Bloodmill Road

Singland & Towlerton

Co. Limerick

Natura Impact Statement

DEC Ltd.

June 2023

Bloodmill Road

Singland & Towlerton, Co. Limerick

Natura Impact Statement

Document Stage	Document Version	Prepared by
Client Issue	1	Pat Doherty MSc, MCIEEM
Final	2	Pat Doherty MSc, MCIEEM

For and on behalf of

Doherty Environmental Consultants Ltd

Prepared By: Pat Doherty

This report has been prepared by Doherty Environmental Consultants Ltd. with all reasonable skill, care and diligence. Information report herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is prepared for Limerick City & County Council and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

Table of Contents

1.0 INTRODUCTION

Doherty Environmental Consultants Ltd. has been commissioned by Limerick City & County Council to undertake a Natura Impact Statement to inform an Appropriate Assessment (AA), to be undertaken by the competent authority under Article 6(3) of the EU Habitats Directive, Council Directive 92/43/EEC, as transposed into national legislation by *inter alia* Part XAB of the Planning and Development Act 2000 as amended (the "Planning and Development Act"), for the development of the proposed Bloodmill Road Extension, Towlerton, Ballysimon, Limerick (see Figure 1.1 for project location and Figure 1.2 for aerial view of the project).

1.1 BACKGROUND

Under Article 250 of the Planning and Development Regulations, as amended, Limerick City & County Council consulted with An Bord Pleanála in order to obtain a determination from An Bord Pleanála as to whether the proposed Bloodmill Road Extension has the potential to result in likely significant effects to European Sites and whether an Appropriate Assessment is required for the project. As part of the consultation documents Limerick City & County Council provided An Bord Pleanála with a preliminary screening of the project (provided as Appendix 1).

A Screening for Appropriate Assessment was completed by An Bord Pleanála and is set out under the Inspector's Report under An Bord Pleanála Reference No. An Bord Pleanála-315259-22 (provided as Appendix 2).

The An Bord Pleanála Screening Report concluded that the project will have the potential to result in likely significant effects to 1 no. European Site, namely the Lower River Shannon SAC. The qualifying features of interest for which the Lower River Shannon SAC is designated are set out in Table 1.1 below. The spatial relationship between the project and the Lower River Shannon SAC is shown on Figure 1.3 below. Also shown on Figure 1.3 is the hydrological pathway connecting the project to this SAC.

Table 1.1: Qualifying features of interest of the Lower River Shannon SAC

Qualifying feature of interest of the Lower River Shannon SAC
Sandbanks which are slightly covered by sea water all the time [1110]
Estuaries [1130]
Mudflats and sandflats not covered by seawater at low tide (referred to as tidal mudflats and sandflats) [1140]
Coastal lagoons [1150]
Large shallow inlets and bays [1160]
Reefs [1170]
Perennial vegetation of stony banks [1220]
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
Salicornia and other annuals colonising mud and sand [1310]
Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]
Mediterranean salt meadows (Juncetalia maritimi) [1410]
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation (referred to as vegetation of flowing waters) [3260]
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]

Qualifying feature of interest of the Lower River Shannon SAC
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]
Petromyzon marinus (Sea Lamprey) [1095]
Lampetra planeri (Brook Lamprey) [1096]
Lampetra fluviatilis (River Lamprey) [1099]
Salmo salar (Salmon) [1106]
Tursiops truncatus (Common Bottlenose Dolphin) [1349]
Lutra lutra (Otter) [1355]

The An Bord Pleanála Screening for Appropriate Assessment examined the potential for the project to result in likely significant effects to each of qualifying features of interest listed in Table 1.1 above. Following this examination, it was found by An Bord Pleanála that the following qualifying features occur within the zone of influence of the project and the potential for likely significant effects to these features cannot be ruled out at the screening stage:

Vegetation of flowing waters

River lamprey

Brook lamprey

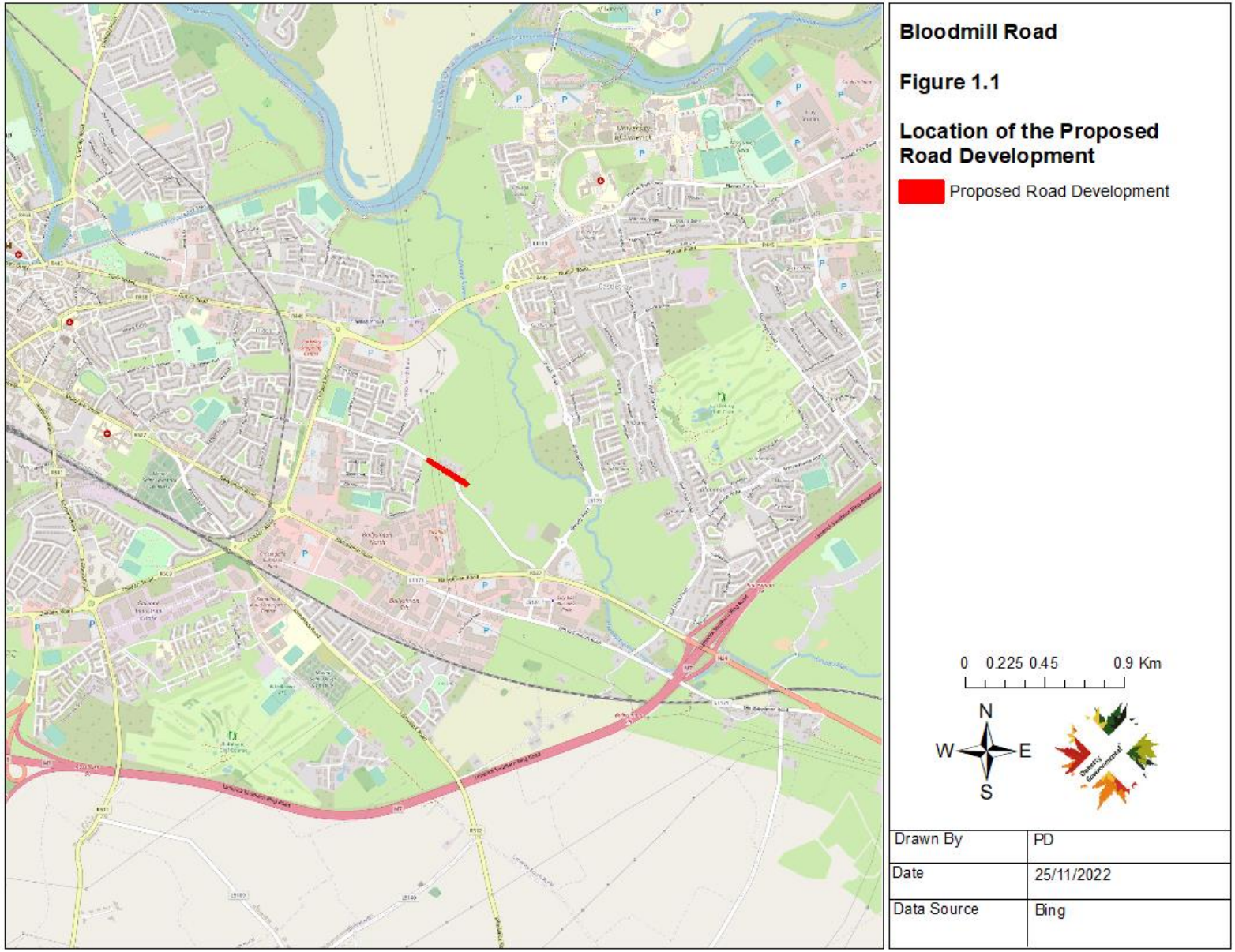
Atlantic salmon

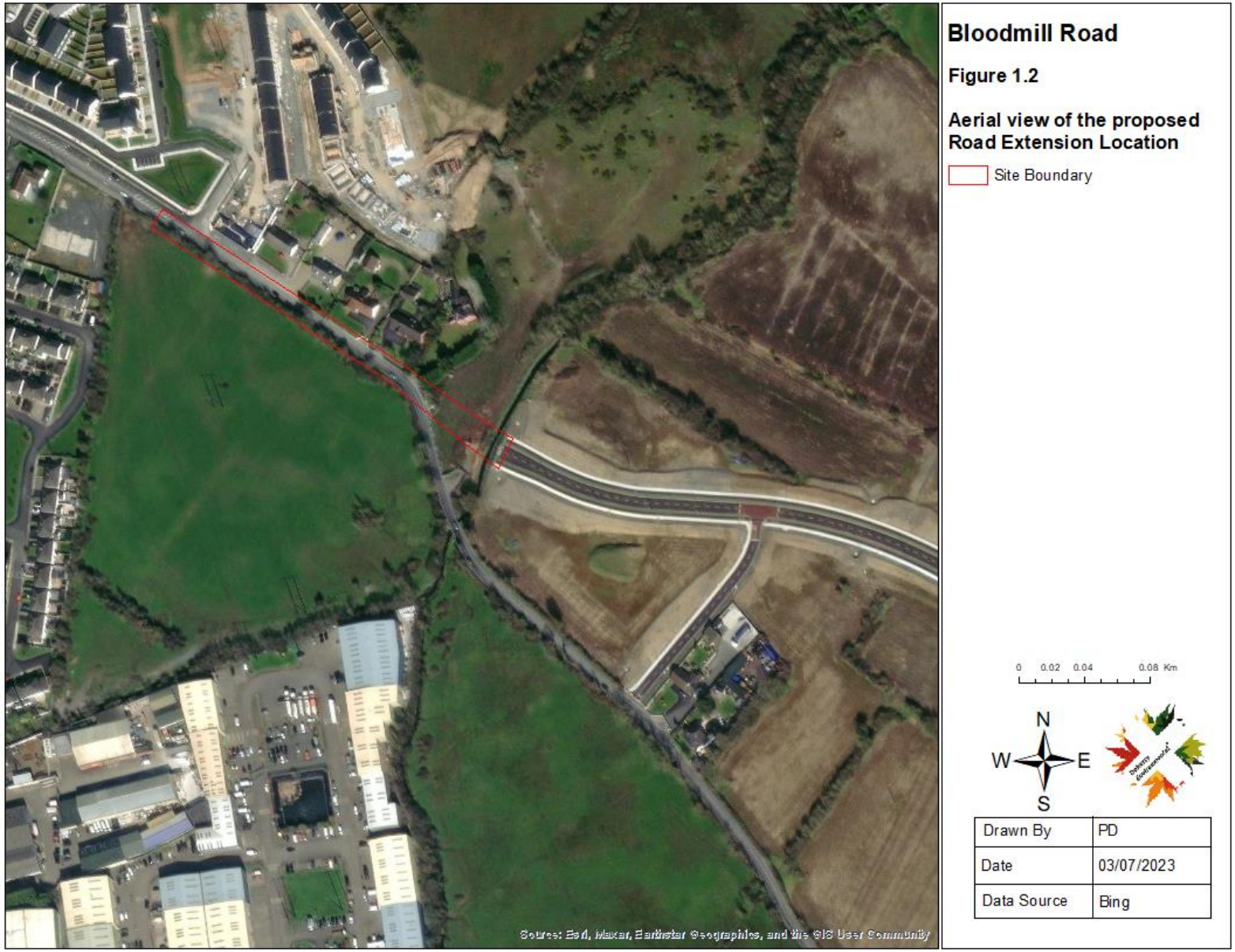
All other qualifying features of interest were adjudged to be located outside the zone of influence of the project and as such are not at risk of likely significant effects as a result of the project. It is noted that the An Bord Pleanála Inspector's Report states that the sea lamprey are unlikely to be impacted by the proposed road development due to the separation distances

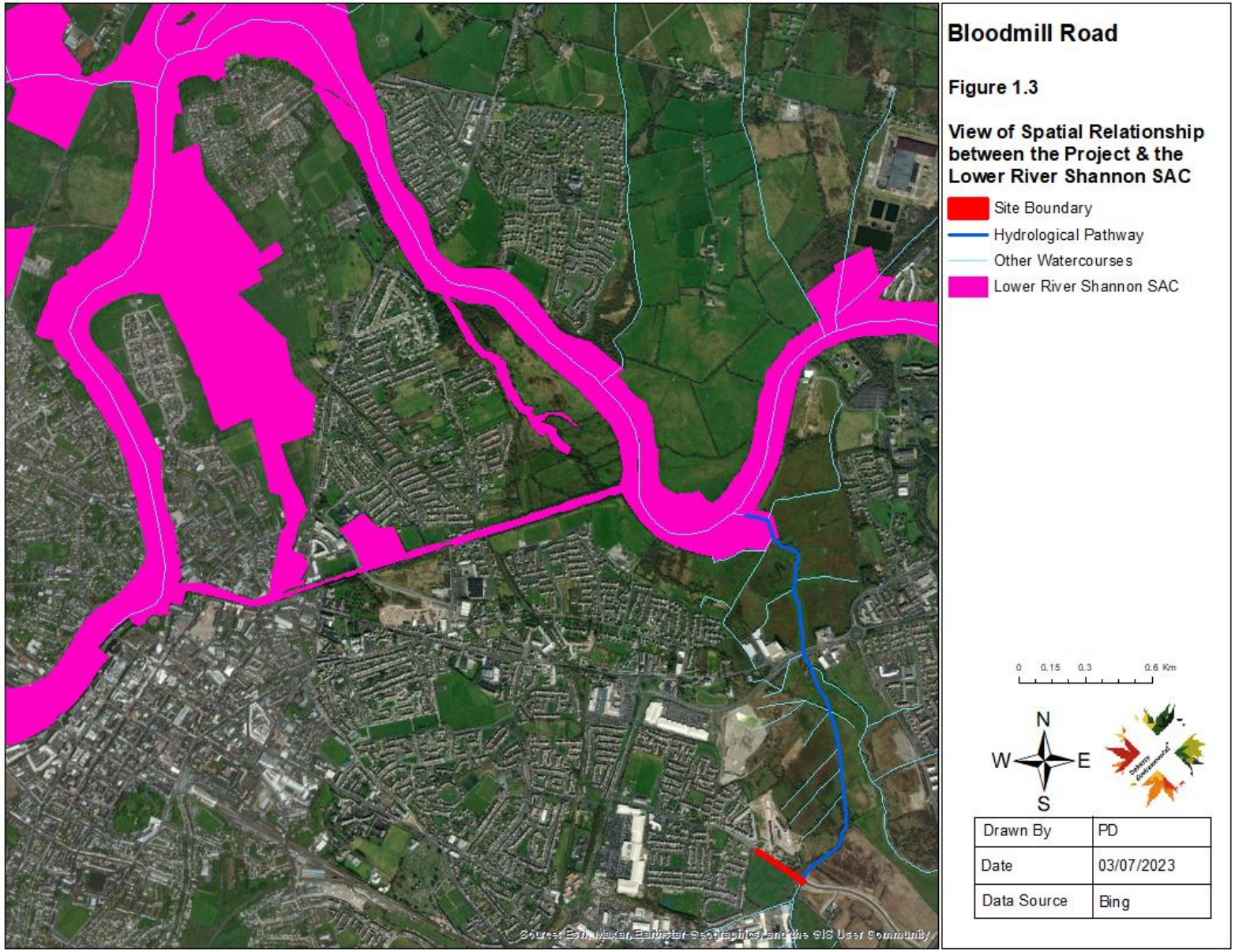
involved between the project site and the habitat of this lamprey species. However, it is noted that sea lamprey are an anadromous species, which spawns in freshwater habitats, similar to those relied upon by river lamprey and brook lamprey. Given the presence of freshwater habitats and the hydrological pathway connecting the project to the SAC, for the purposes of this Natura Impact Statement, sea lamprey are also identified as a species occurring within the zone of influence of the project and for which likely significant effects cannot be ruled out.

The potential for likely significant effects to the five number qualifying features of interest occurring within the zone of influence of the project relates to the presence of a hydrological pathway that connects the project to this SAC and the area of the SAC where these qualifying features of interest occur. This hydrological pathway has been identified as having the potential to function as a vector for the conveyance of pollutants from the project site to the Lower River Shannon SAC with resultant negative impacts to water quality within the SAC and associated effects to these qualifying features of interest. The hydrological pathway, which is shown on Figure 1.3., is established by the Towlerton Stream and River Groody.

The conclusion of An Bord Pleanála's Appropriate Assessment screening was that the potential for likely significant effects to the qualifying features of interest of the Lower River Shannon SAC occurring within the zone of influence of the project could not be ruled out at the screening state and an Appropriate Assessment is required for the project (the An Bord Pleanála Direction Order is provided as Appendix 3). As such this Natura Impact Statement has been prepared to inform the Appropriate Assessment for the project.


