



Golf Links Road Upgrade  
Castletroy, Limerick

Screening Report for Appropriate  
Assessment

Doherty Environmental Consultants Ltd.

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# Golf Links Road Upgrade

Castletroy, Limerick

## Screening Report for Appropriate Assessment

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Final	1	Pat Doherty MSc, MCIEEM

For and on behalf of  
  
Doherty Environmental Consultants  
Ltd  
  
Prepared By: Pat Doherty

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## 1.0 INTRODUCTION

Limerick City & County Council have commissioned Doherty Environmental Consultants (DEC) Ltd. to complete a Stage 1 Screening Report for Appropriate Assessment for the development of proposed upgrade works to the Golf Links Road, Castletroy, Limerick (see Figure 1.1 for project location).

This Screening Report for Appropriate Assessment forms Stage 1 of the Habitats Directive Assessment process and is being undertaken in order to comply with the requirements of the Habitats Directive Article 6(3). The function of this Screening Report is to identify the potential for the project to result in likely significant effects to European Sites and to provide information so that the competent authority can determine whether a Stage 2 Appropriate Assessment is required for the project.

### 1.1 LEGISLATIVE CONTEXT

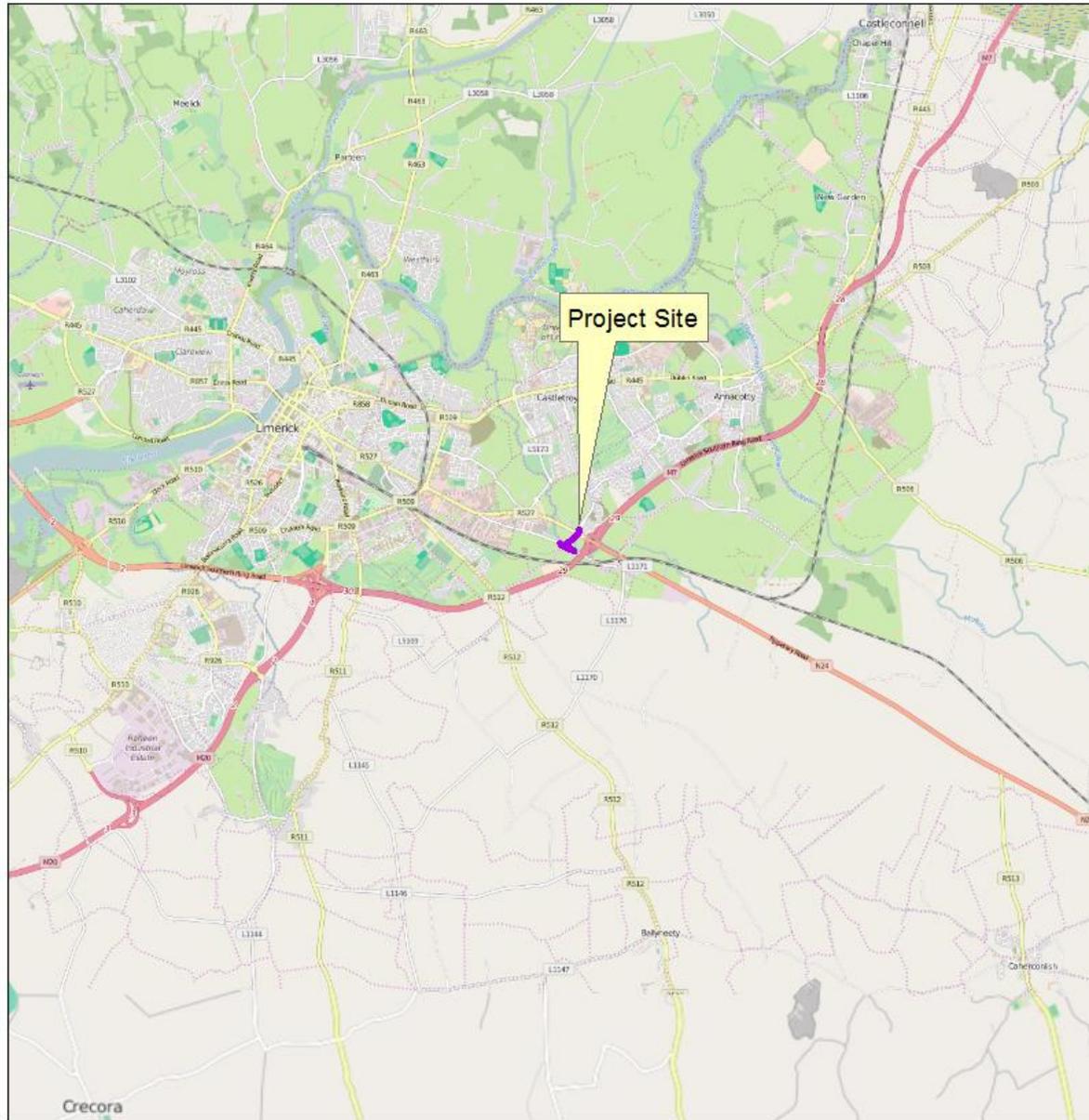
This Screening Report for Appropriate Assessment is being prepared in order to enable the competent authority to comply with Article 6(3) of Council Directive 92/43/EEC (The Habitats Directive). It is prepared to assess whether or not the project alone or in combination with other plans and projects is likely to have a significant effect on any European Site in view of best scientific knowledge and in view of the conservation objectives of the European Sites and specifically on the habitats and species for which the sites have been designated. <sup>[1]</sup><sub>[SEP]</sub>

#### 1.1.1 Requirement for an Assessment under Article 6 of the Habitats Directive <sup>[1]</sup><sub>[SEP]</sub>

According to Regulation 42(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 – 2015, the competent Authority has a duty to:

- Determine whether the proposed Project is directly connected to or necessary for the management of one of more European Sites; and, if not, <sup>[1]</sup><sub>[SEP]</sub>
- Determine if the Project, either individually or in combination with other plans or projects, would be likely to have a significant effect on the European Site(s) in view of best scientific knowledge and the Conservation Objectives of the site(s).

