

Navan Cycle Scheme - R147 Martha's Bridge to Circular Road

Appropriate Assessment Screening

Meath County Council

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Notice

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1. Introduction

Meath County Council intend to submit a Part 8 Planning Application for the development of a cycle route from the R147 Martha's Bridge to Circular Road in Navan Town in order to provide improved facilities for pedestrians and cyclists.

Atkins Ireland have been commissioned by Meath County Council to prepare a Screening for Appropriate Assessment (AA) report for the proposed Navan Cycle Scheme – R147 Martha's Bridge to Circular Road Project and all associated works in Navan Town. See Figure 1-1 for an overview of the project location.

The proposed scheme consists of improvements and upgrades to the R147 as well as the following junctions: -

- R161 Circular Road / R147 Dublin Road Junction;
- L-3418 Academy Street / R147 Dublin Road Junction; and
- L-50555 Bothar Sion / R147 Dublin Road Junction

The northern extent of the proposed Navan Cycle Scheme – R147 Martha's Bridge to Circular Road Project will connect to another cycleway; Athlumney to Trim Road Cycle and Pedestrian Scheme which is aligned (in part) along the R147 roadway running parallel to the River Boyne. The Athlumney to Trim Road Cycle and Pedestrian Scheme is a granted development; Planning Notice Part 8 P8/18014.

The Navan Cycle Scheme will provide safe and attractive cycle routes, catering for all cycle users including commuters, leisure, and family cycling groups. Ultimately when the routes are delivered, they will help to improve safety, including a reduction in vehicle speeds and contribute towards an increased number of trips in the area by pedestrians and cyclists.

The scheme is aligned with National Policy and is in keeping with the objectives of the Meath County Development Plan and Navan Development Plan. The location of the proposed Navan Cycle Scheme from the R147 to Martha's bridge is shown below in Figure 1-1.

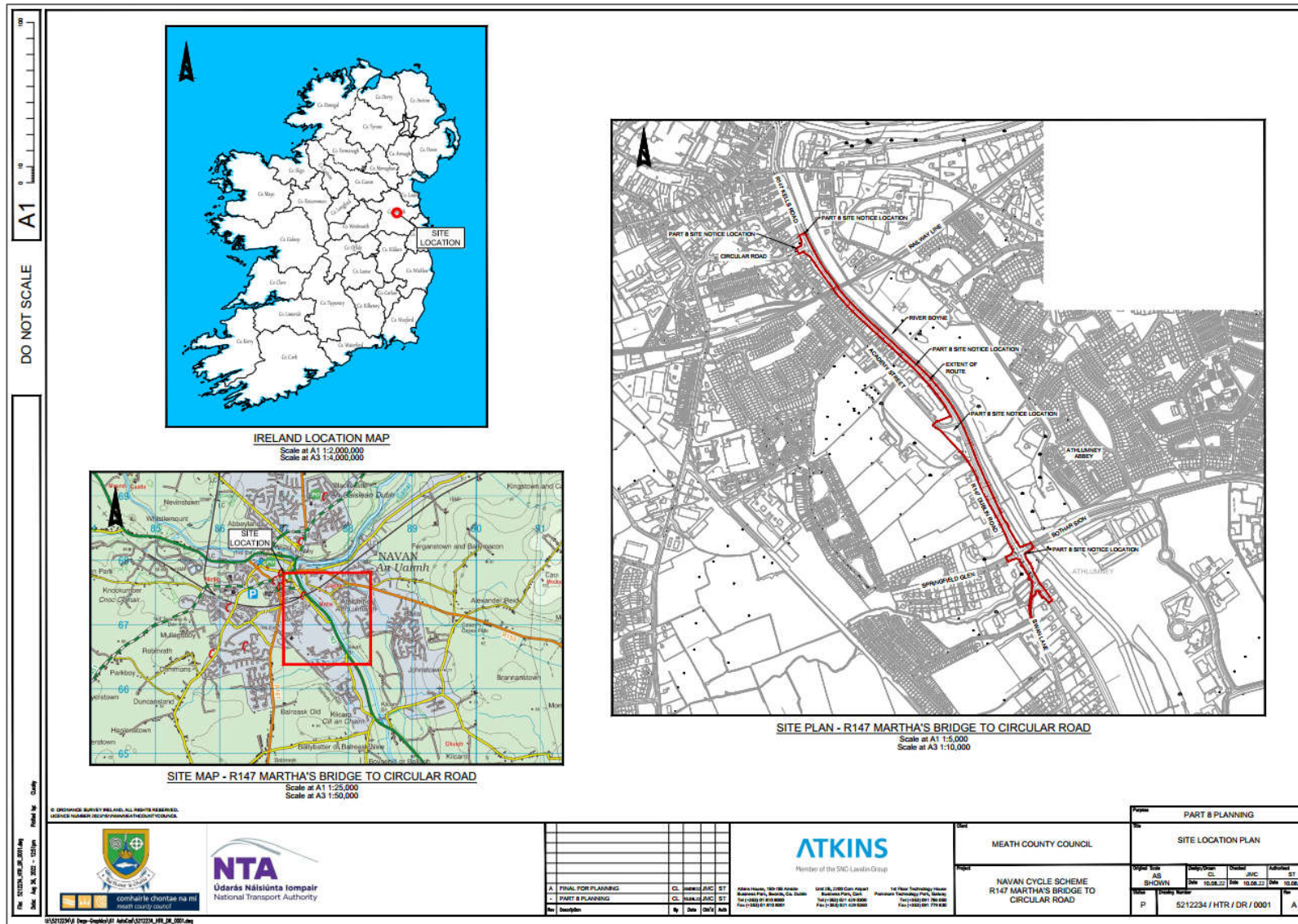


Figure 1-1 - Proposed Project Location.

1.1. Description of the Proposed Development

The proposed scheme consists of a ca. 1.4km cycleway on the existing road network adjacent to the River Boyne.

The proposed scheme has been broken down into general sections to provide for various link design types. These sections are as follows: -

1. Link A: the northern portion of the scheme from R161 Circular Road / R147 Dublin Road Junction to Academy Street. This link type will comprise of: -
 - i. 2 No. 1.8m wide (minimum) footpaths;
 - ii. 1 No. 2.5m wide (minimum) two-way cycle track along the river side of the scheme; and
 - iii. 2 No. 3.25m wide traffic lanes (narrowed to 3m at signalised junctions or turning lanes).
2. Link B: the central portion of the scheme from Academy Street to L-50555 Bóthar Sion / R147 Dublin Road Junction. This link type will comprise of: -
 - i. 2 No. 1.8m wide (minimum) footpaths;
 - ii. 1 No. 2.5m wide (minimum) two-way cycle track along the land side¹ of the route; and
 - iii. 2 No. 3.25m wide traffic lanes (narrowed to 3m at signalised junctions / turning lanes).
3. Link C: southern portion of the scheme from L-50555 Bóthar Sion / R147 Dublin Road Junction and to the start / termination point south of Swan Lane. This link type will comprise of: -
 - i. 2 No. 1.8m wide (minimum) footpaths;
 - ii. 1 No. 2.5m wide (minimum) two-way cycle track along the land side of the route; and
 - iii. 2 No. 3.25m wide traffic lanes (narrowed to 3m at signalised junctions / turning lanes).

Link A, B and C are illustrated below in Figure 1-2, 1-3 and 1-4.

¹ Land side' is used for simplicity when referring to the side of the R147 that is opposite the river.