Bloodmill Road
Figure 1.1
Location of the Proposed Road Development
Proposed Road Development
0 0.225 0.45 0.9 Km
N
W
E
S
Drawn By PD
Date 25/11/2022
Data Source Bing


Bloodmill Road
Figure 1.2
Aerial view of the proposed Road Extension Location
Site Boundary
0 0.02 0.04 0.08 Km
N
W
E
S
Drawn By PD
Date 03/07/2023
Data Source Bing
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community


Bloodmill Road
Figure 1.3
View of Spatial Relationship between the Project & the Lower River Shannon SAC
Site Boundary
Hydrological Pathway
Other Watercourses
Lower River Shannon SAC
0 0.15 0.3 0.6 Km
N
W
E
S
Drawn By PD
Date 03/07/2023
Data Source Bing

2.0 METHODOLOGY

2.1 GUIDANCE

This NIS has been undertaken in accordance with National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG 2010) and *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC.* The following guidance documents were also adhered to during the preparation of this NIS:

- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010). DEHLG.

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats Directive 92/42/EED. European Commission (2021).

- Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission (2018).

The information provided in this NIS is also guided by European and Irish case law guiding the approach to Stage 2 Appropriate Assessment. It is noted that the consideration of impacts provided in Section 6 this NIS has been undertaken in the absence of any regard to construction phase best practice measures and operation phase design measures that aim to safeguard the receiving environment and European Sites from potential adverse impacts.

1.1.1 Background to Habitats Directive Article 6 Assessments

The EC (2021) guidelines outline the stages involved in undertaking an assessment of a project under Article 6(3) and 6(4) of the Habitats Directive. The assessment process comprises the three stages outlined below. This NIS presents the findings of an examination, analysis and evaluation of the project to inform a Stage 2 Appropriate Assessment of the project.

- Stage 1 – Screening: This stage defines the proposed project, establishes whether the proposed project is necessary for the conservation management of the European Site and assesses the likelihood of the project to have a significant effect, alone or in combination with other plans or projects, upon a European Site.

- Stage 2 – Appropriate Assessment: If a plan or project is likely to have a significant affect an Appropriate Assessment must be undertaken. Case law has established that such an Appropriate Assessment, to be lawfully conducted, in summary:

  (i) must identify, in the light of the best scientific knowledge in the field, all aspects of the proposed development which can, by itself or in-combination with other plans or projects, affect the conservation objectives of the European site;

  (ii) must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and

  (iii) may only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of the identified potential effects. If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to stage three and, if necessary, stage four.

- Stage 3 – This stage of the process is governed by Article 6(4) and arises where adverse effects on the integrity of a European site cannot be excluded and where the developer considers that the plan or project is necessary for imperative reasons of overriding public interest. This is only possible if there are no alternative solutions, the imperative reasons of overriding public interest are duly justified, and if suitable compensatory measures are adopted to ensure that the overall coherence of the European Sites is protected.

1.1.2 Stage 2: Appropriate Assessment

The EC Guidance Assessment Criteria for a Stage Two Appropriate Assessment provides the following steps:

1. the collection of information on the project and on the European Sites concerned;
2. An assessment of the implications of the project in view of the site's conservation objectives, individually or in combination with other plans or projects;
3. An evaluation as to whether the project can have adverse effects on the integrity of European Sites;
4. The consideration of mitigation measures (including their monitoring).

This NIS addresses each of these items, through the following sections provided below.

1.2 SCIENTIFIC INVESTIGATIONS

A range of scientific site investigations have been completed for the project and these are relied upon in this Natura Impact Statement.

Desk-based investigations were completed to identify pathways connecting the proposed project to European Sites. Datasets used to assist with the desk-based investigations include:

- NPWS European Sites and site-specific conservation objectives datasets;
- EPA Rivers and Lakes dataset;
- EPA surface water catchment and sub-catchment datasets;
- NPWS Article 17 Habitats and Species Reports datasets;
- OSI Geohive and OSI Historic townlands online mapping portal;
- National Biodiversity Data Centre (NBDC) online mapping portal; and

- NPWS Protected Species Dataset for the proposed development site and surrounding area.

The ecological field surveys that have been completed and inform this Natura Impact Statement include:

- Habitats and mammal surveys completed on the 3rd November 2022.
- Ornithological surveys during the non-breeding season to determine the presence of wetland birds and whether such bird species rely on the project site and adjacent lands for foraging and/or roosting. Surveys were completed on the 3rd November 2022; 15th February 2023; and 5th March 2023.

Previous multidisciplinary surveys have been completed for project on lands immediately adjacent to the proposed road extension. These include multidisciplinary surveys completed by:

Minogue & Associates on the 17th April and 8th May 2019 with respect to the adjacent project (Planning Reference No. 19549).

MKO on the 26th October 2022 and 17th May 2023 with respect to the adjacent project (Planning Reference No. 22950).

Moore Group on the 29th November 2022 and 24th January 2023 with respect to the adjacent project (Planning Reference No. 23102).

3.0 PROJECT DESCRIPTION

3.1 OVERVIEW

The aim of the project is to realign the existing Bloodmill Road to link with the recently constructed developer provided link road to the Northern Trust Roundabout on Groody Road. The scheme will implement improved Active Travel measures for pedestrians, cyclists and public transport to serve the currently under construction secondary school and private hospital on surrounding zoned lands. The scheme should encourage the uptake of more sustainable transport options by providing safer road infrastructure for vulnerable road users. The scheme will provide high quality facilities for pedestrians, cyclists and the mobility impaired with a view to encouraging modal shift from private car use to more sustainable, active travel options such as walking and cycling.

The project will involve:

- Construction of approx. 260m of new road corridor with a 6.2m wide carriageway, 2x2m footpaths, 2x2m landscaped verges and 2x2m off-road cycle tracks.
- The construction of a new surface water drainage system.
- The installation of a new public lighting system.
- The construction of a new culvert across the Towlerton Stream where the existing newly constructed link road terminates.

3.2 THE PROPOSED DEVELOPMENT

The works will include road realignment, road widening, a new river culvert to bridge the proposed new road over the Towlerton stream, road reconstruction and resurfacing, new footpath construction, new cycle track construction, services diversions and new ducting for telecommunications, gas, power supply, watermain replacement, a new surface water drainage system, a new road lighting scheme, new boundary treatments, retaining walls, embankments, accommodation works driveways, walls, gates and fences, new landscaping, new road markings, upgraded road signage and street furniture and all ancillary works necessary for completion. Detailed layout drawings for the proposed upgrade works are provided in the enclosed drawing pack.

The proposed culvert has been designed for a 1 in 100-year rainfall event plus 20% climate change allowance. The dimensions of the new bridge aperture to accommodate these flows will be 1.8m width x 2.1m in height (including associated freeboards). The length of the culvert will be 18.0m. The proposed culvert design is subject to approval of a pending Section 50 application to the Office of Public Works.

All storm water generated on the upgraded road surface will be collected in roadside drainage gullies and conveyed in a new surface water drainage pipe network. All road gullies will have silt traps for the collection of debris. The drainage pipe network will pass through a large silt trap chamber, hydrocarbon interceptor chamber and a 220m^3 attenuation tank before out falling to the Towlerton Stream.

3.3 DESCRIPTION OF CONSTRUCTION WORKS

Phase 1(a)- Site Set Up

Set up of a site office, hoarding to site perimeter to secure the construction site and erection of signage for site security and safety purposes. The provision of temporary welfare facilities will be provided close to the site office location. The welfare facilities will be portable type as there is no existing foul sewer network.

Phase 1(b)- Construction of the Bridge Culvert

The placing of the new culvert will take place ahead of construction of the new road and widening of the existing road.

Phase 1(c)- Excavation of Attenuation Tank

The proposed attenuation tank will be excavated to facilitate the attenuation of surface water from the proposed road. Hydrocarbon interceptor and silt traps to be put in place.

Phase 2(a)- Removal of topsoil under road corridor (New Road Section)

The topsoil under the proposed new section of road corridor will be removed. It is envisioned that topsoil will be stockpiled on-site in a designated area for re-use.

Phase 2(b)- Importation and compaction of road embankments (New Road Section)

Fill material will be required to construct the new road embankments. This phase of construction will involve the importation of fill material via truck and the placement/compaction of the fill material using excavators. The fill for the new section of road will firstly be placed and compacted.

Phase 2(c)- Road construction (New Road Section)

This phase will involve the installation of ancillary road services (drainage, public lighting ducts, utility ducts) and the construction of the road carriageway, kerbing, footpaths, cycle tracks and verges.

Phase 3(a)- Site Clearance to Facilitate Road Widening

Site clearance will include removal of the existing trees and hedgerows along the existing Bloodmill Road to facilitate widening and realignment of the road.

Phase 3(b)- Importation and compaction of road embankments (Widening of Existing Road)

This stage will involve the importation of fill material via truck and the placement/compaction of the fill material using excavators to facilitate the widening of the existing Bloodmill Road.

Phase 3(c)- Road construction (Widening of Existing Road)

This phase will involve the installation of ancillary road services (drainage, public lighting ducts, utility ducts) and the construction of the road carriageway, kerbing, footpaths, cycle tracks and verges.

Phase 4(a)- Installation of public lighting columns and road signage

This phase will involve the installation of public lighting columns, road signage and street furniture.

Phase 4(b)- Landscaping

Prior to the road opening, all tree planting, verge planting and embankment planting will be carried out.

3.4 SCHEDULE & DURATION OF CONSTRUCTION WORKS

It is estimated that the construction process will take up to 12 months and it is proposed that there will be several phases of construction.

Phase 1(a)- Site Set Up (Month 1)

Phase 1(b)- Construction of the Bridge Culvert (Month 1-3)

Phase 1(c)- Excavation of Attenuation Tank (Month 3)

Phase 2(a)- Removal of topsoil under road corridor (New Road Section) (Month 3)

Phase 2(b)- Importation and compaction of road embankments (New Road Section) (Month 4)

Phase 2(c)- Road construction (New Road Section) (Month 4-6)

Phase 3(a)- Site Clearance to Facilitate Road Widening (Month 6)

Phase 3(b)- Importation and compaction of road embankments (Widening of Existing Road) (Month 6)

Phase 3(c)- Road construction (Widening of Existing Road) (month 7-10)

Phase 4(a)- Installation of public lighting columns and road signage (month 11)

Phase 4(b)- Landscaping (Month 12)

3.5 PLANT & CONSTRUCTION MATERIALS REQUIRED

The type of plant and machinery required will be typical civil engineering road construction plant for earthworks and paving, and is likely to include:

- 360-degree 20 tonne Excavators (track machines)
- Rubber tyred Excavators 6t JCB
- 3t Mini Digger
- 30t Dump Trucks
- 6t Dumpers
- 7.5 tonne multi-purpose truck
- 20 tonne and 30 tonne delivery trucks (importation of rock and bitumenous paving materials
- Teleporter for erection of lighting columns
- Site Vehicles
- Compactor plates
- 6t vibrating Rollers
- 10t rollers
- Paving Machine
- Bitumen Boiler/Hot Box
- Road Planing Machine
- Extruded Kerb Laying Machine
- Road Saws/Con Saws/chain saws
- Compressors,
- Jack Hammers
- Stihl Saws
- Small tools/hand tools

- Traffic Management Signs, Cones & Barriers
- Traffic Lights
- Road Sweeper & Water Tank Truck
- PPE

All machinery will be inspected and certified to be free of leaks and weeps prior to mobilisation on site.

The materials will be typical civil engineering road construction materials consisting of cement, sand, gravel of various aggregate sizes, recycled stone from demolition of masonry arch bridge and walls/ditches, imported and reused rock fill, imported and reused top soil, concrete blocks, paviors and sets, natural stone paviors and sets, precast concrete kerbs, manhole bases, covers, precast concrete culverts, pipes, precast concrete services chambers, PVC-u ducts & chambers, PVC-u drainage channels with galvanised steel covers, galvanised metal chamber covers, galvanized, powder-coated street lighting columns and traffic signal poles, galvanised steel sign posts and metal traffic signs, bituminous road paving materials, thermoplastic road marking materials, LED lighting lanterns & electrical equipment, traffic signals & controller electronic equipment, galvanised metal field gates, driveway gates and posts.

3.6 SITE PERSONNEL

At its peak it is expected that there will be between 20 and 30 personnel on site full time. The personnel will consist of general operatives, skilled operatives and tradesmen, apprentice tradesmen, machine operators, truck drivers, engineers, technicians, surveyors and construction managers.

3.7 DURATION OF CONSTRUCTION PHASE

It is estimated that the construction process will take up to 12 months.

3.8 CONSTRUCTION COMPOUND

The construction compound will be located on one of the new, unused serviced sites within the new development park to the east. These sites are well buffered (i.e. a minimum of 200m) from the Towlerton and any other watercourses.

The developer constructed section of Bloodmill Road will provide ideal access for construction traffic and construction staff as it is a newly constructed road that only services a new school and potentially other sites under construction adjacent to the road.

It is proposed that the main entrance to the site during construction of the road extension will be via the existing developer constructed section of the Bloodmill Road. The site entrance for the road extension is located just 1.8km from the M7 motorway via the Groody Road and Ballysimon Road, this area of Ballysimon is an industrial/commercial zone that caters to large numbers of HGV traffic daily.

The site has excellent access to the National Road and Motorway network and as such, construction traffic is not envisaged as causing a nuisance to local residences or businesses.

Movement of vehicles to/from the site will be confined to the working hours permitted by Limerick City & County Council. The existing developer constructed section of the Bloodmill Road will be used for inward and outward deliveries. This road will provide ideal access for construction traffic and construction staff as it is a newly constructed road that only services a new school and potentially other sites under construction adjacent to the road and it has a general width of 6.5m.

Drawings BR-CMP-D01 & BR-CMP-D02 (Construction Traffic Management Plans), provided under separate cover with the planning application documentation, indicates the proposed site compound location, staff parking area and indicative haul routes to and from the site.

3.9 EARTHWORKS

Approximately 730m^3 of fill material will be required to construct the link road embankments. This phase of construction will involve the importation of fill material via truck and the placement/compaction of the fill material using excavators. The volume of fill material required

for this project is minimal as the existing gradient of the lands being constructed on are close to the level required to construct the road.

3.10 SPOIL STORAGE

All spoil material arising from the project will be stored within the site construction compound area.

3.11 WATERCOURSE CROSSINGS & REALIGNMENTS

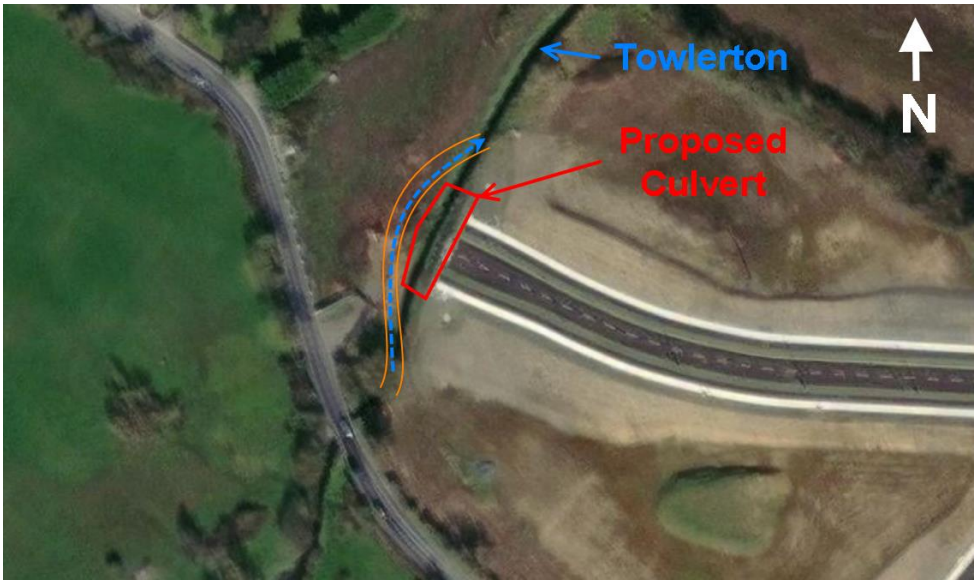
It is expected that the Towlerton stream will need to be diverted locally around its current course in order to put the new culvert in place. A new course will be excavated for the stream in the ground to the west of the proposed new link road crossing point. See proposed stream diversion layout in Figure 3.1 below. This stream diversion will be temporary, and its construction methodology will be subject to agreement with Inland Fisheries Ireland. Once the excavation works for the stream diversion are completed and all bank and bed finishes are in place, the downstream embankment opening will be made first and then the upstream embankment will be opened to allow the waters flow through the diversion. The existing river channel will be damned using sandbags. Once the riverbed has dried out at the proposed culvert location the foundations and ground will be prepared to receive the new concrete culverts. These will be lifted into position in 2m precast unit lengths. The culvert units will be lifted into position and placed one by one. The backfill and surrounding fill to the culverts will be completed to formation level of the road. Once the newly placed culvert joints are dried and cured, the river will be re-diverted from the temporary loop through the completed culvert again by removing the temporary coffer dams. Using this approach there will be continued flow along the Towlerton Stream at all times during the bridge replacement works. All cofferdams, or other structure installed within the channel, to allow working in dry conditions will be designed by a competent person, be constructed of appropriate materials and take account of site conditions (i.e. depth of water, available space, bed substrate, flow velocities, flow patterns, duration of works, accessibility and potential ingress of water). During any working with cofferdams the following methods will be adhered to:

- The cofferdam will be inspected daily for any movement, leakage and general deterioration; any defects found will be remedied immediately.

