Report for the purposes of Appropriate Assessment Screening

Monksland Pipeline (Gas to Greener Ideas Athlone)

Prepared by: Moore Group – Environmental Services

3 September 2024

On behalf of Gas Networks Ireland

Project Proponent	Gas Networks Ireland
Project	Monksland Pipeline (Gas to Greener Ideas Athlone)
Title	Report for the purposes of Appropriate Assessment Screening Monksland Pipeline (Gas to Greener Ideas Athlone)

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Abbreviations

AA	Appropriate Assessment
ABP	An Bord Pleanála
CEMP	Construction Environmental Management Plan
EEC	European Economic Community
EPA	Environmental Protection Agency
EU	European Union
FWPM	Freshwater Pearl Mussel
GIS	Geographical Information System
LAP	Local Area Plan
NHA	Natural Heritage Area
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
OSI	Ordnance Survey Ireland
pNHA	proposed Natural Heritage Area
SAC	Special Area of Conservation
SPA	Special Protection Area
SuDS	Sustainable Drainage System
UÉ	Uisce Éireann
WFD	Water Framework Directive

1. Introduction

1.1. General Introduction

This report for the purposes of Appropriate Assessment (AA) Screening contains information required for the competent authority to undertake screening for Appropriate Assessment (AA) in respect of the construction and operation of the Monksland Pipeline (GNI asset number 'GNI138') designed to connect the existing BGE/77 750mm Ories to Perssepark 'Pipe to the West' Pipeline to the permitted Monksland Above Ground Installation (AGI) at Monksland, Athlone, Co. Roscommon (hereafter referred to as the Proposed Development) to determine whether it is likely individually or in combination with other plans or projects to have a significant effect on any European sites, in light of best scientific knowledge.

Having regard to the provisions of the Planning and Development Act 2000, as amended (the "Planning Acts"), the purpose of a screening exercise is to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with other plans or projects is likely to have a significant effect on a European site.

If it cannot be *excluded* on the basis of objective information that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site then it is necessary to carry out a Stage 2 appropriate assessment under the Planning Acts.

When screening the project, there are two possible outcomes:

- the project poses no potential for the possibility of a significant effect and as such requires no Stage 2 assessment; or
- the project has potential to have a significant effect (or this is uncertain and therefore cannot be excluded) and therefore a Stage 2 Appropriate Assessment of the project is necessary.

This report has been prepared by Moore Group - Environmental Services to enable the competent authority to carry out AA screening in relation to the Proposed Development. The report was compiled by Ger O'Donohoe B.Sc. Applied Aquatic Sciences (ATU Galway, 1993) & M.Sc. Environmental Sciences (TCD, 1999) who has over 30 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements on terrestrial and aquatic habitats for various development types.

Supporting surveys of Otters were undertaken by O'Donnell Environmental. Tom O'Donnell is a Chartered Environmentalist and a full member of the Chartered Institute of Ecology and Environmental Management. He was awarded a BSc in Environmental and Earth System Science [Applied Ecology] in 2007 and an MSc in Ecological Assessment in 2009, both from UCC. Tom has 15 years professional experience in the environmental

industry, including working on projects such as windfarms, overhead power lines, roads, cycleways and residential developments. Tom is licensed by NPWS for roost disturbance (Ref: DER/BAT 2023-16) and to capture bats (C25/2023).

1.2. Legislative Background - The Habitats and Birds Directives

Article 6(3) and 6(4) of the Habitats Directive are transposed into Irish Law inter alia by the Part XAB of the Planning Acts (in particular section 177U and 177V) which governs the requirement to carry out appropriate assessment screening and appropriate assessment, where required, per Section 1.1 above.

The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the European Union (EU). Under the Habitats Directive, Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a EU context.

The Birds Directive (Council Directive 2009/147/EC on the conservation of wild birds), transposed into Irish law by the Bird and Natural Habitats Regulations 2011 as amended, and the Wildlife Act 1976, as amended, is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Birds Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

SACs designated under the Habitats Directive and SPAs, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs. These sites are also referred to as European sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to have a significant effect on Natura 2000 sites. Article 6(3) establishes the requirement to screen all plans and projects and to carry out an appropriate assessment if required (Appropriate Assessment (AA)):

> ***Article 6(3):*** *"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 subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In 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) establishes requirements in cases of imperative reasons of overriding public interest.

2. Methodology

The Commission's methodological guidance (EC, 2002, 2018, 2021 see Section 2.1 below) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1 and 2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other plans and projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. In order to screen out a project, it must be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site.

Stage 2 Appropriate Assessment: This stage examines whether it is likely that the project, either alone or in combination with other projects or plans, will have a significant effect upon the integrity of a European site. In order to 'screen out' a project (i.e. in order to conclude that it is not necessary to move to the 'Stage 2' appropriate assessment stage (see immediately below), the possibility that the Proposed Development (individually or in combination with other plans or projects), will have a significant effect on the integrity of a European site must be excluded on the basis of objective information.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the Proposed Development complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to enable the competent authority to carry out AA screening in relation to the Proposed Development to determine whether it can be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

2.1. Guidance

This report has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC, 2018).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021).
- Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021).
- Office of the Planning Regulator (OPR) Practice Note PN01 Appropriate Assessment Screening for Development Management (OPR, 2021).

2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2024;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
    - Natura 2000 - Standard Data Form;
    - Conservation Objectives;
    - Site Synopses;
- National Biodiversity Data Centre records;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans;
    - Roscommon County Development Plan 2022-2028

This Report for AA Screening is supported by field work undertaken as part of the EIAR process which includes surveys of habitats undertaken by Moore Gorup and specifically Otters by O'Donnell Environmental having regard to appropriate survey timing and including best scientific knowledge.

3. Description of the Proposed Development

3.1. Construction Design

The proposed development comprises c. 2.488 km 200 NB pipeline will provide a natural gas supply to the permitted Greener Ideas Facility by connecting the permitted Monksland AGI to the existing BGE/77 750mm Ories to Perssepark 'Pipeline to the West'. The detailed specifications, including the specific locations and distances along the pipeline (chainage), description of the location, and the construction method is provided below in the Table below.

Route section	Description of Location	Pipeline length (m)	Construction method
Chainage 000 Tie-in point to the existing BGE/77 pipeline	The proposed pipeline will tie into the existing 750 NB 'Pipeline to the West', BGE/77, in an agricultural field to the west of the R446 road.	N/A	Tie in Location
Chainage 000 to 015 Agricultural land	The pipeline will be routed east through agricultural land to the R446 road culvert crossing point.	c. 15 m	Open cut trench in field
Chainage 015 to 020 Crossing the culvert of the tributary of the Newtownflood Stream on the R446	The pipeline will be routed north and cross a culverted tributary of the Newtownflood Stream within the R446 road.	c. 5 m	Open cut trench culvert service crossing
Chainage 020 to 1610 Public roadways R446	The pipeline will be routed north along the R446	c. 1,590 m	Open cut trench in roadway
Chainage 1610 to 1900 Public roadways L2027	The pipeline will be routed west along the L2027 to the Drum Community Centre.	c. 290 m	Open cut trench in roadway
Chainage 1900 to 2065 Agricultural land	The pipeline will be routed northwest from the L2027 through agricultural land.	c. 165 m	Open cut trench in field
Chainage 2065 to 2075 Crossing of the tributary of the Cross River	The pipeline will be routed north and cross through a ditch tributary of the Cross River.	c. 10 m	Open cut trench - flume watercourse crossing
Chainage 2075 to 2155 Agricultural land	The pipeline will be routed northwest through agricultural land to the Cross River launch shaft.	c. 80 m	Open cut trench in field
Chainage 2155 to 2215 Crossing underneath the Cross River	The pipeline will be routed underneath the Cross River, utilising a trenchless crossing method. Launch shaft and receiver shaft will be required at this location. A temporary bridge will	c. 60 m	Trenchless Crossing Temporary bridge

	be installed over the Cross River to facilitate access.		
Chainage 2215 to 2245 Agricultural land	The pipeline will be routed north through agricultural land until the M6 motorway and Galway to Dublin Hueston rail line launch shaft.	c. 30 m	Open cut trench in field
Chainage 2245 to 2365 Crossing underneath the M6 motorway and Galway to Dublin Hueston rail line crossing	The pipeline will be routed beneath the M6 motorway and Galway to Dublin Hueston rail line, utilising a trenchless crossing method. Launch shaft and receiver shaft will be required at this location.	c. 120 m	Auger bore
Chainage 2365 to 2420 Scrub land at the margin of the M6 motorway	The pipeline will be routed west through scrub land at the margin of the M6 motorway; crossing minor drainage ditches.	c. 55 m	Open cut trench
Chainage 2420 to 2430 Crossing of the tributary of the Cross River	The pipeline will be routed north and cross through a ditch tributary of the Cross River.	c. 10 m	Open cut trench - flume watercourse crossing
Chainage 2430 to 2435 Piped tributary of the Cross River	The pipeline will be routed west and cross a underground closed piped tributary of the Cross River within the Greener Ideas Facility site.	c. 5 m	Open cut trench – culvert service crossing
Chainage 2335 to 2488 Greener Ideas Facility and tie-in to the permitted Monskland AGI	The pipeline will be routed west through the Greener Ideas Facility to the permitted Monskland AGI Compound, where it will tie-in to the Monskland AGI.	c. 53 m	Open cut trench in field / Greener Ideas Facility

