AtkinsRéalis

Environmental Impact Assessment Report (EIAR) Volume 2 – Chapter 1 – Introduction and Methodology

Uisce Éireann

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0089328DG0033

BALLINA AND LOUGH TALT WATER SUPPLY UPGRADE

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Abbreviations

Abbreviation	Term
AA	Appropriate Assessment
ACP	An Coimisiún Pleanála
BPR	Break Pressure Tank
CRU	Commission for Regulation of Utilities
EC	European Community
EEC	European Economic Community
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
EU	European Union
NIS	Natura Impact Statement
SAC	Special Area of Conservation
SID	Strategic Infrastructure Development
SPA	Special Protection Area
UÉ	Uisce Éireann
WFD	Water Framework Directive
WRZ	Water Resource Zone
WTP	Water Treatment Plant
ZoI	Zone of Influence

Glossary

Term	Meaning
Appropriate Assessment (AA)	Assessment of potential effects of a project on European Sites and their conservation objectives.
Booster Pumping Station	Facility used to increase water pressure for transfer through a pipeline network.
Break Pressure Tank	Facility used to reduce hydrostatic pressure in a water supply system.
Candidate Special Area of Conservation (cSAC)	Site proposed for protection under the Habitats Directive.
Candidate Special Protection Area (cSPA)	Site proposed for protection under the Birds Directive.
Directive 2014/52/EU	European directive amending environmental impact assessment requirements.
Drinking Water Directive	EU legislation establishing standards for water intended for human consumption.
EIAR	Environmental Impact Assessment Report documenting environmental effects and mitigation measures.
Environmental Impact Assessment (EIA)	Process for identifying, evaluating and reporting environmental effects of a project.
Environmental Protection Agency (EPA)	Irish environmental regulator responsible for environmental compliance and water quality oversight.

European Site	Protected site designated under the Habitats or Birds Directives.
Habitats Directive	European legislation protecting habitats and species of conservation importance.
Non-Technical Summary	Simplified summary of an EIAR
Special Area of Conservation (SAC)	Protected site designated under the Habitats Directive.
Special Protection Area (SPA)	Protected site designated under the Birds Directive.
Strategic Infrastructure Development (SID)	Development of strategic economic or social importance submitted directly to ACP.
Water Framework Directive (WFD)	European directive requiring protection and improvement of water body status.

1. Introduction and Methodology

1.1 Purpose of Report

This Environmental Impact Assessment Report (EIAR) presents an assessment of the likely significant effects and identifies applicable mitigation measures in respect of the proposed Ballina and Lough Talt Water Supply Upgrade (hereafter referred to as the 'Proposed Development'). The EIAR follows the requirements of the Directive 2014/52/EU (the EIA Directive) on the effects of certain public and private projects on the environment. This EIAR will support a planning application for the Ballina and Lough Talt Water Supply Upgrade, a Strategic Infrastructure Development, directly to An Coimisiún Pleanála (ACP).

1.2 Proposed Development Overview

1.2.1 Site context

The Proposed Development is needed to provide a safe and reliable water supply to Ballina, Lough Talt and surrounding areas, while also supporting future growth and development in the area.

The Proposed Development will comprise upgrades to the capacity of the water infrastructure in Ballina and Lough Talt supply networks in excess of two million cubic meters per annum. More detail is provided in the Strategic Infrastructure Development (SID) Engineer's Report submitted with this application. The Proposed Development will facilitate an extension to the Ballina network to areas currently served by the Lough Talt Water Supply Scheme, where the source is not sustainable in the long-term.

The Proposed Development will deliver a number of key benefits to the existing water infrastructure and network, including:

- Addressing both current and future water supply challenges in the region;
- Enabling future growth and development in the community and cater for an expected increase in population in the area;
- Enabling the cessation of abstraction from Lough Talt, helping to restore natural lake levels and deliver significant ecological benefits for local habitats and wildlife; and
- Improving the resilience of the network and enhance long-term security of supply across North Mayo and South Sligo.

1.2.1.1 Ballina Water Resource Zone

The Ballina WRZ currently serves 22,631 people (as of June 2026 – CSO, 2026) from two WTPs and is forecast to have a shortfall in potable water supply capacity in future due to factors including population growth, non-domestic/industrial users and tourism (Uisce Éireann, 2023a). Potable water storage (reservoir) capacity in the Ballina RWSS network is also currently below optimal volumes to ensure security and resilience of supply to the area. In addition, the existing trunk main network between Lisglennon WTP and Ballina town will not have sufficient capacity to transfer the necessary flows to meet the increased demand. Upgrades to the existing network including replacement of the pipeline are therefore required between the Lisglennon WTP and Ballina town.

1.2.1.2 Lough Talt Regional Water Supply

Lough Talt Regional Water Supply serves a large rural supply area in south County Sligo with a population of approximately 13,744 people (as of June 2026). Currently, raw water is abstracted from Lough Talt and then treated at facilities on an existing Lough Talt WTP site.

Irish Water applied in 2015 to Sligo County Council for planning permission to upgrade the Lough Talt Water Treatment Plant (WTP) to adhere to Environmental Protection Agency (EPA) and European standards, while maintaining an abstraction of 8,000 m^3/day. This application was refused by both Sligo County Council (Planning ref: 15/227) on 2nd February, 2016 and by An Bord Pleanála on appeal (Planning Ref: PL 21.246218) on 18th April, 2017. Sligo County Council was not satisfied that the development, in combination with the water abstraction on which it would rely, would not adversely affect the integrity of the Lough Hoe Special Area of Conservation (SAC) or the River Moy SAC, nor that the proposed mitigation measures would adequately protect against exacerbation of the effects of natural events (Sligo County Council, 2016). In arriving at its decision, Sligo County Council completed an appropriate assessment and concluded that the proposed upgrade to the existing Lough Talt WTP was likely to adversely affect the integrity of Lough Hoe SAC, as during periods of extended dry weather the lake level drops as a result of the abstraction operation, potentially endangering the protected Geyer's whorl snail. An Bord Pleanála (2017) upheld this decision.

A subsequent planning application for an upgrade to the existing Lough Talt WTP was submitted to Sligo County Council in May, 2018 (18/210) and, having evaluated alternative options, the Planning Authority considered that the only available option in the immediate short term is to upgrade the Lough Talt WTP, in order to ensure a safe water supply. (Sligo County Council, 2019). Sligo County Council completed an Appropriate Assessment on the proposed upgrade to the existing Lough Talt WTP and concluded that while the risk of adverse effects on the integrity of Lough Hoe SAC remained, the ongoing risk and danger to public health from *Cryptosporidium* and trihalomethanes (THMs) constituted an Imperative Reason of Overriding Public Interest (IROPI) under the Habitats Regulations for the upgrading of Lough Talt WTP, and to comply with EU drinking water standards. SCC granted permission in June, 2019, under Article 6(4) of the Habitats Directive IROPI process, pursuant to Section 177AB(3) of the Planning and Development Act, 2000, as amended, to upgrade the WTP and utilise it for a period of 10 years, while a new public drinking water source is developed. The permission granted in 2019 was expressly intended as an interim measure pending development of an alternative long-term water source. Accordingly, a replacement supply remains required to facilitate cessation of abstraction from Lough Talt.

1.2.2 Site Location

The Proposed Development site is located in the townlands of: Wherrew, Lisglennon, Ballinteean, Rathglass East, Derreens, Broadlands, Coonealmore, Rosserk, Coonealcauraun, Rathroeen, Culleens, Laghtadawannagh, Farrannoo, Garrankeel, Quignamanger, Quignalegan, Rathmeel, Quignashee, Ballyholan, Behy More, Corrimbla South, Carrownlabaun, Bonniconlon West, Bonniconlon East, and Drumsheen, Co. Mayo; and Knockasliggaun, Glennawoo, Largan, and Gortersluin, Co. Sligo; and Lough Conn, Co. Mayo, and Lough Talt, Co. Sligo.

An overview of the Proposed Development is presented in Figure 1-1.