- De-watering of the coffer dam may be required in order to maintain dry working conditions. Any water being pumped from the coffer dam will not be discharged directly into the Towlerton.
- Before removal of the cofferdam at completion of the works all materials, debris, tools, plant and equipment will be removed from the work area.
- The de-watered area will be re-watered before the cofferdam is removed to avoid the sudden ingress of water which may cause erosion of the replaced substrate.
- When re-watering is undertaken, the pump inlets will be screened appropriately to prevent the intake of fish or other aquatic animals.
- IFI's guidelines and advise will be followed right through the process. For example, any existing fish population may need to be removed by stunning and placed downstream before the commencement of the river diversion works to avoid fish kills.

The proposed culvert has been designed for a 1 in 100-year rainfall event plus 20% climate change allowance. The culvert will be a closed bottom box culvert, 1.8m wide, 2.1m high and 18m in length. The new culvert will be set 200mm below bed level as per IFI requirements. The proposed culvert design is subject to approval of a pending Section 50 application to the Office of Public Works.

Figure 3.1: ***Proposed Temporary Stream Diversion for Culvert Construction***



4.0 OVERVIEW OF BASELINE ECOLOGY AT THE PROJECT SITE

4.1.1 Habitats

The proposed road extension will involve an upgrade of the existing Bloodmill Road within the boundary of the project site. The habitats occurring in this section of the project site are representative of buildings and artificial surfaces and boundary hedgerows with mature trees. Trees occurring along and adjacent to the existing road corridor include hornbeam, ash, crab apple, elder, hawthorn and sycamore. The eastern section of the proposed road extension as it ties in with the completed section of new road corridor is characterised by spoil and bare ground (ED2) habitat as well as the Towlerton Stream (which is representative of a depositing watercourse FW2).

4.1.2 Fauna

This section provides details of survey results for fauna species that can be listed as qualifying features of interest/special conservation interests of European Sites. Such fauna include waterbirds and otters.

The habitats occurring along the proposed road extension are not suitable for supporting wetland bird species and none were recorded on site during field surveys completed during November 2022, February and March 2023. No evidence indicating the presence of otters was identified along the Towlerton Stream during field surveys completed during the above months. In addition no evidence of otter use of or reliance on this stream was recorded during previous surveys along the stream during April and May 2019 (under Planning Ref. No. 19546) or during more recent surveys during October 2022 (under Planning Ref. No. 22950).

4.1.3 River Groody

The project site is located within the River Groody catchment. The Groody rises in the townland of Caherconlish and predominantly flows in a north-westerly direction towards the River Shannon, north of the proposed route.

The River Groody is a direct tributary of the River Shannon and the confluence of these rivers is located approximately 1.7km downstream of the project site. Environmental Protection Agency (EPA) monitoring of the River Groody upstream of the project site has classified this watercourses at Moderate status. Previous monitoring completed along the river as part of the Water

Frameworks Directive Mulkear Water Management Unit Action Plan report the River Groody to be in an unsatisfactory ecological condition when surveyed in 2008. Dominance of pollution tolerant macroinvertebrate fauna was recorded at Killonan Bridge (Monitoring Station ID No. 0150) and indicated moderate pollution, other indicators included luxuriant macrophyte growth and excessive siltation. Further downstream at Ballysimon (0200) the lack of sensitive macroinvertebrate taxa, excessive siltation and enhanced macrophyte and algal growth indicated no improvement in ecological quality.

A report published by the EPA (EPA, 2018) has identified diffuse urban pressures, caused by misconnections, leaking sewers and runoff from paved and unpaved areas as the principal (and significant) pressure to the River Groody with elevated concentrations of phosphate and ammonia associated with these pressures sources being the significant issues.

The River Groody support a small population of breeding Atlantic Salmon and brown trout are also supported by this watercourse.

The Mulkear WMU has identified pressures to the morphology of the section of the River Groody downstream of the project site.

5.0 DESCRIPTION OF THE LOWER RIVER SHANNON SAC

Lower River Shannon SAC is designated as a SAC for its role in supporting a range of qualifying habitat and species. This SAC is a very large site stretches along the Shannon valley from Killaloe in Co. Clare to Loop Head/ Kerry Head, a distance of some 120 km. The site thus encompasses the Shannon, Feale, Mulkear and Fergus estuaries, the freshwater lower reaches of the River Shannon (between Killaloe and Limerick), the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head. Rivers within the sub-catchment of the Feale include the Galey, Smearlagh, Oolagh, Allaughaun, Owveg, Clydagh, Caher, Breanagh and Glenacarney. Rivers within the sub-catchment of the Mulkear include the Killeenagarriff, Annagh, Newport, the Dead River, the Bilboa, Glashacloonaraveela, Gortnageragh and Cahernahallia.

The qualifying features of interest of this SAC have been listed in Table 1.1 above and those that are the subject of this Natura Impact Statement comprise: vegetation of flowing waters; Atlantic salmon; and sea, river and brook lamprey.

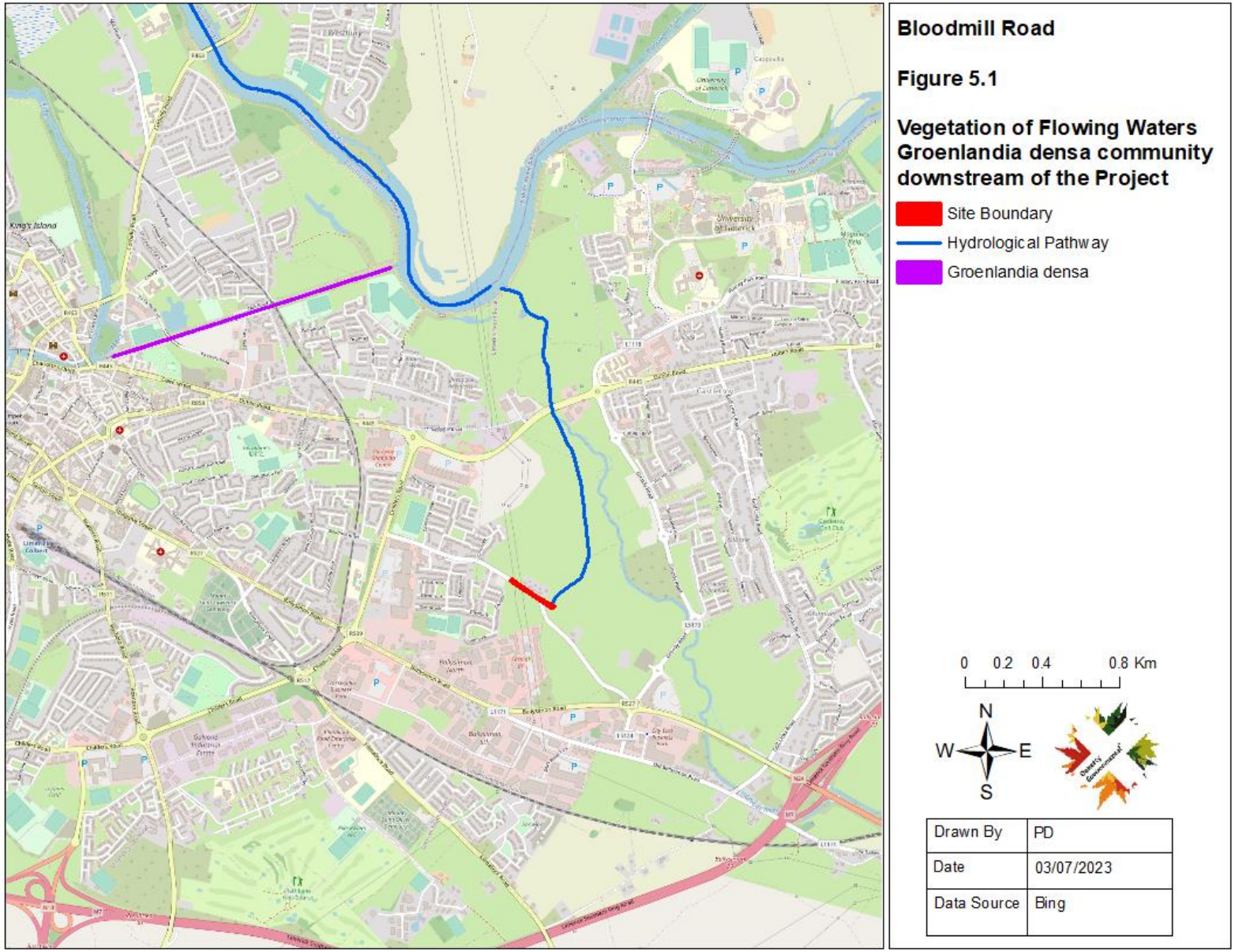
5.1.1 Vegetation of Flowing Waters

This qualifying habitat of the SAC supports three recognised sub-types which include Groelandia densa; Schoenoplectus triqueter; and bryophyte-rich streams and river sub-type. Of these three sub-types, the sub-type occurring downstream of the River Shannon and River Groody confluence is the Groelandia densa sub-type.

Groenlandia densa is known from the northern bank of the River Shannon at the Shannon (New) Bridge and also the Limerick (Park) Canal, Limerick City, "from near the River Shannon at its north-east end to the lock gates at its southwest end" (Reynolds et al., 2006). Figure 5.1 shows the location of the canal where this habitat occurs. The stands occurring along the Park Canal represent the nearest stands of this species to the project site. The mapped distribution of the sub-type extends for c. 1.6 km. Stands of Groelandia densa have also been recorded along a drainage ditch bounding the northwestern end of King's Island (JBA, 2019). This drainage ditch is not hydrologically connected to the River Shannon but instead receives water from runoff. The species is also likely to be more widespread in the tidal stretches of the Shannon and other rivers, as well as in marginal ditches.

For the Groenlandia densa associated with the large, depositing stretches of the River Shannon, river flow is important to the provision of appropriate substrata. River flow variation may also contribute to the disturbance necessary for the species' persistence. Regular vegetation clearance in canals and drains also allows Groenlandia to thrive. The management regime in the Limerick Canal at the time of the rare and scarce vascular plant survey (regular clearance, leaving some plants to allow re-growth) was considered to suit the species (Reynolds et al., 2006).

With respect to water quality the Groelandia densa sub-type community is considered to be most sensitive to elevated nutrient inputs and eutrophication (NPWS, 2012).


Bloodmill Road
Figure 5.1
Vegetation of Flowing Waters Groenlandia densa community downstream of the Project
Site Boundary
Hydrological Pathway
Groenlandia densa
0 0.2 0.4 0.8 Km
N
W
E
S
Drawn By PD
Date 03/07/2023
Data Source Bing

5.1.2 Atlantic Salmon

McGinnity et al. (2003) estimated the Shannon catchment to hold approximately 3.28% of the national fluvial accessible habitat for Atlantic salmon. The Ardnacrusha Dam has resulted in a profound impact to the us movement of salmon stocks. The Scientific Standing Committee on Salmon (SSCS) have assigned a conservation limit value of 49,638 salmon for the River Shannon upstream of the dam. Data on fish passage monitoring at the dam between 2011 and 2015 recorded an average figure of 2,148 salmon passing through the dam. This level of fish passage above the dam is below 5% of the conservation limit assigned for the River Shannon.

Until 2006, salmon were fished by drift-net teams in the estuary. The section of the River Shannon adjoining its confluence with the River Groody is used as a migratory channel for adult salmon returning to spawn, spent species returning to sea and smolts running to sea. The main smolt run is between March and mid-June and peaks in May, while the inward adult migration is from March to September. For both adults and smolts, high river flows are often associated with larger movements. While smolts will not delay their journey once they initiate it and continue directly to sea, the summer-autumn returnees will often spend extended periods in holding station in the estuary depending on flow. The section of the river between Thomond Bridge and Sarsfield Bridge contains important transitory holding pool habitat for adult salmon (JBA Consulting, 2019).

No suitable salmon spawning habitat occurs in the vicinity of the project site and as such this species does not spawn or feed in the section of the channel at or downstream of the Shannon's confluence with the River Groody. The nearest spawning habitat to the River Shannon and Groody confluence is upstream at Castleconnell, Doonass, Plassey and Corbally.

5.1.3 Lamprey Species

Sea Lamprey enter estuaries from the sea and migrate upstream in April-June to spawn in June and July in the freshwater reaches of the River Shannon catchment. The ammocoetes live in marginal silty area where they gradually develop over several years. They then begin to metamorphose to adults, starting in July. This takes about 3 months after which they migrate to the lower estuary in about October, where they commence their parasitic life on fish.

The upstream migration of River Lamprey is less well-defined than Sea lamprey and is thought to commence in August and continue over the winter months until the spawning season in spring with two peaks in migration occurring, first in the August-November period and then a second in Spring (March-April). Metamorphosed young adults begin their downstream migration over an extended period from late winter to early summer. Downstream migration by both Sea Lamprey and River Lamprey is predominantly nocturnal.

The tributaries of the Lower River Shannon, particularly the Mulkear and the main channel of the Lower River Shannon between Plassey and Parteen Dam, where suitable spawning exists are considered important areas of the Lower River Shannon for adult lamprey (Igoe et al. 2004, Curd, 2009).

5.2 CONSERVATION OBJECTIVES

Detailed Site-Specific Conservation Objectives have been published for the Lower River Shannon SAC. These Conservation Objectives are outlined in Section 6 below and an assessment is provided in Section 6 by evaluating the project's potential to result in likely significant effects to the Conservation Objectives of the qualifying feature of interest occurring in the zone of influence of the project.

6.0 EXAMINATION OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Given that the project is not located within or adjoining the Lower River Shannon SAC it will not have the potential to result in direct impacts in the form for physical habitat loss, degradation or disturbance to these European Sites. Thus, as identified in the An Bord Pleanála Screening for Appropriate Assessment this Natura Impact Statement is required to examine the potential for the project to result in adverse effects to the Lower River Shannon SAC and the relevant qualifying features of interest occurring within the zone of influence of the project, that could result from the emission of pollutants from the project site to the River Groody and downstream to the SAC.

6.1 SURFACE WATER RUNOFF

The potential impacts that may arise as a result of the project relate to the discharge of contaminated surface water from the project site during the construction phase to the Towlerton Stream, the River Groody and on downstream to the Lower River Shannon SAC.

The potential impacts that may arise as a result of the project relate to the discharge of contaminated surface water from the project site during the construction phase directly to the Towlerton Stream and downstream to the River Groody. For instance the proposed road extension will require a crossing of the Towlerton Stream, where it is propose to install a box culvert.

Earthworks associated with the construction phase of the project will require the excavation of existing overburden within the of the proposed development. In the absence of an appropriate design and mitigation measures such activities will have the potential to generate silt-laden runoff from the works area and for this runoff to be discharged to the Towlerton Stream and on downstream to the Groody River and eventually the Lower River Shannon SAC.

Any deposition of contaminants such as hydrocarbons or cement material to the Towlerton Stream and on downstream to Groody River and the Lower River Shannon SAC could conceivably result in the contamination of benthic fauna and epifauna which represent the prey species of Atlantic salmon and lamprey species. In addition, the discharge of such contaminants will also have potential to contribute towards existing water quality pressures that could undermine the suitable condition of habitats within the Lower River Shannon SAC downstream to support spawning and juvenile qualifying freshwater fish species, such as lamprey species which are known to be widely distribution within the section of the Lower River Shannon SAC downstream of the project site. The toxic effect of such contaminants, particularly hydrocarbons, on feeding, growth, development and reproduction are known to cascade and bioaccumulate throughout the food chain affecting benthic fauna, fish, birds and mammals (Ferrando, 2015).

The significance of the impact of the uncontrolled release of contaminants from the project site to the Groody River and downstream to the Lower River Shannon SAC, will depend upon the frequency of the release and the concentration of contaminating materials in surface water discharging from the site. In a worst-case scenario the ongoing discharge of waters with high

concentrations of contaminating substances during the construction phase could over time lead to the deposition of such contaminants to these receiving waters. Revitt et al. (2014) demonstrated the potential of car parking areas to result in a build-up of diffuse pollution loads on their surfaces with subsequent mobilization and direct discharge to receiving waters. In the absence of appropriate design safeguards (such as the inclusion of interceptors and the proper storage of potentially contaminating materials) the discharge of such contaminated surface water during the construction phase could represent a source of temporary contamination to surface drainage waters being discharged to the River Groody. Accidental spillages of contaminating materials during the construction phase could also represent sources of acute pollution to the Towlerton Stream and on downstream to the River Groody and the Lower River Shannon SAC.