The Construction Methodology included with the S39A application was prepared by Fingleton White providing the framework from which a detailed Construction Methodology will be developed by the appointed construction contractor. This will include comprehensive method statements and construction techniques to be finalised before site work commences.

AWN Consulting have prepared the project outline Construction Environmental Management Plan (oCEMP) included with the S39A application, this provides the framework from which the CEMP will be developed by the appointed construction contractor to avoid, minimise or mitigate any construction effects on the environment prior to commencement on site. This plan should be viewed as a live document that will be updated as and when required. The contractor will then prepare specific method statements setting out site working requirements which manage perceived risks to the environment e.g., traffic management, work safety plans etc.

Construction compounds will be established along the proposed pipeline route. The compounds will serve as the central hubs for various activities and functions during the construction of a project. They are temporary setups that provides essential welfare facilities and space for workers, equipment, materials, and administrative

needs. The oCEMP (AWN, 2024) details the elements that the site compounds will include, as well as the factors that will be considered when finalising the locations of these compounds.

The contractor will implement health and safety measures in relation to the safety of the workforce and the public. Additionally, measures will be applied to minimise traffic delays, disruption and maintain access to residences and businesses along the public road. Construction traffic access to the site will be via the existing roadways where the majority of the pipeline will be installed, the R446 and the L2027.

Construction methodologies to be implemented and materials to be used will ensure that the pipeline is installed in accordance with the guidelines and standards of GNI. See further detail presented in 1379-01-RT-0102-R1 Gas to GIL Athlone Construction Methodology prepared by Fingleton White and submitted with this application including sequencing of works and diagrams. This section summaries the key environmental aspects of the proposed construction elements.

Tie In Location

The new pipeline shall tie into the existing 750 NB BGE/77 pipeline in an agricultural field on the west side of the R446 road located at (Chainage 000).

An approximate 4.5m deep excavation shall be undertaken here to facilitate the hot tap tie-in. An excavated length of approximate 14 m around the hot tap is required to facilitate the drilling equipment.

Hot tapping allows a connection to an existing pipeline to be completed while the line is fully operational, ensuring no shutdown is required and that no gas is lost from the pipe.

Open Cut Trench Methodology in Fields

The Monksland Pipeline shall be laid in agricultural lands (c. 413 m in total) using an open cut method as described in this section. These sections are located at Chainage 000 to 015, Chainage 1900 to 2065, Chainage 2075 to 2155, Chainage 2215 to 2245 and Chainage 2365 to 2488.

In brief the methodology is to excavate trenches to a depth of 1600 mm, ensuring a minimum cover of 1.2 m above the pipe. Subsoil will be stored separately from topsoil to prevent mixing. Trench supports and close sheet piling may be used where necessary to aid construction. Dewatering of the pipe trench may be required along the pipeline route and will be carefully controlled to prevent sediment entering watercourses in accordance with the Construction Environmental Management Plan (CEMP).

Open Cut Trench Methodology in Roadway

The Monksland Pipeline shall be laid in existing roads (c. 1,885 m in total) using an open cut method. These sections are located at Chainage 015 to 1900.

In brief the methodology is to excavate to a minimum depth of 1600 mm (to base of trench) and 500 mm width (both at base and ground level). Extend excavations locally every 12 – 24 m at bell hole locations to facilitate welding. Trench depths will be adjusted based on existing service crossings to meet the minimum cover requirements as per I.S. 328: 2021. Existing services/utilities will be crossed as per the typical service crossing. The subsoil shall be stored separately to asphalt/bitmac for future reinstatement, any excavated material not used will for reinstatement will be removed as waste. Trench supports and close sheet piling may be used where necessary to aid construction. Dewatering of the pipe trench may be required along the pipeline route and will be carefully controlled to prevent sediment entering watercourses in accordance with the Construction Environmental Management Plan (CEMP).

Open Cut – Service Crossing

The Monksland Pipeline has one crossing of an existing culvert (tributary of the Newtownflood stream) located at Chainage 0150 to 020, and one crossing of an existing piped watercourse (tributary of the Cross River) located at Chainage 2430 to 2435. These crossings will follow a typical third-party service crossing, whereby the pipeline will be installed to avoid interaction with the existing underground service. Given the minimum depth of cover required (1200 mm to the top of the pipe) the pipeline will be constructed to pass underneath the culvert section. A minimum separation distance of 500mm will be maintained between the pipeline and the watercourse/culvert pipe.

The service crossing methodology at this section includes:

- A trench will be excavated beneath the concrete pipe, ensuring that the existing pipe remains intact and undisturbed (minimum separation distance of 500mm).
- The gas pipeline will be laid in the trench below the watercourse/culvert pipe.
- The trench will be backfilled and compacted to restore the ground to its original level.

The pipeline is designed to pass underneath the piped section with an adequate separation distance, eliminating any potential impact on the stream's structural integrity and flow. There are no instream works at this location.

Open Cut Methodology - Flume Water Course Crossing

The Monksland Pipeline has 2 no. open cut watercourse crossing through the tributary of the Cross river located at Chainage 2065 to 2075, and one located at Chainage 2420 to 2430.. This water crossing is proposed to be undertaken using an open cut method, with the water temporarily diverted using a flume (pipe). The flume will temporarily direct water away from the trench area, preventing interference from construction activities and ensuring the safety of workers and the integrity of the watercourse.

At this crossing location the flume (temporary culvert) crossing is installed to allow for an uninterrupted running track for the duration of the construction works, and removed once reinstatement of the working area is completed.

Flume pipes sized to ensure they are capable of accommodation flood flow water volumes are inserted into the watercourse, ensuring they extend past the area of the proposed trench and running track. The waters being crossed shall be effectively dammed both upstream and downstream of the trench location so as to ensure that works are undertaken in the dry. Straw bales are placed downstream to capture sediments as required. The water course is then left uninterrupted until a few days (estimated 2-3 days) before the pipeline install time.

The pipe trench is then excavated below the flume pipe. This excavated material is stored separately to the topsoil and subsoil and only this material will be used to backfill the watercourse trench. Trench supports and close sheet piling may be used where necessary to aid construction. Dewatering of the pipe trench may be required along the pipeline route and will be carefully controlled to prevent sediment entering watercourses in accordance with the Construction Environmental Management Plan (CEMP).

Trenchless Methodology – Cross River, Railway and Motorway Crossing

The Monksland Pipeline has 2 no. planned trenchless crossings one for the Cross River (Chainage 2155 to 2215), and one for the Railway and Motorway (Chainage 2245 to 2365).

In brief the methodology includes installation of launch and reception shafts at either end of the crossing, and trenchless excavation to install the pipeline.

The trenchless crossing will require the launch and reception shafts (temporary works) these will be carefully planned, designed, set out and fully excavated. These shafts, constructed using steel sheet piled cofferdams, ensure safe excavation by holding back soil and water pressures. The design of the cofferdams considers factors like excavation depth and equipment loads. Controlled dewatering is necessary to prevent sediment from entering watercourses, as outlined in the Construction Environmental Management Plan (CEMP). After the gas pipe is installed, the pits are backfilled in a structured sequence, with steel sheet piles removed afterward.

