

Limerick City & County Council

EUs Habitats Directive 92/43/EEC Article 6(3) Planning and Development Act 2000 (as amended)

Proposed Development: N21 Abbeyfeale Road Scheme

Proposal for the development of:

Roads

- 6.6km of Type 2 Divided Road (Protected Road), bypassing Abbeyfeale, with start and end roundabout junctions with the existing N21. In addition, there is a further 1.0km of realignment of the existing N21 at the West and East roundabout junction tie-ins; and
- 2.2km of single-carriageway regional and local road realignment and accesses;
- 0.5km of Single Carriageway Local Road realignment; and
- 3.5km of Accommodation Access Tracks.

Junctions

- Two at-grade roundabout type junctions, providing access points at each end of the Proposed Project.

Structures

- Six overbridges (for side roads and landowner access);
- One underbridge (for the L7091);
- Two culverts (watercourse crossings); and
- Two underpasses (for farm accommodation works).

Active Travel Provisions

- 6.6km of shared-use two-way active travel track; and
- 1.5km of shared-use two-way active travel connections from the local road network to the active travel provision.

Other Works

- Drainage works in accordance with sustainable drainage design principles and guidance;
- The treatment of surface water run-off before outfall discharge, spill containment measures and attenuation treatment facilities;
- Alterations to medium and low voltage electricity lines;
- Diversion of existing services and utilities including overhead and underground electricity lines, watermains and communication cables;
- The earthworks for the Proposed Project will involve the excavation of approximately 850,000m³ of soil. This material will undergo limited processing for potential reuse as construction fill, while unsuitable or soft material will be re-deposited on-site for use in landscaping works or in a dedicated material deposition area;

- Due to the steep topography of the site and the presence of a high groundwater table, achieving an earthworks balance within the lands to be acquired is not feasible. The scheme requires 720,000m³ of suitable fill material to complete the earthworks for the scheme, most of which will be site-won with some import required. The scheme will have a surplus of 225,000m³ of material, which will be deposited on site in a series of dedicated material deposition areas;
- Construction of farm access tracks with accommodation works ancillary to the Proposed Project;
- Provision of landscape planting, signage, lighting and other works ancillary to the construction and operation of the Proposed Project; and
- The acquisition of three dwelling houses for the construction of the Proposed Project.

Location: Commencing at the existing N21 carriageway at Kilconlea Lower and extending south of Abbeyfeale through Kilconlea Upper, Abbeyfeale West, Abbeyfeale East, Dromtrasna Collins, and tying into the existing N21 carriageway at Dromtrasna Hartnett, east of Abbeyfeale.

Appropriate Assessment (AA) Screening Determination

Pursuant to the requirements of the above, Limerick City & County Council is proposing a 6.6km long Transport Infrastructure Ireland (TII) Type 2 Divided Road along the N21 Limerick to Tralee Road bypassing Abbeyfeale in County Limerick.

Having regard to Article 6 of the Habitats Directive 92/43/EEC, Part XAB of the Planning and Development Acts 2000 (as amended), and the Department of Housing, Local Government and Heritage's 2009 guidance document "*Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*", screening of the development for Appropriate Assessment was carried out by Jacobs Engineering on behalf of Limerick City and County Council for the proposed N21 Abbeyfeale Road Scheme.

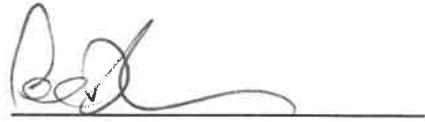
Following this assessment, Limerick City and County Council, as the Competent Authority for AA screening, has determined that potential pathways for significant effects on European sites cannot be ruled out. Therefore, a full Appropriate Assessment is required to assess whether the proposed scheme could adversely affect the integrity of the following Natura 2000 sites, having regard to their conservation objectives:

- Lower River Shannon SAC
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA

For Natura Impact Statements, An Coimisiún Pleanála is the Competent Authority and will carry out a Stage 2 Appropriate Assessment of the proposed scheme. To support this, a Natura Impact Statement (NIS) will be prepared and submitted as part of the statutory planning process.

The rationale for this determination is detailed in the AA Screening Report accompanying this statement.

Order: That Limerick City & County Council as the competent authority having considered the AA Screening Report prepared by Jacobs Engineering makes a determination that, when considered either alone or in combination with other plans or projects, a Stage 2 Appropriate Assessment will be required to accompany the proposal for the development of the a 6.6km long Transport Infrastructure Ireland (TII) Type 2 Divided Road along the N21 Limerick to Tralee Road bypassing Abbeyfeale in County Limerick.



JOE DELANEY

DIRECTOR GENERAL

Date: 27th August 2026

Oifig Dearadh Bóthar
Náisiúnta an Mheáin Iarthair
Comhairle Cathrach & Contae Luimnigh

Teach Lios an Fhálaigh,
Tuar an Daill, Luimneach.



Mid West
National Road Design Office
Limerick City & County Council

Lissanalta House, Dooradoyle Road,
Dooradoyle, Limerick, V94 H5RR.

Our Ref: 0141_07_00021

24th August 2026

**MR JOE DELANEY
DIRECTOR GENERAL**

**RE: N21 ABBEYFEALE ROAD SCHEME
APPROPRIATE ASSESSMENT SCREENING DETERMINATION**

Dear Director General

The N21 Abbeyfeale Road Scheme proposes 6.7km of Type 2 Divided Road (Protected Road), bypassing Abbeyfeale, with start and terminal roundabout junctions with the existing N21 and other associated works as described in the enclosed documentation.

Having reviewed and considered information on the proposed project, Jacobs Engineering has undertaken an Appropriate Assessment (AA) Screening on behalf of Limerick City and County Council and enclosed is a copy of the report, report reference N21-JAC-EIA-AFB-RP-P3-0005 D03.

Based on the objective scientific information in the attached report, significant effects on a European site cannot be ruled out. Consequently, Limerick City and County Council, as the Competent Authority for AA screening, is in a position to determine that an Appropriate Assessment Stage 2 is required in respect of the proposed project.

Therefore, a full Stage 2 Appropriate Assessment is required to assess whether the proposed scheme could adversely affect the integrity of Natura 2000 sites, having regard to their conservation objectives.

For Natura Impact Statements, An Coimisiún Pleanála is the Competent Authority and will carry out a Stage 2 Appropriate Assessment of the proposed scheme. To support this, a Natura Impact Statement (NIS) will be prepared and submitted as part of the statutory planning process.



Telephone: 061 - 951000

Mid West National Road Design Office is a collaboration of
Limerick City & County Council and Tipperary County
Council



Comhairle Cathrach
& Contae Luimnigh
Limerick City
& County Council



Comhairle Contae Thiobraid Árann
Tipperary County Council



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Tionscnaimh paitníreachtas is ea Oifig Dearadh Bóthar Náisiúnta an Mheáin Iarthair
idir Chomhairle Cathrach & Contae Luimnigh agus Chomhairle Contae Thiobraid
Árann

Continued from previous page

Our Ref: 0141_07_00021

24th August 2026

**MR JOE DELANEY
DIRECTOR GENERAL**

**RE: N21 ABBEYFEALE ROAD PROJECT
APPROPRIATE ASSESSMENT SCREENING DETERMINATION**

I attach an Appropriate Assessment Screening Determination for signing and await your approval.

Notification of this determination shall be made available to the public on the N21 Abbeyfeale Road Scheme project website (www.N21abbeyfeale.ie) and on the Limerick City and County Council website in accordance with the regulations.

SIGNED:



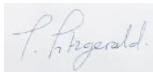
**DEIRDRE CLARKE
SENIOR EXECUTIVE ENGINEER**

To/ Joe Delaney

Director General

I agree with the above recommendation.

RECOMMENDED:



**TIM FITZGERALD
SENIOR ENGINEER**

ENDORSED:



**PATRICIA LIDDY
DIRECTOR OF SERVICES
TRANSPORTATION, MOBILITY & PUBLIC REALM**

APPROVED:



**JOE DELANEY
DIRECTOR GENERAL**

Encl.