The exposure of benthic freshwater fauna as well as qualifying freshwater fish species to such contaminants can result in disturbance and stress effects. Upon detection of such contaminants mobile species may simply move away from the affected area, with the potential to result in a decline in the distribution of these species within the SAC. For sessile benthic fauna there will be no potential for escape and their exposure to contaminants may result in biological changes designed to aid survival. In some cases these benthic species may acclimatise to contaminated conditions, while in others the contaminants may lead to mortality and decreases in population density.

Whilst it is acknowledged that there may be some dilution and dispersion of contaminants downstream of the project site, any release of such polluting material could combine with existing pressures (as set out in Section 4.1.3 above) to the water quality of the River Groody and combine with these sources to exacerbate water quality pressures along this river with resultant implications (considered in more detail in Section 6.2 below) for the conservation status of qualifying features of interest of the SAC occurring downstream.

Such an effect would have the potential to undermine the conservation status of the Lower River Shannon SAC.

6.2 IMPLICATIONS FOR QUALIFYING FEATURES OF INTEREST

6.2.1 Qualifying Fish Species

The discharge of contaminated surface water runoff to surrounding drainage ditch network and downstream to the River Groody and Lower River Shannon SAC will have the potential to result in adverse impacts to invertebrates, plant life and on all life stages of salmonid fish and lamprey species. The adverse effects of contaminated runoff to fish species including salmon and lamprey include:

- The settlement of silt on spawning redds resulting in the infilling of intra-gravel voids and the smothering of eggs and newly hatched fish.
- The settlement of silt on river beds can smother and displace macroinvertebrates, reducing the prey resource for fish species.
- Suspended solids can settle in pool and riffle habitats resulting in a reduction in the availability and quality of rearing habitat for fish.
- Silt-laden runoff can result in a reduction in transparency, impairing the ability of fish and otters to find food.

Suspended solids can abrade or clog salmonid fish gills. Whilst high concentrations of suspended solids are required to clog fish gills, small concentrations can result in abrasion to gills, which can in turn create the potential for infection.

6.2.2 Vegetation Of Flowing Waters

This habitat is sensitive to changes in hydrological and morphological conditions, eutrophication and other water pollution. Any inappropriate discharges from the project site to the Towlerton Stream and downstream to the Groody River will have the potential to exacerbate the adverse impacts of existing pressures to river habitats downstream.

6.3 POTENTIAL IN-COMBINATION EFFECTS

A search of the Limerick City and Council Planning Enquiries Portal has been completed to identify any other projects that could combine with the proposed project to result in in-combination effects to the Lower River Shannon SAC. A search was completed for all recent projects within the last five years along the Towlerton Stream and the River Groody upstream

and downstream of the project site. The projects identified and the potential for the proposed road extension project to combine with these other projects to result in cumulative adverse effects to the Lower River Shannon SAC is examined below.

Planning Reference No. 19546 – this project comprises the development of a new public road, 637m in length, with footpaths and cycle tracks, public lighting, landscaping and ancillary main services within the roadway, from the City East Roundabout on Groody Road across the 'Towlerton Development Lands' to the north-western boundary of the lands; surface water drainage system for the new road consisting of 3 no. underground attenuation tanks and ancillary services, and disposal to 2 existing streams and to an existing surface water manhole adjacent to City East Roundabout; new foul gravity rising mains and new watermain along the length of the new road; abandonment of existing 800mm asbestos cement watermain on the development lands and provision of new watermain in lieu; demolition of existing buildings on the development lands comprising a two-storey house and associated sheds and out-buildings; relocation of an existing bus stop from the south to the north of City East roundabout on Groody Road and associated diversion of existing cyclepaths and footpaths; new cyclepaths and footpaths to accommodate future widening of Groody Road; widening of southern entrance to and northern exit of City East Roundabout on Groody Road and amendment of road markings at the roundabout. All works to occur on the public domain or on the 'Towlerton Development Lands' only. An Appropriate Assessment was completed by the Planning Authority for this development. The Appropriate Assessment was informed by an Natura Impact Statement. The Appropriate Assessment found that, provided all mitigation measures specified in the Natura Impact Statement and subsequently conditioned as part of the grant of planning are implemented, this project will not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to the Lower River Shannon SAC. On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC. Furthermore it is also noted that the construction phase works associated with this development have been completed and as such there will be no potential for the currently proposed road extension to combine with the construction phase of the road element of this project.

Planning Reference No. 191061 – this project comprises the construction of a part three storey, part two storey post primary school, (Roll No. 68309N) including PE hall, 4 classroom Special Educational Needs Unit and all ancillary site works. The proposed development also

incorporates associated car parking, access road, drop off areas, pedestrian access, bicycle lane, construction of external ball courts, landscaping, connection to public services, ESB sub-station and all associated siteworks. The development also includes a section of public road, footpaths, cycle track, landscaping, public lighting, mains services and relocated bus stop. An Natura Impact Statement was completed for this project and this concluded that that, provided all mitigation measures specified in the Natura Impact Statement and subsequently conditioned as part of the grant of planning are implemented, this project will not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to the Lower River Shannon SAC. On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC. Furthermore it is also noted that the construction phase works associated with this development have been completed and as such there will be no potential for the currently proposed road extension to combine with the construction phase of the road element of this project.

Planning Reference No. 217006 – this project comprises an extension of duration for the planning approved project under Planning Reference No. 16693. The Planning Authority completed a screening for Appropriate Assessment for this project as described under Ref. No. 16693 and found that the project "should not exercise a significant effect on the conservation status of any SAC or SPA and therefore an Appropriate Assessment is not necessary". On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC.

Planning Reference No. 22950 – this project comprises the development of: Building A: The provision of a single storey discount foodstore including off license use with gross floor area of 2,205 sq.m as well as roof mounted plant and solar panels. (Net retail area: 1,408 sq.m). Building B: A single-storey café building with external seating area (gross floor area - 150 sq.m). Building C: A 3 no. storey building comprising 6 no. commercial units at ground floor area to accommodate Shop use (Class 1) or Office/Professional/Financial Services use (Class 2) or Office use (Class 3) or Medical use (Class 8) (gross floor area 625 sq.m). First and second floors consist of office floorspace including circulation space with entrance at ground floor (gross floor area 1,545 sq.m). Building D: A 6 no. storey building comprising 4 no. commercial units at ground floor to accommodate Shop use (Class 1) or Office/Professional/Financial

Services use (Class 2) or Office use (Class 3) or Medical use (Class 8) (gross floor area of 786 sq.m). The upper five floors comprise 38 no. apartments, with entrance at ground floor, (gross floor area of 3,900 sq.m), as follows: (a) 10 no 1-bedroom apartments, (b) 26 no 2-bedroom apartments, (c) 2 no 3-bedroom apartments. Provision of signage for Buildings A, B, C & D (130.9 sq.m). Provision of pedestrian and vehicular access, 172 no. car parking spaces including 6 no. disabled bays, 6 no. family bays, 142 no. cycle spaces, public realm area with street furniture, residents' communal open space, site landscaping, public lighting, boundary treatments, EB substation (24 sq.m), external bin storage areas (56.5 sq.m) and all other site development works and services ancillary to the proposed development.

In the absence of appropriate safeguards the potential would exist for the current proposed road extension project to combine with this other project to result in perturbations to local surface water quality and downstream impacts to the Lower River Shannon SAC. However it is noted that an Natura Impact Statement has been completed for this project and this Natura Impact Statement has set out a range of mitigation measures that aim to ensure this project does not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to this SAC. The Natura Impact Statement for this project has concluded that this project will not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to the Lower River Shannon SAC. On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC.

Planning Reference No. 211740 – this project comprises development of a new c.19,405sqm hospital over 2 to 4 no. storeys, with plant(c.3,100sqm) at roof level and associated c.504sqm 2no. storey energy centre. The proposed development will provide a 79no. bed hospital, with both in-patient and out-patient facilities and treatment rooms. The principal access and egress to the site will be from Groody Road to the south-east. Service access is proposed from the newly constructed link road in the north-east corner of the site with associated service egress point to the south-west onto Bloodmill Road. Pedestrian and cyclist access is provided from Groody Road and from the new link road. The development will also include ancillary administration offices, laboratories, patient pharmacy, oratory, operating theatres, staff and patient facilities including a staff and patient restaurant, car park at surface level with motorbike and cycle parking spaces, EV charging facilities, payment kiosks and security barriers. The development will also include signage, including 3no. signage totems, internal wayfinding,

c.13sqm security cabin, public lighting, plant and associated screening, including gas infrastructure tank and vacuum insulated evaporator compound, all piped infrastructure and ducting, 1no. ESB substation, 3no. attenuation tanks, rainwater harvesting tanks, SUDs including green roof provision, services provision, boundary treatments, waste marshalling compound storage area, hard and soft landscaping, changes in level, internal roads and paths including vehicle set down areas, and all associated site development works above and below ground. The Planning Authority completed a screening for Appropriate Assessment for this project and found that the project "should not exercise a significant effect on the conservation status of any SAC or SPA and therefore an Appropriate Assessment is not necessary". On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC.

Planning Reference No. 23102 – this project comprises the development of: the construction of a new 5-storey (5,529sq.m. approx.) Medical Building with plant at roof level, accommodating Medical Diagnostics (including X-Ray Screening / Diagnostics and PET CT), Medical Consulting Rooms and Treatment Rooms, offices, service areas, circulation, storage, refuse management, ESB substation and switchroom. The development will also include staff and patient facilities, including car park at surface level providing 97 no. car parking spaces and 56 no. cycle parking spaces with secure, covered bicycle parking stands, EV charging facilities, car park access barrier, internal roads and paths including vehicle set down area; signage comprising building signage and 2 no. signage totems; public lighting, boundary treatments, hard and soft landscaping, connection to existing water and waste-water services, new surface water outfall to existing drain and all related site development works and excavation works above and below ground. Vehicular, pedestrian and cyclist access to and egress from the site will be via the newly constructed link road (Towlerton Distributor Road, permitted under Limerick City & County Council Register Reference No. 19/546).

In the absence of appropriate safeguards, the potential would exist for the current proposed road extension project to combine with this other project to result in perturbations to local surface water quality and downstream impacts to the Lower River Shannon SAC. However it is noted that an Natura Impact Statement has been completed for this project and this Natura Impact Statement has set out a range of mitigation measures that aim to ensure this project does not have the potential, alone or in-combination with other plans or projects, to result in adverse

effects to this SAC. The Natura Impact Statement for this project has concluded that this project will not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to the Lower River Shannon SAC. On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC.

Limerick City & County Council Castletroy Link Road: this project comprises the development of a new link road connecting Golf Links Road from Schoolhouse Road junction with the Groody Road at Kilbane Roundabout.

In the absence of appropriate safeguards the potential would exist for the current proposed road extension project to combine with this other project to result in perturbations to local surface water quality and downstream impacts to the Lower River Shannon SAC. However it is noted that an Natura Impact Statement has been completed for this project and this Natura Impact Statement has set out a range of mitigation measures that aim to ensure this project does not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to this SAC. The Natura Impact Statement for this project has concluded that this project will not have the potential, alone or in-combination with other plans or projects, to result in adverse effects to the Lower River Shannon SAC. On the basis of this finding, it can be concluded that the current project will not have the potential to combine with this project to result in cumulative adverse effects to the Lower River Shannon SAC.

6.4 EXAMINATION OF THE PROJECT'S POTENTIAL TO RESULT IN LIKELY SIGNIFICANT EFFECTS TO THE QUALIFYING INTERESTS OCCURRING WITHIN ITS ZONE OF INFLUENCE

A NIS is required to assess the potential for impacts to the integrity of a European Site, with respect to the site's structure and function and its Conservation Objectives. The structural and functional elements of a European Site to maintain the favourable conservation status of qualifying features of interest are embedded into the list of detailed SSCOs for each of the site's interest features. As such a European Sites' SSCOs represent the parameters against which a project's potential to adversely affect the integrity of a European Sites should be considered.

Table 5.1 lists the Conservation Objectives attributes and targets for each of qualifying features of interest of the Lower River Shannon SAC occurring within the zone of influence of the

project and examines how the project, in the absence of mitigation, will have the potential to result in adverse effects to these attributes and targets.

Table 5.1: Examination of Likely Significant Effects Against the Site Specific Conservation Objectives for Qualifying Features Of Interest Occurring within the Zone of Influence of the Project

Attribute No.	Attribute	Target	Consideration of likely significant effects
Lamprey Species			
1	Distribution (extent of anadromy for sea lamprey) &/or barriers to movement	Access to all watercourses down to first order streams for brook lamprey. Greater than 75% of main stem length of rivers accessible from the estuary.	Activities associated with the construction phase of the project will not have the potential to undermine this attribute. The project will not result any barriers to the movement of lampreys throughout the Groody River catchment. Given the absence of any physical interactions with watercourses of this catchment there will be no potential for the project to result in a reduction in the distribution of lamprey species within the Groody River catchment and the Lower River Shannon SAC. It is noted that existing barriers downstream of the Groody River present obstacles to the distribution of lamprey species within the sub-catchment. However, the project will not have the potential to exacerbate the impact of these existing barriers to the distribution of lamprey species within the sub-catchment.
2	Population structure of juveniles	At least three age/size groups present	The preferred spawning habitat for lamprey is gravel-dominated substratum typical of eroding watercourses in the upper reaches of catchments. After hatching the larvae swim or are washed downstream and settle in areas of preferred juvenile habitat. The juvenile stage of the lifecycle of lamprey species is generally restricted to depositing freshwater and estuarine environments where the substratum supports areas of sandy silt. Such habitats are considered to be unlikely to occur downstream of the project site within the Groody River sub-catchment. However suitable spawning habitat for lamprey species occurs downstream of the project site within the Groody catchment and river and brook lamprey have been recorded in the catchment. In the event of negative impacts to lamprey spawning habitat downstream as a result siltation or elevated nutrient-related effects, the potential will exist for indirect impacts to the later life-cycle juvenile stage of this species.

3	Juvenile density in fine sediment	Mean catchment juvenile density of at least 2/m^2 for brook lamprey and 1/m^2 for sea lamprey	As set out for attribute no. 2 above in the event of negative impacts to lamprey spawning habitat, the potential will exist for an indirect and temporally delayed impact to the density of juveniles occurring within suitable juvenile habitat downstream. Such an impact will be derived from a reduction in suitable spawning habitat and lamprey larvae moving downstream to juvenile habitats.
4	Extent and distribution of spawning habitat	No decline in distribution and extent of spawning beds.	
5	Availability of juvenile habitat	More than 50% of sample sites positive	Given that the watercourses occurring downstream of the project site are suboptimal for juvenile lamprey the potential for the project to result in negative impacts to the availability of this habitat will not arise.
Atlantic Salmon			
6	Distribution (extent of anadromy	100% of river channels down to second order from the estuary.	Activities associated with the construction phase of the project will not have the potential to undermine this attribute. The project will not result any barriers to the movement of Atlantic salmon throughout the River Shannon catchment. Given the absence of any above ground, physical interactions with watercourses of this catchment there will be no potential for the project to result in a reduction in the distribution of this species within the SAC.
7	Adult spawning fish	Conservation limit consistently exceeded	The project will not result in any barriers to the movement of adult spawning fish and will not have the potential to undermine the number of adult spawning fish in the River Shannon catchment. It is noted that existing barriers downstream of the project site within the Groody River catchment present obstacles to the distribution of salmon within this sub-catchment. However, the project will not have the potential to exacerbate the impact of these existing barriers to the distribution of Atlantic salmon and the abundance of adult spawning fish within the sub-catchment.
8	Salmon fry abundance	Maintain or exceed 0+ fry mean catchment wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling.	The project's potential to undermine the targets for this attribute will be mediated by construction generated pollution and its potential to combine with other existing water quality pressures to the water quality of the Groody sub-catchment and exacerbate suh pressures and related impacts on spawning success and survival of juvenile salmon within the Groody River sub-catchment and the main channel of the River Shannon downstream .
9	Out-migrating smolt abundance	No significant decline	The project's potential to undermine the targets for this attribute will be mediated by construction generated pollution pollution and its potential to combine with other existing water quality pressures to the water quality of the Groody sub-catchment and exacerbate suh

			pressures and related impacts on spawning success and survival of juvenile salmon within the Groody River sub-catchment and the main channel of the River Shannon downstream .
10	Number and distribution of redds	No decline in numbers or distribution	The project's potential to undermine the targets for this attribute will be mediated by construction generated pollution impacts, particularly the potential release of silt-laden runoff, to the Groody River sub-catchment and the River Shannon further downstream. Salmon redds require high levels of dissolved oxygen and low levels of siltation. Excess silt on the river bed will reduce oxygen levels in redds and decrease the suitability of river beds to support spawn.
11	Water quality	At least Q4	In the event that the project causes pollution to the Towlerton Stream, the Groody River sub-catchment or the main channel of the River Shannon, it will have the potential to adversely affect water quality of these waterbodies.
Vegetation of Flowing Waters			
12	Habitat area	Area stable or increasing, subject to natural processes	Any adverse effects to the water quality of the Groody River sub-catchment or the main channel of the Shannon will have the potential to result in a reduction in the extent of suitable riverine habitat within the SAC to support this qualifying habitat.
13	Habitat distribution	No decline, subject to natural processes.	For the reasons outlined for Attribute no. 12 the project will have the potential to result in a decline in the distribution of this habitat within the Groody River sub-catchment and the main channel of the River Shannon.
14	Hydrological regime: river flow	Maintain appropriate hydrological regimes	The project will not result in any instream works and will not change the nature of the hydrological regime of the Groody River sub-catchment and the main channel of the River Shannon Groody River sub-catchment and the main channel of the River Shannon.
15	Hydrological regime: tidal influence	Maintain natural tidal regime	The project will not have the potential to influence the tidal regime of this SAC.
16	Hydrological regime: freshwater seepages	Maintain appropriate freshwater seepage regimes	The project will not have the potential to influence input of freshwater seepage to examples of tall herb habitat occurring upstream and downstream of the project site.
17	Substratum composition: particle size range	The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type (frequently sands, gravels and cobbles)	The release of silt during the construction phase from the project site to the Towlerton Stream, the Groody River sub-catchment and the main channel of the River Shannon will have the potential to undermine the quality of substratum in watercourse downstream of the project to support this habitat. As noted under Attribute No. 33 the potential for the discharge of sediment fines to river beds to result in the abundant growth of commonly occurring and species poor stands of crowfoot vegetation has been identified by the NPWS (NPWS, 2019a)

18	Water quality: nutrients	The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition	Any inadvertent discharge of pollutants to the Groody River sub-catchment and the main channel of the River Shannon during construction will have the potential to undermine this target.
19	Vegetation composition: typical species	Typical species of the relevant habitat sub-type should be present and in good condition	Any emission of pollutants to the Groody River sub-catchment and the main channel of the River Shannon as a result of the project will have the potential to undermine this target.
20	Floodplain connectivity	The area of active floodplain at and upstream of the habitat should be maintained	The project will not result in any changes to the existing river floodplain habitat within the River Shannon catchment.
21	Riparian habitat	The area of riparian woodland at and upstream of the bryophyte-rich sub-type should be maintained	No riparian woodland occurs in the vicinity of the project. No semi-natural riparian habitats will be adversely affected by the project.

