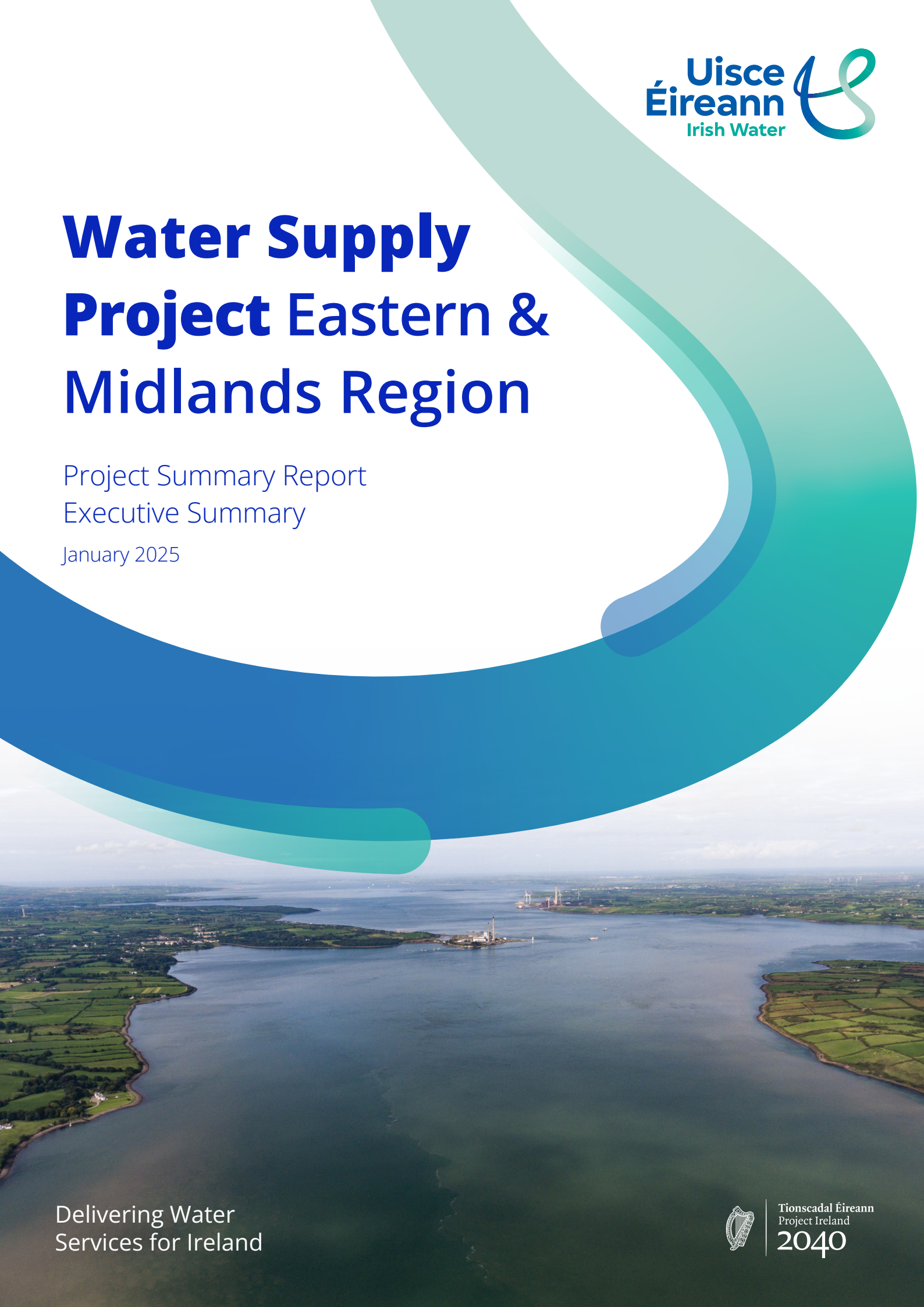
Uisce Éireann
Irish Water

Water Supply Project Eastern & Midlands Region

Project Summary Report
Executive Summary

January 2025



Delivering Water
Services for Ireland

Tionscadal Éireann
Project Ireland
2040

Introduction

Uisce Éireann is consulting on its proposals for the Water Supply Project Eastern and Midlands Region (the 'Proposed Project') for which it will be making a Strategic Infrastructure Development planning application to An Bord Pleanála in 2025.

The Proposed Project will deliver a new safe, sustainable, secure and resilient source of drinking water from the River Shannon at Parteen Basin and consists of a 172km pipeline, five associated infrastructure sites, a Flow Control Valve and other ancillary infrastructure. The consultation is being undertaken between January and March 2025.

The purpose of the consultation is to provide stakeholders including members of the public with an opportunity to provide feedback on the Proposed Project.

Consultation Questions

1. What are your thoughts on the potential benefits of the Proposed Project?
2. Do you have any feedback on the key infrastructure components of the Proposed Project, such as the water intake and pumping station, pipelines, water treatment plant, storage reservoir, booster pumping station and break pressure tank?
3. What are your views on the proposed construction approach, including the use of identified roads for construction traffic, and the locations of temporary storage and working areas?
4. Can you provide any comments on the potential environmental impacts of the Proposed Project and the measures proposed to mitigate these impacts?
5. Are there any additional comments you would like to share regarding the Proposed Project?

