**Our Case Number:** ACP-323980-25

**Planning Authority Reference Number:**

An Coimisiún Pleanála

Friends of the Irish Environment
Tony Lowes
Kilcatherine
Eyeries
Co. Cork
P75 CX53

**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,

pp O'Reilly

Eimear Reilly
Executive Officer
Direct Line: 01-8737184

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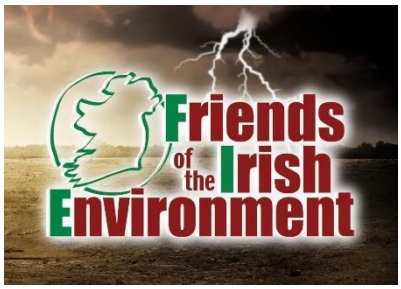


An Coimisiún Pleanála,
64 Marlborough Street,
Dublin 1,
D01 V902.

25 February 2026

Reference: PA92.323980[1]

Applicant: Uisce Éireann

Description: Proposed Water Supply Project for the Eastern and Midlands Region.

Development Address: works extending across counties Tipperary, Offaly, Kildare and Dublin associated with the treated water pipeline, together with related electricity infrastructure works extending into counties Clare and Limerick.

A Chairde,

This submission is made together with an accompanying legal analysis prepared by FP Logue Solicitors and an independent ecological review prepared by Dr William O'Connor. The documents are intended to be read as complementary. The Friends of the Irish Environment submission addresses matters of environmental assessment, evidential sufficiency and planning judgment relevant to the Board's determination. The accompanying legal submission

[1] https://www.pleanala.ie/en-ie/case/323980

examines the application of the Water Framework Directive and related jurisprudence, while Dr O'Connor's report provides technical ecological analysis of the receiving environment and existing hydromorphological and biological pressures within the Shannon system. Taken together, the documents are provided to assist the competent authority in evaluating whether the information before it enables a reasoned scientific conclusion to be reached regarding compliance with applicable EU environmental law.

The proposed Water Supply Project represents a substantial intervention in the water environment and must be assessed across the full hydrological cycle in accordance with the Water Framework Directive (WFD). The EIAR presents a Water Framework Directive compliance assessment reaching a conclusion of no deterioration; the issue raised here concerns whether the underlying analysis enables independent verification of that conclusion.

Four issues arise from the application:

- the project is presented primarily as supply infrastructure rather than as part of the wider water cycle;
- abstraction is proposed within an already heavily modified water body without adequate cumulative assessment;
- expansion of supply is not matched by demonstrated wastewater capacity; and
- compliance with the outcome-based obligations of Article 4 WFD has not been transparently demonstrated on the information provided.

These matters relate to the adequacy of assessment rather than the objective of securing additional water supply. On the material currently before the Board, the assessment required to demonstrate compliance with the Water Framework Directive cannot yet be completed on the basis of the information currently provided. In the absence of further information, it is not apparent how the competent authority could complete the assessment required under the Water

Framework Directive or be satisfied that the environmental objectives of Article 4 would be met.

This submission addresses only those matters necessary to assist the competent authority in reaching its decision on a complete evidential basis.

**1. Assessment Must Reflect the Water Cycle**

The Environmental Impact Assessment treats abstraction, treatment and distribution largely as separate engineering components.

Under the Water Framework Directive, assessment must take place at catchment scale and across the full cycle of abstraction, use and return flows. Consideration of individual elements in isolation risks overlooking cumulative effects within the same hydrological system.

The proposal provides capacity to supply approximately 300 MLD, comprising about 280 MLD of treated water together with a 20 MLD operational allowance, across a Water Supply Area encompassing 36 Water Resource Zones. Increased potable supply will result in increased wastewater discharge and should be assessed as part of the same set of project effects.

Increased potable supply necessarily generates corresponding wastewater loading within connected catchments. Assessment under the Water Framework Directive therefore requires demonstration that receiving waters possess sufficient assimilative capacity to accommodate those additional returns without risk of deterioration. In the absence of a transparent regional water balance analysis linking abstraction, consumption and return flows, the information provided does not clearly demonstrate compliance with the environmental objectives set out in Article 4.

The project proposes abstraction of up to 2% of the long-term annual average flow of the River Shannon at Parteen Basin, downstream of Lough Derg.

The documentation does not clearly demonstrate:

- sufficient assimilative capacity in receiving waters;

- alignment between wastewater infrastructure delivery and supply expansion; or
- assessment of cumulative downstream effects.

Material submitted during the process indicates that wastewater treatment infrastructure in parts of the receiving region is already operating at or near capacity, with upgrades dependent on future delivery programmes. Reliance upon future or programme-level infrastructure delivery introduces uncertainty into the environmental assessment, where project effects depend upon operational capacity not yet evidenced within the assessment material. Outcome-based obligations under Article 4 WFD require assessment on the basis of demonstrated environmental performance rather than anticipated future upgrades. This raises the question of whether a regional water-in / water-out balance assessment has been undertaken. Increased potable supply will lead to increased wastewater loading, yet it has not been demonstrated that existing or planned infrastructure within the Greater Dublin Area and connected catchments can accommodate this loading without risk to receiving waters.

The EIAR includes a Water Framework Directive compliance assessment concluding that deterioration would not arise. However, water impacts are assessed mainly through significance ratings associated with EIA methodology. Article 4 WFD establishes outcome-based obligations, including prevention of deterioration and achievement of good status, which require demonstration capable of independent verification by the competent authority. The Water Framework Directive requires assessment capable of demonstrating compliance with outcome-based obligations rather than reliance on significance classifications alone.

Accordingly, on the material provided, deterioration within the meaning of Article 4 WFD cannot be excluded.

**2. Heavily Modified Water Body, Shannon System**

The abstraction point lies within the Shannon system at Parteen Basin, already substantially altered by hydropower infrastructure associated with the Ardnacrusha scheme.

The downstream Shannon water body is classified at less than good status, with hydromorphology identified as a significant pressure. Article 4 WFD requires protection, enhancement and restoration of such water bodies.

Designation as a heavily modified water body does not reduce assessment obligations. It requires clear justification and transparent evaluation of environmental consequences and restoration potential.

Article 4(3) of the Water Framework Directive establishes criteria relevant to the designation and management of heavily modified water bodies, including consideration of restoration potential and environmentally preferable alternatives. These considerations form part of the environmental context within which additional pressures must be assessed.

The documentation does not clearly demonstrate, at a system-wide scale:

- how ecological improvement or restoration measures have been taken into account in evaluating the proposed abstraction;
- how abstraction interacts cumulatively with existing hydromorphological alteration; or
- how the alternatives assessment enables understanding of whether environmentally preferable options were considered in the context of the modified water body.

The assessment material should therefore make clear how the considerations reflected in Article 4(3) have informed evaluation of the proposed abstraction within an already modified hydrological system.

The modified condition of the Shannon forms part of the environmental baseline against which additional abstraction pressures must be assessed. Where an environmental baseline is already subject to hydromorphological pressure and

restoration obligations, incremental abstraction must be evaluated cumulatively with existing alterations rather than considered as an isolated intervention. Even relatively small additional pressures may influence ecological recovery potential within a constrained system. Where the environmental baseline is itself subject to ongoing ecological pressure and restoration obligations, additional abstraction must be assessed against potential future environmental flow requirements rather than historic operating conditions alone.

**3. Cumulative Effects on Migratory Species**

Operation of the Ardnacrusha scheme has altered flow regimes and migration pathways affecting salmon and lamprey populations.

Additional abstraction must therefore be considered in the context of existing pressures.

The Environmental Impact Assessment does not clearly demonstrate:

- potential effects during low-flow migration periods;
- interaction between regulated flows and abstraction volumes; or
- whether ecological recovery objectives may be further constrained.

Given the Directive's objective of preventing deterioration, uncertainty regarding potential effects should be resolved before a conclusion on compliance with Article 4 can be reached.

**4. Alternatives and Strategic Options**

EU guidance requires projects involving physical modification of water bodies to be assessed against environmentally preferable alternatives.

It has not been demonstrated:

- whether alternative supply configurations were fully examined;
- whether demand management or storage options were comparatively assessed; or
- how system-wide optimisation informed the preferred option.

Any conclusion that no significantly better environmental alternative exists must be supported by clear and transparent analysis capable of verification by the competent authority. Such analysis should demonstrate that optimisation has been considered at system scale, including sequencing of infrastructure delivery, storage resilience and demand-side measures, rather than limiting comparison to engineering configuration alone.

**5. Climate and Low-Flow Conditions**

Assessment relies largely on average river flow conditions.

Ecological effects are most likely during low-flow periods rather than average conditions. Assessment methodologies relying primarily on mean annual flow conditions may therefore underestimate ecological risk relevant to deterioration thresholds, particularly where regulated river systems already experience altered flow regimes. Climate projections indicate increasing variability, including extended dry periods.

The documentation acknowledges potential impacts during drought conditions. Under WFD jurisprudence, temporary deterioration must also be assessed unless it can be clearly excluded that water status would be affected.

Climate-adjusted modelling is required to enable determination of whether precautionary requirements have been satisfied.

**6. Governance, Transparency and Evidence Base**

Major infrastructure decisions depend on accessible and transparent supporting information.

In several instances conclusions are presented without a clearly traceable analytical pathway, limiting understanding of how environmental outcomes have been derived. Transparency is particularly necessary where conclusions depend upon modelling assumptions, operational practices or infrastructure performance extending beyond the immediate project footprint, as these factors materially influence whether deterioration can be excluded.

Effective participation under Article 14 WFD is supported where the assessment clearly explains:

- explanation of assumptions;
- accessible supporting analysis; and
- transparent decision logic.

Given the scale and technical complexity of the proposal, assessment will require access to appropriate specialist expertise sufficient to allow independent evaluation of the scientific material presented.

## 7. Integrated Catchment Management

Water supply expansion cannot be considered separately from catchment pressures.

Implementation of the Water Framework Directive depends on measures linked to individual water bodies and identified pressures. Water supplied to the Greater Dublin Area ultimately returns to the aquatic environment through wastewater discharges. Environmental assessment must therefore consider redistribution of pressures across interconnected catchments, demonstrating how redistribution of supply interacts with wastewater treatment capacity, discharge licences and receiving water objectives.

While future regional offtake connections would be subject to separate consenting processes, the environmental assessment must still consider the system-wide consequences of enabling increased supply capacity.

Greater integration with catchment management planning would assist assessment, including:

- identification of affected catchments;
- anticipated pressure changes arising from redistribution of supply;

- alignment between supply expansion and wastewater infrastructure delivery; and
- mitigation aligned with catchment objectives.

**8. Adequacy of Information**

The following matters have not been demonstrated on the basis of the information provided:

- cumulative ecological assessment within the modified Shannon system;
- restoration and alternatives analysis required under HMWB provisions;
- wastewater capacity and receiving water assimilative capacity sufficient to prevent deterioration arising from increased supply;
- climate-adjusted abstraction modelling;
- system-wide environmental outcomes; and
- whether reliance is placed on Article 4(7) WFD derogation provisions and, if so, how the required conditions are satisfied.