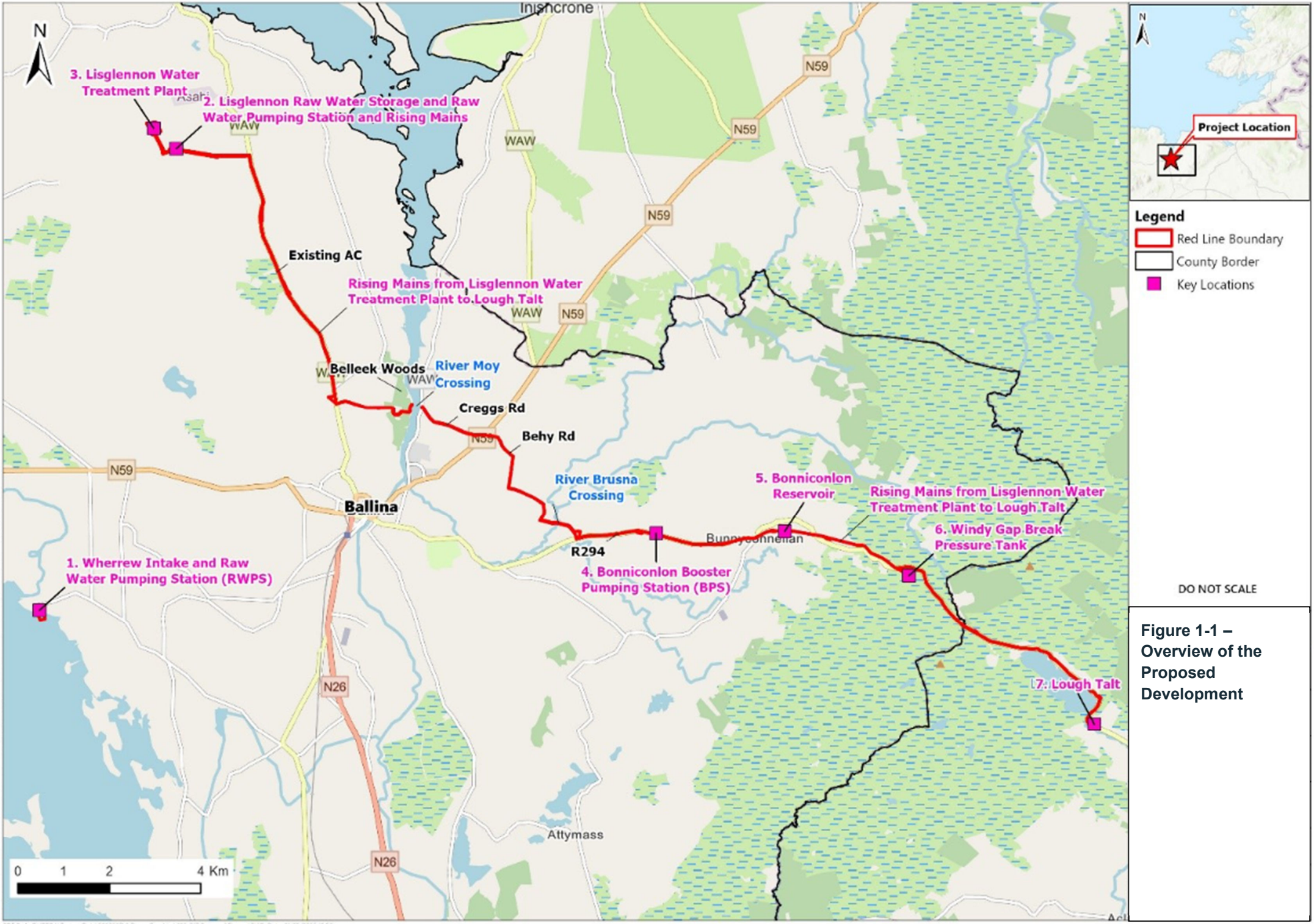


Figure 1-1 – Overview of the Proposed Development

1.2.3 Project Description

A detailed description of the Proposed Development is provided in Chapter 3 – Project Description.

The Proposed Development will consist of seven “key locations” and five discrete sections of pipeline, as follows:

- Upgrade to the existing Wherrew Raw Water Intake & Pumping Station (RWI&PS), Wherrew, Ballina, Co. Mayo;
- Upgrade to the existing Lisglennon Raw Water Storage and Pumping Station (RWS&PS), Lisglennon, Ballina, Co. Mayo;
- Proposed Pipeline A – Lisglennon RWPS to Lisglennon Water Treatment Plant (WTP);
- Upgrade to the existing Lisglennon Water Treatment Plant (WTP), Lisglennon, Ballina, Co. Mayo;
- Proposed Pipeline B – Lisglennon WTP to Existing River Moy Crossing;
- Proposed Pipeline C – Existing River Moy Crossing to Bonniconlon Booster Pumping Station (BPS);
- Proposed Pipeline D – Bonniconlon BPS to Windy Gap Break Pressure Tank (BPT);
- Proposed Pipeline E – Windy Gap BPT to Lough Talt WTP;
- Proposed Bonniconlon BPS located at Bonniconlon, Ballina, Co. Mayo;
- Proposed Windy Gap BPT located at the Windy Gap, Ballina, Co. Mayo;
- Repurposing the existing Lough Talt Water Treatment Plant (WTP), Co. Sligo;
- Proposed Treated Water Reservoir at the existing Bonniconlon Reservoir site, Ballina, Co. Mayo; and
- All permanent and temporary works, including construction compounds, access routes, pipeline corridors, and trenchless crossings.

A schematic overview of the development is shown in Figure 1-2. For ease of reference, raw water and treated water assets have been identified and shown separately.

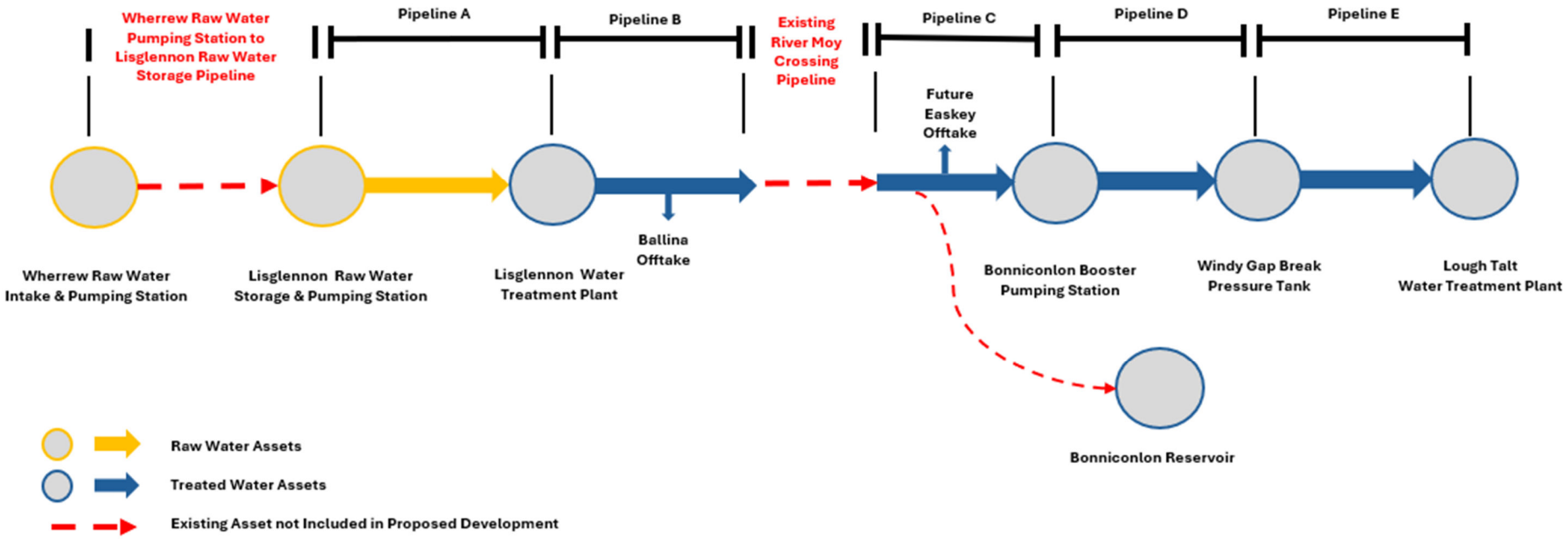


Figure 1-2 — Schematic Overview of the Proposed Development

1.2.4 Overview of the Proposed Works

A summary of the proposed works is provided below (in brief).