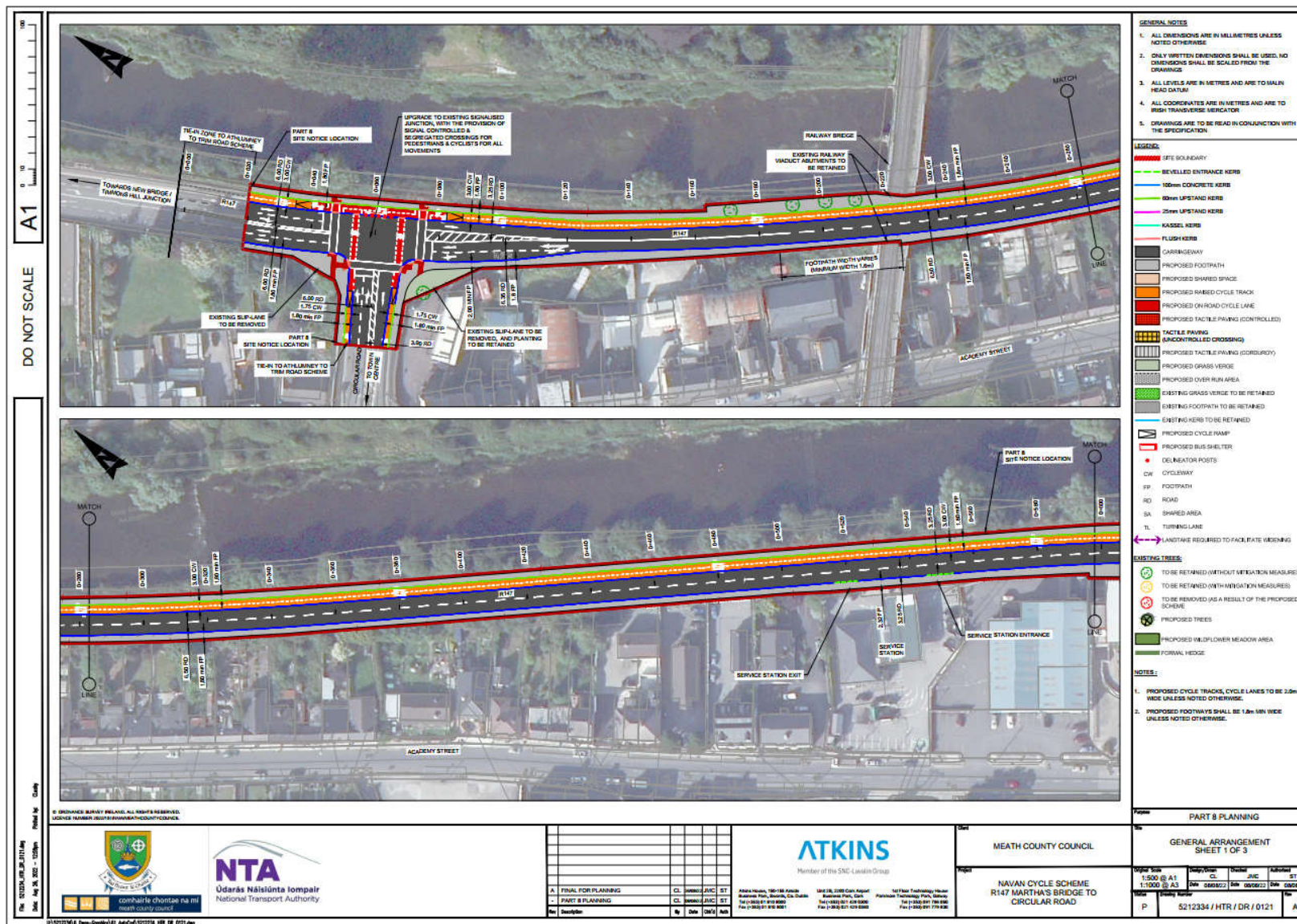


Figure 1-2 – Link A: Northern section of the Route.

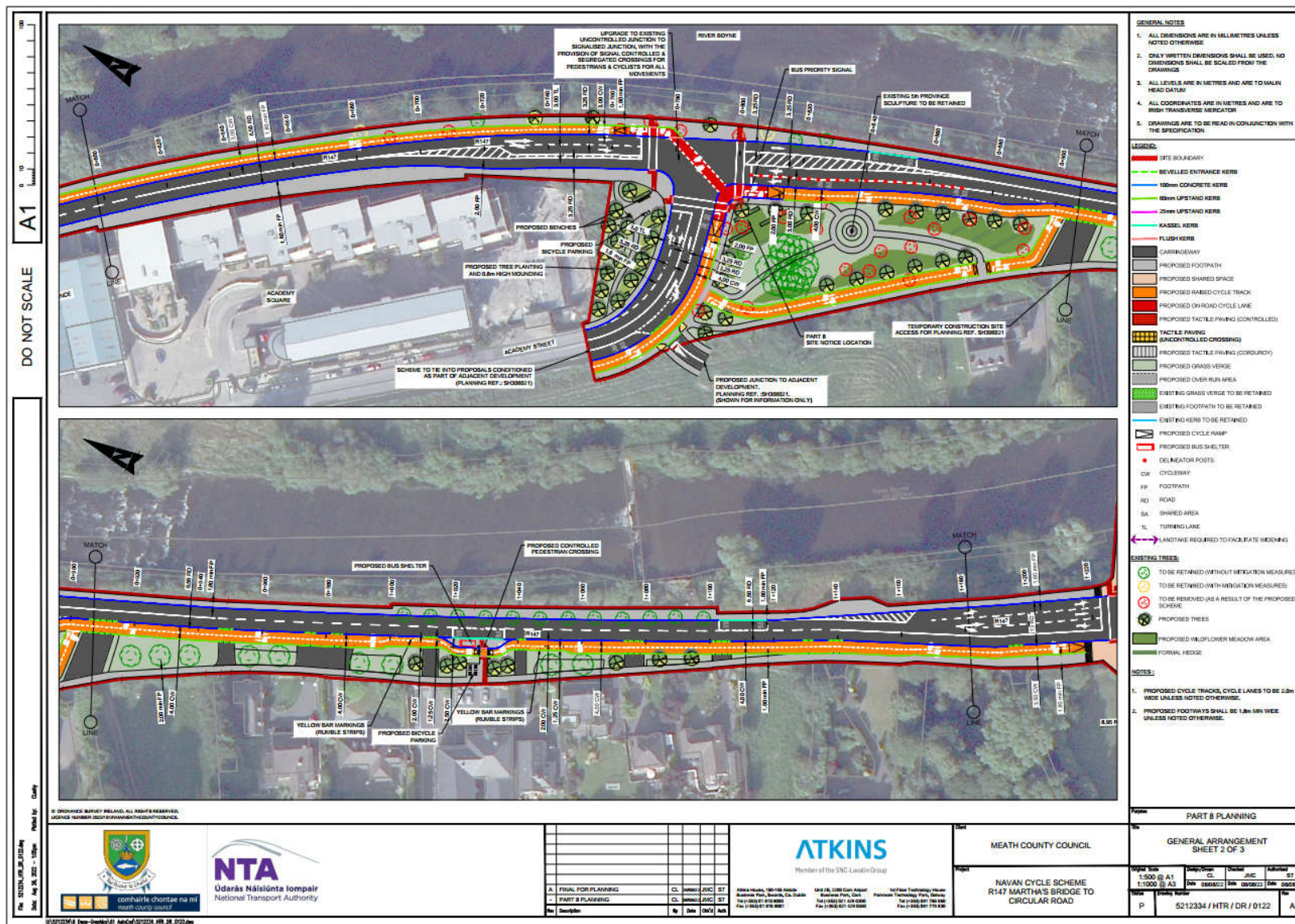


Figure 1-3 – Link B Central Section of the Route.

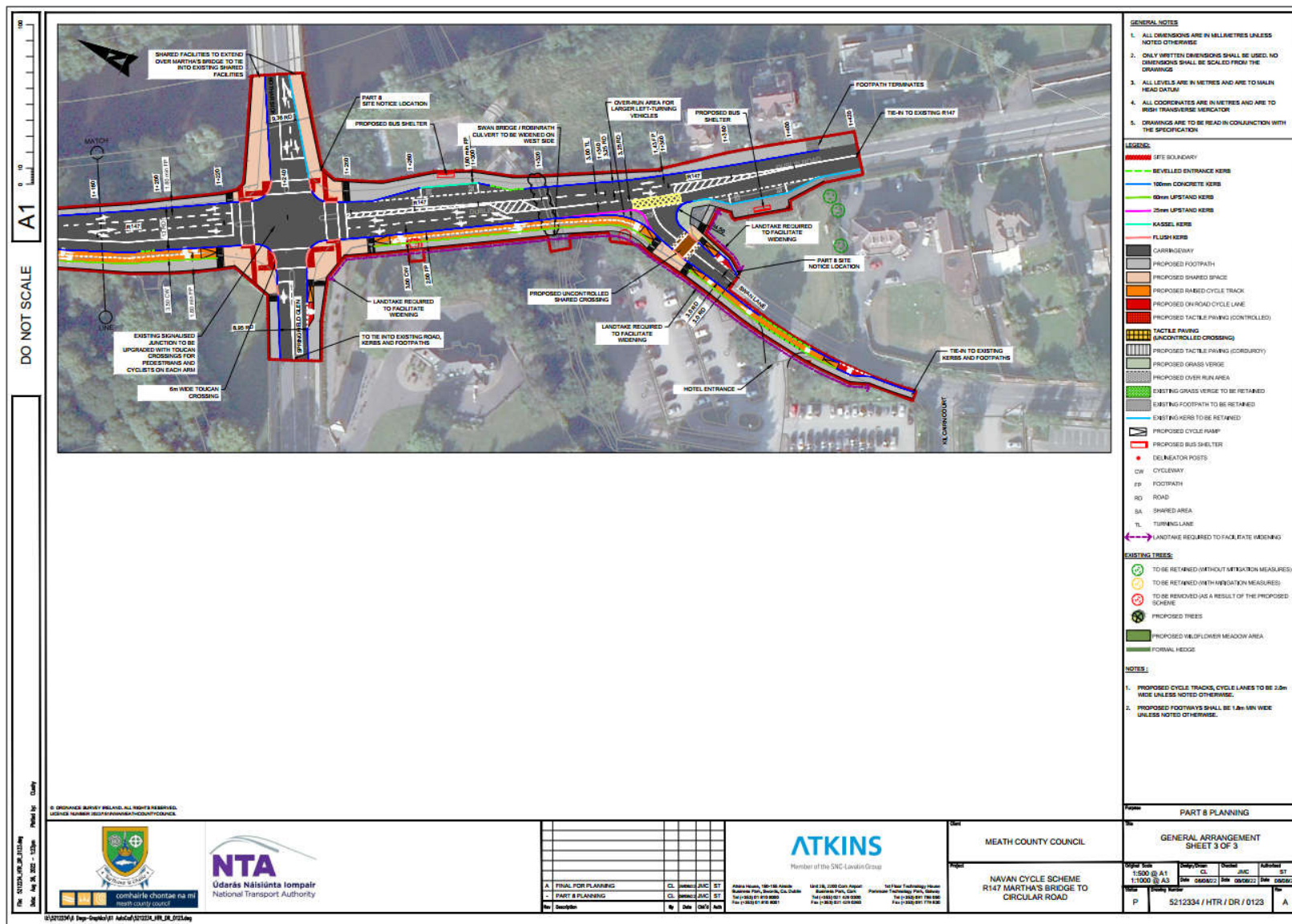


Figure 1-4 – Link C southern section of the Route.

1.2. Construction Methodology

The Construction period for the proposed scheme is anticipated to be 12 months and can be summarised as follows: -

1.2.1. Cycle path Construction

Works will commence with the clearance and off-site removal of redundant road signage, boundary treatment, road surface materials and topsoil. The works will be undertaken using a combination of operatives using hand tools, mechanical excavators and dumper trucks. To facilitate the main works, underground utilities which conflict with the main works will be uncovered using mechanical excavators and hand digging where appropriate. The need for significant utility diversions is not envisaged as part of the works; instead a 'lower and protect' approach will be favoured. This is likely to be restricted to locations where the walking and cycling facilities cross or interface with public roads.