On the information currently available, reasonable scientific doubt regarding environmental effects remains, and deterioration cannot be excluded. Where such uncertainty persists regarding cumulative hydrological effects, wastewater assimilative capacity or climate-adjusted operating conditions, it is not clear how the competent authority could be satisfied that the environmental objectives of Article 4 of the Water Framework Directive would be met. In that context, and consistent with the precautionary approach underpinning EU environmental policy, these uncertainties should be resolved on the basis of complete and verifiable information before a conclusion on compliance is reached.

**9. Conclusion**

The need to consider diversification of Ireland's water supply is recognised. The question before An Coimisiún Pleanála is whether the proposed development, as

assessed, provides a sufficient evidential basis to enable a lawful determination under EU environmental law and the requirements of the Water Framework Directive.

The proposed development represents a catchment-scale intervention within an already modified hydrological system. The material submitted does not clearly demonstrate, on the basis of a reasoned scientific assessment, that the environmental objectives of Article 4 of the Water Framework Directive, in particular the prevention of deterioration, can be achieved. Where scientific uncertainty remains regarding those objectives, a precautionary approach supports resolving such uncertainty prior to reaching a determination on compliance.

On the information currently provided, it is not clear how the competent authority could be satisfied that the environmental objectives of Article 4 WFD would be met. In the absence of such information, and where compliance with environmental obligations cannot be established, the competent authority cannot reach a reasoned scientific conclusion that the objectives of the Water Framework Directive will not be compromised.

It is respectfully requested that An Coimisiún Pleanála:

- require cumulative ecological assessment of abstraction within the Shannon heavily modified water body;
- require transparent alternatives analysis consistent with Article 4 WFD requirements;
- require demonstration that wastewater treatment capacity and receiving water assimilative capacity are sufficient to prevent deterioration arising from increased supply;
- require a regional water-in / water-out balance assessment;
- require climate-adjusted abstraction modelling;

- clarify whether Article 4(7) WFD derogation provisions are relied upon and, if so, how the required conditions are satisfied; and
- require clearer integration with catchment management objectives.

Yours faithfully,

Tony Lowes, Director

Friends of the Irish Environment,

Enclosures: €50 fee for third-party submissions.

Annex I

Friends of the Irish Environment CLG (FIE) is a non-governmental charity formed in 1997 by a group of environmental activists from across Ireland, with the company limited by guarantee established in 2001, towards the following goals:

- monitoring the full implementation of European law and assisting in its development,
- advocating for changes in the Irish planning laws,
- encouraging the implementation of the right to full public participation and access to justice,
- supporting individuals, local groups, and the wider public in understanding environmental issues, and
- seeking the proper implementation of environmental and planning laws to support sustainable communities, including pursuing concerns and cases in both the built and natural environments.

In recent years, FIE has taken legal action to hold the Irish Government accountable for meeting national and international commitments to reducing carbon emissions, including the "Climate Case Ireland" on the adequacy of the Government's Mitigation Plan. [2]

FIE conducts policy research, advocacy, and public awareness campaigns alongside litigation. As an independent and principled environmental advocate, FIE strives to be both challenging and cooperative, effective yet respectful. A commitment to fact-finding, truth-telling, integrity, and transparency drives FIE. FIE is a member of the Irish Environmental Network and the European Environmental Bureau. [3, 4]

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2 https://www.ejiltalk.org/the-supreme-court-of-irelands-decision-in-friends-of-the-irish-environment-v-government-of-ireland-climate-case-ireland

3 https://ien.ie

4 https://eeb.org

# Planning Application for the Water Supply Project Eastern and Midlands Region

# Review of ecological issues

**Version 25 February 2025 (FINAL)**

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## INTRODUCTION

This report presents a preliminary review of selected ecological issues arising from the Planning Application for the Water Supply Project – Eastern and Midlands Region.

The review focuses on the adequacy of the Natura Impact Statement (NIS) and Environmental Impact Assessment Report (EIAR) in assessing the implications of the proposed abstraction within a highly regulated hydrological system that is already subject to significant ecological pressures.

Particular attention is given to the interaction between the proposed abstraction and the existing ESB dam management regime, the adequacy of baseline surveys, compliance with Water Framework Directive (WFD) criteria, inter-basin transfer implications, invasive species control measures, and the requirement under Article 6(3) of the Habitats Directive to remove all reasonable scientific doubt as to the absence of adverse effects on site integrity.

This review does not seek to re-assess every aspect of the project. Rather, it identifies fundamental structural issues within the NIS and EIAR which, in my opinion, prevent the competent authority from lawfully concluding that the proposed project will not adversely affect the integrity of the affected European sites, either alone or in combination with existing pressures.

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**Dr. Will O' Connor**
*PhD, MSc, BSc, CBiol, CEnv, MCIEEM, FRSB*
*Fellow of the Royal Society of Biology*
*Chartered Biologist*
Chartered Environmentalist

Date 25 February 20206

# KEY ISSUES

## Background hydrological condition of the Old River Shannon within the Lower River Shannon SAC

The "Old River Shannon" refers to the stretch of the Lower River Shannon Special Area of Conservation (SAC) extending from Parteen Regulating Weir to the confluence with the tailrace from Ardnacrusha hydroelectric power station (HEPS). This stretch of river is over 15km long and forms part of the designated Natura 2000 site. Prior to the construction of the hydroelectric scheme all the water draining from Lough Derg flowed down this channel. Most of the water is now diverted to Ardnacrusha HEPS.

Despite the impacts of the hydroelectric scheme, this stretch of river remains one of the most important areas in the SAC and contains extensive high gradient stretches that are of international ecological importance.

Under the current operational regime, a statutory minimum compensation flow of 10 $m^3/s$ (cumecs) is left in the stretch of the Lower River Shannon SAC downstream of Parteen Regulating Weir. The majority of the flow is abstracted from the Lower River Shannon SAC and diverted down the headrace canal to Ardnacrusha headrace. On average, 93% of the time only this minimum flow of 10 cumecs is left in this stretch of Natura 2000 river. This results in a highly regulated and unnatural hydrological regime, with prolonged low, uniform flows punctuated by sudden high-flow releases when the generating capacity of Ardnacrusha HEPS is exceeded.

Such a regime departs significantly from the natural hydrograph of a large river. Riverine ecological and geomorphological processes are shaped by seasonal variability, periodic freshets, and gradual transitions between flow conditions. In contrast, the prevailing regime in the Old River Shannon is characterised by extended periods of low, unvaried discharge followed by abrupt increases and decreases in flow. This altered pattern has materially affected channel processes, sediment transport, and riparian dynamics. Evidence of vegetation encroachment, sediment deposition, and channel adjustment reflects a system operating under reduced hydraulic energy. The ecological consequences include habitat simplification and reduced hydraulic diversity within a river reach that forms part of a European site designated for Annex I habitats and Annex II species.

The regulation of the river results in a situation where up to 97% of the flow is abstracted from the Lower River Shannon SAC. This abstraction is likely to have a greater impact on migratory fish populations than the physical presence of the dams. Upstream migrating fish including Atlantic salmon (*Salmo salar*), Sea Lamprey (*Petromyzon marinus*), River Lampreys (*Lampetra fluviatilis*), juvenile European eels (*Anguilla anguilla*), and Smelt (*Osmerous sperlanus*) follow the water into the tailrace and get trapped there. Similarly, downstream migrating fish including salmon smolts and silver eels follow the water out of the Lower River Shannon SAC into the headrace and travel downstream into the turbines.

The fish passes at these dams have been shown to ineffective, and the issue here is often presented as one that new modern fish passes would solve. However, no fish pass could ever work effectively in a situation where 97% of the flow in a river (up to 400 $m^3$/sec) is being abstracted. There are also no fish screens or bypass channels at Ardnacrusha HEPS and downstream migrating fish have to enter the turbines.

The statutory compensation flow of 10 cumces represents a minimum operational threshold established under the Shannon Fisheries Act (1935). It was not derived from ecological criteria and predates both the EU Habitats Directive and the Water Framework Directive. The legislation does not preclude the

release of greater volumes of water. Section 20 of the Shannon Fisheries Act (1935) states that "*The Board shall not, without the previous consent of the Minister, permit the rate of discharge of water through the weir at Parteen Villa to be less at any time than ten cubic metres per second*". There is nothing in this legislation that would prevent the ESB from leaving more water in the river than this minimum base flow. The minimum compensation flow is maintained for extended periods without any seasonal variation, except during major floods when spill events occur. The resulting hydrograph is neither natural nor environmentally derived. The river is managed at the very limit of what the ESB is statutorily permitted to do. However, this legislation is from 1935 and is clearly not compatible with current obligations under the EU Habitats and Water Framework Directive.

In addition to the impacts of the low and unvaried flow on the river as a result of the compensation flow, sudden increases in discharge during spill events, followed by rapid cessation of spilling, also have serious ecological implications. Rapid transitions from low to high flows and back again affects fish migration, spawning gravels, juvenile fish habitat, and the stability of riverine substrates. Best practice in regulated river systems typically seeks to taper flow increases and reductions where possible, in order to mimic natural hydrograph characteristics and minimise ecological shock. The current management regime at Parteen Regulating Weir does not exhibit such gradual changes.

The ecological consequences of this hydrological alteration are reflected in the status of the downstream WFD water body and in the documented decline of migratory fish populations in the River Shannon. Salmon passage data indicate that numbers of returning adult salmon at Ardnacrusha are substantially below conservation targets, with only a small fraction of required escapement currently achieved. While multiple factors influence salmon stocks at national scale, the hydrological and passage constraints associated with the Shannon hydroelectric scheme are widely recognised as significant additional pressures. Indeed, Inland Fisheries Ireland (IFI) has reported that the number of salmon passing though the ESB dams on the Lower River Shannon is currently less than 5% of the conservation limit (CL) escapement target. The CL is the number of salmon that have to run a river before the river is meeting favourable conservation status. On the River Shannon the CL is approximately 50,000 salmon per year, however the numbers of salmon passing the ESB's dams on the River Shannon is now in the hundreds - and most of these are hatchery salmon.

There have been declines in salmon stocks on all Irish rivers. However, the River Shannon is at the very bottom of the league of all the rivers in Ireland in meeting this minimum conservation limit escapement target.

In the IFI national fish counter report for 2024 (IFI, 2024), which is the most recent year for which counts are available, a total of only 124 salmon passed though the fish pass at Ardnacrusha HEPS. At Parteen Regulating Weir, a total of 966 salmon were recorded, but these were likely to mainly reared salmon returning to the hatchery. The scale of the decline of salmon stocks on the River Shannon is far worse that other rivers in Ireland this is primarily a result of the impact of the current water management and fish passage issues.

Despite the impacts of the hydroelectric scheme, the Old River Shannon remains one of the most ecologically valuable reaches of any river in Ireland. It has shown incredible resilience and can be readily restored by increasing and varying the flows to this >15km long channel. Despite decades of unsustainable water management, this is the most important part of the Lower River Shannon SAC and contains extensive high gradient stretches cascading through alluvial forest. The famous "Falls of Doonass" is located on this stretch and is still fully intact. This is a Natura 2000 river of international ecological importance.