1.2.4.1 Wherrew RWI&PS

Works comprise retention and upgrade of existing structures, as follows:

- A new intake pipe (approx. 165 m long, approx. 1,200 mm internal diameter) and intake screen on a precast concrete base (approx. 1.75 m by 1.75 m);
- The existing intake channel will be infilled with suitable material to restore the original lakeshore profile;
- Three new cardinal markers;
- Upgrade and extension to the intake structure;
- Proposed fish return system with acoustic hoods;
- Proposed pressure and flow monitoring instrumentation and associated works;
- Upgrade of the existing MCC, including provision of an HMI panel and associated Programmable Logic Controller (PLC) modification, located within the pumping station;
- Facility to connect a temporary generator, by providing a connection point and change over switch between existing electrical supply and temporary generator, and a concrete slab for temporary generator set down; and
- Ancillary site development works, including access arrangements, hardstanding, security/fencing, surface water (stormwater) management, site lighting, landscaping.
- Temporary works during construction include:
    - A temporary raw water abstraction arrangement; and,
    - A temporary cofferdam or equivalent temporary water-retaining structure to allow the intake structure upgrade works to be undertaken in dry conditions.

The existing 700 mm twin rising mains have sufficient capacity to accommodate the anticipated increases in abstracted water, therefore no works are proposed to these existing rising mains and they do not form part of the Proposed Development.

There are no works proposed to Wherrew WTP or the pumps which supply it, therefore Wherrew WTP does not form part of the Proposed Development.

1.2.4.2 Lisglennon RWS&PS

Works comprise retention and upgrade of existing structures, as follows:

- Replacement of the existing, decommissioned pumps with two new pump sets within the pumping station;
- Replacement of the pipework and valves within the pumping station to accommodate increased future flows;
- Installation of pressure measuring instrumentation including pressure gauges and pressure transducers within the pumping station;
- Installation of new flowmeter on Pipeline A; and
- Ancillary works, primarily located within the existing hardstanding area of the pumping station, and landscaping of the site generally.

No changes are proposed to the power supply, site lighting and stormwater management.

1.2.4.3 Raw Water Pipeline: Pipeline A

Pipeline A follows the existing raw water pipeline corridor between Lisglennon RWS&PS and Lisglennon WTP, described above.

The following upgrades will be undertaken:

- A new raw water pipeline, approx. 630 mm internal diameter, will be installed parallel to the existing 300 mm raw water pipeline between Lisglennon RWS&PS and Lisglennon WTP building for a total length of approx. 1 km;
- The existing 300 mm diameter pipeline will be retained and connected to Pipeline A through strategically located cross-connections, allowing the pipeline to serve as a maintenance bypass during planned outages or maintenance activities; and,
- Ancillary pipeline infrastructure, including valves, marker posts, fittings and associated chambers, will be installed as required to facilitate the operation, maintenance and identification of Pipeline A.

No watercourse crossings or other connections have been identified as being required along the route of Pipeline A.

1.2.4.4 Lisglennon WTP

Lisglennon WTP will be upgraded to provide increased treatment capacity, improved process resilience and enhanced operational control within the existing WTP site. The proposed upgrades will integrate retained existing assets with new treatment, storage, chemical dosing, residuals management, mechanical, electrical, instrumentation, control and automation infrastructure. The upgraded WTP will support the transfer of treated water to the wider Ballina and Lough Talt supply areas and will be operated in accordance with Uisce Éireann requirements for drinking water quality, asset resilience, health and safety, environmental protection and maintainability.

The proposed upgrades have been developed to provide a robust treatment process for the raw water supply from Lough Conn, with additional treatment stages, increased process redundancy, enhanced treated water storage and upgraded residuals handling.

The proposed works at Lisglennon WTP will include:

- Construction of new and upgraded coagulation, flocculation and clarification infrastructure;
- Provision of additional rapid gravity filtration capacity;
- Introduction of granular activated carbon filtration as a secondary filtration stage;
- Construction of a new treated water storage reservoir, to operate in conjunction with the retained existing treated water reservoir;
- Construction of new residuals management infrastructure, including washwater equalisation, washwater settlement, sludge balancing, sludge holding and dewatering facilities;
- Provision of new process buildings, including filter gallery buildings, soda ash dosing building, pump station and UV building, and sludge dewatering building;
- Provision of new electrical infrastructure, including an ESB medium voltage substation, control systems, telemetry and associated ducting;
- Provision of solar PV infrastructure to supplement site power demand;
- Ancillary works, including:
  - upgrades to internal access roads, hardstanding, drainage, fencing, lighting and site security;

- decommission of the existing septic tank and its replacement with new wastewater treatment system with percolation area; and,
- landscaping.

Changes to the treatment process includes:

- Provision of new chlorine contact tanks and associated disinfection infrastructure;
- Upgrades to pH correction, alkalinity correction, fluoridation and chemical dosing systems;
- Enhanced coagulation, flocculation and clarification capacity;
- Increasing primary filtration (Rapid Gravity Filtration (RGF)) capacity;
- Introducing second stage filtration through Granular Activated Carbon (GAC) filters;
- Increasing disinfection capacity;
- Increasing pH correction capacity of the final treated water;
- Increasing treated water storage capacity; and,
- Increasing residual management capacity.

Upgrade of the Lisglennon WTP will include new infrastructure, repurposing of existing infrastructure and ancillary works, as follows:

- Retained and upgraded infrastructure:
  - Existing WTP;
  - Upgrades to existing flocculation tank;
  - Existing clarifier tanks;
  - Existing rapid gravity filters and building;
  - Existing reservoir tank;
  - Existing dewatering building;
  - Existing picket fence thickener; and,
  - Existing chemical storage tanks – fluorine.
- New structures
  - Proposed flash mixing tank;
  - Proposed new flocculation tank;
  - Proposed clarifier tanks;
  - Proposed rapid gravity filters and building;
  - Proposed clear water tank;
  - Proposed pumping station and future UV building;
  - Proposed GAC filters and building;
  - Proposed soda ash and dosing building;
  - Proposed chlorine contact tank;
  - Proposed reservoir tank;
  - Proposed used washwater equalisation tank;
  - Proposed used washwater settlement tank;
  - Proposed filtrate and supernatant return pumping stations, inside existing dewatering building;
  - Proposed dewatering building;
  - Proposed sludge pumping station;

- Proposed sludge balancing tank;
- Proposed sludge holding tank;
- Proposed chemical storage tanks – one new tank and two replacements of existing sodium hypochlorite bulk storage;
- Proposed chemical storage tanks – alum;
- Proposed chemical storage tanks – sulphuric acid (in repurposed alum tanks);
- Proposed drain down pumping station and storage tank;
- Proposed wastewater service return pumping station;
- Proposed wastewater treatment system and percolation area;
- Proposed ESB MV substation building;
- Temporary generator plinth;
- Temporary mobile dewatering unit set down area;
- Proposed weigh bridge;
- Decommissioning of the existing septic tank and its replacement with new wastewater treatment system with percolation area;
- Installation of solar panels; and,
- Ancillary site development works, including upgrades to internal access roads, temporary generator plinth, mobile dewatering unit set down area, weighbridge, hardstanding, drainage, fencing, lighting, site security and landscaping.

