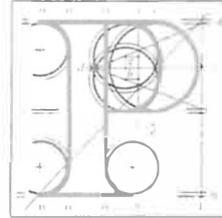


Our Case Number: ACP-323980-25

Planning Authority Reference Number:



An
Coimisiún
Pleanála

Joe Mayo
56 Derg Hill
Cullenagh
Ballina
Co. Tipperary
V94 K5W8

Date: 03 March 2026

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

Dear Sir / Madam,

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

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

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

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

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

Yours faithfully,



Eimear Reilly
Executive Officer
Direct Line: 01-8737184

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SUBMISSION TO AN COIMISIÚN PLEANÁLA

Application Ref: ACP-323980-25

Proposed Water Supply Project – Eastern and Midlands Region, Lower River Shannon
Abstraction Scheme

From: Joe Mayo, 56 Derg Hill, Cullenagh, Ballina, Co. Tipperary V94 K5W8

EXECUTIVE SUMMARY

This submission addresses one central legal question: can the Board lawfully conclude, on the evidence before it, that ecological deterioration of the River Shannon system has been excluded in accordance with Article 4 of the Water Framework Directive (WFD)?

This is not a policy or merits question. Article 4 WFD operates as a legally binding prohibition on deterioration. It does not confer a general planning discretion to balance environmental decline against strategic benefit, save where the strict conditions of Article 4(7) are lawfully satisfied.

The proposal engages binding obligations under:

- Directive 2000/60/EC (Water Framework Directive – WFD);
- Directive 92/43/EEC (Habitats Directive);
- Directive 2011/92/EU as amended (EIA Directive);
- Article 191 TFEU (Precautionary Principle);
- Article 37 of the EU Charter;
- European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. 272/2009), as amended;
- European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. 9/2010).

Under C-461/13 (Weser), authorisation must be refused where deterioration of any individual Biological Quality Element (BQE) cannot be excluded. Under C-535/18 (Moorburg), deterioration of a single BQE is sufficient even where overall water body status remains “Good.”

In practical terms, this means that the law does not allow even small ecological backsliding. If any measurable component of river health — such as fish populations, aquatic insects, or plant communities — declines because of this project, consent must be refused, even if the river remains classified overall as “Good.”

The competent authority must be satisfied, on the basis of complete, precise and definitive findings capable of removing reasonable scientific doubt, that deterioration will not occur (C-127/02 Waddenzee, by analogy). While Waddenzee arose under Article 6(3) of the Habitats

Directive, its articulation of precautionary certainty reflects the evidential discipline required across EU environmental law and is instructive in applying Article 4 WFD.

The burden lies with the Applicant to demonstrate compliance with Article 4. It is not for the Board to infer compliance where evidential uncertainty remains.

The documentation does not clearly demonstrate:

- BQE-level class-boundary proximity and resilience margins;
- Sequential multi-year drought modelling under worst-case conditions;
- Basin-scale cumulative hydrograph modelling integrating hydropower and existing abstractions;
- Nutrient concentration modelling under reduced dilution;
- Protection of ecological recovery trajectories under the River Basin Management Plan;
- Demonstrated equivalence between UKTAG lake-level metrics and Irish EPA biological classification standards;
- That mitigation measures remove deterioration risk beyond reasonable scientific doubt;
- That significantly better environmental options have been ruled out under Article 4(7);
- That basin-scale ecological concentration risk does not narrow resilience margins.

In the absence of further clarification addressing these matters, the legal threshold required under Article 4 WFD has not been demonstrated. A grant of consent in the absence of clear evidence addressing the matters identified in this submission would risk misapplication of the Article 4 legal test.

1. INTRODUCTION

1.1 Project Overview

This submission concerns the proposed abstraction of up to 300 Ml/d from the Lower River Shannon, treatment near Birdhill, and transfer via a 172 km pipeline to the Greater Dublin Area and associated Water Resource Zones.

The proposal constitutes a structural intervention in a major river basin system with long-term ecological and hydrological consequences.

Put plainly, this is not a localised development: it alters how water is managed within a large regulated basin, and therefore increases the importance of proving — in a transparent and conservative way — that the river’s ecological health will not be put at risk.