Image Ex.1 provides a Project Roadmap which includes a summary of the main stages in the development of the Proposed Project and shows the link between this consultation and the Strategic Infrastructure Development planning application that will be submitted for the Proposed Project.

Uisce Éireann will consider the feedback received in response to the consultation and use it to inform the finalisation of the design and accompanying environmental assessments in advance of submitting a Strategic Infrastructure Development planning application, Compulsory Purchase Order application and abstraction licence application which collectively are needed to secure consent to build and operate the Proposed Project.

The documents available as part of this consultations include:

- The Project Summary Report.
- Project Consultation Brochure.
- Project Summary Report: Appendix 1 – Details of the Proposed Project.
- Project Summary Report: Appendix 2 – Calculation of the Water Supply Requirement.
- Project Summary Report – Supporting Figures – Figures 1 – 85.
- Pipeline and Ancillary Pipeline Features factsheets describing the pipeline and providing information on permanent features along it including the Flow Control Valve.
- Infrastructure Site factsheets describing each site.

Water Supply Project Eastern & Midlands Region

Consultation on previous iterations of the project

- The Project Need Report consultation March 2015
- The Options Working Paper consultation June 2015
- The Preliminary Options Appraisal Report consultation November 2015
- The Final Options Appraisal Report and the EIS Scoping Report consultation November 2016

Project Consultation Roadmap

2020

National Water Resources Plan - Phase 1 published
Statutory Public Consultation on Framework Plan

25 year strategy for a sustainable, secure, reliable water supply defining the project need. SEA and AA completed.

2021

Regional Water Resources Plan Eastern & Midlands - Phase 2 Statutory Public Consultation

Defining the regional need for water and consideration of options for meeting it. SEA and AA completed.

National Water Resources Plan - Phase 1 adopted

2022

Regional Water Resources Plan Eastern & Midlands - Phase 2 adopted

2023

EIA Scoping Methodology Report

Methodology for the Environmental Impact Assessment updated in response to changes in policy and guidance. This was consulted upon with relevant organisations including statutory bodies.

2024

Design Development

On-going development of the project taking account of surveys, third party feedback including landowner engagement and environmental assessment.

2025

Submit Consent Applications to An Bord Pleanála

The Non-statutory consultation feedback will inform the final design and environmental impact assessment report and Natura Impact Statement that will be submitted with the planning application.

Non Statutory Public Consultation

Consultation to obtain feedback on the Proposed Project, its construction and environmental impacts.

*Future timelines are indicative

IMAGE EX.1: CONSULTATION ROADMAP

Benefits of the Proposed Project

There is a deficit in the reliability of drinking water supplies in the Greater Dublin Area and the wider Eastern and Midlands Region and this will only increase in the future due to population growth, and climate change. The Proposed Project will address deficits in supply, increase the resilience of the current system and provide the capacity needed to meet the domestic, commercial and industrial water supply needs now and into the future.

This is a generational project and is the first major 'new source' infrastructure in the region in the last 60 years. It will deliver a safe, secure, and sustainable source of water supply necessary to support the growing population and economy, including the demand for housing. It is a project that will enable Uisce Éireann to adapt to the effects of climate change by diversifying water supply sources. It will provide the Greater Dublin Area including parts of Meath, Kildare and Wicklow with a new supply of water and will have the capacity to supply communities in Tipperary, Offaly and Westmeath along the route.

It will support balanced regional development by facilitating the redirection of supplies currently serving Dublin to Louth, Meath, Wicklow, Carlow and Kildare, and provide infrastructure with capacity for future connections across the Midlands including for example, Mullingar, (once future projects are brought forward). The Proposed Project infrastructure will have the capacity to supply drinking water to up to 50% of Ireland's population. This is essential to public health as well as social and economic growth.

IMPROVED LEVELS OF SERVICE

to homes and businesses in the Region

Capacity to create a **SUSTAINABLE CLIMATE CHANGE RESILIENT** water supply for up to

50% OF THE POPULATION

Infrastructure with capacity for offtakes to supply communities and industry in

TIPPERARY, OFFALY AND WESTMEATH

along the route

MEET THE WATER SUPPLY DEMANDS

of population, housing and economic growth

Greater resilience against the impact of

CLIMATE CHANGE

through climate adaptation and the provision of a new, sustainable source of water supply.

MEET THE DEMAND FOR WATER

within the GDA Water Resource Zone to 2050 and beyond.

INCREASED RESILIENCE AND SUSTAINABILITY

in the water supply through diversification of sources to Louth, Meath, Kildare, Wicklow and Carlow and a new water supply with capacity to serve communities along the route in Tipperary, Offaly and Westmeath in the future.

The Proposed Project will allow Uisce Éireann to adapt to climate change and will provide a supply which is resilient to those changes. Therefore, the Proposed Project is critical for the future of the Eastern and Midlands Region.

The objectives of the Proposed Project are to:

- Provide a sustainable water supply from a New Shannon Source.
- Address critical supply issues in the Greater Dublin Area with provision for future supplies to multiple Water Resource Zones in the region.
- Increase resilience of supplies and levels of service.
- Deliver a flexible, future-proofed solution that is responsive to change.

Note on Signposting in the Executive Summary

Throughout the Project Summary Report – Executive Summary, you will find 'Have Your Say' infographics. These infographics are designed to draw your attention to specific sections of the Project Summary Report that relate to our consultation questions. While you are welcome to provide feedback on any aspect of the Proposed Project, these signposts serve as helpful guides to assist you in making your submission.