7.0 MITIGATION MEASURES

The potential adverse impacts to the Lower River Shannon SAC qualifying features of interest that occur within the zone of influence of the project have been identified in Section 5 above and relate to mitigating the potential for the proposed development to result in perturbations to water quality and downstream effects to qualifying feature receptors.

Targeted mitigation measures are provided to safeguard against the potential adverse effects to the Annex 1 habitats and the Annex 2 qualifying features of interest of the SAC. The measures to be implemented to protect the water quality, estuarine and freshwater habitats and associated fauna populations downstream of the proposed development and within the SAC are outlined in the following sub-sections. These measures shall be implemented by the contractor appointed for the construction and decommissioning phase, in consultation with the appointed Ecological Clerk of Works (ECoW) so that the sensitive receptors of the Lower River Shannon SAC are safeguarded and pathways connecting the project site to these receptors are eliminated as potential impact pathways.

The Ecological Clerk of Works (ECoW) will be appointed to supervise the works and to ensure that all biodiversity receptors are protected during the construction and decommissioning phase. The ECoW will be appointed to ensure that habitat restoration and enhancement activities are implemented as planned, and to advise on any environmental or ecological aspect of the works. The ECoW will inspect habitat and ditches/water courses during the construction phase and during habitat restoration works and will be in charge of water quality monitoring throughout the construction phase. The ECoW will be the first point of contact with the Limerick City & County Council for all matters relating to ecology and biodiversity.

All operation phase mitigation measures will be required to be implemented by site Limerick City & County Council during the operation phase of the project.

7.1 DESIGN MITIGATION

The design of the proposed road includes the implementation of a 2m wide vegetated buffer strip on either side of the road. This strip between the road surface and surrounding areas will allow for habitat space for flora and fauna, interception of vehicle runoff or salt during Winter road maintenance, and retention of surface water runoff.

The design of the culvert crossings will be to the standards outlined in TII Guidelines (NRA, 2008a).

7.2 PROCEDURE MITIGATION

An Environmental Operating Plan (EOP) will be produced and implemented by the appointed contractor. The EOP will assist the contractor in preventing, minimising, or managing environmental impacts during the construction phase of the development. The EOP will outline methods for preventing or reducing environmental impacts, incorporate an Emergency Response Plan for dealing with an accidental spillage or environmental contamination, detail training to be provided to on-site staff. The EOP will be designed in accordance with the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan.

7.3 MEASURES TO PROTECT SURFACE WATER QUALITY

7.3.1 Construction Phase

7.3.1.1 Best Practice

The construction phase of the project will adhere to best practice guidance, particularly the CIRIA guidance document C532 Control of water pollution from construction sites. The construction approach will also adhere to the requirements set out in the Inland Fisheries Ireland guidance document *Requirements for the Protection of Fisheries Habitat during Construction and Development Works and Development Sites*.

7.3.1.2 Pollution Prevention – Chemical Substances

During construction key requirements for control of chemical pollution risk will include:

- It will be a condition of the contract between proponent and the Main Contractor that the Construction & Environmental Management Plan (CEMP) specifies how materials with the potential to adversely affect surface water quality, for example diesel and oil, will be stored and handled in a manner that minimises the risk of accidental spills or leaks. The CEMP will include all measures outlined in this NIS that aim to safeguard surface water quality runoff from the construction footprint. The

CEMP will also ensure that spill containment and clean-up equipment is provided and maintained during the construction phase of the development.

- Measures will be put in place during the construction phase to collect, attenuate, settle and treat surface water runoff prior to discharge from the site. These measure will include features such as surface swales, settlement ponds, silt dams and check dams. Settled water will pass through an interceptor prior to discharge from the site.

- Storage – all equipment, materials and chemicals will be stored a minimum distance of 25m away from any surface water body. Chemical, fuel and oil stores will be sited on impervious bases and within a secured bund of 110% of the storage capacity, within the lay down area.

- The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall also be tested and demonstrated.

- All fuel oil fill areas will have an appropriate spill apron and spill kits will be provided on site.

- Vehicles and refuelling – standing machinery will have drip trays placed underneath to prevent oil and fuel leaks causing pollution. Where practicable, refuelling of vehicles and machinery will be carried out on an impermeable surface in designated areas, well away from any surface waterbody.

- Maintenance – maintenance to construction plant will not be permitted on site, unless vehicles have broken down necessitating maintenance at the point of breakdown. All necessary pollution prevention measures will be put in place prior to commencement of maintenance in this instance;

- Concrete - Wet concrete operations will be carried out in dry conditions. Runoff from wastewaters or contaminated surface water runoff will be directed to construction phase surface water drainage system to be installed on site;

- Mess, sanitation and welfare facilities will be required during construction and will be located at the construction compound. Foul effluent will make use of chemical facilities with periodic removal for offsite disposal.

7.3.1.3 Pollution Prevention – Suspended solids/Silt

The prevention of silt generation during site works will be achieved through the interception and management of surface water runoff. Surface water swales will be installed around the perimeter of the construction footprint. All surface water collected in swales will be directed to attenuation ponds where it is allowed to settle prior to discharge. Settled water will pass through an interceptor prior to discharge to the receiving tidal watercourse to the north of the project site. This will allow for the control and management of all surface water runoff within the site during the construction phase.

All spoil generated during the construction phase will be stored in areas a minimum distance of 25m away from any surface waterbody.

Excavated soil material to be re-used for landscaping purposes will be stored on level ground a minimum distance of 25m away from any surface waterbody.

Standard dust suppression measures will be implemented during periods of dry weather. This will avoid any impacts arising from the spread of dust particles during the construction phase.

7.3.1.4 Pollution Prevention Plan

A Pollution Prevention Plan (PPP) will be implemented and monitored by the site manager as part of a full Construction Method Statement for the project to be approved by the Planning Authority and relevant consultees. Although this will be of particular importance during construction, it will apply to potentially polluting activities during all phases of the project.

As a minimum, the PPP will comply with best practice as advocated by CIRIA. The PPP will identify site-specific measures, and incorporate a Pollution Incident Plan, which will include emergency contact details, details of spill kits on site, and instructions on actions in case of spillage/emergency.

7.3.1.5 Measures to be Implemented during the Provision of the Culverts

The project requires crossings of a minor stream and drainage ditches. These will require in-stream works including bunding and/or diverting the watercourse temporarily. The following measures will be implemented during all instream works required for the project:

All plant to be used for instream works will be required to have in place a valid GA1 inspection certification. All plant will be in good working order. Weekly recorded GA2 inspections will be carried out as well as daily recorded visual inspections. Refuelling of plant will be carried out in designated refuelling area within the site compound and away from the stream, drains and instream works locations. Spill kits will be available at the stream works location.

The works area will be demarcated with appropriate signage and fencing prior to any works. Construction activities will take place within the demarcated boundary areas only. A trained, experienced operative will control the construction works. Any deep excavations required for the works will be fenced off. Vehicles required to access the works location will be controlled by an operative who will ensure vehicle movements are all carried out in a safe manner. Any reversing of site dumpers will be supervised and controlled by operatives on the ground guiding drivers to the required locations.

Works will be carried out in the following phases:

First: clearing of vegetation.

Second: installation of temporary measures to control the flow of the stream water during the works including a channel to allow for installation of a flume pipe away from the excavation during the works.

Third: Installation of the flume pipe upstream and downstream of the works area and temporary diversion of the stream into the flume pipe. This will effectively separate the watercourse from the works and allow the works to be completed in dry condition.

Fourth: Completion of instream works and the provision of new culverts and crossing. The culverts to be installed will comprise 3-sided embedded box culverts.

Fifth: Reinstatement of the original stream channel. The box culvert will be 3-sided with the side wall abutments embedded into the adjacent bankside. This design will facilitate the provision of a natural stream bed along the channel sections under the two new bridges. The replacement of the existing piped culverts with the 3-sided culvert will provide for the maintenance of a continue natural stream bed along the length of the channel flowing under the roadway. Reinstatement and landscaping of the stream bankside in accordance with the landscape masterplan for the project.

All works associated with the instream works will be undertaken in accordance with the Inland Fisheries Ireland (IFI) Guidelines on the Protection of Fisheries during Construction Works in and Adjacent to Waters.

Even though the stream is considered to be of negligible fisheries value the instream works will be timed to be completed during the open season for instream works. The months during which these works will be completed will be during July and August. This will also coincide with periods of lower rainfall and lower flows which will reduce risks and obstacles associated with instream works.

A detailed method statement will be required to be prepared by the contractor in advance of the commencement of instream works. The contractor will be required to liaise with the IFI and provide them with a copy of the method statement. The contractor will only proceed with the instream works when IFI have indicated their satisfaction with the approach to the instream works as set out in the method statement.

The implementation of these measures will ensure that the instream works required for the project will be completed in a sensitive manner that will avoid impacts to water quality and will ensure the full and effective reinstatement of the stream channel and bankside along the stream upon completion.

In addition to the above the following measures will also be implemented:

- Vegetation will be established as soon as possible on all exposed soils.

- Design and construction of watercourse crossings shall be in accordance with best practice guidance and in particular with "Guidelines On Protection Of Fisheries During Construction Works In And Adjacent To Waters "(Inland Fisheries Ireland) and "Guidelines For The Crossing Of Watercourses During The Construction Of National Road Schemes" (NRA);

- All watercourse crossings shall be subject to OPW Section 50 agreement;

- Mammal passage though all culverts will be maintained whether via retention of riparian banks (bridge) or provision of a mammal ledge (culverts).

- Culverts will be designed so that they can be constructed out of the watercourse and with the shortest possible length. Short lengths of stream diversion will then be constructed to route the stream through the completed culvert.

7.3.2 Operation Phase

7.3.2.1 Surface Water Management System

All storm water generated on the upgraded road surface will be collected in roadside drainage gullies and conveyed in a new surface water drainage pipe network. All road gullies will have silt traps for the collection of debris. The drainage pipe network will pass through a large silt trap chamber, hydrocarbon interceptor chamber and a 220m^3 attenuation tank before out falling to the Towlerton Stream. The surface water management system will be designed in accordance with TII Publications.

7.4 EVALUATION OF MITIGATION MEASURES

The mitigation measures and environmental safeguards outlined above for the construction phase of the project are taken from established best practice guidelines that have been successfully implemented for a wide range of project-level infrastructural developments. These measures have undergone extensive and rigorous monitoring for their effectiveness at development sites where they have previously been applied to ensure adverse environmental impacts are avoided.

It is further noted that the range of mitigation measures outlined in this NIS to avoid impacts to Lower River Shannon SAC receptors occurring within the zone of influence of the project have been successfully implemented for a range of other infrastructure development projects in Ireland.

The results of this monitoring and the proposal of these measures as standard best practice guidelines is based upon their high degree of success in ensuring negative environmental impacts are avoided.

The best practice guidance that have informed the mitigation measures and environmental safeguards proposed in this NIS and that will be adhered to throughout the construction, operation and decommissioning of the proposed development include:

- The Good Practice Guidance notes proposed by EA/SEPA/EHS:
- PPG 1: Understanding your environmental responsibilities - good environmental practices
- GPP 2: Above ground oil storage tanks
- PPG 3: Use and design of oil separators in surface water drainage systems
- GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer
- GPP 5: Works and maintenance in or near water
- PPG 6: Working at construction and demolition sites
- PPG 7: Safe storage - The safe operation of refuelling facilities
- GPP 8: Safe storage and disposal of used oils
- GPP 8: Safe storage and disposal of used oils
- GPP 19: Vehicles: Service and Repair
- GPP 21: Pollution incident response planning
- GPP 22: Dealing with spills
- GPP 26 Safe storage - drums and intermediate bulk containers

- PPG 27: Installation, decommissioning and removal of underground storage tanks
- CIRIA Environmental Good Practice on Site.
- CIRIA Control of Water Pollution from Construction Sites. Technical Guidance C648.
- CIRIA SuDS Manual Technical Guidance C697.
- Development on Unstable Land. Department of Environment (DOE), UK.

8.0 CONCLUSION

This Natura Impact Statement presents an analysis of the potential for the project to result in adverse impacts to one European Site, namely the Lower River Shannon SAC and the relevant qualifying features of interest of this SAC as set out in Section 1.1 above. An evaluation of the potential impacts that could arise as a result of the project to these qualifying features of interest and their conservation objectives has been completed.

A range of mitigation measures have been prescribed that, once implemented in full, will remove the risk of adverse effects posed by the proposed development to these qualifying features of interest.

Based upon the information provided in this NIS, it is the considered view of the authors of this NIS that it can be concluded by An Bord Pleanála that, subject to the implementation of all mitigation measures, the project will not, alone or in-combination with other plans or projects, result in adverse effects to the integrity and conservation status of European Sites in view of their Conservation Objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion.

9.0 REFERENCES

Department of the Environment Heritage and Local Government (DEHLG) (2008) Circular letter SEA 1/08 & NPWS 1/08.

Department of the Environment Heritage and Local Government (DEHLG) (2010). Appropriate Assessment of Plans and Projects. Guidance for Local Authorities.

English Nature (1999). Habitats *regulations guidance note no. 3 (HRGN No. 3). Determination of Likely Significant Effect under The Conservation (Natural Habitats &c) Regulations 1994*.

EPA (2018). Lower Shannon & Mulkear Catchment Assessment (HA 25D). Version 3. Report by Catchment Science & Management Unit Environmental Protection Agency.

European Commission (2000). *Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC*. Luxembourg.

European Communities (2001). *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*. Luxembourg.

European Commission (1992). EU Habitats Directive.

Ferrando, Agustina and Gonzalez, Emilia and Franco, Marcos and Commendatore, Marta and Nievas, Marina and Militon, Cécile and Stora, Georges and Gilbert, Franck and Esteves, José Luis and Cuny, Philippe Oil spill effects on macrofaunal communities and bioturbation of pristine marine sediments (Caleta Valdés, Patagonia, Argentina): experimental evidence of low resistance capacities of benthic systems without history of pollution. (2015) Environmental Science and Pollution Research, vol. 22 (n° 20). pp. 15294-15306.

JBA Consulting (2019). King's Island Flood Relief Scheme. Natura Impact Statement. Final Report December 2019. Limerick City & County Council & OPW.

McGinnity, P., Gargan, P., Roche, W., Mills, P. & McGarrigle, M. (2003) Quantification of the Freshwater Salmon Habitat Asset in Ireland using data interpreted in a GIS platform. Irish Freshwater Fisheries Ecology and Management Series: Number 3, Central Fisheries Board, Dublin, Ireland.