The Launch Shaft will be located on the southern side of the Cross River and approximately 12m long x 4m wide x 5m deep sheet piled. The Reception Shaft will be located on the northern site of the river and approximately 5m long x 4m wide x 5m deep sheet piled. Installation of launch and reception shafts at either end of the road/rail crossing. The Road/Rail Crossing will have the Launch Shaft will be located to the south of the railway approximately 15m long x 3.5m wide sheet piled. The Reception Shaft will be located to the north of the motorway and approximately 3.5m long x 3.5m wide sheet piled.

The Preliminary Design for the Cross River Crossing has determined that the trenchless crossing can be achieved with a Conventional Micro-tunnelling approach or Guided Auger-boring / Hybrid MT. These methods include the use of concrete pipe sleeve that provides continual ground support to the excavated tunnel. The trenchless

crossing will achieve a minimum clearance of 1.6m from the riverbed to the top of the pipe is required by IS 328:2021 and GNI standards. The trenchless crossing of the Cross River is a minimum distance of 60m.

Dewatering During Construction

Dewatering and removal of surface run-off is necessary to create a dry working environment and prevent water from seeping into the excavation and flooding the construction site.

Dewatering from the established shallow ground bores will be managed as required to assist with creating a dry working environment and prevent water from seeping into the excavation (launch and receiver) and flooding the construction site.

Dewatering water from within these overburden deposits will be contained within the site, treated, and ultimately discharged to the Cross River.

Construction Duration

The overall start-to-finish duration is estimated to be 9 months. Construction is anticipated to commence in Q1 2025 and be completed by Q1 2026.

Temporary Works Areas

The Proposed Development will require the establishment of temporary works areas including three (3) construction compounds in order to facilitate the Proposed Development works. Locating the areas along the route ensures that construction activities can be efficiently managed and supervised, reducing the logistical challenges associated with a single centralised compound.

The proposed works areas are as follows:

- 1 no. temporary works area and compound at the proposed hot tap location,
- 1 no. temporary works area and compound located in the agricultural lands to the north of the Drum Community Centre, and
- 1 no. temporary works area and compound at the proposed tie-in with the Monksland AGI.

The temporary works area locations have been identified and indicative space planning undertaken for the Hot Tap compound and Pipeline works area, respectively.

There are 4 no. potential locations identified for the temporary working area and compound at the Monksland AGI. The final AGI compound location will be established in collaboration with the appointed construction contractor(s).

Haul roads will be established within the running track and temporary works area, Depending on the soil conditions. These will be stabilised utilising materials such as crushed rock, gravel and a layer of geotextiles to improve load-bearing capacity and prevent deformation under heavy traffic.

3.2. Description of the Existing Environment

The Proposed Development is a linear development located in agricultural land to the west of Athlone, Co. Roscommon with the 'Hot Tap' connection at Keeloges off the old Athlone to Galway Road R446 and then running along the road carriage way north to Crannagh where it turns west along the L2027 toward Drum Community Centre. From here it traverses wet grassland fields to a point where it passes underneath the Cross River and the Railway and M6 Motorway to reach the permitted Monksland Above Ground Installation (AGI) at Monksland on the north side of the M6.

The proposed Monksland Pipeline, via the permitted Monksland AGI, will provide a natural gas supply to the permitted Greener Ideas Facility. The Greener Ideas Facility consists of the 100MW gas fired power plant with associated plant, equipment and buildings (permitted under Roscommon County Council (RCC) Reg. Ref: 18/256, as revised by RCC Reg. Ref. 22/177 and RCC Reg. Ref. 22/234), and 110kV single-bay air insulated substation (Cuilleen), 110kV underground grid connection and all associated works (permitted under An Bord Pleanála (ABP) Reg. Ref.: ABP-317588-23.

Figure 1 shows the Proposed Development location and Figure 2 shows a detailed view of the Proposed Development boundary on recent aerial photography. Figures 3 and 4 show the layout of the Proposed Development at the AGI site and major route crossings to the north and along the R446 to the Hot Tap tie-in to the south.

(FW2) Cross River

This habitat classification applies to The Cross River under which the pipeline will be placed by guided auger bore. This methodology will require a temporary bridge crossing to facilitate boring machinery and machinery to dig reception and launch pits to continue under the rail way and motorway to the north.

The Cross River is described in the SHRFB Rivers Report (2008[1]); as; *a low lying limestone stream that rises in Co Roscommon approximately four kilometres southwest of Lough Funshinagh. It flows in a south westerly direction until it joins the River Shannon two kilometres south of Athlone. Although the Cross River is a good stream for trout fishing and has undergone rehabilitation work, it was previously damaged by drainage work in 2001 (O'Reilly 2002). An electric fishing survey was conducted on the 25th of July 2008 along a 176m stretch of channel. One boat-based electric-fishing unit was used to conduct three fishings. The site was located immediately upstream of an unnamed bridge in Co. Roscommon, 250m upstream from the Cross's confluence with the River Shannon, approximately two kilometres south of Athlone. The mean channel width was 6.2m, and the mean*

[1] Sampling Fish for the Water Framework Directive. The Central and Regional Fisheries Boards.

depth was 1.3m. The total wetted area sampled was 1,091m2. This site was composed entirely of glide habitat, with evidence of previous drainage work obvious. The substrate was composed exclusively of mud and silt. The main land use adjacent to the site was pasture. The river bank was not fenced, but steep vertical banks prevented cattle from accessing the channel. A few mature willow trees were present in the riparian zone; however, these were too far away from the channel to provide any shade to the river.

A total of five fish species were recorded in the Cross River, with perch being the most abundant species, followed by roach. The two brown trout recorded during this survey measured 19.6cm and 30.8cm in length. Based on a classification of growth in rivers by Kennedy and Fitzmaurice (1971), trout growth rate in the Cross was therefore categorised as fast.

The Cross River is the main river in the 26G Upper Shannon catchment which flows into the SHANNON (UPPER)_120. The SHANNON (UPPER)_120 is also the receiving water for the SHANNON (UPPER)_110, the CLOONBONNY STREAM_010 and the BOOR_020 water bodies. The results for the Cross River water quality trend assessment are presented in the 26G Upper Shannon Catchment Summary WFD Cycle 2 Assessment[2];

Average orthophosphate concentrations along the Cross River are relatively low with values of 0.014, 0.015 and 0.018mg/l at CROSS (ROSCOMMON)_020, CROSS (ROSCOMMON)_030 and CROSS (ROSCOMMON)_040 respectively. The Environmental Quality Standard (EQS) of 0.035mg/l is not exceeded at any of the main channel monitoring points where water chemistry data is available.

Total oxidised nitrogen (TON) concentrations are low and remain below the 2.6mg/l threshold at each monitoring point. A moderate spike in ammonia is apparent at CROSS (ROSCOMMON)_030, however the EQS (0.065mg/l) is not exceeded. Similarly, ammonia concentrations at CROSS (ROSCOMMON)_020 and CROSS (ROSCOMMON)_040 are below the EQS. There is no water chemistry data available for CROSS (ROSCOMMON)_010.

During site surveys the river was observed as having a high turbidity, c. 100-250 NTU during the Winter period. The banks contain occasional Fools Watercress (*Apium nodiflorum*) and Water Starwort (*Callitriche stagnalis*) with higher ground having Meadowsweet (*Filipendula ulmaris*), Nettle (*Urtica diocia*) and occasional Water mint (*Mentha aquatica*) along with Reed Canary Grass (*Phalaris arundinacea*) and occasional Fine-leaved Water Dropwort (*Oenanthe aquatica*) observed within the channel

The most recent EPA water quality rating for the Cross River at Cross Bridge (EPA code RS26C100300 'Bridge S. of Doyle's Bridge' in 2023 was a Q4 or Good status. This point being at the R446 downstream of the proposed pipeline crossing. The EPA report notes that; *the Cross River is strongly influenced by groundwater especially in its upper reaches downstream of Lough Funshinagh resulting in a typically low dissolved oxygen saturation for a river. Improvements to good quality were noted in the middle reaches (0200 and 0300) but a decline to poor was*

[2] Upper Shannon (Mid Shannon) Catchment Assessment 2010-2015 (HA 26G) Catchment. Catchment Science & Management Unit Environmental Protection Agency December 2018 Version no. 3

recorded at the last site (0400) immediately upstream of the River Shannon not far downstream from Athlone town.