1.2.4.5 Treated Water Pipelines

The proposed works for each section of the treated water pipelines are as follows:

- Pipeline B – Lisglennon WTP to Existing River Moy Crossing:
  - New pipeline, approx. 710 mm diameter, from Lisglennon WTP to Junction R314 and Belleek Rd;
  - New pipeline, approx. 560 mm diameter, from Junction R314 and Belleek Rd to Existing River Moy Crossing;
  - Tie in with the existing watermain to the west of the Existing River Moy crossing;
  - Transfer of a number of supply connections from the existing network to the new trunk main, including provision of flowmeters connected to the telemetry system;
  - Connection to existing Ballina Offtake;
  - Abandon existing 400 mm to 500 mm diameter trunk main between Lisglennon WTP and Ballina Town; and
  - Abandon existing 350 mm mains between the R314 and Quay Road.
- Pipeline C – Existing River Moy Crossing to Bonniconlon BPS Trunk Main:
  - Tie in with the existing watermain to the east of the Existing River Moy crossing;
  - New pipeline, approx. 500 mm to 560 mm diameter, from River Moy Crossing to Bonniconlon BPS; and
  - New offtake to facilitate a future connection to Lough Easkey Regional Water Supply Scheme (RWSS) will be provided at the Creggs Road and N59 junction.
- Pipeline D – Bonniconlon BPS to Windy Gap BPT Trunk Main:
  - New pipeline, approx. 500 mm to 560 mm diameter, from the new Bonniconlon BPS to Windy Gap BPT on the R294 / L51172 / L51357.
- Pipeline E – Windy Gap BPT to Lough Talt WTP Trunk Main:

- New pipeline, approx. 450 mm diameter, from Windy Gap BPT to the existing Lough Talt WTP on the R294.

Ancillary pipeline infrastructure, including valves, fittings, marker posts, flowmeters, washout/scour arrangements, air valves, chambers, manholes and inspection chambers, will be installed as required to facilitate the operation, monitoring, maintenance, flushing, scouring and identification of the treated water pipeline system.

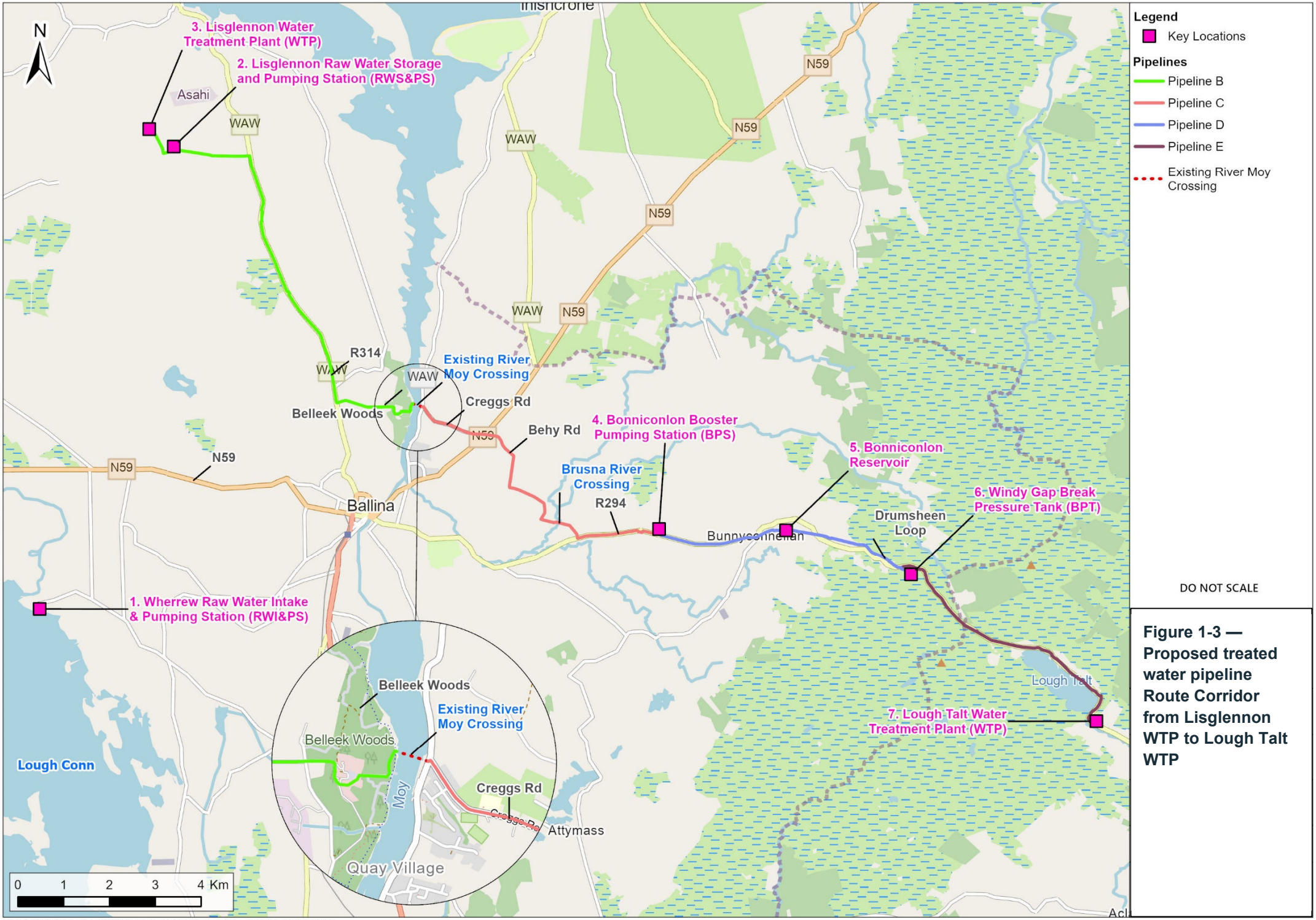


Figure 1-3 — Proposed treated water pipeline Route Corridor from Lisglennon WTP to Lough Talt WTP

1.2.4.6 Bonniconlon BPS

A new BPS will be constructed at Bonniconlon to transfer the full allotment of flow to Lough Talt WTP and will consist of:

- A new 320 kW booster pumping station (approx. 150 m^2, approx. 8 m tall) with pumping area, control room and welfare facilities, noise proofing by means of thick walls and sound-proofing measures on doors and windows;
- Two surge vessels (approx. 20 m^3 each);
- ESB substation (approx. 35 m^2, 3 m tall) with dedicated fence and entrance;
- A new permanent standby generator;
- Provision of solar PV infrastructure to supplement site power demand; and
- Installation of new flowmeter and associated works;
- Ancillary site development works, including access, fencing, scour management, storm water management including pond, wastewater management, potable water supply, site lighting and landscaping.

1.2.4.7 Windy Gap BPT

The proposed site utilises the existing access road of the Bunnyconnellan Wind Farm granted planning permission in 2013 under Planning Application Ref. 10/514 and Appeal Ref. PL16.241506. Proposed BPT is required to provide operational and transient suppression benefits (i.e. to regulate water pressure) and serve as a storage tank for the Lough Talt network. The Proposed Development will consist of:

- A new BPT with a storage capacity of approx. 80 m^3;
- A new scour extraction kiosk and a new control kiosk;
- Associated inlet pipe (Pipeline D), outlet pipe (Pipeline E), overflow pipe and scour line;
- A new Precast Cement Concrete inspection/collection chamber approx. 900 mm diameter;
- Associated works including underground flowmeter chambers, valve chambers, pipework; and,
- Ancillary site development works, including access arrangements, hardstanding, surface water management, site lighting, fencing, security and landscaping.

1.2.4.8 Lough Talt WTP

The existing Lough Talt site will be repurposed as part of the Proposed Development. The existing storage at Lough Talt WTP is limited and hence a new treated water reservoir with increased storage is required to improve water security and water quality for the Lough Talt RWSS area. As part of repurposing of Lough Talt WTP, new infrastructure, repurposing of existing infrastructure, retention of existing infrastructure, removal and decommissioning of existing redundant infrastructure and ancillary works are proposed, as follows:

- New infrastructure:
  - A new treated water reservoir of approx. 3,300 m^3 capacity and associated works; and,
  - Installation of roof mounted solar panels.
- Repurposed existing infrastructure:
  - Repurposing of existing approx. 330 m^3 chlorine contact tank as reservoir.
- Retained existing infrastructure:

    - Control building;
    - Chemical storage container, tanks and associated works; and,
    - Disinfection (chlorination and ammonia) and orthophosphate dosing infrastructure.
- Ancillary site development works, including alterations to access road, hardstanding, surface water management, wastewater management, site lighting, fencing and landscaping.