The Old River Shannon contains the most important salmon and lamprey populations in the SAC. It provides optimal habitat for Otters (*Lutra lutra*) and the Annex I habitat 'Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation' is also present. The only thing missing from the 'Falls of Doonass' is water, and this part of the river is still a "biodiversity hotspot" despite the low compensation flow. When additional water is released though Parteen Regulating Weir these falls roar back to life and look similar to what they did a century ago. The river temporarily resumes a morphology and hydraulic character closer to its natural state, demonstrating the underlying ecological resilience of the channel. This indicates that ecological restoration through increased and seasonally varied discharge is feasible.

In 1923, Rev. J. Adams wrote the following about this stretch of river: "*It's a miniature Niagara from World's End to Landscape. Above the falls and below them, the Shannon is raging mad—racing, leaping, seething, foaming like a thing possessed."* During major flood events, when the ESB have to spill water through Parteen Regulating Weir, the falls come to life again and could be described same as they were in 1923. This is not a heavily Modified Waterbody (HWMB) – it is a physically intact and resilient river that just requires more water to allow it to recover.

The proposed new water abstraction represents approximately 35% of the water that now usually passes over the 'Falls of Doonass'. This flow does not vary for over 90% of the time. The proposed new abstraction is not negligible in the context of the Old River Shannon channel and its requirements for restoration.

If the existing water management regime requires modification to comply with the Habitats Directive and the Water Framework Directive, whether through enhanced environmental flows, improved seasonal variability, or restoration measures, then the compatibility of the proposed abstraction must be assessed in relation to those anticipated changes. The Natura Impact Statement (NIS) and Environmental Impact Assessment Report (EIAR) assess the abstraction against the existing operational regime but do not evaluate its implications for a future environmentally optimised flow regime. This omission is material in circumstances where reform of the current hydrological management framework is reasonably foreseeable.

There is mounting evidence that the existing abstraction for the hydroelectric scheme is having integrity level impacts on the migratory fish qualifying interests of the Lower River Shannon SAC, and severe impacts on other migratory fish species including the critically endangered European eel, and the threatened Smelt. Cumulative and in combination impacts of this with the new additional proposed abstraction have not been treated correctly in the NIS and EIAR.

Water Framework Directive (WFD) reports identify the relevant river waterbodies immediately downstream of Parteen Regulating Weir as having ecological status below "Good" in recent assessment cycles. The Shannon (Lower)_050 is rated as 'Poor' and the Shannon (Lower)_060 is rated as 'Moderate', with hydromorphology listed among the key pressure categories.

While unsatisfactory status does not automatically prove legal non-compliance (because WFD allows time extensions and exemptions, and heavily modified water body designations can change the objective to 'good ecological potential'), this is strong evidence that (a) WFD objectives are not currently being met in these affected reaches, and (b) the flow regulation/diversion system is treated by the Irish competent authorities as a primary hydromorphological pressure requiring mitigation.

Parteen Regulating Weir and its reservoir are located within the Lower River Shannon Special Area of Conservation (SAC), which is designated for Annex I river habitats and Annex II species including

Atlantic salmon, sea/river/brook lamprey, and otter. The site-specific conservation objectives explicitly identify Parteen and Ardnacrusha as “considerable obstructions” on the Shannon main channel for salmon, with fish passes present but upstream migration described as “problematical”.

The Irish authorities have already framed Parteen Regulating Weir and Ardnacrusha Hydroelectric Station as requiring a package of remedial measures, including fish passage improvements and an environmental flow (“Eflow”) regime explicitly tied to WFD and Habitats objectives in official planning. In particular, the Water Action Plan 2024 (Ireland’s third RBMP cycle documentation) describes an approved “roadmap” for fish passage improvements at the Shannon dams, including an Eflow study programme, feasibility studies for barriers and fish passage, and a “Lower Shannon Management Plan” to be agreed (subject to public consultation). None of these measures have been implemented to date.

Habitats Directive compliance hinges on (i) whether the existing operation is causing deterioration or significant disturbance of the SAC’s qualifying interests (Habitats Directive Article 6(2)), and (ii) whether any operative consents/renewals or operational modifications have been screened/assessed appropriately (Article 6(3)). The evidence points to substantial compliance failure in relation to both the Habitats and Water Framework Directives.

It is not possible to reconcile the compensation flow provided to the Old River Shannon with EU ecological-flow principles and with the site’s stated conservation needs around fish passage, habitat condition, and flow/hydromorphology. There has been no evidence-based justification and no mitigation framework is in place.

## The Proposed Project has not been assessed in relation to future Environmental Flow changes for the Lower River Shannon SAC

The proposed abstraction is not being introduced into an ecologically neutral baseline. It is being added to a hydrological regime in which approximately 90–95% of the long-term average flow of the Lower River Shannon SAC at Parteen Regulating Weir is being abstracted from the SAC and diverted to Ardnacrusha HEPS, leaving a largely uniform statutory compensation flow of 10 cumecs in more than 15 km of the Lower River Shannon SAC channel, for on average 93% of the time.

The downstream Water Framework Directive (WFD) water body commencing below Parteen Weir (Shannon (Lower)_050) is identified as being of ‘Poor’ status and subject to anthropogenic pressures within a controlled flow regime. The existing regime reflects a historic statutory minimum established in 1935, not an environmental flow derived from contemporary ecological requirements under the Habitats Directive or the Water Framework Directive.

The Natura Impact Statement (NIS) and Environmental Impact Assessment Report (EIAR) assess the proposed abstraction relative to this managed regime, rather than demonstrating that the regime itself is ecologically adequate. In effect, the baseline against which the project is assessed is already hydrologically constrained and environmentally compromised.

The NIS and EIAR rely on hydrological modelling and screening tools, including the UKTAG lake level test, to conclude that the proposed abstraction will not materially alter lake levels or downstream flows under the current operating regime. The statutory 10 $m^3/s$ compensation flow is treated as an operational boundary condition rather than as a flow regime validated against WFD ecological objectives.

There is no demonstration that the current compensation regime maintains hydromorphological processes consistent with Good Ecological Status or Good Ecological Potential, or that it maintains the favourable conservation status of qualifying interests in the >15 km SAC river channel between Parteen Regulating Weir and the confluence with the tailrace. The assessment demonstrates limited hydrometric change within a regulated system but does not establish the ecological adequacy of that system.

The NIS states that the Proposed Project would not impede a future "flow-sharing decision" or gate adjustments at Parteen Weir to allow more water to be provided to the Natura 2000 river channel downstream of Parteen Regulating Weir. However, no defined future environmental flow regime is set out against which this assertion can be tested.

The referenced *Roadmap for the Lower River Shannon* (CDM Smith, 2021) focused primarily on fish passage and migratory enhancement. It did not define the hydrological regime required to restore the full ecological function of the >15 km SAC designated river channel between Parteen Regulating Weir and the tailrace confluence. Improving fish passage is not equivalent to restoring environmental flows capable of achieving Habitats Directive or WFD objectives.

CDM Smith (2021) itself characterised the Shannon Scheme as being far from best practice and an outlier in Europe. This implies that substantive reform of the compensation flow and operational regime will be required. The scale and nature of such reform remain undefined.

The proposed abstraction is operationally integrated into the Shannon Scheme and depends upon the continued regulation of flows between hydropower and compensation discharge. Yet the ecological adequacy of the existing regime has not been demonstrated, the affected WFD water body is currently of Poor status, the hydrological regime is acknowledged to be highly controlled and artificial, and the future environmental flow requirements necessary to restore compliance are unknown.

In these circumstances, the principal concern is not whether the abstraction causes measurable short-term changes in lake levels or flows downstream of Parteen Regulating Weir under the current regime. The fundamental question is whether introducing a new large-scale abstraction into an already constrained system could constrain or complicate the implementation of future environmental flow reforms required under EU law.

Without defining the future hydrological regime necessary to achieve Habitats Directive and WFD objectives, the conclusion that the proposed scheme will not be an impediment is highly speculative. A lawful and precautionary assessment would require the abstraction to be tested against realistic restoration scenarios, rather than solely against the historic statutory framework set under the 1935 Act.

The project's compliance case is one of demonstrating negligible hydrological change within an already altered system. However, if that underlying system is not compliant with the Habitats Directive and the Water Framework Directive, then layering an additional abstraction onto it creates a cumulative impact issue. The assessment has not examined the abstraction and the Shannon Scheme as an integrated hydrological system requiring restoration. Instead, it treats the historic regime as fixed and environmentally validated. If the underlying flow management system must change in order to meet EU environmental obligations, then the compatibility of this new abstraction with that future system must be assessed. The NIS and EIAR for the proposed scheme have failed to do this.

Under the Habitats Directive and WFD framework, it is not acceptable to advance a new abstraction proposal that is dependent on, and embedded within, an existing regulated dam/weir operating regime, while not identifying and assessing (or bounding with sufficient certainty) the measures that are required

for the wider regime to comply. This is especially the case when those measures could be material to flow regime, hydromorphology, fish passage, and SAC conservation objectives. EU law requires prior certainty, including in relation to in-combination effects, and prohibits filling material gaps with future unknown measures or uncertain benefits.

## The Proposed Project has not been assessed in relation to future water management changes for Lough Derg (Shannon) SPA

Lough Derg (Shannon) SPA is hydrologically managed by the same ESB operating regime that controls flows at Parteen Regulating Weir and Ardnacrusha HEPS. The NIS and EIAR describe how ESB manages lake levels within a defined Normal Operating Band (NOB), with seasonal tendencies toward higher levels in late spring/early summer and lower levels in autumn and winter for storage and flood management purposes. These operating rules are driven by hydropower, navigation, and flood management requirements rather than ecological thresholds linked to SPA conservation objectives.

The SPA's qualifying interests, including Common Tern (*Sterna hirundo*), Cormorant (*Phalacrocorax carbo*), Tufted Duck (*Aythya fuligula*), and Goldeneye (*Bucephala clangula*) and the Wetland and Waterbirds habitat, are all directly influenced by water level dynamics. In particular, Common Tern breeding success is sensitive to the timing, magnitude and rate of water level change during the nesting season. Nesting islands and shoreline bars are vulnerable to flooding if levels rise during egg incubation and to increased predation risk if levels fall excessively or unpredictably.

The NIS does not assess breeding-season water level stability, nest flooding risk, or the rate-of-rise characteristics of lake levels under abstraction scenarios. Instead, it relies on the premise that abstraction remains within the existing NOB and therefore will not materially affect the SPA.

However, the conservation objective for the SPA is to maintain or restore favourable conservation condition of the qualifying interests and their supporting wetland habitat. If restoration of species such as Common Tern or improvement of waterbird habitat condition requires adjustments to lake level management, such as narrower fluctuation limits during breeding months, modified seasonal storage strategies, or ecologically driven release rules, then the operating band itself may need to change in the future. The NIS states that the Proposed Project would not impede future flow-sharing decisions or Parteen Weir gate adjustments. However, yet again no defined future ecological operating scenario is presented against which this can be tested.

The proposed abstraction is operationally integrated into the Shannon Scheme and will form part of the overall water balance of Lough Derg. By introducing a permanent additional demand within the managed system, it may reduce the flexibility to change the operating band or to prioritise ecological water level management during critical periods. The assessment does not evaluate whether abstraction volumes, particularly during drought or low-storage conditions, could constrain the ability to implement future ecological optimisation of lake levels required under the Habitats Directive or to prevent deterioration under the Water Framework Directive.