1.2 Applicable Legal Framework

The decision falls to be made within the following binding legal framework:

- Directive 2000/60/EC (Water Framework Directive);
- Directive 92/43/EEC (Habitats Directive);
- Directive 2011/92/EU as amended (EIA Directive);
- Article 191 TFEU;
- Article 37 EU Charter;
- S.I. 272/2009 (Surface Waters Regulations);
- S.I. 9/2010 (Groundwater Regulations);
- European Union (Water Policy) Regulations 2003–2022;
- Planning and Development Act 2000 (as amended).

CJEU jurisprudence is directly applicable and binding.

2. ARTICLE 4 WATER FRAMEWORK DIRECTIVE

2.1 Legal Test

Article 4(1)(a) requires prevention of deterioration of all surface water bodies and protection, enhancement and restoration of those bodies, as well as and protection of progress toward achieving Good status.

There is no residual planning discretion to authorise deterioration unless Article 4(7) is lawfully satisfied on the evidence.

Under S.I. 272/2009, ecological status is determined by:

- Biological quality elements (fish, macroinvertebrates, macrophytes, phytoplankton);
- Supporting physico-chemical elements;
- Hydromorphological conditions;
- Chemical status.

The legal inquiry must address:

1. Current classification of each BQE;
2. Proximity to class boundaries;
3. Impact of abstraction under cumulative and climate stress;
4. Whether deterioration of any individual BQE can be excluded beyond reasonable scientific doubt.

In simple terms, the question is whether the river’s biology — fish, insects, plants and algae — will be kept stable, including during drought and under cumulative pressures.

Article 4(8) and 4(9) require non-compromise of other water bodies and consistency with other EU environmental law.

2.2 Application of Weser and Moorburg

Under Weser, deterioration occurs where at least one BQE falls by one class.

Under Moorburg, deterioration may occur even where overall status remains “Good.”

In the Shannon system, deterioration may arise through:

- Phytobenthos shifts due to nutrient concentration changes;
- Macroinvertebrate decline linked to extended low-flow duration;
- Fish assemblage alteration from hydrograph timing changes.

The documentation does not clearly quantify BQE-level class-boundary proximity or resilience margins.

Hydromorphological lake-level compliance does not substitute for biological stability.

2.3 Precautionary Principle – Waddenzee

Under Article 191 TFEU and C-127/02 (Waddenzee), authorisation may only be granted where no reasonable scientific doubt remains.

Certainty requires exclusion of doubt on the basis of complete, precise and definitive findings capable of removing reasonable scientific doubt. It does not require absolute certainty, but it does require that reasonable doubt be removed before consent is granted.

Uncertainty persists where:

- Sequential multi-year drought modelling is unclear;
- Uncertainty bands are not disclosed;
- Worst-case scenarios are not stress-tested;
- BQE nutrient sensitivity is not fully quantified.

Monitoring cannot cure uncertainty at authorisation stage.

There is no residual planning discretion to authorise deterioration unless the strict conditions of Article 4(7) are demonstrably satisfied on the evidence.

3. CHAPTER 9 – WATER AND MITIGATION

Pre-mitigation impacts include dewatering, crossings, washout discharge and infrastructure runoff.

Residual compliance depends upon mitigation.

Where WFD compliance relies on mitigation, it must be shown that:

- Measures are clearly defined;
- Legally binding;
- Quantifiable;
- Stress-tested under worst-case conditions.

Under C-323/17 (People Over Wind), mitigation cannot be used to avoid full assessment.

In plain terms, mitigation cannot be assumed to work perfectly so as to conclude that no deterioration will occur without transparently demonstrating how that conclusion is reached.

4. WATER STATUS IMPACT ASSESSMENT REPORT

4.1 Methodological Equivalence

UKTAG lake-level methodologies are adopted.

Irish classification is biologically driven.

The Shannon–Lough Derg–Lower Shannon system is influenced by:

- Hydropower regulation;
- Nutrient loading;
- Peatland drainage legacy impacts;
- Climate variability.

Ecological response depends on flow timing, dilution, hydrograph shape, temperature and dissolved oxygen.

The documentation does not demonstrate equivalence between lake-level compliance and BQE stability.

The Water Status Impact Assessment relies upon UKTAG lake-level methodology as a proxy for ecological stability. The issue is not the use of UK guidance per se, but whether methodological equivalence with Irish EPA biological classification standards has been demonstrated in this specific hydrological context. UKTAG guidance is principally hydromorphological in orientation, meaning it focuses on physical water level changes rather than direct biological response. By contrast, Irish ecological status classification under S.I.