NPWS (2016) Conservation Objectives: Lower River Shannon SAC Site Code 002165. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

Reynolds, S., Conaghan, J. and Fuller, J. (2006) A survey of rare and scarce vascular plants in County Limerick. Unpublished report to the National Parks and Wildlife Service

APPENDIX 1: PRELIMINARY SCREENING REPORT

Bloodmill Road

Singland & Towlerton

Co. Limerick

Preliminary Screening for Appropriate Assessment

Doherty Environmental Consultants Ltd.

November 2022

Bloodmill Road

Singland & Towlerton, Co. Limerick

Preliminary Screening Report for Appropriate Assessment

Document Stage	Document Version	Prepared by
Final	1	Pat Doherty MSc, MCIEEM

For and on behalf of

Doherty Environmental Consultants Ltd

Prepared By: Pat Doherty

This report has been prepared by Doherty Environmental Consultants Ltd. with all reasonable skill, care and diligence. Information report herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

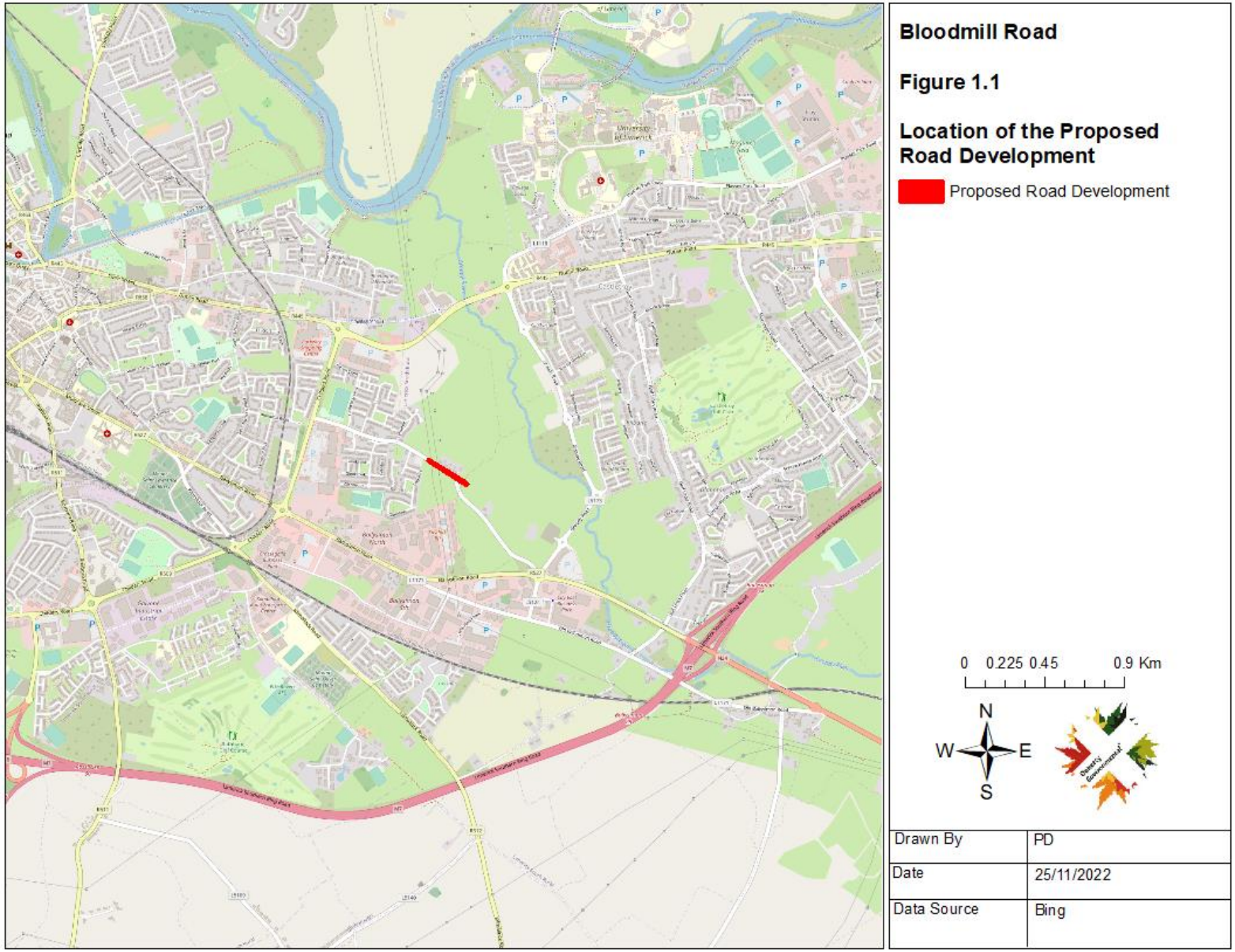
This report is prepared for Limerick City & County Council and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

Table of Contents

1.0 INTRODUCTION

Limerick City & County Council have commissioned Doherty Environmental Consultants (DEC) Ltd. to complete a preliminary Stage 1 Screening Report for Appropriate Assessment for the development of the proposed Bloodmill Road, Limerick (see Figure 1.1 for project location and Figure 1.2 for aerial view of the project).

This preliminary report aims to establish whether or not the proposed road is connected to any European Sites via potential impact pathways. Where the presence of impact pathways are identified, the preliminary screening report is to be used as a background document to inform a screening determination as to whether or not an Appropriate Assessment and supporting Natura Impact Statement is required for the proposed road development.


Bloodmill Road
Figure 1.1
Location of the Proposed Road Development
Proposed Road Development
0 0.225 0.45 0.9 Km
N
W
E
S
Drawn By PD
Date 25/11/2022
Data Source Bing


Bloodmill Road
Figure 1.2
Aerial view of the Proposed Road Development Location
Proposed Road Development
0
0.075
0.15 Km
N
W
E
S
Drawn By
PD
Date
25/11/2022
Data Source
Bing

2.0 PROJECT DESCRIPTION

The aim of the project is to realign the existing Bloodmill Road to link with the recently constructed developer provided link road section. The scheme should implement improved Active Travel measures for pedestrians, cyclists and public transport to serve the planning approved and currently under construction secondary school and private hospital on surrounding zoned lands. The scheme should encourage the uptake of more sustainable transport options by providing safer road infrastructure for vulnerable road users. The scheme should provide high quality facilities for pedestrians, cyclists and the mobility impaired with a view to encouraging modal shift from private car use to more sustainable, active travel options such as walking and cycling.

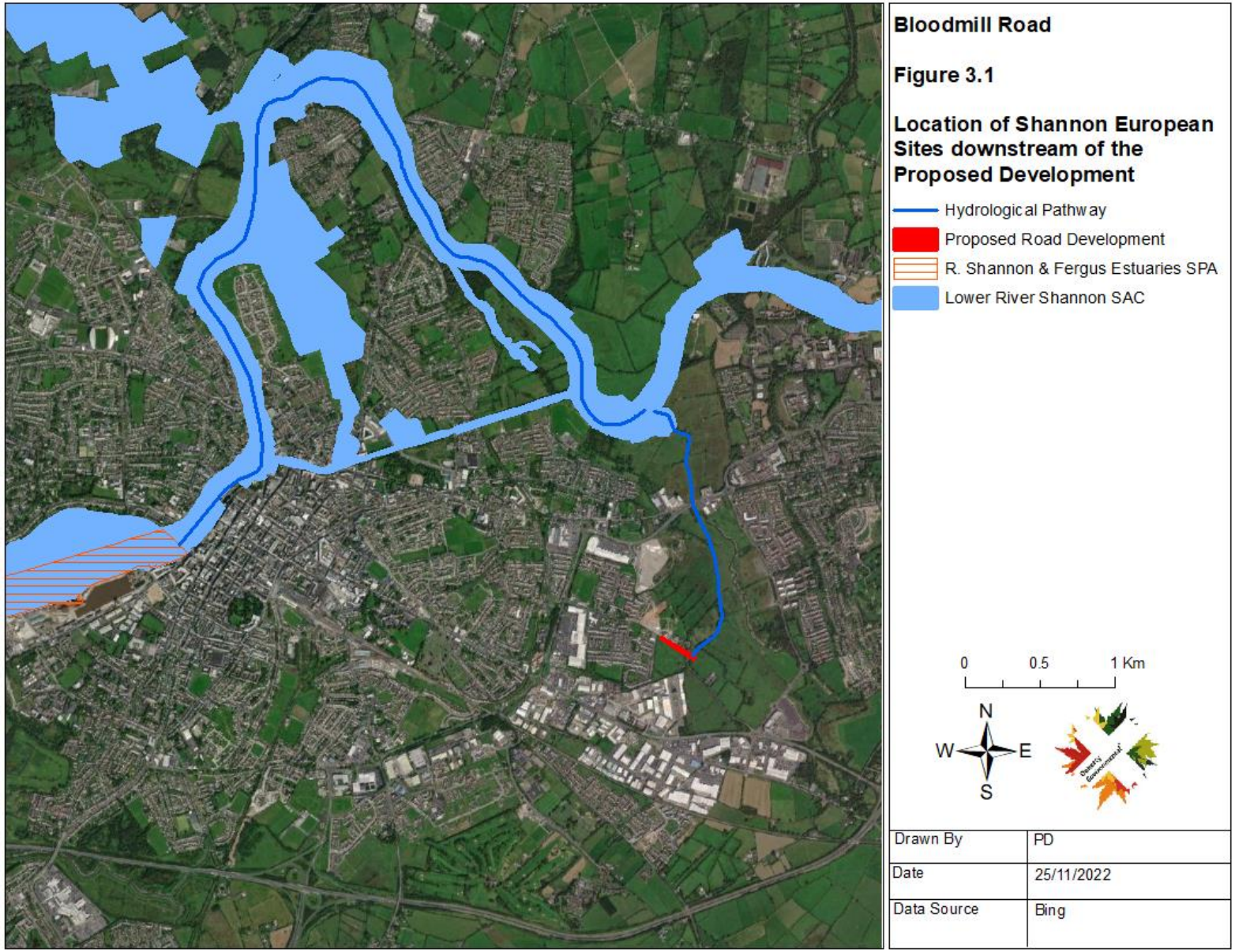
The project will involve:

- Construction of approx. 260m of new road corridor with a 6.2m wide carriageway, 2x2m footpaths, 2x2m landscaped verges and 2x2m off-road cycle tracks.
- The construction of a new surface water drainage system.
- The installation of a new public lighting system.
- The construction of a new culvert across the stream where the existing newly constructed link road terminates.

3.0 EXAMINATION OF POTENTIAL IMPACT PATHWAYS

The proposed Bloodmill Road is not located within or adjoining any European Sites. The European Sites occurring in the wider area surrounding the proposed development are shown on Figure 3. below.

The nearest European Site to the proposed development is the Lower River Shannon SAC. This SAC is located approximately 1.3km from the nearest point of the proposed development. Given the separation distance between the proposed development and the nearest European Site there will be no potential for the development to result in direct impacts, such as habitat loss, physical habitat disturbance or disturbance to the habitats and species of the nearest European Site, the Lower River Shannon SAC within the boundary of this SAC.


Bloodmill Road
Figure 3.1
Location of Shannon European Sites downstream of the Proposed Development
Hydrological Pathway
Proposed Road Development
R. Shannon & Fergus Estuaries SPA
Lower River Shannon SAC
0
0.5
1 Km
N
W
E
S
Drawn By
PD
Date
25/11/2022
Data Source
Bing

As such the remainder of this preliminary screening report seeks to identify the potential for indirect impacts to arise, via potential impact pathways between the proposed development and the nearest European Sites, the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.

Current guidance informing the approach to screening for Appropriate Assessment defines the zone of influence of a proposed development as the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. It is recommended that this is established on a case-by-case basis using the Source-Pathway-Receptor (SPR) framework.

Under the SPR model the project, the works associated with the construction of the project and the operation of the proposed development represent the source of potential impacts.

Pathways that can arise as a result of develop project and lead to offsite/downstream impacts are listed below and an appraisal of this pathways potential to connect the project to European Sites and their qualifying features of interest (which represent the receptors under the SPR model) is also provided:

- Emissions to surface water: A hydrological pathway will connect the project site to the Lower River Shannon SAC, via the Towlerton Stream and Groody River. The Towlerton Stream will be crossed by the proposed road. The confluence of the Towlerton and the Groody is approximately 1.07km downstream from the proposed development crossing point. The distance between the crossing point to the boundary of the Lower River Shannon SAC is approximately 1.7km downstream. The distance to the Groody outfall to the River Shannon within the SAC is approximately 1.9km downstream from the proposed crossing point. Given the presence of this stream and its connectivity to the Lower River Shannon SAC and the main channel of the River Shannon, it establishes a hydrological pathway between the proposed development and this SAC.

  It is further noted that the boundary of the River Shannon and River Fergus Estuaries SPA is located a further 7.4km downstream from the confluence of the Groody and the River Shannon. This is approximately 9.3km downstream from the proposed crossing point of the Towlerton Stream.

- Emissions to groundwater: Given the separation distance between the project site and the nearest point of a European Site, over 1km from the project site and the absence of any groundwater dependent habitats of the Lower River Shannon SAC occurring at the section of the SAC to the north of the proposed development, no function groundwater pathway is considered to connect the proposed development to the SAC.

- Noise and vibration emissions: given the distance separating the project site from the nearest European Sites and the absence of any mobile qualifying species of European Sites occurring at or relying on the project site, as determined during previous surveys for the adjacent Towlerton development[1], there will be no potential for the project to result in vibration or noise disturbances to European Sites and their qualifying features of interest in the wider surrounding area.

- Emissions to air: the project site will not result in perceptible emissions to air and no air emission pathway will connect the works to European Sites and their qualifying features of interest in the wider surrounding area.

- Light emissions: the project site is located at a remote distance from the nearest European Sites and any lighting associated with the project, will not be perceptible within these European Sites.

- Visual emissions: The proposed development is located at a remote distance from the nearest European Sites and is not predicted to have the potential to result in visual emissions that could generate disturbance to qualifying species of this European Sites.

- Mobile Species Pathway: Development projects that are located outside of European Sites can also result in impacts to mobile qualifying species of European Sites in the event that such species rely on habitats occurring within the project site. For the purposes of

[1] For the purposes of this preliminary screening the surveys completed in 2019 for the adjacent Towlerton project adjacent to the proposed development are referred to.

including such a scenario in the consideration of potential pathways this screening report refers to the reliance of mobile qualifying species of European Sites on the project site as a "mobile species pathway". Given that the project site does not support any habitats that are relied upon for supporting waterbirds of the River Shannon and River Fergus Estuaries SPA (as found during surveys completed for the adjacent Towlerton development) there will be no potential for a mobile species pathway to connect the project site to the special conservation interest bird species of the River Shannon and River Fergus Estuaries SPA. The River Groody downstream of the proposed development is known to support lamprey species and is also likely to support otters. These species are listed as qualifying species of the Lower River Shannon SAC and given the connectivity between the proposed development and suitable habitat for these species there is a considered to be a mobile species pathway between the proposed development and qualifying species of the SAC.

- Human disturbance pathway: Human disturbance, ex-situ of a project site, to a European Sites is representative of an indirect impact arising as a result of land use activities generated by a project. An example of such an indirect impact is an increase in human presence and associated pressures within a European Sites. New developments in areas outside of, but proximate to European Sites, can result in an increase in the presence of people within European Sites, such as for recreational activities. The potential for a human disturbance pathway, through which a proposed development could generate activity within European Sites and result in disturbance to qualifying habitats or species is also identified as a potential pathway requiring examination. Given the remote distance of the project site from the nearest European Site (i.e. 1.3km) there will be no potential for the project to result in human disturbance to European Sites and their features of interest. As such this human disturbance pathway does not represent a pathway connecting the project site to European Sites and their features of interest.

In summary from the above two pathways have been identified connecting the proposed development to the Lower River Shannon SAC. These are a hydrological pathway and a mobile species pathway between the proposed development and the SAC. A hydrological pathway, whilst greater in distance and likely more tenuous given the potential for dispersion, dilution and attenuation, also occurs between the proposed development and the River Shannon and River Fergus Estuaries SPA further downstream.

4.0 CONSIDERATION OF ADJACENT TOWLERTON DEVELOPMENT

A planning application for an adjacent development at Towlerton, immediately to the east of the proposed development was lodged with Limerick City & County Council in 2019. This application, which has since been consented and partly development, was accompanied by an Natura Impact Statement and Appropriate Assessment. The reasons set out for completing the Natura Impact Statement and the Appropriate Assessment related to the potential for a hydrological pathway and mobile species pathway to occur between the Towlerton development and the Lower River Shannon SAC.

5.0 CONCLUSION

In light of the foregoing a hydrological pathway and mobile species pathway has been identified to connect the proposed development to the Lower River Shannon SAC and more tenuously a hydrological pathway connects the proposed development to the River Shannon and River Fergus Estuaries SPA.