Therefore, the key issue is not limited to short-term changes in mean lake level. The key question is whether the proposed abstraction could act as a barrier to future ecological restoration of Lough Derg (Shannon) SPA. In the absence of a defined environmental flow or ecological operating framework for the lake, and without modelling breeding-season water level sensitivity for SPA qualifying interests, the conclusion that the project will not prevent future restoration is yet again speculative. A precautionary and compliant assessment would require the abstraction to be evaluated against realistic ecological management scenarios, rather than solely against the historic hydropower-driven operating regime.

The NIS does not include an adequate description of Common Terns (*Sterna hirundo*) in Lough Derg (Shannon) SPA. This species is listed under Annex I of the EU Birds Directive and is a Qualifying Interest of this SPA. This SPA is with the Zone Of Influence (ZOI) of the proposed scheme according to the NIS.

A breeding survey of this SPA was conducted by NPWS in May 2024 and no Common Tern were recorded which indicates a complete population collapse in the SPA. This information is contained Conservation Objectives report for this SPA prepared by NPWS (2024).

The NPWS (2024) report is listed in the references in the NIS for the proposed scheme and is selectively quoted. However, the fact that a complete population collapse of this species has recently occurred in the SPA is omitted from the NIS.

Common Tern has historically bred in Lough Derg SPA since at least the 1980s when the first surveys were completed. The collapse of the population in this SPA runs contrary to the national population trend and is of major concern as this is a qualifying interest of the site.

Common Tern are ground nesting birds and, in this SPA, have bred almost entirely on Goat Island. This species is highly vulnerable to water level changes in regulated lakes, where artificial management of water can lead to the flooding of their nests and reduced breeding success.

On page 457 of the NIS, it is stated that "*management of one of the islands used for nesting (of Common terns) has increased the area of suitable habitat available and prevented nests being destroyed by fluctuating water levels*". However, the fact the Common Tern colony on the lake has recently collapsed is not stated in the NIS, and the cause of the collapse is not examined. Although the NPWS (2024) report is quoted, data on the numbers of breeding Common terns in the SPA is only provided up to 2015. The bird surveys completed at the proposed Raw Water Intake and Pumping Station (RWI & PS) location recorded small numbers of Common Tern.

Impacts on Common Tern are only discussed in the NIS in relation to potential indirect water quality impacts from the proposed pipeline. There is no examination of indirect or cumulative effects in relation to water level regulation.

## Climate change and undefined future environmental flow requirements

The Abstraction Assessment (Appendix A9) incorporates climate change by applying percentage reductions to Q95 low flows under a +2°C scenario, adopting the Upper 75th percentile allowance as a reasonable worst case. The modelling tests abstraction impacts against the existing operational framework, including the statutory 10 m³/s compensation flow at Parteen Weir, and the current Normal Operating Band on Lough Derg.

However, the 10 m³/s compensation flow was established under the Shannon Fisheries Act (1935) as a statutory minimum safeguard and was not derived from ecological criteria. The modelling therefore assumes the continued suitability of a historic operational regime whose environmental adequacy has not been demonstrated under the Habitats Directive or the Water Framework Directive. The climate change analysis reduces inflows statistically but retains the structural premise that a 10 cumec compensation flow remains the relevant base condition.

This is a critical limitation in the climate change modelling undertaken. Climate change is projected to reduce summer low flows significantly, increasing ecological stress in the Lower River Shannon SAC and Lough Derg (Shannon) SPA. Under such conditions, compliance with EU environmental law may

require increased environmental baseflows, greater seasonal variability, and revised operating bands to offset climatic pressure. The modelling does not test scenarios in which the statutory minimum compensation flow is raised and varied, including during drought periods, nor does it test whether abstraction remains compatible if enhanced environmental flows are required. Similarly, it does not assess any possible changes to the NOD on Lough Derg.

The modelling does not explicitly define drought from an ecological perspective. The only environmental flow reform tested is an outline environmental flows regime derived from CDM Smith (2021). The climate modelling demonstrates that the abstraction remains compatible with the historical 1935 compensation regime under projected Q95 reductions. However, it does not demonstrate compatibility with the environmentally compliant regime that may be required under future climate conditions. If restoration of the Lower River Shannon SAC and Lough Derg (Shannon) SPA necessitate increased baseflows, enhanced seasonal variability, or revised operating bands in response to climate stress, the abstraction will operate within a materially different hydrological framework than that assessed.

In these circumstances, the conclusion that the proposed abstraction will have a “Negligible” and “Not Significant” impact on the affected waterbodies and even under climate change scenarios will not impede future environmental reform rests on assumptions rather than on a defined, climate-adapted restoration scenario. Under Article 6(3), this does not remove reasonable scientific doubt.

## Proposal Is premature pending completion of Lower River Shannon study

The Proposed Project is premature given that the State has recently tendered for further work explicitly aimed at addressing foundational gaps in the understanding of the Lower River Shannon hydrology and ecology. A contract notice recently published on eTenders (Reference: 7328234) seeks consultancy support to develop environmental flow recommendations and hydrological modelling for the Shannon Scheme that will specifically inform restoration of ecological function and compliance with EU environmental law.

This confirms that key technical work required to define the environmental flow regime necessary to achieve Water Framework Directive objectives and favourable conservation status for the Lower River Shannon SAC is still outstanding. Proceeding with consent for a major abstraction, embedded within and dependent upon the regulated ESB dam management regime, while this work remains incomplete, entrenches a regime that has not been scientifically assessed for ecological compliance.

The absence of a defined and assessed environmental flow framework undermines the scientific basis of the NIS and EIAR and means that the authorities are being asked to approve a large-scale hydrological intervention before essential ecological and hydrological evidence is in place. This is contrary to the precautionary principle of Article 6(3) of the Habitats Directive and to the requirements of the Water Framework Directive.

## Failure to demonstrate compliance with UKTAG Criteria

The Abstraction Assessment (Appendix A9) relies on UKTAG standards in assessing hydrological compliance. It reports a Q95 net inflow to the Lough Derg/Parteen system of 25.6 $m^3/s$ and confirms that the proposed peak abstraction is 3.47 $m^3/s$ (300 Mld). Based on these figures, the abstraction represents approximately 13.6% of Q95.

UKTAG environmental standards for rivers reference an Environmental Quality Standard (EQS) limit of 10% of flow at Qn95 for most river types, with even stricter thresholds applying to sensitive watercourses with salmonid spawning and nursery areas.

While UKTAG river standards are normally applied to naturalised flows and are sensitivity-class dependent, the abstraction proposed here exceeds the 10% benchmark when compared to the Q95 figure presented in Appendix A9. This is evidence that the proposed abstraction level is too high and would not allow compliance with WFD river flow standards.

Importantly, the Q95 value used in the modelling is derived from a regulated and managed hydrological system (1972–2023 record) rather than from a naturalised baseline. UKTAG river abstraction criteria are generally intended to be applied to naturalised or near-natural flow regimes. The assessment does not present a naturalised Q95 for the affected river reach, nor does it demonstrate compliance against UKTAG river standards for sensitive watercourses.

In a regulated system, it is entirely possible that the natural Q95 would be lower than the regulated net inflow figure cited, particularly during drought conditions, meaning that the true percentage abstraction relative to natural low flows could be higher.

The assessment instead relies primarily on a UKTAG lake level test applied to Lough Derg and Parteen Basin. This is not equivalent to demonstrating compliance with UKTAG river flow criteria for the Lower River Shannon SAC.

No structured assessment is presented demonstrating that the abstraction meets UKTAG river flow condition limits when applied to the relevant water body type under naturalised low-flow conditions.

The proposed abstraction exceeds the UKTAG low-flow percentage benchmarks when measured against the Q95 value presented in the applicant's own modelling. In the absence of a naturalised Q95 calculation, sensitivity classification and river-based UKTAG assessment, compliance with UKTAG river standards has not been demonstrated. If the applicant chooses to rely on UKTAG criteria, it is incumbent upon them to demonstrate that the abstraction meets those criteria for the affected river water bodies. Based on the figures presented, that has not been shown.

## Inadequate baseline surveys of Qualifying Interests

The Zone of Influence (ZOI) of the proposed project is defined in the NIS and EIAR as extending from Meelick Weir to the confluence with the Ardnacrusha tailrace confluence upstream of Limerick City. It could be argued that the ZOI extends further than this. However, the ecology field surveys completed were confined to only the footprint of proposed Raw Water Intake and Pumping Station (RWI & PS) and a small buffer area around the footprint of this proposed infrastructure. Therefore, after defining the spatial area that was that within the likely ZOI, the baseline ecology surveys completed did not spatially cover this area. The baseline surveys actually only extend to a 75m radius around the RWI & PS, and to only 50m for the aquatic ecology surveys.

No fish surveys following a standard methodology were completed at the proposed abstraction point. Instead, a previous historical survey completed by Inland Fisheries Ireland (IFI) in 2016 is relied upon. This survey is out-of-date and was undertaken for a different purpose than assessing the impacts of the proposed development. It was also a limited survey that was undertaken over only two nights in July 2016 and did not include electrofishing (that would be required to detect juvenile lampreys). IFI are not part of the project team and their historical report is presented in the NIS and EIAR as if they were.

The surveys completed did not include standard species-specific methodologies for Atlantic salmon (*Salmo salar*) and lamprey species. Atlantic salmon, Brook lamprey (*Lampetra planeri*), River lamprey (*L. fluviatilis*), and Sea lamprey (*Petromyzon marinus*) are all qualifying interests of the Lower River Shannon SAC. However, no baseline surveys of these species following a standard approved methodology were conducted within the ZOI.

The surveys completed were limited to the proposed RWI & PS site only. No netting or electrofishing surveys were completed. The surveys completed were limited to visual surveys and the use of dip nets. It is claimed in the NIS that core sampling was used to check for lamprey ammocoetes. However, this is not a standard and approved survey method for lampreys and its use is not even mentioned in the English Nature lamprey monitoring manual (Harvey & Cowx, 2003) which sets out the standard methods that should be used for surveying lampreys in Natura 2000 rivers. This manual has been adopted for use in Ireland by IFI and the National Parks and Wildlife Service (NPWS).

The number of cores, spatial coverage, sediment volume sampled and replication are not provided. No quantitative density estimates were undertaken, despite conservation objectives including targets for juvenile lamprey density in fine sediments. In the absence of defined survey effort using a standardised methodology, the conclusion that ammocoetes are absent or unaffected is not supported by robust field evidence. Also, no surveys were conducted for other life cycle stages of lampreys, in particular macrophthalmia (the migratory juvenile stage of lampreys).

The NIS and EIAR refer to the fact that lampreys were also not recorded in the 2016 historical survey completed by IFI. However, IFI also did not use any survey methods appropriate to lampreys.

No surveys for Atlantic salmon or any other fish species were completed following an approved methodology. The NIS and EIAR states that salmon were surveyed by visual survey, dip netting, scuba surveys and a multi-method stock survey of Parteen Basin. However, none of these surveys are formal standardised salmon monitoring methods. Again, the use these methods (netting, scuba, dip netting) are not appropriate for salmon and their use is not even mentioned in the English Nature salmon monitoring manual (Cowx & Fraser, 2003), which sets out the standard methods that should be used for surveying salmon in Natura 2000 rivers. Again the “multi-method stock survey” referred to is an out-of-date survey completed by IFI and IFI are not on the project team. The historical IFI survey was limited in scope and was not designed to assess the impact of the proposed water abstraction. Therefore, no fish survey of Parteen reservoir using a standard method was completed to inform the NIS and EIAR.