As part of site repurposing, the following existing infrastructure (items, surfaces) will be decommissioned, removed / demolished:

- Section of existing access road overlapping the footprint of the proposed new treated water storage tank;
- Containerised filtered water pumps;
- Two filter banks;
- Backwash holding tank;
- Containerised backwash pumps;
- Micro-strainer building;
- Inlet valve chamber;
- Three Kiosks;
- Chemical tank;
- Containerised UV unit;
- Raw water feed container;
- Raw water balance tank;
- UWWEST tank;
- Settlement tank;
- Sludge holding tank;
- Associated works with removal and demolition of the above; and
- Existing fenceline.

No works are proposed to the existing abstraction point from Lough Talt, which is not located within the Lough Talt WTP site or the Red Line Boundary. The cessation of abstraction from Lough Talt will be achieved by closing a control valve within the abstraction arrangement located adjacent to the carpark at Lough Talt.

1.2.4.9 Bonniconlon Reservoir

In order to improve the water security of the Bonniconlon area, a new reservoir is required. This reservoir will be fed by the existing network that supplies to Bonniconlon. While Pipeline D will be laid in the L51172 adjacent to the site, the new treated water pipeline will not supply this site.

The proposed works will consist of:

- A new reservoir approx. capacity of 185 m^3 and associated works;
- New dechlorination chamber;
- Relocation of ESB pole; and
- Ancillary site development works, including alterations to access arrangements, hardstanding, surface water management, site lighting, fencing, security, landscaping works.

1.3 Overview of the Planning Process

1.3.1 The Applicant

On the 1st of January 2014, through the Water Services Act (No. 1) 2013, Irish Water assumed statutory responsibility for the provision of public water services and management of water and wastewater investment. Irish Water's role is to provide public water and wastewater services throughout the country. Irish Water was formally renamed Uisce Éireann, effective from 1st January 2023, in accordance with the Water Services (Amendment) Act 2022 (Appointed Day) Order 2022 (S.I. No. 682 of 2022).

Uisce Éireann is the statutory body responsible for the provision of public water services and the management of water and wastewater investment in Ireland. It is responsible for ensuring the delivery of safe and secure drinking water supplies and the collection and treatment of wastewater in compliance with national and EU legislation. They are also responsible for investment, planning and managing capital projects. Uisce Éireann supports Ireland's social and economic growth in a sustainable manner through appropriate investment in water services and strives to protect the environment in their activities.

Uisce Éireann is regulated by the following:

- The economic regulator, the Commission for Regulation of Utilities (CRU), is charged with protecting the interests of the customer. The CRU also approves appropriate funding to enable Uisce Éireann to deliver the required services to specified standards in an efficient manner.
- The environmental regulator, the Environmental Protection Agency (EPA), sets standards and enforces compliance with EU and National Legislation for drinking water supply and wastewater discharge to water bodies. The EPA liaises with the Health Services Executive in matters of public health.

1.3.2 Strategic Infrastructure Development

The Planning and Development Act 2000 as amended (the Act) includes provisions for developments which are of strategic economic or social importance which would contribute significantly to the fulfilment of any of the objectives of the National Planning Framework or any regional spatial economic strategy of an area. These are listed in the seventh Schedule and are defined as Strategic Infrastructure Development (SID).

Under Section 37A (1) of the Act, an application for permission for any development specified in the Seventh Schedule shall, subject to Section 37A (2), be made to An Coimisiún Pleanála (previously known as An Bord Pleanála) under section 37E.

The Water Environment (Abstraction and Associated Impoundments) Act 2022 was enacted in August 2024 and expanded the classes of development within Part 3 (Environmental Infrastructure) of the Seventh Schedule of the Act to include surface water abstractions, as follows:

"*Development comprising or for the purposes of any of the following…A groundwater abstraction, artificial groundwater recharge scheme or a surface water abstraction where the annual volume of water abstracted or recharged is equivalent to or exceeds 2 million cubic metres*."

The Proposed Development, which comprises development for the purpose of abstraction in excess of the above threshold, therefore qualifies to be considered as SID.

In relation to Section 37A(2), in order to be determined to be a SID it would need to be established that a prospective development is of strategic economic or social importance which contributes significantly to the objectives of the National Planning Framework (37(2)(a)), contributes significantly to a regional spatial and economic strategy (37A(2)(b)), and/or has significant effects extending beyond the functional area of a single planning authority (37(2)(c)).

As per the requirements of Section 37B of the Act, ACP has served notice that the Proposed Development falls within the scope of paragraphs 37A(2)(a), (b), and (c), and that the Proposed Development would be a SID within the meaning of section 37A of the Planning and Development Act, 2000, as amended, and the application for permission for the Proposed Development is to be submitted directly to ACP.

1.3.3 Abstraction Licence

There is an existing abstraction licence in place from Lough Conn (Reference No. R0651-02)) for public water supply at Wherrew, Co. Mayo. In accordance with the Water Environment (Abstractions and Associated Impoundments) Act 2022, the regulation of abstractions falls under the remit of the Environmental Protection Agency (EPA). Any amendment to the abstraction licence for relevant future operational aspects of the Proposed Development will be subject to a separate consenting process.

1.3.4 Appropriate Assessment

European Sites, for example, Special Areas of Conservation (SAC) and Special Protection Areas (SPAs) are protected by the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC) respectively. Section 177 (R) of the Planning and Development Act 2000 as amended extends the European sites to include candidate Special Areas of Conservation (cSACs) and candidate Special Protection Areas (cSPAs).

The preparation of an Appropriate Assessment (AA) by the Applicant is a key protection mechanism to consider the potential effects of a Proposed Development on the conservation status of a European Site. The AA comprises an assessment of the Proposed Development, either alone or in combination with other plans or projects, on the integrity of European Sites in view of their Conservation Objectives. An AA involves the submission of a Natura Impact Statement (NIS) as part of the SID application to ACP.

1.3.5 Water Framework Directive

Directive 2000/60/EC, the Water Framework Directive (WFD), requires all water bodies to maintain or achieve good water quality status by 2027. Any activity which is likely to have a potential effect on the water quality status of a waterbody needs to be assessed by way of a WFD assessment. A WFD assessment report is submitted as part of the SID to ACP.

1.3.6 Need for an Environmental Impact Assessment Report

Under Section 37E of the Planning and Development Act 2000, applications for which a notice under Section 37B has been served by ACP requires an EIAR to accompany the planning application. An EIAR has, therefore, been prepared for the Proposed Development.

1.3.7 Pre-Application Consultation

A pre-application consultation meeting was held with An Coimisiún Pleanála on 28th July 2025 to determine if the Proposed Development constituted SID. A further meeting was held on 3rd March, 2026.

Confirmation of the conclusion of the consultation process was received from An Coimisiún Pleanála on 19th June 2026. An Coimisiún Pleanála determined that it is of the opinion that the Proposed Development falls within the scope of paragraphs 37A(2)(a), (b) and (c) of the Planning and Development Act. The Commission also determined that the Proposed Development would be strategic infrastructure within the meaning of Section 37A of the Planning and Development Act 2000, as amended. Any application for permission for the Proposed Development must therefore be made directly to An Coimisiún Pleanála under Section 37E of the Act.

1.4 Environmental Impact Assessment Process

1.4.1 Definition of Environmental Impact Assessment

Environmental impact assessment is a support tool for the decision-making process, which helps to ensure that the consent decisions are made in the knowledge of the environmental consequences of the project. Article 1(2)(g) of the 2014 EIA Directive (2014/52/EU) states that:

Environmental impact assessment means:

(i) The preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);

(ii) The carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;

(iii) The examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;

(iv) The reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and

(v) The integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a'.

For the purposes of this environmental impact assessment report, Uisce Éireann is the 'developer' and An Coimisiún Pleanála is the 'competent authority'.

This EIAR has been prepared in accordance with Planning and Development Regulations, 2001, as amended, and with due regard to the following EIAR guidance:

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Government of Ireland, 2018);
- EPA 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA, 2022);
- 'Environmental Impact Assessment of Projects Guidance on Scoping' (Directive 2011/92/EU as amended by 2014/52/EU); and
- 'Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report' (Directive 2011/92/EU as amended by 2014/52/EU), published by the European Commission (2017).