Given the presence of these pathways it is recommended that Limerick City & County Council seek a determination from An Bord Pleanála, under Article 250 of the Planning and Development Act (as amended), as to whether the proposed development has the potential to result in likely significant effects to a European Site and whether an Appropriate Assessment and accompanying Natura Impact Statement is required to be completed for the proposed development.

APPENDIX 2: AN BORD PLEANÁLA INSPECTORS REPORT

Inspector's Report
ABP-315259-22

Development	Bloodmill Road Extension Scheme
Location	In the townland of Towlerton, Ballysimon, Co. Limerick
Planning Authority	Limerick City and County Council
Planning Authority Reg. Ref.	Not applicable
Applicant(s)	Limerick City and County Council.
Type of Application	NIS Direction under the provisions of Article 250 of the Planning and Development Regulations 2001.
Planning Authority Decision	Not Applicable
Type of Appeal	NIS direction
Appellant(s)	Not applicable
Observer(s)	None.
Date of Site Inspection	20th January 2023
Inspector	Paul Caprani

Contents

1.0 Introduction

1.1. Limerick City and County Council are seeking a determination under the provisions of Article 250 of the Planning and Development Regulations 2001 (as amended) from An Bord Pleanála as to whether or not a Natura Impact Statement is required to be prepared in respect of works to be carried out involving the widening and realignment of the Bloodmill Road at Towlerton in the eastern environs of Limerick City.

2.0 Site Location and Description

2.1. The Bloodmill Road (L5124) is a local, two-way, 3rd Class Road on the south-eastern outskirts of Limerick City. It is approximately 1.6 km in length and runs from the R509 south of the Parkway Roundabout to the R527, which forms part of the main Limerick Tipperary Road. It consists of a two-way metalled carriageway c.4m in width. The section of the roadway closer to the city is slightly wider and incorporates foot paths on both sides and public lighting. The north western section of the roadway operates as a collector/distributor route serving a number of commercial and residential lands as well as Claughaun GAA Club. As one travels south eastwards along the road the carriageway narrows and becomes more rural in nature. After c750m the footpaths and public lighting along the roadway end. The remaining section of roadway serves scattered rural housing development and farmyards along its alignment until it meets the Groody Road / R527 Roundabout, c. 850 meters further southeast.

3.0 Proposed Development

3.1. The aim of the project is to re-align the existing Bloodmill Road to link up the recently constructed and improved section of link road constructed as part of a housing development on the northern side of the Road. It also seeks to provide improved infrastructure for pedestrians cyclists and public transport users. The new alignment will also provide improved access to surrounding zoned lands or a new private hospital and secondary school. In detail the project will provide for:

- The construction of approximately 200m of road corridor with a 6.2 m carriageway together with 2x2m footpaths and 2x2m off-road cycle tracks.
- The construction of a new surface water drainage system.
- The installation of a new culvert across the Towlerton[1] stream where the newly constructed link road terminates.

4.0 Planning Authority Documentation Submitted

4.1. The application for the determination under the provisions of Article 250 of the Planning and Development Regulations 2001 (as amended) was lodged on December 1st 2021. It is accompanied by the following documentation.

- A covering letter by the Transportation and Mobility Directorate of Limerick County Council. Which set out details of the background to the project. It notes that in addition to the planned health and education infrastructure earmarked on contiguous lands along the alignment, the Bloodmill Road has been identified as part of the Draft Bus Connect Project. The lands identified for the road improvement scheme is owned by both the council and a number of 3rd parties. Negotiations are on-going in respect of acquiring the land.

Appendix A of the submission sets out preliminary drawings indicating the section of roadway to be improved together with a schematic layout of the road improvement scheme.

Appendix B comprises of a series of zoning maps in the adopted development plan for the subject site and its surroundings.

Appendix C contains details of a Report for a Preliminary Screening for Appropriate Assessment, carried out be Doherty Environmental Consultants. It concludes that, given the presence of hydrological pathways between the proposed development and Natura 2000 sites in the vicinity, it is recommended that the Council seek a determination from An Bord Pleanála under the provisions of Article 250 of the Planning and Development Regulations 2001 (as amended) as to whether the proposed development has the potential to result in likely significant effects on the

[1] This is also referred Galvone Stream in documentation submitted by the Planning Authority.

Natura 2000 sites in question and therefore whether a Natural Impact Statement (NIS) is required to be completed for the proposal.

5.0 **Natura 2000 Sites in the Vicinity.**

The following Natura 2000 sites have been identified within a zone of influence of 15 km radius of the proposed development, which could theoretically be affected by the proposed development:

Natura 2000 Site	Distance from the Proposed Development
Lower River Shannon SAC (002165)	1.4 km (as the crow flies), hydrologically 1.8km
River Shannon and River Fergus Estuaries SPA (004077)	3.4 km (as the crow flies). Hydrologically 9.1km
Slievefelim to Silvermines Mountains SPA (004165)	12.5 km (as the crow flies)
Tory Hill SAC (000439)	13.8 km (as the crow flies)
Glenomra Wood SAC (001013) Co Clare	11.2 Km (as the crow flies)

6.0 **Potential Impacts that could arise from the Proposal**

6.1. The works to be carried out are not described in any great detail in the documentation submitted. However, the potential adverse impacts that could arise from a typical road improvement/realignment scheme in the surrounding environment include the following:

- Pollution discharges to groundwater though accidental spillage of potential contaminants such as fuels, oils paints or chemicals etc. Having regard to the distances between the subject site and the Natura 2000 sites in question groundwater contamination is unlikely to pose a threat to the Natura 2000 sites in question.

- Surface water emissions - where hydrological connections exist between the subject site and Natura 2000 sites in the vicinity. There is potential for water pollution to occur through accidental spillage of potential contaminants such as fuels, oils paints or chemicals etc. Due to the hydrological connection between the

subject site and Natura 2000 site in the vicinity. Surface water pollution could pose a risk to qualifying interests.

- Noise and Vibration Emissions - Elevated noise and vibration during construction works associated with the road scheme (and to a much lesser extent during the operational phase through increased traffic) has the potential to impact on breeding foraging and nesting sites associated with SPA's in the vicinity and also certain species associated with SAC's through general disturbance. Having regard to the built-up nature of the baseline environment and the distance between the subject site and the Natura sites, particularly SPA sites, noise and vibration emissions are very unlikely to pose a threat to the Natura 2000 site in question.

- Elevation emissions to air which could affect air quality which in turn could potentially impact on qualifying interests associated with the Natura 2000 Sites. Again, having regard to the built-up nature of the baseline environment and the distance between the subject site and the Natura sites, particularly SPA sites, air pollution / emissions arising from the proposed development are very unlikely to pose a threat to the Natura 2000 site in question.

- Light pollution - elevated levels of light pollution could potentially impact on species associated with the Natura 2000 sites. Having regard to the built-up nature of the baseline environment and the distance between the subject site and the Natura 2000 sites, increased light pollution is extremely unlikely to pose a threat to the Natura 2000 site in question.

- Human and increased traffic activity – particularly associated with the construction and operational phases of the project could potentially give rise to disturbance of species associated with Natura 2000 sites in the vicinity. Again however, regard to the built-up nature of the baseline urban/peri urban environment and the distance between the subject site and the Natura 2000 sites, increased human and traffic activity are very unlikely to pose a threat to the Natura 2000 site in question.

7.0 Screening for Potential Impacts on Natura 2000 Sites

7.1. The subject site is not located within or contiguous to a designated Natura 2000 Site. There are total of 5 designated Natura 2000 Site within a 15 km radius. The table below assesses the theoretical potential for the proposed development to impact on

the Natura 2000 site in question, and the rationale on which this conclusion is based (Column 3):

Site Name and Site Code	Distance of Natura 2000 Site from proposed Road Alignment Scheme (Closest Point)	Hydrological or other connection between the subject site and Natura 2000 site	Potential Adverse Impact on Integrity of a European Site
Lower River Shannon SAC (002165)	1.4 km (As the crow flies). Hydrological route 1.8km	Yes; the Towlerton stream which traverses the Bloodmill Road at the termination point of the proposed works discharges into the Groody River at a Reboge Meadows approximately 1km north of the site. The Groody River discharges into the Lower River Shannon SAC a further 800m to the north.	Potentially Yes
River Shannon and River Fergus Estuaries SPA (004077)	3.4 km (as the crow flies). Hydrological Route 9.1km	River Shannon and River Fergus Estuaries SPA form part of the lower River Shannon Corridor as it flow westwards from the City of Limerick. There is a hydrological connection between the subject site via the Towlerton Stream, River Groody and the River Shannon. The Hydrological route is circuitous at almost 10 km in length which is a significant separation distance. Furthermore, the dilution and dispersion capacity of the Lower River Shannon for a distance of approximately 7.3 km would ensure that any potential pollution episode on reaching the River Shannon would be adequately diluted and dissipated to significantly reduce any probability of adversely indirectly impacting on the River Shannon and River Fergus Estuaries SPA.	No potential impact

Slievefelim to Silvermines Mountains SPA (004165)	12.5 km (as the crow flies)	There is no hydrological or other connection between the proposed road re-alignment works and the Slievefelim to Silvermines Mountains SPA. Furthermore, the separation distance between the two sites in question are such that there is no potential for the proposal to adversely impact on the species of conservation interest associated with the SPA.	No potential impact
Tory Hill SAC (000439)	13.8 km (as the crow flies)	There is no hydrological or other connection between the proposed road re-alignment works and the Tory Hill SAC. Furthermore, the separation distance between the two sites in question are such that there is no potential for the proposal to adversely impact on the qualifying interests, all of which are habitats, associated with the SAC.	No Potential Impact
Glenomra Wood SAC (001013) Co Clare	11.2 Km (as the crow flies)	There is no hydrological or other connection between the proposed road re-alignment works and the Glenomra Wood SAC. Furthermore, the separation distance between the two sites in question are such that there is no potential for the proposal to adversely impact on the single qualifying interest, namely woodland habitat.	

I have argued from my screening assessment above that, of the 5 designated Natura 2000 sites identified in the vicinity, the proposed development may have the potential to impact on one site only, namely the Lower Shannon River SAC. The following section of the report looking in more detail at the qualifying interests associated with the SAC and whether or not the proposal and the potential to impact on this qualifying interests.

Site Name and Code	Qualifying interests / Species of Conservation Interest
Lower River Shannon SAC (002165)	*Sandbanks which are slightly covered by sea water all the time [1110]* *Estuaries [1130]* *Mudflats and sandflats not covered by seawater at low tide [1140]* *Coastal lagoons [1150]* *Large shallow inlets and bays [1160]* *Reefs [1170]* *Perennial vegetation of stony banks [1220]* *Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]* *Salicornia and other annuals colonising mud and sand [1310]* *Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]* *Mediterranean salt meadows (Juncetalia maritimi) [1410]* *Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]* *Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]* *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]* *Margaritifera (Freshwater Pearl Mussel) [1029]* *Petromyzon marinus (Sea Lamprey) [1095]* *Lampetra planeri (Brook Lamprey) [1096]* *Lampetra fluviatilis (River Lamprey) [1099]* *Salmo salar (Salmon) [1106]* *Tursiops truncatus (Common Bottlenose Dolphin) [1349]* *Lutra (Otter) [1355]*

In assessing whether or not the proposed development would have potential adverse impacts on the qualifying interests associated with the SAC, I have had particular regard to the information contained in the report entitled “Conservation Objectives Series” prepared by the National Wildlife and Park for the SAC in question. The potential impacts on each of the qualifying interests are set out below:

Sandbanks which are slightly covered by sea water all the time [1110]

This habitat amounts to c1,353 ha of lands at the River Shannon Estuary, c80km down stream of the subject site. It will not be impacted in anyway as a result of the proposed development.

Estuaries [1130]

This permanent habitat area is stable or increasing, subject to natural processes. It covers a large area within the SAC (c.24,273 Ha) and extends up the river to a point c2 km downstream of the discharge point of the River Groody into the River Shannon. The conservation objective seeks to conserve the following community types in a natural condition: Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex; Estuarine subtidal muddy sand to mixed sediment with gammarids community complex; Subtidal sand to mixed sediment with *Nucula nucleus* community complex; Subtidal sand to mixed sediment with *Nephtys spp*. community complex; Fucoid-dominated intertidal reef community complex; Faunal turf-dominated subtidal reef community; and Anemone-dominated subtidal reef community. Any potential pollution episode arising from the development over 3.8km away, is extremely unlikely to impact on this habitat.

Mudflats and sandflats not covered by seawater at low tide [1140]

This habitat is encountered at numerous locations along the shoreline downstream of the subject site. The closest area of mudflats and sandflats to the subject site (hydrologically) is the Shannon Bridge 8.8km away. The conservation objective seeks to conserve the following community types in a natural condition: Intertidal sand with *Scolelepis squamata* and *Pontocrates spp.* community; and Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex. Any potential pollution episode arising from the development 8.8km away is extremely unlikely to impact on this habitat due to the nature of the habitat and the separation distances involved.

Coastal lagoons [1150]

The NPWS Conservation Objectives report notes that the coastal lagoonal areas within the SAC comprise of 4 individual areas all located a significant distance downstream from the proposed works, in excess of 20 km away. The lagoons will in no way be potentially affected by the proposed development.

Large shallow inlets and bays [1160]

This habitat is stable or increasing and covers and estimated area of 35,282 ha associated with the outer estuary area. Due to the separation distances c60km and the availability of significant dilution and dispersal rates, the habitats of inlets and bays will in no way be affected by the proposal.

Reefs [1170]

The distribution of reefs within the SAC is considered to be stable within the SAC. The conservation objective is to conserve the reef community types within the SAC in a natural condition. These habitats area all located a significant distance downstream of the proposed works to be carried out, (c.50km away) and will not be adversely affected by the proposal.

Perennial vegetation of stony banks [1220]

Nine separate areas of Perennial vegetation of stony banks are identified within the SAC, all of which are a located a considerable distance downstream (in excess of 60 km) near the mouth of the estuary and thus will in no way be affected by the proposal.

Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]

Likewise, these habitats identified in the SAC are all located a considerable distance downstream (in excess of 60 km) near the mouth of the estuary and thus will in no way be affected by the proposal.

Salicornia and other annuals colonising mud and sand [1310]

As in the case of the habitats referred to above, the areas supporting this type of habitat is located in excess of 60km down stream and will not be affected by the proposal.

Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]

As in the case of the habitats referred to above, the areas supporting this type of habitat is located in excess of 20km downstream and will not be affected by the proposal. The availability of significant dilution and dispersal rates ensure that Atlantic salt meadows will in no way be adversely affected.

Mediterranean salt meadows (Juncetalia maritimi) [1410]

The closest areas supporting this type of habitat is located in the River Fergus Estuary, in excess of 40km downstream and will not be affected by the proposal. The availability of significant dilution and dispersal rates will ensure that this habitat will in no way be affected by the proposal.

Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]

That section of the water course / canal[2] linking the Abbey River at the Grove Island Shopping Centre with the River Shannon at Guinness Bridge at Carrabullawn is immediately down stream of where the River Groody discharges into the River Shannon. The main pressures and threats on water courses of plain to montane levels with *Ranunculion fluitantis Callitricho-Batrachion* vegetation and are human-related changes to river structure hydrology and water pollution. As the subject site is located adjacent to Towlerton Stream, which in turn discharges into the Groody River in close proximity to the Canal, there is in my view some potential, in the absence of mitigation to impact on the water quality in the canal which hosts this habitat. On a precautionary basis therefore the proximity of this type of habitat to the subject site could trigger the requirement for a stage 2 Appropriate Assessment.

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]

The spatial extent of this particular habitat does not appear to be mapped on the NPWS Conservation Objectives Report. The NPWS report states that the full extent of this habitat in this site is currently unknown. This habitat has been recorded on the eastern bank of the Shannon, just north of Castleconnell, Co. Limerick. This is upstream of the proposed development and therefore will not be affected by the proposal. The report goes on to note that the full distribution of this habitat in this site is currently unknown and it almost certainly occurs elsewhere. However, as this habitat occurs on semi-natural grasslands, it is extremely unlikely that any pollution episode at the site of the proposal will affect the nature of the grassland supporting this habitat.

[2] Referred to on the Discovery map series as the Lough Derg Canal.

Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]

These habitats are located upstream of the proposal and therefore will not be affected by the proposal.

Margaritifera (Freshwater Pearl Mussel) [1029]

There is a single freshwater pearl mussel catchment area within the SAC centred on the Cloon River in Co Clare. This catchment in excess of 60 km from the subject site and will be in no way affected by the proposed development.

Petromyzon marinus (Sea Lamprey) [1095], Lampetra planeri (Brook Lamprey) [1096], Lampetra fluviatilis (River Lamprey) [1099]

The spatial extent of this particular habitat does not appear to be mapped on the NPWS Conservation Objectives Report. The proposed development is likely unlikely to impact on Sea Lamprey because of the separation distances involved between the subject site and the habitat of this lamprey species. Brook lamprey and River lamprey inhabit freshwater and river environments. The biggest threats to the lamprey species is habitat loss/ degradation and water pollution. On the basis that river and brook lamprey could inhabit section of the River Shannon in closest proximity to the works to be undertaken, there is in my view some potential, in the absence of mitigation, to impact on the water quality in the receiving waters which may host lamprey species. On a precautionary basis therefore, the potential for the species to occur in proximity to the subject site could trigger the requirement for a stage 2 Appropriate Assessment.