272/2009 is biologically driven and determined by reference to specific Biological Quality Elements — including fish, aquatic insects, plant communities and phytoplankton.

In simple terms, maintaining a lake within certain water-level limits does not automatically demonstrate that its biological communities will remain stable. Ecological response depends not only on average water level, but on flow timing, low-flow duration, nutrient concentration, hydrograph shape, and dissolved oxygen dynamics. These factors are particularly significant in a large, regulated river–lake–river continuum such as the Shannon system.

The documentation does not clearly demonstrate that UKTAG lake-level deviation thresholds have been empirically validated against Irish EPA biological class-boundary metrics in this hydrological context. Without such equivalence, lake-level compliance cannot be assumed to exclude deterioration within the meaning of Article 4 WFD.

4.2 Climate and Drought

It is not clearly demonstrated that:

- Sequential drought scenarios were modelled;
- Q95/Q99 flows were stress-tested;
- Interaction with existing abstractions was fully assessed.

Precaution requires resolution of uncertainty before consent.

5. BIODIVERSITY

Compliance conclusions are derived primarily from hydrological modelling rather than explicit BQE class-boundary testing.

Given that deterioration of a single BQE is sufficient, element-level sensitivity testing is required.

6. SOILS, GEOLOGY AND HYDROGEOLOGY

Peatland legacy drainage reduces catchment buffering capacity and may amplify drought sensitivity.

Catchment storage dynamics are not clearly integrated into basin-scale modelling.

In practical terms, reduced natural buffering can increase the severity and duration of low-flow conditions, which is precisely when rivers are most ecologically vulnerable.

7. CUMULATIVE EFFECTS AND INTERACTIONS

7.1 Basin Pressures

Cumulative pressures include:

- Existing abstraction licences;
- Agricultural diffuse pollution;
- Wastewater discharges;
- Hydropower regulation;
- Climate-driven baseflow reduction.

7.2 Basin-Scale Modelling Expectations

A robust cumulative model would include:

- Dynamic hydrograph modelling;
- Q95/Q99 analysis;
- Rate-of-change modelling;
- Sequential drought scenarios;
- Nutrient concentration modelling;
- BQE sensitivity testing;
- Recovery trajectory analysis.

Lake-level compliance alone does not demonstrate basin-scale resilience.

7.3 Basin-Scale Ecological Concentration Risk

Article 4(8) requires that implementation of measures must not permanently compromise the achievement of environmental objectives in other water bodies within the same river basin district.

Structural dependence of metropolitan supply on a single basin increases:

- Drought extraction pressure;
- Reduction of ecological headroom;
- Sensitivity to modelling uncertainty;
- Systemic vulnerability under climate stress.

In practical terms, concentrating supply on one basin magnifies the environmental consequences if modelling proves optimistic or drought sequences are more severe than anticipated. That systemic vulnerability is legally material under Article 4(8).

Diversified supply may reduce ecological concentration risk. The documentation does not clearly assess this dimension.

7.4 Nutrient Concentration

Reduced discharge increases nutrient concentration during low-flow periods.

This interaction is not clearly quantified.

7.5 Recovery Trajectory

It is not clearly demonstrated that abstraction will not slow attainment of Good status under River Basin Management Plan measures.

Put plainly, even if deterioration is avoided in the short term, Article 4 also requires that progress toward achieving Good status is not undermined or delayed.

8. ALTERNATIVES – ARTICLE 4(7)

If deterioration cannot be excluded, authorisation is prohibited unless the cumulative conditions set out in Article 4(7) are demonstrably satisfied on the evidence.

Article 4(7)(d) requires demonstration that objectives cannot be achieved by significantly better environmental options.

Structured modelling would be required for:

- Accelerated leakage reduction;
- Demand management;
- Phased abstraction;
- Desalination;
- Diversified supply models.

It is insufficient to state that alternatives were considered.

In plain terms, if there are less environmentally risky ways to achieve water security, the law requires those options to be tested with the same rigour as the proposed abstraction.

9. HUMAN HEALTH

Positive health conclusions depend on hydrological stability and absence of deterioration.

