



APPROPRIATE ASSESSMENT SCREENING REPORT FOR THE PROPOSED DEVELOPMENT OF AN AFFORDADABLE HOUSING SCHEME WITH A CIVIC SPACE AT BALLYBURKE, KNOCKACARRA, CO. GALWAY ON BEHALF GALWAY CITY COUNCIL

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1. Introduction

1.1 Background

Envirico have been commissioned by Galway City Council (GCC) to provide ecological consultancy services for a proposed mixed-use development located at Ballyburke, Knocknacarra, Co. Galway. The proposed development works will consist of an affordable and social housing scheme with public civic/plaza space incorporating a creche, local retail unit, cafe, and all associated works. A Full description of the proposed works is given in Section 4.2.

The purpose of this AA screening is to determine if the proposed development, alone or in combination with other plans or projects, is likely to have a significant effect (LSE) on a European site (site); comprising of Special Area of Conservation (SACs) and Special Protection Areas (SPAs) in view of the site's conservation objectives.

The proposed site is located in Knockacarra, Galway and the proposed development consists of demolishing one existing dwelling to allow for consolidating of the lands owned by Galway City Council to develop a key new "Local Centre" housing development. The Galway City Development Plan 2017-2023 and the newly adopted development plan 2023-2029 highlights the site as significant in the area and requires the need for establishing a local centre. The focal point of this new local centre will be a central plaza area with local commercial units fronting onto it. This will provide for a communal open space which will serve the local and surrounding areas. It is envisioned, in line with the development plan, that local services will be provided in these units such as a convenience store, café and hairdressers.

1.2 Legislative Context for Appropriate Assessment

Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 437 of 2011) (as amended) transposes Article 6 of the Habitats Directive (92/43/EEC) into Irish law. The regulations require that where a public authority wishes to progress a project (which is not directly connected with or necessary to the management of the site as a European Site), a screening for Appropriate Assessment (AA) of the project must be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that project, individually or in combination with other plans or projects is likely to have a significant effect on the European site. AA screening is required under Article 6(3) of European Union Council Directive 92/43/EEC (also known as the Habitats Directive), section 177U of the Planning and Development Act 2000 to 2018 and amendments (Amendment of Part XAB (appropriate assessment)).

In accordance with the requirements of the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC), Member States have identified a network of sites of conservation importance, hosting habitats and/or species identified in the Directives as needing to be either maintained at or returned to favourable conservation status. These sites are known as the network and in Ireland, sites comprise areas designated as Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs), Special Protection Areas (SPAs) and candidate Special Protection Areas (cSPAs).

These Directives require that where a project is likely to have a significant effect on a Site, while not directly connected with or necessary to the nature conservation management of the site, it shall be subject to 'Appropriate Assessment' to identify any implications for the site in view of the site's conservation objectives. Specifically, Article 6(3) of the Habitats Directive states:

"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".

Article 6(4) states:

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

This screening for Appropriate Assessment has been carried out in accordance with the following European Commission Guidance:

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DoEHLG (2010);

- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10. National Parks and Wildlife Service (NPWS) (2010);
- Assessment of plans and projects significantly affecting sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission (2001);
- Managing sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Commission (2000a);
- Communication from the Commission on the Precautionary Principle. European Commission, (2000b); and
- Assessment of plans and projects significantly affecting sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg. European Commission (2002).
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Habitat Assessments Volume 2. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland

2. The Appropriate Assessment Process

2.1 Stages in Screening and Appropriate Assessment

Screening for Appropriate Assessment (AA) is broken into four distinct stages, as outlined in the European Commission Guidance document (2001). Within these stages, the potential of significant impacts/effects upon a site will be assessed and detailed. The four stages of an AA are summarised below. Article 6(3) of the Habitats Directive, which details this assessment process, is implemented into law in Ireland through the provisions of Sections 177U and 177V of the 'Planning and Development Act 2000 to 2018'.

All potential effects between activities associated with the proposed development and the ecological components of European sites must be considered. This includes potential effects on mobile species notably, birds, mammals, invertebrates, and migratory fish.

If the prospect of LSEs occurring cannot be excluded on the basis of objective information, the project is taken forward to the next stage of the process, Appropriate Assessment. At Screening, the burden of evidence is to show, on the basis of objective information, and beyond reasonable scientific doubt, that the project will have no LSEs on a European site. If the effect may be significant, or is not known, it would trigger the need for Appropriate Assessment. The entire process can be broken down into four stages (EC, 2001), as outlined below:

Stage 1 - Screening:

Screening for an AA, in relation to the construction, management/operation and decommissioning of a specific proposed plan or project, shall be completed in order to assess whether said development, either individually or in combination with others, is likely to have a significant effect upon sites locally, regionally or nationally, in view of these site's conservation objectives.

Stage 2 - Appropriate Assessment:

The competent authority detailing the AA shall, under Article 6(3) and Section 177V of the 'Planning and Development Act 2000 to 2018', make a decision as to whether or not the proposed development would affect or impact upon the integrity of a site. Where there are adverse effects on site integrity identified, mitigation measures are proposed, as appropriate, to avoid adverse effects, and as such a Natura Impact Statement is then required. For projects, the AA process is documented within a Natura Impact Statement (NIS). This is provided to the competent authority by the applicant, to facilitate an informed assessment of the project.

Stage 3 - Assessment of Alternative Solutions:

If following AA, including proposal of mitigation, adverse effects on site integrity remain, or uncertainty remains, an Assessment of Alternatives is required. This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site.

Stage 4 - Assessment where no alternative solutions exist:

Where alternative solutions, locations, etc. are absent, or if such solutions are likely to have increased levels of impact upon sites, the competent authority must establish whether or not the plan or project can be considered as necessary for Imperative Reasons of overriding public interest (IROPI).

3. Screening Methodology

3.1 Desktop Review

An ecological desk review was undertaken across various dates in May 2023 in order to assess the potential impacts of the proposed project, as detailed in Section 4.2 of this document. The purpose of this review is to collate available data and information relating to the site and relevant sites. Within this review, sources, publications, and datasets that were consulted included:

- Details and qualifying interests of European sites
- Aerial photography and 1:50000 mapping
- National Parks and Wildlife Service (NPWS)
- Species and habitat records from the National Biodiversity Data Centre's

