Our Case Number: ACP-323980-25

Planning Authority Reference Number:

An Coimisiún Pleanála

James Crowley
Carrigdangan
Gyleen
Whitegate
Co. Cork
P25 WY43

Date: 04 March 2026

Re: Proposed Water Supply Project for the Eastern and Midlands Region
in the counties of Clare, Limerick, Tipperary, Offaly, Kildare, and Dublin.

Dear Sir / Madam,

An Coimisiún Pleanála has received your recent submission in relation to the above mentioned proposed development and will take it into consideration in its determination of the matter. Please accept this letter as a receipt for the fee of €50 that you have paid.

The Commission will revert to you in due course with regard to the matter.

Please be advised that copies of all submissions / observations received in relation to the application will be made available for public inspection at the offices of the local authority and at the offices of An Coimisiún Pleanála when they have been processed by the Commission.

More detailed information in relation to strategic infrastructure development can be viewed on the Commission's website: www.pleanala.ie.

If you have any queries in the meantime please contact the undersigned officer of the Commission. Please quote the above mentioned An Coimisiún Pleanála reference number in any correspondence or telephone contact with the Commission.

Yours faithfully,

Eimear Reilly
Executive Officer
Direct Line: 01-8737184

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25th February, 2026

Strategic Infrastructure Development Section
An Coimisiún Pleanála
64 Marlborough Street
Dublin 1 D01 V902
Via Email: sids@pleanala.ie

Re: Observations on Uisce Éireann's Water Supply Project (Eastern and Midlands Region)
Strategic Infrastructure Development Application

To whom it may concern,

I am deeply grateful for the opportunity to make observations on Uisce Éireann's Proposed Water Supply Project for the Eastern and Midlands Area. The proposed project comprises intake, conveyance, storage and treatment infrastructure for a 173km, 1.6-metre diameter steel pipeline (Pipeline Project) and other supporting infrastructure. This pipeline project is the selected alternative to address water supply scarcity and is designed to deliver up to 300 million litres of treated water daily by 2050 to the Greater Dublin Area (GDA) and a portion of the Midlands region. The most recent estimated capital cost for this selected water supply alternative is €10,400,000,000 (€10.4 billion, January 2026).

This is an unprecedented pipeline engineering endeavour both in scope and cost for Ireland. Its core purpose is the large-scale movement of water from the west to the east coast. Considering the flows in the River Shannon, the abstraction of up to 300 million litres per day may seem insignificant when expressed as a percentage of the long-term average flow at Parteen. However, during periods of drought, this abstraction will have significant impacts, including the potential for the River Shannon to be critically depleted. The pipeline project carries serious long-term risks that may not have been properly addressed in the planning documents. **As a result of my review of the planning application, I object to the proposed pipeline project and request An Coimisiún Pleanála to reject this Strategic Infrastructure Development Application until these observations are appropriately addressed.**

My Professional Expertise

I am somewhat uniquely qualified to offer independent observations on this pipeline project. I am a Civil Engineer who was born in Ireland and graduated from University College Cork. I recently retired as a Professional Civil Engineer in California with 35 years of experience, employed at a large water management agency, and have also worked in consulting and with NGOs. I have been responsible for the management of over 300km of large-diameter raw and treated water pipelines (>1 metre to several metres in diameter), pumping plants, intakes, and treatment facilities on projects of this scale. I have knowledge of the large federal and state water projects in the western United States now challenged with reduced river flows and drought. My role also

included responsibility for water supply sustainability planning for a large part of Silicon Valley in California. I have also been heavily involved in ecological and climate change-related projects for over three decades. Since retirement, I have travelled extensively, working collaboratively with the Lakota and Choctaw Nations in North America as well as Mexican, Central and South American peoples to understand indigenous ways of thinking about nature. This has provided me with a unique perspective on how the built environment can sustainably integrate into the natural environment, with a particular focus on water.

Why Am I Commenting?

As I prepare to re-emigrate back to Ireland, I am seeking to understand the social and cultural issues facing the Country and to actively contribute to Irish society. Conversations with friends and relatives last Christmas led me to review much of the documentation for the pipeline project. I decided to document my concerns in this letter to help ensure that the expenditure of over €10 billion on this infrastructure aligns with the overall water supply objectives of the pipeline project and the principles of strategic infrastructure development in Ireland. Fundamentally, how can large infrastructure like this result in the most good for the most people over the longest period of time while addressing social issues, and appropriately protecting the environment?