While water security and public health considerations are important, they cannot displace mandatory obligations under Article 4 WFD in the absence of lawful reliance on Article 4(7).

10. HABITATS DIRECTIVE

Under Article 6(3), adverse effects must be excluded beyond reasonable scientific doubt.

Hydrological compliance alone does not automatically satisfy the integrity test.

In plain terms, compliance with a physical water-level metric does not, by itself, prove that protected habitats and species dependent on flow and water quality will not be affected.

11. ARTICLE 4(7)

No explicit derogation analysis is presented.

If deterioration cannot be excluded, Article 4(7) must be formally engaged.

12. CONCLUSION

The documentation demonstrates compliance with selected hydromorphological indicators.

It does not clearly demonstrate:

- BQE-level class security;
- Quantified resilience margins;
- Sequential drought modelling;
- Basin-scale hydro-ecological integration;
- Nutrient concentration sensitivity;
- Recovery trajectory protection;
- Rigorous exclusion of significantly better environmental options;
- Mitigation performance beyond reasonable scientific doubt.

Under Article 4 WFD, deterioration must be excluded beyond reasonable scientific doubt on the basis of complete, precise and definitive findings capable of removing reasonable doubt.

The question for the Board is whether it can lawfully conclude, on the basis of the evidence before it, that deterioration has been excluded in accordance with Article 4.

A determination in the absence of clear evidence addressing the matters identified above would risk misapplication of the Article 4 legal test.

Where reasonable scientific doubt remains, consent cannot lawfully issue.

APPENDIX A

FORMAL SCHEDULE OF REQUESTED FURTHER INFORMATION

(Pursuant to Directive 2000/60/EC, S.I. 272/2009, S.I. 9/2010 and Section 172 Planning and Development Act 2000)

In light of the scale of abstraction proposed and the strict obligations imposed under Article 4 of the Water Framework Directive, the following information is reasonably required to enable lawful determination of the application.

PART 1 — WATER FRAMEWORK DIRECTIVE COMPLIANCE

1. Element-Specific Status Identification

1.1 A complete tabulated schedule of each surface water body directly and indirectly affected by the proposed abstraction.

1.2 For each water body:

- Current ecological status classification;
- Current classification of each biological quality element;
- Supporting physico-chemical status;
- Hydromorphological status;
- Chemical status (where applicable).

1.3 Identification of any water body currently classified as Moderate, Poor or Failing to achieve Good status.

2. Class-Boundary Proximity and Sensitivity

2.1 Quantified distance between current measured values and Good/Moderate class boundaries for each biological quality element.

2.2 Modelling outputs showing predicted post-abstraction values for each element under:

- 154 Ml/d abstraction;
- 300 Ml/d abstraction;
- Climate-adjusted abstraction scenarios.

2.3 Identification of the safety margin (expressed numerically) between predicted outcomes and deterioration thresholds.

2.4 Sensitivity analysis demonstrating how model uncertainty affects class-boundary proximity.

3. Drought and Low-Flow Modelling

3.1 Identification of drought return periods tested.

3.2 Modelling of sequential multi-year drought scenarios (minimum two-year and three-year sequences).

3.3 Predicted Q95 and Q99 flow values under:

- Current baseline;
- 154 ML/d abstraction;
- 300 ML/d abstraction;
- Climate-adjusted abstraction.

3.4 Interaction modelling between proposed abstraction and all existing abstraction licences during extreme low-flow conditions.

4. Hydrograph and Flow Regime Assessment

4.1 Dynamic hydrograph simulations pre- and post-abstraction.

4.2 Assessment of changes in:

- Flow variability;
- Rate-of-change (ramping);
- Duration of low-flow events;
- Flood pulse characteristics.

4.3 Modelling of interaction between abstraction and hydropower release regime.

5. Nutrient and Water Quality Modelling

5.1 Modelling of nutrient concentration under reduced discharge scenarios.

5.2 Dissolved oxygen modelling during summer low-flow.

5.3 Temperature modelling under abstraction scenarios.

5.4 Interaction analysis between abstraction-induced low-flow and agricultural diffuse nutrient loads.

6. Recovery Trajectory and Non-Jeopardy

6.1 Identification of water bodies currently subject to improvement measures under the River Basin Management Plan.

6.2 Modelling of abstraction impact on attainment of Good status within statutory planning cycles.

6.3 Assessment of whether abstraction narrows ecological resilience margins.

6.4 Quantification (in years) of any projected delay in attainment of Good status attributable to abstraction under each modelling scenario.