This Report contains a Screening for Appropriate Assessment and is intended to examine and address all issues regarding the construction and operation of the Project and to inform and allow the competent authority to comply with the Habitats Directive. Article 6(3) of the Habitats Directive defines the requirements for assessment of projects and plans for which likely significant effects on European Sites may arise. <sup>[L]</sup>~~[SEP]~~The European Communities (Birds and Natural Habitats) Regulations, 2011 – 2015 (the Habitats Regulations) transpose into Irish law Directive 2009/147/EC (the Birds Directive) and Council Directive 92/43/EEC (the Habitats Directive) lists habitats and species that are of international importance for conservation and require protection. The Habitats legislation requires competent authorities, to carry out a Screening for Appropriate Assessment of plans and projects that, alone or in combination with other plans or projects, would be likely to have significant effects on European Sites in view of best scientific knowledge and the Site’s conservation objectives. This requirement is transposed into Irish Law by Part 5 of the Habitats Regulations and Part XAB of the Planning and Development Act, 2000 (as amended).

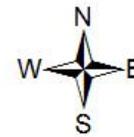


## Golf Links Road Upgrade

Figure 1.1  
 Project Site Location

 Project Site

0 0.5 1 2 Km



Drawn By	PD
Date	04/03/2019
Data Source	OSM

## 2.0 SCREENING METHOD

The function of the Screening exercise is to identify whether or not the proposal will have a likely significant effect on European Sites. In this context “likely” refers to the presence of doubt with regard to the absence of significant effects (ECJ case C-127/02) and “significant” means not trivial or inconsequential but an effect that has the potential to undermine the site’s conservation objectives (English Nature, 1999; ECJ case C-127/02 &). In other words any effect that compromises the conservation objectives for the site would constitute a significant effect.

The nature of the likely interactions between the project and the conservation objectives of European Sites will depend upon the sensitivity of the sites qualifying features of interest to potential impacts arising from the project; the current conservation status of the European Sites and its qualifying features of interest; and any likely changes to key environmental indicators (e.g. habitat structure; vegetation community) that underpin the conservation status of the site and its associated qualifying features of interest, in combination with other plans and projects.

This Screening exercise has been undertaken with reference to respective National and European guidance documents: *Appropriate Assessment of Plans and Projects in Ireland (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* and relevant European and National case law. The following guidance documents were also of relevance during this Screening Assessment:

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

The EC (2001) guidelines outline the stages involved in undertaking a Screening exercise of a project that has the potential to have likely significant effects on European Sites. The methodology adopted for this Screening exercise is informed by these guidelines and was undertaken in the following stages:

1. Describe the project and determine whether it is necessary for the conservation management of European Sites;

2. Identify European Sites likely to be influenced by the project;
3. Screen the project against established assessment criteria to determine if it has the potential to affect European Sites; and
4. Identify other plans or projects that, in combination with the project, have the potential to affect European Sites.

### **3.0 PROJECT DESCRIPTION**

#### **3.1 PROJECT AIM**

The Golf Links Road (L1116) is a local county primary road within the Limerick City urban boundary in the south eastern city suburb of Ballysimon. It is an arterial urban distributor road that links the R445 Dublin Road from the Milford Road traffic signals in Castletroy, running south and then west towards Ballysimon, where it passes under the R527 Ballysimon Road, near the M7/N24 Ballysimon Interchange, and forms a cross roads with the L1171 Old Ballysimon Road at O'Shea's Pub, overall a distance of 2.3km. The northern section of Golf Links Road from the Dublin Road to the Evanwood area is fit for purpose as an urban distributor road, but the southern section from Evanwood to O'Shea's junction is substandard with pinch points at Ballysimon Bridge and at the Mill Race where only one car can pass between the bridge parapet walls, with road widths of only 3.3m and 3.7m respectively.

The aim of this project is to upgrade the section of L1116 between O'Shea's Junction, including the junction and the L1171 south eastern approach, to the Cairnsfort housing estate, north of the R527/N24 underpass. The L1116 is an important link between the residential areas of Castletroy/Monaleen/Newtown/Annacotty and the employment/retail hub of Ballysimon. The purpose of these upgrades is to provide a suitable road arrangement to accommodate existing and future pedestrian, cycle and vehicular traffic accessing the Golf Links Road from the Ballysimon and Castletroy areas. This will be achieved through road widening, road realignment, bridge replacement, junction upgrade to traffic signal control, upgrade of existing footways and creation of new pedestrian and cycle links and where necessary through land acquisition. This project, while including junction and road upgrades, will have a significant focus on active travel modes, namely the provision of safe walking and cycling facilities. The area is also subject to river flooding in the vicinity of the Ballysimon Bridge of the Groody River and it is the intention that the existing bridge would be replaced by a new structure that can cope with a 100 year design flood return period.

### **3.2 OVERVIEW OF THE PROJECT**

The work extents are from the Golf Links Road (L1116) junction with the Old Ballysimon Road (L1171) to the entrance to Cairnsfort housing estate – approximately 350m along the L1116 and also extending 300m from the L1171/L1116 Junction south-eastwards along the L1171 Old Ballysimon Road. It is proposed to signalise the Golf Links Road/Old Ballysimon Road junction and to create a new gateway and transition zone from the rural to the urban environment on the L1171 approach to the cross roads.

The road works scheme is to consist of the widening of the Golf Links Road into the adjoining private lands to the west of the existing road, providing a safer public road environment for all road users. The Old Ballysimon Road will be widened into lands to the south of the L1171 on the eastern approach to the Golf Links Road junction to create the new transition zone. The works will require the realignment and widening of the existing roads, the replacement of the existing bridge over the River Groody and the old millrace culvert on Golf Links Road, some Groody river flood prevention works, installation of traffic signals at the realigned junction, installation of new street lighting, the diversion of services, installation of new services and drainage works, road and footpath construction works, road resurfacing, new road markings and traffic signage as well as accommodation works to private properties with new boundary treatments.

### **3.3 DESCRIPTION OF WORKS**

The works will include road realignment, road widening, bridge replacement, mill race culvert replacement, signalisation of the L1171/L1116 junction at O’Shea’s, road reconstruction and resurfacing, new footpath construction, new cycle facility construction, services diversions and new ducting for gas, power supply, telecommunications, watermain replacement, new surface water drainage system, new road lighting scheme, new boundary treatments, retaining walls, embankments, flood prevention walls and bunds, accommodation works driveways, walls, gates and fences, new landscaping, traffic calming measures including new “gateway” entry to city, roadside buildouts and road centre traffic islands, designated roadside car parking, new road markings, upgraded road signage and street furniture and all ancillary works necessary for completion of the scheme. Figure 3.1 provides an aerial view of the project site boundary. Detailed drawings for the proposed upgrade works are provided in the Part VIII Planning Drawing Pack.

