APPROPRIATE ASSESSMENT SCREENING STATEMENT

for the

Proposed Ballaghaderreen Town Public Realm Enhancement Project at Ballaghaderreen, Co. Roscommon

prepared for

Comhairle Contae Ros Comáin
Roscommon County Council

on behalf of

BDP.

by FGE Consulting

FGE Consulting

June 2021

Document Details	
Client	Roscommon County Council
Document Title	AA Screening Statement for the proposed Ballaghaderreen Town Public Realm Enhancement Project at Ballaghaderreen, Co. Roscommon
Publisher	Finch Geospatial and Environmental Consulting, Kilmolin, Enniskerry, Co. Wicklow, Ireland.
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Date	18/06/2021
Status	Document for submission

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1. Introduction

1.1. Background

FGE Consulting has been appointed by BDP. on behalf of Roscommon County Council to prepare this Appropriate Assessment (AA) Screening Report (also known as *Stage One* AA) to support AA procedures to determine whether or not a Natura Impact Statement (NIS; *Stage Two* AA) is required for the proposed Ballaghaderreen Town Public Realm Enhancement Project at Ballaghaderreen, Co. Roscommon (the proposed public realm project), in accordance with the requirements of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the "Habitats Directive").

1.2. Report Structure

This report sets out the legislative context for the assessment process with reference to relevant guidelines and highlight the experience and qualifications of the author. It then details the proposed scheme and the works associated with this which are then interrogated to identify any possible effects which may be ecologically relevant. Following this, the metrics for the assessment of 'significance' of these effects are explained and applied to each of the European sites identified to be ecologically connected to the proposed scheme area. This assessment is undertaken in view of the conservation objectives and known sensitivities of the qualifying interests and special conservation interests for each European site. Other plans and projects are then considered to identify any likely in combination effects which may result in significant adverse effects to European sites.

1.3. Legislative Context

The Habitats Directive provides legal protection for habitats and species of European importance. The overall aim of the Habitats Directive is to maintain or restore the "favourable conservation status" of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Habitats Directive as above and Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated to afford protection to the most vulnerable of them. These two designations are collectively known as European sites. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect such sites. Article 6(3) establishes the requirement for AA. These requirements are implemented in the Republic of Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and the Planning and Development Act 2000 (as amended).

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'.*

The AA process relates to the protection of species listed in Annex I and Annex II of the Habitats Directive which form the Natura 2000 network (Article 3(1)). Species breeding and resting places of species listed in Annex IV of the Habitats Directive are nationally protected in Ireland as per Articles 15 and 16 of the Habitats Directive. The species listed in Annex IV do not form part of the Natura 2000 network as they are not mentioned in Article 3(1) of the Directive which defines the Natura 2000 network.

Article 3(1) of the Habitats Directive States:

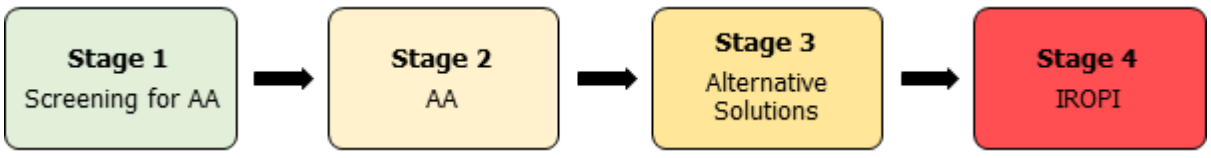
> *'A coherent European ecological network of special areas of conservation shall be set up under the title Natura 2000. This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range'.*

AA is an assessment of the likely significant effects arising from a plan or project, either individually or in combination with other plans or projects, to assess if the plan or project will adversely affect the integrity of the European site concerned including implications in view of the European site's conservation objectives. These sites consist of SACs and SPAs and provide for the protection and long-term survival of Europe's most valuable and threatened species and habitats. The AA process is concluded by the relevant competent authority in the formation of a determination in accordance with article 6(3) of the Habitats Directive.

1.4. Overview of the Habitats Directive and Appropriate Assessment Process

The Habitats Directive itself promotes a hierarchy of avoidance, mitigation and compensatory measures. This approach aims to avoid any effects on European sites by identifying possible effects early in the plan or project making process and avoiding such effects. Second, the approach involves the application of mitigation measures, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If potential significant effects on the integrity of European sites remain, and no further practicable mitigation is possible, the approach requires the consideration of alternative solutions. If no alternative solutions are identified and the plan or project is required for imperative reasons of overriding public interest, then compensation measures are required for any remaining adverse effects.

There are four main stages in the AA process:



Stage One: Screening

The process that identifies the likely impacts upon a European site of a project or plan, either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant.

Stage Two: Appropriate Assessment
The consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse effects mitigation measures are required to avoid or minimise potential effects. The details of these mitigation measures are then assessed in the context of the ecological integrity of the plan/project characteristics to ensure no significant adverse effects on European sites. If this assessment process shows there are no residual significant effect, then the process may end at this stage, stage two, of the AA process which are formalised in Natura Impact Statements (NIS) reports which support the overall AA process. However, if the likelihood of significant impacts remains, then the process must proceed to Stage Three.

Stage Three: Assessment of Alternative Solutions
The process that examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European site.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain
An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

1.5. Approach

This AA screening is based on best scientific knowledge and has utilised ecological and hydrological expertise. In addition, a detailed online review of published scientific literature and 'grey' literature was conducted. This included a detailed review of the National Parks and Wildlife Website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives. The EPA Envision map viewer (www.epa.ie) and available reports were also reviewed, as was the NPWS (2019) publication "The Status of Protected EU Habitats and Species in Ireland".

The ecological desktop study that has been completed for the AA screening of the proposed project, comprised the following elements:

- Identification of European sites within 15km[1] of the subject lands;
- Identification of European sites within 15km of the site with identification of potential pathways to specific sites (if relevant) greater than 15km from the subject lands;
- Review of the NPWS site synopses and conservation objectives for European sites within 15km and for which potential pathways from the proposed site have been identified; and
- Examination of available information on protected species.

Source-Pathway Receptor Model
Ecological impact assessment of potential effects on European sites is conducted following a standard source-pathway-receptor model, where, in order for an effect to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – e.g. pollutant run-off from proposed public realm project;
- Pathway(s) – e.g. groundwater connecting to nearby qualifying wetland habitats; and,
- Receptor(s) – qualifying aquatic habitats and species of European sites.

[1] While the actual zone of impact is likely to be much smaller, the default 15km zone extent has been applied on a precautionary basis

In the interest of this report, receptors are the ecological features that are known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the proposed Ballaghaderreen Town Public Realm Enhancement Project that is known to interact with ecological processes. The pathways are any connections or links between the source and the receptor. This report provides information on whether direct, indirect and cumulative adverse effects could arise from the proposed public realm project.

Guidance

The AA screening has been prepared taking into account legislation including the aforementioned legislation and guidance including the following:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government, 2009;*
- *Commission Notice: Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC", European Commission 2018;*
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC", European Commission Environment DG, 2002; and*
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC", European Commission, 2000.*

1.6. Author Details

Domhnall Finch is a Senior Ecologist with 8 years' experience working on major national and local scale projects. Domhnall graduated from University College Dublin in 2011 with a B.Sc. degree in Environmental Science, Master's degree in Biodiversity and Conservation from the University of Leeds in 2012 and obtained a PhD from the University of Sussex in 2020. He has a range of ecological skills which include habitat mapping, ecological surveying, data interpretation and report writing. Domhnall is a vegetative plant specialist, who has a wealth of experience classifying riparian habitats and identifying rare floral species. Domhnall has a vast knowledge of riparian and freshwater ecosystems and undertakes freshwater surveys regularly. Domhnall holds 4 national protected species licenses and has a lot of experience optioning surveying licenses for aquatic species such as the white clawed crayfish. He is also a Bat specialist with a wealth of experience, in acoustic surveying and monitoring of bats. Throughout Domhnall career he has worked on a number of large-scale multifaceted projects such as the Wild Atlantic Way Monitoring Programme. For this work, Domhnall designed and oversaw all ecological field work relating to the Environmental Impact Assessment (EIA) and AA.

2. Description of proposed public realm project

2.1. Receiving Environment

The town of Ballaghaderreen is located at the convergence of a number of regional and local roads – L1244 (formerly the N5 National Primary route) and R293 regional road. The historic core of the town comprises the area around the Market Square, Main Street, Barrack Street and Pound Street area. These traditional core retailing areas remain relatively unchanged since the mid-twentieth century, with some expansion to the north-west to accommodate a SuperValu supermarket. The town centre remains the primary retail area in Ballaghaderreen. The majority of residential development has taken place outside the town core along the approach roads with smaller infill developments within the centre itself.

Ballaghaderreen itself is a semi-urban settlement surrounded by agriculture on all sides. To the west of it lies the Gleann Ard stream and to the east of it lies the Ballaghaderreen stream. These both flow into the River Lung, before eventually flowing out into the sea at the mouth of the River Shannon.

Within the plan boundary area, the majority of the site comprises of buildings and artificial surfaces with very few trees present in the town. The carparking area to the extreme east of the scheme area is bounded by a disused excavation area which is surrounded by a woodland area (see map below). The woodland is outside of the redline boundary. The area within the redline boundary has negligible ecological value as it is so intensively built up.

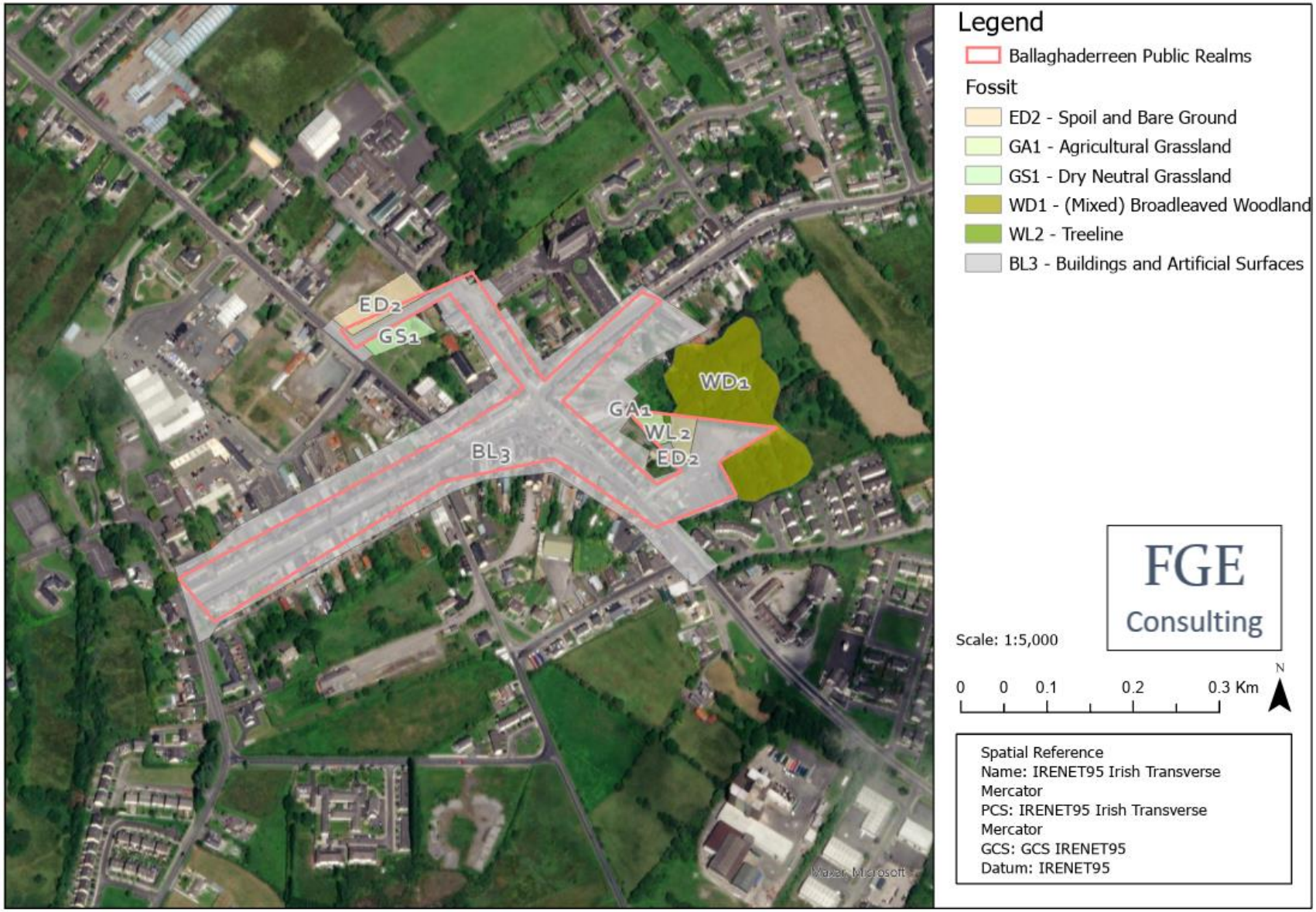


Figure 2.1.1 Habitat map of the receiving environment following the Fossit level III coding system, as at May 2021