(FW4) Drainage ditches

This habitat classification applies to water courses and the upper reaches of these courses which are in essence large stagnant or slow-moving drainage ditches leading to the Cross River. These have similar marginal species as above with Fools Watercress (*Apium nodiflorum*) and Water Starwort (*Callitriche stagnalis*) in stagnant section along with Duckweed (*Lemna minor*) and with higher ground having Meadowsweet (*Filipendula ulmaris*), Nettle (*Urtica diocia*), occasional Water mint (*Mentha aquatica*), Bulrush (*Typha latifolia*) and Yellow-flag Iris (*Iris pseudacorus*).

The water course located at the Hot Tap Tie-in is considered a drainage ditch which is culverted under the old Galway Road R446 and continues as a large steep sided drainage ditch to the Newtownflood Stream and Cross River.

On the northern side of the Motorway the pipeline will cross an underground closed piped tributary of the Cross River within the Greener Ideas Facility site (Chainage 2430 to 2435), and cross through a ditch tributary of the Cross River (Chainage 2420 to 2430) using a flume method.

(GA1) Improved agricultural grassland

The proposed pipeline runs northwards, from the hot tap connection at the corner of a field of Improved grassland (GA1), part of which has had topsoil stripped and is now classed as Spoil and bare ground (ED2), along the R446 regional road. The route then follows a local road west as far as the Drum Community Centre, where it turns north to enter agricultural land. All roads and footpaths are classed as Buildings and artificial surfaces (BL3).

The majority of the fields adjacent to the proposed development are improved with the exception of the first two fields surveyed at the northern extent either side of the Cross River which comprise wet grassland and wetter sections of the development area in the vicinity of the AGI at Monksland.

The improved grassland fields are essentially large, in most cases, open fields of grassland which are managed for either silage, hay or grazing dominated by common forage grasses such as Perennial Rye-Grass and Yorkshire Fog with little in the way of herbs present along with Creeping Thistle, Meadow Buttercup, Nettle and Silverweed (*Potentilla anserina*). As the ground gets higher, species of drier habitats also increase, with Perennial Rye-Grass, Crested Dogs-Tail (*Cynosurus cristatus*) and False-Oat Grass (*Arrhenatherum elatius*) all recorded. The edges of the fields contain some well grown Hawthorn (*Crataegus monogyna*) and Ash (Fraxinus excelsior).

A field of damp Improved agricultural grassland (GA1) lies to the north of the river, with an area of Gorse (*Ulex europaeus*) dominated scrub in its northeastern corner. The fields, including the roadside boundary are lined by hedgerows (WL1), which have largely been allowed to develop into taller treelines (WL2). Hawthorn, Grey Willow, Elder (*Sambucus nigra*) and Blackthorn (*Prunus spinosa*) are the dominant species, together with taller Ash, much of it diseased.

(GS4) Wet grassland

The pipeline crosses two fields of Wet grassland (GS4)(Chainage 1900 to 2155) opposite Drum Community Centre, with characteristic species such as abundant Soft Rush (*Juncus effusus*), Meadowsweet (*Filipendula ulmaria*), Yorkshire Fog (*Holcus lanatus*), Star Sedge (*Carex echinata*) and Creeping Buttercup (*Ranunculus repens*). The two fields are divided by a Drainage ditch (FW4) lined by treelines (WL2) on both banks. In less shaded portions of this ditch, Floating Sweet Grass (*Glyceria fluitans*) and Bulrush (*Typha latifolia*) were observed, elsewhere the tall Ash (Fraxinus excelsior), Alder (*Alnus glutinosa*) and Grey Willow (*Salix cinerea*), clothed in Ivy (*Hedera hibernica*) entirely shades the ditch. Stands of Mixed broadleaf woodland (WD1) and Scrub (WS1) have developed in parts of these fields, with Ash, Beech (*Fagus sylvatica*), Willow and Hawthorn (*Crataegus monogyna*), fringed by dense Bramble (*Rubus fruticosus*).

(WD1 & WS1) Woodland & Scrub

The majority of lands within the planning boundary to the north of the M6 motorway are occupied by the site of the Greener Ideas Power Station, which is currently under construction, as well as associated carparking and access roads. These are classed as (BL3). A triangular section of land southeast of this site comprises an area of shelterbelt trees between the Monksland industrial area and the M6, classed as Mixed broadleaf woodland (WD1). Trees are generally of similar age (10-20 years), and a mix of native species such as Grey Willow, Hawthorn and Common Alder, and non-native species, including Oriental Plane (*Platanus orientalis*) and Grey Alder (*Alnus incana*). The understorey comprises abundant Nettle (*Urtica dioica*), Yorkshire Fog (*Holcus lanatus*), Rough Meadow Grass (*Poa trivialis*) and Creeping Thistle (*Cirsium arvense*). A grassy track runs through part of this section, and along its western perimeter, with Nettle and False Oat Grass (*Arrhenatherum elatior*), while a dense hedge of Dogwood (*Cornus* sp.) forms the western boundary. Lands closer to the M6 to the south, as well as those adjacent to the Cross River, and southwest of the Greener Ideas site, comprise tall Wet grassland (GS4), with Meadowsweet, Great Willowherb (*Epilobium hirsutum*), Iris, False Oat-Grass and Reed Canary Grass. The areas fringing the Railway line are scrubby in patches with frequent Gorse.

(BL3) Buildings and artificial surfaces

These areas refer to road crossings and hardstanding areas of tracks and existing pathways along the R446 regional road and L2027 local road (Chainage 015 to 1900). All roads and footpaths are classed as Buildings and artificial surfaces (BL3).

Invasive Species

A large infestation of Japanese knotweed (*Reynoutria japonica*) was recorded growing on the property of the cottage located on the R446 (ITM 600804 739020; Chainage 450) adjacent to the proposed pipe laying works. It was apparent that the JKO has been previously treated with herbicide resulting in reduced growth, excepting for a single mature stand which appears to have been missed in the original herbicide treatment. Despite this

treatment, many small plants were recorded in the vicinity of the road boundary wall outside the planning application boundary.

Otters

A report on Mammals including Otters was prepared by O'Donnell Environmental and is presented separately as part of the S39A application package for the Project. The main findings of the report are summarised as follows.

The desk study aspect of the Otter Survey revealed two relevant internationally designated sites with Otter listed as a qualifying interest: Lough Ree SAC (0440) located 2.64km northeast and River Shannon Callows SAC (0216) located 1.55km east of the proposed development. Both sites are connected hydrologically via the Cross River and it is considered likely that individuals associated with these designated sites utilise the area surrounding the proposed development at least occasionally.

No evidence of Otter holts was identified along the watercourses surveyed as part of the proposed development. The primary watercourse, the Cross River, is largely characterised by steep banks comprised of rank grassland and dense vegetation extending right up to the riverside. Additionally, the Cross River appears to periodically inundate the surrounding area during periods of inclement weather. Considering the riverbank structure and periodic high-water levels resulting in inundation of the riverbanks, the portion of the Cross River surveyed as part of the proposed development is considered generally unsuitable for the formation of Otter holts.

Multiple mammal tracks were identified along the mammal underpass associated with the M6 bridge and a drainage channel associated with the Cross River, of which a portion were attributed to Otter. Scat in the form of Otter spraint was identified in two locations: along the mammal underpass and along the Cross River, both of which are located outside the development boundary.

Despite the lack of evidence of underground dwellings attributed to Otter, the Cross River is considered to provide suitable foraging and commuting habitat for Otter and the species is likely to regularly occur here.

