ASTER ENVIRONMENTAL CONSULTANTS LTD

Natura Impact Statement

Limehill Esker Ltd Dunlo, Ballinasloe

Co. Galway

Proposed Residential Housing Ballinasloe

August, 2022

Reference Number AAS 26082022

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Contents

1.0 Introduction

Aster Environmental Consultants Ltd have been appointed by Limehill Esker Limited relation to an application for planning permission for a Strategic Housing Development at Dunlo Ballinasloe County Galway. Aster has been commissioned to carry out a Habitats Directive Assessment by Limehill Esker Ltd. The assessment will be conducted in accordance with Schedule 6(3) of the Habitats Directive 92/43/EEC (Assessment of Plans and projects significantly affecting Natura 2000 Sites).

1 .1 PURPOSE OF ASSESSMENT

This report has been undertaken to determine the potential for significant impacts of a proposed SHD at Dunlo Ballinasloe on nearby sites with European conservation designations (i.e. Natura 2000 Sites). This Natura Impact Statement has been undertaken by Marie Louise Heffernan CEnv, MCIEEM, MSc who has 28 years' experience in Ecology with 20 years in Ecological consultancy She has worked on Appropriate Assessments since 2009. Marie Louise holds an MSc in Environmental Science from TCD (1995), and is a chartered environmentalist with the Society of the Environment (UK) as well as a full member of the Chartered Institute of Ecology and Environmental Management.

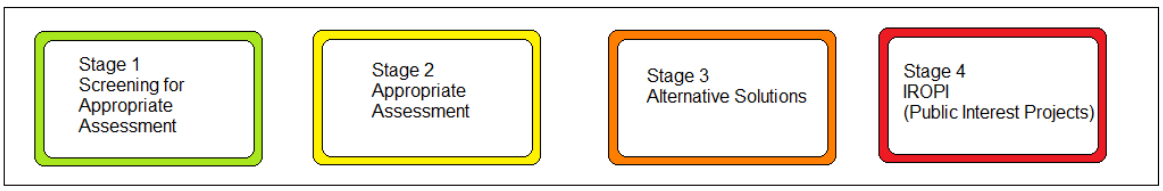
Note An Ecological Impact Assessment is also prepared to ensure that the elements of the proposed project that may potentially affect protected habitats or species outside the designated Natura 2000 are adequately assessed. This is a separate report, but compliments this Appropriate Assessment Screening.

1.2 LEGISLATIVE CONTEXT

Natura 2000 sites are those designated under the terms of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the 'Habitats Directive' and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (codified version of Directive 79/409/EEC as amended) commonly known as the 'Birds Directive'. There are two types of Natura 2000 site designation, the Special Area of Conservation (SAC) and the Special Protection Area (SPA). SACs are designated for the conservation of flora, fauna and habitats of European importance under the Habitats Directive and SPAs for the conservation of bird species and habitats of European importance under the Birds Directive. These sites form part of 'Natura 2000' a network of protected areas throughout the European Union. Annex I of the Habitats Directive lists certain habitats that must be given protection. Certain habitats are deemed 'priority' and have greater protection. Irish habitats listed on Annex I include raised bogs, active blanket bogs, lagoons, turloughs, heaths, lakes and rivers. Annex II of the same directive lists species whose habitats must be protected and includes Lesser Horseshoe Bat, Otter, Salmon and White-clawed Crayfish. Annex I of the Birds Directive lists endangered and migratory species for which SPAs are required to be designated.

1.3 SCREENING FOR APPROPRIATE ASSESSMENT

An Appropriate Assessment may be required under the Habitats Directive 92/43/EEC, Article 6(3) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites. The Department of the Environment Heritage and Local Government guidelines (DOELHG, 2009) indicates the European Commission's methodological guidance (EC, 2002) promoting a four-stage process to complete the AA, and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required. The four stages are summarised diagrammatically below.



1.4 SCOPE

This report has been prepared in accordance with the European Commission guidance document Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and the Department of the Environment's Guidance on the Appropriate Assessment of Plans and Projects in Ireland (Amended 2010).

Where significant or indeterminate effects on the conservation objectives and the general integrity of Natura 2000 sites are determined following the preliminary screening, further assessment under Article 6(3) is deemed necessary and the completion of a Natura Impact Statement (NIS) is recommended. Where such impacts are not predicted then the project can screen out for Appropriate Assessment and thus no further report is required.

Note: Originally it was intended to prepare a screening for Appropriate Assessment for the Dunlo SHD project however the hydrological report highlighted a connection between the Natura 2000 network and the project site and so a Natura Impact Statement was required.

1.5 DESK STUDY

In order to complete the assessment certain information on the existing environment is required. A desk study was carried out to collate available information on the subject site's natural environment. This comprised a review of the following publications, data and datasets:

- Geohive Aerial photography and 1:50000 mapping
- National Parks and Wildlife Service (NPWS)
- National Biodiversity Data Centre (NBDC) (on-line map-viewer)
- BirdWatch Ireland (including IWeBS dataset)
- Geological Survey Ireland (GSI) area maps
- Environmental Protection Agency (EPA) water quality data
- Other information sources and reports footnoted in the course of the report

1.6 CONSULTATION

Given that this is a Strategic Housing Development consultation and opinion were sought from An Bord Pleanala. Case Reference: ABP-312236-21

An Bord Pleanála states that "Furthermore, Pursuant to article 285(5)(b) of the Planning and Development (Strategic Housing Development) Regulations 2017, the prospective applicant is hereby notified that, in addition to the requirements as specified in articles 297 and 298 of the Planning and Development (Strategic Housing Development) Regulations 2017, the following specific information should be submitted with any application for permission:" (Note only relevant section is presented below)

An AA screening report which considers potential impacts on the Qualifying Interests of any Natura 2000 site.

In addition, Aster sought Consultation DAU Minister for Housing, Local Government and Heritage. A letter was sent on the 1st June to DAU seeking the advice and input of NPWS in respect of the development. Normally a six week time frame is expected. In early August we sought an update and further information was requested on Aug 17th. However given time bound constraints for strategic projects no further correspondence was forthcoming by submission date.

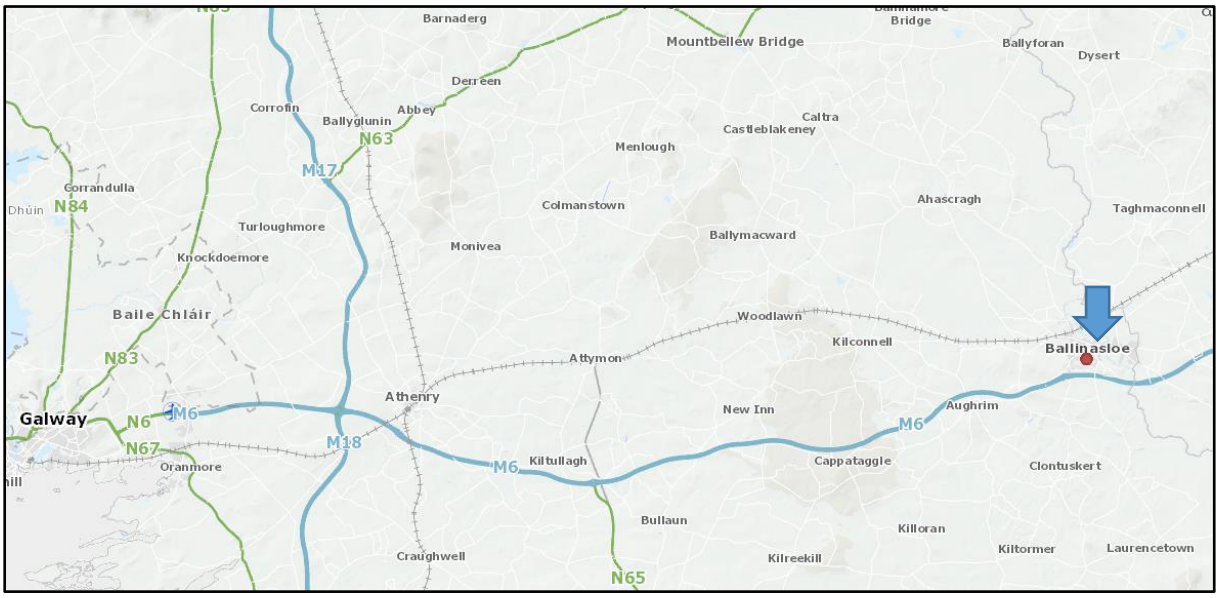
1.7 FIELD SURVEYS

The Ecological surveys were carried out on the following dates 19th November 2021, 28th November2021, 14th January 2022, Wed 30th March, 29th April, 18th June, 29th July 2022 with the purpose of surveying habitats (Fossit, 2000) and species on site in order to inform this assessment and the Ecological Impact Assessment.