3.1.1 Websites and other Resources Consulted

- Environmental Protection Agency ENVision online maps <http://maps.ie>
- National Parks and Wildlife Service website, www.npws.ie map viewer
- National Biodiversity Data Centre (www.biodiversityireland.ie),
- https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2019_Vol2_Habitats_Article1_7.pdf
- Conservation Status Assessment Reports [1] (CSARs), Backing Documents and Maps prepared in accordance with Article 17 of the Habitats Directive;
- Published and unpublished NPWS reports on protected habitats and species including Irish Wildlife Manual reports, Species Action Plans, and Conservation Management Plans; and
- Existing relevant mapping and databases e.g. waterbody status, species and habitat distribution etc. (sourced from the Environmental Protection Agency - <http://gis.epa.ie/>, the National Biodiversity Data Centre - <http://maps.biodiversityireland.ie> and the National Parks and Wildlife Services - <http://www.npws.ie/mapsanddata/>).
- Ballyburke, Desktop Review and field surveys. Envirico Ltd 2023
- NPWS (2013) Conservation Objectives of the relevant sites, particularly Galway Bay SPA Site Code 004031 and Galway Bay Complex SAC Site Code 000268, both of which are in proximity of the proposed development
- NPWS (2013) Conservation Objectives: Galway Bay Complex SAC 000268. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

- NPWS (2017) Conservation objectives for Lough Corrib SAC 000297. Version 1. National Parks & Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- NPWS (2015) Conservation Objectives: Connemara Bog Complex SAC 002034. Version 1. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2018) Conservation Objectives: Ross Lake and Woods SAC 001312. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.
- NPWS (2022) Conservation objectives for East Burren Complex 001926. Version 1. National Parks & Wildlife Service, Department of Housing, Local Government and Heritage.
- NPWS (2014) Conservation Objectives: Black-Head Poulsallagh Complex SAC 000020. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2021) Conservation Objectives: Moneen Mountain SAC 000054. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
- NPWS (2013) Conservation Objectives: Inner Galway SPA 004031. Version 1. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht
- NPWS (2023) Conservation Objectives: Lough Corrib SPA 004042. Version 1. National Parks & Wildlife Service, Department of Housing, Local Government and Heritage
- NPWS (2023) Conservation Objectives: Cregganna Marsh SPA 004142. Version 1. National Parks & Wildlife Service, Department of Housing, Local Government and Heritage.
- NPWS (2023) Conservation Objectives: Connemara Bog Complex SPA 004181. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

3.1.2 Interested Party Consultations

- Consultation with Galway City Council 2023

3.2 Zone of Influence

The Zone of Influence (Zoi) for a project is the area over which significant effects could occur to ecological features from the proposed project and associated activities. The determination of a Zoi for a project should be identified on a case-by-case basis as there may be an effect on European sites that are at a distance from the development site itself. For example, where there is a hydrological link between the development site and a European site.

Considerations when determining the potential Zoi include:

- Ecological features within and in proximity to the proposed development

- Migratory/mobile species within the area
- Construction/operational activities that may cause a significant effect
- Linkages to European sites or sensitive habitats connected to those sites

Current Irish departmental guidance (DoEHLG, 2010) on the ZOI to be considered during the AA process states the following:

“A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson et al., 2006). 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 with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in-combination effects”.

Given the relatively minor footprint of the proposed development and that the effects during operation of the development are likely to be slight to negligible, it is concluded that the ZOI is likely to be significantly smaller than 15km.

3.3 European site and identification

The identification of European/ sites, which have the potential to be impacted as a result of the proposed development (either individually and or in combination with other plans or projects, proposed or in development) is an important step in the assessment of such impacts whether they be indirect or direct. All sites are different; hold differing ecological features, Qualifying Interests, conservation objectives, functions and general structure. Each relevant site should be evaluated in order to determine if the proposed development is likely to have a significant effect on (EC, 2001).

The Qualifying Interests (QI) of each site can be affected directly and indirectly. Direct effects include habitat loss and habitat fragmentation, which can occur as a result of development land-take, alteration of conditions within a protected site, etc. Indirect effects that have the potential to occur as a result of a project (either individually or in combination with others) can include the change of silt content of a system, alteration of groundwater flow, etc. These indirect effects have the potential to result in impact to Qualifying Interests which rely on optimum conditions within a specific area/catchment (EC, 2001).

4. Screening

4.1 Introduction

The purpose of Screening is to determine whether AA is required. This is done by examining whether;

- A plan or project which is directly connected with or necessary to the management of the site can be excluded from AA
- The potential effects of a plan or project, either alone or in-combination with other plans or projects, on a European site, in view of its conservation objectives and considering whether these effects will be significant.

4.1.1 The Likely Significant Effect test

Screening is underpinned by an interpretation of LSE as this interpretation provides the benchmark for a finding of likely effects. Any assessment of significance must satisfy the principles that underpin a satisfactory determination for LSE with regard to the accumulation of impacts and an understanding of the nature, probability and severity of potential impacts. The terms ‘likely’ and ‘significance’ have been defined variously by governments and through the courts. The following sections seek to provide clarification on the current interpretation of these key terms as determined by recent guidance and case law.

4.1.2 An interpretation of ‘likely’

European case law has established that the benchmark requirement of ‘likely’ should not be regarded as a measure of probability in the context of an AA. Rather, a LSE finding is an acknowledgment that the risk of a significant effect occurring exists. This approach is consistent with the findings in the Waddenzee judgement, which found that *“if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site”* then a LSE finding is appropriate.

This position was upheld in the European Court of Justice (ECJ) in Case C-258/11 (Sweetman v An Bord Pleanála (Ireland)), where the judgment interprets “likely” to mean “may”. *“The test is set at a lower level”* and *“there is no need to establish such an effect; it is merely necessary to determine that there may be such an effect”*. In cases where there is a determination that there is no significant effect, the Waddenzee judgment establishes that there must remain *“no reasonable scientific doubt as to the absence of such effects.”*

More recently the Kokott Judgement (Case C-721/21 Eco Advocacy CLG, (Request for a preliminary ruling from the High Court (Ireland))), delivered on 19th January 2023 states that;

“At the stage of screening the need for an appropriate assessment under Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as amended by Council Directive 2013/17/EU of 13 May 2013, features of the plan or project involving the removal of contaminants that may have the effect of mitigating a harmful effect on the protected site may be taken into account, where it is clear, on the basis of objective considerations, that those features were incorporated into the design as standard features irrespective of any effect on the protected site concerned, and all reasonable scientific doubt concerning their effectiveness can be ruled out.”

4.1.3 An interpretation of ‘significant’

It was clarified in the ECJ Case C-127/02 (the Waddenzee judgment) that the measure of significance should be made against the ecological objectives for which the site was designated: “where a plan or project is likely to undermine the site’s conservation objectives, it must be considered likely to have a significant effect on that site”.

The proposed project is not directly connected with, or necessary to the management of any European site therefore Screening for AA is required. This involves the following:

- Proposed development description
- European site(s) identification, Qualifying Interests and conservation objectives
- Ecology baseline conditions within and in close proximity to proposed development
- Assessment of likely effects
- Screening conclusion.
- CIEEM (2017). Guidelines for Preliminary Ecological Appraisal. (Chartered Institute of Ecology and Environmental Management) Second Edition
- Fossitt, J. (2000). Guide to Habitats in Ireland. The Heritage Council
- NRA (2010). Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads.