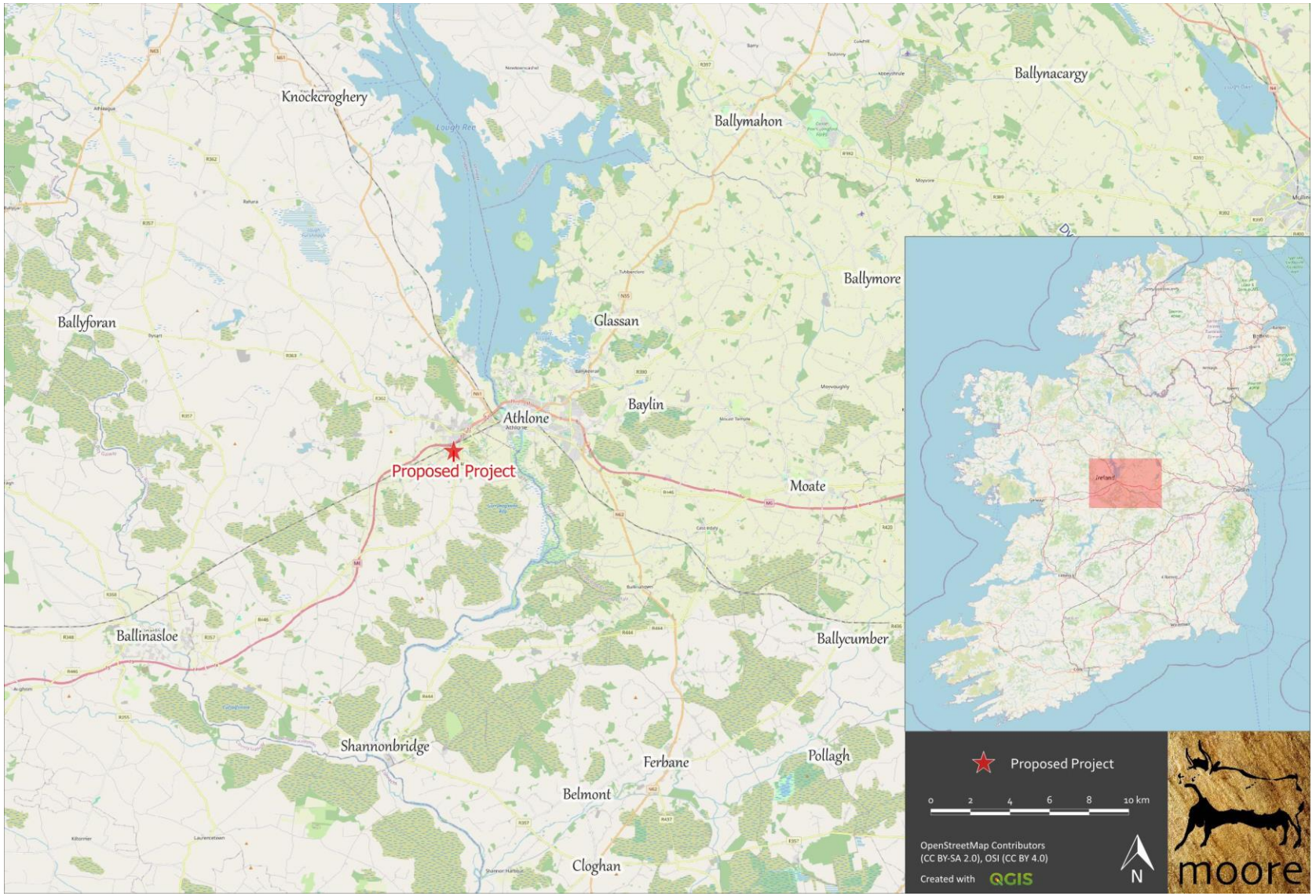

Figure 1. Showing the Proposed Development location to the southwest of Athlone in Co. Roscommon.

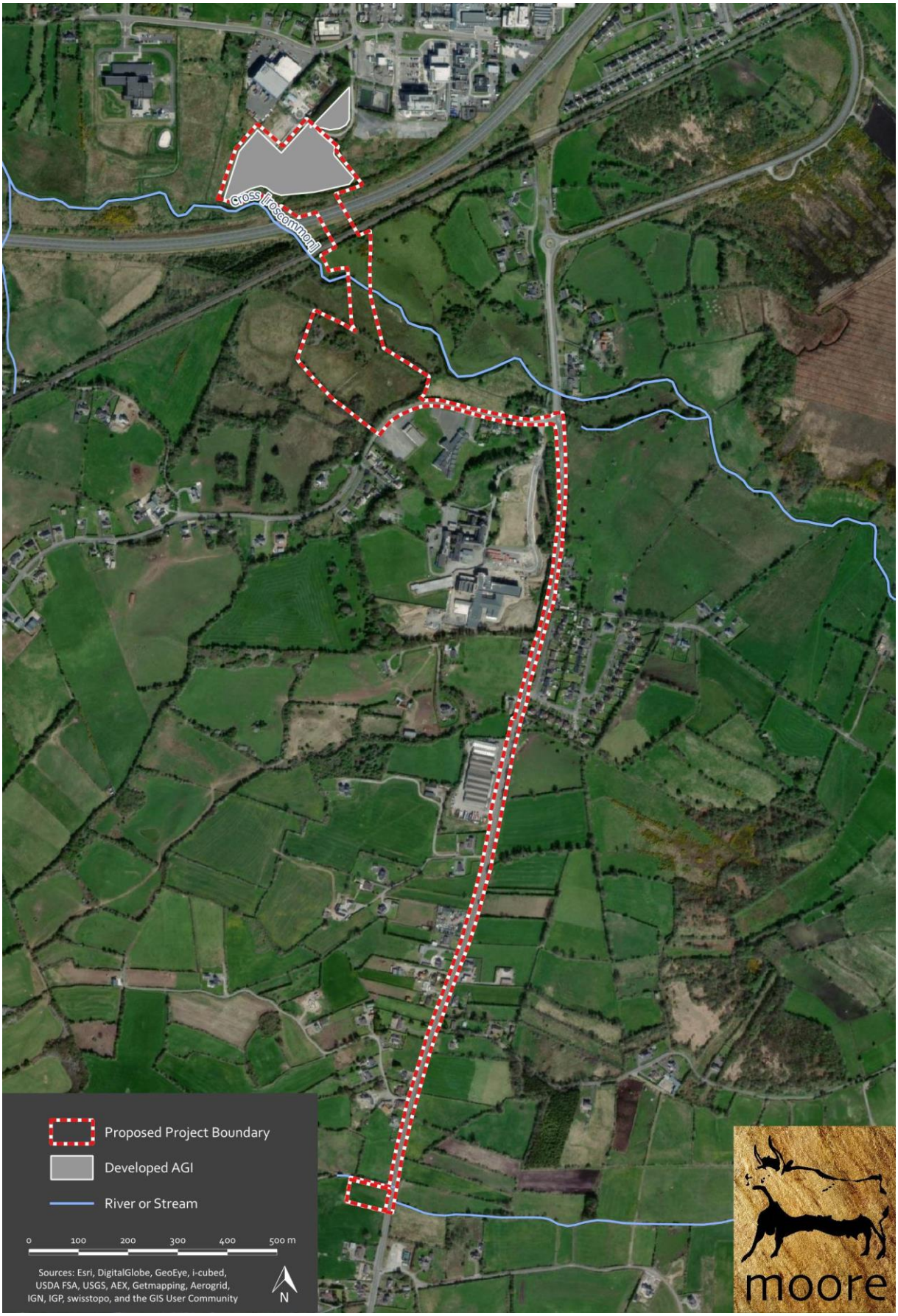

Figure 2. Showing the Proposed Development boundary on recent aerial photography.

Figure 3. Plan of the Proposed Development, northern section to the permitted Monksland AGI (Dwg Ref: 1379-01-DG-0001).

Figure 4. Showing the site plan – southern section with 'Hot Tap' tie in area (Dwg Ref: 1379-01-DG-0001-Sht1).

4. Identification of Natura 2000 Sites

4.1. Description of Natura Sites Potentially Significantly Affected

A Zone of Influence (ZoI) of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note (2021), PN01, the ZoI should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's "*Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC*" published 28 September 2021 states at section 3.1.3, that:

"Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- *any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- *any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project".*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the

movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Proposed Development's potential connectivity with European sites, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Proposed Development are listed in Table 1 and presented in Figures 5 and 6, below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 3 September 2024. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

Table 1 European Sites located within the potential Zone of Influence[3] of the Proposed Development.

Site Code	Site name	Distance (km)[4]
000216	River Shannon Callows SAC	1.55
000440	Lough Ree SAC	2.64
004096	Middle Shannon Callows SPA	1.56
004064	Lough Ree SPA	2.61

The Lough Ree SAC (Site Code 000440) and the Lough Ree SPA (Site Code 004064) both lie 2.6km to the northeast. These two sites lie upstream of Athlone and upstream of the Cross River and its tributaries, at the point where the Proposed Development will pass underneath the river. Lough Ree is in a different WFD SubCatchment (Shannon[Upper]_SC_090). There is no S-P-R connectivity between the potential effects of the proposed pipeline development and Lough Ree SAC and SPA and they are therefore considered to be outside the Zone of Influence of the Proposed development and are screened out at Stage 1 Screening.