Following the diversion of utilities, the initial pavement and cycle track construction phase will be undertaken. This will include the excavation and removal of the existing stone, soil, concrete and bitumen materials along the route followed by the installation of new path and track base materials. Excavations will be largely undertaken by mechanical means, with any spoil arising to be removed off site or reused locally where testing confirms its suitability. The proposed project involves an anticipated maximum excavation depth of 50mm below ground level to facilitate the base layers for the proposed footpaths / pavements and the ducting for the signalling associated with the scheme. The base layers of the pavement and track are to be made of compacted stone materials.

The works will also involve constructing the civil engineering elements required to facilitate the commissioning of the traffic signals and the public lighting elements at the latter stages of construction. Service chambers and underground duct sets will be laid within trenches and backfilled with granular material. Signal poles and public lighting columns will be erected, and ducting connections will be made to the base of each pole unit. Following completion of the lighting elements, the final pavement surface course will be laid using an asphalt paving machine followed by compaction using a vibrating roller.

1.2.2. Road Resurfacing

The scheme also involves the resurfacing of the roadways and painting of new road markings within the scheme footprint. The existing road surface course layer will be planed-out throughout the entire scheme extents with planings being removed off site. The planed-out area will be replaced with Hot Rolled asphalt (HRA) or Stone Mastic Asphalt (SMA) surface course ca. 40mm - 60mm thick. Additional to this, and where required, additional bituminous layers may be replaced in localised areas where there is evidence of pavement failure. It is not envisaged that the foundations layers (i.e. sub-base or capping) will require replacement. Following road resurfacing new road markings will be painted on road surfaces.

1.2.3. Footpath Construction

The construction of the cycleway will also involve relocation and installation of footpaths and kerbs adjacent to the cycleway. Footpaths will be constructed similar to the cycleway; excavation of existing footpath with materials removed off site to a licenced waste facility, excavations along footpath alignment to depths of maximum 500mm, infill of footpath subbase materials (compacted stone) and the pouring of concrete footpaths in shuttered sections. A ca. 60mm high poured concrete kerb will also be installed along the footpath edge.

1.2.4. Drainage Alterations

Drainage works, which will run in tandem with the pavement construction phase, are considered to be minimal and restricted to areas where the scheme interfaces with the public road. The drainage works at these locations are limited to the relocation of existing road gullies with the larger existing road drainage infrastructure (i.e. carrier drains) not being altered or adjusted. During these works the main carrier drains will be isolated / blocked off from works activities / work zones to facilitate the relocation of drainage gullies.

Typically, drainage will be provided using new gullies (relocated to alongside the proposed kerb positions) connecting to the existing surface water drainage infrastructure / main carrier drain. The new footpaths and cycle

tracks will generally slope towards the road in order to minimise the need for additional drainage collection measures specific for these facilities. Alternatively, and where the proposed scheme results in a marked increase in catchment area (due to an increased hard-standing area), sections of footway and/or cycle track will be constructed using either porous surfacing; or where appropriate, the cross-fall will fall towards an adjacent grass verge (thus not discharging into the surface water network).

1.2.5. Verge Reinstatement

For soft landscaping areas topsoil profiles will be graded to tie into the new pavement levels followed by grass seeding. The top soiling and seeding will be undertaken using a combination of mechanical excavator, tractor unit drawing a rotavator / rake / seed spreader and also operatives using hand tools for areas where machinery access is unavailable.

There will be no additional demolition works associated with this project.

1.2.6. Traffic Management

The construction of the cycleway will be carried out in short segments (ca.100-200m in length) on one side of the roadway at a time to allow for continued traffic flow and will progress along the roadways, as such individual work zones will be relatively small.

1.2.7. Junctions

All junctions along the scheme will be segregated. This will feature cyclists passing through the junction on their own cycle tracks with dedicated traffic signal phases which are separate to the vehicular phasing and separate to the pedestrian phasing (where applicable). The proposed junctions are to include kerb upstands throughout (except at crossing points), providing vertical segregation and thereby increasing protection to the cycle tracks.

1.2.8. Bridge Crossings

The cycleway crosses 1 no. watercourse; Robinrath Stream (aka Swan River). The Robinrath Stream is culverted under the R147 and it is proposed to align the cycleway alongside and parallel to the roadway to span over the stream. It is proposed to utilise a precast deck unit of ca. 4m in length (steel or reinforced concrete) to span the open channel watercourse adjacent to the culvert. The deck unit will be installed on 2 no. reinforced concrete abutment walls, or similar to enable the ca. 4m span across the stream and avoid in-stream works. The concrete abutment walls will be poured in situ and will be located at a ca. 1m set back distance from the stream bank. As per standard construction techniques, the abutment walls will be poured inside oversized shuttering / form work to ensure concrete is contained and restricted only to the required areas which will ensure there is no risk of concrete loss near or to the watercourse.

1.2.9. Site Compound

It will be the responsibility of the Contractor to determine a suitable location for the site compound within the proposed development area, but away from any identified environmental sensitive receptors (watercourses, designated sites etc) so as to avoid potential impacts to the environment and the general public. The final proposed site compound location will not be permitted within the River Boyne and River Blackwater SAC / SPA nor within 25m of the River Boyne. It is planned that existing Local Authority (Meath County Council) controlled material storage yards in the locality, currently used for the storage of inert materials, will be utilised during the construction phase to store similarly inert materials for incorporation in the proposed scheme. Materials will be brought to site on a periodic basis as required directly from suppliers. Parking for operatives will be at the main compound only. Operatives will be transported from the compound to the works area. No parking will be allowed within the temporary works area or on-street.

1.2.10. Scheme connectivity

The northern extent of the proposed scheme will connect to another cycleway; Athlumney to Trim Road Cycle and Pedestrian Scheme where a section of this permitted and proposed scheme is aligned along the R147 roadway. The proposed scheme will also connect to the existing cycling / pedestrian infrastructure from Martha's Bridge onto Johnstown and Metges Road.

2. Scope of Study

The aim of this report is to provide supporting information to assist the competent authority to carry out an AA determination with respect to the proposed Scheme.

2.1. Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the ‘Habitats Directive’ provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 – 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservations of an EU-wide network of sites known as European sites. European sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects that could potentially affect European sites. Article 6(3) establishes the requirement for Appropriate Assessment: -

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

Article 6 (4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan or project will adversely affect a European site. Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures need to be addressed in this case. Article 6(4) states: -

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

2.2. Appropriate Assessment Process

Guidance on the AA process was produced by the European Commission (EC, 2001; 2018), which was subsequently used to develop guidance for Ireland by the Department of Environment, Heritage and Local Government in 2009 (DEHLG, 2009), National Parks and Wildlife Service in 2018² (NPWS 2018) and the Office of the Planning Regulator (2021). These guidance documents set out a staged approach to complete the AA process and outline the issues and tests at each stage. The stages outlined below are taken from the guidance document *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities* (DEHLG, 2009) and Office of the Planning Regulator; *Appropriate Assessment Screening for Development Management* (2021).

² <https://www.npws.ie/development-consultations>

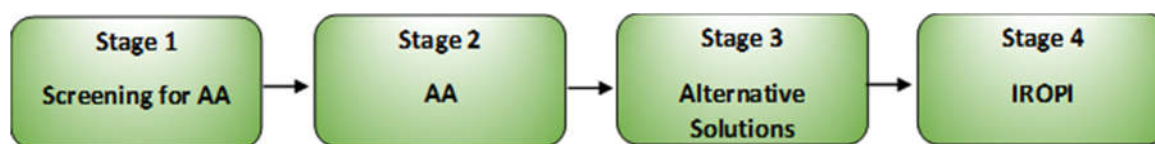


Figure 2-1 - Appropriate Assessment Process (Source: DEHLG, 2009).

2.2.1. Screening for Appropriate Assessment

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3): -

- i. Whether a plan or project is directly connected to or necessary for the management of the site, and
- ii. Whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, then the process must proceed to Appropriate Assessment.

2.2.2. Appropriate Assessment

Appropriate Assessment considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any necessary mitigation measures.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where sufficient mitigation cannot be achieved, the alternative solutions need to be considered and the process proceeds to the consideration of alternative solutions.

2.2.3. Alternative Solutions

This examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a European site. The process must return to AA as alternatives will require assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected, it is necessary to examine whether there are imperative reasons of overriding interest (IROPI).

2.2.4. IROPI

This examines whether there are imperative reasons of overriding public interest for allowing a plan or project that will have adverse effects on the integrity of a European site to proceed in cases where it has been established that no less damaging alternative solution exists. Compensatory measures must be proposed and assessed, of which the Commission must be informed.

The AA process only progresses through the full process for certain plans and projects. For example, for a project not connected with the management of a European site and where no likely significant effects on a European site in view of its conservation objectives are identified, the process stops at Screening for AA. Throughout the process the precautionary principle must be applied, which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty (EC, 2001; 2018).

3. Methods

3.1. Guidance documents

The Screening for Appropriate Assessment was prepared with reference and due consideration to the following documents and case law, including but not limited to: -

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna (Habitats Directive);
- Statutory Instrument No. 477/2011 — European Communities (Birds and Natural Habitats) Regulations 2011;
- National Parks and Wildlife Service - Development Consultations³ (NPWS 2018)
- European Commission (2018). Managing Natura 2000 sites: the provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC;
- European Commission (2021). Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC;
- European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;
- Department of the Environment, Heritage and Local Government (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities;
- National Roads Authority (2009). Guidelines for Assessment of Ecological Impacts of National Roads Scheme;
- Office of the Planning Regulator (2021). Appropriate Assessment Screening for Development Management. OPR Practice Note PN01; and,
- Case: ; C-323/17 People Over Wind & anor. V. Coillte; C-461/17 Holohan v An Bord Pleanála; Kelly v An Bord Pleanála & anor [2019] IEHC 84; Eco Advocacy CLG v An Bord Pleanála & anor [2021] IEHC 265, and other relevant court rulings and case law.