The new bridge culvert that will replace the existing bridge has been designed to cater for a storm event with a 100-year Return Period flow. The dimensions of the new bridge aperture to accommodate these flows will be twin pre-cast concrete (PCC) box culverts 3m width x 2.4m in height (including associated freeboards and river bed material) laid side by side in the main river channel and an additional set of twin PCC box culverts 2.1m width x 2.4m in height (including associated freeboards and river bed material) in the flood channel to the south of the main river channel. The overall length of the culverted river will be 22m.

A concrete apron forms the river bed upstream, under and downstream of the bridge. As part of the river culverting works the concrete apron will be removed and a new concrete apron will be constructed under the bridge inlet wing walls upstream and outlet wing walls downstream of the bridge. This apron will be 500mm underneath the river bed. The river bed will be restored to a natural bed over the concrete aprons and over the box culvert floors. A low level weir wall will be constructed upstream of the bridge culvert so that normal river flows are taken through the normal river channel and flood flows will spill over the weir into the flood culverts to the south of the main channel. The works have been designed to ensure adequate low flow depths within the watercourse are maintained at all times so that fish and other lotic fauna can be sustained. Minor bank reinforcing of the river banksides will also be completed downstream of the bridge so that banksides and the riparian zone are protected and also so that heterogeneity in river habitat is provided. The reinforced sections of bankside will slope gently from the river bed at an angle of less than 45°. Natural stone will be used for re-profiling and such re-profiling sections will alternate between both banksides within 45m downstream of the bridge. Planting of the bankside with shrubs will also be undertaken. The removal of the concrete apron and the reinstatement of a natural river bed are in keeping with the aims of the Water Frameworks Directive which seeks to maintain natural morphological conditions within and along watercourses.

An untreated point source discharge is located immediately adjacent to the upstream elevation of the bridge and as part of the works it is proposed to eliminate this discharge and instead connect it to the existing public foul sewer.

As part of the design all storm water generated on the upgraded road surface will be collected in road side drainage gulleys and conveyed in a new surface water drainage pipe network. All road gullies will have silt traps for collection of debris. The drainage pipe network will pass through a large silt trap chamber and a hydrocarbon interceptor chamber before discharging the treated

surface water runoff to the Groody River. The provision of the new drainage system will represent a positive development for road drainage and the water quality of the River Groody and its provision is in keeping with the aim of the Water Frameworks Directive to achieve good status for surface watercourses.

### **3.4 APPROACH TO BRIDGE REPLACEMENT AND INSTREAM WORKS**

The existing triple eye stone masonry arch bridge is to be demolished and replaced by four rectangular precast concrete culverts laid contiguously. The L1116 Golf Links Road will be closed for the bridge replacement section of the works. The Ballysimon Bridge has three separate stone masonry arches, two of which are dry and unused. The two unused arches south of the river will be demolished, excavated and replaced by twin box culverts in advance of the main river bridge replacement works. The demolition of the main, live, arch will require construction of cofferdams and dewatering of the bridge arch barrel by diversion of the river through the new twin culverts to the south so that works can be carried out in dry conditions. Once the demolition works and ground preparatory works are completed the replacement culverts will be lifted into position and placed. The backfill and surrounding fill will be completed to formation level of the road. Once the newly placed culvert joints are dried and cured, the river will be rediverted through the completed main channel twin culverts. Using this approach there will be continual flow along the Groody River at all times during the bridge replacement works. All cofferdams, or other structures 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 River Groody.
- 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.

### **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 (crawler track machines)
- Rubber-tyred Excavators, 6 tonne JCB
- 3 tonne Mini Diggers
- 30 tonne Dump Trucks
- 40 tonne Mobile Crane
- 300 tonne Heavy Crane
- 6 tonne 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 (4x4 wheel short base and vans)
- Compactor plates
- 1 tonne hand roller

- 6 tonne vibrating Rollers
- 10 tonne dead weight rollers
- Blawknex Paving Machine
- Bitumen Boiler/Hot Box
- Oil Tanker/Sprayer
- Road Planing Machine
- Extruded Kerb Laying Machine
- Road Saws/Con Saws/chain saws
- Bark Mulchers
- Air Compressors
- Jack Hammers
- Stihl Saws
- Small tools/hand tools
- Traffic Management Signs, Cones & Barriers
- Herras Fencing
- Mobile 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, galvanised, 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 with up to 40 for a limited period of weeks during particularly labour intensive operations. 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 10 months.

### **3.8 CONSTRUCTION COMPOUND**

The construction compound will be restricted to the footprint of an existing brownfield yard used for the storage of construction materials. This yard is located offsite and well buffered i.e. a minimum of 100m) from the River Groody and any other watercourses.



### Golf Links Road Upgrade

Figure 3.1

Aerial View of the Project Site

 Project Site

0 0.0150.03 0.06 Km



Drawn By	PD
Date	04/03/2019
Data Source	OSM

## 3.9 BASELINE ECOLOGY AT THE PROJECT SITE

### 3.9.1 Habitats

The following habitats, as categorised in Fossit (2000) occur at and adjacent to the project site:

Building and Artificial Surfaces (BL3): this habitat dominates the land cover within the project site boundary. It is comprised of the existing Golf Links Road, The Old Ballysimmon Road, residential driveways, housing, commercial buildings and laybys.

Freshwater Depositing River (FW2): the Groody River flowing under the Golf Links Road is an example of a lowland, depositing watercourse. The River Groody and the associated old mill race represent the principal semi-natural habitat within and adjacent to the project site. Further baseline information for the river is provided in Section 3.9.3 below.

Eroding Watercourse (FW1): The old mill race flowing under the Golf Links Road is an example of an eroding watercourse.

Improved agricultural grassland (GA1): this habitat occurs to the south of the Old Ballysimmon Road and to the west of the Golf Links Road and is comprised of species-poor and intensively managed grassland. Grazing by horses and cattle is undertaken in the fields to the west of the project site.

Scrub (WS2): this habitat occurs along the riparian corridor of the River Groody upstream and downstream of the Golf Links Road. It is comprised of *Prunus spinosa*, *Crataegus monogyna* and *Ulex europaeus*.