A number of other European sites located downstream adjacent to or near the River Shannon are considered including; Pilgrim's Road Esker SAC (001776), Redwood Bog SAC (002353), River Suck Callows SPA (004097), River Little Brosna Callows SPA (004086); Lough Derg, North-East Shore SAC (002241) and Lough Derg (Shannon) SPA (004058). However, these sites are located either on terrestrial habitats (Pilgrim's Road Esker and Redwood

[3] All European sites potentially connected irrespective of the nature or scale of the Proposed Development.
[4] Distances indicated are the closest geographical distance between the Proposed Development and the European site boundary, as made available by the NPWS.

Bog) with no pathway or at such a large distance downstream, over 25 river km to the River Suck Callows and over 60 river km to Lough Derg, that they are considered outside the zone of influence of the Proposed development.

The nearest European sites to the Proposed Development are the largely overlapping River Shannon Callows SAC (Site Code 000216) and the Middle Shannon Callows SPA (Site Code 004096), 1.55km directly to the east.

The pipeline will exit the Hot Tap tie-in and cross over a minor water course which is culverted under the adjacent R446 at Crannagh (Chainage 015 to 020). The water course continues as an open drainage ditch leading to the Newtownflood Stream (EPA code 26N15) c. 1.2 river km downstream, flowing a further 825m to the Cross River plus 470m to the SAC/SPA boundary; a total distance of c.2.5 river km.

The proposed underground transmission gas pipeline crosses a number of field boundaries with associated hedgerows and the most notable water course being the Cross River (Chainage 2155 to 2215), the Cross River ultimately discharges to the River Shannon approximately 3.5 river kilometres downstream. Smaller drainage ditches are also considered with regard to connectivity to the Cross River. On the northern side of the Motorway the pipeline will cross an underground closed piped tributary of the Cross River within the Greener Ideas Facility site (Chainage 2430 to 2435), and cross through a ditch tributary of the Cross River (Chainage 2420 to 2430) using a flume method.

The distance between the crossing of the pipeline at the Cross River and the nearest European sites is c.3.15 river km downstream where the Cross River and surrounding callows are designated as part of the River Shannon Callows SAC (Site code 000216) and the Middle Shannon Callows SPA (Site code 004096).

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the Zone of influence of the Proposed Development are provided in Table 2 below.

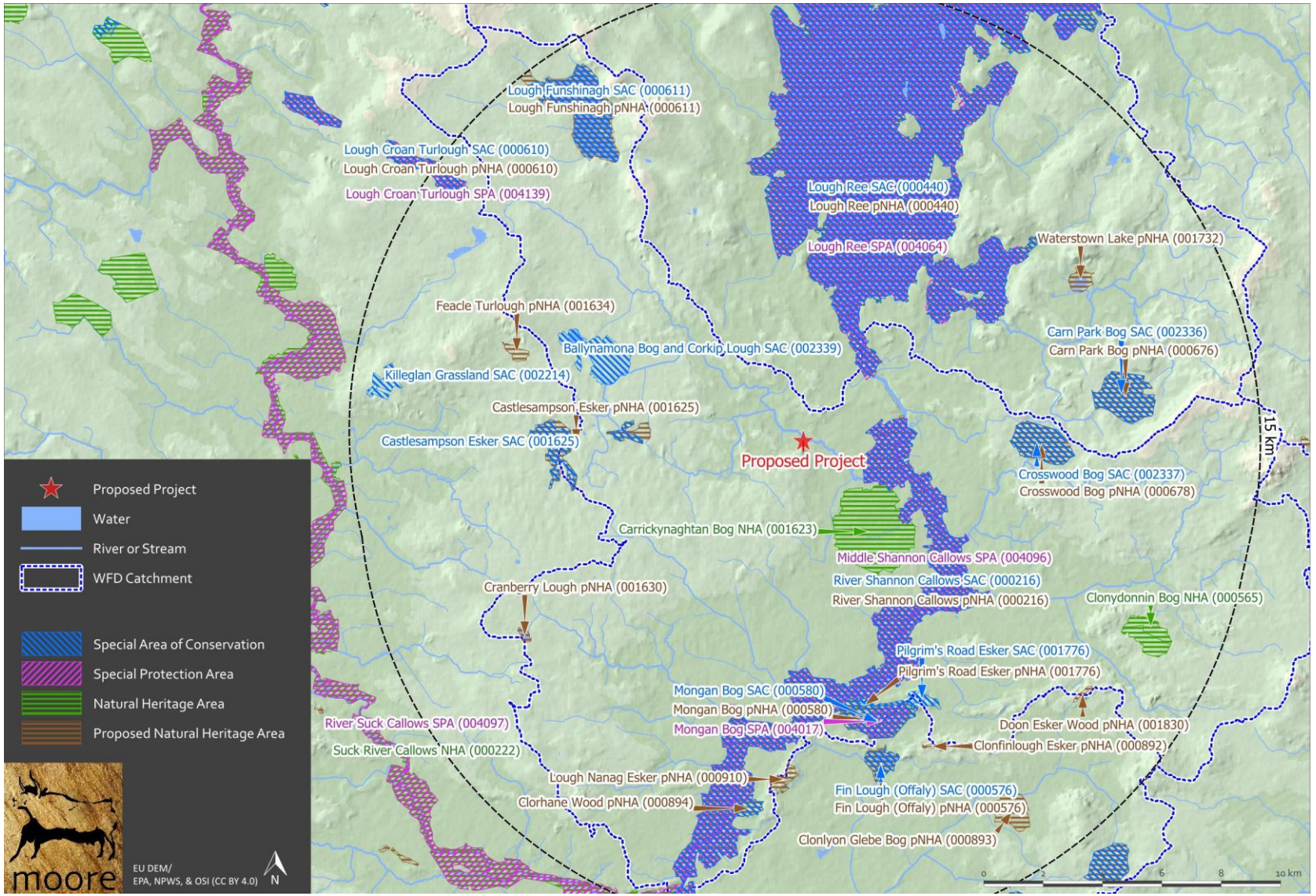

Figure 5. Showing European sites and NHAs/pNHAs within the wider Potential Zone of Influence of the Proposed Development.