2.0 Description of Development

2.1 LOCATION

The proposed development is located in Ballinasloe Co. Galway and close to the eastern boundary of the County.



Map 1: Location of the proposed development (Reproduced under OSI Licence number EN 0070910)

2.2 DESCRIPTION

Limehill Esker Ltd intend to apply to An Bord Pleanála for Permission for a Strategic Housing Development (' Dunlo SHD') at this site (c.6.7ha) in the townlands of Dunlo and Pollboy, Ballinasloe Co Galway.

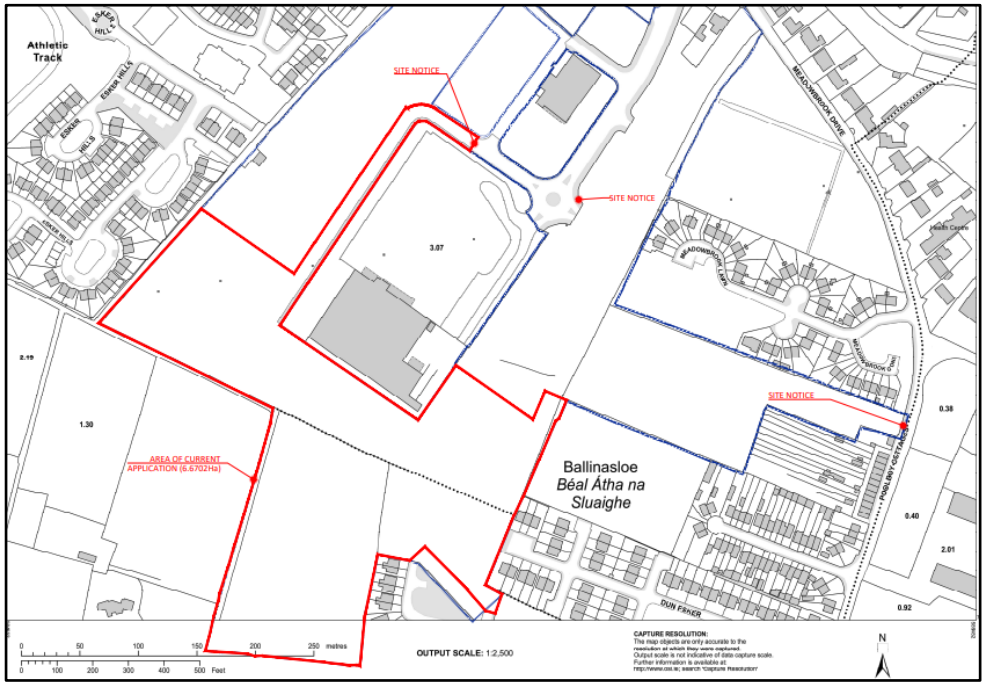
The site is generally bounded by: the Dun Esker and Beechlawn Heights Estates to the east , the Esker Fields Estate to the west, greenfield residential zoned lands to the south, and a commercial park and a residential site under construction immediately to the north.

The proposed development consists of residential development (c. 15,992 m 2 gross floor area), consisting of 165 No residential units and all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including:

The development will consist of :

- Block A1 and A2, each consisting of 6 No Two-Bed Ground Floor apartments, 1 No One-Bed ground Floor apartment, 6 No Three-Bed First Floor Duplex Units, and 1 No Three-Bed Second Floor apartment.

- Blocks B1 to B13 inclusive, each consisting of 2 No Two-Bed Ground Floor Duplex Units, 2 No Three-Bed Ground Floor Duplex Units, 1 No Two-Bed Second Floor apartment, and 1 No One-Bed Second Floor apartment.
- House Type C : 32 No Two-Bed units in semi-detached pairs
- House Type E : 27 No Three-Bed units in triplet arrangements
- provision of 281 No. on-site car parking spaces incorporating 163 No. spaces for residents of the apartment/duplexes, and 118 No in-curtilage car parking spaces for the housing units
- Provision of all water, surface water, foul drainage, utility ducting and public lighting and all associated siteworks and ancillary services.
- All ancillary site development works including access roadways, footpaths, cycle ways, pedestrian links, Bicycle Sheds, waste storage areas, communal and open space, site landscaping, and boundary treatments,



Map 2. Site Boundary map (Reproduced under OSI Licence number EN 0070910)

3.0 Zone of influence and Natura 2000 Sites

The proposed development site is located in the townland of Dunlo, Ballinasloe, Co. Galway. It is 840m from the River Suck to the east of the town.

Map 3: Location of the proposed development site (red outline) and pink hatching River Suck SAC

source NPWS.ie (Reproduced under OSI Licence number EN 0070910)

3.1 Relationship to Designated Sites

Natura 2000 sites within 15 kilometres of the proposed dwelling were considered initially as per the NPWS guidance document. This Initial screening revealed that the following sites lie within 15km radius of the development:

Natura 2000 Site	Code	Distance from Proposed Housing
River Suck Callows SPA	004097	700m to the SAC boundary or 840m to the River Suck
Glenloughan Esker SAC	002213	3.8km
Castlesampson Esker SAC	001625	11.0km
Killeglan Grassland SAC	002214	11.4km
Ballynamona Bog and Corkip Lough SAC	002239	14.9km