The Proposed Project infrastructure will provide the capacity to meet the drinking water need for a Water Supply Area consisting of 36 Water Resource Zones (WRZ) across the Eastern and Midlands Region[1]. It will do this by providing the capacity to supply up to 300 million litres (Mld) of water per day which will:

- Immediately meet the identified need for water within the Greater Dublin Area Water Resource Zone (GDA WRZ) to 2050 and beyond.
- Enable the future supply to 17 other WRZs by re-directing supplies within the GDA WRZ and expanding the GDA WRZ by incorporating these WRZs into the GDA Regional WRZ, when future projects are brought forward by Uisce Éireann.
- Enable the future supply to a further 18 WRZs across the midlands from take-off points along the pipeline and facilitate the consolidation of those WRZs into four new WRZs, when future projects are brought forward by Uisce Éireann.
- Make provision for potential reductions in existing supply volumes due to sustainability requirements anticipated under the new abstraction licensing regime.

Have Your Say

The Water Supply Project Team welcomes your feedback under Consultation Question 1 on:

1. The benefits of the Proposed Project

2. The outcomes of the Proposed Project

[1] 37 Water Resource Zones were identified in the Eastern and Midlands Plan consisting of the GDA WRZ and 36 other WRZs. Subsequently Barndarrig WRZ and Redcross WRZ have been rationalised and combined and so the total is now 36 Water Resource Zones consisting of the GDA WRZ and 35 other WRZs.

The Proposed Project

The Proposed Project will abstract raw water from the River Shannon at Parteen Basin and pump it to a treatment facility near Birdhill, County Tipperary, which will make it suitable for public consumption. It will then be transferred through a steel pipeline to a new reservoir at Peamount, County Dublin. An overview of the Proposed Project is provided in Image Ex.2. The key pieces of infrastructure needed to achieve this consist of:

- A Raw Water Intake and Pumping Station on the eastern shore of Parteen Basin which will abstract raw water from the Lower River Shannon downstream of Lough Derg.
- Two steel pipelines of approximately 2km in length and 1500mm in diameter, which will transfer raw water from the Raw Water Intake and Pumping Station to the Water Treatment Plant near Birdhill, County Tipperary.
- A single steel pipeline of approximately 170km in length and 1600mm in diameter which will transfer treated water from the Water Treatment Plant to the Termination Point Reservoir at Peamount, County Dublin.
- Infrastructure including a Break Pressure Tank near Cloughjordan, County Tipperary, a Booster Pumping Station east of Birr, County Offaly and a Flow Control Valve in County Kildare.
- Operational infrastructure at frequent intervals along the length of the pipeline including line valves, air valves, water discharge points (referred to as 'wash outs'), parking lay-bys for maintenance access.
- Power connections to the infrastructure sites and line valves, including uprating of the existing Ardnacrusha – Birdhill 38 kilovolt overhead line to deliver adequate electrical power to the Raw Water Intake & Pumping Station and Water Treatment Plant.

In addition, provision has been made for take-off points at strategic locations between the Water Treatment Plant and Termination Point Reservoir. These facilitate future connections to supply communities in the Midlands without disruption to the operation of the pipeline. The connecting pipelines and associated infrastructure will be delivered by Uisce Éireann through separate projects, that will be subject to their own consenting processes.