2.2. Overview of the proposed public realm project

There are a number of prominent public buildings, of historic and architectural significance, that help to define the historic core of the town – the Library, the Courthouse, St. John's School (now vacant), the Cathedral, and St. Nathy's College (former military barracks). The public realm proposals include measures to enhance the setting of these public buildings so that they acquire a greater prominence and help to provide a series of visual anchors for the town centre. The final project will provide the following opportunities for Ballaghaderreen:

- Enhance the streetscape through new high-quality paving materials, street furniture and street lighting
- Increase pedestrianised space by widening of footways
- Relocate on-street parking
- Provide street tree planting
- Enhance the new gateway into the town centre at Pound Street.
- Traffic circulation measures around St. Nathy's School
- Introduction of cycleways

2.3. Details of Proposal

The proposal includes works to develop a Public Realm Enhancement Plan within the town centre to enhance the existing areas and streetscapes including (Figure 2.3.1):

- Main Street – running from Market Square (at its east end) to the Courthouse (to the west; Figure 2.3.2):
    - Streetscaping works to facilitate footpaths and cycleway access on the main street.
    - Alteration to onsite carparking facilities.
- Market Square – where the street widens at the junction of Main Street, Barrack Street and Pound Street; site of the historic Market House (now demolished; Figure 2.3.3):
    - Public space amendments to facilitate clustering or gathering.
- Barrack Street – the southern approach to the town centre (from the access road to the public car park to Market Square; Figure 2.3.4):
    - Streetscaping works to facilitate footpaths and cycleway access on the Market Square; whilst also enhancing street furniture and street lighting.
    - Alteration to onsite carparking facilities, giving greater consideration for pedestrian access.
- Pound Street – the eastern approach to the town centre (from the Cathedral of the Annunciation and St. Nathy's College to Market Square (Figure 2.3.5):
    - Streetscaping works to facilitate greater pedestrian access, alternative carparking facilities, and new trees along the street.
- Cathedral Street and Chapel Street – leading to the Cathedral and St. Nathy's College (Figure 2.3.6):
    - Streetscaping works to facilitate greater pedestrian access, alternative carparking facilities, and new trees along the street.
- The Public Carpark (to south of town centre) and the 'Plots' (a back-land area to the south of Pound Street (Figure 2.3.7):
    - Aesthetically enhance the area.

Overall, it is intended that the Ballaghaderreen will be reimagined as a more urban amenity-based destination where a greater balance is struck between pedestrian and vehicular movement, in what is currently a vehicle dominated environment. Public realm improvements will be delivered through the above-mentioned hardscaping, landscaping and lighting. New surfaces will be provided and the scheme will provide for the scope to have increased pedestrian space which will have the potential to act as a communal urban space for staging events, festivals, homecomings etc.

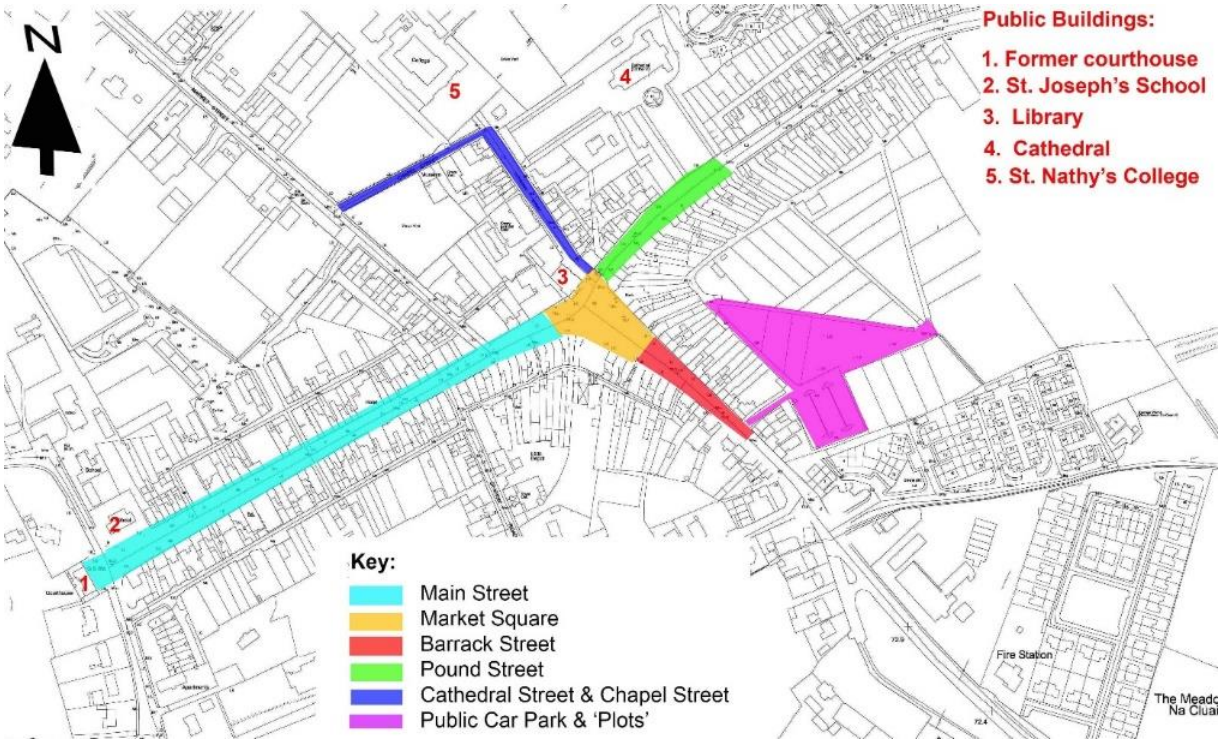


Figure 2.3.1 Overview of locations of each of the six areas for public enhancement as part of the proposed Ballaghaderreen Public Realm Plan.

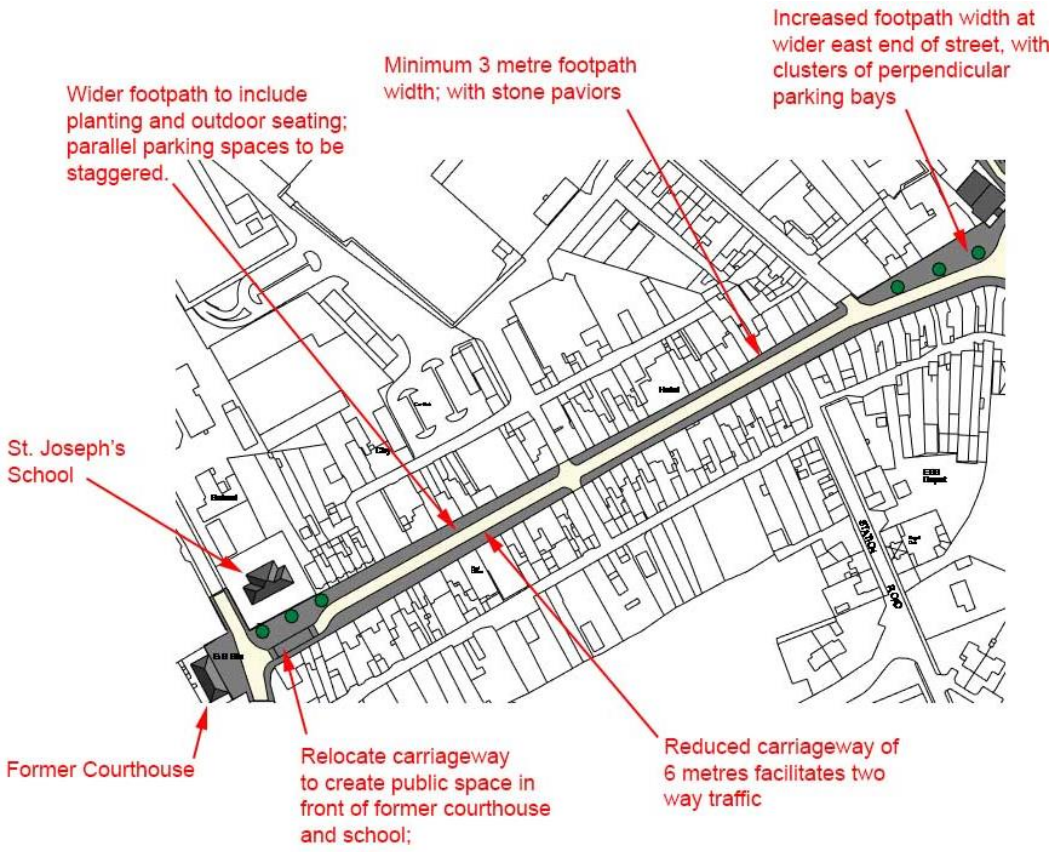


Figure 2.3.2 Proposed public realm works to Main Street.