Table 1: Natura 2000 sites within 15km

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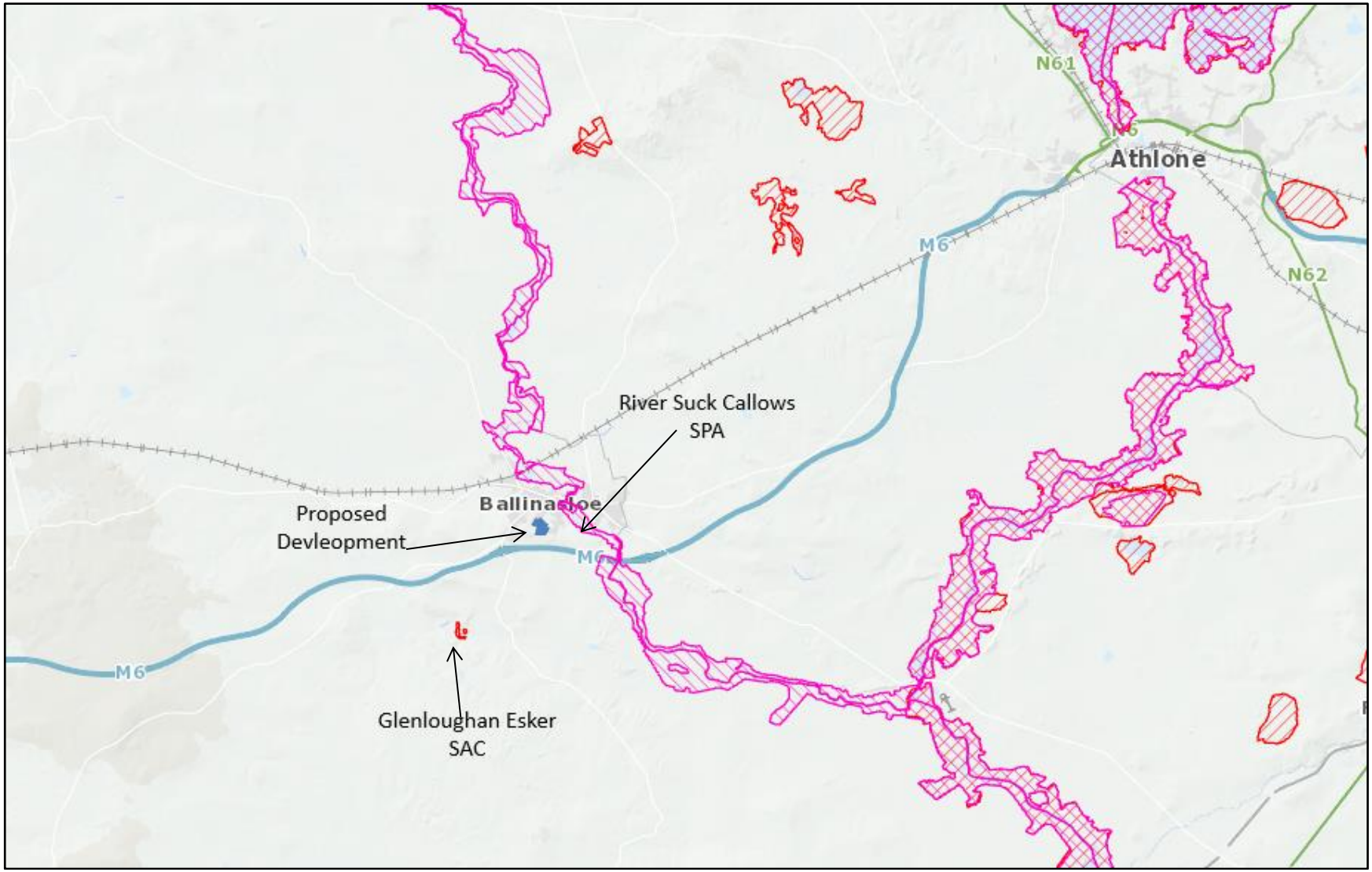

Map 4: Location of the site relative to the Natura 2000 designations. (Reproduced under OSI Licence number EN 0070910)

Zone of Influence

According to the DEHLG 2009 guidelines "Although a distance of 15km is currently recommended in the case of plans…[however] for projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis"

Thus the Zone of Influence requires to be defined for each project. A "zone of influence" is the difference between an activity's spatial footprint and the extent of the activity's effects on surrounding habitat and wildlife populations. Light, noise and hydrological connections are the major influencers in this regard.

The factors in defining the zone of influence above were as follows:

- The location of designated N2000 sites.
- Qualifying interests of those sites
- The distance to which pollution generated could impact on downstream habitats.
- The extent of noise and light impacts on ecological receptors.

Given the type and scale of the project the site being considered further is the River Suck Callows SPA.

The Annex 1 priority habitat Orchid Rich grassland was noted as a transitional habitat on the proposed development site. This habitat is a qualifying interest for Glenloughan Esker SAC and Castlesampson Esker SAC. However, given that this habitat is transitional resulting from land clearance it was decided to screen out these sites. This decision was made because the development of this site at Ballinasloe has no potential to significantly impact on the conservation of these sites which are 3.8 km and further away. These sites were not considered to be within the zone of influence and were not considered further in this assessment.

The Natura 2000 site River Suck Callows SPA at 700m from the development is considered further in this assessment as it is within the zone of influence. It has the potential to be impacted on either hydrologically or via other pathways and will be brought forward for further consideration.

3.2 Description of the Natura 2000 Sites

The Habitats Directive states "Any plan or project not directly connected 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 implication for the site in view of the sites *conservation objectives* …the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site…"

The conservation objectives form the basis of the Appropriate Assessment as it is against these objectives that the assessment is made.

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

• Its natural range, and area it covers within that range, are stable or increasing, and

• 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.

The 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, and

• The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and

• There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long - term basis.

River Suck Callows SPA

Code	Qualifying Interest	Conservation Objectives
A038	Whooper Swan *Cygnus cygnus*	To maintain or restore the favourable conservation condition
A050	Wigeon *Anas penelope*	To maintain or restore the favourable conservation condition
A140	Golden Plover *Pluvialis apricaria*	To maintain or restore the favourable conservation condition
A142	Lapwing *Vanellus vanellus*	To maintain or restore the favourable conservation condition
A395	Greenland White-fronted Goose *Anser Albifrons flavirostris*	To maintain or restore the favourable conservation condition
A999	Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the wetland habitat at River Suck Callows SPA as a resource for the regularly-occurring migratory waterbirds that utilise it

Table 2: Conservation Objectives for River Suck Callows SPA.

The conservation objectives above form the basis of this assessment.

4.0 Receiving Environment

Receiving environment can be broken down into several different elements

1. Habitats
2. Hydrology
3. Invasive species

4.1 Habitats

The habitats found on site are classified based on six walkover surveys between November 2021 and July 2022. The habitats recorded are classified in accordance with 'A Guide to Habitats in Ireland' (Fossitt, 2000), which classifies habitats based on the vegetation present and management history. The habitat map below shows the extent of the habitats on site.

Map 3: Habitat Map (classification after Fossitt 2000)

ED3/GS1

The main habitat on site is recolonising bare ground (ED3) in mosaic with dry calcareous and neutral grassland (GSI). This mosaic has arisen due to site clearance in 2009. In some areas the site is 50% bare ground or more whereas in other places recolonisation to 100% has occurred. The soil on site was cleared and piled into heaps and these are dominated by dock (*Rumex* spp) false oat grass (*Arrhenatherum elatius*), nettles (*Urtica dioica*) with red clover (*Trifolium pratense)*, meadowsweet (*Filipendula ulmaria*) and eyebright (*Euphrasia* spp). Scrub is invading the site dominated by trees up to around 2m high of buddleia, grey willow (*Salix cinerea*). and birch (*Betula pubescens*) . Some areas are grassy in nature corresponding more closely to GS1 with grasses; cock's-foot (*Dactylis glomerata*) and perennial rye-grass (*Lolium perenne*) sweet vernal grass (*Anthoxanthum odoratum)* present. Common broadleaved herbs include clovers (*Trifolium* spp.), yarrow (*Achillea millefolium*), Common Knapweed (*Centaurea nigra*), Selfheal (*Prunella vulgaris*), common bird's-foot trefoil (*Lotus corniculatus*), yellow-wort (*Blackstonia perfoliata*), wild carrot (*Daucus carota*), common centaury (*Centaurium erythraea*) and Ox eye daisy (*Leucanthemum vulgare)*

This site is also important for Orchids Bee orchid.: (*Ophrys apifera),* Heath spotted orchid (*Dactylorhiza maculate*) and Pyramidal Orchid (*Anacamptis pyramidalis*) found throughout the site in June and July surveys.

The habitat on site is transitional in nature and has links to the Annex 1 habitat Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometea) (*important orchid sites) (6210)

The vegetation type is considered a priority type if it is an important orchid site, which hosts: a rich suite of orchid species, an important population of at least one orchid species considered rare or (highly) endangered on the national territory, or one or several orchid species considered to be rare or exceptional on the national territory. Scrub and woody vegetation, which develops with the relaxation of management, are also considered part of the

6210 Habitat. The EU Habitat Interpretation Manual recommends a rather wide interpretation of 6210 habitat (EC 2019).

Indicators of good quality for 6210 habitat • High species richness • Absence of nutrient-demanding and ruderal species • Long-term habitat stability • Generally closed sward with low vegetation structure • Traditional grazing/mowing regime • Low cover of encroaching tall grasses, shrubs and trees. Therefore the habitat is classified as of poor quality (EC, 2019). Note this is addressed in the Ecological Impact Assessment.