Additionally, discipline specific best practice guidance has been consulted by each specialist for each of the relevant topics (Population & Human Health; Biodiversity; Agronomy; Landscape and Visual; Air Quality; Climate; Noise & Vibration; Traffic; Land, Soils & Geology; Water; Cultural Heritage Material Assets; Resource and Waste Management and Risk of Major Accidents and Disasters) during the preparation of the EIAR.

This EIAR includes all necessary technical studies to address the likely environmental effects of the construction and operation of the proposed water infrastructure development. The disciplines identified for inclusion in this EIAR, along with the technical content, were determined based on various Site walkover surveys, completion of an environmental scoping exercise (to inform the content and extent of matters covered in the environmental information) and consultation with statutory bodies.

1.4.2 Assessment of Effects – Evaluation Criteria

The assessment of the effects of the Proposed Development on the environment has been undertaken in accordance with best practice, legislation and guidance. In the assessment of significance, the magnitude of the change in baseline conditions and the sensitivity of the resource and/or receptor(s) has been taken into consideration.

The EPA's 'Guidance on the Information to be Contained in an Environmental Impact Assessment Report' (2022) sets out criteria to determine the significance of an effect. Definitions of effects, taken from the abovementioned EPA Guidance are set out in Table 1-1. Some sections of the EIAR may use alternative terms to describe effects and these will be highlighted to the reader in the relevant section.

Table 1-1 — Definitions used to Describe Effects (EPA, 2022)

Description of effects		
Quality of Effect	Positive Effects	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error
	Negative/Adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Classification	Imperceptible	An effect capable of measurement but without significant consequences.
	Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.

	Description of effects	
	Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
	Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
	Profound Effects	An effect which obliterates sensitive characteristics.
Magnitude	Extent	Describe the size of the area, the number of sites and the proportion of a population affected by an effect
	Context	Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability	Likely	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Frequency	Momentary Effects	Effects lasting from seconds to minutes.
	Brief Effects	Effects lasting less than a day.
	Temporary Effects	Effects lasting less than a year.
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years.
	Long-term Effects	Effects lasting fifteen to sixty years.
	Permanent Effects	Effects lasting over sixty years
	Reversible Effects	Effects that can be undone, for example through remediation or restoration.
	Frequency of Effects	Describe how often the effect will occur (once, rarely, occasionally, frequently,

Description of effects		
		constantly – or hourly, daily, weekly, monthly, annually).
Types of Effects	Indirect Effects (a.k.a. Secondary or Off-site Effects)	Effects on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative Effects	The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
	'Do-nothing Effects'	The 'do-nothing' alternative is a general description of the evolution of the key environmental factors of the site and environs if the proposed project did not proceed.
	Indeterminable Effects	When the full consequences of a change in the environment cannot be described.
	Irreversible Effects	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic Effects	Where the resultant effect is of greater significance than the sum of its constituents.

The definitions of significance of an effect are presented graphically in Figure 1-4.

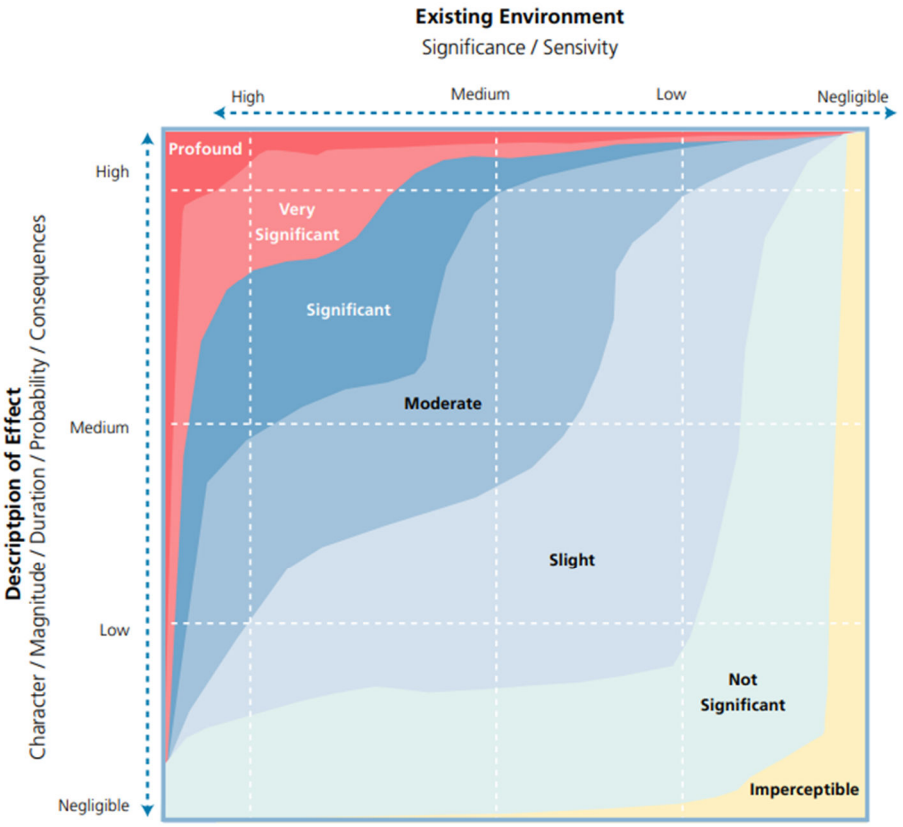


Figure 1-4 — Description of Effects (EPA, 2022)

1.4.3 Mitigation and Monitoring

In accordance with Annex IV(7) of the EIA Directive, an EIAR should include a '*description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases*.'

Mitigation can be implemented by avoidance, prevention and reduction, and is either primary (embedded) or secondary:

- Primary (embedded): these are measures adopted into the design to avoid, prevent or reduce potential negative or adverse effects on the environment; and
- Secondary: these are additional measures that are not incorporated into the design and are implemented to further reduce or offset significant negative or adverse effects on the environment. These are typically implemented via management plans.

In limited circumstances, it may be necessary to offset significant negative or adverse effects, that result in an overall reduction of environmental effect, by compensation, however this would only be applied in exceptional circumstances.

Monitoring may be required to demonstrate compliance with the proposed mitigation measures or validate the conclusions of the EIAR.

Mitigation and monitoring identified in this EIAR to avoid, prevent or reduce potential negative or adverse effects on the environment are set out in each topic-specific chapter and summarised in Chapter 21 – Mitigation and Monitoring Measures. These measures have been captured in the outline management plans submitted with this EIAR. The purpose of these plans is to set out responsibility for adhering to proposed mitigation and monitoring measures and provide means to track compliance. It is also anticipated that An Coimisiún Pleanála may apply appropriate conditions to any planning permission. The outline management plans will be reviewed and updated where necessary to include such conditions in advance of construction.

1.4.4 Residual effects

The residual effects are the final predicted effects which occur after the proposed mitigation measures have been implemented. These are the remaining environmental 'costs' of a project that could not be reasonably avoided. These residual effects are clearly described in each topic-specific chapter in accordance with the standardised terminology set out above. Where an assessment deviates from the above, the significance is clearly stated in the chapter.

1.4.5 Assessment of Cumulative Impacts

Directive 2014/52/EU states that:

A description of the likely significant effects of the project on the environment resulting from inter alia:

'The cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the natural resources'.

Cumulative Impacts, including identification of relevant other projects, have been assessed in each technical chapter and are also set out in Chapter 20. A summary of all committed / proposed developments within the Zone of Influence (ZoI) of the Proposed Development, which have been approved by Sligo or Mayo County Council or An Coimisiún Pleanála within the last five years, have been reviewed as part of the preparation of this EIAR. Committed / proposed developments at timeframes greater than five years would generally be constructed, partially constructed or can reasonably be expected to be complete before commencement of works associated with this Proposed Development. Developments granted permission more than five years ago were reviewed on a case-by-case basis to determine whether they remained relevant to the cumulative assessment. The majority of these developments have already been constructed or are of small scale in nature (i.e. extension works, or property retention works) or are considered to be a reasonable distance from the Proposed Development and so are not considered likely to give rise to significant cumulative effects and therefore have not been carried forward for detailed assessment. Relevant committed developments are summarised below under three broad categories: residential development, development within adjacent business parks, and community and utility development. In addition, relevant projects are also considered which could potentially have a cumulative impact. Specific plans and projects have also been considered where relevant during the preliminary design stage and the preparation of this EIAR, within individual environmental topics, as detailed further within the specific EIAR Chapters.