Tionscadal Éireann
Project Ireland
2040



An Roinn Iompair
Department of Transport



Cornhairle Cathrach
& Contae **Luimnigh**
Limerick City
& County Council



Mid West
National Road Design Office

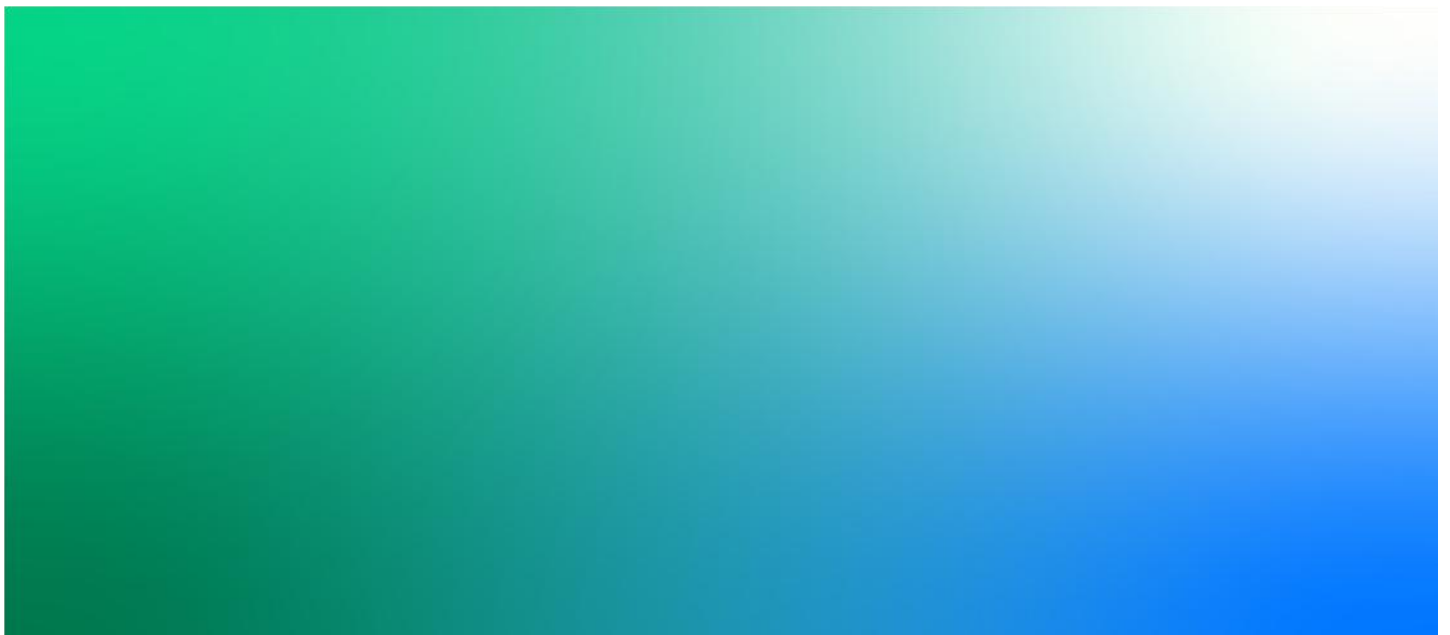
Jacobs

N21 Abbeyfeale Road Scheme **APPROPRIATE ASSESSMENT (AA) SCREENING REPORT**

N21-JAC-EIA-AFB-RP-P3-0005 | D03

August 2026

Limerick City and County Council



N21 Abbeyfeale Road Scheme

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Glossary of Terminology, Abbreviations and Acronyms

Term, Abbreviation or Acronym	Description
AA	Appropriate Assessment
AESI	Adverse Effect on Site Integrity
CBS	Common Bird Census
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Conservation Objectives
cSAC	Candidate Special Area of Conservation
DoT	Department of Transport
DHLGH	Department Of Housing, Local Government and Heritage
DoEHLG	Department Of Environment, Heritage and Local Government
EC	European Commission
EcIA	Ecological Impact Assessment
ECJ	European Court of Justice
eDNA	Environmental DNA
EEA	European Environment Agency
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
GPS	Global Positioning System
HRA	Habitats Regulations Appraisals/Assessment
IAS	Invasive Alien Species
IFI	Inland Fisheries Ireland
IROPI	Imperative Reasons of Overriding Public Interest
LCCC	Limerick City and County Council
LSE	Likely Significant Effect
NBDC	National Biodiversity Data Centre
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
OPR	Office of The Planning Regulator
QI	Qualifying Interest
SAC	Special Area of Conservation
SPA	Special Protection Area
SWMP	Surface Water Management Plan
TII	Transport Infrastructure Ireland
WFD	Water Framework Directive

Term, Abbreviation or Acronym	Description
Zol	Zone of Influence

Executive Summary

Limerick City and County Council (LCCC) are seeking approval for the N21 Abbeyfeale Road Scheme (hereafter referred to as the Proposed Project) under Section 51 of the Roads Act, 1993 (as amended).

The Proposed Project will provide a bypass of Abbeyfeale to the south of the town and is approximately 6.6km in length. The bypass will comprise a Type 2 Divided Road cross section. This type of road has two traffic lanes in each direction separated by a narrow central reservation (Median) with a vehicle restraint barrier. There will be 0.5m wide hard strips on the outer edges of the carriageway, but no hard shoulders. A dedicated shared use active travel facility, with a defined separation distance, in accordance with TII Design standards is also included as part of the Proposed Project. At-grade roundabouts are proposed at each tie in with the existing N21.

The extent of the Proposed Project is presented in Figure 1, Appendix A of this report.

This Appropriate Assessment (AA) Screening Report has been prepared as part of the planning application for the Proposed Project and approval is also sought by An Coimisiún Pleanála in accordance with the provisions of Part XAB of the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended).

The purpose of this AA Screening Report is to identify whether the Proposed Project, either acting individually or in-combination with other plans or projects would result in Likely Significant Effects (LSEs) on the Qualifying Interests (QIs) of any European Sites. All potential impact pathways from activities associated with the Proposed Project on QIs of European Sites were considered.

Following this assessment, the following potential impact pathways were identified in regard to the Lower River Shannon Special Area of Conservation (SAC) and Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle Special Protection Area (SPA) and have been screened in for LSE:

- Lower River Shannon SAC
 - Mortality:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Habitat degradation – changes in water quality:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic Salmon
 - Otter
 - Habitat degradation – changes in hydrology/hydrogeology:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter

- Physical disturbance:
 - o Sea lamprey
 - o Brook lamprey
 - o River lamprey
 - o Atlantic salmon
 - o Otter
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA
 - Mortality
 - o Hen harrier
 - Physical disturbance
 - o Hen harrier

As such, an AA is required to determine whether the Proposed Project will adversely affect the integrity of the Lower River Shannon SAC and Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA in view of their Conservation Objectives. This will be documented in a Natura Impact Statement (NIS) which will be submitted at planning to enable the Competent Authority to undertake an AA in respect of the Proposed Project.

1. Introduction

1.1 Background

Limerick City and County Council (LCCC) are seeking approval for the N21 Abbeyfeale Road Scheme (hereafter referred to as the Proposed Project) under Section 51 of the Roads Act, 1993 (as amended).

The Proposed Project will provide 6.6km of TII Type 2 Divided Road along the N21 Limerick to Tralee Road bypassing Abbeyfeale in County Limerick.

The Proposed Project is set mainly within agricultural land, but also in proximity to rural residential properties, commercial and agricultural businesses. The Proposed Project comprises of several river crossings and underpasses and / or overbridges for existing infrastructure (i.e. regional and local roads) and private land accesses.

The extent of the Proposed Project is presented in Figure 1, Appendix A of this report.

1.2 Purpose and Structure of this Report

In the context of Article 6(3) of the Habitats Directive and Section 177U(1) of Planning and Development Act 2000 (as amended), An Coimisiún Pleanála as the competent authority must carry out Screening for Appropriate Assessment (AA) of the Proposed Project to assess whether, on the basis of objective scientific information, the Proposed Project, individually or in-combination with other plans or projects, is likely to have a significant effect on the conservation objectives (CO) of any European sites. This report presents the information required for the competent authority to undertake Screening for AA for the Proposed Project.

The structure of the report is as follows:

- Section 1: Introduction (including legislative context and the authors experience).
- Section 2: Description of Proposed Project
- Section 3: Methodology
- Section 4: Identification of Relevant European sites
- Section 5: Baseline Characterisation
- Section 6: Assessment of Likely Significant Effects.
- Section 7: Assessment of In-combination Effects.
- Section 8: Screening Statement and Conclusion
- Section 9: References
- Appendix A: Figure 1

This report is to be read in full, with no excerpts to be representative of the findings. This report has been prepared exclusively for Jacobs' client and no liability is accepted for any use or reliance on the report by third parties. This report has been prepared on the basis of best scientific knowledge and data made available at the time of writing. Where assumptions have been necessary, these are clearly outlined.

1.3 Legislative Context for Appropriate Assessment

Habitats and species of European importance are provided legal protection under Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (hereafter referred to as the Habitats Directive) and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (hereafter referred to as the Birds Directive). The Habitats Directive protects habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as

the Natura 2000 network (hereafter referred to as European sites¹). European sites comprise Special Areas of Conservation (SACs²) and Special Protection Areas (SPAs).

The Habitats Directive has been transposed by the Planning and Development Act, 2000 (as amended) now being replaced by the Planning and Development Act, 2024 as amended, and S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011 (hereafter referred to as the Birds and Habitats Regulations). Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites.

Article 6(3) establishes the requirement for AA:

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

Article 6(4) states:

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

The Habitats Directive was transposed into Irish law from a planning perspective through Part XAB of the Planning and Development Act 2000 (as amended). The circumstances under which an Appropriate Assessment (AA) is required, the stages of that assessment which must be undertaken and the responsibilities of the Competent Authority in considering whether or not to approve consent for proposed plans or projects are outlined in the Act.

Part 5 of the Bird and Natural Habitat Regulations 2011, Article 42.(1) establishes the requirement for AA:

'A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the Conservation Objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European Site'.

Section 177U(1) of the Planning and Development Act, 2000 states that:

"A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site."

Where likely significant effects upon a European site are predicted, or cannot be ruled out beyond reasonable scientific doubt, it is the responsibility of the Competent Authority, in this case An Coimisiún Pleanála (ACP), to undertake an AA under Article 6(3) of the Habitats Directive, informed through an Natura Impact Statement (NIS), to determine

¹ The term Natura 2000 network was replaced by 'European Site' under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011.

² Candidate SAC (cSAC) are afforded the same protection as SACs. The process of making cSAC into SACs by means of Statutory instrument has begun and while the process is ongoing the term SAC will be used to conform with nomenclature used in the National Parks and Wildlife Services (NPWS) databased.

whether or not the proposed plan in combination with any other plan or project would adversely affect the integrity of a European site in light of its Conservation Objectives (CO).

Section 177T(1) states that:

"(a) A Natura impact report means a statement for the purposes of Article 6 of the Habitats Directive, of the implications of a Land use plan, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

(b) A Natura impact statement means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites."

Section 177T(2) states that:

"Without prejudice to the generality of subsection (1), a Natura impact report or a Natura impact statement, as the case may be, shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites."