4.2 Description of the Proposed Development

The proposed development site is located in Ballyburke, Knockacarra Co. Galway (refer to figure.1). The proposed development consists of demolishing one existing dwelling to allow for consolidating of the lands owned by Galway City Council to develop a key new “Local Centre” housing development. The Galway City Development Plan 2017-2023 and the newly adopted development plan 2023-2029 highlights the site as significant in the area and requires the need for establishing a local centre. The focal point of this new local centre will be a central plaza area with local commercial units fronting onto it. This will provide for a communal open space which will serve the local and surrounding areas. It is envisioned, in line with the development plan, that local services will be provided in these units such as a convenience store, café, hairdresser etc.

84 residential units are proposed and are broken up into 71 apartments across four blocks and 13 terraced family units across two blocks. Of the apartments proposed 40% of these are designed as age friendly / universal design units which by being located adjacent to the local centre services proposed will be very accessible. There are a high proportion of 3/4 bedroom family houses in the area. With an ever-changing demographic these units over the long term will facilitate downsizers moving to more suitable housing, while also living close to their local community. The proposed layout of the site responds to existing established pattern of development in that the building lines of the proposed apartment blocks south of Maoilin and Drisin align with the existing building line of these estates. The treatment of the proposed building heights in these areas also responds to the adjacent form of 2 storey development in that the apartment blocks step up from 2 storey elements adjacent the existing housing developments to limit any overshadowing concerns and raise up to 3-6 storey elements where applicable in order to ensure a suitable density is achieved on the site. Terraced housing is proposed to the North East corner of the site to integrate with the existing terraced housing of Drisin whilst also providing for a pedestrian/cycle link onto the existing Ballymoneen road to the West (Refer to figure.2 below for the draft plan).

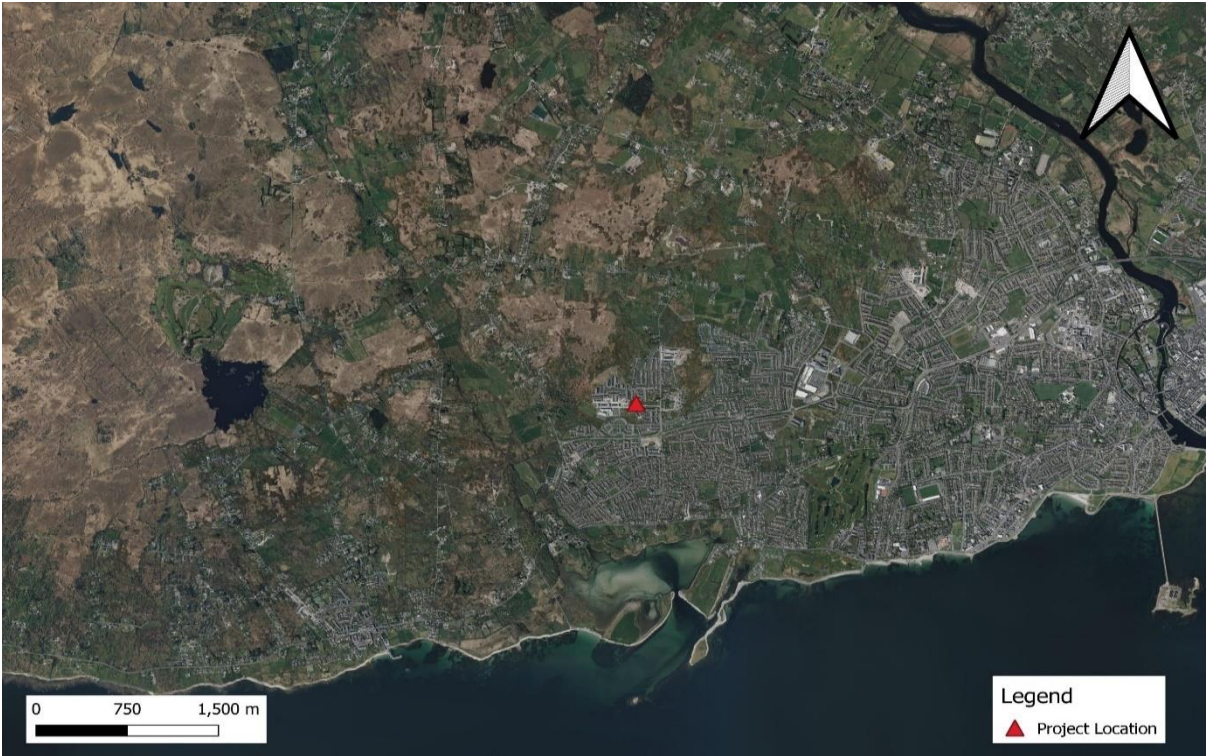


Figure 1: Location of proposed development site in Ballyburke, Knockacarra, Co. Galway



Figure 2: Draft plan for proposed development in Ballyburke

4.3 Baseline Characterisation

4.3.1 Overview of baseline data

Envirico Ecologists carried out a detailed site walkover on the 15th May 2023 to inform the screening for Appropriate Assessment. This assessment included the identification of notable species, habitats, bat, bird, and mammal evidence.

The site is bordered by the Clairin Road to the south, by the Ballymoneen Road to the east and by buildings and artificial surfaces (BL3), mainly composed of residential dwellings along the western and eastern perimeters of the site. The western end of the proposed development site is mainly composed of habitat types such as Spoil and bare ground (ED2) in a mosaic with pockets of Recolonising bare ground (ED2) mainly present on spoil heaps after excavation. The terrain of the site follows a west to east pathway with elevated sections of terrain along the eastern flank of the proposed development site. There is a high degree of succession present on site in the form of Scrub (WS1) habitat type due to lack of management of the site. There are large pockets of scrub present along the northern and southern boundaries of site mainly consisting of Gorse (*Ulex europaeus*), Brambles (*Rubus fruticosus*) with some Bracken (*Pteridium aquilinum*) coverage. There is a low-lying area located towards the western end of the site composed of wet grassland (GS4), with a stream covered in dense vegetation, flowing from north to south through the site.

The Barna Stream_010 enters the site through a pipe from the residential estate to the north of site. The stream appears to be culverted as it flows through the residential estate upon entering the site via the pipe, and the stream leaves the site via a culvert at the southern end of the site by the Clairin Road. The low-lying nature of the terrain combined with the presence of the stream combined to create the waterlogged wetland area. There were pockets of Dry meadows and grassy verges (GS2) habitat type, on the drier more elevated areas of the wet grassland habitat area.