Salmo salar (Salmon) [1106]

The spatial extent of this particular habitat does not appear to be mapped on the NPWS Conservation Objectives Report. The conservation objective seeks to restore the favourable conservation condition of Salmon in the Lower River Shannon SAC, which is defined by a list of attributes and targets including achieving and maintaining at least Q4 at all sites sampled by the EPA. The Q-value for water quality at Athunkard Bridge, c. 2km downstream of the confluence point between the River Shannon and the River Groody is 3-4. This is on the cusp of the attribute and target sought to achieve the favourable conservation condition of the Salmon in the

SAC. On this basis there is in my view, some potential from the proposed works to be undertaken, in the absence of mitigation, to impact on the water quality in the receiving waters which may host salmon species. On a precautionary basis therefore, the proximity of this species to the subject site could trigger the requirement for a stage 2 Appropriate Assessment.

Tursiops truncatus (Common Bottlenose Dolphin) [1349]

The critical habitat of the Common Bottle Noise Dolphin is located a considerable distance downstream, in the region of 60 km from the site where the road improvements are to take place. Any adverse impacts arising from the proposed development will not impact on this critical habitat. The species also frequents and commutes over a much wider area of the Lower Shannon River and Estuary. The dolphin commutes up stream as far as Cock Rock, approximately 11 km downstream from where the Groody River discharges into the River Shannon. Having regard to the separation distances and the dilution and dispersion capacity in the receiving waters of the River Shannon, any potential pollution episode arsing from the works to be undertaken would have no adverse effect on the Bottle-nosed Dolphin.

Lutra (Otter) [1355]

The Otter commuting buffer zone is depicted on Map 17 of the NPWS Conservation Objectives Report. It indicated that the commuting zone for otters extends far up the River Shannon into Limerick City as far as St Thomas Island, c. 1km north of Athlunkard Bridge. The otter committing zone therefore terminates c.3 km north of the confluence point between the River Groody and the River Shannon, and approximately 4.8 km north (hydrologically) where the proposed works are to take place along the Bloodmill Road. Having regard to the separation distances and the dilution and dispersion capacity of the receiving waters, no adverse impact is anticipated on the commuting habitat of the otter.

8.0 Conclusion and Recommendation

Arising from my assessment above, I would conclude that (a) because of the nature of works to be undertaken in an existing built-up area, (b) the separation distances between the proposed road improvement works and the Natura 2000 sites in the vicinity, that all Natura 2000 sites, with the exception of the Lower River Shannon

SAC (site code: 002165), can be excluded in terms of the potential for adverse impact on qualifying interests or species of conservation interest associated with the Natura 2000 Sites.

With regard to the Lower Shannon SAC, I have evaluated the potential impact of the proposed development on each of the qualifying interests associated with the SAC, and I have concluded that for reasons relating primarily to proximity, the proposed development is highly unlikely to adversely impact on the vast majority of qualifying interests. However due to the direct hydrological connection between the works to be undertaken on the subject site and the susceptibility of three or four of the qualifying interests associated with SAC, which lie in closest proximity to the subject site; namely Altantic Salmon *(Salmo salar),* Brook and River Lamprey (*Lampetra planeri and Lampetra fluviatilis*) and water courses of plain to montane levels with the *Ranunculion fluitantis and Callitricho-Batrachion* vegetation, the potential for adverse impacts on these particular qualifying interests cannot be categorically ruled out. I therefore recommend that the Board determine that a stage 2 appropriate assessment of the proposed development is required and direct the local authority to prepare an NIS in respect of the proposed development and to submit the proposed development to the Board for approval under section 177AE of the Planning and Development Act 2000, as amended.

9.0 Reasons and Considerations

Having regard to:

a) The nature and scale of the proposed development,

b) The location of the proposed development and the separation distance from the Lower River Shannon SAC (site code: 002165)

c) The existence of a hydrological connection from the proposed development site to the Lower River Shannon SAC

d) The nature of the qualifying interests, some of which may be located along the section of the River Shannon in closest proximity to the proposed development.

e) The submission made by the local authority, including the Preliminary Screening Report for Appropriate Assessment Screening received by the Board on dated November 2022,

f) The report and recommendation of the Inspector,

It is considered reasonable to conclude that on the basis of the information available, which is considered adequate to issue a screening determination, that it cannot be ruled out that the proposed development, either individually or in combination with other plans or projects, would not be likely to have a significant effect on a number of the qualifying interests associated with the Lower River Shannon SAC (Site Code: 002165) in view of the conservation objectives of these sites and that a Stage 2 Appropriate Assessment and the submission of a Natura Impact Statement for the proposed development is, therefore, required.

Paul Caprani
Senior Planning Inspector

27th of January 2023.

APPENDIX 3: AN BORD PLEANÁLA DIRECTION ORDER

Our Case Number: ABP-315259-22

An Bord Pleanála

Limerick City and County Council
c/o Karen McDonnell
Transportation & Mobility Directorate
Merchants Quay
Limerick
Co. Limerick
V94 EH90

Date: 23 JUN 2023

Re: Bloodmill Road Extension Scheme
in the townland of Towlerton, Ballysimon, Co. Limerick

Dear Sir / Madam,

An order has been made by An Bord Pleanála determining the above mentioned case. A copy of the order is enclosed.

In accordance with section 146(5) of the Planning and Development Act, 2000 as amended, the Board will make available for inspection and purchase at its offices the documents relating to the decision within 3 working days following its decision. In addition, the Board will also make available the Inspector's Report and the Board Direction on the decision on its website (http://www.pleanala.ie).

This information is normally made available on the list of decided cases on the website on the Wednesday following the week in which the decision is made.

The attachment contains information in relation to challenges to the validity of a decision of An Bord Pleanála under the provisions of the Planning and Development Act, 2000, as amended.

If you have any queries in relation to the matter please contact the undersigned officer of the Board. Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,

Eimear Reilly
Executive Officer
Direct Line: 01-8737184

ED10

Teil Tel (01) 858 8100
Glao Áitiúil LoCall 1800 275 175
Facs Fax (01) 872 2684
Láithreán Gréasáin Website www.pleanala.ie
Ríomhphost Email bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

Teil	**Tel**	(01) 858 8100
Glao Áitiúil	**LoCall**	1800 275 175
Facs	**Fax**	(01) 872 2684
Láithreán Gréasáin	**Website**	www.pleanala.ie
Ríomhphost	**Email**	bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

An Bord Pleanála

Board Order
ABP-315259-22

Planning and Development Acts, 2000 to 2021

Planning Authority: Limerick City and County Council

Application by Limerick City and County Council requesting An Bord Pleanála to exercise its powers under article 250(3)(a) of the Planning and Development Regulations, 2001, as amended, whether Limerick City and County Council should be directed to prepare a Natura Impact Statement in respect of the Bloodmill Road Extension Scheme, Towlerton, Ballysimon, County Limerick.

Decision

Direct the local authority to prepare a Natura Impact Statement in respect of the proposed development, based on the reasons and considerations set out below.

Reasons and Considerations

Having regard to:

(a) the nature and scale of the proposed development,

(b) the location of the proposed development and the separation distance from the Lower River Shannon Special Area of Conservation (Site Code: 002165),

(c) the existence of a hydrological connection from the proposed development site to the Lower River Shannon Special Area of Conservation (Site Code: 002165),

(d) the nature of the qualifying interests, some of which may be located along the section of the River Shannon in closest proximity to the proposed development,

(e) the submission made by the local authority, including the Preliminary Screening Report for Appropriate Assessment Screening received by the Board on the 1st day of December, 2022, and

(f) the report and recommendation of the Inspector,

it is considered reasonable to conclude that on the basis of the information available, which is considered adequate to issue a screening determination, that it cannot be ruled out that the proposed development, either individually or in combination with other plans or projects, would not be likely to have a significant effect on a number of the qualifying interests associated with the Lower River Shannon Special Area of Conservation (Site Code: 002165) in view of the conservation objectives of these sites and that a Stage 2 appropriate assessment and the submission of a Natura Impact Statement for the proposed development is, therefore, required.

Peter Mullan

Peter Mullan
Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.

Dated this 19th **day of** June, **2023**

An Bord Pleanála

Judicial Review Notice

Judicial review of An Bord Pleanála decisions under the provisions of the Planning and Development Acts (as amended).

A person wishing to challenge the validity of a Board decision may do so by way of judicial review only. Sections 50, 50A and 50B of the Planning and Development Act 2000, as amended, contain provisions in relation to challenges to the validity of a decision of the Board.

The validity of a decision taken by the Board may only be questioned by making an application for judicial review under Order 84 of The Rules of the Superior Courts (S.I. No. 15 of 1986). Sub-section 50(6) of the Planning and Development Act 2000 requires that any application for leave to apply for judicial review must be made within 8 weeks of the date of the decision of the Board, save for decisions made pursuant to a function transferred to the Board under Part XIV of the Planning and Development Act 2000, where any application for leave to apply for judicial review must, as set out in sub-section 50(7), be made within 8 weeks beginning on the date on which notice of the decision of the Board was first sent (or as may be the requirement under the relevant enactment, functions under which are transferred to the Board, was first published). These time periods are subject to any extension which may be allowed by the High Court in accordance with sub-section 50(8).

Section 50A(3) states that leave for judicial review shall not be granted unless the Court is satisfied that (a) there are substantial grounds for contending that the decision is invalid or ought to be quashed and (b) the applicant has a sufficient interest in the matter which is the subject of the application or in cases involving environmental impact assessment is a body complying with specified criteria.

Section 50B contains provisions in relation to the costs of certain judicial review proceedings in the High Court; pursuant to Section 50B(1), Section 50B applies to the following proceedings:

(a) proceedings in the High Court by way of judicial review, or of seeking leave to apply for judicial review, of—
(i) any decision or purported decision made or purportedly made,
(ii) any action taken or purportedly taken,
(iii) any failure to take any action, pursuant to a statutory provision that gives effect to
I. a provision of the EIA Directive 85/337/EEC as amended to which Article 10a (as inserted by Directive 2003/35/EC) of that Directive applies,
II. the SEA Directive 2001/42/EC, or
III. a provision of the IPPC Directive 2008/1/EC to which Article 16 of that Directive applies, or
IV. Article 6(3) or 6(4) of the Habitats Directive; or

(b) an appeal (including an appeal by way of case stated) to the Supreme Court from a decision of the High Court in a proceeding referred to in paragraph (a);

(c) proceedings in the High Court or the Supreme Court for interim or interlocutory relief in relation to a proceeding referred to in paragraph (a) or (b).

The general provision contained in section 50B(2) is that in proceedings to which the section applies each party shall bear its own costs. The Court however may award costs against any party in specified circumstances. There is also provision for the Court to award the costs of proceedings or a portion of such costs to an applicant, to the extent that the applicant succeeds in obtaining relief, against a respondent or notice party, or both, to the extent that the action or omission of the respondent or notice party contributed to the relief being obtained.

General information on judicial review procedures is contained on www.citizeninformation.ie

Disclaimer: The above is intended for information purposes. It does not purport to be a legally binding interpretation of the relevant provisions and it would be advisable for persons contemplating legal action to seek legal advice.

An Bord Pleanála

Fógra faoi Athbhreithniú Breithiúnach

Athbhreithniú breithiúnach ar chinntí an Bhoird Pleanála faoi fhorálacha na nAchtanna um Pleanáil agus Forbairt (arna leasú).

Ní fhéadfaidh duine ar mian leis nó léi agóid a dhéanamh in aghaidh bhailíocht chinneadh de chuid an Bhoird é sin a dhéanamh ach trí athbhreithniú breithiúnach. Tá forálacha in Alt 50, 50A agus 50B den Acht um Pleanáil agus Forbairt 2000, arna leasú, maidir le dúshláin i leith bhailíocht chinneadh an Bhoird.

Ní féidir bailíocht cinnidh arna ghlacadh ag an mBord a cheistiú ach amháin trí iarratas a dhéanamh ar athbhreithniú breithiúnach faoi Ordú 84 de Rialacha na nUaschúirteanna (S.I. Uimh. 15 de 1986). Ceanglaíonn fo-alt 50(6) den Acht um Pleanáil agus Forbairt 2000 go gcaithfear aon iarratas ar chead chun iarratas a dhéanamh ar athbhreithniú breithiúnach a dhéanamh laistigh de 8 seachtaine ó dháta chinneadh an Bhoird, seachas cinntí a dhéantar de bhun feidhme aistrithe chuig an mBord faoi Chuid XIV den Acht um Pleanáil agus Forbairt 2000, i gcás nach mór aon iarratas ar chead chun iarratas a dhéanamh ar athbhreithniú breithiúnach, mar atá leagtha amach i bhfo-alt 50(7), a dhéanamh laistigh de 8 seachtaine ag tosú ar an dáta ar ar tugadh fógra faoi chinneadh an Bhoird ar dtús (nó mar a cheanglófar faoin achtú ábhartha, ar aistríodh feidhmeanna faoi chuig an mBord, a foilsíodh den chéad uair). Tá na tréimhsí ama seo faoi réir aon síneadh a fhéadfaidh an Ard-Chúirt a cheadú de réir fho-alt 50(8).

Sonraítear in alt 50A(3) nach ndeonófar cead d'athbhreithniú breithiúnach mura bhfuil an Chúirt sásta (a) go bhfuil forais shubstaintiúla ann chun a áitiú go bhfuil an cinneadh neamhbhailí nó gur chóir é a chur ar neamhní agus (b) go bhfuil leas leordhóthanach ag an iarratasóir san ábhar is ábhar don iarratas nó i gcásanna a bhaineann le measúnú tionchair timpeallachta ar comhlacht é a chomhlíonann critéir shonraithe.

Tá forálacha in alt 50B maidir le costais imeachtaí athbhreithnithe bhreithiúnaigh áirithe san Ard-Chúirt; de bhun Alt 50B(1), tá feidhm ag alt 50B maidir leis na himeachtaí seo a leanas:

(a) imeachtaí san Ard-Chúirt mar athbhreithniú breithiúnach, nó trí chead a lorg chun iarratas a dhéanamh ar athbhreithniú breithiúnach, ar—
(i) aon chinneadh nó cinneadh airbheartaithe a rinneadh nó a airbheartaítear a rinneadh,
(ii) aon ghníomh a rinneadh nó a airbheartaítear a rinneadh,
(iii) aon mhainneachtain aon ghníomh a dhéanamh, de bhun forála reachtúla a thugann éifeacht

I. d'fhoráil de Threoir EIA 85/337/CEE arna leasú lena mbaineann Airteagal 10a (arna cur isteach le Treoir 2003/35/CE) den Treoir sin,
II. do Threoir SEA 2001/42/CE, nó
III. d'fhoráil de Threoir IPPC 2008/1/CE a bhfuil feidhm ag Airteagal 16 den Treoir sin maidir léi, nó
IV. d'Airteagal 6(3) nó 6(4) den Treoir maidir le Gnáthóga; nó

(b) achomharc (lena n-áirítear achomharc de chás ráite) chun na Cúirte Uachtaraí i gcoinne breithe ón Ard-Chúirt in imeacht dá dtagraítear i mír (a);

(c) imeachtaí san Ard-Chúirt nó sa Chúirt Uachtarach le haghaidh faoisimh eatramhach nó idirbhreitheach i ndáil le himeacht dá dtagraítear i mír (a) nó (b).

Is í an fhoráil ghinearálta atá in alt 50B(2) ná go n-íocfaidh gach páirtí in imeachtaí lena mbaineann an t-alt a chostais féin. Féadfaidh an Chúirt, áfach, costais a dhámhachtain in aghaidh aon pháirtí in imthosca sonraithe. Tá foráil ann freisin go ndéanfaidh an Chúirt costais imeachtaí nó cuid de chostais den sórt sin a dhámhachtain d'iarratasóir, a mhéid a éiríonn leis an iarratasóir faoiseamh a fháil, i gcoinne freagróra nó páirtí fógra, nó an dá cheann, a mhéid a chuir an chaingean nó an t-easnamh ar thaobh an fhreagróra nó an pháirtí fógra go páirteach leis an bhfaoiseamh atá á fháil.

Tá eolas ginearálta ar nósanna imeachta athbhreithnithe bhreithiúnaigh ar fáil anseo a leanas, www.citizensinformation.ie.

Séanadh: Mar eolas atá an méid thuas ceaptha. Ní airbheartaíonn sé a bheith ina léirmhíniú ceangailteach ó thaobh dlí ar na forálacha ábhartha agus bheadh sé inmholta do dhaoine atá ag smaoineamh ar chaingean dlí comhairle dlí a lorg.