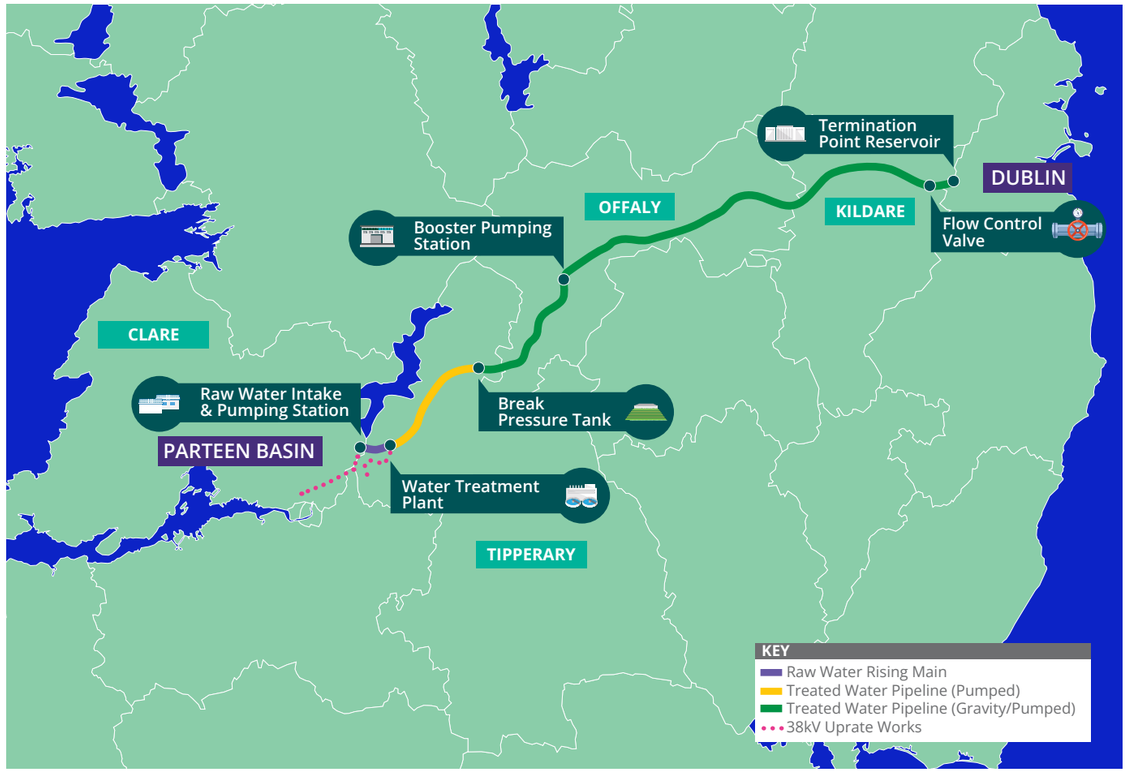


IMAGE EX.2: OVERVIEW OF THE PROPOSED PROJECT

Moving water through the pipeline

A combination of pumping and gravity will be used to move the water through the pipeline. Raw water will be pumped 2km from the Raw Water Intake and Pumping Station to the Water Treatment Plant. Treated water will be pumped for the first 37km of the pipeline from the Water Treatment Plant to the Break Pressure Tank. The Break Pressure Tank is designed to be located at the high point along the pipeline and so from there the water will usually flow by gravity along the remaining 133km to the Termination Point Reservoir. This has been done to reduce the energy needed to move water through the pipeline and will therefore, generate the carbon generated during operation. At times when the volume of water needed is higher, the water will be pumped through the pipeline from the Booster Pumping Station to the Termination Point Reservoir. The Booster Pumping Station provides the capability for this additional pumping, when it is required.

For the Infrastructure Sites identified on Image Ex.2 and the Flow Control Valve there will be permanent acquisition of land by Uisce Éireann. Along the length of the pipeline the Proposed Project will have a permanent wayleave, which will give Uisce Éireann the rights to construct, inspect, operate and maintain the Raw Water Rising Mains, Treated Water Pipeline and associated infrastructure.

Certain restrictions will apply within this wayleave in order to protect the pipeline. This will include limiting future development and restrictions on planting certain species of trees. The permanent wayleave associated with the Raw Water Rising Mains and Treated Water Pipeline will be approximately 20 metres (m) in width, normally centred on the pipeline. There will also be permanent wayleaves associated with connections from the washout valves to outfall locations. These will be approximately 10m in width, normally centred above the connection pipe.

The construction phase of the Proposed Project will require the establishment of a Construction Working Width, approximately 50m wide, along the length of the pipeline, temporary working facilities and the use of certain lands on a temporary basis.

Land has been identified for the establishment of temporary Construction Compounds (to accommodate office space and plant, materials and equipment) and temporary Pipe Storage Depots (to facilitate the delivery of the pipe). All of these temporary facilities and traffic management arrangements are collectively referred to as temporary works.

The Proposed Project Boundary is shown on Figures 1-59 and it encompasses all permanent and temporary land-take required for the Proposed Project.

The Proposed Project is now at an advanced stage of preliminary design. It is this Proposed Project that Uisce Éireann intends to seek planning permission for, from An Bord Pleanála.

Further details on the Proposed Project are contained in Appendix 1 - Details of the proposed Project of the Project Summary Report.

Have Your Say

The Water Supply Project Team welcomes your feedback under Consultation Question 2 and 3 on:

1. The location, size and purpose of the permanent infrastructure
2. The construction of the Proposed Project
3. The temporary and permanent land take

The alignment of the Proposed Project with the National Water Resources Plan

Uisce Éireann has adopted the Republic of Ireland's first National Water Resources Plan (NWRP) for public water supply. The objective of the NWRP is to implement a strategic plan to meet Ireland's water requirements over the short, medium and long term by ensuring a safe, secure, sustainable and reliable water supply for all consumers.

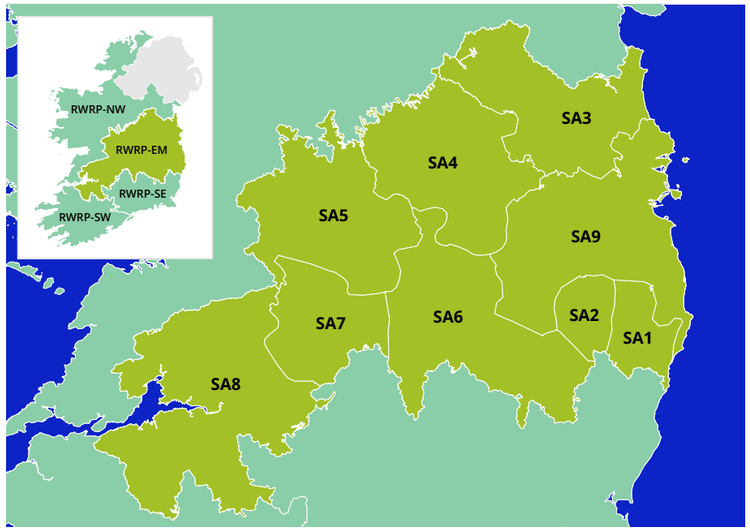


IMAGE EX.3: STUDY AREAS WITHIN THE EASTERN AND MIDLANDS PLAN

The NWRP was delivered in two phases.