The assessment of protected species and habitats and/or invasive species was undertaken in line with the following guidelines:

- CIEEM (2017). Guidelines for Preliminary Ecological Appraisal. (Chartered Institute of Ecology and Environmental Management) Second Edition
- Fossitt, J. (2000). Guide to Habitats in Ireland. The Heritage Council
- NRA (2010). Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads.

4.3.2 Habitats

The proposed development site is a semi-natural habitat due to the site undergoing no management practice, with the site surrounded by a built-up environment. The site is dominated by spoil and bare ground (ED2), scrub (WS1), wet grassland (GS4), dry meadows and grassy verges (GS2), whilst managed amenity grassland (GA2) forms the majority of the remaining habitat around a dwelling house present on the north eastern section of the site.

In total nine habitat types were identified on site with some habitats grading into each other forming mosaic combinations. None of the habitats identified as priority Habitats and generally are common within the area. These habitats include:

Spoil and Bare Ground (ED2)

This area is in the western end of the site and consists of largely bare ground and spoil heaps of coarse gravel. Very little recolonisation. The spoil heaps present were recolonising after excavation with species such as Beaked Hawk's-beard (*Crepis vesicaria*) and Willowherb (*Epilobium parviflorum*) present.

Recolonising bare ground (ED3)

Areas of bare ground, but largely dominated by grassland vegetation, with a cover of >50%, making this a mosaic of dry grassland and recolonising bare ground, with Butterfly species utilising the habitat. Scrub, such as Gorse (*Ulex europeus*) was also beginning to develop. Species present included Dandelion (*Taraxacum spp.*), Yorkshire Fog (*Holcus lanatus*), Annual Meadow Grass (*Poa annua*), Red Clover (*Trifolium pratense*), Ribwort Plantain (*Plantago lanceolata*), Bird's-foot Trefoil (*Lotus corniculatus*), Nettles (*Urtica dioica*) and Bramble (*Rubus fruticosus*).

Earth Banks (BL2)

Large, well developed earth banks occurred on the site, likely from previous excavations. One earth bank occurred on the west side of the site beside the bare ground habitats, while another occurred to the East side of the site. On top of these earth banks, were well developed habitats of their own such as grassland, and scrub, which are mapped separately. Species found present on the well-developed earth mounds included Common Vetch (*Vicia sativa*), Docks (*Rumex spp.*), Creeping Cinquefoil (*Potentilla repens*), Birds-foot Trefoil (*Lotus corniculatus*), Creeping Buttercup (*Ranunculus repens*), Yorkshire Fog (*Holcus lanatus*), Ribwort Plantain (*Plantago lanceolata*) and Lesser Trefoil (*Trifolium dubium*).

Dry meadows and grassy verges (GS2)

No ongoing management with this particular habitat type observed, with sward and herbs quite tall. Significant coverage of grassland communities on the earth bank to the west, to qualify as a grassland

habitat. Gorse and bramble scrub were beginning to establish in this habitat. Section of this habitat type also occurred as a road verge on the Northern edge of the road. Species observed included Meadow Buttercup (*Ranunculus acris*), Smooth Meadow-grass (*Poa pratensis*), Creeping Bent-grass (*Agrostis stolonifera*), Creeping Buttercup (*Ranunculus repens*), Ribwort Plantain (*Plantago lanceolata*), Docks (*Rumex spp.*), Yorkshire Fog (*Holcus lanatus*), Nettles (*Urtica dioica*), Common Figwort (*Scrophularia nodosa*), Cocksfoot meadow grass (*Dactylis glomerata*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Colt's-foot (*Tussilago farfara*), and Yarrow (*Achillea millefolium*), Herb-Robert (*Geranium robertinum*) both present along the roadside verge.

Scrub (WS1)

Significant scrub establishment on earth banks, with some grassland vegetation grading in forming mosaic combinations. The scrub was quite impenetrable in places, with some bracken cover occurred in sections of this habitat, but not of enough cover to be classed as Dense Bracken (HD1) habitat type. Species present included Common Hawthorn (*Crataegus monogyna*), Gorse (*Ulex europeaus*), Brambles (*Rubus fruticosus*), Fuchsia (*Fuchsia magellanica*), Ivy (*Hedera helix*), Bracken (*Pteridium aquilinum*) and Hazel (*Corlylus avellana*) present in a few bushes on the east of the site.

Wet grassland (GS4)

Wet grassland occurred in a low-lying area around the stream towards the western end of the site. The Barna Stream that flowed through the site in a north to south direction through the wet grassland habitat, was densely vegetated and likely responsible for the varying moisture levels and vegetation composition with wet underfoot conditions. Dry meadows and grassy verges (GS2) habitat type, occurred in drier and more raised sections of this habitat area, then frequently graded into wet grassland (GS4), with a coverage of *Juncus effusus* where it was wetter. No on-site management observed, with sward and vegetation coverage dense. Species present included Fool's-water-cress (*Apium nodiflorum*), Water-cress (*Nastartium officinale*) around the stream, Soft Rush (*Juncus effusus*), Willowherb (*Epilobium spp.*), Creeping Buttercup (*Ranunculus repens*), Cuckooflower (*Cardamine pratensis*), Meadow Vetchling (*Lathryus pratensis*), Cocksfoot meadow grass (*Dactylis glomerata*) and Bird's-foot Trefoil (*Lotus corniculatus*).

Depositing/ lowland river (FW2)

The Barna Stream enters the site via a culvert at northern end of the site through a residential development and exits the site via a culvert at the southern end of the site by the Clairin Road. The stream provides linkages to nearby European Sites; Galway Bay Complex SAC and Inner Galway Bay SPA. The

stream area is covered in dense vegetation, with species such as Fool's-water-cress (*Apium nodiflorum*), Water-cress (*Nastartium officinale*) around the stream. The stream is in poor condition and offers no otter potential, although the stream supports the low-lying wetland area within the site.

Buildings and artificial surfaces (BL3)

This particular habitat consists of the dwelling house and the hard surface surrounds that is present on the north eastern end of the site.

Amenity Grassland (GA2)

This particular habitat type consists of the garden that is present around the dwelling house at the north eastern section of the site that appears to regularly maintained.



Figure 3: Habitat map of proposed development site

4.3.3 Invertebrates

No investigation of invertebrates or micro-organisms was undertaken on the day of site survey. The desk study search of NBDC records for the 2km square encompassing the site yielded approximately 52 records two of which were threatened or endangered, the Dingy Skipper (*Erynnis tages*) a butterfly species and the Large Red Tailed Bumble Bee (*Bombus (Melanobombus) lapidarius*).

4.3.4 Avifauna

The desk study search of NBDC records a species list of 48 bird species for the 2km square (M22M) in which the site is located. During the course of the survey the following species were recorded Magpie (*Pica pica*), Robin (*Erithacus rubecula*), Blackbird (*Turdus merula*), Jackdaw (*Corvus monedula*) and Feral Pigeon (*Columba livia f. domestica*).