Hedgerows and Treelines (WL1 & WL2): Hedgerows in the form of amenity landscape planting in residential gardens and along the boundary of agricultural fields occur along sections of the Golf Links Road. These are interspersed with some mature trees that are generally dominated by *Fraxinus excelsior*. A treeline dominates the southern boundary of the Old Ballysimmon Road. This treeline is dominated by mature *Fraxinus excelsior* trees.

### **3.9.2 Fauna**

A search for the presence of otters along the River Groody and the old mill race was completed during a field visit to the site in late February and May 2019. The section of the river upstream and downstream of the Golf Links Road was inspected for field signs, such as holts, couches, spraints, footprints etc. indicating the presence of otters. No such field signs were encountered during the survey.

A mink was observed during the survey on the right-hand bankside of the River Groody immediately downstream of the bridge.

No evidence of other protected ground dwelling mammals such as badger was observed during the field surveys.

The bridge was searched for the crevices with potential to support roosting bats. The bridge has been subject to previous maintenance works with repointing noted throughout the arch barrel. Crevices within the arch barrel are limited and these also have limited potential to support roosting bats. No bats were identified as roosting within the bridge during inspection surveys in May 2019.

Commonly occurring passerine and corvid bird species were observed during the field visit. Species observed include robin, wren, bluetit, chaffinch, pigeon, hooded crow and rook. Grey wagtail was also noted foraging along the river.

### **3.9.3 River Groody**

The River Groody is a direct tributary of the River Shannon and the confluence of these rivers is located approximately 3.4km downstream of the project site. Environmental Protection Agency (EPA) monitoring of the River Groody upstream of the project site has classified this watercourse 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 recent 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 bridge location the river bed is characterised by an artificial concrete apron that runs upstream and downstream of the existing bridge. The Mulkear WMU has identified pressures to the morphology of this section of the River Groody and the presence of the concrete apron is considered to contribute to these morphological pressures. Its removal as part of the project will have the potential to represent a long-term positive impact for the morphology of the river. The river bed beyond the concrete apron consists of a gravel and stone bed with some boulders also occurring. Silt was noted along the stretch of the channel upstream and downstream of the bridge during site surveys in February and May 2019.

### **3.10 IS THE PROJECT DIRECTLY CONNECTED WITH OR NECESSARY FOR THE CONSERVATION MANAGEMENT OF EUROPEAN SITES**

Given the description of the proposed project in Section 3.1 above it is clear that the project is not directly connected with or necessary for the management of any European Sites.

## **4.0 IDENTIFY EUROPEAN SITES LIKELY TO BE INFLUENCED BY THE PROJECT**

Current guidance on undertaking EU Habitats Directive Article 6 Assessments advises that all European Sites occurring within a 15km radius of a project site should be included within a Screening Assessment (Scott Wilson et al., 2006; DOEHLG, 2010). The guidelines go on to state that for certain projects this distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects.

Given that the footprint of the proposed road upgrade will be small in scale and will be restricted to a small area of largely existing carriageway within the River Groody catchment, it is considered that only those European Sites occurring downstream of the project site are likely to occur in the zone of influence of the project.

Two European Site occur downstream of the project site. These are the Lower River Shannon SAC (Site Code: 002165) and the River Shannon and River Fergus Estuaries SPA (004070). All other European Sites are located at a remote distance from the project site (see Figure 4.1 and Figure 4.2, the closest being approximately 12km from the project site) and are not connected to the project site via any impact pathways. The distance between the project site and the absence of impact pathways connecting the project site to these other European Sites ensures that they are located outside the zone of influence of the project.

Therefore the remainder of this Screening focuses on examining the potential for the project to result in likely significant effects to the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.

### **4.1 SHANNON EUROPEAN SITES FEATURES OF INTEREST**

#### **4.1.1 Lower River Shannon SAC**

The qualifying features of interest of the Lower River Shannon SAC are listed in Table 4.1 below. In Table 4.1 these features of interest are grouped into broad habitat classifications and a comment on their occurrence within the Shannon Estuary is also provided.

**Table 4.1: Qualifying Features Of Interest of the Lower River Shannon SAC**

Qualifying feature of interest	Broad Habitat Classification and Location
Sandbanks which are slightly covered by sea water all the time [1110]	Marine habitat located in the out Shannon Estuary.
Estuaries [1130]	Marine and coastal habitat located in the outer to inner estuary.
Mudflats and sandflats not covered by seawater at low tide [1140]	Coastal habitat located in the outer to inner estuary.
Coastal lagoons [1150]	Coastal habitat located in the outer and middle estuary.
Large shallow inlets and bays [1160]	Marine habitat located in the outer estuary.
Reefs [1170]	Marine habitat located in the outer estuary.
Perennial vegetation of stony banks [1220]	Coastal habitat located in the outer estuary.
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	Coastal habitat located in the outer estuary.
Salicornia and other annuals colonising mud and sand [1310]	Coastal habitat located in the outer to inner estuary as east as the Maigne estuary.
Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritima</i> ) [1330]	Coastal habitat located in the outer to inner estuary as east as the Maigne estuary.
Mediterranean salt meadows ( <i>Juncetalia</i>	Coastal habitat located in the outer to inner estuary as

Qualifying feature of interest	Broad Habitat Classification and Location
maritimi) [1410]	east as the Mague estuary.
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	Freshwater and tidal watercourse habitat located along the Park Canal and the inner Shannon Estuary downstream of Limerick City.
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]	Terrestrial habitat located adjacent to freshwater sections of the River Shannon upstream of Limerick City, with noteworthy examples occurring near Castleconnel.
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	Freshwater habitat located upstream of the Mulkear confluence with the River Shannon and along the Mulkear catchment.
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	Freshwater species, restricted to the Cloon sub-River catchment on the northern side of the estuary
Petromyzon marinus (Sea Lamprey) [1095]	Freshwater and tidal sections of the River Shannon.
Lampetra planeri (Brook Lamprey) [1096]	Freshwater and tidal sections of the River Shannon.
Lampetra fluviatilis (River Lamprey) [1099]	Freshwater and tidal sections of the River Shannon.
Salmo salar (Salmon) [1106]	Freshwater and tidal sections of the River Shannon.
Tursiops truncatus (Common Bottlenose Dolphin) [1349]	Restricted to the outer and middle Shannon Estuary.

Qualifying feature of interest	Broad Habitat Classification and Location
Lutra lutra (Otter) [1355]	Freshwater and tidal sections of the River Shannon.