3.2. Desk Study

A desk study was carried out to collate information available on European sites in the vicinity of the proposed scheme. These areas were viewed using Google Earth, Google maps⁴ and Bing maps⁵ (last accessed on 03/06/2022).

The National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) online databases were reviewed concerning European sites and their features of interest in the vicinity of the proposed scheme.

The Environmental Protection Agency (EPA) mapping⁶ system was used to identify any hydrological connection between the proposed project and European sites.

Locations and boundaries of all European sites were identified and reviewed using the NPWS online map viewer.

³ <https://www.npws.ie/development-consultations>

⁴ <https://www.google.ie/maps>

⁵ <http://www.bing.com/maps/>

⁶ <https://gis.epa.ie/EPAMaps/>

Desktop information on relevant European sites were reviewed on the NPWS website, including the site synopsis for each SAC/SPA, the conservation objectives, the site boundaries as shown on the NPWS online map viewer, and published information and unpublished reports on the relevant European sites.

Relevant planning information for the surrounding area was reviewed using the planning enquiry systems of Meath County Council. Search criteria were implemented to determine whether such projects or plans would not be relevant to this study. This reviewed information was used to determine potential cumulative impacts from other plans / projects with the proposed works.

3.3. Statement of Authority

The Screening for Appropriate Assessment report was prepared by Avril McCollom and Colin Wilson. Paul O'Donoghue provided peer review and support.

Avril McCollom has a BSc (Hons) in Freshwater and Marine Biology. Avril has worked in ecological and environmental consultancy since 2017, working on a wide range of projects including, greenways, road construction, Strategic Housing Developments and Strategic Infrastructure Developments. A focus of Avril's work to date has been on the preparation of Appropriate Assessments Screenings, Environmental Impact Assessment Screenings and Outline Construction Environmental Management Plans and Construction and Demolition Waste Management Plans. Avril assisted with the collation of background information to inform this report.

Colin Wilson (Atkins Dublin) has a BSc (Hons) in Environmental Science. He has over 14 years working in the fields of ecology and environmental management. He is a Senior Ecologist with experience in ecological surveying, environmental assessment, on-site ecological supervision and mitigation. He has experience on multiple road projects regarding all elements of surface and groundwater management, monitoring, sampling and associated reporting. Colin also has a broad range of experience in invasive species management, biosecurity and control. Colin has prepared AA screening reports, Natura Impact Statements and has also been involved in the development of Environmental Operating Plans and Construction Environmental Management Plans for a number of national infrastructure projects.

Paul O'Donoghue has a BSc (Zoology), MSc (Behavioural Ecology) and a PhD in avian ecology and genetics. Paul is a chartered member of the Society for the Environment (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Paul has over 18 years' experience in ecology; including extensive experience in the preparation of Habitat Directive Assessments / Natura Impact Statements (i.e. Appropriate Assessment under Article 6(3) of the EU Habitats Directive). Paul carried out the technical review of this report.

4. Existing Environment

The cycle route is predominately within the hardstanding areas of the existing road network and adjacent footpaths, with minor portions within landscaped areas. The proposed cycle network runs predominately along the R147 with small sections extending onto Circular Road in the northern section of the scheme, onto Academy Street in the central section of the study area and onto Swan Lane, Bóthar Sion Bridge and Springfield Glen in the southern section of the scheme. The storm water drainage infrastructure along residential roadways, along which the proposed scheme is aligned outfalls to the River Boyne.

The project site is predominantly aligned along the R147 roadway which is adjacent to the River Boyne which accommodates the River Boyne and River Blackwater SAC (002299) and River Boyne and River Blackwater SPA (004232). The SAC boundary is aligned along the railings / fence line of the R147 roadway. The SPA boundary follows the R147 railings / fence line for some sections of the proposed scheme but is largely aligned along the river edge ca. 10m from the railings / fence line of the R147.

At the northern end of the scheme the cycleway is proposed to tie into the granted development; Athlumney to Trim Road Cycle and Pedestrian Scheme. The proposed project will tie into a section of the pedestrian pathway of the granted development which lies ca. 1m inside the boundary of River Boyne and River Blackwater SAC at the tie in point. In order to tie into the granted development the proposed project will be aligned within the SAC for a length of ca. 24.36m and maximum width of ca. 0.87m before tapering to 0m. The total area within the SAC is 10.47m². The 10.47m² tapered tie in footpath will be constructed on existing built land/made ground predominantly comprised of stone and / or gabion baskets on the east side of the roadway railings. The habitats along this section of tie in can be classified as Artificial Surfaces (BL1). Plates 4.1 and 4.2 below show the made ground at the location of the tie in.

Near the southern extent of the scheme the alignment of the cycleway is, for a small section, on top of the Bóthar Sion road bridge which crosses the SAC and SPA, however the proposed works will only be carried out within the existing roadway on this bridge.

There are no National Heritage Areas (NHA's) or proposed National Heritage Areas (pNHA's) near the project site. The closest pNHA to the proposed scheme is Boyne Woods pNHA located ca. 4.4km northeast of the project site.

There are 2 no. EPA watercourses within the vicinity of the cycle route; the Robinrath Stream (EPA Code: IE_EA_07B041810), also known as Swan River, which is crossed by the cycle route adjacent to the R147 where the stream is culverted under the roadway. The River Boyne (EPA Code: IE_EA_07B041810) is aligned along the eastern boundary of the proposed cycle route.

The proposed scheme is within the Boyne Water Framework Directive (WFD) catchment area and the Boyne sub-catchment area. A review of Geological Survey Ireland datasets⁷ identifies the project site as predominately being within areas of 'High' groundwater vulnerability with a small portion of extreme groundwater vulnerability noted within the southern portion of the scheme. An area of 'Rock at or near Surface or Karst' is also directly adjacent to the route in the Limekiln Hill area in the southern section of the study area.

Table 4-1 below outlines Water Framework Directive 2013-2018 water quality details for the EPA watercourses (Source: EPA⁸).

⁷ <https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228>

⁸ <https://gis.epa.ie/EPAMaps/>

Table 4-1 - WFD details of watercourses near the project site.

Watercourse	Code	Order	River Waterbody WFD Status (2013-2018)	River Waterbody Risk	Q Value
Robinrath Stream (aka Swan River)	IE_EA_07B041810	1	Good	Not at Risk	N/A
River Boyne	IE_EA_07B041810	6	Good	Not at Risk	3-4 / Moderate status at Boyne Railway Bridge (2003) 3-4 / Moderate status at Kilcarn Old Bridge (2020)

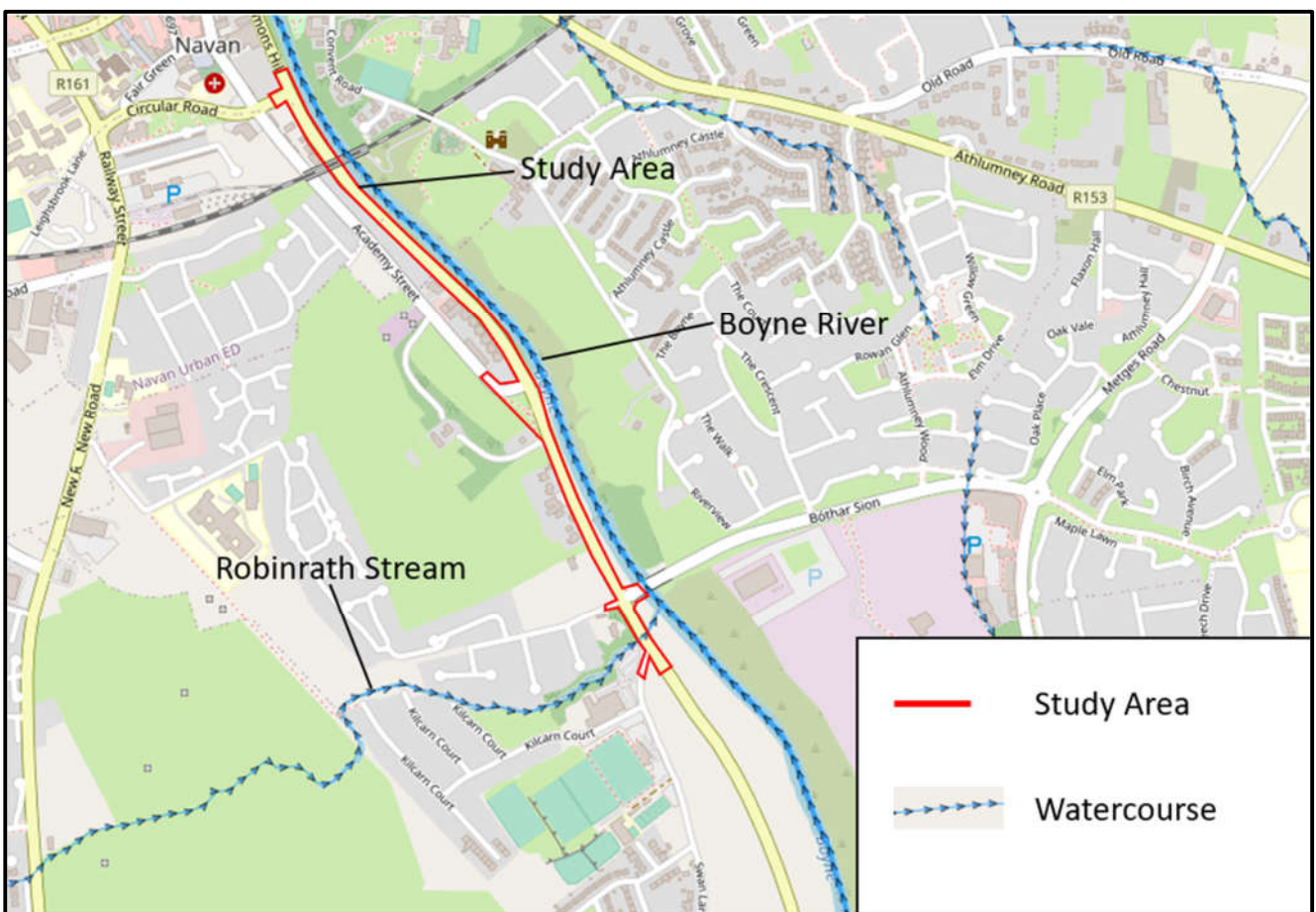


Figure 4-1 - Watercourses within close proximity to the project site.