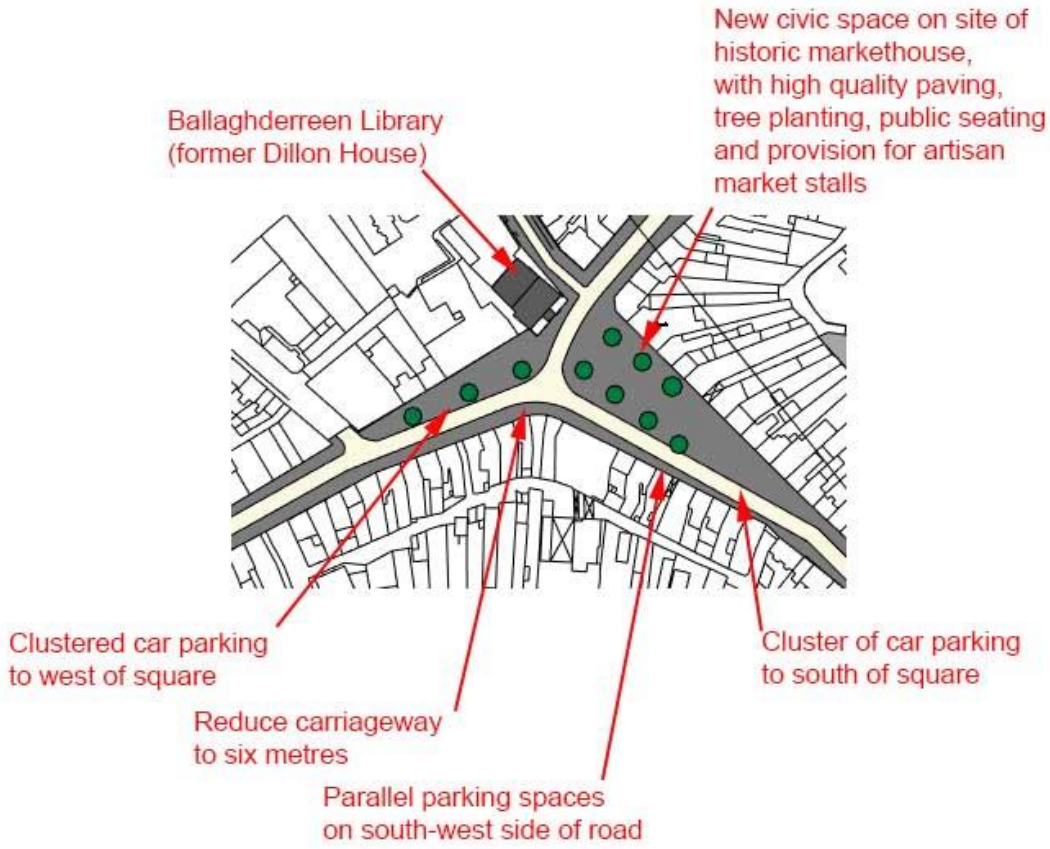


Figure 2.3.3 Proposed public realm works for Market Square

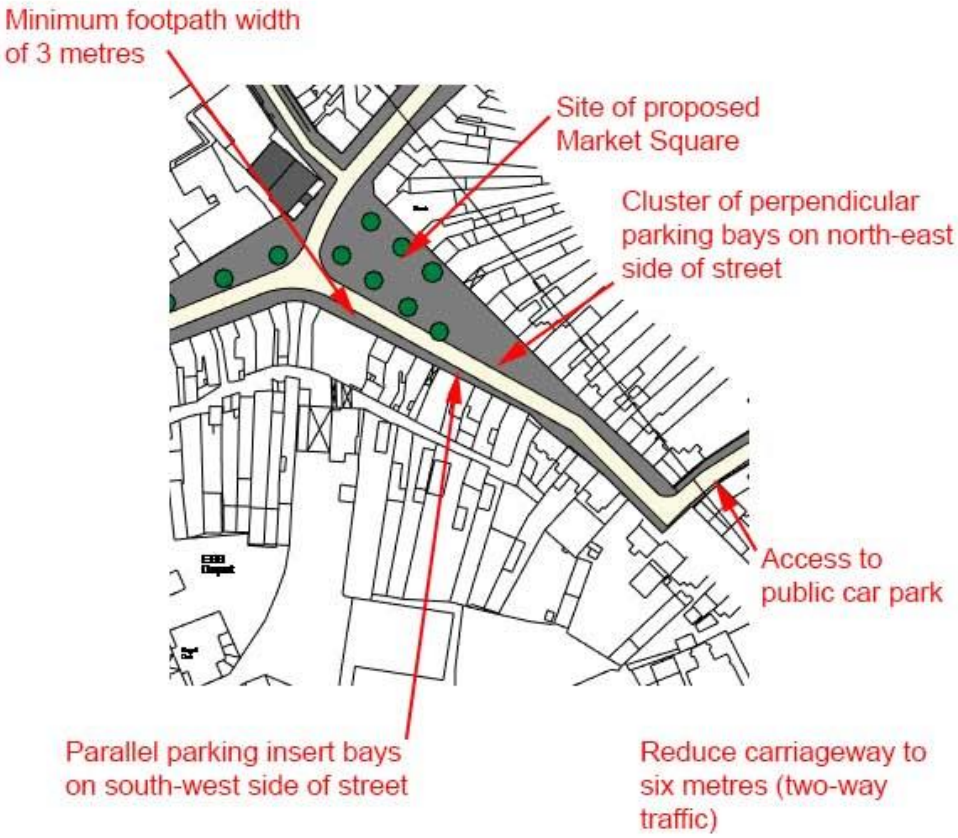


Figure 2.3.4 Proposed public realm works for Barrack Street

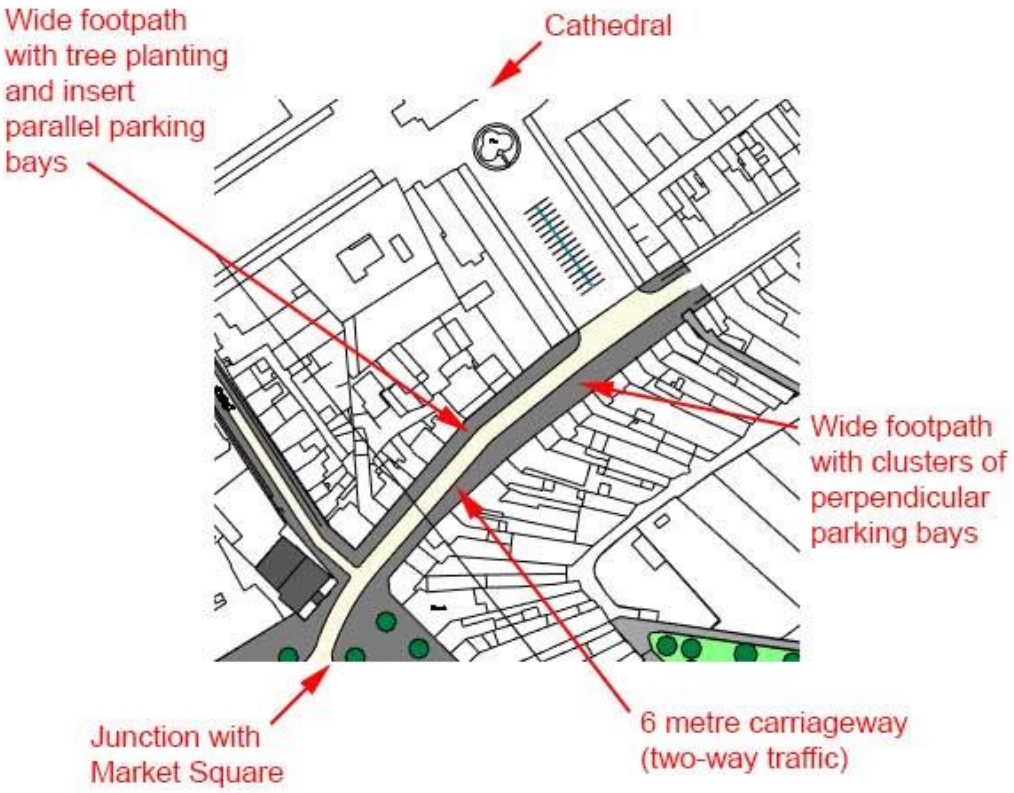


Figure 2.3.5 Proposed public realm works to Pound Street

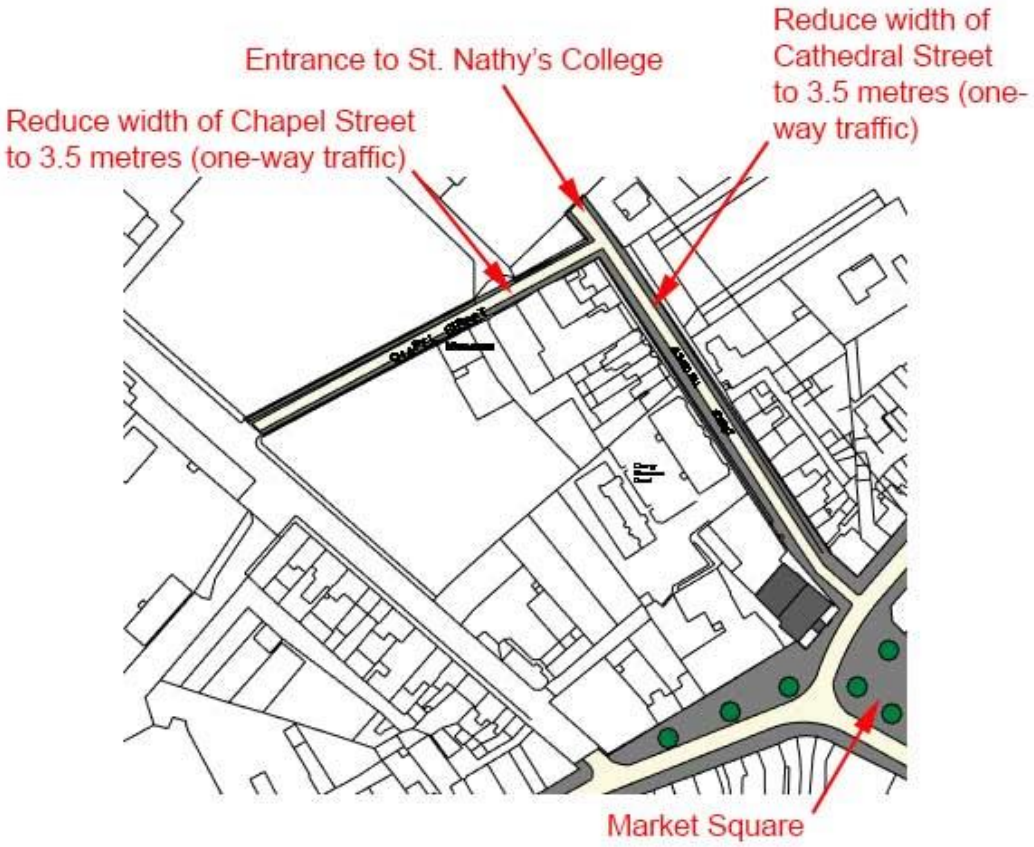


Figure 2.3.6 Proposed public realm works to Cathedral Street and Chapel Street

Figure 2.3.7 Proposed public realm works to Public Car

3. Screening for Appropriate Assessment

3.1. Introduction

This stage of the process identifies any likely significant effects on European sites from the project, either alone or in combination with other projects or plans. A series of questions are asked in order to determine:

- Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a European site.
- Whether the project will have a potentially significant effect on a European site, either alone or in combination with other projects or plans, in view of the site's conservation objectives or if residual uncertainty exists regarding potential impacts.

An important element of the AA process is the identification of the "'conservation objectives", "Qualifying Interests" (QIs) and/ or "Special Conservation Interests" (SCIs) of European sites requiring assessment. QIs are the habitat features and species listed in Annexes I and II of the Habitats Directive for which each European site has been designated and afforded protection. SCIs are wetland habitats and bird species listed within Annexes I and II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support QIs and SCIs are considered as part of the assessment.

Site-Specific Conservation Objectives (SSCOs) have been designed to define favourable conservation status for a particular habitat or species at that site. According to the European Commission interpretation document 'Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC', paragraph 4.6(3):

> *"The integrity of a site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."*

Favourable conservation status of a habitat is achieved when:

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

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;
- 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 of the Appropriate Assessment where they were deemed relevant to the European sites and their QIs/SCIs.

3.2. Identification of relevant European sites

This section of the screening process describes the European sites which exist within the Zone of Influence (ZOI) of the site. The Department of the Environment (2009) Guidance on AA recommends a 15km zone to be considered. On a precautionary basis this radius has been adopted for this AA. A review of all sites within the ZOI has identified that in the absence of significant hydrological links, the characteristics of the proposed public realm project will not impose effects beyond 15km. Sites beyond 15km which are designated for vagile species are identified to use isolated resources across the landscape; therefore, potential effects to such species at this scale are not identified to be significant due to the broad home range available to these species and the availability of alternate resources.