#### 4.1.2 River Shannon and River Fergus Estuaries SPA

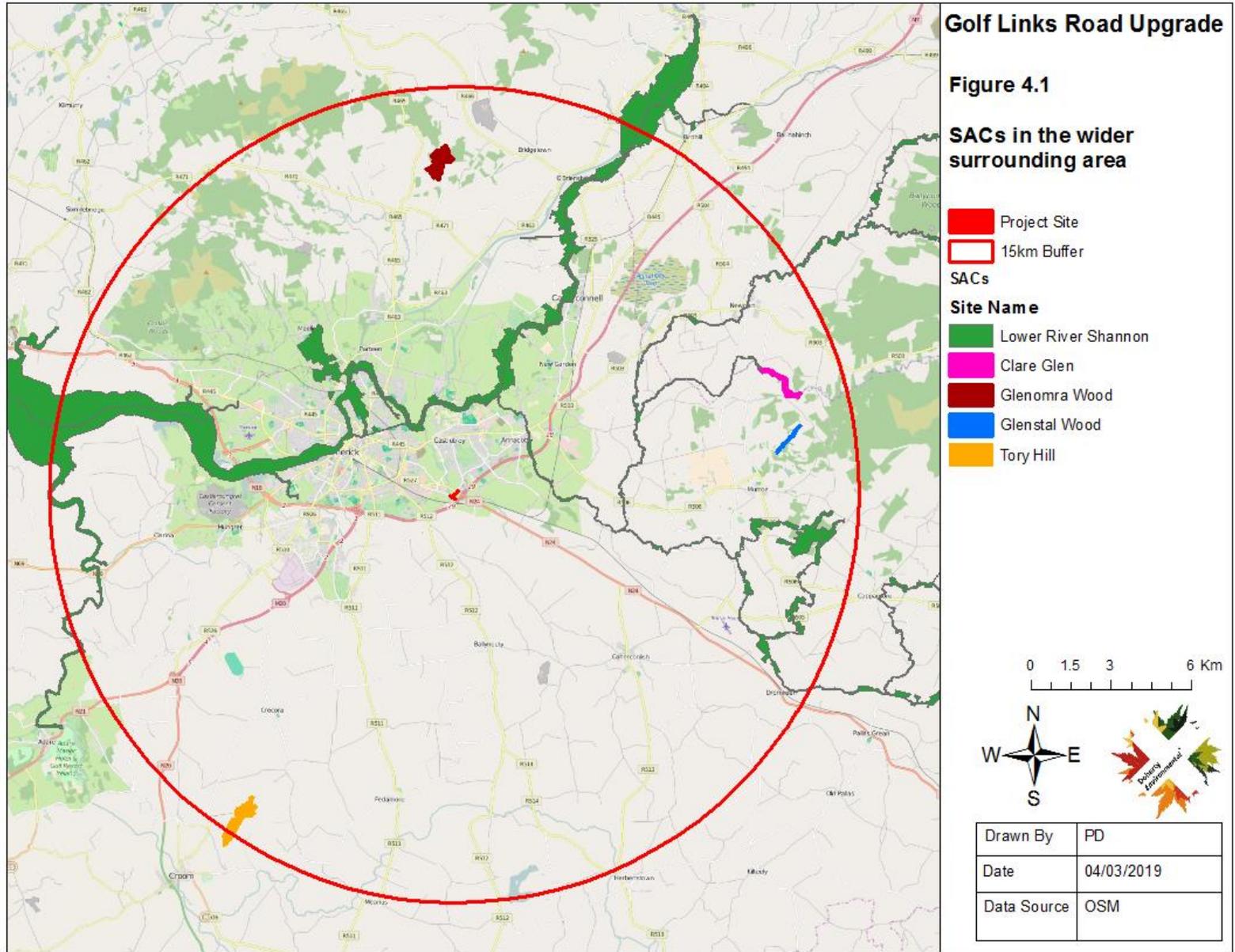
The special conservation interests of the River Shannon and River Fergus Estuaries SPA are as follows:

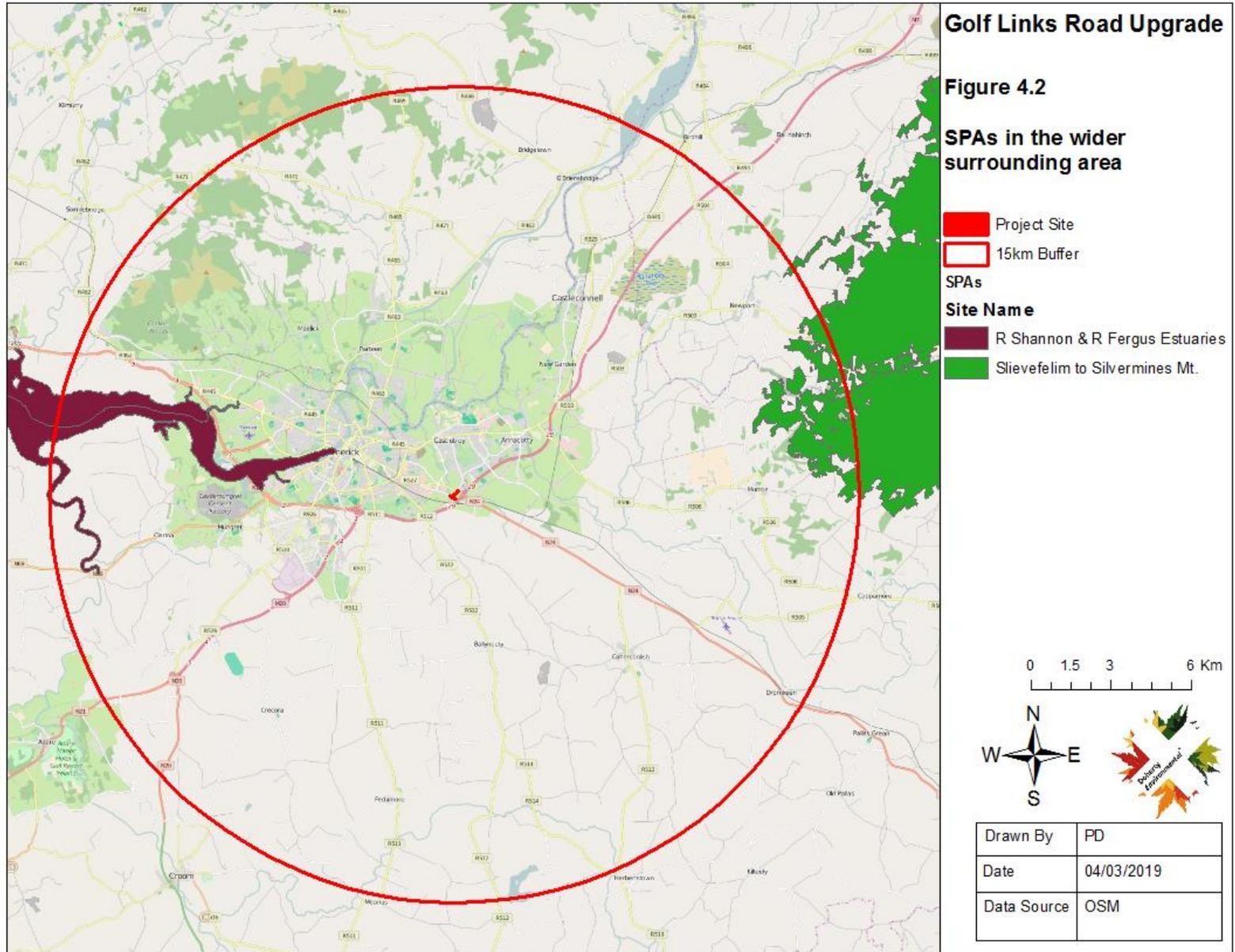
**Table 4.2: Special Conservation Interests of the River Shannon and River Fergus Estuaries SPA**