GA1Improved Grassland

This field is improved grassland that has recently been disturbed and is dominated by ruderals Restharrow (*Ononis repens*), dock (*Rumex*), redshank (*Persicaria maculosa*), silverweed (*Potentilla anserina*), red clover (*Trifolium pratense*) , yarrow (*Achillea millefolium*), wound wort (*Stachys sylvatica*), rye grass (*Lolium perenne*), pineapple weed (*Matricaria discoidea*) with small pockets of rosebay willowherb (*Chamaenerion angustifolium*) and yellow flag (*Iris pseudacorus*).

WS1 Scrub

This consists of birch (*Betula pubescens*), willow (*Salix* spp) some ash trees (*Fraxinus excelsior*), and buddleia with bramble (*Rubus*), ragwort (*Senecio jacobaea*), vetch (*Vicia cracca*) and bind weed (*Calystegia spp*.) There is a bare path transecting the section immediately behind Tesco.

WL2 The treeline

Species recorded within the hedgerow treeline habitat include ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), dog-rose (*Rosa canina*) and bramble (*Rubus fruiticosus*). The trees are generally covered in ivy (*Hedera helix*).

4.2 Invasive species

Invasive species are often associated with disturbed sites such as this one at Dunlo. Therefore, it was considered that infestation was likely. The site was searched for invasive species on each of the seven site visits. No invasive species listed in the Birds and Habitats regulations 2011 were found .

4.3 Hydrology

Hydrology plays a critical role in appropriate assessment and is often a key element of assessments. Indirect impacts of a project are often the result of water pollution (sediments and hydrocarbons) leaving the site and travelling downstream to a protected area.

Map 5: This map shows the probability of flooding (low med and high probability) (source Floodmaps.ie)

The hydrological maps show no possibility of the development site flooding nor any direct surface connectivity of the subject site with the designated area. However the hydrological report by Hydro S shows that there are other potential pathways such as groundwater and impacts on the Suck River are not discounted.

The Suck River and its flood plains are to the East of the subject site and the minimum distance to the centreline of River Suck is approximately 840 m to the North-East. The short drain to the South of Shearwater hotel is approximately 500 m North-East of the subject site. The status of River Suck is poor (Q3) at the bridge within the town although at the railway bridge and motorway bridge it is of moderate status (Q4). The subject site is between the town and the motorway. River Suck East of the subject site is within the area of being of risk not meeting the WFD objectives in 2027. Therefore, any effects from the proposed development on River Suck should be Not significant or imperceptible (Hydro S, 2022).

The top soil is well drained soil and the subsoil is till derived from limestone whereas the bedrock is pure bedded limestone. This indicates groundwater as a possible receptor…The West part of the subject site is in Moderate and High groundwater vulnerability whereas the East part is in Extreme and high vulnerability areas. The subject site is within the aquifer type described as Rkc (Regionally Important Aquifer - Karstified (conduit)). The subject site is within Lower Suck groundwater basin and this basin is within the category of Review for meeting WFD objectives in 2027. The category Review is described as either because additional information is needed to determine their status before resources and more targeted measures are initiated or the measures have been undertaken, e.g. a wastewater treatment plant upgrade, but the outcome hasn't yet been measured/monitored. Therefore, the effects from the proposed development on groundwater should be Not significant or imperceptible (Hydro S, 2022)..

The source – pathway – receptor model is used in this assessment …The receptors are Suck river, its flood plain, the drain to the South of Shearwater hotel and groundwater. There aren't direct pathways to the Suck river and its flood plains or to the drain South of Shearwater hotel (Hydro S, 2022).

4.4 Geology

According to the GSI maps the bedrock in this area is Carboniferous Visean Limestones undifferentiated. The site was disturbed (pre designation) in 2009 and the top soil piled in laced and the subsoil/gravels beneath the soil exposed. It would appear that the site is underlain by natural gravels limestone in nature.

5.0 Ecological Assessment

The project description combined with an appreciation of related to the ecology of the habitats and species listed under the conservation objectives will result in an impact assessment.

In this case we refer to the following questions in respect of impact

1. Do the birds of Suck Callows SPA utilise the development site on an ex situ basis given the distance of 700m between the designated site and the development (Crekav v. ABP; Hyde, 2021).
2. Are there any routes for pollution of this River Suck callows Wetland and thus impact on the birds for which this SPA is designated?

These are answered below in the following manner

1. Habitat suitability
2. Evidence of use of this development site by SCI species
3. Hydrological Connectivity

5.1 assessment of Habitat Suitability in respect of SCI species

SCI Species Suck Callows SPA	Population estimate NPWS (article 12 reporting	Conservation assessment/status	Period in Ireland	Food Requirements	Habitat	Assessment in relation to proposed site
Whooper Swan (Cygnus cygnus) [A038]	10,520 Increasing 16% short term and 32% long term	Annex I species Green List	Winter visitor to wetlands throughout Ireland from October to April.	This species often feed on aquatic vegetation, but they are commonly found grazing on agricultural grasslands and fields where there is spilled grain, as well as potatoes from cultivated land.	Most are found on lowland open farmland around inland wetlands, regularly seen while feeding on grasslands and stubble.	The habitat on site and food resources available are not suitable for Whooper Swan. This site is not suitable to support these species
Wigeon (Anas penelope) [A050]	56,000 Decreasing 11% short term and 37% long term	Amber list	Common winter visitor to wetlands throughout Ireland from September and April.	This species favour wetlands and also feed regularly on grasslands and cereal crops.	Widespread - they occur on coastal marshes, freshwater and brackish lagoons, estuaries, bays. Many on inland wetlands, lakes, rivers and turloughs.	The habitat and food resources available on site are not suitable for Wigeon. This proposed development site is not suitable for these species
Golden Plover (Pluvialis apricaria) [A140]	99,870 Significant decrease (68% short term, unknown long term)	Annex I Red list	Breed in Ireland in low numbers but this designation is just for wintering population Most occur in Ireland between October & February	Golden plover feed on a variety of soil and surface-living invertebrates, principally beetles and earthworms, but also on plant material such as berries, seeds and grasses.	Throughout the winter, Golden Plovers are regularly found in large, densely-packed flocks, and in a variety of habitats, both coastal and inland. Their distribution is widespread in Ireland.	The habitat and food resources available on site are not suitable for Golden Plover. This site is not suitable for these species

Lapwing (Vanellus vanellus) [A142]	88,580 Significant decrease 60% short term, 47% long term	Red list	winter visitors (from western & central Europe)	Feed on a variety of soil and surface-living invertebrates, particularly small arthropods and earthworms. They use traditional feeding areas, are opportunistic, and will readily exploit temporary food sources, such as ploughed fields and on the edge of floodwaters.	Large flocks regularly recorded in a variety of habitats, including most of the major wetlands, pasture and rough land adjacent to bogs.	The habitat and food resources available on site are not suitable for Lapwing. This proposed development site is not suitable for these species
Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	12,173 decrease 10% short term Increase 34% long term	Annex I Green list	Scarce winter visitor to wetlands. Found mainly in Wexford and western Ireland from October to April.	Grazes on a range of plant material taking roots, tubers, shoots and leaves. Grasses, clover, spilt grain, winter wheat and potatoes are popular foods. Forages over peat bogs, dune grassland, and occasionally salt marsh, with the use of agricultural grassland increasing in recent years.	Traditionally occurred in peatland areas, though now mostly seen feeding on intensively managed grasslands	The habitat and food resources available on site are not suitable for Greenland White Fronted Geese. This site is not suitable for these species In addition, GWF geese are very susceptible to disturbance and avoid areas with disturbance potential . Therefore they are not known from this busy area.

Table 3 Assessment of Proposed Development site in respect of the ecological requirements of SCI Species

5.2 Assessment of site usage evidence

Following the comments of judge MacDonald in the Crekav v. ABP case, on the important of assessing Ex situ habitats for birds in respect of an SPA assessment (Hyde, 2021), bird Surveys of the SCI species were carried out. These were carried out during winter period to establish lack of use of this site by these species. The survey dates were 28th November2021, 14th January 2022, Wed 30th March

The survey was carried out by Marie Louise Heffernan a surveyor with 25 years of bird counting experience

1. Wintering Bird Survey

The distribution of most species of waterbirds (principally swans, geese, ducks and waders) during the non-breeding period is restricted largely to wetland habitats. Many wetland sites represent relatively discrete areas and, with most species readily visible within these areas. The simple 'look-see' method, whereby all birds present within a pre-defined area are counted, is thus employed for I-WeBS (Irish Wetland Bird Survey) core counts.

