discrepancies Notify architect of any dimensional discrepancies. Any modifications or
devadion to be brought to the attention of the architect tor fevewew and
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Aldimensions, unless othemise stated, are given in milimertes an
must te e onfimed and Must be confirmed and checked by the Contractor on site.



PROPOSED 3D SITE OVERVIEW SCALE:


COPYRIGGT - This drawing is protected by copyright and is the property Mayo County Council. It may not be used, reproduced or disisclosed to to anyon Do not scale this drawing. Written dimensions only to be used.

## LEGEND

| SITE BOUNDARY OUTLINED IN RED. <br> AREA APPROX 7740M2 (0.774)HA |  |
| :--- | :--- |
|  |  |
| ITM COORDINATES : | Density = 11.6 units per Hectare |
| 519461 E, 776033 N | Percentage Green Area = 12\% |
| OS MAP NR. = 2271 | Total No Units 9 |
| LOCATION OF SITE NOTICE |  |

Scales as stated are vald on the original draving only, Writen
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80KPH REGIONAL ROAD SPEED LIMIT SIGHT LINES AT 3m SET BACK 120m CLEAR LINE OF SIGHT

## ACCESS ROAD SIGHT LINES

z



PART 8 APPLICATION



> LEGEND

nematme PART 8 APPLICATION





3B-D GROUND FLOOR PLAN


3B-D FIRST FLOOR PLAN
 3B-D SIDE ELEVATION (GABLE)


3B-D SIDE ELEVATION (N)


Referto ite phan fob detallsof
ORENTATION ANO LAOOUTOMSTI




EXTERNAL WALL FINSH:: SAND CEMENT Render Panted to selecteo colour
PITCHED Roof Finsh: SLate finsh blued black in colour
windows I Doors: ALU CLAD triple giaze in timeer frames Panted to selected colour
 FASCIA \& SOFFIT TO MatCH RANWATER Prooucts.
PRECAST CONCRETE CILLS TO WNDOWS

FLUSH Door theneshol to front door, with drannage channel to entrance

PART 8 APPLICATION