Plate 4.1 - Made ground on east side of railings



Plate 4.2 - Made ground on east side of railings with grass encroachment.

5. Appropriate Assessment Screening

5.1. Connectivity to European Sites

The 'zone of influence' (ZoI) for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2019). National Parks and Wildlife Service and Office of the Planning Regulator guidance⁹ advises that the potential 'zone of influence' must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.

Thus, given the nature, scale and extent of the proposed project, the potential zone of influence will consider European sites with regard to the location of a European site, the QIs of the site and their potential mobility outside that European site, the Cause-Pathway-Effect model and potential environment effects of the proposed project.

The zone of influence of the proposed project is limited to those European sites within or directly adjacent to the red line boundary of the proposed project. The zone of influence of the proposed project also includes those European sites with potential indirect connectivity through the following pathways: -

- Hydrological – effects from surface water quality; and,
- Hydrogeological – effects from groundwater.

The proposed project lies directly adjacent to the boundary of River Boyne and River Blackwater SAC (002299) and River Boyne and River Blackwater SPA (004232). A small section of the proposed cycleway is aligned on top of Bóthar Sion Bridge and this bridge crosses over River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA. At the northern end of the scheme the proposed cycleway will connect into the Athlumney to Trim Road Cycle and Pedestrian Scheme (granted development) and this scheme at the tie in point is ca. 0.86m within the boundary of the River Boyne and River Blackwater SAC.

At the southern end of the proposed scheme, the Robinrath Stream is to be crossed by a ca. 4m single span deck unit. The open channel of the Robinrath stream is to be crossed by the deck unit immediately adjacent to where the stream is culverted under the R147 roadway. There is potential indirect connectivity from the proposed project to the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA via the Robinrath Stream.

The Boyne Coast and Estuary SAC (001957) and Boyne Estuary SPA (004080) are located ca. >33km downstream from the project site along the River Boyne and as such there is potential hydrological connectivity to these 2 no. European sites.

Tables 5-1 and 5-2 below detail the European sites which are within the potential ZoI of the proposed project. and lists their associated qualifying interests. Figures 5-1 and 5-2 depict the locations of the European Sites within the potential ZoI of the proposed project.

⁹ DoEHLG (2009). *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, Dublin, Ireland.
OPR (2021) Appropriate Assessment Screening for Development Management. OPR Practice Note PN01. Office of the Planning Regulator. Dublin, Ireland.

Table 5-1 - SAC's within the potential Zone of Influence of the proposed project.

Site Name and Code	Approximate Distance from project location	Features of Interest	Within the Zol
River Boyne and River Blackwater SAC (002299)	Directly adjacent to SAC	<ul style="list-style-type: none"> Alkaline fens [7230] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Salmo salar</i> (Salmon) [1106] <i>Lutra lutra</i> (Otter) [1355] 	<p>Yes.</p> <p>The proposed project is located immediately adjacent to River Boyne and River Blackwater SAC.</p> <p>Potential impacts on this European site will be discussed below.</p>
Boyne Coast and Estuary SAC (001957)	Ca. >25km direct line distance. Ca. >33km downstream via River Boyne.	<ul style="list-style-type: none"> Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] 	<p>No.</p> <p>There is no potential for direct impacts on this SAC given the location of the project site.</p> <p>While there is a potential hydrological link to Boyne Coast and Estuary SAC, this is via >33km of the River Boyne.</p> <p>Many of the Qualifying Interest habitats; i.e. drift line vegetation, and dunes systems are terrestrial in nature and cannot be impacted via hydrological pathways or as a result in a change in surface water quality.</p> <p>Given the nature and scale of the project works, the location of the scheme predominantly along urban roadways, and the limited connectivity between the project site and the River Boyne, no likely significant impacts are anticipated on the surface water quality of the River Boyne from the construction of the proposed scheme.</p> <p>In addition, given the distance between the project site and the SAC, the volume of intervening water within the River Boyne and the dilution and dispersal that would occur, it is not likely that any pollution event which the project could potentially generate could result in significant impacts to the QI habitats of Boyne Coast and Estuary SAC which are susceptible to changes in surface water quality. This coupled with the scale and nature of proposed works is such that there is not in fact a risk to Boyne Coast and Estuary SAC or its qualifying interests.</p>

Table 5-2 - SPA's within potential Zone of Influence of the proposed project.

Site Name and Code	Approximate Distance from project location	Features of Interest	Within the Zol
River Boyne and River Blackwater SPA (004232)	Directly adjacent to SPA.	<ul style="list-style-type: none"> Kingfisher (<i>Alcedo atthis</i>) [A229] 	<p>Yes.</p> <p>The proposed project is located immediately adjacent to River Boyne and River Blackwater SPA.</p> <p>Potential impacts on this European site will be discussed below.</p>
Boyne Estuary SPA (004080)	Ca. >25km direct line distance. Ca. >33km downstream via River Boyne.	<ul style="list-style-type: none"> Shelduck (<i>Tadorna tadorna</i>) [A048] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Lapwing (<i>Vanellus vanellus</i>) [A142] Knot (<i>Calidris canutus</i>) [A143] Sanderling (<i>Calidris alba</i>) [A144] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Redshank (<i>Tringa totanus</i>) [A162] Turnstone (<i>Arenaria interpres</i>) [A169] Little Tern (<i>Sterna albifrons</i>) [A195] Wetland and Waterbirds [A999] 	<p>No</p> <p>This SPA is remote from the project site and as such direct impacts on the SPA are precluded. There is no potential for the proposed project to result in disturbance or displacement of QI bird species accommodated within the SPA. The project site is along roadways and as such there is no potential for ex-situ QI bird species to utilise the project site for roosting or foraging.</p> <p>While there is a hydrological link to Boyne Estuary SPA, this is via >33km of the Robinrath stream and the River Boyne. Given the nature and scale of the project works, the location of the scheme predominantly along urban roadways, and the limited connectivity from the project site to the River Boyne, no likely significant impacts are anticipated on the surface water quality of the River Boyne from the construction of the proposed scheme.</p> <p>In addition, given the distance between the project site and the SPA, the volume of intervening water within the River Boyne and the dilution and dispersal that would occur, it is not likely that any pollution event which the project could potentially generate could result in significant impacts to the QI wetland habitats of Boyne Estuary SPA. This coupled with the scale and nature of proposed works is such that there is not in fact a risk to Boyne Estuary SPA wetland habitats.</p>