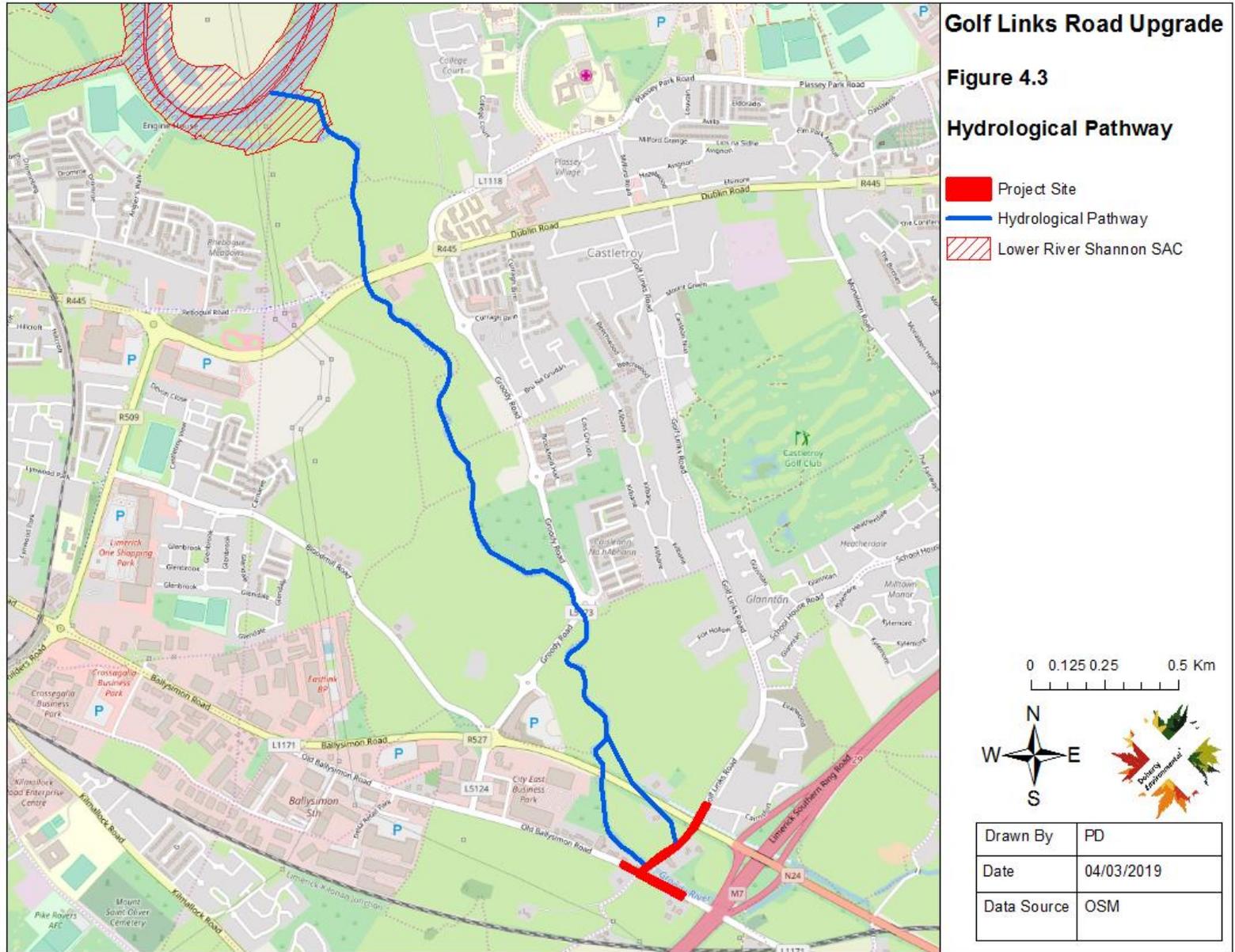
Cormorant (Phalacrocorax carbo) [A017]	Shoveler (Anas clypeata) [A056]	Dunlin (Calidris alpina) [A149]
Whooper Swan (Cygnus cygnus) [A038]	Scaup (Aythya marila) [A062]	Black-tailed Godwit (Limosa limosa) [A156]
Light-bellied Brent Goose (Branta bernicla hrota) [A046]	Ringed Plover (Charadrius hiaticula) [A137]	Bar-tailed Godwit (Limosa lapponica) [A157]
Shelduck (Tadorna tadorna) [A048]	Golden Plover (Pluvialis apricaria) [A140]	Curlew (Numenius arquata) [A160]
Wigeon (Anas penelope) [A050]	Grey Plover (Pluvialis squatarola) [A141]	Redshank (Tringa totanus) [A162]
Teal (Anas crecca) [A052]	Lapwing (Vanellus vanellus)	Greenshank (Tringa)

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	[A142]	nebularia) [A164]
Pintail ( <i>Anas acuta</i> ) [A054]	Knot ( <i>Calidris canutus</i> ) [A143]	Dunlin ( <i>Calidris alpina</i> ) [A149]
Black-headed Gull ( <i>Chroicocephalus ridibundus</i> ) [A179]	Wetland and Waterbirds [A999]	







## 5.0 ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Given that the project is not located within or adjoining the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA it will not have the potential to result in direct impacts in the form of physical habitat loss, degradation or disturbance to these European Sites. Thus this Screening Report examines the potential for the project to result in likely significant effects to these European Sites by investigating whether the project is linked to these European Sites via pathways and whether these pathways have the potential to function as impact pathways.