European sites that occur within 15km of the proposed public realm project are listed in Table 1 and illustrated in the Figure below. Details on the specific QIs and SCIs of each European site are also identified in Appendix I as well as site-specific threats and vulnerabilities of each of the sites. Conservation objectives that have been considered by the assessment are included in the following National Parks and Wildlife Service documents:

NPWS (2021) Conservation Objectives for River Shannon Callows SAC [IE0000216] Version 8.
NPWS (2016) Conservation Objectives for Lough Ree SAC [IE0000440] Version 1.
NPWS (2021) Conservation Objectives for Doocastle Turlough SAC [IE0000492] Version 8.
NPWS (2016) Conservation Objectives for Flughany Bog SAC [IE0000497] Version 1.
NPWS (2015) Conservation Objectives for Bellanagare Bog SAC [IE0000592] Version 1.
NPWS (2016) Conservation Objectives for Callow Bog SAC [IE0000595] Version 1.
NPWS (2015) Conservation Objectives for Carrowbehy/Caher Bog SAC [IE0000597] Version 1.
NPWS (2016) Conservation Objectives for Cloonchambers Bog SAC [IE0000600] Version 1.
NPWS (2015) Conservation Objectives for Derrinea Bog SAC [IE0000604] Version 1.
NPWS (2017) Conservation Objectives for Errit Lough SAC [IE0000607] Version 1.
NPWS (2016) Conservation Objectives for Cloonshanville Bog SAC [IE0000614] Version 1.
NPWS (2017) Conservation Objectives for Urlaur Lakes SAC [IE0001571] Version 1.
NPWS (2016) Conservation Objectives for Lough Forbes Complex SAC [IE0001818] Version 1.
NPWS (2019) Conservation Objectives for Cloonakillina Lough SAC [IE0001899] Version 1.
NPWS (2012) Conservation Objectives for Lower River Shannon SAC [IE0002165] Version 1.
NPWS (2016) Conservation Objectives for River Moy SAC [IE0002298] Version 1.
NPWS (2016) Conservation Objectives for Drumalough Bog SAC [IE0002338] Version 1.
NPWS (2015) Conservation Objectives for Tullaghanrock Bog SAC [IE0002354] Version 1.
NPWS (2021) Conservation Objectives for Lough Gara SPA [IE0004048] Version 8.
NPWS (2021) Conservation Objectives for Lough Derg (Shannon) SPA [IE0004058] Version 8.
NPWS (2021) Conservation Objectives for Lough Ree SPA [IE0004064] Version 8.
NPWS (2012) Conservation Objectives for River Shannon and River Fergus Estuaries SPA [IE0004077] Version 1.
NPWS (2019) Conservation Objectives for Lough Derg, North-East Shore SAC [IE0002241] Version 1.
NPWS (2021) Conservation Objectives for Middle Shannon Callows SPA [IE0004096] Version 8.
NPWS (2021) Conservation Objectives for Ballykenny-Fisherstown Bog SPA [IE0004101] Version 8.
NPWS (2021) Conservation Objectives for Bellanagare Bog SPA [IE0004105] Version 8.

In order to determine the potential effects of the proposal, information on the qualifying features, known vulnerabilities and threats to site integrity pertaining to any potentially affected European sites has been reviewed. Background information on threats to individual sites and vulnerability of habitats and species that was used during this assessment included the following:

- Ireland's Article 17 Report to the European Commission *"Status of EU Protected Habitats and Species in Ireland"* (NPWS, 2019);

- Site Synopses[2]; and
- NATURA 2000 Standard Data Forms[3].

The assessment takes consideration of the SSCOs of each of the sites within the ZOI. Since the conservation objectives for the European sites focus on maintaining the favourable conservation condition of the QIs/SCIs of each site, the screening process has concentrated on assessing the potential effects of the proposed public realm project against the QIs/SCIs of each site. The conservation objectives for each site have been consulted throughout the assessment process.

[2] NPWS (2019); NPWS Database of protected site data and associated documents for each European site; available at https://www.npws.ie/protected-sites: last accessed 24th May 2021

[3] NPWS (2019); NPWS Database of protected site data and associated documents for each European site; available at https://www.npws.ie/protected-sites: last accessed 24th May 2021

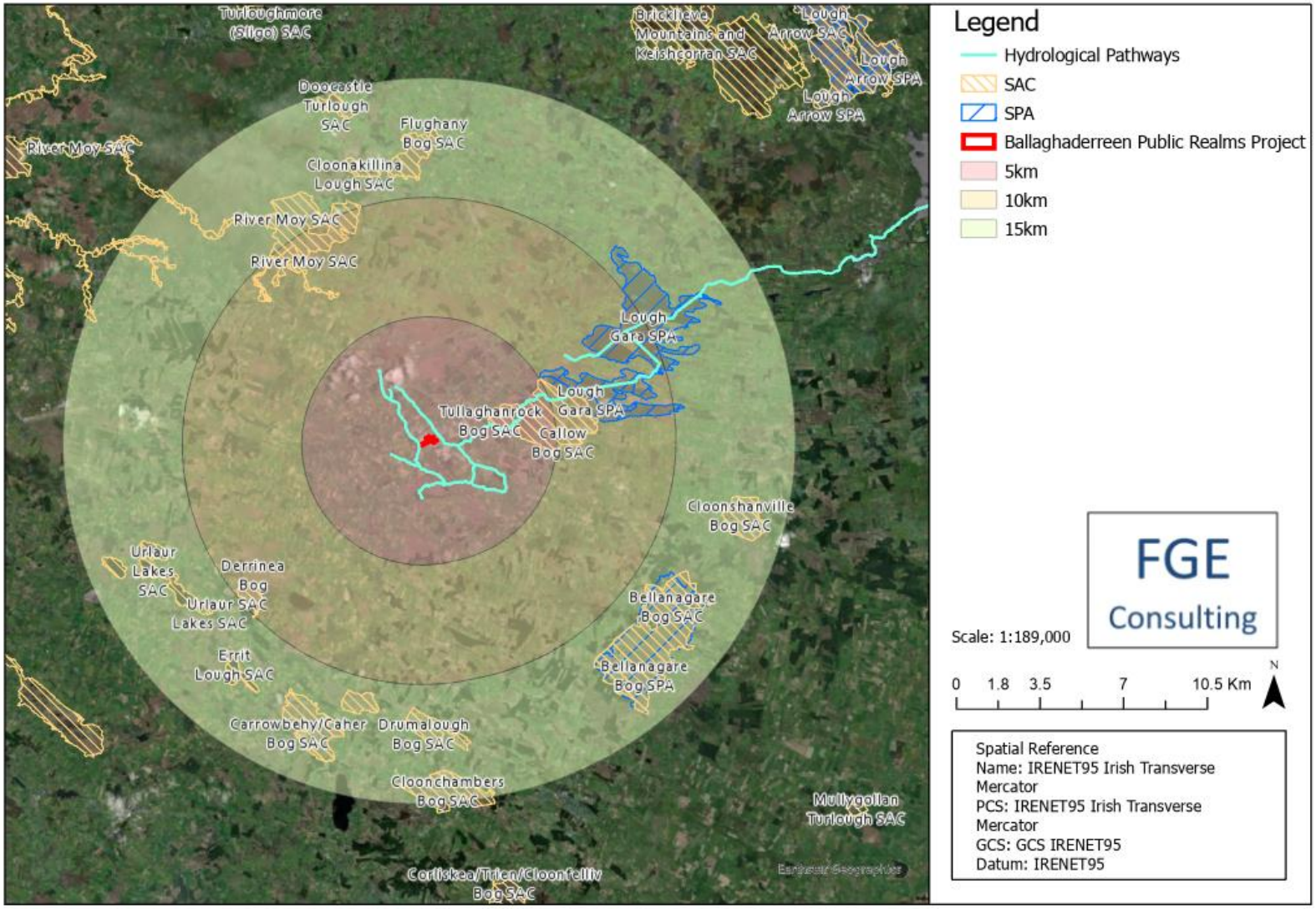


Figure 3.2.1 European sites within 15km of the proposed public realm project boundary[4]

[4] Source: NPWS (datasets downloaded 24th May 2021)