1.4 Case Law

A number of cases have been brought to both the national and European courts in relation to the AA process. Therefore, relevant case law, European Court of Justice (ECJ) rulings and EC publications have also been considered in the preparation of this AA Screening Report for the Proposed Project.

1.5 Stages in Appropriate Assessment

The AA process comprises a number of stages where the outcome at each successive stage determines whether a further stage in the process is required.

The purpose of Screening (Stage 1) is to identify whether, activities associated with plans or projects³, either acting individually or in-combination with other plans or projects result in likely significant effects (LSEs) on any European sites. All potential impact pathways between activities associated with the plans or projects and the QIs of European sites must be considered. This includes potential effects on mobile species, notably birds, mammals, invertebrates and migratory fish that may use functionally linked land outside the boundaries of European sites.

At Screening, the burden of evidence is to show, on the basis of objective information, and beyond reasonable scientific doubt, that the proposed plan or project will have no LSEs on a European Site. If LSEs cannot be excluded, or there is uncertainty, it would trigger the need for AA (Stage 2). An overview of the AA process is outlined below:

- **Stage 1 Screening:** Screening determines whether an AA is required by determining if the project or plan is likely to have a significant effect on any European site(s) either individually or in-combination with other plans or projects, in light of the site's CO. Under Section 177T(4) of the Planning and Development Act, 2000 ("the PDA 2000") it is open to the Council to submit an NIS with its application for consent for proposed development as defined by Section 177R of Part XAB of the PDA 2000 or An Coimisiún Pleanála can direct the submission of same;
- **Stage 2 Appropriate Assessment:** If the Screening has determined that AA is required, the competent authority then considers the effects of the project or plan on the integrity of the European site(s), specifically it must be determined if the project or plan will adversely affect the integrity of a European site(s) either individually or in-combination with other plans and projects in view of the COs for the sites. Where potential adverse effects on site integrity (AESI) are identified, mitigation measures are proposed to avoid adverse effects, as appropriate. For projects, the AA process is documented within a Natura Impact Statement (NIS).

³ For the purposes of this assessment the Proposed Project is considered a type of project.

Following AA, including mitigation proposals, if AESI remain, or uncertainty remains and the project/plan is to be progressed, an Assessment of Alternative Solutions is required under the provisions of Article 6(4) of the Habitats Directive. This process examines the alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. If no alternatives exist, or all alternatives would result in adverse effects on the integrity of a European site, then if the project/plan is to be progressed the process moves to the next stage, or the project is abandoned. Where an Assessment of Alternative Solutions fails to identify any suitable alternatives, then for a project or plan to be progressed it must demonstrate that there are imperative reasons of overriding public interest (IROPI). In this case the provisions of Article 6(3) cannot be met and therefore, the provisions of Article 6(4) are used. If, in light of an assessment of IROPI, it is deemed that the project or plan should proceed, compensatory measures must be secured to maintain the coherence of the European site network in the face of AESI

1.6 Statement of Authority

This report has been prepared by Philip Brown, checked and reviewed by Fran Tobin and Matt Pannell.

Philip Brown is an Ecologist and holds an MSc in Wildlife Conservation from the University of Chester. Philip has 4 years consultancy experience ranging from small domestic projects to large infrastructure projects in both the UK and Ireland. Philip has worked on wastewater, water, energy, urban infrastructure and highways and a variety of other projects as a graduate Ecologist.

Fran Tobin is a Chartered Ecologist and has over 10 years' experience in consultancy working on projects both in the UK and Ireland. Before this, Fran was involved in badger surveys and vaccination, as well as wildlife management and monitoring, for government agencies in England and Wales. Fran has worked on major infrastructure projects, particularly road schemes, as well as flood prevention schemes, bridge replacements and cycle networks. Fran's key skills and expertise lie in Ecological Impact Assessment (EcIA) and Habitats Regulations Appraisals/Assessment (HRA).

Matt Pannell is a Chartered Environmentalist and has over 20 years of experience of supporting major infrastructure projects in ecological assessment and construction phases. Matt's experience includes infrastructure projects for trunk roads, flood defence schemes and renewable energy. Matt co-ordinates the delivery of a team of 30+ ecologists across a wide range of projects including many projects that interact with European sites designated for Nature Conservation.

2. Description of Proposed Project and Site Characteristics

2.1 Overview of the Proposed Project

The Proposed Project is situated along the N21 Limerick to Tralee National Primary Route. This section of the N21 National Road forms part of a vital Strategic Corridor Link between the South-West and the Mid-West regions of Ireland. The transport corridor plays a significant role in international and regional connectivity, which in turn increases prosperity to the regions, including tourism and exports. Together with the N22 and N23 National Roads, the N21 also provides one of the main accesses from the north-west to the major tourism hub of Killarney.

The N21 forms part of the Comprehensive Road Network of TEN-T, which is a network of multi-modal strategic transport corridors identified to improve the mobility of goods and people throughout the European Union (EU).

In order to meet the future demands of the route in a safe and efficient manner (which are based on traffic forecasting and design standards) and enhance the urban realm environment within the town of Abbeyfeale, it is proposed to upgrade the existing N21 at Abbeyfeale by way of a TII Type 2 Divided Road by-pass to the south of the town.

The Proposed Project will provide 6.6 km of TII Type 2 Divided Road along the N21 Limerick to Tralee Road bypassing Abbeyfeale in County Limerick. This type of road has two traffic lanes in each direction separated by a narrow central reservation (Median) with a vehicle restraint barrier. There will be 0.5m wide hard strips on the outer edges of the carriageway, but no hard shoulders. A dedicated shared use active travel facility, with a defined separation distance, in accordance with TII Design standards is also included as part of the Proposed Project. At-grade roundabouts are proposed at each tie in with the existing N21.

The Proposed Project is considered to be of strategic economic importance at a regional level as it will improve connectivity between the South-West and the Mid-West regions of Ireland, however the Proposed Project is also considered important at a local level as it will assist with improving road safety, mobility, urban realm, air quality as well as other issues within the town of Abbeyfeale. The Proposed Project will contribute to the fulfilment of a number of the objectives identified in European and National transport policy documents and in the hierarchy of planning documents from the National Planning Framework (NPF) to Local Area Plan level.

2.2 Construction Phase: Temporary Works

Throughout the construction phase of the Proposed Project, material will need to be excavated and placed to construct the road alignments using excavators and haulage vehicles. Suitable haul routes have been identified to minimise impacts on stakeholders and the environment of moving the material. Construction activities will also include piling, ground investigations and implementation of utilities. These activities will require utilisation of heavy plant such as piling machines, hydraulic hammers, drill rigs, etc.

Surplus soil material generated through construction activities which is unsuitable for use in construction may be stored in six deposition areas identified as part of the Proposed Project. Separate areas will be used for temporary storage of topsoil to be used for landscaping within the boundary of the Proposed Project. Temporary fencing will also be implemented during the construction phase.

A construction compound area will be established near the southern extent of the Proposed Project, utilising an existing area of extensively used fields with bare ground. On completion of the permanent works, the construction compound will be removed, with any stone and/or asphalt areas within the compound excavated.

Construction work within and adjacent to watercourses will be required at locations where bridges and culverts are to be implemented, including such activities as bank alteration and the creation of structures.

2.2.1 Pollution Control Measures

A Surface Water Management Plan (SWMP) will be prepared as part of a wider Outline Construction Environmental Management Plan (CEMP) which will be produced for the Proposed Project. The SWMP will detail controls and management measures for avoiding, preventing, or reducing any significant adverse impacts on the surface water

environment during the construction phase of the Proposed Project. The measures within the SWMP are required for legal compliance irrespective of whether any European site may or may not be affected.

The SWMP will include the following measures:

- Construction drainage to manage the flow rate, volume and quality of surface water for discharge to the receiving environment would be implemented prior to any construction works taking place. Construction drainage where possible shall be attenuated, treated and discharged at or below green field runoff rates to the surface water environment. Discharge at greenfield runoff will mitigate changes in the volume of water within the system whilst still attenuating water when flow volumes are high;
- Installation of silt fencing in areas prone to increased surface water runoff and along drainage pathways, for example along areas of open cut trenching. These will undergo regular maintenance and checks to ensure silt fencing functions as intended;
- Location of soil storage would be planned as part of the CEMP and should not be located adjacent to or within 20m of watercourses. Where this is not possible to achieve, soil storage mounds should be bunded to prevent sediment laden runoff entering surface water features;
- Re-fuelling of plant where possible shall take place in an appropriate, bunded area, located more than 10m away from any watercourse or land drain. This installation would include an impervious base and, where possible, interceptor drains. Where this is not possible (i.e. for large plant that takes time to disassemble), best management practice will be employed whereby nominated and trained refuelling staff shall be utilised, adequate spill kits provided for the type and amount of fuel being used;
- All valves, hoses and associated equipment would be checked regularly to ensure there are not leaks or the potential for leaks to occur. If leaks are detected, then the equipment will be replaced with equipment that is in suitable condition; and
- All concrete pours will be carefully planned in a detailed method statement. Cementitious material will be stopped from entering watercourses, drainage ditches and ponded areas. Care will be taken when transporting cement on site and all vehicles used for this would be suitable for the amount to be carried.

2.2.2 Biosecurity Measures

During works a biosecurity strategy will be undertaken and implemented for the appropriate treatment of invasive, alien species (IAS). The strategy will set out appropriate construction, handling, treatment and disposal procedures to prevent the spread of IAS in line with recognised best practice. The biosecurity measures are required for legal compliance irrespective of whether any European site may or may not be affected.

2.3 Operational Phase: Permanent Works

Permanent works include the creation of the new road and associated access routes, installation of fencing, safety barriers, and road lighting. Structures such as culverts and bridges are planned to be incorporated along the Proposed Project at locations where the alignment crosses over watercourses.