- Phase 1, the NWRP Framework Plan (the 'Framework Plan') described the approach to identifying water supply needs and quantifies those needs up to year 2044. It also described the approach to identifying solutions to address the water supply needs across all of Uisce Éireann's water supplies. The Framework Plan, following public consultation, was finalised and adopted in Spring 2021.
- Phase 2 comprised the development of four Regional Water Resources Plans to identify the optimal technical solutions (the 'Preferred Approaches') required to address the needs outlined in the Framework Plan. The Eastern and Midlands Region is shown in Image Ex.3. The four geographic regions defined in the Plan are shown in the inset in Image Ex.3. The Regional Water Resources Plan – Eastern and Midlands Region (the 'Eastern and Midlands Plan') following public consultation was adopted in Autumn 2022.

The Eastern and Midlands Plan identified that a New Shannon Source was the Preferred Approach to address the water supply need of the GDA WRZ. Having identified the New Shannon Source as the Preferred Approach, the Eastern and Midlands Plan identified additional WRZs along the length of the pipeline and also adjacent to the GDA WRZ, which had a deficit that could also be met by 'transfers' of water from the New Shannon Source.

The Water Supply Project was initiated and previous versions of it were consulted on prior to the development of the the NWRP. For that reason, it is acknowledged in the Plans as an 'In-flight' project (referred to as the 'In-Flight Water Supply Project'). Following the adoption of the Eastern and Midlands Plan a comparison has been undertaken by Uisce Éireann to consider whether the In-Flight Water Supply Project needed to be modified in response to the recommendations set out in the Plan. This is summarised in Table Ex.1.

TABLE EX.1: COMPARISON OF THE EASTERN AND MIDLANDS PLAN AND THE IN-FLIGHT WATER SUPPLY PROJECT

Category	In flight Water Supply Project	Framework Plan and Eastern and Midlands Plan outcomes	Comparison of the In flight Water Supply Project with the Framework Plan and Eastern and Midlands Plan outcomes	Conclusion
Preferred Scheme	A new abstraction from Parteen Basin and treated water transfer pipeline to the GDA, with offtake locations for potential future connecting pipelines	A New Shannon Source consisting of an abstraction from Parteen Basin and treated water transfer pipeline to the GDA with offtakes to other water resource zones in the Region identified as the Preferred Approach to address supply deficits in the GDA and 36 other Water Resource Zones in the Region	The In-Flight Water Supply Project is substantially aligned with the relevant outcomes of the Framework Plan and Eastern and Midlands Plan in its recommended solution to address Need in the GDA and other locations in the Eastern and Midlands Region	The In-flight Water Supply Project does not need to be modified.
Water Supply Area	The In flight Water Supply Project includes the GDA and a Benefiting Corridor based on an interim assessment of potential benefiting communities from a new supply from the River Shannon	The Framework Plan and the Eastern and Midlands Plan, when looking at the region holistically, identify the potential for a New Shannon Source to address supply deficits in 36 WRZs in the Region, in addition to supplying the GDA WRZ.	The In-flight Water Supply Project and the Plans both identify water supplies outside of the current GDA WRZ that have water supply needs that could be addressed by a new supply from the Lower River Shannon.	Recommend updating the Benefiting Corridor to align with the Water Resource Zones identified in the Eastern and Midlands Plan and to review offtake locations on the transfer pipeline in light of those updates.

On this basis it has been concluded that the Benefitting Corridor proposed for the In-Flight Water Supply Project should be replaced with a Water Supply Area which aligns with the 36 WRZs that are identified in the Eastern and Midlands Plan to be supplied from a New Shannon Source with transfers[2]. The Proposed Project Infrastructure will therefore:

- Have the capacity to deliver the volume of water needed to meet the peak demand in the Water Supply Area.
- Include take-off points to allow for future connections into the Water Supply Area.

[2] 37 Water Resource Zones were identified in the Eastern and Midlands Plan consisting of the GDA WRZ and 36 other WRZs. Subsequently Barndarrig WRZ and Redcross WRZ have been rationalised and combined and so the total is now 36 Water Resource Zones consisting of the GDA WRZ and 35 other WRZs. This does not result in a change to the water supply requirement.

Water Supply Requirement

Uisce Éireann has projected the deficit in the Water Supply Area up to 2050 and calculated the Supply Demand Balance (SDB) using the methodology in the adopted NWRP.

The SDB is the difference between how much water will be needed and how much water is available for use. This calculation identified that to meet the projected deficit in the SDB at year 2050 and increase resilience within the Water Supply Area the Proposed Project must be capable of supplying the total volume of water set out in Table Ex.2.

TABLE EX.2: TOTAL VOLUME OF WATER REQUIRED FROM THE NEW SOURCE[3]

Component	2050 Mld*
Greater Dublin Area Water Resource Zone (WRZ)	197
35 WRZs[4]	83
Provision for potential sustainability reductions from existing supply volumes due to future abstraction licensing	20
Total Peak Volume of Water	300

Have Your Say

The Water Supply Project Team welcomes your feedback under Consultation Question 2 and 5 on:

1. The alignment of the Proposed Project with the NWRP
2. The volume of water to be supplied by the Proposed Project

[3] Supply Demand Balance based on adopted Regional Water Resources Plan – Eastern and Midlands Region projected to 2050.

[4] 37 Water Resource Zones were identified in the Eastern and Midlands Plan consisting of the GDA WRZ and 36 other WRZs. Subsequently Barndarrig WRZ and Redcross WRZ have been rationalised and combined and so the total is now 36 Water Resource Zones consisting of the GDA WRZ and 35 other WRZs. This does not result in a change to the water supply requirement.