A source-pathway-receptor model has been used to establish the potential for the project to result in impacts to the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA via impact pathways. Under such a model the project, as described in Section 3 of this Screening Report, represents the source.

Potential impact pathways relate to potential emissions from the project; the potential for pathways to convey such emissions; and the potential for such emissions to result in negative effects downstream of the project site at the SAC and the SPA. Given that the project site is located at a remote distance from the nearest point of the Lower River Shannon SAC, the only possible impact pathway that could convey emissions from the project site to this SAC or the River Shannon and River Fergus Estuaries SPA is the hydrological pathway, represented by the River Groody.

The receptors represent European Sites and their associated features of interest (i.e. qualifying features of interest of the SAC and special conservation interests of the SPA).

European Sites and their associated features of interest are only likely to be at risk from the project where the project has the potential to result in emissions that have the potential, alone or in-combination with other projects, to undermine the Conservation Objectives of features of interest of the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.

An assessment of the River Groody's potential to function as an "effective" impact pathway is discussed in the following section.

## **5.1 ASSESSMENT OF THE HYDROLOGICAL PATHWAY TO FUNCTION AS AN IMPACT PATHWAY**

During the upgrade of the Golf Links Road the primary contaminants of concern are hydrocarbons, cementitious materials and suspended solids. There is very limited potential for accidental hydrocarbon and cementitious contamination of the River Groody or the old mill race during the upgrade works as any required bulk storage of fuels and cement materials will be within the construction compound that will be located over 25m from either of these watercourses. As such the only potential leakage of hydrocarbons along the corridor or works is a single construction vehicle leak i.e. maximum 200 litres. It is noted that only construction vehicles that are free of fuel and oil leaks and weeps will be used during the construction phase of the project. Notwithstanding this in the event of any hydrocarbon contaminated run-off entering the River Groody or the old mill race it will become quickly diluted downstream. Based on the flow and shallow gradient downstream of the project site along this watercourse natural degradation of such hydrocarbon inputs will occur within the River Groody prior to its confluence with the River Shannon. It is further noted that the waters of the River Groody discharging to the River Shannon represent a minor volume of the overall waters within the main channel of the Shannon. The River Groody represents less than 3% of the volume within the River Shannon at the confluence of both rivers. As such any waters discharging from the River Groody to the tidal sections of the River Shannon downstream will be well mixed and assimilated within the River Shannon.

There will be no potential for cementitious materials to result in pollution of the River Groody and the old mill race. All cement-based structures required for the replacement of the existing bridge of the River Groody and the replacement of the old mill race culvert will be precast and cured prior to installation on site. There will be no mixing of cement in the vicinity of the river or the old mill race.

As outlined in Section 3.4 above all works associated with the removal of the existing bridge structure, the culvert along the old mill race and the concrete apron within the River Groody channel will be undertaken in dry conditions. Dry conditions are required for the safe and effective upgrade of the existing bridge structure. Such works will be completed during low flow conditions during the summer months and outside the closed season for instream works (i.e. October to April inclusive). River flows will be maintained by providing a temporary

realignment of the watercourse while all works to the channel are being completed. The provision of the temporary realignment will eliminate the potential for any works within the project footprint to interact with the River Groody and result in negative impacts to water quality downstream of the project site.

In light of the above the potential for a change in water quality downstream within the River Groody, the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA as a result of an accidental emission during the upgrade works be imperceptible and will not have the potential to result in likely significant effects the qualifying features of interest of the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA.

Mobile freshwater species are listed as qualifying species for the Lower River Shannon SAC. The qualifying species of the SAC that are likely to occur within the River Groody are lamprey species, Atlantic Salmon and otters. It is noted that no evidence of otters was identified within the vicinity of the project site during field surveys. Given the details outlined in the preceding paragraphs above the project will not have the potential to undermine the Conservation Objectives for the populations of these species occurring within the SAC downstream. For instance the connectivity of the freshwater sections of the SAC will not be undermined by the project; the availability of suitable habitat for juvenile lamprey species and Atlantic Salmon within the SAC will not be undermined; the availability of a suitable prey resources for otters within the SAC will not be undermined; and the water quality within the SAC will not be undermined.

The River Shannon and River Fergus Estuaries SPA is located at a remote distance downstream of the project site and is also situated within the estuarine and tidal sections of the River Shannon. No suitable habitat for the wetland bird species that are listed as special conservation interests for this SPA occurs in the vicinity of the project or downstream along the River Groody and there will be no potential for the project or any potential emissions to the River Groody to result in negative effects to these species.

It is also noted that as part of the proposed upgrade works new pipework, along with silt and hydrocarbon interceptors will be installed. The installation of these elements will aim to improve the quality of runoff from the road to the River Groody. This will represent a positive

development for the River Groody and is in keeping with the aims of the Water Frameworks Directive.

In light of the assessment provided above it is considered that the hydrological pathway between the project site and the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA further downstream, that is established by the River Groody, will not have the potential to function as an impact pathway that could convey emissions downstream to these European Sites and result in likely significant effects to their Conservation Objectives.

## 5.2 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 and the River Shannon and River Fergus Estuaries SPA. A search was completed for all recent projects within the last five years along the River Groody upstream and downstream of the project site. A small number of projects were identified. All of these projects are small in scale and involve the construction of residential dwellings, the extension to existing residential dwellings and the retention of structures within the curtilage of residential dwellings. None of these projects will have the potential to combine with the proposed project to result in likely significant effects to the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA.

## 5.3 SCREENING MATRIX

A Screening Matrix, in line with European Commission (2001) guidelines is provided below in Table 4.2.

**Table 5.1: Screening Matrix for proposed project.**

Brief description of the project or plan	The project and associated activities are described in Section 3 above.
Brief description of the European Sites	The European Sites occurring in the wider surrounding area are identified and briefly described in Section 4 above.