The Proposed Project includes the management of surface water runoff and is being designed to minimise the impacts on the local water environment using features such as dedicated attenuation ditches and storage ponds incorporated into the design.

3. Methodology

3.1 Guidance Documents

This Screening for AA was undertaken following guidance from the Office of the Planning Regulator (OPR), 'Appropriate Assessment Screening for Development Management. OPR Practice Note PN01' (OPR 2021), but also taking cognisance of the following guidance:

- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities (Department of Environment, Heritage and Local Government (DoEHLG 2010);
- 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 (EC 2021);
- Communication from the Commission on the Precautionary Principle (EC 2000);
- Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission (EC 2007);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC 2013);
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC 2018); and
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC 2021).

3.2 Screening Methodology

Steps required for Screening include the following:

- Determination of whether a project or plan is directly connected with or necessary to the conservation management of any European sites⁴;
- Description of the details of the project/plan (including the site characteristics/plan area);
- Description of the characteristics of European sites that might be affected (i.e. identification of QIs and COs that could be affected as a result of progressing the project/plan;
- Assessment of LSEs on relevant European sites in view of the sites' COs, either individually or in-combination with other plans and projects; and
- Presentation of a screening assessment which should determine if the project/plan individually or in-combination with other plans and projects could undermine the COs of the site(s) and give rise to LSEs. The assessment of LSEs must be undertaken in the absence of mitigation measures.

3.3 Source-Pathway-Receptor Model and Zone of Influence

When assessing the Proposed Project, the 'source-pathway-receptor' model is applied taking consideration of all potential impact pathways connecting elements of the Proposed Project to European sites in view of their COs.

The source-pathway-receptor conceptual model is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means that there is no likelihood for the effect to occur (i.e. no potential for LSEs).

⁴ The Proposed Project is not directly connected with or necessary to the conservation management of any European sites.

The 'source-pathway-receptor' model is focused solely on the QIs for which European sites are designated as per the latest published COs as documented on the NPWS website⁵. Potential impact pathways assessed are:

- Habitat loss;
- Mortality;
- Habitat degradation – changes in water quality;
- Habitat degradation – changes in air quality;
- Habitat degradation – hydrological/hydrogeological changes;
- Habitat degradation – spread of invasive alien species (IAS); and
- Physical disturbance.

The Zone of Influence (Zoi) is the area over which impacts could occur to ecological features from the Proposed Project. The determination of a Zoi for a project is identified for each impact pathway as each pathway may have a different Zoi.

There is potential for LSE where the Zoi of a potential impact pathway overlaps a QI habitat or supporting/functionally linked habitat of QI species.

3.4 Desk-Based Data Review

The following key resources were analysed to inform the baseline description of the sites and surrounding environment:

- Aerial imagery (ESRI);
- Environmental Protection Agency (EPA) rivers and water quality data Water Framework Directive (WFD) status online at <https://gis.epa.ie/EPAMaps/> [accessed January 2024];
- Mapping of European Site boundaries available online at www.npws.ie [accessed January 2024];
- Protected species data from the National Biodiversity Data Centre online at <http://www.biodiversityireland.ie/> [accessed January 2024];
- NPWS (2019a). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill;
- NPWS (2019b). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill;
- NPWS (2019c). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data [accessed January 2024];
- Protected and invasive species data from the National Biodiversity Data Centre (NBDC) online at <http://www.biodiversityireland.ie/> [accessed January 2024];

⁵ <https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives>.

- Online web portal of Inland Fisheries Ireland (IFI) Inland Fisheries Ireland Data Hub (arcgis.com) [accessed January 2024]; and
- O'Connor W. (2006) A baseline survey of juvenile lamprey populations in the River Feale catchment. Irish Wildlife Manuals, No. 22. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

3.5 Site Surveys

3.5.1 Habitat Surveys

General habitat surveys were undertaken by experienced ecologists employed by Jacobs on the 23rd-27th May 2022, 13th-17th June and 4th-8th July 2022. At this time, habitats within the survey area (i.e. up to 250m from the Proposed Project) were mapped according to Heritage Council's habitat codes (Fossitt 2000) and in accordance with Best Practice Guidance for Habitat Survey and Mapping (Smith *et al.* 2011). Plant species present that were either representative of a habitat or considered to be of conservation interest were recorded, along with their relative abundances. The extents of habitats were recorded using a tablet mobile mapper with aerial imagery and GPS (Global Positioning System) location.

Habitats were also assessed for their potential to support QIs (Annex I habitats and Annex II species) associated with European sites. The assessment of species and habitats including IAS was undertaken in line with the following guidelines and informed this Screening for AA:

- A Guide to Habitats in Ireland. The Heritage Council (Fossitt 2000);
- Article 17 reports (NPWS 2019a, 2019b, and 2019c);
- CIEEM Good Practice Guidance for Habitats and Species (CIEEM 2021);
- CIEEM Guidelines for Preliminary Ecological Appraisal. Second Edition (CIEEM 2017);
- CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2018);
- National Roads Authority (NRA) Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (NRA 2010);
- Transport Infrastructure Ireland (TII) The Management of Invasive Alien Plant Species on National Roads, Standard (TII 2020a); and
- Transport Infrastructure Ireland (TII) The Management of Invasive Alien Plant Species on National Roads, Technical Guidance (TII 2020b).

3.5.2 Habitat Suitability Surveys – Aquatic Species

Aquatic habitat surveys were undertaken between 25th-29th July 2022 for all watercourses up to 1km downstream of any crossing point with the Proposed Project. Aquatic habitat surveys were repeated in August – October 2024 to update the baseline for all watercourses up to 150m up and downstream of crossing points where access allowed. Some of the watercourses were heavily shaded by vegetation and were not able to be fully inspected by surveyors. Whilst some areas could not be fully surveyed, the baseline information gathered during surveys is considered sufficient to inform a robust and thorough assessment of potential impacts. Furthermore, a precautionary approach has been adopted.

Where access allowed watercourses were visually assessed for the potential to support aquatic species including fish, freshwater pearl mussel *Margaritifera margaritifera* and white-clawed crayfish *Austropotamobius pallipes*. In addition, physical attributes such as channel form, flow conditions, substrates, wet width, and depths were recorded. The habitat was assessed for its suitability for aquatic species, specifically substrates and flows suitable for salmonid

spawning and nursery areas, and features that provide suitable refuge such as large unconsolidated substrates, macrophytes, overhanging vegetation, tree roots and woody debris.

3.5.3 eDNA Sampling – Aquatic Species

Watercourses identified during the habitat suitability surveys as supporting appropriate habitat for fish species but where presence of fish could not be assumed/confirmed were subsequently selected for eDNA surveys to determine the presence or likely absence of these species within the selected watercourses. Samples were collected from three watercourses: Allaghaun River (Western Tributary 1), Allaghaun River (Western Tributary 2) and Allaghaun River (Dromtrasna) in September 2022 and October 2024. These were sent to Surescreen Scientifics for subsequent analysis.

3.5.4 Otter Surveys

Terrestrial mammal surveys were undertaken in tandem with the habitat surveys, including otter *Lutra lutra*. Watercourses were searched for field signs of otter activity, and where observed, the level of activity and status of any otter holt was recorded, along with any evidence of activity including tracks, feeding signs, spraints, or couches (otter resting places).

3.5.5 Breeding Bird Surveys

Breeding bird surveys were conducted over three visits during May, June and July 2022 using a methodology adapted from the Breeding Bird Survey (Gilbert *et al.* 1998) combined with the Common Bird Census (CBS) survey methodology. These survey methods targeted potential breeding territories of raptors, waterbirds and passerines of conservation concern (e.g. waders and red/amber-listed species), as well as QI species of nearby designated sites.

3.5.6 Wintering Bird Surveys

Wintering bird surveys were conducted by EirEco Ltd on behalf of Jacobs during November 2021, December 2021, January 2022 and February 2022. Winter bird surveys were repeated by Jacobs monthly from November 2024 to March 2025. Surveys in 2024 and 2025 included dusk and dawn hen harrier roost surveys. Winter bird surveys covered habitats within 400m of the Proposed Project. This survey buffer ensured that the disturbance distances of the wariest bird species likely to be encountered in the area was sufficiently covered.

4. Identification of Relevant European Sites

4.1 Potential Effect Pathways from Works

Table 4.1 describes the potential impacts that could occur as a result of Proposed Project, the potential effects on European sites and associated QI species or habitats, and the ZOI of each impact that have been used in the assessment.

Table 4.1: Potential Impact Pathways from Development on European Sites.