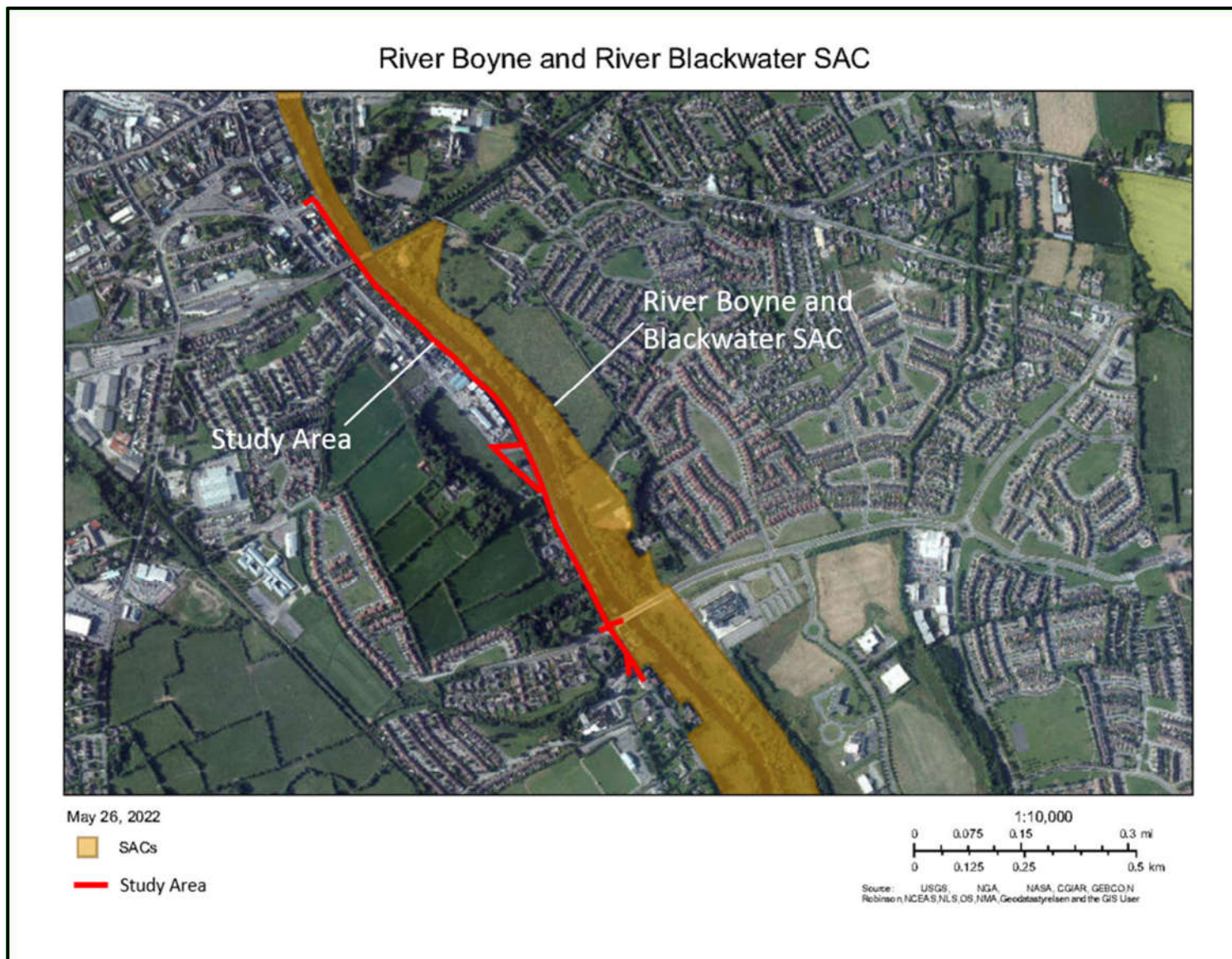


Figure 5-1 - SAC's within the Zone of influence of the proposed project.

River Boyne and River Blackwater SPA



May 26, 2022

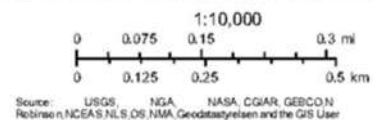


Figure 5-2 - SPA's within the zone of influence of the proposed project.

5.2. River Boyne and River Blackwater SAC

5.2.1. Site Synopsis

A synopsis of the SAC, as detailed by NPWS, is as follows¹⁰: -

“This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part, with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site, including Slane, Navan, Kells, Trim, Athboy and Ballivor.

*The main areas of alkaline fen in this site are concentrated in the vicinity of Lough Shesk, Freehan Lough and Newtown Lough. The hummocky nature of the local terrain produces frequent springs and seepages which are rich in lime. A series of base-rich marshes have developed in the poorly-drained hollows, generally linked with these three lakes. Open water is usually fringed by Bulrush (*Typha latifolia*), Common Club-rush (*Scirpus lacustris*) or Common Reed (*Phragmites australis*), and this last species also extends shorewards where a dense stand of Great Fen-sedge (*Cladium mariscus*) frequently occurs. This in turn grades into a sedge and grass community (*Carex* spp. and Purple Moor-grass, *Molinia caerulea*), or one dominated by Black Bog-rush (*Schoenus nigricans*). An alternative aquatic/terrestrial transition is a floating layer of vegetation. This is normally based on Bogbean (*Menyanthes trifoliata*) and Marsh Cinquefoil (*Potentilla palustris*). Other species gradually become established on this cover, especially plants tolerant of low nutrient status e.g. bog mosses (*Sphagnum* spp.). Diversity of plant and animal life is high in the fen and the flora includes many rarities. Plants of interest include Narrow-leaved Marsh-orchid (*Dactylorhiza traunsteineri*), Fen Bedstraw (*Galium uliginosum*), Cowbane (*Cicuta virosa*), Frogbit (*Hydrocharis morsus-ranae*) and Least Bur-reed (*Sparganium minimum*). These species tend to be restricted in their distribution in Ireland. Also notable is the abundance of aquatic stoneworts (*Chara* spp.) which are characteristic of calcareous wetlands.*

*The dominant habitat along the edges of the river is freshwater marsh, and the following plant species occur commonly in these areas: Yellow Iris, Creeping Bent (*Agrostis stolonifera*), Canary Reed-grass (*Phalaris arundinacea*), Marsh Bedstraw (*Galium palustre*), Water Mint (*Mentha aquatica*) and Water Forget-me-not (*Myosotis scorpioides*). In the wetter areas Common Meadow-rue (*Thalictrum flavum*) is found. In the vicinity of Dowth, Fen Bedstraw (*Galium uliginosum*), a scarce species mainly confined to marshy areas in the midlands, is common in this vegetation. Swamp Meadow-grass (*Poa palustris*) is an introduced plant which has spread into the wild (naturalised) along the Boyne approximately 5 km south-west of Slane. It is a rare species which is listed in the Red Data Book and has been recorded among freshwater marsh vegetation on the banks of the Boyne in this site. The only other record for this species in the Republic of Ireland is from a site in Co. Monaghan.”*

5.2.2. Conservation Objectives

The Habitats Directive defines when the conservation status of the listed habitats and species is considered as favourable. The definitions it uses for this are specific to the Directive. In summary, they require that the range and areas of the listed habitats, and the range and population of the listed species, should be at least maintained at their status at the time of designation. Site-specific conservation objectives aim to define favourable conservation conditions for a particular habitat or species at that site.

Article (1) of the Habitats Directive (92/43/EEC) describes favourable conservation status for habitats and species as follows.

Favourable conservation status of a habitat is achieved when: -

¹⁰ <https://www.npws.ie/protected-sites/sac/002299>

- 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, and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objectives for the River Boyne and River Blackwater SAC, to maintain the favourable conservation for each of the qualifying interests of the site, were published by NPWS (2021) (Version 1; 03/12/2021)¹¹.

5.3. River Boyne and Blackwater SPA

5.3.1. Brief Description of the River Boyne and River Blackwater SPA

A synopsis of the SPA, as detailed by NPWS, is as follows¹²: -

“The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into Cos Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation.

Most of the site is underlain by Carboniferous limestone but Silurian quartzite also occurs in the vicinity of Kells and Carboniferous shales and sandstones close to Trim.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive of special conservation interest for the following species: Kingfisher.

A survey in 2010 recorded 19 pairs of Kingfisher (based on 15 probable and 4 possible territories) in the River Boyne and River Blackwater SPA. A survey conducted in 2008 recorded 20-22 Kingfisher territories within the SPA. Other species which occur within the site include Mute Swan (90), Teal (166), Mallard (219), Cormorant (36), Grey Heron (44), Moorhen (84), Snipe (32) and Sand Martin (553) – all figures are peak counts recorded during the 2010 survey.

¹¹ NPWS (2021). Conservation Objectives: River Boyne and River Blackwater SAC 002299. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

¹² <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004232.pdf>

5.3.2. Conservation Objectives

The conservation objectives for River Boyne and River Blackwater SPA¹³ are to maintain or restore the favourable conservation status of habitats and species of community interests.

The favourable conservation status of a species is achieved when: -

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objectives for River Boyne and River Blackwater SPA (NPWS, 2022)¹⁴ is 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA' i.e. Kingfisher.

5.4. Likelihood of Potential Impacts on European Sites

The available information on the European Sites within the potential Zol of the proposed project was reviewed to establish whether or not the proposed project is likely to have a significant effect on the conservation objectives of these SACs/SPAs. The likelihood of impacts on the features of interest of European Sites identified in this report is based on information collated from the desk study, site plans and other available existing information.

The likelihood of impacts occurring are established in light of the type and scale of the proposed works, the location of the proposed works with respect to European sites and the features of interest and conservation objectives of the European sites.

This screening report is prepared following the Cause – Pathway – Effect model. The potential impacts are summarised into the following categories for screening purposes.

- Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be as a result of a change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment.
- Indirect and secondary impacts do not have a straight-line route between cause and effect. It is potentially more challenging to ensure that all the possible indirect impacts of the project – in combination with other plans and projects - have been established. These can arise, for example, when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as an indirect consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact. Disturbance to fauna can arise directly through the loss of habitat (e.g. displacement of qualifying interest species) or indirectly through noise, vibration and increased activity associated with construction and operation.

¹³ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004232.pdf

¹⁴ NPWS (2022). Conservation objectives for River Boyne and River Blackwater SPA [004232]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

5.5. Identification of Potential Impacts on European Sites

5.5.1. River Boyne and River Blackwater SAC

The River Boyne and River Blackwater SAC covers a significant geographical area and the qualifying habitats and species for which they are designated are also spread widely throughout. An Appropriate Assessment screening, under Article 6(3) of the Habitats Directive, should be appropriate to assess the potential level of impact, the likely receptors, and in the case of water quality, connectivity between the site and the SAC. Therefore, designated SAC features which have no potential of being impacted by the proposed project, either because they do not occur within the area likely to be affected or because of distance from the works areas of the proposed project, are listed as such below. Table 5-5 below presents an overview of the potential for impacts on the habitats and species listed as features of interest within the SAC.

Table 5-3 - Review of qualifying interests of River Boyne and River Blackwater SAC.

Habitat / Species	Comment	Within the Zol
Alkaline fens [7230]	Alkaline fen habitats within the SAC are concentrated in the vicinity of Lough Shesk, Freehan Lough and Newtown Lough all of which are remote from the project site (>20km according to NPWS site documentation ¹⁵). There is no direct or indirect connectivity to this habitat from the proposed project. The proposed project does not have the potential to affect this habitat. There will be no residual impacts on this habitat and the proposed project will not have an adverse effect on the integrity of this habitat either during the construction or operational phases.	No
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0]	Alluvial forest habitats within the SAC are located on Boyne River Island west of Drogheda ca. 20km from the project site. Alluvial forest habitat does not occur along the River Boyne next to the project site. There is no direct or indirect connectivity to this habitat from the proposed project. The proposed project does not have the potential to affect this habitat. There will be no residual impacts on this habitat and the proposed project will not have an adverse effect on the integrity of this habitat either during the construction or operational phases.	No
River Lamprey (<i>Lampetra fluviatilis</i>) [1099]	This species has the potential to be affected should the proposed project result in a deterioration in water quality within the watercourses near the project site.	Yes
Salmon (<i>Salmo Salar</i>) [1106]	This species has the potential to be affected should the proposed project result in a deterioration in water quality within the watercourses near the project site.	Yes
Otter (<i>Lutra lutra</i>) [1355]	This species has the potential to be affected should the proposed project result in impacts to aquatic prey species as a result of a deterioration in water quality within the watercourses near the project site.	Yes

¹⁵ <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002299.pdf>

5.5.1.1. Construction Phase

Direct Impacts

The proposed project does not necessitate any in-stream works or works directly beside the waterbody of the River Boyne. As such the proposed project will not result in any direct impacts on the Qualifying Interest species; Atlantic salmon, River Lamprey or otter.