4.3.5 Invasive Species

The field survey and the desk study search of NBDC, of the 2km square encompassing the site, for invasive alien plant species and invasive animal species, scheduled to the European Communities (Bird and Natural Habitat Regulations) 2011 was carried out and showed no records of the presence of third schedule invasive alien species present.

4.3.6 Aquatic Habitats

The Barna Stream (IE_WE_31B010200) as described above in the habitats section, enters the northern end of site via a culvert through a residential area and exits the southern end of the site through a culvert at Clairin Road. The stream area is covered in dense vegetation and offers no suitable fisheries or otter habitats. The stream was classed as Moderate status by the EPA (refer to figure.5) under the Water Framework Directive (WFD)(<https://gis.epa.ie/EPAMaps/>).



Figure 4: Aquatic environment in the wider vicinity of the proposed development site



Figure 5: Water Framework Directive (WFD) of Barna Stream & watercourses in the wider vicinity of the site

4.3.7 Mammals and Aquatic Species

The desk study search of NBDC, of the 2km square (M22M) encompassing the site, returned one record of Irish Stoat (*Mustela erminea subsp. Hibernica*) on the 19th of April 2016.

4.3.7.1 Bats

The field survey assessment of proposed development site for Potential Roost Features (PRFs), revealed little or no potential for bat roosting features. The scrub habitats present on-site consisting of low-lying gorse and grassland habitats do not provide suitability for bat roost features and suitable habitat for foraging or commuting bats. The Bat Suitability Index for the proposed development in Ballyburke was 37.44 for all bat species (refer to table.1 for individual bat species).

Table 1: Bat Suitability Index for proposed development in Ballyburke (National Biodiversity Data Centre Maps)

Bat Suitability Index Callan		
All Bats		37.44
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	57
<i>Plecotus auritus</i>	Brown long-eared bat	56
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	48
<i>Rhinolophus hipposideros</i>	Lesser horseshoe bat	3
<i>Nyctalus leisleri</i>	Leisler's bat	49
<i>Myotis mystacinus</i>	Whiskered bat	34
<i>Myotis daubentonii</i>	Daubenton's bat	37
<i>Pipistrellus nathusii</i>	Nathusius' pipistrelle	11
<i>Myotis natteri</i>	Natterer's bat	42

4.4 Identification of European Sites

Within 15 km of the development site, two European sites were identified. Table.2 (Section 4.4) details each European/Natura site within 15km and its distance in relation to the proposed development. Table.3 (Section 4.4) details the potential effects which could occur as a result of the proposed development, describing the effect and indicating where this impact is likely to occur within the detailed Zone of Influence (Zoi). These sites are then assessed against the detailed impacts in Table.4 (Section 4.5).

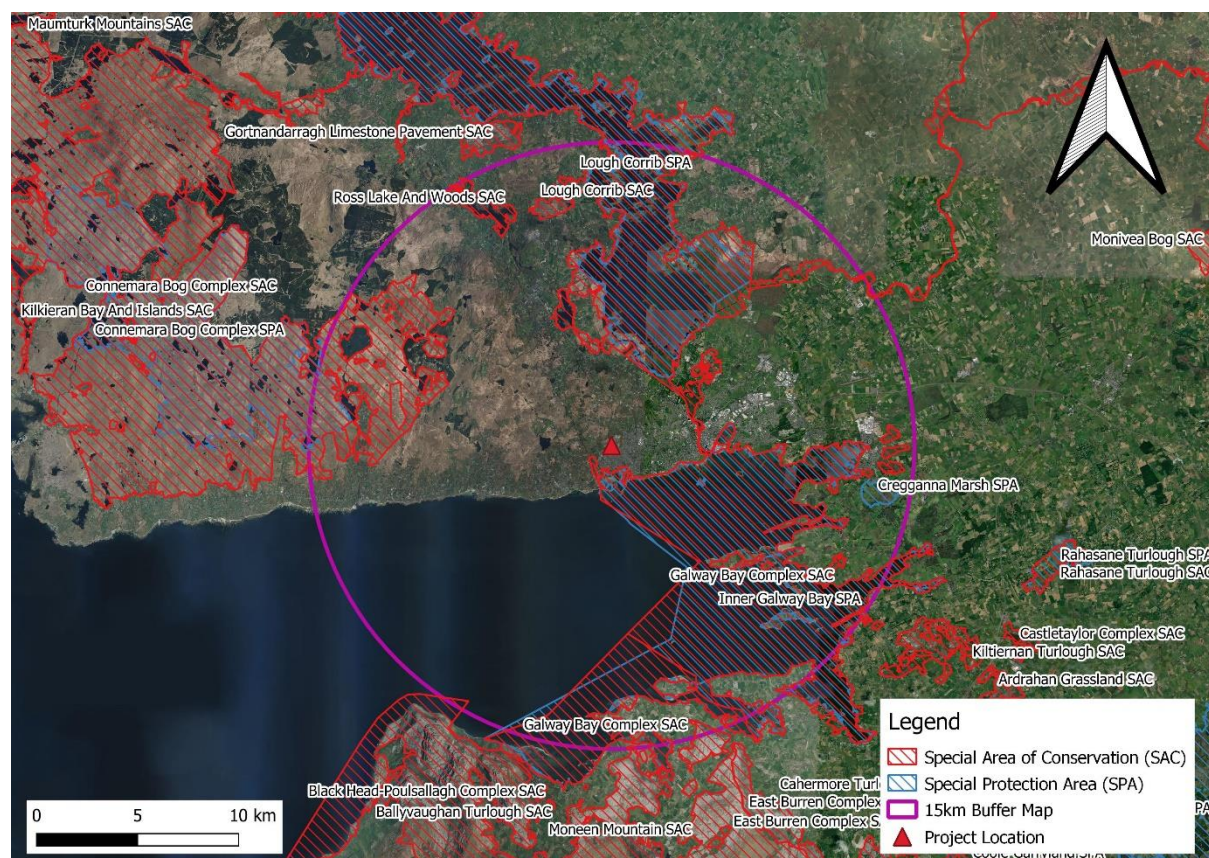


Figure 6: Proposed development site in Ballyburke in relation to sites within 15km

Table 2: European sites/ sites within 15km of the proposed development

European Site Name and Code:	Distance of site from proposed project & connectivity pathways	Conservation Objectives	Qualifying Interests (* = priority habitat)
Galway Bay Complex SAC (000268)	1.03km south Yes indirect hydrological link 1.3km south / south-east and 1.3km downstream via the Barna_010 stream	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:	<u>Habitats (* denotes priority habitat)</u> Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons* [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]