Potential Impact Pathways on European Sites	Potential Pathway Description	Zone of Influence
Habitat loss	The Proposed Project activities including temporary works areas and access routes could result in direct loss of QI habitat (terrestrial or aquatic) or supporting habitat for QI species in a European site, or functionally linked land associated with mobile QI species outside the boundaries of European sites.	The ZOI assessed is within the footprint of the Proposed Project. Physical loss of habitat is only possible within the boundary of a European site, or within an area of functionally linked land habitat outside of the European site (for example, off-site area of known foraging, roosting, breeding habitat for a QI for which a nearby European site is designated).
Mortality	Mortality of species could occur through killing of individuals by construction works or death of individuals on roads that have to cross roads because their existing commuting routes along watercourses have been severed.	The ZOI assessed is within the footprint of the Proposed Project or within 50m of where watercourses that are currently open will be crossed by a new road or culverted.
Habitat degradation – changes in water quality	Water quality can be affected by oil, chemicals, heavy metals, etc during construction (from plant operation and fuelling) or through runoff during operation (from traffic using new roads). Water quality can also be affected by sedimentation through runoff during construction. Changes in water quality could directly affect QI species or habitats or affect them indirectly through loss of aquatic prey species, or through changes in their habitat.	The ZOI assessed is within the footprint of the Proposed Project or within hydrologically linked areas. Pollutants can travel along hydrological linkages to a considerable distance from works.
Habitat degradation – changes in air quality	Air quality can be affected by increased emissions from construction traffic during construction or from increased traffic during operation. Increased deposition of pollutants from traffic can degrade habitats.	The ZOI assessed is within the footprint of the Proposed Works or within 200m of the footprint of the Proposed Works, based on guidance from the Highways Agency (2007).
Habitat degradation – hydrological/hydrogeological changes	Construction impacts related to tunnelling and/or deep excavations can affect groundwater quality and/or quantity and thereby the existing hydrological regime. Changes in hydrogeology can alter geomorphological processes which can affect the deposition of shingle or other material potentially impacting on habitat of QI fish species, etc. Changes in these processes can impact aquatic/riparian/terrestrial habitats and species either directly or indirectly.	The ZOI assessed is within the footprint of the Proposed Project or within groundwater connectivity.
Habitat degradation – spread of invasive alien species	IAS can be spread either through the spread of species already within the construction site (through transfer on plant or within materials moved during earthworks), or by importing materials from outside the construction site (on the wheels of plant or delivery vehicles, etc).	The ZOI assessed is within the footprint of the Proposed Project. The spread or importing of IAS can only occur within the construction site.

Potential Impact Pathways on European Sites	Potential Pathway Description	Zone of Influence
Physical disturbance	Development could result in disturbance of QI species. This disturbance may include, noise and vibration, or visual stimuli such as movement (of people and/or vehicles) and lighting. Disturbance may lead to the abandonment of habitats or resting sites by QI species, which could include designated supporting habitat or functionally linked habitats outside of a European site.	The ZOI assessed is within the footprint of the Proposed Project or within 400m of the construction or operation of the road. The ZOI only relates to where this distance overlaps habitat within the boundary of a European site, or within an area of functionally linked land habitat outside of the European site (for example, off-site area of known foraging, roosting, breeding habitat for a QI for which a nearby European site is designated). 400m is considered to be an appropriate distance to assess disturbance as QI species are unlikely to be significantly disturbed beyond this distance.

4.2 European Sites within the Zol of the Proposed Project

The 'source-pathway-receptor' model was applied taking consideration of all potential impact pathways (Table 4.2) connecting elements of the Proposed Project to European Sites in view of their COs.

The Proposed Project was examined with reference to their location to European Sites and taking account of the potential impact pathways outlined in Table 4.1. The following European sites are considered to be within the Zol of the Proposed Project :

- Lower River Shannon SAC (002165) (NPWS 2012a)– this site lies within the Zol for:
 - Mortality;
 - Habitat degradation – changes in water quality;
 - Habitat degradation – changes in air quality;
 - Habitat degradation – hydrological/hydrogeological changes; and
 - Physical disturbance.
- Stack's to Mullaghareirk Mountains, West limerick Hills and Mount Eagle SPA (004161) (NPWS 2022) – this site lies within the Zol for:
 - Habitat degradation – changes in water quality;
 - Habitat degradation – changes in air quality;
 - Habitat degradation – hydrological/hydrogeological changes;
 - Habitat degradation – spread of invasive non-native species; and
 - Physical disturbance.

The QI and COs of these European sites are detailed in Table 4.2 and these European sites are shown in Figure 1, Appendix A.

Table 4.2: European Sites within the Zol of the Proposed Project

European Site Name and Code	Distance of Site from the Proposed Project	Conservation Objectives and Qualifying Interests (*=priority habitat).
Special Areas of Conservation (SAC)		
Lower River Shannon SAC	15m (direct overland distance)	To maintain or restore the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected. Sandbanks which are slightly covered by sea water all the time [1110]

European Site Name and Code	Distance of Site from the Proposed Project	Conservation Objectives and Qualifying Interests (*=priority habitat).
	255m (hydrological distance from a Proposed Project watercourse crossing)	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] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows <i>Glaucopuccinellietalia maritima</i> [1330] Mediterranean salt meadows <i>Juncetalia maritimi</i> [1410] Watercourses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils <i>Molinion caeruleae</i> [6410] *Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Ino-Padion, <i>Alnus incanae</i>, <i>Salix alba</i> [91E0] Freshwater pearl mussel <i>Margaritifera margaritifera</i> [1029] Sea lamprey <i>Petromyzon marinus</i> [1095] Brook lamprey <i>Lampetra planeri</i> [1096] River lamprey <i>Lampetra fluviatilis</i> [1099] Atlantic salmon <i>Salmo salar</i> [1106] Common bottlenose dolphin <i>Tursiops truncatus</i> [1349] Otter <i>Lutra lutra</i> [1355]
Special Protection Area (SPA)		
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA	1km	To restore the favourable conservation condition of hen harrier within the SPA. Hen harrier <i>Circus cyaneus</i> [A082]

4.3 Other European Sites

In addition to the sites listed in Table 4.2, a number of other European sites within the wider area surrounding the Proposed Project (see Figure 1, Appendix A) were also considered. However, these European sites were not considered to be within any of the Zol, and so were assessed as being not relevant European sites as there are no feasible effects pathways:

- **Moanveanlagh Bog SAC (002351):** Located 10km to the northwest of the Proposed Project. Designated for peat and bog habitats (NPWS 2015). This site is not within hydrological connectivity of the Proposed Project and is beyond other Zol;
- **Blackwater River (Cork/Waterford) SAC (002170):** Located 17km to the south of the Proposed Project. Designated for various Annex I habitats and Annex II species (NPWS 2012b). This site is not within hydrological connectivity of the Proposed Project and is beyond other Zol; and
- **River Shannon and River Fergus Estuaries SPA (004077):** Located 23km to the northwest of the Proposed Project. Designated for various Annex I wetland and water bird species and wetlands (NPWS 2012c). This site is not within hydrological connectivity of the Proposed Project and is beyond other Zol. In particular, functionally linked land used by the QI species is not considered to lie within the Zol for disturbance.

5. Baseline Characterisation

The following section provides an overview of the baseline environment within the ZOI of the Proposed Project including habitats, European sites, QI species and habitats for these sites and aquatic environments.

5.1 General Description of Habitats (including Annex I)

No Annex I habitats were identified within the footprint of the Proposed Project in the desk-based review. Habitats and flora within the site were classified using the Heritage Council's Guide to Habitats in Ireland (Fossitt 2000).

The lands surrounding the Proposed Project were mainly comprised of mixed agricultural land (improved agricultural grassland GA1 and wet grassland GS4), with thick sward vegetation and dominated by soft rush *Juncus effusus*. Dense scrub (WS1) was widespread throughout the survey area, predominantly along the boundaries of fields, roads and watercourses. Scrub areas were predominantly comprised of bramble *Rubus fruticosus*, ivy *Hedera sp.*, gorse *Ulex europaeus*, bracken *Pteridium aquilinum*, willow *Salix sp.* and hawthorn *Crataegus monogyna*.

5.2 European Sites

The Proposed Project is not within any European site; however, there are two sites that can be considered within the ZOI for the Proposed Project (see Section 4.2 also).

- The Lower River Shannon SAC is located 15m overland from the southern end of the Proposed Project at the River Feale (Southern Stem). The closest hydrological connection between the SAC and a watercourse crossing on the Proposed Project is approximately 255m where the Proposed Project crosses a small unnamed watercourse towards its eastern end. All larger watercourse crossings are greater than 1km from the Proposed Project.
- Stack's to Mullagharerik Mountains, West Limerick Hills and Mount Eagle SPA is located 1km from the Proposed Project at its closest point. The SPA is designated for a single bird species, hen harrier *Circus cyaneus*, and is hydrologically linked upstream to the Proposed Project (NPWS 2022).

5.3 Qualifying Interest Species

The desk-based review of the National Biodiversity Data Centre (NBDC) returned low resolution records (10km and 2km grid squares) of the following QI species associated with the European sites above. Records were considered where 10km and 2km grid square results intersected with the ZOI of the Proposed Project.

5.3.1 Otter (Lower River Shannon SAC)

A search of NBDC returned nine records of otter within 5km of the Proposed Project from the last 10 years. The most recent record was from 2015.

Surveys in 2022 and 2024 identified River Feale (Southern Stem) as having suitable habitat for holt creation and commuting, foraging and resting otter. Allaghaun River (Western Tributary 1), Allaghaun River (Western Tributary 2), and Allaghaun River (Dromtrasna), were considered to have suitability for commuting and foraging, and River Feale (Curraghatouk) was considered unsuitable for otter. Furthermore, one watercourse, Allaghaun River (Eastern Tributary), could not be fully surveyed due to access constraints from the existing N21, and is assumed to be suitable for otter commuting only, on a precautionary basis. Suitable habitat and connectivity to the wider Lower River Shannon SAC suggest otter are likely to be present on River Feale (Southern Stem).

The field surveys at Allaghaun River (Western Tributary 1) were very limited, and as stated above Allaghaun River (Eastern Tributary) could not be fully surveyed due to access constraints. Furthermore, due to dense vegetation and/or health and safety constraints, the whole length of each watercourse could not be surveyed thoroughly, as such, a precautionary approach has been taken for this assessment.

5.3.2 Atlantic Salmon (Lower River Shannon SAC)

Desk study records show Atlantic salmon have been recorded within the River Feale catchment (Feale_SC_020), within which all of the watercourses crossed by the Proposed Project are located (IFI 2021). There are no obstacles causing significant fish passage issues for Atlantic salmon on the River Feale (NPWS 2012a).