A small section of the scheme, at the northern tie in point, will be ca. 0.86m within the SAC boundary in order to connect to the Athlumney to Trim Road Cycle and Pedestrian Scheme. The ca. 24.36m long tie in; maximum width of ca. 0.87m before tapering to 0m, with total area; 10.47m², is within existing built land / artificial surfaces (BL3) comprised of stoned surfaces / gabion baskets on the east side of the roadway railings. There will be no land take from natural habitats. Refer to Plates 4.1 and 4.2 above for artificial surfaces at the tie in point. A vegetated bank exists alongside the R147 Kells Road, ca. 10m wide, providing a buffer between the scheme and the River Boyne during construction. The ca. 10.47m² footprint of the tie in is located on built lands / made ground, habitats which could accommodate SAC Qualifying Interest species do not occur in this location therefore there will be no likely significant effects on Atlantic salmon, river lamprey or otter as a result of a ca. 24.36m long section of works alongside the R147 roadway.

Indirect Impacts

Project works are occurring directly adjacent to the SAC boundary and in addition the proposed cycleway crosses over the Robinrath Stream which is a tributary of the Boyne River. Given the proximity of the construction activities to the SAC and also given the potential indirect hydrological connectivity of the project site to the SAC via the Robinrath Stream, the potential for construction activities to result in a deterioration in the water quality of the River Boyne must be considered.

There will be no in-stream works or watercourse diversions occurring within the Robinrath Stream. The design of the scheme includes for a precast deck unit (ca. 4m long, 2.5m wide, steel or reinforced concrete) to span the stream. 2 no. reinforced concrete abutments are required at either end of the deck unit. Excavations for the 2 no. abutments will cover a ca. 3m x 1m wide area and will be ca. 0.5m in depth and spoil material will be removed off site for disposal at a licenced facility. The concrete abutment walls will be poured in situ, as per standard construction techniques, in oversized shutters to ensure concrete is adequately contained within the excavation. Concrete will be premixed and delivered to site and there will be no batching of concrete on site. The abutments will be located at a ca. 1m set back distance from the stream bank. The works required for the 2 no. abutments set back from the watercourse, are of very small scale and as per standard construction techniques, concrete pouring will be contained within oversized shuttering. Given the scale, duration (ca. 1/2 day) and nature of the works, it is considered that these small scale works will not likely result in contamination of the water quality of the Robinrath Stream. Given the location, duration, scale and nature of this element of the project works there will be no likely significant effects, via the Robinrath stream, on the qualifying interest species; Atlantic salmon, river lamprey or otter in view of their conservation objectives.

The only other potential indirect hydrological connectivity to the SAC is via the existing surface water drainage infrastructure within the R147 roadway which outfalls to the River Boyne. The construction of the scheme will be carried out in short segments (ca.100-200m in length) on one side of the road at a time to allow for continued traffic flow and will progress along the roadways, as such individual work zones will be relatively small. During the construction phase, within these relatively small works zones, the existing carrier drain will be isolated and blocked off from the works activities / works area. As such significant impacts via the road drainage network which could affect the water quality of the River Boyne are not anticipated due to the isolation of the drainage network from the works. The isolation of the road drainage infrastructure described in this section will be considered under the Contractor's Temporary Works Design.

Excavation depths involved in the construction of the proposed scheme will be relatively shallow (ca. 0.5m bgl) and will be within the made ground of roadways and footpath as such encountering groundwater is unlikely and significant impacts on local groundwater are not anticipated. Therefore, there will be no likely significant effects on the River Boyne or River Blackwater SAC from the construction works through hydrogeological pathways.

5.5.1.2. Operational Phase

The proposed scheme is located along Navan town's busy urban roads. The usage of the cycle scheme will not result in an increase in noise levels within the area of the project site relative to ambient levels and as such Qualifying Interest species; otter will not be affected from noise or disturbance related impacts by cycleway usage. Qualifying Interest aquatic species; Atlantic salmon and river lamprey are not susceptible to noise related impacts from urban roadways and therefore will not be directly or indirectly affected by the usage of the cycle scheme.

No significant increase in lighting is proposed within the design of the proposed scheme, as such lighting will not increase the existing level of lighting along the R147 roadway. Given there is no increase in lighting levels, Qualifying Interest species; otter will not be affected from disturbance related impacts as a result of additional night time lighting.

The footprint of the scheme is located almost entirely along existing hard standing areas (roadway and footpaths) and as such there will be no significant changes or increases to surface water drainage / storm water run-off rates as a result of the project. Given that there will be no material changes to existing drainage conditions within the project site, there will be no likely significant effects on the water quality or hydrological regime of the River Boyne nor on the Qualifying Interest species; Atlantic salmon, river lamprey or otter from surface water run-off during scheme usage.

5.5.2. River Boyne and River Blackwater SPA

5.5.2.1. Construction Phase

The River Boyne and River Blackwater SPA is designated for Kingfisher. There are no works proposed along the watercourse of the River Boyne or within the riparian habitats along the river banks. There will be no direct physical loss, disturbance or damage to known or suitable foraging, roosting or nesting habitat. Therefore, there will be no direct impacts on Kingfishers within the SPA.

The project site is within the busy urban roadways of Navan town and there is a densely vegetated bank providing a buffer between the scheme works areas and the River Boyne during construction. It is considered that during construction of the scheme, any increase in noise in the area of the project will be temporary and negligible relative to ambient levels. Given the location, duration and scale of the proposed scheme, there will be no likely significant effects in terms of disturbance to Kingfishers within the SPA during the construction phase.

5.5.2.2. Operational Phase

The proposed scheme is located along Navan town's busy urban roads. A vegetated bank exists alongside the R147 Kells Road, ca. 10m wide, providing a buffer between the scheme and the River Boyne during the operational phase of the proposed scheme, refer to Plate 5.1 below, therefore otters will not be affected by anthropogenic disturbance. The usage of the cycle scheme will not result in an increase in noise levels within the area of the project site relative to ambient levels and as such Qualifying Interest species; kingfisher will not be affected from noise or disturbance related impacts by cycleway usage.



Plate 5.1 – Vegetated river bank providing buffer between scheme and River Boyne.

(photos from Atkins dash cam footage taken March 2022).

5.6. Cumulative Impacts

Available Meath County Council records were reviewed with respect to other projects which have the potential to occur during the same period as the proposed project to determine if there is the potential for works or projects to act in combination and give rise to potential cumulative impacts on the designated sites.

A search of Meath County Council Planning Applications has been undertaken for applications submitted within the last 7 years in the vicinity project site. This search identified a number of developments which may have the potential to cause cumulative impacts with the proposed works. Some of the granted applications have already been completed and of those which are not completed most are of small scale in nature (i.e. residential extension works or property improvement works) or are considered to be of a reasonable distance from the proposed works and as such will not cause any effects on River Boyne and River Blackwater SAC and SPA, therefore they have not been considered further in terms of potential cumulative impacts.

Of the granted applications; 7 no. of these developments have been further assessed in terms of cumulative impacts with the proposed cycleway infrastructure project and are presented in Table 5-6 below.

It is considered that there are no council approved developments or projects that will act in combination with the proposed cycleway project to give rise to cumulative impacts on River Boyne and River Blackwater SAC / SPA or any other European site.

Table 5-4 - Planning applications near the proposed scheme.

Planning Ref	Applicant Name / Location	Description	In-combination assessment
Part 8 P8/18014.	Athlumney to Trim Road Cycle and Pedestrian Scheme, Navan.	Meath County Council proposes to carry out development works which consist of 2.9km of segregated cycle and pedestrian facilities, starting at Beechmount Junction on the Trim Road (R161), moving north eastwards to the roundabout at the Solstice Art Centre, then going east onto Circular Road to meet the R147. From this point, a 2 way cycle track and pedestrian footpath will travel north eastwards on the River Boyne side of the R147, where it will join up with the cycle facilities on the new bridge (currently under construction) to cross the River Boyne and continues out the Kentstown Road to the junction with Convent Lane (approved under a previous Part 8 process). At Convent Lane, the footpaths will be upgraded and a shared on-road space for cyclists and vehicular traffic will be provided which continues as far as the entrance to St Michaels Loreto Secondary School. Thereafter, segregated facilities will be provided for cyclists and pedestrians as far as the railway bridge, at which point, north bound cyclist's revert to a shared road space facility with one way (north bound) vehicular traffic maintained. This scheme terminates at the top of Convent Lane at the junction with Elm Park.	<p>This project has been subject to the AA process and the assessment concludes; 'Following the assessment detailed in this AA Screening Report, it can be concluded that the Project, either individually or in combination with other plans or projects, does not give rise to any likely significant effects on Qualifying Interests of the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA or any other Natura 2000 site.'</p> <p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from either project, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>
SH311199	Es Corella Creek Ltd / Trim Road, Balreask Old, Navan, Co Meath	The proposed development will consist the construction of 132 no. residential units. The development will comprise off 60 no. houses; 8 no. two storey, three-bedroom terraced houses; 30 no. 2-storey three bedroom semi-detached houses; 11 no. 2-storey three bedroom houses; 11 no. 3-storey four	This residential development project has been subject to the AA process and the assessment concludes; 'It has been objectively concluded by Arup, following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the Proposed Development and with the implementation of the mitigation measures proposed, that the Proposed Development does not pose a risk of adversely affecting