			Salicornia and other annuals colonising mud and sand [1310] Atlantic Salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Turloughs* [3180] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>* [7210] Alkaline fens [7230] Limestone pavements * [8240] <u>Species</u> Harbour Seal (<i>Phoca vitulina</i>) [1365] <i>Lutra lutra</i> (Otter) [1355]
Inner Galway SPA (004031)	1.3km South Yes, indirect hydrological link 1.3km south / south-east and 1.3km downstream via the Barna_010 stream	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	<u>Birds</u> Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Dunlin (<i>Calidris alpina</i>) [A149] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Redshank (<i>Tringa totanus</i>) [A162] Common Gull (<i>Larus canus</i>) [A182] Great Northern Diver (<i>Gavia immer</i>) [A003] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Turnstone (<i>Arenaria interpres</i>) [A169] Lapwing (<i>Vanellus vanellus</i>) [A142] Wigeon (<i>Anas penelope</i>) [A050] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Curlew (<i>Numenius arquata</i>) [A160] Black-throated Diver (<i>Gavia arctica</i>) [A002]

			Golden Plover (<i>Pluvialis apricaria</i>) [A140] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Teal (<i>Anas crecca</i>) [A052] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Common Tern (<i>Sterna hirundo</i>) [A193] Grey Heron (<i>Ardea cinerea</i>) [A028] <u>Habitats</u> Wetlands
Lough Corrib SAC (00297)	4.2km east There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010).	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:	<u>Annex I Habitats</u> Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130] 3140 Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.[3140] Water courses of plain to montane levels with <i>the Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Active raised bogs* [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the <i>Rhynchosporion</i> [7150] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>* [7210] Petrifying springs with tufa formation (<i>Cratoneurion</i>)* [7220]

			Alkaline fens [7230] Limestone pavements* [8240] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Bog woodland* [91D0] <u>Annex II Species</u> Brook Lamprey (<i>Lampetra planeri</i>) [1096] Sea Lamprey (<i>Petromyzon marinus</i>) [1095] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>) [1303] Salmon (<i>Salmo salar</i>) [1106] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) [1092] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) [1029] 1355 Otter (<i>Lutra lutra</i>) [1355] Slender Green Feather-moss (<i>Hamatocaulis vernicosus</i>) [6216] 1833 Slender Naiad (<i>Najas flexilis</i>) [1833]
Lough Corrib SPA (004042)	4.3km north east There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010). Furthermore, the	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	<u>Birds</u> Pochard (<i>Aythya farina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Common Scoter (<i>Melanitta nigra</i>) [A065] Common Gull (<i>Larus canus</i>) [A182] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Hen Harrier (<i>Circus cyaneus</i>) [A082] Coot (<i>Fulica atra</i>) [A125] Gadwall (<i>Anas strepera</i>) [A051] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Shoveler (<i>Anas clypeata</i>) [A056] Common Tern (<i>Sterna hirundo</i>) [A193] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] <u>Annex I Habitats</u> Wetlands

	proposed development site or its environs do not support suitable foraging or roosting habitat for avifaunal species for this European Site.		
Ross Lake and Woods SAC (000132)	11.6km north west There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010).	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:	<u>Annex I Habitats</u> Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140] <u>Annex II Species</u> Lesser Horseshoe Bat <i>Rhinolophus hipposideros</i> [1303]
Connemara Bog Complex SAC (002034)	9.4km west/north west There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:	<u>Annex I Habitats</u> Coastal lagoons* [1150] Reefs [1170] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130] Natural dystrophic lakes and ponds [3160] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Blanket bogs (* if active bog) [7130] 7140 Transition mires and quaking bogs

	(Knock (Furbo)_SC_010).		Depressions on peat substrates of the <i>Rhynchosporion</i> [7150] Alkaline fens [7230] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] <u>Annex II Species</u> Salmon (<i>Salmo salar</i>) [1106] Slender Naiad (<i>Najas flexilis</i>) [1833] Otter (<i>Lutra lutra</i>) [1355] Marsh Fritillary (<i>Euphydryas aurinia</i>) [1065]
Connemara Bog Complex SPA (004181)	13km west/north west There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010). Furthermore, the proposed development site or its environs do not support suitable foraging or roosting habitat for avifaunal species for this European Site.	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	<u>Birds</u> Cormorant <i>Phalacrocorax carbo</i> [A017] Merlin <i>Falco columbarius</i> [A098] Golden Plover <i>Pluvialis apricaria</i> Common Gull <i>Larus canus</i> [A182]
Cregganna Marsh SPA (004142)	12.6km east There is no hydrological or hydrogeological connectivity between the proposed development site and this	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation	<u>Birds</u> Greenland White-fronted Goose <i>Anser albifrons flavirostris</i> [A395]

	European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010). Furthermore, the proposed development site or its environs do not support suitable foraging or roosting habitat for avifaunal species for this European Site.	Interests for this SPA.	
Black Head - Poulsallagh Complex SAC (000020)	14.5km south/south west There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010).	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:	<u>Annex I Habitats</u> Reefs [1170] Perennial vegetation of stony banks [1220] Petalwort <i>Petalophyllum ralfsii</i> [1395] Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates [6210] (Festuco Brometalia)(*important orchid sites) Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [6510] Petrifying springs with tufa formation (Cratoneurion) [7220] Limestone pavements [8240] Submerged or partially submerged sea caves [8330]
East Burren Complex SAC (001926)	14.1km south There is no hydrological or hydrogeological connectivity between the proposed development site and this	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for	<u>Annex I Habitats</u> Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp</i> [3140] 3260 Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]

	European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010).	which the SAC has been selected:	Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [6510] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>* [7210] Petrifying springs with tufa formation (<i>Cratoneurion</i>)* [7220] 7230 Alkaline fens Limestone pavements* [8240] Caves not open to the public [8310] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)* [91E0] <u>Annex II Species</u> Marsh Fritillary <i>Euphydryas aurinia</i> [1065] Lesser Horseshoe Bat <i>Rhinolophus hipposideros</i> [1303] Otter <i>Lutra lutra</i> [1355]
Moneen Mountain SAC (000054)	14.9km south There is no hydrological or hydrogeological connectivity between the proposed development site and this European Site. This European Site is not located within the same surface water sub catchment as the proposed development site (Knock (Furbo)_SC_010).	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:	<u>Annex I Habitats</u> Turloughs*[3180] Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Petrifying springs with tufa formation (<i>Cratoneurion</i>)*[7220] Limestone pavements*[8240] <u>Annex II Species</u> Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>) [1303] Marsh Fritillary (<i>Euphydryas aurinia</i>)[1065]

Based on the project description as set out in Section 4.2 and the ZOI over which the effect could occur, i.e. the distance at which the proposed development could have potential effects, using professional judgement and published guidance, potential effects can be identified. Table.3 focuses on the potential effects that could occur during the construction and operational phase of the proposed project.