Suitable habitat for Atlantic salmon was identified in Allaghaun River (Western Tributary 1) and Allaghaun River (Western Tributary 2), and Allaghaun River (Dromtrasna), during habitat suitability surveys in 2022 and 2024. River Feale (Southern Stem) is not crossed by the Proposed Project but is assumed to contain Atlantic salmon given the suitable habitat and desk study records.

The eDNA survey in watercourses returned results for Atlantic salmon in Allaghaun River (Dromtrasna) only for both 2022 and 2024 surveys.

5.3.3 Freshwater Pearl Mussel (Lower River Shannon SAC)

A search of NBDC returned a single record of freshwater pearl mussel at the western extent of the Proposed Project, though these records had a low resolution of 10km (most recent recorded in 2007). This record was located immediately upstream of the confluence of River Feale (Curraghatouk) and the River Feale, which is approximately 1.5km downstream of the proposed crossing on River Feale (Curraghatouk). This 10km grid square also overlaps the site boundary at the western extent of the Proposed Project at chainage 0+000. Therefore, a precautionary approach assumes the possible presence of freshwater pearl mussel in the Zol.

Habitat within the four minor watercourses is considered unsuitable to support freshwater pearl mussel due to shallow flows and the lack of clean, coarse substrates. The conservation objectives for freshwater pearl mussel applies only to the population situated in the Cloon River, Co. Clare (NPWS 2012a). Hydrologically this population is greater than 75km away from the Proposed Project and is separated by estuary and sea.

5.3.4 Sea, Brook and River Lamprey (Lower River Shannon SAC)

Desk study records show that all three native species of lamprey have been recorded within the River Feale catchment (O'Connor 2006). A 2013 IFI survey of the Feale catchment (including tributaries) noted the large extent of survey locations across the catchment lacking suitable lamprey habitats (IFI 2013).

Habitat within the surveyed watercourses to be crossed by the Proposed Project were considered unsuitable to support river, brook or sea lamprey with a lack of suitable instream features, including the absence of silt beds required by lamprey ammocoetes (larval stage).

The eDNA survey on Allaghaun River (Western Tributary 1) and Allaghaun River (Western Tributary 2), and Allaghaun River (Dromtrasna) returned negative presence for brook lamprey and sea lamprey.

5.3.5 Hen Harrier (Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA)

A search of NBDC returned records of hen harrier with a resolution of 2km; the 2km square covers the entirety of the Proposed Project (most recently recorded in 2021).

The wintering bird surveys carried out in 2021/22 recorded one observation of hen harrier at Ballaghbehy South, approximately 1km east of the Proposed Project on 13/02/2022. An incidental sighting of a single male hen harrier quartering over fields was recorded in April 2020 during habitat surveys.

An observation of a hen harrier pair perched in a tree was made incidentally during a habitat survey at Kilkinlea Upper, approximately 45m south of the Proposed Project between chainages 6+950 and 7+000 during the habitat walkover surveys undertaken in 2022. Regular anecdotal observations of hen harrier by landowners around Kilkinlea (southern end of the Proposed Project) have also been noted with the most recent observation from 2024.

Dedicated hen harrier vantage point surveys were undertaken on 28th and 29th May 2024 in areas that hen harrier had previously been observed (either anecdotally or incidentally during other surveys). Hen harrier was not recorded

during these surveys. It was concluded that there was no suitable breeding habitat in the surrounding area, although the adjacent fields would be suitable for foraging, particularly in winter. No sightings were recorded during dusk and dawn hen harrier roost surveys in winter 2024 and 2025.

There was one sighting of hen harrier on 28th November 2024 seen commuting and circling over a wet grassland field and conifer plantation 640m south of the Proposed Project during a daytime drive-over. This area was included in the winter 2024 and 2025 dusk and dawn surveys; however, no further sightings of hen harrier were recorded.

Whilst it is considered that hen harrier is likely not breeding or roosting within the footprint of the Proposed Project, individuals do appear to be using habitats in the local area for foraging.

5.4 Aquatic Environment (Lower River Shannon SAC)

The Proposed Project crosses/is adjacent to five watercourses which are hydrologically linked to European sites. The following watercourses are adjacent to or being crossed by the Proposed Project.

- River Feale (Southern Stem):
 - The River Feale was assigned a Water Framework Directive (WFD) Status of Good by Ireland's Monitoring Programme 2019-2021 and has a risk rating of 'Not at risk';
 - The watercourse forms part of Lower River Shannon SAC and was designated as a salmonid river under S.I No. 293/1988;
 - The watercourse is not crossed by the Proposed Project but is within 15m at its closest point; and
 - Atlantic salmon, lamprey species, and otter are considered likely to be present in the River Feale catchment.
- River Feale (Curraghatouk):
 - The Curraghatouk Stream was assigned WFD Status of Good by Ireland's Monitoring Programme 2019-2021, included as part of the Allaghaun River classification and has a risk rating of 'Not at risk';
 - The watercourse is heavily shaded with little flowing water evident, flowing directly into the River Feale. It has steep incised banks and a maximum channel base width of 1m;
 - Otter are considered likely to be present; and
 - Atlantic salmon and lamprey species are considered likely to be absent from the Curraghatouk stream.
- Allaghaun River (Western Tributary 1) and Allaghaun River (Western Tributary 2):
 - The Allaghaun River downstream of these watercourses was assigned a WFD Status of Good by Ireland's Monitoring Programme 2019-2021 and has a risk rating of 'Not at risk';
 - Allaghaun River (Western Tributary 1) has 3m high banks which were steep and densely vegetated with bramble and bracken and therefore could not be fully assessed. Watercourse is 3m wide, 20-50cm deep and fast flowing. Substrate consists of bedrock, and fine sands up to large angular cobbles and there is potential for Atlantic salmon, lamprey species, and otter to be present within this watercourse.
 - Allaghaun River (Western Tributary 2) is 1-2m wide, 10-20cm deep and had moderate flow. Substrate consisted of shale bedrock with cobbles with riffle, pool and natural slide features present. Banks were varied; the west bank is 2m high and densely vegetated bramble. The eastern bank undulates in height and there was evidence of cattle poaching: There is potential for otter to be present within this watercourse. Atlantic salmon and lamprey species are likely to be absent from this watercourse.
- Allaghaun River (Dromtrasna):
 - Allaghaun River (Dromtrasna) is considered in the same EPA segment for water quality as the Allaghaun River and was assigned a WFD Status of Good by Ireland's Monitoring Programme 2019-2021 and has a risk rating of 'Not at risk';
 - This watercourse is 2-3m wide 10 to 20cm deep with moderate flow. Substrate consisted of fine sands to large cobbles with riffle and pool features present. Banks are 1-2m high and varied from vertical to gently sloping with evidence of cattle poaching; and

- Atlantic salmon and otter are considered likely to be present within Watercourse 5 (Dromtrasna) and there is potential for lamprey species to be present.

5.5 Invasive Non-Native Species

A desk-based review identified a total of five invasive non-native plant species⁶, which were recorded within 5km of the Proposed Project, including: Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Reynoutria japonica*, rhododendron *Rhododendron ponticum*, Himalayan knotweed *Persicaria wallichii*, and three-cornered garlic *Allium triquetrum*.

One non-native invasive plant species (Himalayan balsam) listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 was recorded as present within 250m of the Proposed Project at chainage 4+100 during habitat surveys.

⁶ Species listed on the Third Schedule: Part 1 are non-native species subject to restrictions under Regulations 49 and 50. Full list of species found here: <https://invasivespeciesireland.com/wp-content/uploads/wp-post-to-pdf-enhanced-cache/1/third-schedule-part-1-plants.pdf>

6. Assessment of Likely Significant Effects

6.1 Screening Exercise

An identification of European sites and their QI features within the potential ZOI of the Proposed Project is presented in Table 4.2. The determination of LSEs is considered to be any effect that may possibly occur as a consequence of the Proposed Project that would undermine the CO for the QIs of a site.

Potential pathways have been identified between the Proposed Project and European sites as outlined in Table 6.1. The two sites identified for further assessment are:

- Lower River Shannon SAC; and
- Stack's to Mullaghareirk Mountains, West limerick Hills and Mount Eagle SPA.

Table 6.1: European Sites with the Potential for LSEs as a Result of the Proposed Project

European Site Name and Code	Distance of the Site from the Proposed Project	Qualifying Interests (*=priority habitat).	Pathway to Effect	Likely Significant Effects (LSEs)
Special Area of Conservation (SACs)				
Lower River Shannon SAC (002165)	Direct (overland) distance: 15m Hydrological distance to SAC: 255m Downstream hydrological distance to closest mapped QI habitat: 28km	Habitats of 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 [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] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows <i>Glaucopuccinellietalia maritimae</i> [1330] Mediterranean salt meadows <i>Juncetalia maritimi</i> [1410] Watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils <i>Molinion caeruleae</i> [6410] *Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0]	Habitat Loss There will be no direct loss of SAC QI habitat as the works are beyond the Zol, therefore impacts associated with direct habitat loss were ruled out. Mortality Habitats are not sensitive to mortality. Habitat Degradation – Changes in Water Quality The hydrological distance from the Proposed Project to sensitive aquatic habitats of QI in coastal environments is approximately 28km, and therefore it is highly likely any inadvertently introduced pollutants would be diluted by the sea prior to reaching these habitats leading to ecologically inconsequential effects. Habitat Degradation – Changes in air quality Habitats sensitive to changes in air quality are greater than 4.4km (upstream) from the Proposed Project so is beyond the Zol, therefore impacts associated with changes in air quality were ruled out. Habitat Degradation – Hydrological/hydrogeological changes The Proposed Project is greater than 28km from habitats sensitive to hydrological/hydrogeological changes so is beyond the Zol, therefore impacts associated with hydrological/hydrogeological changes were ruled out. Habitat Degradation – Spread of invasive alien species (IAS) The Proposed Project is greater than 4.4km from habitats sensitive to IAS so is beyond the Zol, therefore impacts associated with IAS were ruled out. Physical Disturbance Habitats are not sensitive to disturbance.	No LSEs predicted for Lower River Shannon SAC QI habitats.