It is notable that upstream counters are approved as methodology for surveying adult salmon in Cowx & Fraser (2003). There are two fish counters located in the study area, one at Ardnacrusha Hydroelectric Station and one at Parteen Regulating Weir. The data from these counters is readily available yet was not accessed and reviewed as part of the assessment for the proposed scheme.

It is stated in the NIS that the nearest suitable spawning habitat to Parteen Basin for salmon and lamprey is approximately 5km upstream of Killaloe in the Annacarriga River. However, this is not the case and both salmon and lampreys have been recorded in the past from the River Ardclooney (EPA Code 25_2596) and River Ballyteige (EPA Code 25_2794) which both join Parteen reservoir within 2.5km of the proposed intake. The Grange River (EPA Code 25_2360) also has salmonid and lamprey habitats and flows into Lower River Shannon SAC at the upstream end of Parteen reservoir. The statement that there is “*no immediate source of lamprey ammocoetes at the proposed RWI&PS site*” is therefore factually incorrect. These watercourses are not even mentioned in the NIS and EIAR. It is noteworthy that the EIAR scoping letter from Clare County Council requested that the potential impacts on both the River Ardclooney and River Ballyteige be assessed, yet this was never done.

The European eel (*Anguilla anguilla*) is not separately assessed in a structured manner, despite its critically endangered status and conservation concern. No electrofishing, fyke netting or targeted surveys for juvenile or silver eel migration were undertaken, even at the proposed intake. The ESB operate an eel trap and transport programme within the study area and data on juvenile eels (elvers) trapped at Parteen Regulating Weir and Ardnacrusha Hydroelectric Station, and silver eels (migrating adults) is again readily available. However, this information was not accessed and reviewed as part of the assessment for the proposed scheme. Moreover, the ESB release juvenile eels trapped below Parteen Regulating Weir into Parteen reservoir. However, again this information was not accessed and considered in the assessment. Juvenile eels trapped and released near a major water intake would be highly vulnerable to entrapment and no consideration of this and the release points used by ESB is included in the assessment. Given the known decline in European eel populations, this omission is notable.

IFI recommended that further surveys be completed in their consultation letter. These surveys were not done. IFI asked for consideration of the rare endangered Irish Red Data Book species Smelt (*Osmerous eperlanus*) and Pollan (*Coregonus autumnalis*). Both species occur within the defined ZOI yet no species-specific surveys for them were completed. The presence of Pollan is dismissed based on anecdotal evidence, and Smelt is not even mentioned in the NIS and EIAR.

Overall, apart from limited surveys at the intake footprint and reliance on an older limited IFI survey, there is no comprehensive characterisation of the qualifying interests in the ZOI. The surveys completed at the proposed intake location were very limited, did not follow standard methods, and focused on immediate habitat conditions rather than functional ecology. No description of baseline population status, migration behaviour, and life-stage sensitivities within the ZoI have been provided in the NIS and EIAR. For a project of national scale, embedded in a regulated river system where Annex II migratory fish are qualifying interests, the surveys completed are considered to be completely inadequate.

## Inadequate assessment of impacts on QIs

The proposed abstraction is assessed as a small percentage change within a neutral baseline. In reality, it becomes a structural component of a heavily regulated river system that already constrains qualifying interests. The ecological consequences of that combined system have not been fully assessed.

In a heavily regulated system where migratory fish stocks are already constrained, the individuals that do migrate successfully are disproportionately important for maintaining population viability and genetic continuity. When numbers are low, marginal additional mortality or delay can have a higher proportional effect.

The NIS does not examine how fish species like salmon and lampreys actually migrate past the proposed intake location. There is no description of migration behaviour though the Parteen Basin, no analysis of flow attraction dynamics relative to the intake, and no modelling of behavioural interaction with intake hydraulics beyond general screen velocity statements. The assessment focuses on engineering compliance at the intake footprint, but it does not evaluate how upstream or downstream-migrating fish use the wider zone of influence. In particular, there is no meaningful baseline description of migration timing windows, flow cues, or routing patterns at this location.

The risk of fish impingement and entrainment is one of the most direct and potentially significant ecological impact pathways associated with large-scale surface water abstraction schemes. This is especially true where abstraction occurs within, or immediately adjacent to, a European site designated for migratory fish species. The proposed intake is located within the Lower River Shannon SAC,

downstream of a major hydrological control structure, in a reach that functions as a migration corridor for Annex II species including Atlantic salmon, sea lamprey, river lamprey and European eel. Any intake at such a location has the potential to intercept migrating adults, downstream migrating salmon smolts, juvenile lampreys (including macrophthalmia) and eel life stages. Even low levels of additional mortality may be ecologically significant in a system where stocks are already severely reduced and restoration of favourable conservation condition is an objective.

The Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHG) recognised this risk and recommended that an “Impingement Mortality and Entrainment Characterisation Study” be undertaken, and that sufficient survey data be provided to predict population-level effects. This is a clear and specific request in a formal consultation letter. A characterisation study of this type would normally involve identification of all species and life stages potentially present at the intake location, seasonal surveys to determine timing and abundance, hydraulic assessment of approach and sweeping velocities relative to species-specific swimming performance, modelling of entrainment and impingement rates under different operating scenarios, and an assessment of mortality at individual and population scale. It would also typically set out a monitoring and adaptive management framework to verify performance post-construction.

The NIS does not provide such a study. The material presented consists of a conceptual description of passive wedge-wire cylinder screens, a proposed maximum through-slot velocity of 0.15 m/s, reference to a bubble curtain, and generic swimming speed data derived from broad species groups. The assessment refers repeatedly to “fish and eels” when of course eels are true fish, and lampreys are not eels, and indeed taxonomically are not really fish. There is no clear specification of slot width, no detailed assessment of which species or life stages are likely to be present at the intake during different seasons, no quantification of fish density or migration intensity at this location, no modelling of predicted entrainment rates, and no population-level impact analysis. The document does not distinguish between strong swimmers (e.g. adult salmon) and weaker life stages (e.g. smolts, eel elvers, juvenile lamprey), nor does it assess temperature-dependent performance or endurance capacity. It does not evaluate how screen performance would vary under low lake levels, partial blockage, or different pump duty scenarios. Nor does it provide a monitoring protocol to validate the effectiveness of the intake design once operational.

For a scheme of this magnitude, within a SAC where migratory fish are qualifying interests and where salmon stocks are documented to be well below conservation limits, the absence of the requested characterisation study is a serious material omission. The conclusion that entrainment and impingement will not adversely affect site integrity is not supported by quantified evidence or population modelling, but by generalised engineering assumptions. In circumstances where the competent authority specifically advised that such a study was necessary to predict population effects, the failure to provide it undermines the ability of the Appropriate Assessment to demonstrate, beyond reasonable scientific doubt, that the proposed abstraction will not adversely affect the integrity of the Lower River Shannon SAC.

## Environmental Implications of Veligers and the Practical Feasibility of INNS Control

Zebra mussels (*Dreissena polymorpha*) and Quagga mussels (*Dreissena bugensis*) are well established at the proposed intake location. Zebra and Quagga mussels reproduce by releasing microscopic planktonic larvae (veligers) into the water column. Once drawn into an abstraction system, these veligers can settle and develop within pipes, pumps, valves and other infrastructure. Over time, this biofouling can significantly reduce hydraulic capacity, impair pump efficiency, damage mechanical

components and lead to operational shutdowns for cleaning and maintenance. In large-scale abstraction schemes, uncontrolled colonisation can result in substantial operational risk, increased energy consumption and high maintenance costs. For this reason, scheme operators have a strong operational incentive to prevent veligers from entering abstraction pipes.

These veligers are extremely small - typically in the 70-200 micron range - and are present in very high densities during peak reproductive periods in eutrophic systems. In productive lakes like Parteen Reservoir, veliger concentrations can rise rapidly and remain elevated for extended periods during the summer months. Their small size and abundance mean they behave more like suspended particulate matter than like discrete organisms; they are not readily visible and are easily transported through hydraulic systems.

For an abstraction of approximately 3.5 $m^3/s$ (300 Mld), even moderate veliger densities translate into the continuous intake of very large absolute numbers of larvae. The risk to the project is clear and veliger control is operationally necessary. The NIS recognises this by proposing microscreen filtration, washwater capture and UV treatment, together with potential chemical dosing contingencies.

However, the ecological assessment of this control system is limited. While the design intent is to create a closed-loop process with no discharge to the SAC, the practical feasibility of achieving sustained, near-total veliger exclusion at this scale in a eutrophic lake environment is not robustly demonstrated. The backwashing process alone may generate washwater volumes of up to approximately 3,000 $m^3$/day at peak abstraction rates. This washwater is, by definition, enriched with veligers and suspended material.

The practical challenge is not merely whether veligers can theoretically be filtered at a given slot width or approach velocity. The challenge is maintaining reliable performance during peak bloom conditions, when suspended solids and algal loads increase fouling, reduce UV effectiveness, and increase cleaning frequency. Under such conditions, flush volumes may increase, operational stress on containment systems may rise, and the likelihood of upset conditions (overflow, bypass, partial treatment, or emergency discharge) becomes greater. These likely operational scenarios are not assessed in the NIS.

Moreover, the NIS provides for the contingency use of invasive species control chemicals within the raw water system. While described as being contained within the rising main and not discharged to the lake, the environmental implications of accidental release, maintenance-related discharge, or system failure are not evaluated.

## Failure to assess the environmental implications of inter-basin water transfer

The proposed scheme is categorised under Annex I of the EIA Directive because it constitutes a water transfer project between river basins exceeding 100 million cubic metres per annum. The inter-basin transfer is therefore not a peripheral characteristic of the project - it is one of the reasons that triggered the mandatory requirement for an EIAR.

Annex I classification reflects the inherent environmental sensitivity of large-scale redistribution of water resources across catchment boundaries, including hydrological, ecological and water quality consequences in both the donor and receiving basins.

While an EIAR has been prepared, it does not assess the environmental implications arising from the inter-basin transfer itself. The assessment is focused on abstraction impacts within the Shannon

system. However, once abstracted, the transferred water will be treated, used and discharged into different river catchments.

The Environmental Protection Agency (EPA) specifically advised during the EIAR scoping that Uisce Éireann "*will need to consider the impact of providing this water to the ecological status of the water bodies to which this water will subsequently be discharged after use*". This advice reflects the requirements of Article 3 of the EIA Directive, which mandates assessment of all likely significant direct and indirect effects of the project, including those occurring outside the immediate abstraction location.

It is stated in Chapter 9 (Water) of the EIAR that "*there would be no impacts on the ecological status of the Dublin and Liffey basin as a result of the Proposed Project. This is set out in in Appendix A9.1 (Abstraction Assessment*)". However, this is not actually set out in this Appendix, and it is also not covered anywhere else in the NIS or EIAR.

The redistribution of water between basins necessarily alters flow volumes, wastewater discharge quantities, pollutant loading patterns and dilution dynamics in the receiving catchment. Increased potable supply results in increased wastewater flows. Even where effluent standards are met, higher discharge volumes can influence nutrient budgets, thermal regimes, ecological status boundaries and cumulative pressures under the Water Framework Directive.