Abstraction Regime

The proposed abstraction point for taking water from the River Shannon will be located on the eastern shore of Parteen Basin, in the townland of Garrynatineel, approximately 3.3km north-east of the Parteen Weir.

Parteen Basin, also known locally as the 'Lower Lake', was formed as part of the Shannon Hydro-Electric Scheme in the late 1920's. Much of the perimeter of Parteen Basin is formed by high linear engineered embankment dams. These are category A earthen embankment dams constructed as part of the Shannon Hydro-Electric Scheme to form Parteen Basin. It floods an area through which the Shannon once flowed as a river, and the old channel is still recognisable in depth surveys of the bed of the flooded basin. Parteen Basin is regulated both by the discharge through Parteen Weir, and by the flow through Ardnacrusha Generating Station.

The Electricity Supply Board (ESB) manages water levels on Lough Derg and controls the water levels on Parteen Basin by diverting water to Ardnacrusha powerstation for the production of zero carbon electricity, and by opening gates at Parteen Weir to release water down the old course of the river Shannon. The water levels are managed within a Normal Operating Band, 460mm (18 inches approximately) in depth, across a wide range of flows. It should be noted that 100mm of this operating band is usually reserved for emergency electricity generation and therefore, ESB seek to keep the water level within a 360mm range, above 30.50mOD Malin Head (33.20mOD Poolbeg).

ESB's general practice is to maintain levels at the lower end of the Normal Operating Band in late autumn, in anticipation of higher inflow conditions across autumn/winter. As Winter comes to an end, ESB monitors the falling inflows along the length of the river Shannon before cutting back electricity generation in late Spring with the general aim to retain water towards the upper end of the Normal Operating Band and to keep it in the upper end of the band through the Summer. This is to enable sufficient water for the continual release, if there is a dry summer, of the statutory flow of 10m^3/s down the old river Shannon alongside further electricity generation if the inflows rise due to summer rainfall.

It is proposed to abstract, up to a maximum of 3.47m^3/s from Parteen Basin . This represents the projected Dry Year Critical Period deficit at 2050. Abstraction rates will vary during normal operation up to this maximum however, more typical abstraction rates would be represented by the projected Normal Year Annual Average deficit (equivalent to 1.78m^3/s at 2050).

The proposed abstraction of water is in essence, an abstraction from water normally used in the hydro-power plant, using the same existing water level controls (therefore avoiding the construction of a new impoundment). Water levels on Lough Derg and the Parteen Basin will be managed within the same water level Normal Operating Band as currently applies. Abstraction of water from hydro-electric power schemes is commonly employed worldwide to enable environmentally sustainable availability of water for public supply.

At the maximum rate of abstraction the proposed abstraction of water will equate to a small fraction, less than 2%, of the long term annual average flow through Parteen Basin.

Hydrological modelling work has been undertaken to assess the impact of the proposed abstraction on the water levels of Lough Derg and Parteen Basin and the pass forward flows released to the Old River Shannon. The model was run using data from the period 1 January 1972 to 31st October 2023, allowing the simulation of daily levels and daily flows across this 50-year period with and without the Proposed Project abstraction in place. This time period includes the drought years of 1995 and 2018. A version of the model has also been run to investigate the likely impacts of the Proposed Project in the future when Lough Derg and Parteen Basin are subject to the effects of climate change.

Based on adjustments in power generation by ESB in response to the Uisce Éireann abstraction the impacts on lake levels and flows down the old Shannon due to the modelled inclusion of the Proposed Project abstraction (as a constant flow of either 154Mld or 300Mld) are barely distinguishable from the baseline case when viewed on level/flow duration curves (a standard hydrological method for comparing long-term data series).

During drought periods, such as the drought years of 1995 and 2018, lake levels of both Lough Derg and Parteen Basin are predicted to dip below the baseline case (the scenario without the Proposed Project) due to the inclusion of the Proposed Project abstraction. However, they will remain within the Normal Operating Band. The size and rate of change in water level as a result of drought with the Proposed Project fits within the commonly observed water level changes seen within the 50-year period of observed levels. The minimum statutory flow down the old River Shannon will remain unchanged.

ESB, as part of an overall agreement with Uisce Éireann, will agree to the diversion to the Proposed Project abstraction, water that would otherwise have been used for electricity generation, on a continuous year round basis.

Modelling of the abstraction under these conditions shows that the abstraction is sustainable within the existing normal operating water level range. Operation of Lough Derg, post works, will feel and look very similar to the way it currently operates, and there will not be a visible day to day difference.

Have Your Say

The Water Supply Project Team welcomes your feedback under Consultation Question 1 on:

1. The benefits to the communities along the pipeline route

Community Outcomes

The primary benefit of the Proposed Project is a new nationally important supply of water to the Greater Dublin Area and the Proposed Project infrastructure will have the capacity to supply communities along pipeline route in the future. The Proposed Project is essential to future growth and ensuring there will be water for an increasing population.

The Proposed Project infrastructure will provide the capacity to supply water to 50% of the population of the state. Therefore, the main benefit is the safe, sustainable, secure and resilient source of drinking water.

In addition, opportunities have been sought within the design of the Proposed Project to deliver wider public benefits. For example, Uisce Éireann will also deliver a Visitors Centre at the Water Treatment Plant site for community and educational purposes.

In addition, a Community Gain Fund will be established by Uisce Éireann to support community-based initiatives.