European Site Name and Code	Distance of the Site from the Proposed Project	Qualifying Interests (*=priority habitat).	Pathway to Effect	Likely Significant Effects (LSEs)
		Non-migratory aquatic species Freshwater pearl mussel [1029] Common bottlenose dolphin [1349]	Habitat loss There will be no direct loss of SAC QI functional habitat as the works are beyond the Zol, therefore impacts associated with direct habitat loss were ruled out. Mortality The extent of sensitivity of common bottlenose dolphin and freshwater pearl mussel is limited to areas beyond the Zol of the Proposed Project. Works are unlikely to lead to direct mortality of these species of QI. Habitat degradation – changes in water quality The distribution of freshwater pearl mussel populations associated with the SAC is limited to an area beyond the coastal habitats of Lower River Shannon, approximately 75km from the Proposed Project. Mortality The extent of sensitivity of common bottlenose dolphin and freshwater pearl mussel is limited to areas beyond the Zol of the Proposed Project. Works are unlikely to lead to direct mortality of these species of QI. Habitat degradation – changes in air quality Common bottlenose dolphin and freshwater pearl mussel, and their associated habitats are not sensitive to changes in air quality. Habitat degradation – hydrological/hydrogeological changes The extent of sensitivity of common bottlenose dolphin and freshwater pearl mussel is limited to areas beyond the Zol of the Proposed Project, therefore impacts associated with hydrological/hydrogeological changes were ruled out. Habitat degradation – spread of invasive alien species (IAS) The extent of sensitivity of common bottlenose dolphin and freshwater pearl mussel is limited to areas beyond the Zol of the Proposed Project, therefore impacts associated with IAS were ruled out. Physical disturbance The extent of sensitivity of common bottlenose dolphin and freshwater pearl mussel is limited to areas beyond the Zol of the Proposed Project, therefore impacts associated with physical disturbance were ruled out.	No LSEs predicted for Lower River Shannon SAC Non-migratory aquatic species.
		Migratory aquatic species Sea lamprey [1095] Brook lamprey [1096] River lamprey [1099] Atlantic salmon [1106]	Habitat loss There is the potential for small scale loss of aquatic habitat as a result of the construction of the Proposed Project. However, considering the extent of habitat loss in context of the available habitat within the SAC and wider catchment, any effects would be negligible, and would not result in a significant effect on the SAC populations of lamprey species or Atlantic salmon. Therefore, impacts associated with direct habitat loss were ruled out.	Yes. Potential for LSEs for Lower River Shannon SAC migratory aquatic species due to mortality, changes in water quality, hydrological/hydrogeological

European Site Name and Code	Distance of the Site from the Proposed Project	Qualifying Interests (*=priority habitat).	Pathway to Effect	Likely Significant Effects (LSEs)
			Mortality The Proposed Project is located adjacent to and crosses four watercourses, which are hydrologically linked to the European site at a distance of 255m from the closest point of the Proposed Project. Works taking place at or near watercourses are likely to have a mortality impact on QI fish species without mitigation, therefore impacts associated with mortality were screened in for further assessment. Habitat degradation – changes in water quality The four watercourses crossed by the Proposed Project are hydrologically linked to the Lower River Shannon SAC. Works taking place at or near watercourses and accidental pollution effects from operation of the scheme can increase the possibility of pollutants or sediments entering watercourses and therefore increase the potential of LSEs to sensitive aquatic species within the SAC. There is a risk of LSEs to lamprey and salmon from contaminants entering the watercourse as run off or inadvertent spillages. High levels of silt may affect gill efficiency and reduce populations of aquatic invertebrate prey species. Habitat degradation – changes in air quality Fish species are not sensitive to changes in air quality associated with the Proposed Project. Habitat degradation – hydrological/hydrogeological changes Any deep excavations associated with construction works for bridges and culverts relating to the Proposed Project at watercourse crossings have the potential to impact the groundwater, which could affect the deposition of shingle or other material potentially impacting on aquatic habitats of aquatic QI species indirectly/directly. This was screened in for further assessment. Habitat degradation – spread of invasive alien species (IAS) These QI species are not sensitive to IAS impacts. Physical disturbance The Proposed Project is located adjacent to (within 15m) and crosses four watercourses, which are hydrologically linked to the European site at a distance of 255m from the closest point of the Proposed Project. Works taking place at or near watercourses have the potential to cause disturbance to sensitive QI fish species (vibration/noise) without mitigation. This impact pathway was screened in for further assessment.	changes and physical disturbance.
		Otter [1355]	Habitat Loss There is the potential for small scale loss of aquatic habitat as a result of the construction of the Proposed Project. However, considering the extent of habitat loss in context of the available habitat within the SAC and	Yes. Potential for LSEs for Lower River Shannon SAC, due to mortality, changes in water

European Site Name and Code	Distance of the Site from the Proposed Project	Qualifying Interests (*=priority habitat).	Pathway to Effect	Likely Significant Effects (LSEs)
			wider catchment, any effects would be negligible, and would not result in a significant effect on the SAC otter population. Therefore, impacts associated with direct habitat loss were ruled out. Mortality While otter were not recorded during surveys along the Proposed Project, it is considered likely they occasionally use watercourse habitats crossing the Proposed Project. Therefore, without mitigation, there is the potential for direct mortality to occur during both construction and operation of the Proposed Project. Habitat degradation – changes in water quality The four watercourses crossed by the Proposed Project are hydrologically linked to the Lower River Shannon SAC. Works taking place at or near watercourses and accidental pollution effects from operation of the scheme can increase the possibility of pollutants or sediments entering watercourses and therefore increase the potential of LSEs to sensitive aquatic species within the SAC. There may be an impact to otter from loss of prey availability due to in-stream works or pollution events from the Proposed Project. Habitat degradation – changes in air quality Otters and their habitats are not sensitive to changes in air quality. Habitat degradation – hydrological/hydrogeological changes Construction, including deep excavations, associated with works near watercourses relating to the Proposed Project have the potential to impact surface drainage and groundwater movement. However, such changes are considered unlikely to sufficiently alter watercourses or riparian habitat to the extent otter or their prey would be affected. Therefore, impacts associated with hydrological/hydrogeological changes were ruled out. Habitat degradation – spread of invasive alien species (IAS) Otters are not sensitive to IAS impact pathways. Physical disturbance The Proposed Project is located adjacent to (within 15m) and crosses four watercourses, which are hydrologically linked to the European site at a distance of 255m from the closest point of the Proposed Project. Works taking place at or near watercourses have the potential to cause disturbance to otter from light, noise or vibration without mitigation. This impact pathway was screened in for further assessment.	quality, and physical disturbance.
Special Protection Areas (SPAs)				

European Site Name and Code	Distance of the Site from the Proposed Project	Qualifying Interests (*=priority habitat).	Pathway to Effect	Likely Significant Effects (LSEs)
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle (004161)	Direct Distance: 1km Hydrological distance: 2.5km upstream	Hen harrier [A082]	Habitat loss There will be no loss of SPA habitat therefore impacts associated with direct habitat loss were ruled out. There will be small scale loss of suboptimal supporting habitat outside of the SPA, however, this is not considered to be significant compared to the extensive habitat suitable for hen harrier within the SPA and the wider area beyond the Proposed Project. Mortality Hen harrier utilise habitats outside of the SPA and the Proposed Project is considered within the territorial range (5km) of hen harrier breeding within the SPA. There were observations of hen harrier in the vicinity of the Proposed Project. It is unlikely that the construction or operation of the Proposed Project will result in ecologically consequential mortality of hen harrier. However, as hen harrier have been recorded in the vicinity of the Proposed Project and the Proposed Project is within the territorial range of hen harrier this pathway has been screened in adopting a precautionary approach. Habitat degradation – changes in water quality There is no downstream hydrological link from the proposed works to this SPA and therefore there is no potential for indirect effects from a pollution event (e.g. changes in water quality) impacting on hen harrier. Habitat degradation – changes in air quality Hen harrier utilise habitats outside of the SPA, however, no suitable nesting habitat was recorded in the survey area and habitats utilised by hen harrier are considered unlikely to be susceptible to changes in air quality. Habitat Degradation – Hydrological/hydrogeological changes There is no downstream hydrological link from the proposed works to this SPA and therefore there is no potential for indirect effects from hydrological/hydrogeological changes. Habitat degradation – spread of invasive alien species (IAS) Hen harrier is not sensitive to IAS impacts; therefore, these have been ruled out for further assessment. Physical disturbance No suitable nesting habitat for hen harrier was recorded within a disturbance distance (400m) of the Proposed Project; however, hen harrier utilise habitats outside of the SPA and were recorded within a disturbance distance of the Proposed Project. Therefore, there is the potential for disturbance to hen harrier associated with the SPA from the construction of the Proposed Project. This impact pathway was screened in for further assessment.	Yes, Potential for LSEs for Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA due to mortality and disturbance.

6.2 Determination of Likely Significant Effects

An assessment of LSEs on European sites and their QI features from the Proposed Project is presented in **Table 6.1**. It cannot be concluded on the basis of objective information that LSEs can be excluded for the following pathways to effects on QIs of one European site:

- Lower River Shannon SAC
 - Mortality:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Habitat Degradation – changes in water quality:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Habitat degradation – changes in hydrology/hydrogeology:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Physical disturbance:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA
 - Mortality
 - Hen harrier
 - Physical disturbance
 - Hen harrier

These impact pathways on QIs of this European site must therefore be assessed in an AA, reported in a NIS, in regard to LSEs from the Proposed Project alone.