Planning Ref	Applicant Name / Location	Description	In-combination assessment
		<p>bedroom semi-detached houses; 36 no. apartments in 1 no. 4-storey building; 36 no. own door duplex units; a childcare facility; 2 no. new vehicular access.</p>	<p>(either directly or indirectly) the integrity any European site, either alone or in combination with other plans or projects, and there is no reasonable scientific doubt in relation to this conclusion.'</p> <p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from either project, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>
SH306021	Coindale Limited / Limekilnhill, Belmont, Academy Street, Navan, CO Meath	<p>The construction of a residential development of 544 no. dwellings, 2 no. creches and open space areas. Works include: A)-260 no. houses; B) 198 no. apartments; C) 15 no. 2 bed duplex and 15 no. 3 bed duplex apartments; D) 8 no. 5 dwelling 3 storey corner blocks (40 units in total); E) 2 no. 8 dwelling 3 storey corner blocks (16 units in total); F) 2 no. creches; G)Open spaces within the development including playground areas and communal open spaces; H) Access from 3 no. junctions onto Academy Street, and new pedestrian access onto Dublin Road (R147), also 875 no. car parking spaces and 581 no. cycle spaces; I) Surface water & underground attenuation systems; J) Temporary marketing signage for a period of 3 years; K) All associated site development &landscape works all on a site of c. 15.1 hectares.</p>	<p>The residential development project has been subject to the AA process and the assessment concludes; 'Arising from this assessment, mitigation has been proposed. With the implementation of these measures no adverse effects to the integrity of the SAC will occur. This conclusion is based on best scientific knowledge.'</p> <p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from either project, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>
SH304840	Hunt Capital Ltd./ Metges Road, Johnstown, Navan, Co. Meath	<p>Strategic Housing Development - Submissions directly to An Bord Pleanála - construction of four buildings ranging in height from four to five storeys over basement on a site measuring 1.23 hectares. It will contain 104 no. apartments (20 no. 1-bed, 76 no 2-bed, 8 no 3-bed) and 1536 sqm of commercial</p>	<p>The residential development project has been subject to the AA process and the assessment concludes; ' It can be concluded, therefore, with reasonable certainty that the Proposed Development at Johnstown. Co Meath will not have any effect whatsoever on any European site when taken alone or in combination with any other plans or projects.'</p>

Planning Ref	Applicant Name / Location	Description	In-combination assessment
		space including a creche (256 sqm) sports facility (295sqm), offices, own-door commercial units and ancillary spaces.	<p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from either project, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>
NA161219	Meath Enterprise Centre Co. Ltd./ IDA Business and Technology Park, Athlumney, Navan, Co. Meath	Development will consist of the construction of an Advanced Technology Building of 2.483 sq.m., part two-storey and part double height single-storey with associated car parking, entrance and exit roads, delivery yard, landscaping, site services and sundry related works.	<p>This business development project has been subject to the AA process and the assessment concludes; 'To assist the planning authorities with the screening exercise, we have provided supporting information including; a description of the proposed development, an outline of its environmental setting, details of Natura 2000 sites within the potential zone of impact and an assessment of potential impacts. Based on this information we have demonstrated that there will be no risk of direct or indirect impacts on any Natura 2000 sites so we conclude that Appropriate Assessment is not required.'</p> <p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from either project, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>
21283	Kingscroft Development Limited /Kilarn, Johnstown, Navan, Co Meath	Extension of Duration of Planning Application on Planning Reference No; NA/151352 - 50 no. residential 2-3 storey residential units, pedestrian access, landscaping, boundary works, car parking, associated site development works (Applied for), 46 no. residential 2-3 storey residential units, pedestrian access, landscaping, boundary works, car parking, associated site development works (permission granted).	<p>This residential development is remote from the River Boyne and has no indirect hydrological connectivity to River Boyne, as such this residential development project will have not likely effect on the water quality of the River Boyne. This residential development has no direct or indirect connectivity with the proposed cycleway scheme.</p> <p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from the proposed project and there is no indirect connectivity between the 2 no. projects, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>

Planning Ref	Applicant Name / Location	Description	In-combination assessment
NA171423	Coiste na Mi Cumann Luthchleas Gael/ Pairc Tailteann, Brew Hill/Commons Road, Navan, Co Meath.	Development and the phased redevelopment of the spectator stands associated with the existing County Grounds at Pairc Tailteann, Brews Hill/Commons Road, (Townspark Td.), Navan, Co. Meath, a site of 4.58 hectares.	<p>This sporting development project has been subject to an AA screening report and the assessment concludes; 'This project has been assessed for AA under appropriate methodology. It has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to the Natura 2000 network. A full Appropriate Assessment is therefore not required.'</p> <p>The proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project will not result in likely significant effects on any European sites.</p> <p>Given than no likely effects are anticipated from either project, there is no potential for the 2 no. projects to give rise to cumulative impacts which could affect any European site.</p>

5.7. Likelihood of Significant Effects on Natura 2000 Sites

Works are proposed directly adjacent to and partially within River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA. Works are almost entirely within the hard standing areas of Navan town's urban roadways. There is potential indirect connectivity from the project works areas to the River Boyne and River Blackwater SAC and SPA via the Robinrath Stream and local road drains. Given the location, duration and scale of the works and the nature and scale any construction related impacts that the proposed project could potentially generate, it is, however, considered that the proposed project will not result in negative effects to the water quality of the River Boyne. As negative effects to the water quality of the River Boyne are not foreseen, there will be no likely significant effects to the qualifying interest habitats and species of the SAC/SPA in view of their conservation objectives.

5.8. Consideration of Findings

This Screening for Appropriate Assessment report is based on the best available scientific information. It is concluded by the authors of this report that the proposed Navan Cycle Scheme - R147 Martha's Bridge to Circular Road project, either alone or in-combination with other plans or projects, will not result in likely significant effects on River Boyne and River Blackwater SAC, River Boyne and River Blackwater SPA or any other European site. Thus, it is recommended that it is not necessary for the project to proceed to Appropriate Assessment.

Should the scope, nature or extent of the project change, a new Screening for Appropriate Assessment report shall be required.

6. Appropriate Assessment Screening Matrix

Table 6-1 - Screening Matrix.

1. Description of the project or plan	
Location	R147-Marthas Bridge to Circular Road, Navan, Co Meath
Distance from designated site	Directly adjacent to and partially within the River Boyne and River Blackwater SAC/SPA
Brief Description of the project or plan	See Section 1.1
Is the plan directly connected with or necessary to the site management for nature conservation?	No
2. Brief Description of the European site(s)	
Name	River Boyne and River Blackwater SPA and SAC
Site designation status	Special Area of Conservation Special Protection Area
Qualifying interests	See Table 5-1
Unit size	SAC 2317 ha SPA 460 ha
3. Assessment Criteria	
Other plans or projects which may have a cumulative impact	There are no likely impacts arising from the proposed project on the European sites and there are no other plans or projects ongoing at the same time that would contribute to cumulative impacts on the European sites. The proposed project will not act in combination with the activities identified as threats to the European sites to give rise to cumulative impacts. It is therefore considered cumulative impacts with other projects will not occur.
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the European sites.	See Section 1.1 for description of the proposed scheme.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the European site by virtue of: - <ul style="list-style-type: none"> • Size and scale • Land-take • Distance from European site or key features of the site • Resource requirements • Emissions 	The location and scale of the proposed project is such that direct or indirect impacts are not considered likely.

<ul style="list-style-type: none"> • Excavation requirements • Transportation requirements • Duration of construction, operation etc. • Others 			
<p>Describe any likely changes to the site arising as a result of:</p> <p>Reduction of habitat area Disturbance of key species Habitat or species fragmentation Reduction in species density Changes in key indicators of conservation value Climate change</p>	<p>There are no likely changes to the site as a result of the proposed works.</p> <p>There shall be no reduction of qualifying interest habitat area within European sites as a result of the proposed project.</p> <p>There shall be no habitat or species fragmentation or reduction in species density as a result of the works.</p>		
<p>Describe any likely impacts on the European site as a whole in terms of:</p> <ul style="list-style-type: none"> • Interference with the key relationships that define the structure of the site • Interference with key relationships that define the function of the site. 	<p>There are no likely changes to the site as a result of the proposed project works with respect to the key relationships that define the structure or function of the SAC/SPA.</p>		
<p>Provide indicators of significance as a result of the identification of effects set out above in terms of:</p> <ul style="list-style-type: none"> • Loss • Fragmentation • Disruption • Disturbance • Change to key elements of the site 	<p>There will be no likely significant effects to the conservation objectives of the qualifying interests of the SAC/SPA given the nature and scale of the project.</p>		
<p>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.</p>	<p>No significant impacts are likely as a result of the proposed works.</p>		
<p>Data collected to carry out the assessment</p>			
Who carried out the assessment	Sources of data	Level of assessment completed	Where can the full results of the assessments be accessed and viewed?
<p>Atkins 150 Airside Business Park Swords Co. Dublin</p>	<p>Desktop data derived from the NPWS – European form, site synopsis, SAC/SPA reports etc. National Biodiversity Data Centre online data. EPA Envision Mapping system; Google maps; Bing Maps etc. Dublin County Council Planning GIS Viewer</p>	<p>Screening</p>	<p>Atkins 150 Airside Business Park, Lakeview Drive, Swords Co. Dublin</p>

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