Table 3: Potential effects

Potential Effect	Description of Effect	Zol- likely area over which effect could occur
Construction		
Construction outside the Zol no	Direct disturbance (i.e. habitat removal, reduction, fragmentation.	The construction works for the proposed development will be confined to the project site, so therefore, there is no potential for this impact to occur to any of the European/ sites either within or outside the Zol. The proposed development will be fully regulated to manage all on site activities including CEMP for all on site events. Therefore, there is no potential for this impact to occur.
Spread of Invasive Species	Further spread of Invasive species.	Site works may have potential to enable the spread of these species.
Air Quality/ Dust		Dust deposition is the predominant risk which may arise from construction activities arising from soil/aggregate movement and dust mobilised from vehicle movements. However, given the proposed design parameters dust deposition and residual effects to habitat or species are considered highly unlikely. The nearest European/ site is 1.3km from the Site. Advice provided within the Design Manual for Roads and Bridges (DMRB) suggests that the most sensitive species appear to be affected by dust deposition at distances > 200m from the source. Accordingly, given the low risk of dust mobilisation on Site, embedded design parameters and distance to the nearest European site it is considered unlikely that dust deposition will have had an impact on any nearby designations.
Sediment and pollution events	Indirect impacts on habitat (e.g. reduction in surface water quality/ introduction of invasive spp.)	The proposed development will be fully regulated to manage all on site activities including CEMP for all on site events. However, there is potential for this impact to occur owing to an indirect hydrological link to the nearest European site
Loss Noise and vibration/unfamiliar visual stimuli (e.g. machinery/people).	Disturbance (e.g. noise/recreational etc.)	Of the designations in the search area, it is considered that the SPAs would be sensitive to noise disturbance, given that they are designated on the basis of supporting bird species. Activities within Site which may contribute to increased noise levels include construction noise from building works and movement of construction machinery traffic activities. The nearest European/ sites are in excess of 1.3km from the proposed development site. Given the

		distance of the SPAs from the Site, it is considered that over this distance the noise levels within the Site would have had a negligible impact on the SPA.
<u>Operational</u>		
The operational phase to this project will be the management of the residential and commercial properties (maintenance and services) there are no operational impacts predicted to occur.		

4.5 Sites within the Zol

It has been determined that two of sites within 15km of the proposed development site falls within the Zol, The Galway Bay Complex SAC (000268) and Inner Galway Bay SPA (004031). The proposed development site has an indirect hydrological link to the above European/ sites via the Barna Stream that runs through the site. The assessment of LSE (Likely Significant Effects) upon sites within the Zol have been considered in table.4 below.

Table 4: Assessment of Likely Significant Effects (LSE)

European site name and code	Distance of site from project	Conservation Objectives and Qualifying Interests/Special conservation Interests (*=priority habitat).	Identification of Potential Effects and potential Pathway	Potential for Likely Significant Effects (LSE)
Special Area of Conservation (SPA)				
Galway Bay Complex SAC (000268)	1.03 km	<i>To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:</i> <u>Annex I Habitats</u> Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons* [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonising mud and sand [1310] Atlantic Salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Turloughs* [3180]	Spread of invasive Species: From movement of construction traffic. Sediment and Pollution: Sediment and pollution events from machinery used during the project	Spread of invasive Species: No. No non-native invasive plant species were identified within the proposed development site during the site walkover surveys Sediment and Pollution: No. Based on current information and owing to proximity between the proposed development site and the Galway Bay Complex SAC there is some potential for the proposed development to contribute towards changes in water quality of the two European sites downstream within the Zol of the proposed development, namely, Inner Galway Bay SPA and Galway Bay Complex SAC. The potential effects could only occur without best practice measures on source-pathway receptors and key drainage design controls which will be implemented and incorporated into final design plans during the project's construction phase and into the project's operational phase plans. Taking into account that all drainage works on site will be constructed in accordance with Irish Water Standards STD-WW-01_STD-WW-34 and according to GCC

		<i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>* [7210] Alkaline fens [7230] Limestone pavements * [8240] <u>Annex II Species</u> Harbour Seal (<i>Phoca vitulina</i>) [1365] <i>Lutra lutra</i> (Otter) [1355]	Disturbance/Noise: Disturbance (e.g. noise/recreational etc.) Habitat loss/ fragmentation : Habitat removal, reduction, fragmentation	drainage design requirements, there is no potential for effects on European Sites. Disturbance/Noise: No. The site is located 1.3km from the SAC boundary and due to the detachment distance, will not result in increased noise/disturbance at this stage due to potential site works Habitat loss/ fragmentation : No. The proposed development site does not support suitable habitat for Qualifying Interests connected with SAC. The works will be confined to the proposed development site so will not contribute to habitat loss or land take from the SAC and also will not contribute to habitat or species fragmentation.
Inner Galway Bay SPA (004031)	1.3km	<i>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</i> <u>Birds</u>	Spread of invasive Species: From movement of construction traffic.	Spread of invasive Species: No. No non-native invasive plant species were identified within the proposed development site during the site walkover surveys

	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Dunlin (<i>Calidris alpina</i>) [A149] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Redshank (<i>Tringa totanus</i>) [A162] Common Gull (<i>Larus canus</i>) [A182] Great Northern Diver (<i>Gavia immer</i>) [A003] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Turnstone (<i>Arenaria interpres</i>) [A169] Lapwing (<i>Vanellus vanellus</i>) [A142] Wigeon (<i>Anas penelope</i>) [A050] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Curlew (<i>Numenius arquata</i>) [A160] Black-throated Diver (<i>Gavia arctica</i>) [A002] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Teal (<i>Anas crecca</i>) [A052] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Ringed Plover (<i>Charadrius hiaticula</i>) [A137]	Sediment and Pollution: Sediment and pollution events from machinery used during the project Disturbance/Noise: Disturbance (e.g. noise/recreational etc.)	Sediment and Pollution: No. Based on current information and owing to proximity between the proposed development site and the Galway Bay Complex SAC there is some potential for the proposed development to contribute towards changes in water quality of the two European sites downstream within the Zol of the proposed development, namely, Inner Galway Bay SPA and Galway Bay Complex SAC. The potential effects could only occur without best practice measures on source-pathway receptors and key drainage design controls which will be implemented and incorporated into final design plans during the project's construction phase and into the project's operational phase plans. Taking into account that all drainage works on site will be constructed in accordance with Irish Water Standards STD-WW-01_STD-WW-34 and according to GCC drainage design requirements, there is no potential for effects on European Sites. Disturbance/Noise: No. The site is located 1.3km from the SPA boundary and due to the detachment distance, will not result in increased noise/disturbance at this stage due to potential site works
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		Common Tern (<i>Sterna hirundo</i>) [A193] Grey Heron (<i>Ardea cinerea</i>) [A028] <u>Habitats</u> Wetlands	Habitat loss/ fragmentation : Habitat removal, reduction, fragmentation	Habitat loss/ fragmentation : No. The proposed development site does not support suitable habitat for Qualifying Interests connected with SAC. The works will be confined to the proposed development site so will not contribute habitat loss or land take from the SPA and also will not contribute to habitat or species fragmentation.
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5. Assessment of Likely Significant Effects

The determination of LSE is considered to be any effect that may possibly occur as a consequence of the project that would undermine the conservation objectives for the site's Annex I habitats or Annex II species. As shown in Table 3 (Section 4.5), the potential effects from the project on surrounding European Sites have been shown to be negligible and not likely to occur.