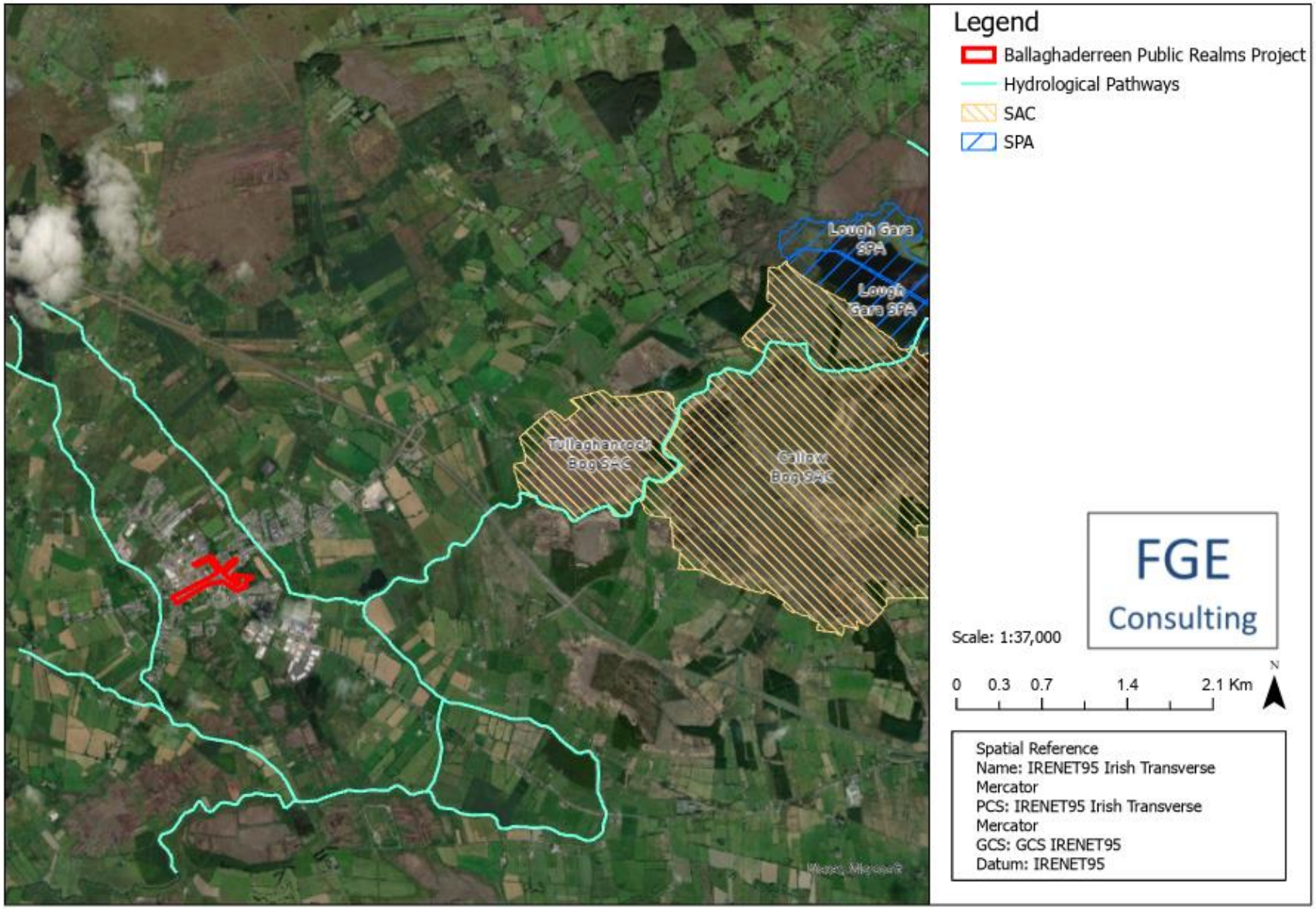


Figure 3.2.2 Hydrological connectivity to the European sites within 5km

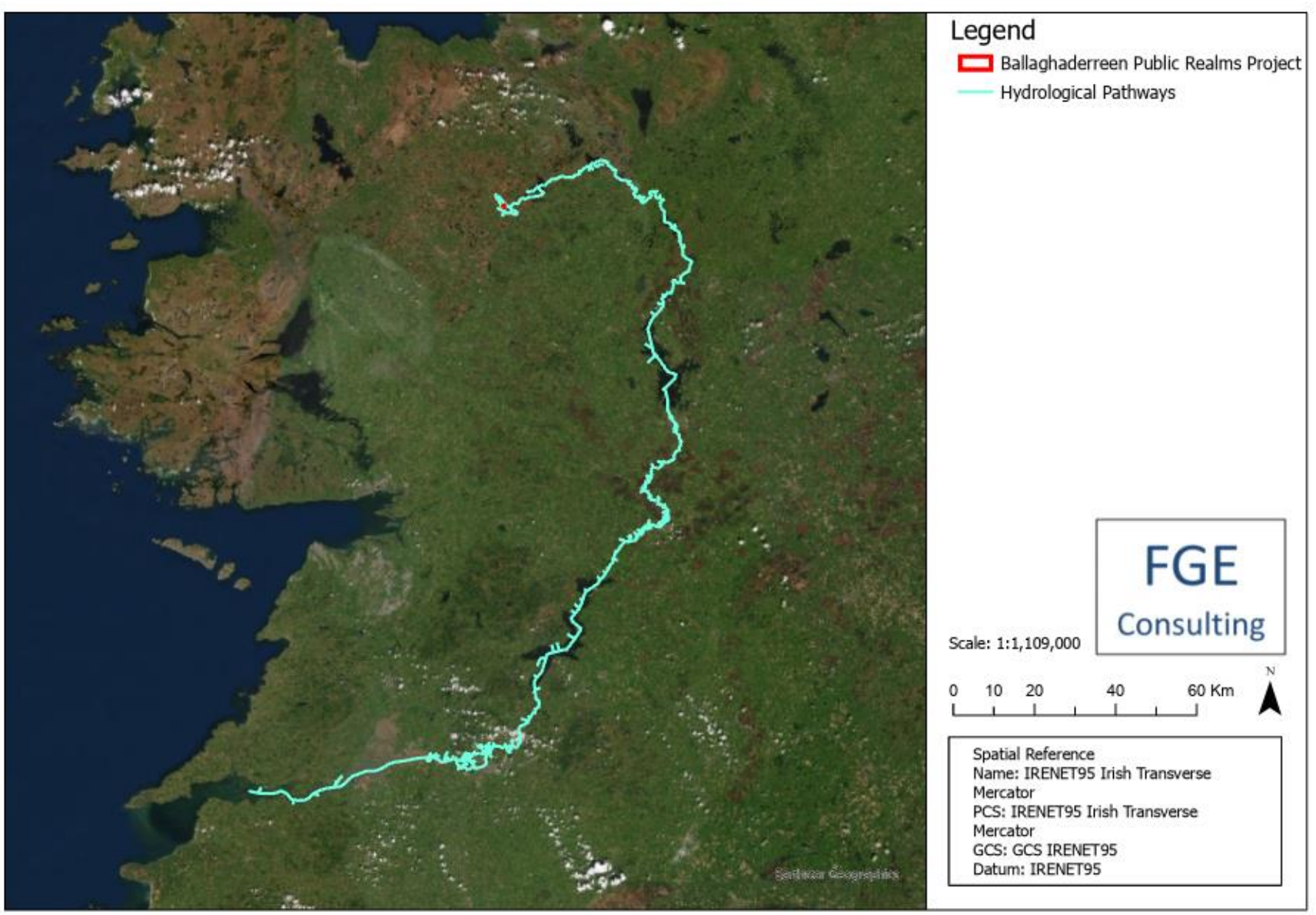


Figure 3.2.3 Hydrological connectivity to the wider landscape, showing connection to the Lower River Shannon, Co. Clare

3.3. Assessment criteria

3.3.1. Is the development necessary to the management of European sites?

Under the Habitats Directive, projects that are directly connected with or necessary to the management of a European site do not require AA. For this exception to apply, management is required to be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive. This refers to specific measures to address the ecological requirements of annexed habitats and species (and their habitats) present on a site(s). The relationship should be shown to be direct and not a by-product of the project, even if this might result in positive or beneficial effects for a site(s).

The primary purpose of the proposed public realm project is not the nature conservation management of the sites, but generally to provide for alterations to the Ballaghaderreen town structure including roadway alterations, footpath widening, inclusion of cycleways etc. Therefore, the proposed public realm project would not be considered by the Habitats Directive to be directly connected with or necessary to the management of European designated sites.

3.3.2. Elements of the proposed public realm project with potential to give rise to effects

This screening assessment process identifies whether the changes brought about by the proposal are likely to cause any direct, indirect or secondary effects (either alone or in combination with other plans or projects) on the European sites. During this assessment a number of factors have been taken into account including the sites' conservation objectives and known threats. The overall aim of the assessment is to attempt to predict the consequences that can be reasonably foreseen by implementation of the proposed public realm project.

For the purposes of this assessment the proposed public realm project is identified to have potential to have both construction and operational phase effects. The operational phase of the project will be consistent with the existing site use within an urban context. The operations of the public realms area will be consistent with existing operations on site; therefore, is not foreseen to interact with European sites. The construction phase elements of the project also introduce potential sources for effects to ecological processes such as:

- Disturbance effects through noise;
- Earthworks (removal of vegetation etc.);
- Dust; and
- Surface water run-off.

The Construction phase will be small scale and temporary. The construction phase effects identified are considered in the context of European sites identified above, their sensitivities and conservation objectives.

3.3.3. Identification of potential effects and screening of sites

This section documents the final stage of the screening process. It has used the information collected on the sensitivity of each European site and describes any potential effects on European sites resulting from the proposed public realm project. This assumes the absence of any controls, conditions, or mitigation measures. In determining the potential for effects, a number of factors have been taken into account. Firstly, the sensitivity and reported threats to European sites. Secondly, the individual

elements of the proposed public realm project and the potential effects they may cause on the sites were considered. The elements of the proposed public realm project with potential to affect the integrity of European sites are presented in Table 3.1.

Sites are screened out based on one or a combination of the following criteria:

- where it can be shown that there are no significant pathways such as hydrological links between activities of the proposed public realm project and a site;
- where a site is located at such a distance from proposed public realm project area that effects are not foreseen; and
- where known threats or vulnerabilities of a site cannot be linked to potential impacts that may arise from the proposed public realm project.

3.4. Characterising potential significant effects

This section of the report explains the metrics used when assessing if the potential effects (previously identified) will have significant implications for European sites. The following parameters are described when characterising impacts (following guidance from the Chartered Institute of Ecology and Environmental Management, Environmental Protection Agency and National Roads Authority):

- **Direct and Indirect Impacts** - An impact can be caused either as a direct or as an indirect consequence of a Plan/Project.
- **Magnitude** - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.
- **Extent** - The area over that the impact occurs – this should be predicted in a quantified manner.
- **Duration** - The time that the effect is expected to last prior to recovery or replacement of the resource or feature.
  - Temporary: Up to 1 Year;
  - Short Term: The effects would take 1-7 years to be mitigated;
  - Medium Term: The effects would take 7-15 years to be mitigated;
  - Long Term: The effects would take 15-60 years to be mitigated; and
  - Permanent: The effects would take 60+ years to be mitigated.
- **Likelihood** – The probability of the effect occurring taking into account all available information.
  - Certain/Near Certain: >95% chance of occurring as predicted;
  - Probable: 50-95% chance as occurring as predicted;
  - Unlikely: 5-50% chance as occurring as predicted; and
  - Extremely Unlikely: <5% chance as occurring as predicted.

The Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines for ecological impact assessment (2016) define: an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area; and the integrity of a site as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

The Habitats Directive requires the focus of the assessment at this stage to be on the integrity of the site as indicated by its Conservation Objectives. It is an aim of NPWS to draw up conservation management plans for all areas designated for nature conservation. These plans will, among other things, set clear objectives for the conservation of the features of interest within a site.

SSCOs have been prepared for a number of European sites. These detailed SSCOs aim to define favourable conservation condition for the qualifying habitats and species at that site by setting targets for appropriate attributes which define the character habitat. The maintenance of the favourable condition for these habitats and species at the site level will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

> **Favourable conservation status** of a **species** can be described as being achieved when: '*population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or 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.*'
>
> **Favourable conservation status** of a **habitat** can be described as being achieved when: '*its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that 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*'.

A Generic Conservation Objective for a cSAC is provided below:

- 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.

A Generic Conservation Objective for a SPA is provided below:

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

3.4.1. Types of potential Effects

EC guidance[5] outlines the types of effects that may affect European sites. These include effects from the following activities:

- Land take
- Resource requirements (drinking water abstraction etc.)
- Emissions (disposal to land, water or air)
- Excavation requirements
- Transportation requirements
- Duration of construction, operation, decommissioning

The 2001 European Commission AA guidance outlines the following potential changes that may occur at a designated site, which may result in effects on the integrity and function of that site:

- Reduction of habitat area
- Disturbance to key species
- Habitat or species fragmentation
- Reduction in species density
- Changes in key indicators of conservation value (water quality etc.)
- Climate change

The elements detailed above were considered with specific reference to each of the European sites

[5] Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission Environment DG, 2001

identified below.

Loss/reduction of habitat area

There are no European sites present within the redline boundary and the closest European site is 2.3 km away. Similarly, there were no Annex I habitats or supporting habitat for Annex II species identified on site. Therefore, there will be no effects posed to European sites in this respect.

Habitat or species fragmentation

The site is already a hard surface site in an urban context and there are no direct surface hydrological connections to any European sites. Therefore, there are no ecological corridors connecting any of the European sites identified above. Similarly, there were no Annex I habitats or supporting habitat for Annex II species identified on site. Therefore, there will be no effects posed to European sites in this respect.

Disturbance to key species

None of the species and/or habitats identified in Table 3.1 were recorded on site. The nearest European site is 2.3 km away from the proposed site and therefore disturbance effects due to noise or lighting etc. are not present.

Reduction in species density

There are no ecological corridors between the site and any European site. Similarly, there are no habitats identified on site of any ecological significance. As there is no supporting habitat and/or connectivity between the proposed public realm project and any European site, there will be no reduction in species density of any of the QI or SCI species.

Changes of indicators of conservation value

The site is 2.3 km from the closest European site, given the nature of the proposed work, the scale and the localised and temporary nature of the potential effects with negligible effects identified. There are no direct hydrological linkages identified between the site and any European site. The site is identified to be indirect hydrological connected to a number of European Sites (identified above) through the nearby Gleann Ard stream and Ballaghaderreen stream (c200m) from the site boundary. This is a tributary of the Lung River that reaches the Tullaghanrock Bog SAC, before eventually reaching the River Shannon. Give the scale, nature of the works and the temporary timescale of the construction phase and in combination of the dilution effect by the River Lung hydrological effects are deemed to be not significant. The works relate to provide for alterations to the Ballaghaderreen town structure including roadway alterations, footpath widening, inclusion of cycleways etc. and there are no ecological pathways for effects between European sites and the proposed public realm project. Therefore, there are no sources for effects with pathways that will affect any conservation indicators related to European sites.