On one level, this pipeline project represents a significant public investment. However, the primary benefit appears to be facilitating continued concentrated growth in the GDA, which is already under significant development pressure. This raises critical questions about whether this investment aligns with national planning objectives, such as those in the National Planning Framework, which seek to promote more balanced regional development. There is a risk that this pipeline project could exacerbate social and economic inequality by fuelling growth in the GDA to the detriment of the rest of the country. From my discussions with neighbours in Cork and people around the Country, I believe that Uisce Éireann has failed to clearly communicate to the Irish people why the GDA needs this pipeline project, its true benefits, and its overall cost. Many things are at stake. I present my observations below.

Our Deeply Sacred River – An tSionainn

My first observation is the debasement of the deeply sacred River Shannon (An tSionainn) by this "take" of water. This abstraction has been envisioned for several decades, yet it appears the Irish people are still not broadly supportive. The Irish people are a unique and fascinating people with layered stories of invasion, magic, survival, and destiny. Our Nation is built on these stories that serve as the foundation of our psyche. We are spiritually both a people of the land ruled by ancient gods and goddesses whose mythology still shapes our future, and a people of modern Irish cities and towns struggling to understand ourselves in a complex world.

Culturally, An tSionainn represents the most deeply held of our origin stories. It is the story of the goddess Sionann, who sacrificed herself to create our homeland while searching for wisdom in the sacred waters of Connla's Well. The very essence of Ireland, our waters and our lifeblood,

come from this divine source. An tSionainn is the most significant and divine feature of the Irish landscape, with waters and ecology possessing ancient wisdom meant for the Irish people that we are only just beginning to understand.

In the context of this planning application, I believe Uisce Éireann has not appropriately addressed the cultural significance and value of An tSionainn. The Environmental Impact Assessment Report (EIAR) appears to define cultural heritage narrowly—in terms of archaeology and protected structures—while failing to assess impacts on the river's intangible cultural heritage. This is a significant omission. The river is not merely a physical resource; it is a living cultural entity. The UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, to which Ireland is a signatory, recognises the importance of such living heritage to community identity.

The application treats An tSionainn solely as a raw water source—a commodity to be abstracted. Nowhere is there consideration of the river's intrinsic right to flow, to maintain its ecological integrity and retain its deeply sacred place and status within our culture. This cannot be simplified as an ecological question; it is a question of how we value the natural world and cultural continuity in our planning decisions. International precedent, includes the recognition of legal personhood for rivers such as the Whanganui in New Zealand, the Yarra in Australia, and the Villacamba River in Ecuador. These recognitions challenge us to consider whether our planning processes adequately account for the rights of nature. This is not merely an ecological question—it is a question of how we value the natural world in our decision-making.

I therefore urge An Coimisiún Pleanála to find the application deficient in this regard and to request further information from Uisce Éireann assessing the pipeline project's impact on the intangible cultural heritage of An tSionainn.

The Take (Abstraction) of the River Shannon's Water

There is a fundamental and inadequately assessed risk at the heart of this pipeline project: the assumption that the Shannon has a permanent surplus of water that can be safely abstracted, even during extreme future drought conditions. This assumption appears flawed as climate change can exacerbate extreme drought conditions. Uisce Éireann's modelling assumes no significant impact due to two historic drought scenarios (1995 and 2018) based upon modelling. However, a potential 2080 climate change drought scenario does not appear to have been modelled. The planning application does not provide sufficient robust analysis to reassure the public or the Commission that the risk has been properly addressed despite extensive modelling.

The application is based upon a projected peak raw water abstraction of 300Mld at the year 2050. This peak abstraction rate is envisaged to be approached during periods of major drought in the east, which may or may not coincide with major drought in the Shannon Basin.

The take of up to 300 million litres per day is stated to represent only 2% of the long-term average flow at Parteen. This statistic is misleading because it masks the critical question: *what percentage of the flow will be taken during the lowest recorded flows, or during future droughts intensified by climate change?* Although extensive modelling has been performed as part of the EIAR, I was unable to find an answer to these questions.

Critically, I could not determine from the documents the projected rate of abstraction under future lowest-possible flow conditions. Uisce Éireann will need to apply to the Environmental Protection Agency (EPA) for a large-scale abstraction licence, and that process will define constraints during low flows. However, the current application proceeds without clarity on what those constraints will be. This is a material omission. Until the licensing process is complete and enforceable limits are set, there is a potential risk that the abstraction could represent a very high percentage—or even all—of the flow in the Shannon downstream of the Parteen basin during extreme drought.