These winter counts were carried out with development site boundaries for the sole purpose of identifying if Special Conservation Interest birds associated with the SPA utilized the site in winter In addition the site was searched for droppings. Swan and geese droppings in particular are very easily identified given the size, shape and colour. This would indicate use outside survey dates/times.

Results

No species of special conservation interest were observed on site nor their droppings or any evidence of use. This was as expected.

Note Birdwatch Ireland were approached for IWEBS count data for this section of the SPA located some 700m from the development site but this section through Ballinasloe is not counted. Presumably only the most significant subsites are counted. The nearest site counted is some 4km south.

5.3 Hydrological Connectivity

The Hydrological assessment was prepared by (Hydro S, 2022). Their findings were that the pathways for this impact are surface, subsurface and through conduits in bedrock. The surface pathways are drains, natural flow paths and overland sheet flow. The subsurface pathways are vertical and horizontal. The vertical pathways are determined from top soil and subsoil permeability and groundwater vulnerability (Hydro S, 2022).

6.0 Impact Assessment

Having outlined the proposed project and the details of the Natura 2000 sites, an assessment for possible impacts can be carried out. following the document; "Assessment of plans and projects significantly affecting Natura 2000 sites- Methodology guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2002".

The impact of the project on the conservation objectives of the selected natura 2000 site must be examined in terms of both direct and indirect impact.

Direct impacts are loss of habitats or loss of nesting/den sites. For example if the main habitat on site was heath and the footprint building resulted in loss of heath habitat that would fall into this category.

Indirect impacts Examples of Indirect impacts are water pollution, light pollution or noise pollution

6.1 Direct and Indirect Impacts SCI species

Birds Directive Special Conservation Interest Species Direct and Indirect Impacts

A038 Whooper Swan *Cygnus cygnus*

A050 Wigeon *Anas penelope*

A140 Golden Plover *Pluvialis apricaria*

A142 Lapwing *Vanellus vanellus*

A395 Greenland White-fronted Goose *Anser Albifrons flavirostris*

The River Suck Callows SPA is circa 700 metres to the north east of the application site and its special conservation interests are whooper swan, wigeon, golden plover, lapwing and Greenland white fronted goose No direct impacts on birds of conservation concern, or their conservation objectives as listed above, are predicted in respect of this development. These birds do not use this site as it is unsuitable for their habitat and foraging requirements (Table 3). These birds are amber, red listed and Annex I birds and their conservation status will not change as a result of this development.

Foraging and roosting

These SCI birds forage in aquatic ecosystems or on wet or managed grasslands. The habitat on the development site is not suitable for these species in terms of foraging or roosting. The habitat on site is unsuitable for the birds of the SPA and there is no evidence, from site surveys, that the birds use this site on an ex situ basis.

Disturbance

The distance of 700 m between the proposed development site and the designated area is sufficient to make a finding of no significant impact in terms of disturbance in respect of light or noise for these birds.

Indirect impacts pollution

The finding of hydrological pathways to the River Suck by Hydro S (2022) means that there is the potential for indirect impacts on these species in respect of the water quality of their habitat. This is dealt with in section 6.2 below.

6.2 Direct and Indirect Impacts Wetlands

Birds Directive Wetlands Direct and Indirect Impacts

A999 Wetland and Waterbirds

No impacts on the species associated with the SPA has been identified . However relevant pollution potential has been identified by Hydro S on the relevant receptors below:

- *River Suck*
- *River Suck flood plain*
- *The underlying aquifer that is classified as Regionally Important Aquifer - Karstified (conduit) (Rkc)*

The effects are described based on its significance. The graded system as given in the new guidelines on EIA (EPA, 2022) is as given below on Table 4

Effect	Description
Imperceptible	An effect capable of measurement but without significant consequences
Not Significant	An effect which causes which causes noticeable changes in the character of the environment without affecting its sensitivities
Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging trends
Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
Very Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment significantly alters most of a sensitive aspect of the environment
Profound	An effect which obliterates sensitive characteristics.

Table 4 Categories for assessment of effects

Significance of the effects on the environment This is determined by combining the significance and sensitivity of the receiving environment (receptor) with the description of the effect. The description of the effect is based on the following aspects although the specific effect may not have all of them as items of interest.

- Character or quality
- Magnitude
- Duration
- Probability
- Consequences

The sources were identified for the construction stage (6.2.1) and operational stage (6.2.2) below. Refer to the hydrological report Hydro (2022). The text below is taken from the hydrological report and follows the identification of impacts in respect of water quality and the mitigation of these impacts.

6.2.1 Construction Stage (HydroS, 2022)

Clearing vegetation on site

Clearing of vegetation on site will result in change of biodiversity, degradation of the topsoil due to erosion and presence of suspended solids in surface runoff. Erosion could happen only during the period of the land is exposed after the vegetation is removed and construction work commences. A worst-case scenario is the site is left for a long duration after the vegetation is removed. The receptors are the surface water channels, River Suck and the drain South of Shearwater hotel. The quality is negative and magnitude is low and the probability is low and is temporary. There aren't any direct routes to both these water bodies. The effects are moderate.

Construction of access roads

This will also cause suspended solids in surface runoff. The quality is negative and magnitude is moderate and the probability is moderate and is temporary. The receptors are the surface water channels, River Suck and the drain South of Shearwater hotel. There aren't any direct routes to both these water bodies. However, the effects are significant.

Storage and erection of temporary structures to facilitate construction phase

The quality is negative and magnitude is moderate and the probability is moderate and is temporary. The receptors are the surface water channels, River Suck, drain South of Shearwater hotel and could be groundwater depending on the material on storage. There aren't any direct routes to the surface water bodies. The effects are significant.

Sewerage from construction personnel

The proposal is to connect the sewerage of the proposed development to the public system and this Section deals with the sewerage during construction phase and provided by temporary methods. The receptors are surface water channels, River Suck, drain South of Shearwater hotel and could be groundwater. The quality is negative and magnitude is moderate. Probability is low and is temporary. The effects are significant.

Excavations based on construction designs

Large excavations are not envisaged during the construction of the proposed development based on the site layout. There aren't structures that need deep excavations as shown on the site layout. The main receptors are surface water channels, River Suck, drain South of Shearwater hotel. Groundwater could be a receptor with low probability. The quality is negative, magnitude moderate, probability is moderate and is temporary with significant effects.

Drainage during construction

The drainage considered in the present Section is those provided during construction stage in order to have the construction areas dry. The main receptors are surface water channels, River Suck, drain South of Shearwater hotel. The quality of the drainage water is considered under separate headings based on the source. The main effect is erosion based on velocities and quantity. The quality is negative, magnitude is moderate, probability is also moderate and is temporary. The effects are significant.

Hydrocarbons from machinery and vehicles

These constitute storage, leaks and accidental spills of fuels and lubricants. They are all petroleum-based products. The main receptors are surface water channels, River Suck, drain South of Shearwater hotel and groundwater. The quality is negative, magnitude low, probability is low and is temporary with significant effects.

Cement based products suspended in water

Cement will be used in concreting throughout the site and any wash aways and other spillage from use and transport. The main receptors are surface water channel, River Suck, drain South of Shearwater hotel and groundwater. The quality is negative, magnitude low probability is moderate and temporary with significant effects for surface water and the quality is negative, magnitude low probability is low and temporary with significant effects for groundwater.

Landscaping

This will also cause suspended solids in surface runoff. The receptors are the surface water channels, River Suck and the drain South of Shearwater hotel. The quality is negative and magnitude is low and the probability is low and temporary. The effects are moderate.