Have Your Say

The Water Supply Project Team welcomes your feedback under Consultation Question 2 and 5 on:

1. Using water from the existing reservoir at Parteen Basin
2. Using water that would have been used for power generation to provide drinking water

Environmental and Sustainability Design Considerations

The development of the design of the Proposed Project has been informed by a range of technical, economic, social, environmental and sustainability considerations.

Some of the environmental considerations taken into account in the design development have included:

- Selection of a solution which delivers a sustainable supply of water. A maximum of 2% of the long term annual average flow at Parteen Basin will be diverted for drinking water supply instead of being used for hydropower generation. This means that potential changes to the natural environment that could otherwise have occurred if overall abstraction rates were increased at Parteen Basin, or elsewhere, can be avoided through a small diversion of water from the existing lake.
- Choosing a route for the pipeline that avoids environmentally sensitive areas, as far as reasonably practicable.
- Selecting infrastructure site locations that, as far as reasonably practicable, minimise environmental impacts, for example, visual effects, whilst considering technical and cost factors.
- Optimising the operation of the pipeline taking into account the size of the steel pipe and the frequency with which pumping will be needed to supplement gravity fed supplies. This had to balance material use, embodied carbon and operational energy use.
- Designing the intake at the Parteen Basin to protect biodiversity, such as preventing fish from being trapped.
- Using trenchless pipeline construction techniques to protect sensitive sites, including major river, road, and railway crossings.
- Preventing the spread of invasive species during construction activities and water transfer.
- Incorporating solar panels at infrastructure sites, including at the Water Treatment Plant, Break Pressure Tank, Booster Pumping Station, Termination Point Reservoir and at the Flow Control Valve to provide renewable energy where practicable.
- Preserving hedgerows along the Proposed Project Boundary where feasible, except at defined access points.
- Committing to soil stripping and reinstatement of earthworks only taking place during suitable weather conditions.
- Selecting routes for construction vehicles (referred to as 'Haul Roads') based on their size and capacity and to avoid sensitive receptors where reasonably practicable. This was done in consultation with the relevant Local Authorities.

The sustainability ambitions for the Proposed Project include:

- Implementing a whole-life Carbon Management approach to support the detailed design, build and operation of the Proposed Project.
- Demonstrating a Carbon 'net zero ready' pathway for operation.
- Undertaking lifecycle assessment for major asset components and implement recommendations to influence the procurement of low carbon/sustainable materials to achieve 20% reduction by volume of virgin materials.
- Developing a By Product and Waste Management plan which will facilitate 70% of excavation arisings being used as a by-product rather than becoming a waste and 100% of recoverable waste being diverted from landfill, in both construction and operation.
- Developing a circular economy strategy as part of detailed design to maximise the opportunity for resource reduction/reuse/refurbish/recycling and for optimised use of operational bioresources.
- Working towards Net Gain in Biodiversity.
- Protecting areas of sensitive habitats, trees or species and encourage recolonisation by implementing biodiversity-sensitive design and including landscape management in the operational management plan and operations contracts.
- Designing nature-based solutions for surface water management where feasible at infrastructure sites.
- Working with partners to develop and engage in environmental restoration specifically in relation to peatland crossed by the Proposed Project.

Environmental Effects

As part of the planning application, an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) will be submitted to An Bord Pleanála. These environmental reports will report the findings of the environmental assessments undertaken for the Proposed Project, including reporting the likely significant effects and setting out the mitigation measures to avoid or reduce likely adverse effects. The EIAR looks at the environment generally, while the NIS looks at European Sites specifically. A Water Framework Directive compliance assessment report will also be submitted with the application. This considers the changes to water bodies such as lakes and rivers potentially affected by the Proposed Project.

Work to inform the assessment of environmental effects, such as field surveys, has been going on for many years.

There have been changes in Environmental Impact Assessment (EIA) guidance and relevant policy during this time. For that reason, Uisce Éireann prepared an updated scope and methodology for the EIAR and invited relevant environmental bodies to comment on it in the Autumn of 2023. The EIAR will be undertaken in accordance with the EIAR Scoping Methodology Report taking account of the responses received and any responses to this consultation on the Proposed Project.

The preparation of the environmental assessments is an on-going process and so Uisce Éireann already has a deep understanding of the potential environmental effects that may arise from the Proposed Project and is working to develop mitigation to avoid or reduce these effects where reasonably practicable to do so. Some of the key environmental risks identified at this stage and the measures proposed to address them are summarised in Table Ex.3.