7. In-Combination Effects

Impact pathways and QIs features that have already been screened in for further Appropriate Assessment alone need not be included in this assessment of in-combination effects as they will be included in the NIS. Qualifying features that were found to have no impact pathways from the Proposed Project need not be assessed for in-combination effects as the Proposed Project cannot contribute to a combined effect, regardless of other proposed plans and projects. Table 7.1 shows the QI features and impact pathways to be included and excluded from in-combination effects assessment.

Table 7.1: QI Features and their Impact Pathways within European Sites Screened in for Further Assessment, Screened Out, or with Impact Pathways that have the Potential for In-Combination LSEs with Other Projects.

European Site Name and Code	QIs and Impact Pathways that have been Screened In for Appropriate Assessment	QIs and Impact Pathways that Do Not Require Further Assessment	QIs and Impact Pathways with Small Effect that Would Lead to LSE with Other Projects
Special Area of Conservation (SACs)			
Lower River Shannon SAC (002165)	Mortality - Sea lamprey - Brook lamprey - River lamprey - Atlantic salmon - Otter Habitat degradation – changes in water quality: - Sea lamprey - Brook lamprey - River lamprey - Atlantic salmon - Otter Habitat degradation – changes in hydrology/hydrogeology: - Sea lamprey - Brook lamprey - River lamprey - Atlantic salmon - Otter Physical disturbance: - Sea lamprey - Brook lamprey - River lamprey - Atlantic salmon - Otter	Habitat Loss - All QI features Habitat degradation – changes in water quality, changes in air quality, changes in hydrology/hydrogeology, spread of invasive alien species (IAS): - Sandbanks which are slightly covered by sea water all the time - Estuaries - Mudflats and sandflats not covered by seawater at low tide - Coastal lagoons - Large shallow inlets and bays - Reefs - Perennial vegetation of stony banks - Vegetated sea cliffs of the Atlantic and Baltic coasts <i>Salicornia</i> and other annuals colonising mud and sand - Atlantic salt meadows - Mediterranean salt meadows - Watercourses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> - Common bottlenose dolphin - Freshwater pearl mussel Mortality - Common bottlenose dolphin - Freshwater pearl mussel Physical disturbance - Common bottlenose dolphin - Freshwater pearl mussel	N/A

European Site Name and Code	QIs and Impact Pathways that have been Screened In for Appropriate Assessment	QIs and Impact Pathways that Do Not Require Further Assessment	QIs and Impact Pathways with Small Effect that Would Lead to LSE with Other Projects
Special Protection Areas (SPAs)			
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)	Mortality - Hen harrier Physical disturbance - Hen harrier	Habitat loss - Hen harrier Habitat degradation – changes in water quality, changes in air quality, changes in hydrology/hydrogeology, spread of invasive alien species (IAS): - Hen harrier	N/A

As there is the potential for LSE alone for both Lower River Shannon SAC and Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA, an in-combination assessment is not required. Further assessment will be undertaken at Stage 2 AA, reported in a NIS, as stated in Section 6.2.

8. Screening Statement and Conclusion

This AA Screening Report presents the objective scientific information required to inform a robust and complete Screening for AA of the potential impacts of the Proposed Project on European sites. The conclusion of the Screening for AA is that Likely Significant Effects on QIs of European sites cannot be excluded, alone or in combination, due to the following impact pathways:

- Lower River Shannon SAC
 - Mortality:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Habitat degradation – changes in water quality:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Habitat degradation – changes in hydrology/hydrogeology:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
 - Physical disturbance:
 - Sea lamprey
 - Brook lamprey
 - River lamprey
 - Atlantic salmon
 - Otter
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA
 - Mortality:
 - Hen harrier
 - Physical disturbance:
 - Hen harrier

A Stage 2 AA of the Proposed Project is therefore required for the pathways to LSE above, which will comprise a detailed assessment of the potential for adverse effects on the integrity of European sites.

Detailed information to inform the AA for the Proposed Project will be presented in a NIS which will be submitted at planning to enable the Competent Authority to undertake an AA in respect of the Proposed Project.

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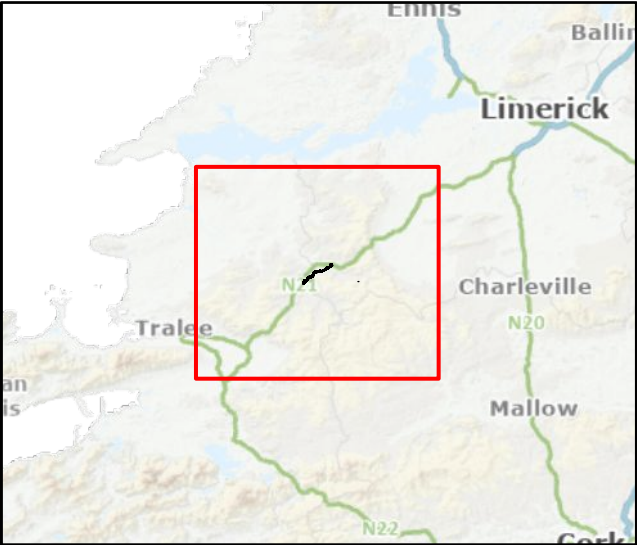
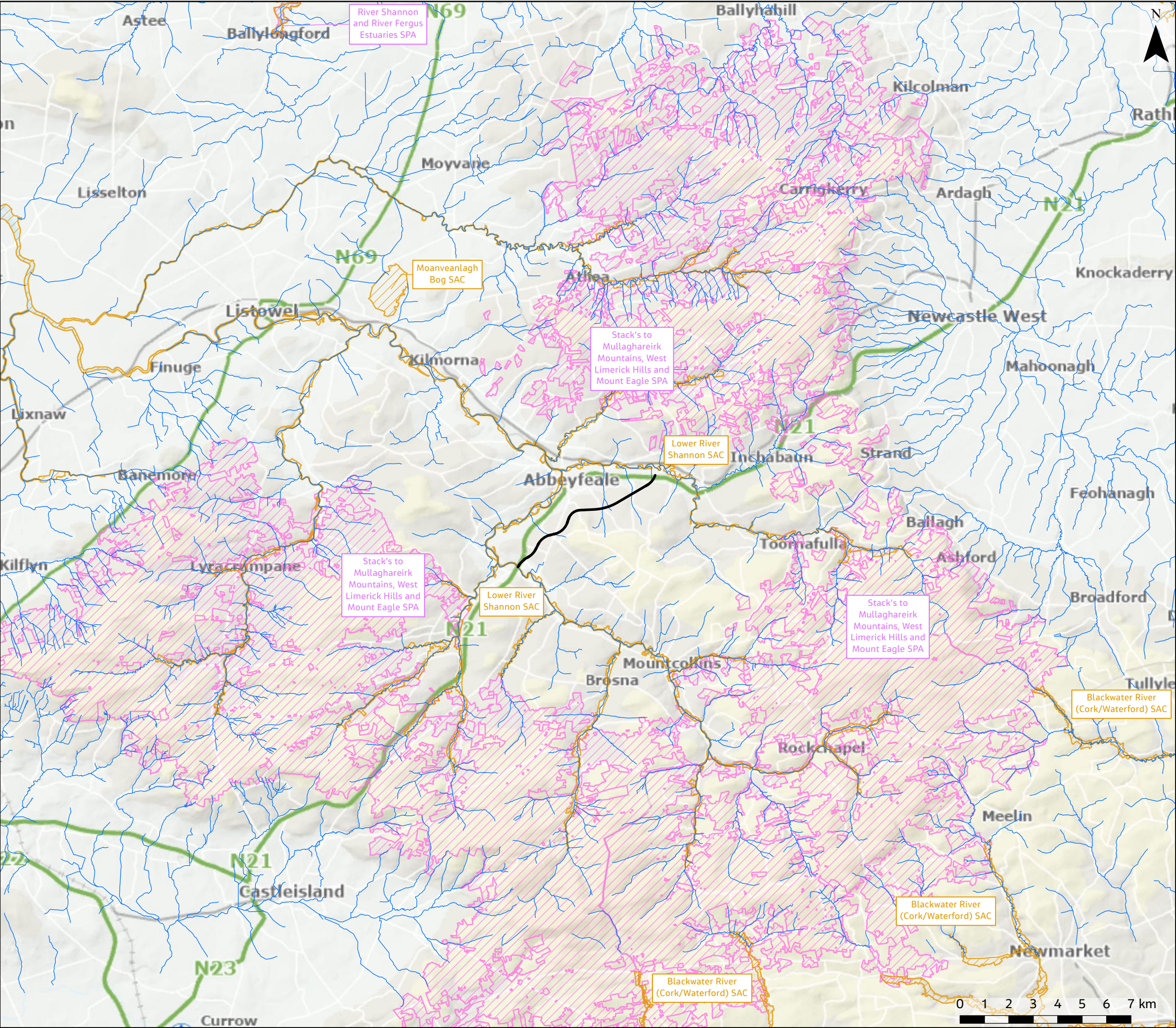
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Appendix A. Figures

Figure 1: Proposed Project Alignment in Relation to European Sites



Legend
Proposed Project Design
— Proposed Project Centreline
Watercourses
— WFD waterbodies
European Sites
Special Area of Conservation (SAC)
Special Protection Area (SPA)

00	Aug 2026	FINAL FOR CLIENT	HP	FT	MM	KC
Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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Drawing Title
FIGURE 1
PROPOSED PROJECT ALIGNMENT IN RELATION TO EUROPEAN SITES

Drawing Status
FINAL

Scale @ A3	1:150,000	DO NOT SCALE
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Client No.		
Drawing No.	Sheet 1 of 1	

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