Potential cumulative effects, defined as 'the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects' (EPA, 2022) have been considered for each environmental topic within this EIAR and the conclusions of these assessments are summarised in Chapter 20.

Interactions between effects are also addressed within each chapter and summarised in Chapter 20 of this EIAR.

1.4.6 Assessment of Risk and Unplanned Events

Annex IV of the 2014 Directive (Information to be Contained in the Environmental Impact Assessment Report), Section 8 requires:

"*A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies*."

In accordance with the requirements of the EIA Directive (2014), the EIAR has assessed the effects of risk of accidents or unplanned events which may be caused by or have an effect on the Proposed Development. Specialist reports such as the Flood Risk Assessment Report (Appendix 10-2) and the climate resilience section of the chapters dealing with climate (Chapter 12) and major accidents and disasters (Chapter 19) have addressed these risks.

1.5 Structure of the EIAR

The EIAR is presented in three volumes as follows;

- Volume 1 – Non-Technical Summary;
- Volume 2 – EIAR; and
- Volume 3 – Appendices.

A brief outline of the contents is provided below.

Volume 1 – Non-Technical Summary
This summarises the findings of the EIAR in an easy to read, non-technical manner with supporting graphics and images. It will provide a non-technical summary of the Proposed Development, information on the existing environment and the effects of the Proposed Development on the existing environment and proposed mitigation measures in a manner that will be easily understood.

Volume 2 – EIAR
Within the main body of the EIAR (Volume 2), Chapter 1 (this chapter) Introduces the Proposed Development, its background, planning process and EIA methodology. Chapter 2 sets out the need for the Proposed Development. Chapter 3, the Project Description, details the proposed upgrades, construction, operation and maintenance methodology and an indicative programme for the works. Chapter 4 sets out the reasonable alternatives considered. A summary of consultation with Stakeholders and the public has been included in Chapter 5. Environmental topics are assessed in Chapters 6 to 19, as per the requirements of the 2014 EIA Directive. Chapter 20 sets out the methodology of the Cumulative Impacts Assessment and Interactions between Effects and summarises the conclusions of the assessment undertaken in the topic-specific chapters. Chapter 21 summarises the mitigation and monitoring measures proposed as part of this EIAR to avoid, prevent or reduce potential negative or adverse effects on the environment. Volume 2 of the EIAR is set out as follows;

- Chapter 1 – Introduction and Methodology;

- Chapter 2 – Project Need;
- Chapter 3 – Project Description;
- Chapter 4 – Alternatives;
- Chapter 5 – Consultations;
- Chapter 6 – Population and Human Health;
- Chapter 7 – Biodiversity;
- Chapter 8 – Agronomy;
- Chapter 9 – Land, Soils & Geology;
- Chapter 10 – Water (Hydrology and Hydrogeology);
- Chapter 11 – Air Quality;
- Chapter 12 – Climate;
- Chapter 13 – Noise & Vibration;
- Chapter 14 – Resource and Waste Management;
- Chapter 15 – Roads, Traffic & Transportation;
- Chapter 16 – Material Assets;
- Chapter 17 – Cultural Heritage;
- Chapter 18 – Landscape & Visual Impact Assessment;
- Chapter 19 – Risk of Major Accidents and Disasters;
- Chapter 20 – Cumulative Impacts Assessment and Interactions; and
- Chapter 21 – Mitigation and Monitoring Measures.

Except where stated in the relevant chapter, each of the main environmental topics are structured using the following general format:

- An introduction describing the purpose of the section and information on the authors of this section of the EIAR;
- A description of the methodology used in the section;
- A description of the aspects of the existing environment (baseline) relevant to the environmental topic under consideration;
- Characteristics of the Proposed Development with potential to affect the receptor being assessed;
- An assessment of the effect of the Proposed Development on the environmental topic, including the 'do nothing' scenario;
- Recommendations for mitigation measures to reduce or eliminate any significant negative effects identified;
- An assessment of the residual effect that will remain, assuming that recommended mitigation measures are fully and successfully implemented;
- Consideration and assessment of cumulative effects; and
- Consideration of interactions.

Further details of the methodology and discipline-specific best practice and guidance are presented in the relevant chapters included within this EIAR, including consideration of legislation and policy, in the context of the topic specific chapter. Sources of information mentioned in the text are provided within the respective chapter.

Volume 3 – EIAR Appendices
This contains specialist reports and supporting information that were used to support the findings of the environmental impact assessment.

Planning Application Pack
The full planning application pack, including this EIAR will be available for public viewing via An Coimisiún Pleanála, and will be on display in the Local Authorities of Mayo and Sligo, or the SID Application Website: https://ballinaandloughtaltwsupgradeproject.ie/.

1.6 Contributors

This EIAR has been prepared by AtkinsRéalis on behalf of the applicant Uisce Éireann. The following table sets out the competent experts who have contributed to this EIAR, showing which parts of the EIAR they have contributed to, their qualifications, experience and any other relevant credentials. Lead competent experts contributing to the production of this EIAR are listed in Table 1-2.

Table 1-2 — List of Competent Experts providing input to this Environmental Impact Assessment Report

Name	Company	Area of Expertise	Relevant Chapter / Input	Relevant Qualifications / Professional Accreditation	Relevant Experience
Declan Egan	AtkinsRéalis	EIAR Reviewer	EIAR Reviewer; Chapter 14 – Resource and Waste Management (Lead)	BSc MSc; Chartered Institution of Water and Environmental Management (CIWEM); Chartered Institution of Wastes Management (CIWM), Chartered Water and Environmental Manager (C.WEM), Chartered Scientist (C. Sci), Chartered Environmentalist (C.Env).	30 years
Dr Laila Higgins	AtkinsRéalis	EIAR Coordinator	EIAR Coordinator	BSc, PhD Zoology	9 years
Joanna Crawford	AtkinsRéalis	Strategic environmental assessment and environmental impact assessment	Chapter 6 – Population and Human Health, co-author	BSc Environmental Geoscience; Graduate CIWEM	4 years

Name	Company	Area of Expertise	Relevant Chapter / Input	Relevant Qualifications / Professional Accreditation	Relevant Experience
Paddy McEntee	AtkinsRéalis	Strategic environmental assessment and environmental impact assessment	Chapter 6 – Population and Human Health, lead author	B.A. (Hons.) Geography, MSc Applied Environmental Science, Member of CIWEM, C.Env., C.WEM	27 years
David McLeod	AtkinsRéalis	Strategic environmental assessment and environmental impact assessment	Chapter 6 – Population and Human Health, co-author	B.Sc. Geography, M.Sc. Environmental Engineering, Member of CIWEM, C.Env, C.WEM	11 years
Kevin McCaffery	AtkinsRéalis	Biodiversity / Ecology	Chapter 7 - Biodiversity Chapter, peer review	BSc (Hons) Applied Freshwater and Marine Biology, MSc Environmental Sustainability	13 years
Colin Wilson	AtkinsRéalis	Biodiversity / Ecology	Chapter 7 - Biodiversity Chapter lead author	BSc (Hons) Environmental Science, MCIEEM	19+ years
Daniel Blake	AtkinsRéalis	Biodiversity / Ecology	Chapter 7 - Biodiversity Chapter, collation of background info	BSc (Hons) Wildlife Biology	6+ years
Kevin Coogan	AtkinsRéalis	Biodiversity / Ecology	Chapter 7 - Biodiversity Chapter, collation of background info	BSc (Hons) Zoology	2.5 years
Niamh Kelly	AtkinsRéalis	Biodiversity / Ecology	Chapter 7 - Biodiversity Chapter, collation of background info	BSc (Hons) Environmental Science with Ecology	1.5 years