It has been determined that there is a hydrological link between the proposed development site and European sites, via the Barna Stream which enters the proposed development site via a culvert at northern end of the site through a residential development and exits the site via a culvert at the southern end of the site by the Clairin Road. The stream provides linkages to nearby European Sites; Galway Bay Complex SAC and Inner Galway Bay SPA.

Based on current information and owing to proximity between the proposed development site and the Galway Bay Complex SAC there is some potential for the proposed development to contribute towards changes in water quality of the two European sites downstream within the ZoI of the proposed development, namely, Inner Galway Bay SPA and Galway Bay Complex SAC.

The potential effects could only occur without best practice measures on source-pathway receptors, and key drainage design controls, which will be implemented and incorporated into final design plans during the project's construction phase and into the project's operational phase plans.

Taking into account that all drainage works on site will be constructed in accordance with Irish Water Standards STD-WW-01_STD-WW-34 and according to GCC drainage design requirements, there is no potential for effects on European Sites.

5.1 In combination Effects

In order to take account of in combination effects, plans, and projects that are completed, approved but uncompleted, or proposed (but not yet approved) should be considered (EC, 2001). A search for relevant plans and projects within the surrounding area was undertaken for assessment of in combination impacts. The sources listed below were searched:

- Galway CityCouncil
- An Bord Pleanala
- National Road Authority

No significant developments were identified from the above sources within close proximity of the proposed development. The majority of proposed and permitted developments within the vicinity surrounding the proposed development site over the previous 5 years are largely composed of private single dwelling

developments, extensions, alterations to existing buildings and demolitions. Given the small nature of these developments within predominantly private dwellings there is unlikely to be any adverse in combination effects from the proposed development on European Sites.

6. Screening Statement and Conclusion

This assessment considers whether the proposed development of a site by Galway City Council, which will consist of an affordable and social housing scheme with public civic/plaza space incorporating a creche, local retail unit, cafe, and all associated works at Ballyburke, Knockacarra, Co. Galway, alone or in combination with other projects or plans, will have adverse effects on the integrity of nearby sites. Following examination of the proposed development, including the nature and location of works, it is concluded that there is no potential to impact on Annex I habitats or Annex II species associated with European Sites, namely the Galway Bay Complex SAC (000268) located 1.03km south and Inner Galway Bay SPA (004031) located 1.3km south of the proposed development site. As this assessment has not identified any potential significant impacts to nearby sites, a Stage 2 Appropriate Assessment and subsequent Natura Impact Statement are not deemed necessary.

The findings of this screening for Appropriate Assessment are summarised in the Findings of no Significant Effects Matrix hereunder:

Table 5: Findings of No Significant Effects Matrix

Findings of No Significant Effects Screening Matrix	
Name of project or plan	Proposed development of an affordable and social housing scheme by Galway City Council, Ballyburke, Knockacarra, Galway City, Co. Galway
Name and location of European site	Galway Bay Complex SAC 1.03km S Inner Galway Bay SPA 1.3km S Lough Corrib SAC 4.2km E Lough Corrib SPA 4.3km NE Ross Lake and Woods SAC 11.6km NW Connemara Bog Complex SAC 9.4km W/ NW Connemara Bog Complex SPA 13km W/ NW Cregganna Marsh SPA 12.6km SE Black Head -Poulsallagh Complex SAC 14.5km S/ SW East Burren Complex SAC 14.1km S Moneen Mountain SAC 14.9km S
Description of the project or plan	For a proposed mixed-use development by Galway City Council for a site in Ballyburke, located in Knockacarra, Galway City, Co. Galway
Land take	None from European sites and no further land take is required from the Site as the boundaries are already in place.
Resource requirements (Water abstraction etc.)	No resources from a Natura site are required or have been required.
Sediment and Pollution (disposal to land, water or air)	Based on current information and owing to proximity between the proposed development site and the Galway Bay Complex SAC there is some potential for the proposed development to contribute towards changes in water quality of

	the two European sites downstream within the Zol of the proposed development, namely, Inner Galway Bay SPA and Galway Bay Complex SAC. The potential effects could only occur without best practice measures on source-pathway receptors and key drainage design controls which will be implemented and incorporated into final design plans during the project’s construction phase and into the project’s operational phase plans. Taking into account that all drainage works on site will be constructed in accordance with Irish Water Standards STD-WW-01_STD-WW-34 and according to GCC drainage design requirements, there is no potential for effects on European Sites.	
Excavation requirements	There are and have been no excavation requirements within the European sites or those that could affect European sites through source pathway modelling.	
Transportation requirements	Transportation of materials to and from Site will not affect / would not have affected European sites in a way that would be measurable.	
Is the project or plan directly connected with or necessary to the management of the site?	No.	
Are there other projects or plans that together with the project or plan being assessed could affect the site?	No. Plans and projects within the local area are predominantly small scale residential and commercial developments.	
The Assessment of Significance of Effects		
Describe how the project or plan (alone or in combination) is likely to affect the European site.	No likely effects determined. All potential impacts are determined as extremely unlikely.	
Explain why these effects are not considered significant	No impacts have been determined therefore there can be no alteration of the conservation condition or objectives of the European sites due to the proposed works.	
Data collected to carry out the assessment		
Who carried out the assessment?	Sources of Data	Level of Assessment
Maurice O’Connor Senior Environmental Project Manager Envirico Ltd. Robert Mc Namara, Project Ecologist Envirico Ltd.	Refer to Section 7. References	Desk study plus field assessment

7. References

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- Fossitt J.A. 2000. A Guide to Habitats in Ireland. Heritage Council, Kilkenny.
- NRA, 2009. Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority, Ireland.
- NPWS (2013) Conservation Objectives of the relevant sites, particularly Galway Bay SPA Site Code 004031 and Galway Bay Complex SAC Site Code 000268, both of which are in proximity of the proposed development <https://www.galwaycity.ie/development-plan-2023-2029>
- <https://www.galwaycity.ie/online-planning-system>
- <https://www.myplan.ie/national-planning-application-map-viewer/>
- <https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de>