

# Water Supply Project Eastern and Midlands Region

**172km Pipeline** – from County Tipperary to County Dublin

*Crossing Tipperary County Council, Clare County Council, Limerick City & County Council, Offaly County Council, Kildare County Council and South Dublin County Council*

## Overview

The Water Supply Project, Eastern and Midlands Region will secure a new source of drinking water from the River Shannon at Parteen Basin, Co. Tipperary. The proposed infrastructure consists of a 172km pipeline, associated infrastructure sites and ancillary pipeline features. The Proposed Project will abstract raw water from the River Shannon at Parteen Basin and pump it to a water treatment plant at Birdhill. Treated water will then be transferred to a new reservoir at Peamount, Co. Dublin.



### What does the pipeline do?

The pipeline will transfer the water from Parteen Basin to Peamount in Co. Dublin.



### What does the pipeline include?

There will be two different parts to the pipeline:

The Raw Water Rising Mains will be approximately 2km long. These will transport raw, untreated water which may contain sediment. Therefore twin 1500mm diameter steel pipes will be needed to ensure continuity of supply when one pipe is taken out of service for cleaning.

The Treated Water Pipeline will be approximately 170km long and will consist of one 1600mm diameter steel pipeline running between the Water Treatment Plant and the Termination Point Reservoir.

The pipeline will also have ancillary infrastructure along its route. These include:

- **Air Valves:** These are needed to manage any air within the pipeline.
- **Line Valves:** These enable sections of the pipeline to be isolated for maintenance purposes.
- **Washout Valves:** These are needed to drain sections of the pipeline during commissioning and in the rare event of a repair being required.

- **Lay-bys:** These are needed to allow safe parking to access lines valves.
- **Power supply:** A low voltage electricity connection is needed at each line valve to operate the valve.

A Flow Control Valve will also be required on the approach to the Termination Point Reservoir. This is needed to control the volume of water arriving at the Termination Point Reservoir.

For normal flows a combination of pumping and gravity will be used to move the water through the pipe. During shorter periods of higher demand, the Booster Pumping Station will provide additional pumping to move the water through the pipe.





## How will the pipeline be built?

Overall the Proposed Project including the pipeline will take 5 years to be constructed including a period of testing and commissioning. Each landowner will typically be affected for a period of 18-24 months.

The typical construction sequence will be:

- Fence the temporary working area.
- Remove vegetation and strip topsoil.
- Install temporary drainage and if required, divert existing drainage.
- Build a temporary access track within the temporary construction area.
- Lay out sections of the pipeline and weld them together.
- Excavate the trench for the pipe.
- Lift pipe sections into the trench and weld sections together.
- Low pressure air test on installed sections.
- Backfill the sections of installed pipe (excluding e.g. valves).
- Install Air Valves, Washout Valves and chambers.
- Pressure test the pipe.

- Install Line Valve infrastructure including power supply.
- Complete backfilling of trench.
- Remove surface water interceptor drains and re-instate land drains.
- Re-instate subsoil/ topsoil.
- Sow grass seed and re-instate hedgerows.
- Remove fencing and hand-back to landowner.
- Testing and commissioning of the pipeline.

To complete this work there will be Construction Compounds and Pipe Storage Depots along the length of the pipeline.

Construction Compounds will include space for office and toilet facilities in temporary prefabricated buildings, machinery storage and vehicle parking.

Pipe Storage Depots will take direct delivery of the pipe for storage before onward journey to the required location along the pipeline.

There are four Principal Construction Compounds proposed, which will act as central strategic and operational hubs for plant, material and labour movement, general storage, administration, logistical support, technical and design staff.

These are proposed at the following locations:

- 1 At the Water Treatment Plant (WTP) Site in the Townland of Incha Beg, County Tipperary.
- 2 In the townland of Lisgarriff, County Tipperary next to the N52.
- 3 In the townland of Killananny, County Offaly next to the R421.
- 4 In the county townland of Drummond, close to the R403.

In addition to these four Principal Construction Compounds, there will be four Satellite Construction Compounds. These are needed to build the Infrastructure Sites and so are located at the Raw Water Intake & Pumping Station (RWI&PS), Break Pressure Tank (BPT), Booster Pumping Station (BPS) and Termination Point Reservoir (TPR). These Satellite Construction Compounds will be required to provide materials storage and support plant and workers along the route to allow for an efficient construction programme.

There will be a temporary construction working width which will typically be 50m wide. The working width will need to be widened at crossings of major rivers, roads or railways and to facilitate particular construction activities such as access points and trenchless sections.