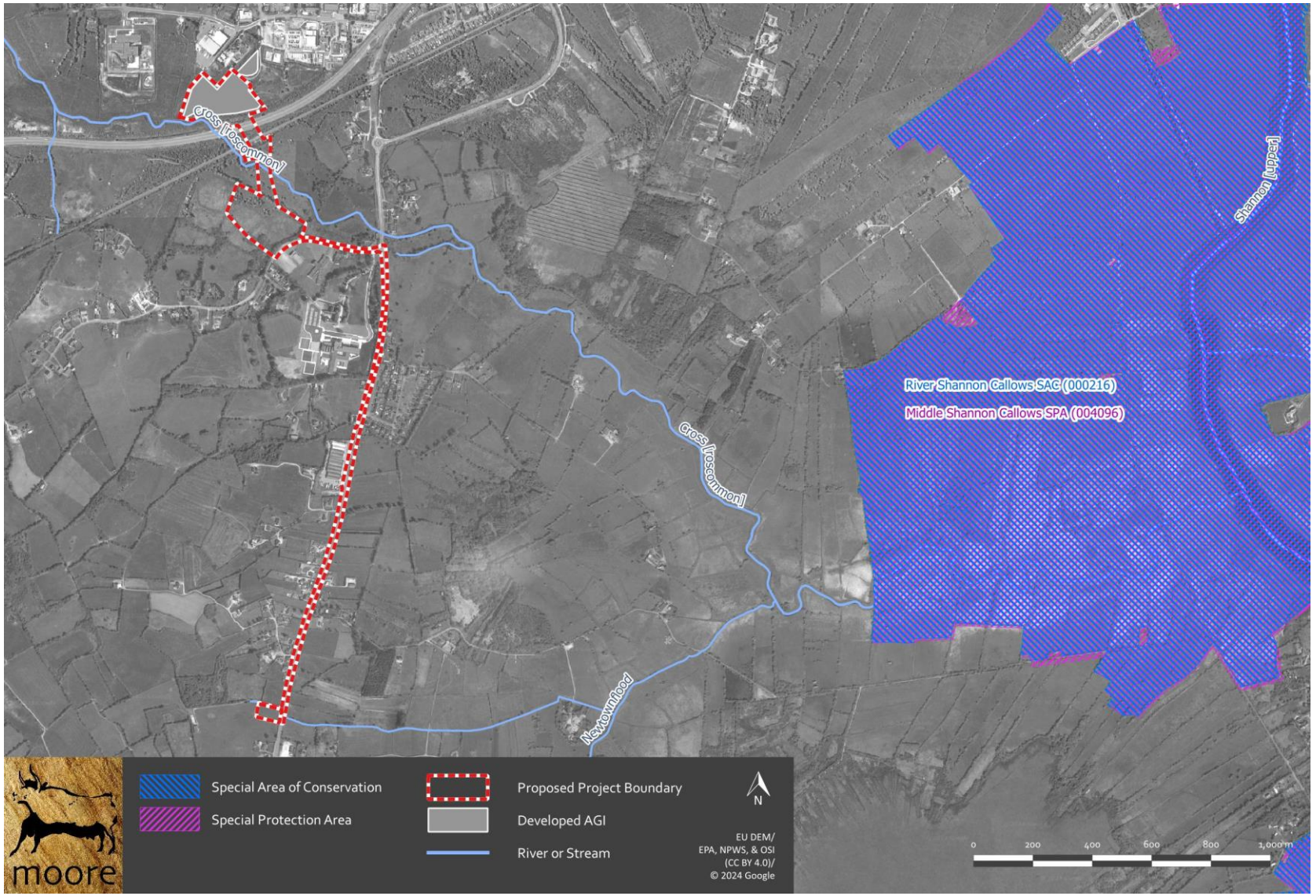

Figure 6. Detailed view of European sites in the nearer Potential Zone of Influence of the Proposed Development.

*Table 2 Identification of relevant European sites using Source-Pathway-Receptor model and compilation of information on QIs and conservation objectives. *Priority Habitats*

European Site name, Site code and Conservation Objectives	Location Relative to the Proposed Development Site	Connectivity – Source-Pathway-Receptor	Considered further in Screening – Y/N
River Shannon Callows SAC (000216) The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest: 1355 Otter *Lutra lutra* 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) 6510 Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*) 7230 Alkaline fens 8240 Limestone pavements* 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)* NPWS (2022) Conservation Objectives: River Shannon Callows SAC 000216. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.	3.15 river km downstream	The Proposed Development will require a temporary crossing of the Cross River to be constructed to facilitate works. Construction environmental management will be employed to avoid potential impacts on the Cross River leading to the River Shannon.	Y
Middle Shannon Callows SPA (004096) The overall aim of the Birds Directive is to maintain or restore the favourable conservation status of habitats and species of community interest: A038 Whooper Swan *Cygnus cygnus* A050 Wigeon *Anas penelope* A122 Corncrake *Crex crex* A140 Golden Plover *Pluvialis apricaria* A142 Lapwing *Vanellus vanellus* A156 Black-tailed Godwit *Limosa limosa* A179 Black-headed Gull *Chroicocephalus ridibundus* A999 Wetlands NPWS (2022) Conservation Objectives: Middle Shannon Callows SPA 004096. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.	3.15 river km downstream	Field surveys carried out deemed the overall lands to be unsuitable feeding and/or roosting sites for Wintering Birds, due to habitat conditions being dominated by semi-improved agricultural grassland or subject to relatively high levels of grazing disturbance. The Proposed Development will require a temporary crossing of the Cross River to be constructed to facilitate works. Construction management will be employed to avoid potential impacts on the Cross River	Y

European Site name, Site code and Conservation Objectives	Location Relative to the Proposed Development Site	Connectivity – Source-Pathway-Receptor	Considered further in Screening – Y/N
		leading to the River Shannon.	

4.2. Ecological Network Supporting Natura 2000 Sites

A concurrent GIS analysis of the proposed Natural Heritage Areas (pNHA) and designated Natural Heritage Areas (NHA) in terms of their role in supporting the species using Natura 2000 sites was undertaken along with GIS investigation of European sites. These supporting roles mainly relate to mobile fauna such as mammals and birds which may use pNHAs and NHAs as ecological corridors or "stepping stones" between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account in the decision process and during the preparation of this AA Screening report.

There is no pathway to the Carrickynaghtan Bog NHA located c. 1.23km to the southeast. The other NHAs and pNHAs identified in Figure 4 are located outside the Zone of Influence, with the exception of the River Shannon Callows pNHA, which is considered under its higher conservation status as a European site.

5. Identification of Potential Impacts & Assessment of Significance

The Proposed Development is not directly connected with or necessary to the management of the sites considered in the assessment and therefore potential impacts must be identified and considered.

5.1. Assessment of Likely Significant Effects

The consideration of all potential direct and indirect impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the Proposed Development are presented in Table 3.

Table 3 Assessment of Likely Significant Effects.

Identification of all potential direct and indirect impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the project.	
Impacts:	**Significance of Impacts:**

Construction phase e.g. Vegetation clearance Demolition Surface water runoff from soil excavation/infill/landscaping (including borrow pits) Dust, noise, vibration Lighting disturbance Impact on groundwater/dewatering Storage of excavated/construction materials Access to site, haul roads Pests	The Proposed Development will require a temporary crossing of the Cross River and the creation Temporary Working Areas within 10m of the river to be constructed to facilitate and contain works effectively. Construction management will be employed to avoid potential impacts on the Cross River leading to the River Shannon. The construction activity associated with drilling under the Cross River and Railway and Motorway will require surface water management to prevent pollution and degradation of habitats from a chemical spill or smothering from excessive suspended solids. A spread of Japanese Knotweed located in the front plot of a derelict cottage on the R446 adjacent to the pipeline route was identified by the author and an Invasive Species Management Plan has been prepared to address the interaction of the pipeline at this point. There were no other records of Invasive Species associated with the Proposed Development.
Operational phase e.g. Direct emission to air and water Surface water runoff containing contaminant or sediment Lighting disturbance Noise/vibration Changes to water/groundwater due to drainage or abstraction Presence of people, vehicles and activities Physical presence of structures (e.g. collision risks)	None
Describe any likely changes to the European site:	
Examples of the type of changes to give consideration to include: Reduction or fragmentation of habitat area Disturbance to QI species Habitat or species fragmentation	None. The Proposed Development site is not located adjacent or within a European site, therefore there is no risk of habitat loss or fragmentation or any effects on QI habitats or species directly. However, records of Otters during fieldwork to the north of the proposed bridge crossing on the Cross

Reduction or fragmentation in species density Changes in key indicators of conservation status value (water quality etc.) Changes to areas of sensitivity or threats to QI Interference with the key relationships that define the structure or ecological function of the site	River confirm the presence of otters on the Cross River. Potential negative effects could include pollution and degradation of habitats from a chemical spill or smothering from excessive suspended solids of supporting habitats, and food availability within the zone of influence of the Proposed Development . The potential for negative effects is uncertain in the absence of construction management.

5.2. Assessment of Potential In-Combination Effects

In-combination effects are changes in the environment that result from numerous human-induced alterations. In-combination effects can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the Proposed Development, other relevant plans and projects in the area must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination effects of the Proposed Development with other such plans and projects on European sites.

A review of the National Planning Application Database was undertaken. The database was then queried for developments granted planning permission within 300m of the Proposed Development within the last three years, these are presented in Table 4 below.

Table 4.Planning applications granted permission in the vicinity of the Proposed Development.

Planning Ref.	Description of development	Comments
21405	Permission for a ground floor extension to existing access corridor with extended roof canopy to set back north façade, alterations to existing west and south façade windows at ground level for additional access and escape doors, external escape stairs and ladder to the south façade, alteration to existing high level windows on the south facade to be replaced with air intake louvres, and provision of exhaust flues and enclosure to the existing roof, and all associated site works at	The potential for in-combination effects will be assessed at Stage 2 AA.
21444	Permission to construct a single storey side extension onto existing dwelling house comprising of a "granny flat" unit and all associated site works at	The potential for in-combination effects will be assessed at Stage 2 AA.
21499	Permission to construct a single storey extension to include an additional classroom and 2 No. SET rooms with a link corridor and all associated site development works at	The potential for in-combination effects will be assessed at Stage 2 AA.
22199	Permission to construct a dwelling house, domestic garage and septic tank with percolation area and associated site works at	The potential for in-combination effects will be assessed at Stage 2 AA.