The EIAR does not provide any consideration of these effects, nor does it demonstrate that no deterioration will occur in receiving water bodies. In circumstances where inter-basin transfer was the legal trigger for mandatory EIA, the absence of an assessment of the environmental consequences in the receiving basin represents a serious material omission.

This omission is particularly significant in light of the Habitats Directive. Atlantic salmon, a qualifying interest of the Lower River Shannon SAC, rely on successful homing migration through estuarine and coastal waters. While salmon exhibit high natal homing fidelity, straying between catchments is a recognised biological phenomenon. Migratory behaviour is influenced by freshwater discharge patterns, plume dynamics and olfactory cues at river mouths. Inter-basin transfers that alter discharge volumes or chemical signatures in estuarine systems may influence migration routing behaviour. Even low straying rates can be ecologically relevant in systems where salmon stocks are already significantly below conservation targets.

Under Article 6(3) of the Habitats Directive, the competent authority must be satisfied, beyond reasonable scientific doubt, that the project will not adversely affect the integrity of any European site. The AA screening and NIS do not assess the potential indirect pathway whereby altered discharge patterns in receiving catchments could potentially affect salmon migration behaviour or distribution. The absence of such analysis is notable given that migration success and distribution are core components of the conservation objectives for Annex II salmon. It is noted again the proposed abstraction represents approximately 35% of the water that is released from Parteen Regulating Weir for a typical 93% of the year. The implications for salmon of this water "signal" coming from a different catchment was not even considered.

The inter-basin transfer implications give rise to both EIA and Habitats Directive concerns. The EIAR does not assess one of the key reasons that required Annex I treatment, namely the environmental consequences of transferring water between river basins. The Appropriate Assessment did not even consider the potential indirect effects on salmon migration. In these circumstances, the environmental assessment is incomplete in relation to a defining feature of the project, as the likely significant effects of the inter-basin transfer of water have been identified or assessed.

## Parallels with Case C-164/17 Grace and Sweetman v An Bord Pleanála

In Case C-164/17 *Grace and Sweetman v An Bord Pleanála*, the Court of Justice made clear that a project cannot rely on assumed or undefined future management measures to exclude adverse effects under Article 6(3).

In Grace and Sweetman v An Bord Pleanála, the court considered a wind farm proposed within a commercial forestry area managed the semi-state commercial entity Coillte. The developer argued that much of the ecological damage to the SPA had already arisen from forestry operations and that ongoing forestry restructuring and habitat management would improve conditions. However, the court rejected this approach and the attempts to offset the impact of the proposed wind farm against assumed or future land management.

The Court of Justice confirmed that a project cannot rely on assumed or external management measures to exclude adverse effects unless those measures are fully defined, secured and assessed as part of the consent. The central principle was that the integrity test under Article 6(3) must assess the project as it will actually operate and cannot rely on external or future management measures unless those measures are fully defined, secured and assessed as part of the consent.

There are clear similarities with the current abstraction proposal. The Lower River Shannon exists within a long-standing regulated hydrological regime operated by ESB, also a semi-state commercial entity. That regime has shaped the current ecological condition of the river. The proposed abstraction cannot function independently of ESB dam operations. It requires ESB to divert water from hydropower generation and to adjust storage and operational decisions to accommodate a permanent additional demand of up to approximately 3.5 cumecs. The proposed abstraction is embedded within the ESB dam management regime and cannot function independently of it.

While the NIS concludes that the project will not impede future flow-sharing decisions, the hydrological regime necessary to achieve compliance with the Habitats Directive and the Water Framework Directive has not been defined or assessed. The existing 10 $m^3/s$ compensation flow was established in 1935 and is not an environmentally derived standard. If restoration of the Lower River Shannon SAC and protection of Lough Derg (Shannon) SPA require revised environmental flows, seasonal variability or changes to operating bands, the abstraction will operate within a materially different regime than that assessed.

The integrity conclusion therefore rests on the assumption that future hydrological reform can occur without conflict with the abstraction, yet the nature of that reform is currently unknown.

Under the principles set out in C-164/17, reliance on undefined future management flexibility cannot remove reasonable scientific doubt. The project has not been assessed against the environmentally compliant regime that may be required over its lifetime. The proposed abstraction alters how the dams must be managed, and the future hydrological regime necessary to achieve compliance with the Habitats Directive and the Water Framework Directive has not been defined, quantified or assessed.

In Grace and Sweetman v An Bord Pleanála, the forestry restructuring measures were presented in part as ecological improvements that would offset the wind farm's impacts. In the present case, the claim is that hydrological change will be negligible because operations remain within the existing Normal Operating Band and statutory minimum flow of 10 cumecs. The project is framed as operating within the historic regime rather than improving it. However, this difference does not remove the core similarities.

The proposed abstraction cannot be separated from ESB dam management because it requires that management to change, both immediately to accommodate the abstraction and prospectively to achieve compliance with EU environmental law. The modified regime, as it will actually function over the lifetime of the scheme, has not been assessed, and the NIS has not evaluated the real system that will operate in practice. Under the principles set out in C-164/17, that is not sufficient to remove reasonable scientific doubt as to the absence of adverse effects on site integrity.

Under Article 6(3) of the Habitats Directive, a project may only be authorised where the competent authority is certain that it will not adversely affect the integrity of a European site. The Court of Justice has held that this requires the removal of all reasonable scientific doubt, applying a precautionary standard to protect the conservation objectives of the site.

## SUMMARY AND CONCLUSIONS

This report has reviewed the Proposed Water Supply Project – Eastern and Midlands Region in the context of the Lower River Shannon SAC, Lough Derg (Shannon) SPA, associated downstream and hydrologically connected European sites, and the requirements of the Habitats Directive and the Water Framework Directive. The review has identified a series of structural deficiencies in both the Natura Impact Statement (NIS) and Environmental Impact Assessment Report (EIAR), which, taken together, prevent the competent authority from lawfully concluding that the project will not adversely affect site integrity.

The abstraction is being layered onto an already highly regulated hydrological regime in which up to 97% of the flow in the Lower River Shannon SAC is being diverted away from over 15 km of Natura 2000 river channel, leaving a constant and unvaried minimum compensation flow of 10 $m^3/s$ in this stretch for prolonged periods. This minimum flow was established in 1935 and was not derived from ecological criteria. The ecological adequacy of this regime has not been demonstrated under the Habitats Directive or the Water Framework Directive. The NIS assesses the abstraction relative to this historic framework rather than against the environmentally compliant regime that may be required to restore favourable conservation condition and achieve WFD objectives.

The modelling undertaken for the application incorporates climate-adjusted Q95 reductions but retains the 1935 compensation flow and existing the NOB as the structural baseline. The future environmental flow regime necessary to restore the Lower River Shannon SAC and protect Lough Derg (Shannon) SPA has not been defined or assessed. If restoration requires increased baseflows, enhanced seasonal variability, or revised operating bands, the abstraction will operate within a materially different regime than that assessed.

The NIS states the conservation objectives for the Lower River Shannon SAC, Lough Derg SPA and other affected European sites, but does not undertake a structured, attribute-level assessment of how the abstraction interacts with those objectives.

This is a major water abstraction located with the Lower River Shannon SAC, and the proposed pipeline crosses 639 watercourses, yet the aquatic surveys completed are very limited. No fish surveys using standard recognised methodology (e.g. electrofishing) were completed at the proposed abstraction and pipeline crossings. The DAHG specifically recommended that a fish impingement and entrainment characterisation study be undertaken and that sufficient survey data be provided to predict population-level effects. However, no such study has been presented. The intake design is described conceptually, but there is no quantified entrainment modelling, no population-level impact assessment for Annex II fish species, and no validated performance framework to demonstrate effectiveness. Given the location of the abstraction within a migration corridor of depleted salmon and lamprey stocks, the absence of a formal intake entrapment study is a significant omission.

The project is a mandatory Annex I inter-basin water transfer scheme exceeding 100 million $m^3$ per annum. The inter-basin transfer was the legal trigger for the EIAR. However, the EIAR does not substantively assess the environmental implications of transferring water to receiving catchments, treating and using it, and discharging increased wastewater volumes into different river systems. The EPA explicitly required that the ecological status implications in receiving water bodies be assessed. That assessment has not been provided.

The abstraction represents 13.6% of the Q95 flow at the abstraction point based on the applicant's own modelling. UKTAG environmental standards for rivers reference an EQS limit of 10% of flow at Qn95,

with even stricter thresholds applying to sensitive watercourses. While UKTAG river standards are normally applied to naturalised flows and are sensitivity-class dependent, the abstraction proposed here exceeds the 10% benchmark when compared to the regulated Q95 figure. This is evidence that the proposed abstraction level is too high and would not allow compliance with WFD river flow standards.

The proposed abstraction represents approximately 35% of the water that now usually passes over the 'Falls of Doonass' downstream of Parteen Regulating Weir. The proposed new abstraction is not negligible in the context of the Old River Shannon channel and its requirements for restoration.

Under C-164/17 Grace and Sweetman, a project cannot rely on assumed or undefined future management measures to exclude adverse effects. The abstraction is embedded within ESB dam management and is assessed against a historic regime whose ecological adequacy has not been demonstrated. The environmentally compliant hydrological regime that may be required in future has not been defined. The integrity conclusion therefore rests on assumptions rather than on complete, precise and definitive findings capable of removing reasonable scientific doubt.

The recent State procurement of consultancy services to develop environmental flow recommendations for the Lower River Shannon highlights that the fundamental hydrological and ecological work remains incomplete. Approving a major inter-basin abstraction before that work is concluded risks entrenching an operational regime that has not been demonstrated to comply with EU environmental law.

Under Article 6(3) of the Habitats Directive, a project may only be authorised where there is no reasonable scientific doubt as to the absence of adverse effects on site integrity. In circumstances where the environmentally compliant hydrological regime has not yet been defined, and where material uncertainties remain regarding ecological and cumulative impacts, that standard cannot be satisfied. The project is therefore premature and should not be consented in its current form.

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FPLOGUE SOLICITORS

Our Reference: EJB/FIE
Your Reference: 323980

25 February 2026

**By email**

An Coimisiún Pleanála

**Our client:** **Friends of the Irish Environment CLG**

**Address of client:** **Kilcatherine, Eyeries, Co Cork, Ireland. P75 CX53**

**RE:** **Submission on water supply for the Eastern and Midlands Region,**

A Chara,

We refer to the above planning application made under the provisions of section 37E of the Planning and Development Act 2000.

We make this addendum submission further to the report of Dr William O' Connor enclosed herewith.

**Introductory Remarks**

The proposed development is one of the most significant infrastructure developments to be proposed within the State in recent decades. It is in that context that it is surprising that this project is being brought forward in its current form considering that it involves abstracting water from the River Shannon at Parteen, where the downstream WFD waterbody is at Poor Status.

This we submit has certain legal consequences which should have been apparent to Uisce Éireann, and which should have been addressed prior to bringing forward this application which is employing huge public resources both in terms of Uisce Éireann and An Coimisiún Pleanála.

It is our respectful submission that the application is fatally flawed in legal terms, and is therefore premature.