Climate change

The proposed works will not result in any additional greenhouse gas emissions to air during the operational phase, compared to the existing urban activities on site. The construction phase works will have increased temporary emissions which will be localised however, given the distance to the nearest European site these are determined to be negligible. Such effects upon greenhouse gas emissions will not affect changes projected to arise from climate change to the degree that it would

affect the QIs or SCIs of the European sites considered.

Table 3.1 Screening assessment of the potential effects arising from the proposed public realm project

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
002354	Tullaghanrock Bog SAC	2.3	Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150]	The site is indirectly linked to this SAC through the nearby Gleann Ard stream (c200m) from the site boundary. This is a tributary of the Lung River that reaches the Tullaghanrock Bog SAC. The site is sensitive to hydrological interactions and direct on-site land use management. There are no provisions of the proposed public realms project that will interact with the on-site management practices. Due to the temporary nature of the construction phase, the small-scale nature of the works and the dilution effects introduced by the indirect hydrological pathways, there are no significant effects identified. Therefore, no further consideration is required.	Indirect pathway, however the dilution effects introduce by the Lung River ensure that the small-scale temporary works will not impose significant effects at this distance.	No
000595	Callow Bog SAC	3.24	Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110]	The site is indirectly linked to this SAC through the nearby Gleann Ard stream (c200m) from the site boundary. This is a tributary of the Lung River that reaches the Tullaghanrock Bog SAC and then subsequently the Callow Bog SAC. The site is sensitive to hydrological interactions and direct on-site land use management. There are no provisions of the proposed public realms project that will interact with the on-site management practices. Due to the temporary nature of the construction phase, the small-scale nature of the works and the dilution effects introduced by the indirect hydrological pathways, there are no significant effects identified. Therefore, no further consideration is required.	Indirect pathway, however the dilution effects introduce by the Lung River ensure that the small-scale temporary works will not impose significant effects at this distance.	No
004048	Lough Gara SPA	5.07	Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395], Whooper Swan *(Cygnus cygnus)* [A038]	The site is indirectly linked to this SAC through the nearby Gleann Ard stream (c200m) from the site boundary. This is a tributary of the Lung River that reaches the Lough Gill. The SCI Species are sensitive to disturbance effects and	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
				hydrological interactions influencing the trophic structure of the site. Given the distances involved, there are no disturbance effects identified to be likely, especially considering the urban context of the works. Furthermore, the lung river introduces considerable dilution effects. Considering the scale and temporary nature of the constructure phase works and the operational phase will be consistent with existing condition of Ballaghaderreen, there are no significant effects identified for the SPA. Therefore, there are no further considerations required.		
002298	River Moy SAC	8.65	Brook lamprey *(Lampetra planeri)* [1096], Atlantic salmon *(Salmo salar)* [1106], Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0], Alkaline fens [7230], White-clawed crayfish *(Austropotamobius pallipes)* [1092], Lowland hay meadows *(Alopecurus pratensis, Sanguisorba officinalis)* [6510], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110], Otter *(Lutra lutra)* [1355], Sea lamprey *(Petromyzon marinus)* [1095], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000604	Derrinea Bog SAC	8.95	Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
002338	Drumalough Bog SAC	10.57	Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
000592	Bellanagare Bog SAC	10.62	Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000497	Flughany Bog SAC	10.73	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
004105	Bellanagare Bog SPA	10.88	Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
001571	Urlaur Lakes SAC	11.06	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
001899	Cloonakillina Lough SAC	11.08	Transition mires and quaking bogs [7140]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000597	Carrowbehy/ Caher Bog SAC	11.57	Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000607	Errit Lough	11.79	Hard oligo-mesotrophic waters with benthic	There are no groundwater interactions identified from the	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
	SAC		vegetation of Chara spp. [3140]	proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.		
000614	Cloonshanville Bog SAC	12.28	Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Bog woodland [91D0], Degraded raised bogs still capable of natural regeneration [7120]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000600	Cloonchambers Bog SAC	13.63	Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000492	Doocastle Turlough SAC	13.71	Turloughs [3180]	There are no groundwater interactions identified from the proposed public realms project. There is no hydrological connectivity and given the distances involved there are no ecological pathways identified. Therefore, no further considerations are required.	No	No
000440	Lough Ree SAC	Hydrologically connected beyond 15km	Alkaline fens [7230], Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150], Active raised bogs [7110], Limestone pavements [8240], Otter *(Lutra lutra)* [1355], Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* * important orchid sites [6210], Degraded raised bogs still capable of natural regeneration [7120], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Bog woodland [91D0]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No
000216	River Shannon	Hydrologically	Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion*	The effects from the proposed public realms works are identified to be small scale temporary, localised to the	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
	Callows SAC	connected beyond 15km	*albae)* [91E0], Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410], Alkaline fens [7230], Otter *(Lutra lutra)* [1355], Lowland hay meadows *(Alopecurus pratensis, Sanguisorba officinalis)* [6510], Limestone pavements [8240]	Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.		
002165	Lower River Shannon SAC	Hydrologically connected beyond 15km	Salicornia and other annuals colonising mud and sand [1310], River lamprey *(Lampetra fluviatilis)* [1099], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Perennial vegetation of stony banks [1220], Sea lamprey *(Petromyzon marinus)* [1095], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410], Bottlenose dolphin *(Tursiops truncatus)* [1349], Freshwater pearl mussel *(Margaritifera margaritifera)* [1029], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Reefs [1170], Brook lamprey *(Lampetra planeri)* [1096], Sandbanks which are slightly covered by sea water all the time [1110], Atlantic salmon *(Salmo salar)* [1106], Coastal lagoons [1150], Large shallow inlets and bays [1160], Vegetated sea cliffs of the Atlantic and Baltic coasts [1230], Estuaries [1130], Otter *(Lutra lutra)* [1355], Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No
004058	Lough Derg (Shannon) SPA	Hydrologically connected beyond 15km	Common tern *(Sterna hirundo)* [A193], Tufted Duck *(Aythya fuligula)* [A061], Cormorant *(Phalacrocorax carbo)* [A017], Wetland and Waterbirds [A999], Goldeneye *(Bucephala clangula)* [A067]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale.	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
				There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.		
004064	Lough Ree SPA	Hydrologically connected beyond 15km	Golden Plover *(Pluvialis apricaria)* [A140], Wigeon *(Anas penelope)* [A050], Wetland and Waterbirds [A999], Mallard *(Anas platyrhynchos)* [A053], Common Scoter *(Melanitta nigra)* [A065], Goldeneye *(Bucephala clangula)* [A067], Common tern *(Sterna hirundo)* [A193], Lapwing *(Vanellus vanellus)* [A142], Whooper Swan *(Cygnus cygnus)* [A038], Little Grebe *(Tachybaptus ruficollis)* [A004], Shoveler *(Anas clypeata)* [A056], Coot *(Fulica atra)* [A125], Teal *(Anas crecca)* [A052], Tufted Duck *(Aythya fuligula)* [A061]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No
004077	River Shannon and River Fergus Estuaries SPA	Hydrologically connected beyond 15km	Lapwing *(Vanellus vanellus)* [A142], Greenshank *(Tringa nebularia)* [A164], Curlew *(Numenius arquata)* [A160], Ringed Plover *(Charadrius hiaticula)* [A137], Cormorant *(Phalacrocorax carbo)* [A017], Knot *(Calidris canutus)* [A143], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Wetland and Waterbirds [A999], Wigeon *(Anas penelope)* [A050], Whooper Swan *(Cygnus cygnus)* [A038], Redshank *(Tringa totanus)* [A162], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Shelduck *(Tadorna tadorna)* [A048], Dunlin *(Calidris alpina)* [A149], Scaup *(Aythya marila)* [A062], Grey Plover *(Pluvialis squatarola)* [A141], Golden Plover *(Pluvialis apricaria)* [A140], Pintail *(Anas acuta)* [A054], Black-tailed Godwit *(Limosa limosa)* [A156], Teal *(Anas crecca)* [A052], Bar-tailed Godwit *(Limosa lapponica)* [A157], Shoveler *(Anas clypeata)* [A056]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No
004096	Middle Shannon	Hydrologically	Wigeon *(Anas penelope)* [A050], Corncrake *(Crex crex)* [A122], Whooper Swan *(Cygnus cygnus)*	The effects from the proposed public realms works are identified to be small scale temporary, localised to the	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
	Callows SPA	connected beyond 15km	[A038], Lapwing *(Vanellus vanellus)* [A142], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Black-tailed Godwit *(Limosa limosa)* [A156], Golden Plover *(Pluvialis apricaria)* [A140], Wetland and Waterbirds [A999]	Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.		
004101	Ballykenny-Fisherstown Bog SPA	Hydrologically connected beyond 15km	Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No
001818	Lough Forbes Complex SAC	Hydrologically connected beyond 15km	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There is considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No
002241	Lough Derg, North-East Shore SAC	Hydrologically connected beyond 15km	[91EO] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae, Salicion albae*), [5130] Juniperus communis formations on heaths or calcareous grasslands, [7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*, [7230] Alkaline fens, [8240] Limestone pavements, [91J0] *Taxus baccata* woods of the British Isles	The effects from the proposed public realms works are identified to be small scale temporary, localised to the Ballaghaderreen area. The assessment of hydrological pathways identifies an indirect hydrological pathway to this European site at a landscape scale. There are considerable dilution effects associated with this pathway and therefore any potential effects will be negligible. Therefore, no further considerations are required.	No	No

3.5. Other plans and projects

Article 6(3) of the Habitats Directive requires an assessment of a plan or project to consider other plans or projects that might, in combination with the plan or project, have the potential to adversely affect European sites.

As part of this assessment each plan or project is considered within a radius of the red line boundary of the proposed area as defined by the ecologist. The distance of this radius works from a standard 200m, but can be extended if the ecologist deems it necessary depending on whether certain characteristics are present, such as:

- Direct or indirect connectivity to a European site;
- In close proximity to a European site;
- The proposal is of a substantial scale relative to the conditions and/or current works taking place in the surrounding landscape.

These factors are considered particular to each proposal for each particular location and specification. Considering the characteristics of the proposed development with respect to the scale and nature of the works, the 200m search for in-combination effects was deemed to be sufficient

Plans of relevance in the context of this proposal include:

- Roscommon County Development Plan 2021 - 2027
- Ballaghaderreen Local Area Plan (LAP) 2017 – 2023

Considering that the proposed development has a small-scale temporary construction phase and the operational phase is consistent with the existing land use, it is not foreseen that proposed development will have any significant in-combination effects with the above plans.

Projects of relevance to this development:
To identify projects for consideration for the in-combination effects section, the National Planning and Housing development database was used[6]. A review of all planning applications within the identified zone was conducted focusing on all application within the past 5 years[7].

The largest of these projects were identified to be 17314, 20249 and 18452 which are developments consisting of changes of use, construction of small structures and extension works to existing structures. The other projects identified relate to small scale extension works and related projects (see table below). As the proposed development is not directly connected to any European site, taking into account the characteristics and scale, it is not foreseen that it will have any significant adverse effects on European sites in-combination effects with the aforementioned projects.