TABLE EX.3: IDENTIFIED KEY ENVIRONMENTAL RISKS AND PROPOSED MANAGEMENT MEASURES

Topic	Environmental Risk	Mitigation / Management Measures
Bio-security	Risk of introduction/spread of non-native invasive species during construction and operation phases.	Implementing biosecurity protocols and removing or treating known invasive non-native species and damaging pathogens, such as ash dieback prior to construction. Cleaning all plant and machinery before moving to other parts of the site. Incorporating intake screens at the Intake Chamber and microfilters on the rising main at the Raw Water Intake to prevent infestation of the infrastructure and prevent transfer of zebra mussels via the infrastructure.
Surface Watercourses	Disruption of surface water flows, across land and in watercourses during construction. Impacts to water quality due to construction activities including excavations in peat, in channel working, construction of washout valves or accidental spillage of oil, fuels or concrete.	Applying buffer strips around watercourses and avoiding in-channel working where practicable. Using good practice measures during construction to control, treat and attenuate silt-laden runoff and water from dewatering activities and temporary site drainage. Adherence to agreed Environmental Protection Agency discharge standards from silt ponds through peat working areas. Use of drip trays under plant and equipment. Programming in-channel working during times of low flow where practicable. Monitoring of water quality during construction and having a management plan that sets out appropriate mitigation measures should any deterioration in water quality be detected.
Biodiversity	Temporary and permanent habitat loss (and associated impacts on the species that use the habitats) associated with clearance of the working area for construction and the permanent footprint associated with above ground infrastructure such as the five infrastructure sites, the Flow Control Valve, valves, wash-outs and lay-bys.	Avoidance of designated sites and key habitats through the options appraisal and site selection. Use of trenchless crossings to go underneath main watercourses to avoid impacts on aquatic habitats and species. Protecting existing habitats where these are to be retained and reinstatement of habitats and planting following construction subject to planting restrictions within the permanent Wayleave.
Biodiversity	Temporary habitat loss/physical disturbance to the aquatic environment in Parteen Basin due to dredging and temporary works.	Working within a double silt curtain to avoid the risk of pollution to the basin. Protecting existing habitats where these are to be retained and reinstatement of habitats following construction. Use of a flexible mat of meshed thin concrete segments at the Raw Water Intake to reduce erosion effects. Excavated native lakebed material will be used to cover the mat to provide a surface which can be recolonised by native flora and fauna.
Groundwater	Potential changes to groundwater levels and flows as a result of the pipeline trench, foundations of buildings or changes to the land drainage regime. This could have effects on groundwater dependent terrestrial ecosystems, existing groundwater abstractions or private water supplies.	Monitoring of groundwater levels and avoiding excavation and construction activities within geological heritage sites and within or adjacent to groundwater dependent terrestrial ecosystems and private groundwater wells.
People	Increased levels of traffic, noise, air pollution and visual intrusion during construction which may cause nuisance and disruption to landowners, local residents, communities and businesses. These factors could also affect human health from people living or working near to the construction areas.	Restricting the activities that can occur outside of normal working hours and choosing plant with lower noise emissions. Erection of temporary noise barriers around equipment or activities where noise sensitive receptors lie close to the construction working area. Measures to manage dust, such as dampening down of surfaces and erecting screens or barriers around the dust-causing activities. Providing information to landowners, local residents and businesses about the project and details about construction activities and timings, particularly any night working.
Climate	Release of greenhouse gas (GHG) emissions produced during construction from the use of construction machinery and embodied carbon within the materials used. Also, GHG emissions produced during operation of the Proposed Project from energy used to pump and treat water.	Producing a Carbon Management Plan with specific targets to reduce embodied carbon in the design and operation of the Proposed Project e.g. using low carbon concrete, where practicable. Using electricity generated from renewable sources for operational electrical power requirements. Procuring from suppliers that meet industry requirements for reducing their embodied carbon.
Groundwater and Biodiversity	Loss of peat due to installation of the pipeline. Areas of peat along the pipeline route have undergone degradation by historical drainage and no high value active raised bog is present. The majority of the areas are cutover peat, however there are three small areas of degraded raised bog at Clonad Bog, Mount Lucas Bog and Timahoe North Bog.	Preparation of a Working in Peat method statement to deliver a sustainable solution to building and operating the pipeline in peat. Reinstating peat layers following installation of the pipeline including cutover bog and reinstating drainage in accordance with Bord na Mona's peat restoration objectives and existing rehabilitation plans. Further opportunities for use of surplus excavated material is being explored with Bord na Mona.
Soils	Loss of soil cover, soil erosion and soil compaction from construction activities such as earthmoving and the tracking of construction vehicles, which could cause a deterioration in soil structure or quality.	Good practice measures for soil stripping, handling, storage and reinstatement, including separating topsoil and subsoil, avoiding double handling of soil, appropriate design and protection of soil stockpiles to reduce surface water build up / run off and compaction.

Have Your Say

The Water Supply Project Team welcomes your feedback under Consultation Question 4 on:

1. The environment effects of the Proposed Project
2. The mitigation measures proposed to address those effects

Responding to the Consultation

The purpose of the consultation is to provide an opportunity to give feedback on the Proposed Project. The public consultation will run for eight weeks and will seek feedback and comments from all key stakeholders including the general public.

To make a submission please send it to us by email, online feedback form or post by 4 March 2025.

All relevant submissions on the Proposed Project are welcomed and will be carefully considered. Following the completion of the consultation period, feedback received will be compiled within a consultation submissions report which will be made available on the project website **water.ie/watersupplyproject.**

The feedback received by Uisce Éireann in response to this consultation, where appropriate, will be used to inform the preparation of the documentation which will be submitted as part of the planning application. The intention is that the Strategic Infrastructure Development planning application and Compulsory Purchase Order application will be submitted to An Bord Pleanála in 2025. This will include all plans, particulars, supporting reports, EIAR and NIS.

How do I respond to the consultation?

To make a submission please use the following contact details:

watersupply@water.ie

ROI: 01 2027770

If you would prefer to write to us, please send any correspondence to:

Water Supply Project, PO Box 13748, Dublin 16

Uisce Éireann
Irish Water

Project Summary Report 2025

Water Supply Project
Eastern and Midlands Region

Uisce Éireann
Colvill House, 24–26
Talbot Street, Dublin 1
water.ie