**Expertise of An Coimisiún Pleanála**

As stated above, this is one of the largest infrastructure projects to come into the planning process in recent decades. The material placed before the Commission is enormous by any standards, and much if not most of it is highly technical.

It is difficult for members of the public to thoroughly engage with the volume of material submitted. Our client has engaged the services of Dr. O' Connor whose expertise in relation to the River

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Shannon is widely recognized. His report details the significant ecological issues with the Project, owing in particular to the degraded condition of the waterbodies from the Ardnacrusha Hydroelectric Power Station ("HEPS").

In that context, it is critically important that An Coimisiún Pleanála employ adequate expertise to assess the EIAR (and the NIS) for this application. The Commission is very unlikely to have the range of expertise inhouse in order to properly evaluate this application.

We refer the Commission in that regard to the judgment of Humphreys J. in *Reid v An Bord Pleanala* [2021] IEHC 362, where he stated at para 48:

> *"The "sufficient expertise" on the part of the board thus has those dimensions: firstly, an expertise to be able to fully understand and properly evaluate the developer's fact-specific material and the science underlying it; and secondly, to do so in the context of expert knowledge of prevailing general standards and scientific information. The board here argued, incorrectly in my view, for a considerably lower standard of expertise. The board specifically disagreed with the proposition that it should know what the appropriate emission standard for ammonia is, and unfortunately contended that it was entitled to rely on the apparent fact that the developer's material was prepared by experts, that a range of bodies had been given the opportunity to comment on such material, and that the county council had already assessed the material. But the council's view is irrelevant because what is before the board is an appeal. The notion of relying on other people's judgements more generally is flawed and, if it were to be applied, would be an abdication of the board's independent statutory role. Indeed it is a circular argument - how can the board know that the developer's advisers are in fact competent experts that can be relied on if the board doesn't itself have, or have access to, equal competence and expert knowledge. The logic that "other people have looked at this, therefore it must be OK" is the sort of thing that leads to systems failures. It is the stuff of Challenger, Columbia, Grenfell Tower, pre-crash financial regulation. I don't accept that the board would be complying with its critically important independent evaluative obligations if it took that approach, although I emphasise that I say that in the context of endeavouring to clarify the board's obligations. I'm not finding that the board did take that approach here. Likewise, the board's argument that it "doesn't have infinite resources" is facile and hollow. Developers don't have infinite resources either, yet they manage to assemble teams of experts to deal with all technical issues. The board must have a corresponding level of expertise on each of the areas so dealt with. But I emphasise that just because the board argued for an unacceptably low standard doesn't mean it isn't in a position to comply with a higher standard. Decision-makers sometimes like a safety net in legal terms, but I'm afraid here it isn't available. Sufficient expertise means fully understanding the developer's material in all its aspects. Green-lighting something you don't fully understand wouldn't be an acceptable procedure, if it were to happen. With those preliminary points in mind, I now turn to the specific grounds of challenge.*

The Court went on at para 72 et seq.:

> *72. The board's most legally pertinent defence to the complaint that it had not adequately assessed the ammonia emissions was, as it was put, that there was nothing on the face of all of the material before the board showing reasonable scientific doubt.*
>
> *73. I would accept that as a statement of the relevant yardstick of the decision-maker's autonomous obligation, but with one important clarification – the board can accept the developer's material for AA purposes if there is nothing on the face of the material, as it appears to a reasonable person with sufficient expertise, that would create scientific doubt. Not as it appears to a planning generalist without detailed expertise in the particular*

*sub-specialty to which any given document relates. A document can only be accepted if it is fully understood – what's the point in nodding through something you don't fully understand? That process lacks integrity and couldn't be proper scrutiny on any analysis.*

*74. One factor pointed to the applicant as creating doubt was that the scale adopted in the developer's diagrams began at 1.2 µg NH3/m3 and did not factor in a 0.3 µg NH3/m3 ambient background. An additional factor was reference to bryophytes at another location to the north of the site, separate from the sensitive location of Louisa Bridge to the west of the site.*

*75. Are these matters that the "reasonable expert" would have said created doubt so as to require the board to examine the NIS more critically without being asked to do so? That is a conclusion that has to be established evidentially. Any scientist could disagree with any other scientist about something – that's science. Hence when Ms Cullen complains about the developer's science, that is to be expected. Had the applicant put forward all, or any, of that at the time, it would have created doubt. But while her affidavits (even looking back at the struck-out paragraphs to see if they need to be revisited yet again) make clear she doesn't agree with the developer (informed as that is to some extent by new original research, which doesn't come in to the legal test), they don't establish that a reasonable person with all of the necessary "sufficient expertise", having read and fully understood the materials before the board, would have autonomously seen the materials on their face as not excluding reasonable scientific doubt.*

*76 Thus the developer's material can be filed under the heading of "correct insofar as it goes" with a lack of material before the board to specifically make an issue of that. It seems to me that in the end, this is a case where, analogous to An Taisce v. An Bord Pleanála [2021] IEHC 254, [2021] 4 JIC 2003 (Unreported, High Court, 20th April, 2021), there wasn't anything before the board to make the zone of influence a real issue. While the developer's science can be critiqued in retrospect like a lot of things, it hasn't been shown to create a doubt on its face in the mind of a reasonable expert so as to make it necessary for the board to question it in the exercise of the board's own required expertise.*

*79. As emphasised earlier in this judgment, by virtue of the EIA directive, the board must have, or have access to, "sufficient expertise" to examine the relevant assessments.*

*80. Subject to further argument if it arises in some future case, it would be questionable if the "sufficient expertise" test requires individual bord members to have qualifications in specific sub-fields. The nature of board meetings is that they lend themselves to highlevel examination of a project, not line-by-line interrogation of the materials. That, one might have thought, must occur at official level. The real problem is likely to be the inspector-as-jack-of-all-trades model. That might work at the level of appeals regarding extensions to domestic dwellings, for example, but no one individual can have "sufficient expertise" in all of the sub-fields now arising in highly complex large-scale applications. So one can't in any sense blame the inspector in this case – no single hypothetical person could have the necessary "sufficient expertise" in all of the various sub-disciplines concerned. Nobody could have the necessary detailed knowledge, constituting sufficient expertise, of everything from geology to physics, ecology to emissions, human health to archaeology. Again the point is that if the knowledge isn't in-depth, it isn't sufficient, because otherwise you are approving something you don't totally understand. There isn't likely to be any single planning inspector to be found, who purports to opine on that full range of sub-fields, that couldn't be severely discomfited in a witness box on the basis of a skilful line-by-line examination of at least some sub-set of a developer's materials in a complex application. The approach of regarding the board and its inspectors as "experts" simpliciter, to be automatically deferred to, has to be reviewed in the light of both the amended EIA directive, the massively changed nature of complex planning applications, and the detailed science now required for environmental assessment*

*procedures. No single expert could provide a modern developer with all she needs – hence each developer seeking a large permission comes girded with a phalanx of highly qualified experts, each specialised in their own sub-discipline. The notion that a single person on the board's side can have equivalent expertise to fully understand and evaluate every line of every document so created is, unfortunately, clearly flawed. One is left with the question as to whether the way the board channels the examination of applications through a single inspector in each case complies with EU law.*

*81. Why then, one might ask, am I not giving more consideration to the grant of relief to the applicant? Unfortunately there is a very old-fashioned answer to that – this point isn't sufficiently pleaded. The only allegation of lack of expertise is in relation to air emissions in the case of a major accident, and I don't see any huge problem with the way the board dealt with that. Nor is there any claim for general declaratory relief. The only declarations sought are along the lines that the decision was ultra vires on various grounds. Indeed, the present case shows the pointlessness of seeking declarations of that type. It is hard to imagine why a court would grant a declaration that a decision was ultra vires and not also grant certiorari. If certiorari is granted, declarations are unnecessary, and if refused, then a declaration that the decision is invalid is also going to be refused. The form of declaration encouraged by the current practice direction in the Commercial Planning and Strategic Infrastructure Development List (and the Asylum List for that matter) as to the rights and legal position of the parties and persons similarly situated, wasn't sought here, although in fairness that post-dated the initiation of these proceedings. And finally, even if the point had been fully pleaded, and broad declaratory relief sought to give the court options in that regard, the issue would still have had to be developed evidentially – perhaps by having sought directions requiring the board, in the exercise of its obligation under the jurisprudence requiring it to lay its cards face up on the table as a respondent in judicial review (see R. v. Lancashire County Council, ex parte Huddleston [1986] 2 All E.R. 941 at 945 and subsequent cases), to put in an affidavit giving a detailed account of the extent to which it examined and understood the science and the background documentation. Even the most expansive view of a court's "own motion" jurisdiction couldn't fill those gaps. So any full discussion of these questions will have to await some other case."*

We submit that the above observations are particularly appropriate in an application such as this where the assumptions and methodology underlying the material submitted by the consultants on behalf of Uisce Éireann will require to be robustly considered.

It is vital in light of the legal issues which will be highlighted below that sufficient relevant independent expertise is retained to assess this development.

**Relationship between EIA and WFD**

The Water Chapter of the EIAR (Chapter 9) proceeds on the basis of assessing effects in terms of Significance. That is of course the correct approach to take in an EIA context.

However, the EIA Directive is a procedural directive. It does not dictate outcomes. The Water Framework Directive on the hand, as was established by the Court of Justice in Case C-461/13, *Bund für Umwelt und Naturschutz Deutschland e.V. v Germany* ("Weser") does dictate outcomes.

The CJEU has found that the WFD assessment should be carried out in the context of the EIA procedure.[1]

[1] See in particular the Opinion of Advocate General Hogan in C-535/18 Land North Rhine-Westphalia

Chapter 9 of the EIAR adopts a test of 'Significance'. For example, at paragraph 310, it states in relation to the impacts of abstraction in terms of operational activities:

> *"Based upon these findings, effects on the Derg TN lake water body and the Derg HMWB would be Not Significant'.*

However, this is not the correct approach if this is to be taken as fulfilling the obligations under Article 4 of the Water Framework Directive. The WFD does not have a 'Significance' test. Instead it has two key tests in terms of surface waters:

1. The achievement of good surface water status (potential), and
2. Non-Deterioration.

Irish case-law does indicates however, a preference for substance over form, so that if the material may be found elsewhere in the documentation this is generally regarded as sufficient. It is recognised that the State has failed to give effect to the Weser ruling by providing adequate statutory and policy guidelines for developers. This is recognized by Uisce Éireann in this case, where they admit that they have had to fall back on UK Guidance. However, such non-binding Guidelines should be treated with caution, notwithstanding the regrettable lack of domestic guidelines. This is also clear from the facts of the first main Irish case dealing with the WFD: *Sweetman v An Bord Pleanála* [2021] IEHC 16) ("Bradán Beo").

However, Uisce Éireann have submitted a 'Water Status Impact Assessment Report' ("the WFD Report"), which is based on aforementioned UK Guidance, namely UKTAG Screening.. In particular in relation to abstraction modelling, they rely on the UKTAG River Basin Management report. As set out in the submission of Dr. O Connor, the UKTAG river abstraction criteria are generally intended to be applied to naturalised or near-natural flow regimes, and not highly regulated flow regimes such as the Lower River Shannon.