[6] https://data-housinggovie.opendata.arcgis.com/datasets/planning-application-sites-2010-onwards; 24th May 2021

[7] planning application have a standard lifespan of 5 years as per Section 40 (3)(b) of the Planning & Development Act 2000, as amended; therefore, these are viewed to be the 'live' applications, all other projects are considered as part of the site context

Table 3.2 Local planning applications within the receiving environment of the proposed public realm project

Project Code	Status	Overview	Project Area (sq m)	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible Significant in-combination effects
17314	Conditional	The development consisting of change of use of part of the existing convent building from residential to office and extension to the building at Ballaghaderreen.	18,406	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
20249	Conditional	Permission to make material alterations to include an attic conversion and to construct extensions to an existing unused Childcare Facility (Previous Planning Grant PD/04/1138) in order to provide a new Childcare Facility (to be called "The Growing Tree".	13,976	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
18452	Conditional	Planning permission to construct a single storey "Log Cabin Type" Childcare Facility with connection to public sewer and all associated site works.	13,972	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
19202	Conditional	1.Conversion of existing squash court to offices at ground floor level and provision of new floor space at first floor level for offices overhead. 2. Provision of roof windows to the southern elevation. 3. Provision of windows to the southern and western end.	2,453	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
15309	Conditional	For change of use of our existing convenience shop at our existing petrol filling station to include use as an off-licence including minor alterations to building layout.	2,343	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Project Area (sq m)	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible Significant in-combination effects
16293	Conditional	To convert the ground floor area of an existing commercial property to use as a retail unit, and to carry out all necessary alterations to its layout and elevations.	1,273	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
17293	Conditional	To alter the existing front elevation at Pound Street, Ballaghaderreen, Co. Roscommon	929	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
15336	Conditional	To retain the following - a change of use of the first-floor area of a shop unit (Unit 2) to use as office space, along with all changes to internal layout, and changes to the internal layout of an adjoining office space at the first-floor level of Unit 3 at The Square, Ballaghaderreen, Co. Roscommon.	607	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any direct connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

4. Conclusion

This stage one screening for AA of the proposed Ballaghaderreen Town Public Realm Enhancement Project at Ballaghaderreen, Co. Roscommon demonstrates that the proposed public realm project is not likely to have significant effects on any European site.

The AA screening process has considered potential effects which may arise during the construction and operational phases as a result of the implementation of the project. Through an assessment of the pathways for effects and an evaluation of the project characteristics, taking account of the processes involved and the distance of separation from European sites, it has been evaluated that there are no likely significant adverse effects on the qualifying interests, special conservation interest or the conservation objectives of any designated European site.

The proposed public realm project is 2.3 km away from the closest SAC and 5.07 km away from the closest SPA. given the nature of the proposed work, the scale and the localised and temporary nature of the potential effects, the proposed project will not lead to any significant effects in-combination with effects arising from any other plans or projects.

It is concluded that the proposed public realm project is not foreseen to give rise to any significant adverse effects on any designated European sites, alone or in combination with other plans or projects. This evaluation is made in view of the conservation objectives of the habitats or species for which these sites have been designated. Consequently, a Stage Two AA (NIS) is not required.

Appendix I Background information on European sites

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known threats and pressures
000216	River Shannon Callows SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Limestone pavements [8240], Alkaline fens [7230], Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410], Lowland hay meadows *(Alopecurus pratensis, Sanguisorba officinalis)* [6510], Otter *(Lutra lutra)* [1355]	A07, A08, J02.01, A03, C01.03.02, A03.03, G01, F03.01, B02.02, J02.05, G05.01, A04.02.05, J02.05.02, J02.11, A04.03, J02.04.01, A04.01, A10.01, D01.01, B06, K03.04	Use of biocides, hormones and chemicals, fertilisation, landfill, land reclamation and drying out, general, mowing or cutting of grassland, mechanical removal of peat, abandonment or lack of mowing , outdoor sports and leisure activities, recreational activities, hunting, forestry clearance, modification of hydrographic functioning, general, trampling, overuse, non-intensive mixed animal grazing, modifying structures of inland water courses, siltation rate changes, dumping, depositing of dredged deposits, abandonment of pastoral systems lack of grazing, flooding, intensive grazing, removal of hedges and copses or scrub, paths, tracks, cycling tracks, grazing in forests or woodland, predation
000440	Lough Ree SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150], Degraded raised bogs still capable of natural regeneration [7120], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Limestone pavements [8240], Active raised bogs [7110], Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* * important orchid sites [6210], Bog woodland [91D0], Otter *(Lutra lutra)* [1355], Alkaline fens [7230]	E01.03, A03.03, G02.09, B02, G01.02, G01.01, A04, J02.04, F03.01, L08, F02.03, I01, A08, H02.06, H01.08, K03.05, H06.03, D03.01.02, J02.11.02	Dispersed habitation, abandonment or lack of mowing , wildlife watching, forest and plantation management & use, walking, horseriding and non-motorised vehicles, nautical sports, grazing, flooding modifications, hunting, inundation (natural processes), leisure fishing, invasive non-native species, fertilisation, diffuse groundwater pollution due to agricultural and forestry activities, diffuse pollution to surface waters due to household sewage and waste waters, antagonism arising from introduction of species, thermal heating of water bodies, piers or tourist harbours or recreational piers, other siltation rate changes
000492	Doocastle Turlough SAC	Turloughs [3180]	A04, A08, F03.01	Grazing, fertilisation, hunting
000497	Flughany Bog SAC	Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110]	A08, C01.03, D01.02, A04, A10, D05	Fertilisation, peat extraction, roads, motorways, grazing, restructuring agricultural land holding, improved access to site
000592	Bellanagare Bog SAC	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	I01, J02.05, C01.03.02, E03.01	Invasive non-native species, modification of hydrographic functioning, general, mechanical removal of peat, disposal of household or recreational facility waste
000595	Callow Bog SAC	Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110]	B, J01.01, J02.15, J02.04, C01.03.02	Sylviculture, forestry, burning down, other human induced changes in hydraulic conditions, flooding modifications, mechanical removal of peat

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known threats and pressures
000597	Carrowbehy/Caher Bog SAC	Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	E03.01, A04, B02.02, I01, J02.05	Disposal of household or recreational facility waste, grazing, forestry clearance, invasive non-native species, modification of hydrographic functioning, general
000600	Cloonchambers Bog SAC	Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110]	A04, C01.03.02, E03.01, I01, J02.05	Grazing, mechanical removal of peat, disposal of household or recreational facility waste, invasive non-native species, modification of hydrographic functioning, general
000604	Derrinea Bog SAC	Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	J02.05, E03.01, A04, I01	Modification of hydrographic functioning, general, disposal of household or recreational facility waste, grazing, invasive non-native species
000607	Errit Lough SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]	G05	Other human intrusions and disturbances
000614	Cloonshanville Bog SAC	Degraded raised bogs still capable of natural regeneration [7120], Bog woodland [91D0], Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110]	J02.04, C01.03.02, B	Flooding modifications, mechanical removal of peat, sylviculture, forestry
001571	Urlaur Lakes SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]	D01.02, A04, E01.03, C01.03.02, J02, E03.01, C01.03.01, A08, F02.03	Roads, motorways, grazing, dispersed habitation, mechanical removal of peat, human induced changes in hydraulic conditions, disposal of household or recreational facility waste, hand cutting of peat, fertilisation, leisure fishing
001818	Lough Forbes Complex SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	J02.07.02, F02.03, I01, A03.03, G02.09, A04.03, A03.02, J02.15, F03.01, H02.06	Groundwater abstractions for public water supply, leisure fishing, invasive non-native species, abandonment or lack of mowing, wildlife watching, abandonment of pastoral systems lack of grazing, non-intensive mowing, other human induced changes in hydraulic conditions, hunting, diffuse groundwater pollution due to agricultural and forestry activities
001899	Cloonakillina Lough SAC	Transition mires and quaking bogs [7140]	B, A04, J01, A03, F02.03	Sylviculture, forestry, grazing, fire and fire suppression, mowing or cutting of grassland, leisure fishing

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known threats and pressures
002165	Lower River Shannon SAC	Reefs [1170], Sea lamprey *(Petromyzon marinus)* [1095], Brook lamprey *(Lampetra planeri)* [1096], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], River lamprey *(Lampetra fluviatilis)* [1099], Perennial vegetation of stony banks [1220], Sandbanks which are slightly covered by sea water all the time [1110], Freshwater pearl mussel *(Margaritifera margaritifera)* [1029], Salicornia and other annuals colonising mud and sand [1310], Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260], Large shallow inlets and bays [1160], Atlantic salmon *(Salmo salar)* [1106], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410], Vegetated sea cliffs of the Atlantic and Baltic coasts [1230], Bottlenose dolphin *(Tursiops truncatus)* [1349], Mudflats and sandflats not covered by seawater at low tide [1140], Coastal lagoons [1150], Otter *(Lutra lutra)* [1355], Estuaries [1130]	B, A04, C01.01.02, E03, F03.01, J02.10, D01.01, G01.01, J02.01.02, F01, C01.03.01, A08, J02.01.01, H04, F02.03, J02.12.01, K02.03, E01, I01	Sylviculture, forestry, grazing, removal of beach materials, discharges, hunting, management of aquatic and bank vegetation for drainage purposes, paths, tracks, cycling tracks, nautical sports, reclamation of land from sea, estuary or marsh, marine and freshwater aquaculture, hand cutting of peat, fertilisation, polderisation, air pollution, air-borne pollutants, leisure fishing, sea defense or coast protection works, tidal barrages, eutrophication (natural), urbanised areas, human habitation, invasive non-native species
002298	River Moy SAC	Otter *(Lutra lutra)* [1355], Brook lamprey *(Lampetra planeri)* [1096], Sea lamprey *(Petromyzon marinus)* [1095], White-clawed crayfish *(Austropotamobius pallipes)* [1092], Degraded raised bogs still capable of natural regeneration [7120], Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0], Lowland hay meadows *(Alopecurus pratensis, Sanguisorba officinalis)* [6510], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Atlantic salmon *(Salmo salar)* [1106], Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Alkaline fens [7230]	A02.01, F03.02.04, B05, F02.03, I01, J02.04, C01.03, H01.05, B01, F03.02, D04.02	Agricultural intensification, predator control, use of fertilizers (forestry), leisure fishing, invasive non-native species, flooding modifications, peat extraction, diffuse pollution to surface waters due to agricultural and forestry activities, forest planting on open ground, taking and removal of animals (terrestrial), aerodrome, heliport
002338	Drumalough Bog SAC	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	E03.01, J02.05, I01	Disposal of household or recreational facility waste, modification of hydrographic functioning, general, invasive non-native species