Flooding of site partly or fully

The CFRAM final maps are available on River Suck to the East of the subject site and is copied as Map 4 and the relevant flood levels are as shown on Table 2. Design flood levels from CFRAM study (source: www.floodinfo.ie) The lowest site levels are 40.3 m AOD and has a freeboard exceeding 2 m. Therefore, the risk of flooding of the site from River suck has chance less than 0.1%. The effects of flooding will affect the items noted above. The quality is negative, magnitude is moderate, probability is very low and temporary with significant effects for surface water. The quality is negative, magnitude low, probability is very low and temporary with significant effects for groundwater

6.2.2 Operational Stage (HydroS, 2022)

The operational stage is after the development is constructed and the dwelling houses are occupied.

Drainage from paved areas that have access to vehicles

Drainage of surface water runoff from paved internal roads, driveways and other parking surfaces. The increase of surface water runoff volumes and the time of concentration (travel time) could increase the flood peaks in the surface water channels, River Suck and drain South of Shearwater hotel. The quality is negative, magnitude low, probability is moderate and temporary with moderate effects on surface water. The surface runoff could have dissolved hydrocarbons and the effect is on surface water channels, River Suck and the drain South of Shearwater hotel and groundwater. The quality is negative, magnitude moderate, probability is moderate and with significant effects on surface water. The quality is negative, magnitude moderate, probability is moderate and with significant effects on groundwater.

Drainage from other paved areas /Drainage of surface water runoff from roofs.

The increase of surface water runoff volumes and the time of concentration (travel time) could increase the flood peaks in the surface water channels, River Suck and drain South of Shearwater hotel. The quality is negative, magnitude low, probability is moderate with moderate effects on surface water.

Sewerage from dwelling houses

The proposal is to connect the sewerage of the proposed development to the public system. Therefore, this will occur only if an overflow occurs at a manhole due to blockages. The receptors are surface water channels, River Suck, drain South of Shearwater hotel and could be groundwater. The quality is negative and magnitude is low, Probability is low and is temporary. The effects are significant

Flooding of the development partly or fully

The lowest finished floor levels are 44.75 m AOD and has a freeboard exceeding 6 m. Therefore, the risk of flooding of the site from River suck has a chance significantly less than 0.1%. The quality is negative, magnitude is low, probability is very low and temporary with significant effects for surface water. The quality is negative, magnitude low, probability is very low and temporary with significant effects for groundwater.

See mitigation in section 7 below

6.3 Cumulative Impacts

Cumulative impacts, may be defined as changes to the environment caused by the combined impact of past, present and future human activities and natural processes. Often cumulative impacts are other activities causing disturbance or pollution to the same Natura 2000 sites. One way of approaching it is to list all of the other pressures on the ecosystem and evaluate them in relation to pressure positive or negative/neutral on the designated sites that are under consideration for the project in hand.

These include

1. Ballinasloe Area Plan 2022-28
2. Galway County Development Plan 2022-28
3. Agriculture

Ballinasloe area plan 2022-28 (relevant sections)

Policy KT 41
European Sites Protect European sites that form part of the Natura 2000 Network (including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC) , EU Birds Directive (2009/147/EC) , the Environmental Liability Directive , the Planning and Development (Amendment) Act 2010 , the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any subsequent or updated guidance). A plan or project (e.g. proposed development) within the plan area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, including a Screening for Appropriate Assessment, and Appropriate Assessment where necessary, that:
1. The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or
2. The plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or
3. The plan or project will have significant adverse effect s on the integrity of any European site (that hosts a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.

6.3.1 Galway County development plan 2022-2028

Galway County development plan 2020 to 2028 and objectives of the Galway County Council development plan 2022 to 2028 was reviewed as part of this proposal the following items are of particular note

According to the new County Development plan

The Key Towns are to grow their population by a t least 30%, relative to Census 2016 (i.e., Ballinasloe and Tuam). In relation to Ballinasloe, one of the Key Future Priorities for the town includes: “realising the town’s potential as a ‘County Town’, ensuring a balance of development in the town centre of Ballinasloe, and providing for compact growth and brownfield development, revitalising Dunlo Street, Market Square, Society Street and Main Street, and to reduce vacancies and support the vitality and vibrancy of these core shopping streets/side streets and the town centre.

Town Centre Infill and Brownfield Sites. A number of settlements in the county offer brownfield development opportunities that could deliver the aspirations of Placemaking and Compact Growth. They are very often serviceable and located along existing public transport corridors and their development would improve the quality public realm in a place. In accordance with the NPF and RSES it is anticipated that a substantial portion of development will be delivered on brownfield and infill sites

Policy Objectives Natural Heritage and Biodiversity

NHB 1 Natural Heritage and Biodiversity of Designated Sites, Habitats and Species

Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan. Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999). Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ ecological network.

NHB 2 European Sites and Appropriate Assessment

To implement Article 6 of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011. All such projects and plans will also be required to comply with statutory Environmental Impact Assessment requirements where relevant.

NHB 3 Protection of European Sites

No plans, programmes, or projects etc. giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects.*

NHB 4 Ecological Appraisal of Biodiversity

Ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites. Where appropriate require an ecological appraisal, for development not directly connected with or necessary to the management of European Sites, or a proposed European Site and which are likely to have significant effects on that site either individually or cumulatively.

NHB 5 Ecological Connectivity and Corridors

Support the protection and enhancement of biodiversity and ecological connectivity in nondesignated sites, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife areas where these form part of the ecological network and/or may be considered as ecological corridors in the context of Article 10 of the Habitats Directive.

NHB 6 Implementation of Plans and Strategies

Support the implementation of any relevant recommendations contained in the National Heritage Plan 2030, the National Biodiversity Plan, the All Ireland Pollinator Plan and the National Peatlands Strategy and any such plans and strategies during the lifetime of this plan.

NHB 7 Mitigation Measures

Require mitigating measures in certain cases where it is evident that biodiversity is likely to be affected. These measures may, in association with other specified requirements, include establishment of wildlife areas/corridors/parks, hedgerow, tree planting, wildflower meadows/marshes and other areas. With regard to residential development, in certain cases, these measures may be carried out in conjunction with the provision of open space and/or play areas.

NHB 8 Increased Awareness of the County's Biodiversity and Natural Heritage

Facilitate increased awareness of the County's biodiversity and natural heritage through the provision of information to landowners and the community generally, in cooperation with statutory and other partners.

NHB 10 NPWS & Integrated Management Plans

Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for European sites involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives; management plans may be considered after this is done. Where Integrated Management Plans are being prepared by the NPWS for European sites (or parts thereof), the NPWS shall be engaged with in order to ensure that plans are fully integrated with the Plan and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities.

Policy Objective Water Resources

WR 1 Water Resources

Protect the water resources in the plan area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the River Basin District Management Plan 2018 – 2021 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same) and also have regard to the Freshwater Pearl Mussel Sub-Basin Management Plans.

WR 2 River Basin Management Plans

It is a policy objective of the Planning Authority to implement the programme of measures developed by the River Basin District Projects under the Water Framework Directive in relation to: Surface and groundwater interaction, Dangerous substances, Hydromorphology, Forestry, On site wastewater treatment systems, Municipal and industrial discharges, Urban pressures, Abstractions.

This project is in line with the local area plan and County Development plan. It contributes to the objective of "The Key Towns are to grow their population by a t least 30%" and "providing for compact growth and brownfield development, revitalising Dunlo Street, …support the vitality and vibrancy of these core shopping streets/side streets and the town centre." This project is also subject to Appropriate Assessment and Ecological Impact assessment and by these mechanisms complies with the area plans in protecting Europesn sites, Biodiversity and water quality.