<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the European Sites.</p>	<p>The elements of the project that could, in theory, give rise to potential effects to the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA relate to the emission of potentially polluting substances to the River Groody arising from the project activities and their conveyance downstream to the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA. An examination of the potential for the River Groody to function as an impact pathway has been provided in Section 5 above and it has found that any emission of potentially polluting material to this watercourses will be apparent only within a short section of this river downstream of the project site and will be degraded, diluted and assimilated within the river prior to its confluence with the River Shannon and the Lower River Shannon SAC. In light of this finding it is considered that the potential for the emission of a limited quantity of potentially polluting substances to the River Groody will not have the potential to give rise to impacts to the Lower River Shannon SAC, the River Shannon and River Fergus Estuaries SPA and their associated Conservation Objectives. Furthermore it is noted that the risk of such polluting material being discharged to the River Groody will be low given that all instream works will be completed in dry conditions, that stores of potentially polluting materials will be stored in the site compound at a remote distance from the river, and that no cement will be mixed and cured in the vicinity of the river.</p>
<p>Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the European Sites site by virtue of:</p>	<p>The project is representative of a small scale project that involves the upgrade of an existing road way.          A small area of land take of improved</p>

<ul style="list-style-type: none"> <li>• size and scale;</li> <li>• land-take;</li> <li>• distance from the Natura 2000 site or key features of the site;</li> <li>• resource requirements (water abstraction etc.);</li> <li>• emissions (disposal to land, water or air);</li> <li>• excavation requirements;</li> <li>• transportation requirements;</li> <li>• duration of construction, operation, decommissioning, etc.;</li> </ul>	<p>agricultural grassland will be required to facilitate the project. The land take associated with the project will be remote from any European Sites. There will be no land take within any European Sites.</p> <p>The project is located at a remote distance from the nearest European Site, which is the Lower River Shannon SAC. This is located approximately 2.7km to the north or 3.4km downstream of the project site.</p> <p>The project will not require any resources that are associated with or relied upon by a European Site and its associated features of interest.</p> <p>The potential for the project to result in emissions to the River Groody and their implications for the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA have been examined in Section 5 of this report and it has been found that the project will not, even in the event of the emission of a limited quantity of potentially polluting materials to the River Groody, have the potential to result in likely significant effects to the Conservation Objectives of the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.</p> <p>The project will not result in any appreciable changes to existing traffic volumes during the upgrade works.</p> <p>The upgrades works will be completed over a short term period of approximately 9 months.</p>
<p>Describe any likely changes to the site arising as a result of:</p> <ul style="list-style-type: none"> <li>• reduction of habitat area;</li> <li>• disturbance to key species;</li> <li>• habitat or species fragmentation;</li> </ul>	<p>The project will not have the potential to result in the reduction in any habitat area within the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA and will not have the potential to result in any habitat area</p>

<ul style="list-style-type: none"> <li>• reduction in species density;</li> <li>• changes in key indicators of conservation value</li> <li>• (water quality etc.);</li> <li>• climate change.</li> </ul>	<p>upon which mobile species of these European Sites rely.</p> <p>The project will not have the potential to result in disturbance to qualifying species of the SAC that could undermine the Conservation Objectives for these species.</p> <p>The project will not result in any species or habitat fragmentation within the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.</p> <p>The project will not have the potential to result in any changes in water quality within the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA. Any changes in water quality within the River Groody as a result of the project will be of a localised and short term nature and will not have the potential to undermine the baseline status of this river to support qualifying species of the Lower River Shannon SAC, outside the boundary of this SAC. Any short term or localised perturbations to water quality in the River Groody will not represent a significant effect to the conservation status of populations of lamprey species, Atlantic Salmon and otters occurring in the wider surrounding area.</p> <p>The project will have the potential for positive implications for climate change by providing infrastructure for alternative modes of transport such as walking and cycling that do not rely on vehicular transportation. The upgrade works also aims to eliminate bottlenecks along the existing Golf Links Road, which will have the potential to decrease overall vehicular emissions.</p> <p>Upon completion the project will have the potential to result in positive implications for instream habitats and freshwater species</p>
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	including Atlantic Salmon by removing the existing concrete apron from the river bed and restoring natural stream conditions within the river. These implications are in keeping within the aims of the Water Framework Directive.
Describe any likely impacts on the European Sites site as a whole in terms of: interference with the key relationships that define the structure of the site; interference with key relationships that define the function of the site	For reasons set out above the project will not have the potential to interfere with key relationships that define the structure and function of European Sites.
Provide indicators of significance as a result of the identification of effects set out above in terms of: <ul style="list-style-type: none"> <li>• loss;</li> <li>• fragmentation;</li> <li>• disruption;</li> <li>• disturbance;</li> <li>• change to key elements of the site (e.g. water quality etc.).</li> </ul>	For reasons set out above the project will not have the potential to result in such effects to European Sites.
Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	The project will not have the potential to result in likely significant effects to European Sites.

## **6.0 SCREENING STATEMENT CONCLUSION: FINDING OF NO SIGNIFICANT EFFECTS**

During the preparation of this Screening Report of the proposed project it was found that two European Sites occur within the zone of influence of the project. These European Sites are the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.

The River Groody was identified as the only potential impact pathway connecting the project site to these two European Sites. A key part of this Screening has been the examination of the potential for the River Groody to function as an impact pathway and convey potential emissions, that may arise as a result of the upgrade works, downstream to the Lower River Shannon SAC and River Shannon and River Fergus Estuaries SPA. This examination has found that the potential for the emission of polluting substances to the River Groody will be restricted to suspended solids and small quantities of hydrocarbons. It is considered that any input of such emissions to the River Groody will be degraded, diluted and/or assimilated within this watercourse prior to entering the River Shannon and the associated SAC and will not have the potential to undermine the water quality status of the River Shannon.

This Screening Report has found that due to the the absence of a functional impact pathway between the project site and the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA there will be no potential for the proposed upgrade works to result in likely significant effects to the Conservation Objectives of these European Sites.

In light of the findings of this report it is the considered view of the authors of this Screening Report for Appropriate Assessment that it can be concluded by Limerick City and County Council that the project is not likely, alone or in-combination with other plans or projects, to have a significant effect on any European Sites in view of their Conservation Objectives and on the basis of best scientific practice and there is no reasonable scientific doubt as to that conclusion.

## 7.0 REFERENCES

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