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known threats and pressures
002354	Tullaghanrock Bog SAC	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	J02.04, A04.02.01, B	Flooding modifications, non intensive cattle grazing, sylviculture, forestry
004048	Lough Gara SPA	Whooper Swan *(Cygnus cygnus)* [A038], Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395]	A08, B	Fertilisation, sylviculture, forestry
004058	Lough Derg (Shannon) SPA	Common tern *(Sterna hirundo)* [A193], Cormorant *(Phalacrocorax carbo)* [A017], Wetland and Waterbirds [A999], Tufted Duck *(Aythya fuligula)* [A061], Goldeneye *(Bucephala clangula)* [A067]	G01.01, A08, F02.03, F03.01	Nautical sports, fertilisation, leisure fishing, hunting
004064	Lough Ree SPA	Mallard *(Anas platyrhynchos)* [A053], Common tern *(Sterna hirundo)* [A193], Coot *(Fulica atra)* [A125], Golden Plover *(Pluvialis apricaria)* [A140], Shoveler *(Anas clypeata)* [A056], Wigeon *(Anas penelope)* [A050], Little Grebe *(Tachybaptus ruficollis)* [A004], Wetland and Waterbirds [A999], Goldeneye *(Bucephala clangula)* [A067], Lapwing *(Vanellus vanellus)* [A142], Tufted Duck *(Aythya fuligula)* [A061], Common Scoter *(Melanitta nigra)* [A065], Teal *(Anas crecca)* [A052], Whooper Swan *(Cygnus cygnus)* [A038]	A08, G01.02, F03.01, G01.01, A04, F02.03, B, I01	Fertilisation, walking, horseriding and non-motorised vehicles, hunting, nautical sports, grazing, leisure fishing, sylviculture, forestry, invasive non-native species
004077	River Shannon and River Fergus Estuaries SPA	Knot *(Calidris canutus)* [A143], Curlew *(Numenius arquata)* [A160], Ringed Plover *(Charadrius hiaticula)* [A137], Lapwing *(Vanellus vanellus)* [A142], Whooper Swan *(Cygnus cygnus)* [A038], Greenshank *(Tringa nebularia)* [A164], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Shelduck *(Tadorna tadorna)* [A048], Cormorant *(Phalacrocorax carbo)* [A017], Grey Plover *(Pluvialis squatarola)* [A141], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Wetland and Waterbirds [A999], Black-tailed Godwit *(Limosa limosa)* [A156], Shoveler *(Anas clypeata)* [A056], Golden Plover *(Pluvialis apricaria)* [A140], Bar-tailed Godwit *(Limosa lapponica)* [A157], Wigeon *(Anas penelope)* [A050], Dunlin *(Calidris alpina)* [A149], Redshank *(Tringa totanus)* [A162], Teal *(Anas crecca)* [A052], Pintail *(Anas acuta)* [A054], Scaup *(Aythya marila)* [A062]	G01.01, F01, D03.02, A08, E02, E01, E03	Nautical sports, marine and freshwater aquaculture, shipping lanes, fertilisation, industrial or commercial areas, urbanised areas, human habitation, discharges

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known threats and pressures
004096	Middle Shannon Callows SPA	Golden Plover *(Pluvialis apricaria)* [A140], Lapwing *(Vanellus vanellus)* [A142], Wigeon *(Anas penelope)* [A050], Whooper Swan *(Cygnus cygnus)* [A038], Wetland and Waterbirds [A999], Black-tailed Godwit *(Limosa limosa)* [A156], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Corncrake *(Crex crex)* [A122]	D01.05, E01, F03.01, A08, G01.02, A04, A03, A04.03, F02.03, D01.01, G01.01	Bridge, viaduct, urbanised areas, human habitation, hunting, fertilisation, walking, horseriding and non-motorised vehicles, grazing, mowing or cutting of grassland, abandonment of pastoral systems lack of grazing, leisure fishing, paths, tracks, cycling tracks, nautical sports
004101	Ballykenny-Fisherstown Bog SPA	Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395]	F03.01, B, F02.03, A04, G01.01	Hunting, sylviculture, forestry, leisure fishing, grazing, nautical sports
004105	Bellanagare Bog SPA	Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395]	A04, C01.03, D01.02, J02.05.02, B01	Grazing, peat extraction, roads, motorways, modifying structures of inland water courses, forest planting on open ground

Appendix II Qualifying Interests of SACs that have undergone assessment including summaries of current threats and sensitivities

Characterisation of Potential Effects arising from the subject land area

Qualifying Interests	EU Code	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
Active raised bogs	[7110]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Alkaline fens	[7230]	Land reclamation, peat extraction; afforestation; erosion and landslides triggered by human activity; drainage; burning and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)*	[1330]	Overgrazing; erosion; invasive species, particularly common cordgrass (Spartina anglica); infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.
White-clawed Crayfish *(Austropotamobius pallipes)*	[1092]	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	Invasive species, disease, surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.
Bog woodland	[91D0]	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak woodlands; and the construction of communication networks through the woodland.	Changes in management. Changes in nutrient or base status. Introduction of alien species.
Coastal lagoons	[1150]	Drainage and changes to hydrological regime; eutrophication, siltation, erosion and sedimentation.	Medium sensitivity to hydrological change. Changes in salinity nutrient input, tidal regime, sedimentation, and erosion.
Degraded raised bogs still capable of natural regeneration	[7120]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Depressions on peat substrates of the Rhynchosporion	[7150]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Estuaries	[1130]	Pollution, fishing /aquaculture and habitat quality.	Inappropriate development, changes in turbidity
Hard oligo-mesotrophic waters with benthic vegetation of muskgrass*(Chara spp.)*	[3140]	Hydrological changes, afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
River Lamprey *(Lampetra fluviatilis)*	[1099]	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	Surface water dependent Highly sensitive to hydrological change.

Qualifying Interests	EU Code	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
Brook Lamprey *(Lampetra planeri)*	[1096]	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	Surface water dependent Highly sensitive to hydrological change.
Large shallow inlets and bays	[1160]	Pressures on the habitat include nutrient enrichment, dredging and invasive alien species. Overall Status is assessed as Bad and deteriorating, a genuine decline since the 2013 assessment of Inadequate and improving, and is based on more detailed information.	Inappropriate development, changes in turbidity, surface water runoff, discharge etc. On site management activities.
Limestone pavements	[8240]	Overgrazing; extractive industries; recreational activities and improved access.	Erosion, overgrazing and recreation.
Lowland hay meadows *(Alopecurus pratensis, Sanguisorba officinalis)*	[6510]	Agricultural intensification; drainage; abandonment of pastoral systems.	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
Otter *(Lutra lutra)*	[1355]	Decrease in water quality: Use of pesticides; fertilization; vegetation removal; professional fishing (including lobster pots and fyke nets); hunting; poisoning; sand and gravel extraction; mechanical removal of peat; urbanised areas; human habitation; continuous urbanization; drainage; management of aquatic and bank vegetation for drainage purposes; and canalization or modifying structures of inland water course.	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution.
Freshwater Pearl Mussel *(Margaritifera margaritifera)*	[1029]	In stream works, hydrological and morphological alterations, sediment and enrichment, pollution due urbanisation etc. Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	Surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.
Mediterranean salt meadows *(Juncetalia maritimi)*	[1410]	Over-grazing by cattle or sheep; infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Coastal development and reclamation.
Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)*	[6410]	Agricultural intensification; drainage; abandonment of pastoral systems.	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
Mudflats and sandflats not covered by seawater at low tide	[1140]	Aquaculture, fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species, particularly cord-grass; hard coastal defence structures; sea-level rise.	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development.

Qualifying Interests	EU Code	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	[3150]	Hydrological changes, afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Old sessile oak woods with Ilex and Blechnum in the British Isles	[91A0]	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak woodlands; and the construction of communication networks through the woodland.	Changes in management. Changes in nutrient or base status. Introduction of alien species.
Perennial vegetation of stony banks	[1220]	Disruption of the sediment supply, owing to the interruption of the coastal processes, caused by developments such as car parks and coastal defence structures including rock armour and sea walls. The removal of gravel.	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, trampling from recreational activity and gravel removal.
Sea Lamprey *(Petromyzon marinus)*	[1095]	Barriers to upstream migration (e.g. weirs), which limit access to spawning beds and juvenile habitat are main threats to this species.	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, trampling from recreational activity.
Reefs	[1170]	Professional fishing; taking for fauna; taking for flora; water pollution; climate change; and change in species composition.	Sensitive to disturbance and pollution.
Salicornia and other annuals colonising mud and sand	[1310]	Invasive Species; erosion and accretion.	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.
Salmon *(Salmo salar)*	[1106]	Marine survival rates are of concern for the populations.	Disease, parasites and barriers to movement.
Sandbanks which are slightly covered by sea water all the time	[1110]	No significant pressures were identified acting on this habitat.	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.
Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)** important orchid sites	[6210]	Land reclamation, afforestation; drainage; and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Transition mires and quaking bogs	[7140]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.

Qualifying Interests	EU Code	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
Turloughs	[3180]	Nutrient enrichment; afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Tursiops truncatus	[1349]	Commercial vessel-based activities such as impacts arising from geophysical seismic exploration or from local/regional prey removal by fisheries	Sensitive to disturbance, overfishing and pollution.
Vegetated sea cliffs of the Atlantic and Baltic coasts	[1230]	A number of significant pressures were identified, including trampling by walkers, invasive non-native species, gravel extraction, and sea-level and wave exposure changes due to climate change. There have been no significant losses in sea cliff habitat since the Directive came into force.	Land use activities such as tourism and/or agricultural practices. Direct alteration to the habitat or effects such as burning or drainage.
Water courses of plain to montane levels with vegetation *(Ranunculion fluitantis and Callitricho-Batrachion)*	[3260]	Hydrological and morphological changes, water quality, enrichment, and surface water discharges from industrial site and/or agriculture.	Surface water dependent Highly sensitive to hydrological change and direct physical interactions.

Appendix III Special Conservation Interests of SPAs that have undergone assessment including vulnerabilities of the SCIs

Special Conservation Interest Species identified for the SPAs within connected to the proposed public realm project

Special Conservation Interest *(SCI)* Species
Great cormorant *(Phalacrocorax carbo)* [A017]
Whooper swan *(Cygnus cygnus)* [A038]
Common shelduck *(Tadorna tadorna)* [A048]
Eurasian wigeon *(Anas penelope)* [A050]
Eurasian teal *(Anas crecca)* [A052]
Mallard *(Anas platyrhynchos)* [A053]
Northern pintail *(Anas acuta)* [A054]
Northern shoveler *(Anas clypeata)* [A056]
Tufted duck *(Aythya fuligula)* [A061]
Greater scaup *(Aythya marila)* [A062]
Black *(common)* scoter *(Melanitta nigra)* [A065]
Common goldeneye *(Bucephala clangula)* [A067]
Corn crake *(Crex crex)* [A122]
Common coot *(Fulica atra)* [A125]
Ringed plover *(Charadrius hiaticula)* [A137]
European golden plover *(Pluvialis apricaria)* [A140]
Grey plover *(Pluvialis squatarola)* [A141]
Northern lapwing *(Vanellus vanellus)* [A142]
Red knot *(Calidris canutus)* [A143]
Bar-tailed godwit *(Limosa lapponica)* [A157]
Eurasian curlew *(Numenius arquata)* [A160]
Common redshank *(Tringa totanus)* [A162]
Common greenshank *(Tringa nebularia)* [A164]
Black-headed gull *(Larus ridibundus)* [A179]
Common tern *(Sterna hirundo)* [A193]
Greenland white-fronted goose *(Anser albifrons flavirostris)* [A395]

Vulnerabilities of Special Conservation Interests

- Bird species are particularly vulnerable to direct disturbance due to noise and/or vibration. These effects are localised, and disturbance effects are foreseen to be low at distances beyond 2km[8].
- Direct habitat loss is a serious concern for bird species, as well as the reduction in habitat quality. Habitat degradation could occur through effects such as local enrichment due to agricultural practices or damage to habitat through activities such as trampling.
- Prey species diversity and availability is a key element of species conservation. Community dynamics and ecosystem functionality are complex concepts and require site specific information. The site synopsis and conservation objectives for the SPAs identified within the ZOI were used to identify any specific prey sensitivities.
- Availability of nesting/roosting habitat. Particularly for the Hen Harrier.
- Vegetation composition, structure and functionality.

Wetland and Waterbirds [A999] Direct land take is a common vulnerability to all sites; as well as significant water quality effects. The conservation objective of all SPAs designated for Wetland and Waterbirds is to maintain the favourable conservation condition of the wetland habitat as a resource for the regularly occurring migratory waterbirds using it.

[8] SNH (2007) A Review of Disturbance Distances in Selected Bird Species: Scottish Natural Heritage; M. Ruddock & D.P. Whitfield