The pipeline project's own operational requirements compound this risk. The proposed pipeline cannot be left without flow for more than a few weeks, or water would stagnate, creating water quality issues and potential infrastructure damage. This creates a perverse incentive: during an extreme drought, Uisce Éireann would be operationally compelled to continue abstracting water even as the river runs dry, to protect the integrity of the €10.4 billion asset. The planning documents do not address how this conflict of interest would be managed.

The Application's Treatment of Climate Risk is Inadequate

The original planning assumptions, made over 20 years ago, presumed the Shannon would have ample water. While the application includes detailed analysis of climate impacts together with extensive modelling, I am not convinced it has been properly modelled. We know that climate change increases the frequency and severity of droughts. We know that low flows have occurred historically. Has the project modelled the 1-in-100-year or 1-in-500-year drought scenario under future climate projections? Additionally, has Uisce Éireann considered the full utilization of existing and possible future water abstraction licences upstream and the intersection of cumulative abstraction with the effect of climate change and their impact on inflow? If so, the results are not clearly presented. If not, the risk assessment is incomplete.

Concerns raised by the Shannon River Protection Alliance and several local councils illustrate the public's deep unease. They have highlighted the risk of the Shannon potentially running dry and possible lowering of water levels in Lough Derg. Even in a normal year, the abstraction to Dublin will represent over 20% of the flow in the river during summer months, and up to 40% of the flow that the ESB currently provides to the Lower River Shannon. Uisce Éireann has stated it will work with the ESB to abstract water that would otherwise have been diverted to Ardnacrusha. However, **no formal operating agreement with the ESB is presented in the application on which the comprehensive modelling of flows based on agreed hydrological data is provided**. This is another critical gap requiring trust in the presence of a failure to disclose known risks.

In light of these significant gaps, I respectfully submit that the application is materially deficient in its assessment of abstraction risk particularly in extreme drought scenarios.. The Commission should request further information from Uisce Éireann, including full hydrological modelling of the Shannon under extreme drought scenarios, a clear statement of minimum residual flows, and a draft operating agreement with the ESB.

Ecological Impacts of the Pipeline Project

The ecological impacts of this Pipeline Project extend far beyond the abstraction point. The Lower River Shannon is designated as a Special Area of Conservation (SAC) under the EU Habitats Directive (Site Code 002165). This designation imposes a legal obligation on any State body to ensure that plans or projects affecting the site do not adversely affect its integrity. Based on my review, I am not convinced that Uisce Éireann has adequately demonstrated compliance with this obligation.

The Lower River Shannon downstream of Parteen Weir is already in a state of severe ecological decline due to existing excessive abstraction for hydroelectric generation. The ESB's Ardnacrusha scheme diverts up to 400 cubic metres of water per second, leaving only 10 cubic metres per second (2.5%) in the original river channel. This 15km stretch of a Natura 2000 river has been reduced to a fraction of its natural flow for nearly a century. The proposed Uisce Éireann abstraction would add to this existing pressure, representing the **deepening of an existing ecological wound**.

The SAC protects a remarkable range of qualifying interests, including Atlantic Salmon, Sea Lamprey, Brook Lamprey, River Lamprey, Freshwater Pearl Mussel, Otter, and estuaries, reefs, and alluvial forests. Each has specific conservation objectives set by the National Parks and Wildlife Service. **The planning application must demonstrate that the proposed abstraction will not undermine these objectives, particularly for flow-dependent species**.

The Shannon River Protection Alliance has warned that the pipeline project could cut water flow to Limerick to "a trickle" during summer months. During drought conditions, when the abstraction would be most needed, the ecological impact on Lough Derg and the river downstream would be most severe. Green Party Councillor Seán Hartigan has noted that the pipeline project could "harm fish species such as salmon and eels" which "rely on seasonal movements to breed."

A significant gap in the application relates to the Shannon Fish Passage Project. A report by CDM Smith, commissioned by the ESB, recommends increasing flow in the old river channel, weekly water releases for salmon migration, and night-time spills for eels. Cllr Hartigan has stated that Uisce Éireann has "largely ignored concerns" about the conflicting demand for water between the Fish Passage Project and the Dublin water supply. **The planning application does not appear to have reconciled these competing demands.**

The Mulkear River, a tributary of the Lower Shannon, was the subject of a major EU LIFE restoration project delivered by Inland Fisheries Ireland. That project demonstrated what is possible when ecological restoration is prioritised, with sea lamprey redds increasing more than three-fold in a single year. Although concerns have been raised about the effectiveness of the project; lessons were learned with the chief lesson clear: the Shannon's ecology can recover if given the chance and I believe the Irish people are not yet willing to give up on that recovery.