Planning Ref.	Description of development	Comments
222	Permission for development consisting of the provision of a new warehouse with ancillary accommodation and a loading bay. The building will be set mainly at single level - ground floor (905 sq.m) except small technical mezzanine floor (85 sq.m), total building floor area of 990 sq.m The maximum parapet height for proposed building shall not exceed 20 meters above ground level. Development will include also all associated infrastructure, road works, additional carparking associated with development and removal of existing temporary modular office accommodation (Environmental Impact Statement (EIAR) accompanies this application) at	The potential for in-combination effects will be assessed at Stage 2 AA.
22234	Permission for development consisting of revisions and alterations of the permitted development of a gas fired power plant under Planning Register Reference PD/18/256. The revisions and alterations relate to the design of the gas fired power plant and will include a change to the electrical output of the power plant to 102MW with associated balance of plant, equipment and buildings including: an engine hall building with a height of 16.9m, (comprising 5 no. gas engines and ancillary infrastructure), an electrical annex building with a height of 18.7m; A workshop building with a height of 5.1m; An administrative building with a height of 6.1m; A tank farm building with a height of 5.7m; A security hut with a height of 3.3m; An exhaust stack with a height of 28.0m; A gas AGI including an instrument kiosk with a height of 4.9m and an analyser kiosk with a height of 2.9m; 2 no. storage containers, each 2.6m in height, radiator coolers with height of 8.5m; Tanks including 2 X diesel oil storage tanks (volume of 1860m3 combined); SCR urea tank (73m3) ; Lube oil storage tank (3m3); Lube oil maintenance tank (26m3); Pilot oil tank (26m3); Fire water storage tank (563m3); Waste oil effluent tank (16m3); Underground surface water attenuation tank (590m3). The revised proposal will involve a revised red line site boundary to provide for drainage and other works within the adjacent roadway. The development optimises the same access permitted under PD/18/256 and includes 12 no. number parking spaces, footpaths, landscaping; fencing and all other associated site development plant and equipment and other works including surface water and foul wastewater drainage, all on site 1.8 hectares in size (A Natura Impact Statement(NIS) is submitted as part of the planning application) (Permission is sought for a period of 10 years) at	The potential for in-combination effects will be assessed at Stage 2 AA.
22301	Permission for development consisting of partial demolition to the rear of the existing dwelling; construction of a single storey extension to the rear, single storey extension to the side and proposed porch to the front with internal alterations to the existing dwelling; decommissioning of an existing septic tank and provision of a new tertiary treatment system and infiltration area; widening of the existing vehicular entrance; and all ancillary site works at Rathuil, Keelty Townland, Athlone, Co. Roscommon, in accordance with the plans submitted with the application. (Application made for development consisting of partial demolition to the rear of the existing dwelling; construction of two storey extension to the rear, single storey extension to the side and proposed porch to the front with internal alterations to the existing dwelling; decommissioning of an existing septic tank and provision of a new tertiary treatment system and infiltration area; widening of the existing vehicular entrance; and all ancillary site works) at	The potential for in-combination effects will be assessed at Stage 2 AA.
22314	Permission for an extension to the existing fire water retention pond consisting of the formation of new pond adjacent to the existing, both linked together with underground pipes, pump cabinet, perimeter fencing and access gates, footpaths, and all associated site works (This	The potential for in-combination effects will be assessed at Stage 2 AA.

Planning Ref.	Description of development	Comments
	application relates to development which comprises an activity which holds an Industrial Emissions Directive Licence (Reg. NO. P0100-02)) at	
22387	Permission for alterations to existing planning permission ref number PD/22/2 to include the following - increase in size of loading dock from 18 sq.m. to 38 sq.m., alteration in parapet height of the one storey building from 6m. to 6.6m., new window on southern elevation to office, new roller shutter forklift access door and high level canopy to southern elevation, new fire escape door to eastern elevation, new enclosed fire escape stair case on southern elevation serving roof and mezzanine level to maximum height of 20m, repositioning of single storey block 2 m. to the east, internal layout alteration to single storey block, omission of electrical switch room to the north west elevation, extension of ramp to loading dock from 10m. to 16m., increase in size of mezzanine area for plant only from 85 sq.m. to 159 sq.m., additional doors to north and western elevation for maintenance access at	The potential for in-combination effects will be assessed at Stage 2 AA.
22447	Permission to erect 300.00m2 or 55.00 kWp of photovoltaic panels on the existing roof of manufacturing building with all associated site works at	The potential for in-combination effects will be assessed at Stage 2 AA.
2360042	Permission: 1. To retain as constructed shared access road 2. To construct domestic dwelling house along with domestic garage, new Treatment system and percolation area and all ancillary site development works at	The potential for in-combination effects will be assessed at Stage 2 AA.
2360212	Permission for proposed new extension to existing dwelling house, demolition of existing rear extension, proposed domestic garage and all ancillary works at	The potential for in-combination effects will be assessed at Stage 2 AA.
245	Retention Permission for development consisting of change of use of 139.7m2 single storey office Building 14 originally a dwelling house constructed prior to 1979 to its current use as an office since 2000. This application related to development which comprises an activity which holds an Industrial Direct License (Reg. No P010002) at	The potential for in-combination effects will be assessed at Stage 2 AA.

The Roscommon County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same potential Zone of Influence of the Proposed Development site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the proposed development area and surrounding townlands in which the proposed development site is located, would be avoided.

The listed developments have been granted permission in most cases with conditions relating to sustainable development by the consenting authority in compliance with the relevant Local Authority Development Plan and in compliance with the Local Authority requirement with regard to the Habitats Directive. The development cannot have received planning permission without having met the consenting authority requirement in this regard.

There are no predicted in-combination effects given that it is predicted that the Proposed Development will have no effect on any European site.

Any new applications for the Proposed Development area will be assessed on a case by case basis *initially* by Roscommon County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

6. Conclusion

The Lough Ree SAC (Site Code 000440) and the Lough Ree SPA (Site Code 004064) both lie 2.6km to the northeast. These two sites lie upstream of Athlone and upstream of the Cross River and its tributaries, at the point where the Proposed Development will pass underneath the river and are considered to be outside the Zone of Influence of the Proposed development and are screened out.

A number of other European sites located downstream adjacent to or near the River Shannon are considered including; Pilgrim's Road Esker SAC (001776), Redwood Bog SAC (002353), River Suck Callows SPA (004097), River Little Brosna Callows SPA (004086); Lough Derg, North-East Shore SAC (002241) and Lough Derg (Shannon) SPA (004058). However, these sites are located either on terrestrial habitats (Pilgrim's Road Esker and Redwood Bog) with no pathway or at such a large distance downstream, over 25 river km to the River Suck Callows and over 60 river km to Lough Derg, that they are considered outside the zone of influence of the Proposed development.

The nearest European sites to the Proposed Development are the largely overlapping River Shannon Callows SAC (Site Code 000216) and the Middle Shannon Callows SPA (Site Code 004096), 1.55km directly to the east.

The Proposed Development will require a temporary crossing of the Cross River to be constructed to facilitate works and construction elements in this general area will require significant sediment and run-off control with the river being the key sensitive receptor in all cases.

In the absence of mitigation measures during construction to control potential pollution of surface water, in particular with regard to the construction and operation of a temporary crossing of the Cross River, the potential effect on the River Shannon Callows SAC and the Middle Shannon Callows SPA is uncertain.

It cannot be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on the following European sites and they are brought forward to Stage 2 AA

- River Shannon Callows SAC (Site code 000216)
- Middle Shannon Callows SPA (Site code 004096)

Construction management will be employed to avoid potential impacts on the Cross River leading to the River Shannon, and it is concluded that in line with Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', a Natura Impact Statement must be prepared for the purpose of Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act, 2000, as amended.

A final determination will be made by the competent authority in this regard.

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2007) 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 interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

European Commission (2018) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Brussels 28.9.21.

European Commission (2021) Guidance document on the strict protection of animal species of Community interest under the Habitats Directive, Brussels 12.10.21.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2024) National Parks and Wildlife Service Metadata available online at https://www.npws.ie/maps-and-data

Office-of-the-Planning-Regulator (2021) Appropriate Assessment Screening for Development Management OPR Practice Note PN01. March 2021