The potential for proposed development to contribute to a cumulative impact on European sites was considered. The online planning system for Galway County Council was consulted focussing on projects granted in the Dunlo area from the last 5 years include the following

File Number	Applicant	Development description
181067	Ballinaslow Christian Fellowship	Use of an existing building as a place of worship and youth centre
181525	OmniPlex holdings	New single story 5 screen Cinema and parkimg
18174	Society of Vincent de Paul	Development of lands at Dunlo
181752	Sarah Arnold	Change of use from doctors surgery and offices to a single dwelling
181794	Whitehorse developments	Alterations to previously granted development
181881	Cluid Housing	Alterations to previously granted development construction of 17 houses
191164	Micheal O Neill	Relocate an existing unauthorized agricultural shed
191978	Limehill Esker Ltd	Build of 78 housing units
19469	Martha Rose Ward	Construct an extension g to an existing house
201196	John and Lorraine Ryan	Change of use from a store to an apartment
201500	Eoin Kelly	Alteration and extension of existing house. Demolition of storage shed.
20400	Ballinasloe town band	Carry out internal works and felt rebatten and reslate the roof of the parish hall
211135	Ronan and Helen Lally	Atlterations and additions to an existing house
211378	Daniel and Amma Monihan	Extension to existing house
211853	Tesco Ireland Limited	Click and collect parking spaces, signage and a pedestrian crossing
21338	Ballinasloe GAA	Toilet facilties and ancillary works
21757	Donal casey	Reconstruct and extend dwelling house to include all associated site works
21819	Eircom Limited	Removal of 15m of floodlight pole and replacement with a new 18 m.
22301	Olivia and mark Gavin	To demolish existing substandard annex and construct new 2 storey rear extension
22378	Tesco Limited	Permission for Click and Collect signage in the existing Tesco car park
22593	Daniel and Emma Moynihan	A single storey extension to the east elevation of an existing dwelling house.

Table 5 Planning application Dunlo past 5 years 2018 to present.

The majority of the projects are small projects such as extensions, change of use, provision of toilet facilities, floodlight provision, signage, agricultural shed relocation and various change of use projects.

There are two large projects close to this development which are detailed below

18/1525 Grant to Omniplex holdings ULC for permission for a single storey 5 screen cinema and associated site works.

19/1978 Grant to Limehill Esker Ltd for a development consisting of 78 dwelling units (mixture of houses/apartments) and a creche

In relation to the former (18/1525) the NIS concluded "The proposed works, individually or in combination with other plans or projects will not adversely affect the integrity of any European site" (MKOS, 2019)

In relation to the latter 19/1978

"The potential for in combination impacts to result in significant cumulative effects when considered in combination with other plans and projects was assessed. The proposed development will not result in any significant residual effects on an EU designated sites. Therefore, there is no potential for the proposed development to contribute to any potential for cumulative impacts in this regard when considered in combination with other plans and projects. Similarly the proposed development will not result in significant effects in relation to water quality given the absence of surface water features within the site". "In view of best scientific knowledge and in view of the conservation objectives of the sites the proposed plan/project individually or in combination with the other plans or projects will not have a significant effect on the QI/SCIs of any European sites." (MKOS 2019b)

6.3.2 Agriculture

The midlands of Ireland are an important agricultural region. In the period 2010 to 2020 the value of livestock from the region has more than doubled with an increase from 106 to 230million euro value. Milk production has seen a similar increase. Cereals and crops have remained constant at c30million, with vegetables around 7 and fruit 3million euro. The increase in livestock and potential associated slurry and dung heaps is likely to put pressure on rivers such as the River Suck in terms of water quality.

Conclusion of the in combination cumulative assessment.

Potential for in combination impacts to result in significant cumulative effects and considered in combination with other plans and projects was assessed. No complete impact source pathway receptor chain for impact was identified between the proposed development and any EU designated site. The proposed works by themselves do not have the potential to result in any significant Direct or indirect effect on any European site as a result they cannot contribute to any potential cumulative impact on any Natura 2000 site therefore there was no potential for the proposed development to contribute to any potential for cumulative impacts in this regard when considered in combination with other plans and projects. This project will not result in any significant residual effects on any EU designated Natura 2000 sites

7.0 Mitigation

Mitigation is not required in respect of the SCI species listed for the River Suck as they do not use this proposed development site some 700m from the Natura 2000 boundary. However given the connectivity identified by Hydro S in their hydrological report (Hydro S, 2022) detailed mitigation is proposed in respect of protection of water quality which will impact on the wetland utilised by these birds of international importance.

The mitigation and residual effects are also examined under the same headings as for effects from the proposed development (section 6 above). Note more detail is given in the Hydrological report

7.1 CONSTRUCTION STAGE

Clearing vegetation on site

To reduce the effects mitigation methods are to be implemented. The effects are mainly associated with heavy rainfall on the exposed surfaces.

- These measures are to contain the suspended solids in the surface runoff from the cleared areas reaching surface drainage and are as follows:
- The site drainage system to be designed to suit the final surface water drainage system of the proposed development
- The existing site is sloping from South-West to North-East and the ground rises to the South-West and therefore interceptor drains at South boundary of the land parcel to the West and South-West boundary of the land parcel to the South of Tesco building would reduce surface runoff as sheet flow over the subject site. These interceptor drains should have grass banks and on the side of the construction side should have silt fences.
- The weather conditions and seasonal variation of weather should be taken into account when planning clearing vegetation and stripping of top soil.
- The areas of stock piles should have silt fences to reduce erosion and to reduce silt finding it way to the drainage system.
- The temporary drains from these areas need to be directed to on-site settlement ponds designed with safety measures
- • Groundworks should not be carried out during very heavy rain and severe weather conditions based on forecasts available.

Residual effects

The quality is negative, magnitude is low, probability is very low and temporary with **imperceptible** effects for surface water.

Construction of access roads

• The weather conditions and seasonal variation of weather should be taken into account when constructing of access roads.

• The temporary drains from these areas need to be directed to on-site settlement ponds designed with safety measures.

• Any groundwork should not be carried out during very heavy rain and severe weather conditions based on forecasts available.

Residual effects The quality is negative, magnitude is low, probability is very low and temporary with **imperceptible** effects for surface water.

Storage and erection of temporary structures to facilitate construction phase

• These temporary structures should be on hard stands to prevent any spills or leaks on to ground or to the drainage network.

• The drainage channels to be protected from any spills or leaks of any material stored and these spills and leaks need to removed following environmentally safe methods.

Residual effects The quality is negative, magnitude is low, probability is low and temporary with insignificant effects on surface water. The quality is negative, magnitude is low, probability is low and temporary with **insignificant effects on groundwater**.

Sewerage from construction personnel

This will be only during the construction. A self-contained port-a-loos with integrated waste holding tanks to be provided based on the number of personnel working on site. They need to be maintained by the providing contractor and be removed from the site in its entirety by the same contractor. They should be located at pre-selected locations.

Residual effects

The quality is negative, magnitude is very low, probability is very low and temporary with imperceptible effects on surface water. The quality is negative, magnitude is very low, probability is very low and temporary with imperceptible effects on groundwater.

Excavations based on construction designs

• Surface water could pond in excavated areas and will need to be pumped out for construction work.

• The weather conditions and seasonal variation of weather should be taken into account when excavations are done.

• The temporary drains from these areas need to be directed to on-site settlement ponds designed with safety measures.

• Any groundwork should not be carried out during very heavy rain and severe weather conditions based on forecasts available.

• Any pumped-out water from an excavation should be directed to a settlement tank.

Residual effects

The quality is negative, magnitude is low, probability is low and temporary with insignificant effects on surface water. The quality is negative, magnitude is low, probability is low and temporary with insignificant effects on groundwater.

Drainage during construction

This covers the effects on the entire drainage network during construction. Some of the issues of the drainage canals are discussed previously based on the source.

• The drainage canals have to be protected from erosion by designing them for a 30 year flood.

• SUD measures are required to be adopted as practical.

• The canal banks to be protected by grass and overflow from settlement tanks to be at a safe rate predesigned previously.

Residual effects

The quality is negative, magnitude is low, probability is low and temporary with imperceptible effects on surface water.

Hydrocarbons from machinery

These cover accidental spills and leaks associated with storage of oils and fuels, leaks from construction machinery and spillage during refuelling and maintenance of the machinery and other vehicles.

• All storage of the oils and fuels to be on a bunded hardstand area and not on the small area that has rock on the surface (see hydrological report fig 15).