Name	Company	Area of Expertise	Relevant Chapter / Input	Relevant Qualifications / Professional Accreditation	Relevant Experience
John Gallogly	Philip Farrelly & Company	Agronomy	Chapter 8 – Agronomy, lead author	BSc, MSc, M.A.C.A., Member of the Institution of Environmental Sciences (MIEnvSc), MIPAV (Affiliate)	10 years
Margaret Mulvihill	Philip Farrelly & Company	Agronomy	Chapter 8 – Agronomy, co-author	BSc., MSc.	4 years
Philip Farrelly	Philip Farrelly & Company	Agronomy	Chapter 8 – Agronomy, reviewer	B.Ag.Sc.	>30 years
Calum Gibb	AtkinsRéalis	Hydrogeology	Chapter 9 – Land, Soils and Geology, co-author	BSc Environmental Geography, MSc Hydrogeology, FGS	5 years
Chris Parker	AtkinsRéalis	Geology	Chapter 9 – Land, Soils & Geology, lead author	BSc MSc CSci FGS	19 years
Mark Boobyer	AtkinsRéalis	Geology	Chapter 9 – Land, Soils and Geology, reviewer	BSc, MSc, CSci MIEnvSc, FGS	22 years
Charlotte Gregory	AtkinsRéalis	Geology	Chapter 9 – Land, Soils and Geology, reviewer	BSc, MSc, MIEnvSc	12 years
Dr Catherine McIntyre	AtkinsRéalis	Water quality	Chapter 10 – Water (Hydrology and Hydrogeology) , lead author	BSc, PhD Biogeochemistry	12 years
Dr Eliot Taylor	AtkinsRéalis	Water ecology	Chapter 10 – Water (Hydrology and Hydrogeology) , reviewer	BSc Biological Sciences, PhD freshwater ecology	>30 years

Name	Company	Area of Expertise	Relevant Chapter / Input	Relevant Qualifications / Professional Accreditation	Relevant Experience
Dr Martin Ferreira	AtkinsRéalis	Hydroecology	Chapter 10 – Water (Hydrology and Hydrogeology) , Lough Conn hydrology assessment	BSc, BSc (Hons), MSc, PhD Aquatic Health, MIEnvSc, C.Env.	19 years
Joanne Mackey	AtkinsRéalis	Geology / Hydrogeology	Chapter 10 – Water (Hydrology and Hydrogeology) – support closure of review comments, hydrogeology author	BSc, MSc Geoscience / Palaeoenvironmental Analysis	8 years
Dr Jovanna Arndt	AWN Consulting Ltd	Principal Air Quality Consultant	Chapter 11 – Air Quality, lead author	BSc Environmental Science, PhD Atmospheric Chemistry Associate Member of the Institute of Environmental Science (MIES), Associate Member of the Institution of Air Quality Management (MIAQM).	9 years
Sarah Berry	AWN Consulting Ltd	Principal Climate Consultant	Chapter 12 – Climate, lead author	BSc. Physical Geography (University of Leeds) Member of the Institute of Sustainability and Environmental Professionals (MISEP)	9 years
James Mangan	Wave Dynamics	Acoustics	Chapter 13 – Noise and Vibration, lead author	Modern Apprenticeship (Advanced) Engineering, IOA Diploma (Acoustics & Noise Control), MIOA	>25 years

Name	Company	Area of Expertise	Relevant Chapter / Input	Relevant Qualifications / Professional Accreditation	Relevant Experience
Shannon Doherty	Wave Dynamics	Acoustics	Chapter 13 – Noise and Vibration, co-author	BSc (Hons), IOA Diploma (Acoustics & Noise Control), MIOA	14 years
Paranjay Dubey	AtkinsRéalis	Transport Planner	Chapter 15 – Roads, Traffic & Transportation , lead author	BTech, MSC	7 years
Peter Foley	AtkinsRéalis	Transport Planner	Chapter 15 – Roads, Traffic & Transportation , lead author	MSc (Urban and Regional Planning) Higher Diploma (Computer Science) BSc (Earth Science)	18 years
Avril McCollum	AtkinsRéalis	Material Assets	Chapter 16 – Material Assets, lead author	BSc. (Hons) Member of IES	9 years
Martin Fitzpatrick	Through Time Ltd.	Cultural Heritage	Chapter 17 – Cultural Heritage, lead author	BA MA MIAI	30 years
Dr Conn Herriott	Archaeological Management Solutions	Underwater Archaeology	Chapter 17- Underwater archaeology,	BA, MA, PhD archaeology	>20 years
Eamonn Byrne	EBLA	LVIA	Chapter 18 – Landscape and Visual Impact Assessment led author	Dip. Hort. (Kew), PG Dip. LD, CMLI	20 years
Tashfeen M Hammad ud din	AWN consulting	Major Accidents and Disasters, Risk assessments	Chapter 19 – Risk of Major Accidents and Disasters, lead author	MSc Environmental Physics, MSc Sustainable Environmental Management, BS (hons) Environmental Science	3 years
Matt Michie	AWN consulting	Major Accidents and	Chapter 19 – Risk of Major Accidents and	MEng (Hons), CEng, MIChemE – Principal Consultant	7 years

Name	Company	Area of Expertise	Relevant Chapter / Input	Relevant Qualifications / Professional Accreditation	Relevant Experience
		Disasters, Risk assessments	Disasters, co-author		
James Close	AWN consulting	Major Accidents and Disasters, Risk assessments	Chapter 19 – Risk of Major Accidents and Disasters, co-author	MChem (Hons), MSc, AIChE, Senior Consultant	7 years

1.7 References

An Bord Pleanála (2017). Appeal Decision for PL 21.246218 on the Upgrade of Lough Talt Water Treatment Plant, Gortersluin Lough Talt Co. Sligo. Planning Application reference: 15/227.

An Coimisiún Pleanála (2021). Strategic Infrastructure Development Guide. February 2021. Available at: https://www.pleanala.ie/en-IE/Strategic-Infrastructure-Development-Guide.

Central Statistics Office (CSO) (2022). 2022 Census Results. Available at: https://www.cso.ie/en/census/. [Accessed May 2024]

Central Statistics Office (CSO) (2026). Census 2027 Information. Available at: https://www.cso.ie/en/census/census2027information/. [Accessed: April 2026]

Irish Water (2021). National Water Resources Plan. Available at: https://www.water.ie/sites/default/files/projects/strategic-plans/national-water-resources/2.-NWRP-Framework-Plan_For-Final-Adoption_2021_05_25.pdf.

National Biodiversity Data Centre (NBDC) (2025). *Biodiversity Maps* Available at: https://maps.biodiversityireland.ie/Map. [Accessed 17/11/2025]

National Parks and Wildlife Service (2025). *NPWS: Maps and Data.* Available at: https://www.npws.ie/maps-and-data. [Accessed 17/11/2025]

European Commission (EC) (2017). Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report' (Directive 2011/92/EU as amended by 2014/52/EU). ISBN 978-92-7974374-0.

Environmental Protection Agency (EPA) (2022). Guidance on the Information to be Contained in an Environmental Impact Assessment Report. Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf [Accessed: November 2025]

Environmental Protection Agency (EPA) (2025). *EPA Geoportal* Available at: https://gis.epa.ie/GetData/Download> [Accessed 17/11/2025]

Environmental Protection Agency (EPA) (2025). *EPA Maps (Water)* Available at: https://gis.epa.ie/EPAMaps/Water> [Accessed 17/11/2025]

Sligo County Council (2016). Chief Executive's Order No. P40/16 on proposed upgrades to Lough Talt Water Treatment Land to refuse permission. Planning Application reference: 15/227.

Sligo County Council (2019). Notification of Decision to Grant A Permission. Planning register Number PL 18/210 - Lough Talt water treatment plant proposed upgrade. Planning Application reference: 18/210.

Uisce Éireann (2018). Lough Talt Regional Water Supply Scheme Water Treatment Plant: Planning Application Report. Document no. MGW0214RP0022, Rev. F01. Planning Application reference: 18/210.

Uisce Éireann (2021). Lough Talt Regional Water Supply Scheme Water Treatment Plant. Our Projects. Available at: https://www.water.ie/projects/local-projects/lough-talt-water-treatmen. [Accessed April 2026]

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