The proposed pipeline project would lock in and deepen the existing unsustainable water management regime for another century.

Beyond the Shannon itself, the 170km pipeline route will traverse counties Tipperary, Offaly, and Kildare, crossing numerous watercourses and habitats. The construction footprint—a 50-metre-wide strip—will result in damage and removal of native trees, plants, and habitat, and potential spread of invasive species. The use of chemicals to control invasive mussels at the intake presents an additional ecological risk. The application should demonstrate that these risks have been assessed and mitigated.

I respectfully urge the Commission to request further information from Uisce Éireann demonstrating how the proposed abstraction can be reconciled with the conservation objectives of the SAC, and requiring full integration of the Shannon Fish Passage Project recommendations into abstraction operating protocols.

Is a Pipeline Project the Best Solution for Ireland?

Based on my 35 years of experience in water infrastructure engineering, I have significant doubts that this pipeline represents the optimal solution for Ireland. The opportunity cost of committing €10.4 billion to this single pipeline project is immense, and my review suggests that other options have been underweighted or prematurely dismissed.

A. Underutilisation of Existing GDA Water Resources:
The capacity of the River Liffey to supply water to the GDA does not appear to have been fully optimised. Re-operation of the existing reservoirs at Poulaphouca, Golden Falls, and Leixlip could potentially yield additional supply, particularly during low-flow periods.

B. Leakage Reduction:
Up to 40% of Dublin's water is lost through leaks. This is an extraordinarily high rate by international standards. Before taking water from the Shannon, the public deserves answers on progress toward the 2030 leakage target of 20%, and the cost per litre of water saved through leakage repair compared to the cost per litre from this pipeline.

C. Demand Management:
The growth of data centres represents a fundamental shift in water demand. Can water used for cooling be treated and reused onsite? Could new data centres be required to achieve net-zero water consumption? Uisce Éireann should work proactively with the technology sector to rethink water use. Have the costs and implications of regulating down to net zero water consumption been fully explored.

D. Wastewater Reuse:
I did not see discussion of treated wastewater effluent reuse for non-domestic demand. Uisce Éireann is uniquely positioned to integrate reuse into its water supply portfolio, diversifying away from reliance on a single distant source.

E. Conjunctive Use and Groundwater:
Maximising conjunctive use opportunities could provide local, resilient supply during extended dry periods. The application does not appear to have fully explored these possibilities.

Taken together, these points lead me to observe that the alternatives analysis appears to suffer from "mega-project bias" and "plan continuation bias". A proper analysis would re-evaluate anew the pipeline not against other individual mega-projects such as large scale desalination, but against a **portfolio approach**: aggressive leakage reduction, demand management, wastewater reuse, and local source optimisation, implemented in combination over time. The application does not make this comparison convincingly.

F. Economic Growth and Regional Balance

This pipeline project raises a fundamental question that extends beyond water supply: *Does it align with Ireland's stated national policy of balanced regional development?*

The recently revised "National Planning Framework (NPF)" establishes a clear target that "50% of future growth should occur outside the Eastern and Midland region". My concern is that the Water Supply Project works directly against this policy objective.

By providing additional water to the GDA, the pipeline will remove a fundamental constraint on growth near Dublin, fuelling further concentration of population and economic activity. Regional cities such as Cork, Limerick, and Galway already face significant infrastructure deficits that constrain their ability to attract investment. Yet the single largest infrastructure investment in a generation is directed not to these regional priorities, but to enabling more growth in the already overheated GDA.

I acknowledge that Uisce Éireann has stated the pipeline project will have regional benefits, including new turnouts to serve towns in Tipperary, Offaly, and Westmeath with this Shannon River source. There is also the potential to redirect at times some of its existing water supplies to

parts of Louth, Meath, Kildare, Carlow, and Wicklow. However, the application documents are not clear on whether these are firm commitments or merely aspirational. More importantly, even if these benefits materialise, they do not alter the fundamental dynamic: this is a Dublin project dressed in regional clothing.

The opportunity cost is immense. €10.4 billion spent on the pipeline is €10.4 billion not spent on upgrading infrastructure in regional growth centres, accelerating leakage reduction nationwide, and investing in sustainable water management models. For example, based on the cost of recent renewable energy infrastructure projects in Ireland, an investment of €10.4 billion could potentially replace approximately 30% to 40% of Ireland's total electricity generation, primarily by installing new onshore wind and solar capacity. This could be equally as important to the stakeholders of this pipeline project while also directly improving the lives of a greater number of Irish people.