**Water Status Impact Assessment Report**

We respectfully submit that the WFD Report is fundamentally flawed.

Crucially at paragraph 166, it states in relation to impacts of abstraction in the operational phase of the development:

> *"During abstraction, the water level regimes in the WFD designated water bodies are only predicted to be affected during drought and in the days immediately preceding. Hydrological modelling results indicate the maximum difference in water level predicted to be caused by the inclusion of the proposed 300Mld abstraction was a drawdown of 134mm, and a drawdown of 65mm for the 154Mld scenario. With future climate change included in the modelling, the differences are 168mm and 73mm respectively. The size and rate of change fits within the commonly observed level changes seen within the 52-year period of observed levels*
>
> *Hydrodynamic modelling has demonstrated that in a worst case drought scenario, the Proposed Project would only result in miniscule changes to concentrations of BOD, dissolved oxygen, nutrients and chlorophyll-a. Overall, it is considered that the change in abstraction will not put WFD status at risk.*
>
> *The changes arising from abstraction on the WFD designated water body will be negligible. Although the Derg HMWB would experience altered flows during flood periods, the proposed abstraction would not prevent fish passage as a result of abstraction. Hydrological modelling suggests that the Proposed Project would have no impact under the proposed Eflow regime, whereby increased releases of water (termed "freshets") would be provided over Parteen Weir to improve fish migration."*

In that context, it is important to point out that Art 4(1)(a)(ii) of the WFD provides:

> *"Member States shall protect, enhance and restore all bodies of surface water."*

At no point does the WFD Report address the requirement in Article 4 to restore bodies of surface water which are not at good status. In particular, the WFD Report does not address the hydromorphological impacts on the downstream Shannon (Lower)_050 waterbody which is at Poor Status with HYMO as the significant pressure. This is generally as a result of the Ardnacrusha HEPS.

It is acknowledged in the documentation submitted that there will be a hydromorphological impact, although it is described as 'negligible'. The application does not describe how the proposed development, which has a negligible adverse impact, would help to restore the Shannon (Lower)_050 waterbody from its current poor status to a good status.

**Non-deterioration**

Furthermore, crucially, the WFD Report does not address the requirement for non-deterioration in Article 4 WFD in the context of the impacts of abstraction on the downstream waterbody.

This is the glaring legal issue with this application, and we respectfully submit that it is fatal.

The Court of Justice in *Weser* addressed the interpretation of deterioration in Art 4. At paragraph 70, the Court held:

> *"In the light of all the foregoing considerations, the answer to the second and third questions submitted is that the concept of 'deterioration of the status' of a body of surface water in Article 4(1)(a)(i) of Directive 2000/60 must be interpreted as meaning that there is deterioration as soon as the status of at least one of the quality elements, within the meaning of Annex V to the directive, falls by one class, even if that fall does not result in a fall in classification of the body of surface water as a whole. However, if the quality element concerned, within the meaning of that annex, is already in the lowest class, any deterioration of that element constitutes a 'deterioration of the status' of a body of surface water, within the meaning of Article 4(1)(a)(i)"*

The concept of 'deterioration' therefore does not include any 'de minimis' or subjective assessments around 'Significance' as appears to be applied in Chapter 9 of the EIAR. Such subjective assessments of deterioration were specifically excluded by the Court where they held as follows at paragraph 68:

> *"Contrary to the submissions of Bundesrepublik Deutschland, an interpretation that only 'serious impairment' constitutes a deterioration of the status of a body of water, an interpretation which is founded, in essence, upon the weighing up of, on the one hand, the adverse effects on waters and, on the other, water-related economic interests, cannot be inferred from the wording of Article 4(1)(a)(i) of Directive 2000/60. Furthermore, as the applicant in the main proceedings observes, such an interpretation does not respect the difference established by the directive between the obligation to prevent deterioration of the status of a body of water and the grounds of derogation laid down in Article 4(7) of the directive, since only the latter involve some weighing up of interests."*

The Court essentially found that issues around subjective assessments of significance were matters for the derogation process provided under Article 4.

This was reiterated in Case C-529/15 *Gert Folk,* in which the CJEU held at paragraph 36:

> *"It should be borne in mind that, when a project is liable to have adverse effects on water, consent may be given to it if the conditions set out in Article 4(7)(a) to (d) of that directive are satisfied (see, to that effect, judgment of 4 May 2016, Commission v Austria, C-346/14, EU:C:2016:322, paragraph 65)."*

In Case C-535/18 *Land North Rhine-Westphalia*, the Court held at paragraph 74:

> *"Article 4 of Directive 2000/60 not only contains more long-term planning requirements provided for by management plans and programmes of measures, but also concerns specific projects to which the prohibition of deterioration of the status of bodies of water also applies. A Member State is consequently required to refuse authorisation for a project where it is such as to result in deterioration of the status of the body of water concerned or to jeopardise the attainment of 'good status' for bodies of surface water or groundwater, subject to the derogations also provided for in Article 4 (see, to that effect, judgment of 1 July 2015, Bund für Umwelt und Naturschutz Deutschland, C-461/13, EU:C:2015:433, paragraphs 47, 48 and 50)."*

It is clear therefore that while there may be differences between the various parties as to the extent to which the abstraction will impact on the downstream waterbody, there can be no doubt that even accepting the developer's modelling (which is refuted by Dr. O' Connor) there will be a deterioration of that waterbody for the purposes of Article 4.

Uisce Éireann have not sought to apply any of the derogations under Article 4 in respect of the proposed development.

It follows from the above that the Commission are precluded from granting permission.

**Temporary deterioration**

It is also to be noted that Uisce Éireann appear to accept impacts in drought conditions. In other words, that there will be temporary adverse impacts. At paragraph 166 of the WFD report they state:

> *"During abstraction, the water level regimes in the WFD designated water bodies are only predicted to be affected during drought and in the days immediately preceding."*

The WFD prohibits temporary deterioration of waterbodies. This was established in Case C-525/20 *Association France Nature Environnement.* In that case, reliance was placed on a non-binding WFD Common Implementation Strategy Guidance document published by the EU Commission which stated that temporary deterioration was not prohibited under the WFD. However, the Court rejected this and at paragraph 45 held:

> *"In the light of all the foregoing considerations, the answer to the two questions posed is that Article 4 of Directive 2000/60 must be interpreted as requiring Member States, when they assess the compatibility of a particular programme or project with the objective of preventing the deterioration of water quality, to take into account temporary, short-term impacts which are without lasting consequences, unless it is clear that such impacts have, by their nature, little effect on the status of the bodies of water concerned and cannot lead to a 'deterioration' of that status, within the meaning of that provision. Where, as part of the authorisation procedure for a programme or project, the competent national authorities determine that that programme or project could lead to such a deterioration, that programme or project may be authorised only if the conditions set out in Article 4(7) of that directive are met, even if the deterioration is temporary in nature."*

**Lack of Adequate Programme of Measures for Waterbodies affected by Ardnacrusha HEPS**

Related to the above, is the fact that no adequate WFD assessment can be conducted in the absence of specific Programme of Measures for the WFD waterbodies affected. This is most obviously the case in relation to the waterbodies currently affected by the abstraction and impoundment for the Ardnacrusha HEPS. As stated above the environmental objectives for these waterbodies include restoration for those waterbodies which are not heavily modified. For those which are heavily modified it includes the obligation to achieve good surface water status.

Those environmental objectives can only be achieved in the contract of Programme of Measures which are set at the level of the waterbody and directed towards the achievement of the environmental objectives for that waterbody.

This issue was addressed by the Court of Appeal in England and Wales in the recent case of *Secretary of State for Environment, Food and Rural Affairs v Pickering Fishery Association* [2025] EWCA Civ 378. That case concerned the transposition in that jurisdiction of the Water Framework Directive, and a challenge to the River Basin Management Plan for the Humber catchment. The RBMP contained only a summary Programme of Measures containing generic, national-level measures, with no detailed Programme of Measure for the individual water bodies in the Humber catchment. This was advanced by the Secretary of State as sufficient to meet the obligation of the WFD

The Court of Appeal comprehensively rejected this interpretation. The Court held that Articles 4, 5, 8, 11, and 13 of the WFD establish an interconnected series of detailed, binding requirements which were not merely strategic or aspirational objectives. The environmental objectives required under the WFD must be set for each individual water body (achieving "good ecological status" or "good ecological potential"), and Programme of Measures must identify measures or actions programmed for each water body in order to attain those objectives within the specified deadline.

The Court stressed that Article 11(5) WFD requires additional measures where environmental objectives for a water body are unlikely to be achieved, and Article 11(8) WFD requires periodic review and updating of the measures. The Court held that those provisions only made logical sense if the measures are water body-specific from the outset.

The Court concluded at para 192:

> *(1) To comply with the WFD and the WFDR 2017 a PoM drawn up under regs.12 and 13 must identify a programme or scheme of actions for each water body in order to achieve the EOs for that body within the relevant deadline.*
>
> *(2) Where the EA and the SSEFRA rely upon generic provisions in a PoM, such as national legislation or policy, as a basis for identifying the measures for a water body, they must set out in the PoM measure(s) or action(s) for each water body to achieve its EOs which follow from an application of those provisions to that body.*

Ireland has chosen to implement the WFD by means of a single RBMP covering the entire territory of the State. The RBMP (Water Action Plan 2024) generally contains only generic national level measures in the Programme Of Measures. In certain instances it does contain specific measures for individual waterbodies or groups of waterbodies, such as particular measures in relation to the Annacotty Weir on the river Mulkear in County Limerick. However, such individual measures do not satisfy the requirement of the WFD as was found in *Pickering* to identify a programme or scheme of actions for each water body, in order to meet the specific environmental obligations for that water body.

The absence of such a programme or scheme of actions for each water body is particularly egregious in the case of the waterbodies impacted by the Ardnacrusha HEPS. As pointed out by Dr. O' Connor

the ESB water regime maintains the lowest possible flow statutorily permitted in the Old River Shannon. There has been no assessment conducted as to whether altering the ESB flow regime to Ardnacrusha HEPS would help achieve the environmental objectives for the waterbodies affected by it. There is simply nothing in the RBMP Programme of Measures providing for the achievement of the environmental objectives of the waterbodies affected by the Ardnacrusha HEPS by the deadline of next year.

Thus, this planning application highlights in stark terms the inadequacy, and in our respectful submission, the unlawfulness of the RBMP for Ireland.

As is clear from the judgement in *Pickering* the WFD does not allow for the administrative convenience of having a single RBMP covering the entire territory of the State, in circumstances where that RBMP does not provide the necessary measures to achieve the environmental objectives of the WFD for each waterbody.

Notwithstanding that this proposed development has been in gestation for many years, it is highly surprising that no Programme of Measures has been set for the waterbodies affected by abstraction for a very significant hydroelectric power station, and from which waterbodies further abstraction is proposed in order to serve the needs of the main urban area of the State.

We therefore submit, that no proper Article 4 assessment could be attempted for the proposed development, although as stated above even the attempt which has been made by Uisce Éireann is wholly inadequate. The bringing forward of this proposed development is premature until such time as there are Programme of Measures established for the affected waterbodies.

**Conclusion**

For the foregoing reasons we respectfully submit that this application should be refused.

Yours faithfully

**FP LOGUE**