• Refuelling and servicing of construction machinery will take place in a designated hardstand area which is also remote from any surface water inlets.

• Accidental spills are managed contained within Environment management plan and spill kits are to be available on site

Residual effects The quality is negative, magnitude is low, probability is low and temporary with **insignificant effects** on surface water. The quality is negative, magnitude is low, probability is low and temporary with **insignificant effects** on groundwater.

Cement based products suspended in water

This covers Concrete runoff, particularly discharge of wash water from concrete trucks.

• Concrete batching will take place off site and wash down and wash out of concrete trucks or plants will take place off site.

• Any form of necessary washouts of concreting equipment to be directed to be impermeable lined dedicated areas and these areas are to be removed and disposed environmentally on the completion of construction phase.

• Concreting work should not be carried out during very heavy rain and severe weather conditions based on forecasts available.

Residual effects

The quality is negative, magnitude is low, probability is low and temporary with imperceptible effects on surface water. The quality is negative, magnitude is low, probability is low and temporary with **imperceptible effects** on groundwater.

Landscaping

Landscaping of the site involves similar works as earth works.

Mitigation measures

• The weather conditions and seasonal variation of weather should be taken into account during landscaping.

• Preventative and precautionary measures to be taken to keep clear from all drains.

• Any groundwork should not be carried out during very heavy rain and severe weather conditions based on forecasts available.

Residual effects

The quality is negative, magnitude is low, probability is low and temporary with **imperceptible effects** on surface water.

Flooding of site partly or fully

Flooding from river Suck has a very low probability and the subject site is within flood zone C. The localised spots of flooding from surface water should be mitigated.

• The temporary drains from these areas need to be directed to on-site settlement ponds designed with safety measures.

• SUDS measures such as swales could be used depending on the localised flood location.

Residual effects

The quality is negative, magnitude is low, probability is low and temporary with imperceptible effects on surface water. The quality is negative, magnitude is low, probability is low and temporary with **imperceptible effects** on groundwater.

Drainage from paved areas that have access to vehicles

These areas are driveways, internal roads of the completed housing estate and other parking areas.

Mitigation measures

• Surface water discharge will be through an oil/fuel interceptor before discharging onto the surface water drainage network.

• A maintenance program should be in place for maintenance of the oil/fuel interceptors and the entire drainage network.

Residual effects The quality is negative, magnitude is low, probability is low and long term with imperceptible effects on surface water. The quality is negative, magnitude is low, probability is low and long term with imperceptible effects on groundwater.

Drainage from other paved areas

These are from roofs and other paved areas not included above. Mitigation measures include

• Surface water could be used in rainwater harvesting or discharged using SUDS methods such as swales or rain gardens.

• A maintenance program should be in place for maintenance of the common surface water disposal measures whereas individual measures are maintained by the households.

The quality is negative, magnitude is low, probability is low and long term with imperceptible effects on surface water. The quality is negative, magnitude is low, probability is low and long term with imperceptible effects on groundwater.

Sewerage from dwelling houses

The sewerage from the development will be connected to the public sewer system. There isn't onsite sewerage disposal. Therefore, the only effect is overflows from accidental blockages. Mitigation measures;

• Blockages within the individual properties is the responsibility of the owner and be dealt with by licensed blockage removal specialist contractor.

• Blockages in the common system is the responsibility of the management entity of the housing estate and be dealt with by licensed blockage removal specialist contractor, promptly.

The quality is negative, magnitude is very low, probability is low and long term with imperceptible effects on surface water. The quality is negative, magnitude is very low, probability is low and long term with **imperceptible effects** on groundwater.

Flooding of the site partly or fully

The proposed development is in flood zone C as detailed in Section 4.2.4 and flood risk from River Suck is significantly less than 0.1% as the freeboard against a flood of 0.1% chance flood is exceeding 4 m.

Mitigation measures are covered in the other sections above localised flooding from surface runoff.

Residual effects The quality is negative, magnitude is low, probability is low and long term with imperceptible effects on surface water. The quality is negative, magnitude is low, probability is low and long term with imperceptible effects on groundwater

Ecological Supervision of Construction

The mitigation above will require ecological supervision for the duration of the build.

8.0 NIS Statement and Conclusion

The conclusion statement presented follows the European Commission guidance assessment of plans and projects significantly affecting Natura 2000 sites (2021) as well as methodological guidance on the provision of Article 63 of the habitats directive 43 EC and the Department of the environment housing assessment of plans and projects in Ireland December 2009 amended February 2010

The project is to building 165 dwellings with associated roads, drainage and landscaping in the Key town of Ballinasloe. Data was collected on site over a series of seven site surveys between November 2021 and July 2022 to inform this assessment.

This is an assessment of the impact of this development on the Natura 2000 network. The assessment focussed specifically River Suck Callows SPA which was the only such site deemed to be within the zone of influence of this development.

The River Suck Callows SPA is circa 700 metres to the north east of the application site and its Special Conservation Interests are whooper swan, wigeon, golden plover, lapwing, Greenland white fronted goose. The habitat on the development site is shown to be unsuitable for the birds of the SPA and there is no evidence that the birds use this site on an ex situ basis. Indirect potential threats would that of, noise or visual disturbance. However, the distance of 700 m between the proposed development site and the designated area is sufficient to make a finding of no significant impact in terms of disturbance of these species

A further conservation objective for the site is “To maintain or restore the favourable conservation condition of the wetland habitat at River Suck Callows SPA as a resource for the regularly-occurring migratory waterbirds that utilise it”. In respect of this there is not a direct hydrological connection between the Natura 2000 site and the proposed development but according to the hydrological assessment (HydroS, 2022) there are functional hydrological source pathway links. Detailed mitigation is proposed by the hydrologist and this is incorporated and summarised in this NIS and is also presented as part of the Construction Management Plan.

The overall conclusion is that in view of conservation objectives of the Natura 2000 network the proposed project, with mitigation, individually or in combination with other plans and projects will not have a significant effect on the Natura 2000 network. This project is in line with the requirements of the Habitats Directive

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Appendix 1: Natura 2000 - Site Synopsis

SITE NAME: RIVER SUCK CALLOWS SPA

SITE CODE: 004097

The River Suck Callows SPA is a linear, sinuous site comprising a section of the River Suck from Castlecoote, Co. Roscommon to its confluence with the River Shannon close to Shannonbridge, a distance of approximately 70 km along the course of the river. The river forms part of the boundary between Counties Galway and Roscommon. The site includes the River Suck itself and the adjacent areas of seasonally-flooded semi-natural lowland wet callow grassland. The River Suck is the largest tributary of the River Shannon.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Whooper Swan, Greenland Whitefronted Goose, Wigeon, Golden Plover and Lapwing. 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.

The River Suck Callows SPA is an important site for wintering waterfowl. Of particular note is the nationally important Greenland White-fronted Goose flock (293 – five year mean peak for the period 1994/95 to 1998/99) which congregates mainly in the middle reaches of the river. Four other species occur in populations of national importance, i.e. Whooper Swan (164), Wigeon (3,232), Golden Plover (2,241) and Lapwing (3,906) – all figures are five year mean peaks from aerial surveys between 2001/02 and 2005/06. Other species present include Mute Swan (122), Teal (402), Mallard (70), Black-tailed Godwit (24), Curlew (22) and Black-headed Gull (86).

The River Suck Callows SPA is of considerable ornithological importance, in particular for the presence of nationally important populations of five species. Of note is that three of the species that occur regularly, i.e. Whooper Swan, Greenland White-fronted Goose and Golden Plover, are listed on Annex I of the E.U. Birds Directive. Part of the River Suck Callows SPA is a Wildfowl Sanctuary.

Appendix 2: Site Photographs

Photo 1: Improved Grassland dominated by docks

Photo 2: Scrub

Photo 3: Recolonising Bare Ground with birch and willow encroaching

Photo 4: Calcareous grassland with Heath Spotted Orchids

Photo 5: Treelines bordering the site