I urge the Commission to consider whether the application adequately addresses its consistency with the NPF, and whether a full assessment has been made of the water supply project's likely effect on regional development patterns.

General Pipeline Engineering Concerns

Based on my professional experience, I offer the following engineering observations. A comprehensive review would require access to detailed design documents, but these observations indicate matters that require rigorous scrutiny.

A. Cathodic Protection and Coatings:
For a 170km steel pipeline of this strategic importance, the integrity of the corrosion protection system will determine its operational lifespan. The application should demonstrate that the cathodic protection system has sufficient redundancy and monitoring capacity, and that a 5-year review protocol is established.

B. Integration with GDA Infrastructure:
It is unclear how the Shannon supply will integrate with Dublin's existing distribution network. Has this hydraulic modelling been undertaken? Will increased local storage be required? These questions have significant cost and operational implications.

C. Appurtenant Structures and Maintenance
The 4 turnouts, 51 line valves, 321 air valves, flow control valve storage reservoirs and other structures require long-term maintenance planning. Access provisions, inspection frequencies, and responsibility across third-party lands must be clearly defined.

D. Washout Valves and Ecological Risk

The 236 treated water washout valves present a recurring operational risk. Dechlorination prior to discharge must be guaranteed, and the application should identify each discharge location, assess receiving water sensitivity, and demonstrate controls to prevent ecological harm.

E. Invasive Species Operational Burden

Established zebra and quagga mussel populations represent a significant long-term maintenance liability. The proposed intake infrastructure will require frequent cleaning that is considered in the application. The potential need for chemical treatment raises further environmental and operational concerns.

F. Treated Water Quality Over Long-Distance Conveyance

Treating water at Birdhill and conveying it 170km introduces water quality risks. Maintaining a disinfection residual will require elevated chlorination, increasing the potential for disinfection by-products. Stagnation during low-flow periods, oxygen depletion, and bacterial regrowth could become significant operational challenges. The application should demonstrate that these risks have been modelled and managed.

G. Infrastructure Resilience and Security

A €10.4 billion, 170km-long, single-source water supply line presents a significant strategic vulnerability. The application should address vulnerability assessment, probabilistic analysis, emergency response protocols, estimated repair times, and redundancy provisions.

H. Chemical Use, Transport and Storage

The types, volumes, and storage locations of chemicals for water treatment and invasive species control should be clearly outlined, together with spill prevention measures and transport routes.

I. Flood Risk Assessment:

The risk that floods pose to the Parteen intake and along the pipeline route should be rigorously evaluated, incorporating climate change projections.

J. Project Embodied Carbon

Uisce Éireann's Sustainability Strategy aims for net-zero carbon by 2040. I estimate that the 170 km of steel pipe will utilize up to 180,000 tons which embodies up to 350,000 tons of CO_2 emissions. This is just one aspect of the carbon embodied by this project. Ireland has declared a climate emergency and committed to legally binding carbon reduction targets. An Coimisiún Pleanála should ensure that embodied carbon Electric Arc Furnaces should be utilized to lower the emissions (up to 75% reduction) from this aspect of the carbon footprint for the pipeline project.

Other Observations

Such other relevant observations may arise as more documentation and results of modelling and analysis become available. I respectfully reserve the right to supplement these observations when further information is made available by the Acquiring Authority and to tender these at the An Coimisiún Pleanála Hearing.

Closing

Again, I am deeply grateful to An Coimisiún Pleanála for the opportunity to make these observations. I also thank Uisce Éireann, their staff, and all the consultants and specialists and their tremendous work to address this critical water supply issue for the people of Ireland. I would also like to acknowledge the people at all the government agencies, NGOs, businesses, and farms, and all those reviewing the project. Finally, I'd like to thank the Irish people who individually recruited me to engage in this form of service to our beloved Nation. Together we all serve Éire and all that she stands for, including An tSionainn, so that future generations may prosper in harmony with nature.

At present, I do not believe that there is enough information for me to conclude that the proposed pipeline and abstraction from the River Shannon is the best alternative for Ireland. This is based upon the cost, the unresolved risks, and the observations outlined in this letter.

Therefore, I object to the proposed pipeline project and request An Coimisiún Pleanála to reject this Strategic Infrastructure Development Application until these observations are appropriately addressed.

My hope is that my input will assist An Coimisiún Pleanála with their decision on this application and guide Uisce Éireann to develop the best alternative in terms of the challenges that all of Ireland is facing related to economic growth, water supply, and related issues affecting all of Ireland, not just the GDA.

Respectfully Submitted,
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