6.5 Identification of water bodies currently within 10% of class-boundary transition and assessment of whether abstraction narrows that margin.

6.6 Assessment of whether abstraction affects achievement of statutory objectives within the current and next RBMP cycles.

6A. Article 4(8) Basin District Non-Compromise

6A.1 Identification of all water bodies within the Shannon River Basin District whose environmental objectives may be indirectly affected by reduced discharge or altered flow regime.

6A.2 Assessment of whether abstraction narrows ecological resilience margins in downstream or hydrologically connected water bodies.

6A.3 Analysis of whether abstraction may permanently compromise attainment of objectives in any other water body within the basin district.

6A.4 Quantified assessment of cumulative basin-scale ecological headroom pre- and post-abstraction.

7. Methodological Equivalence

7.1 Formal statement demonstrating equivalence between:

- UKTAG lake-level methodology; and
- Irish EPA biological classification methodology under S.I. 272/2009.

7.2 Empirical validation linking lake-level deviation to biological element stability in the Shannon system.

7.3 Confirmation (if obtained) from the EPA regarding methodological adequacy.

8. Uncertainty Disclosure

8.1 Identification of all modelling assumptions.

8.2 Disclosure of uncertainty bands and confidence intervals.

8.3 Upper-bound scenario modelling demonstrating worst-case outcomes.

8.4 Explanation of how the precautionary principle has been applied in interpreting uncertainty.

9. Article 4(7) Screening

9.1 Formal screening statement addressing whether Article 4(7) derogation is engaged.

9.2 If not engaged, detailed explanation of how deterioration is excluded beyond reasonable scientific doubt.

9.3 If engaged, full Article 4(7) compliance assessment.

9.4 Comparative modelling outputs demonstrating environmental effects of alternative supply options (including accelerated leakage reduction, demand management, desalination, and phased abstraction) assessed to equivalent evidential depth as the proposed abstraction.

9.5 Structured environmental risk comparison between proposed abstraction and alternative supply scenarios.

9.6 Explanation of why any alternative with lower ecological risk was rejected.

APPENDIX B

FORENSIC INTERROGATORY SCHEDULE

(Material Questions Arising Under EU and Irish Law)

The following questions arise directly from the documentation and are material to lawful determination.

SECTION A — ARTICLE 4 WFD

1. Has deterioration been assessed at individual biological quality element level in accordance with C-461/13?
2. What quantified evidence demonstrates that no element will fall by one class under worst-case abstraction?
3. Has intra-class deterioration (as referenced in C-535/18) been considered?
4. How has Article 4(8) (non-compromise of other water bodies) been applied in cumulative modelling?
5. How has Article 4(9) consistency with Habitats Directive obligations been ensured?
6. What quantified resilience margin exists between predicted post-abstraction values and the relevant class-boundary threshold for each BQE?

SECTION B — METHODOLOGICAL RIGOUR

7. On what basis is lake-level deviation considered sufficient proxy for biological class stability?
8. Has biological element response to hydrograph alteration been directly modelled?
9. What is the model error margin, and how does that margin affect deterioration risk?
10. If the upper bound of the uncertainty band is applied, does deterioration arise?

SECTION C — CUMULATIVE HYDROLOGY

11. How were existing abstraction licences integrated into modelling?
12. How were agricultural diffuse nutrient loads incorporated?
13. How were hydropower release regimes integrated?
14. How were peatland legacy drainage impacts accounted for?
15. Was downstream transitional water salinity intrusion assessed?

SECTION D — CLIMATE STRESS

16. What drought return periods were tested?
17. Were multi-year drought sequences modelled?

18. What are predicted Q95/Q99 values under worst-case abstraction?
19. Has cumulative abstraction plus climate reduction been tested under extreme scenario conditions?

SECTION E — RECOVERY TRAJECTORY

20. Does abstraction delay attainment of Good status in any water body?
21. Has impact on RBMP improvement timelines been quantified?

SECTION F — MITIGATION DEPENDENCY

22. Which WFD compliance conclusions depend upon mitigation?
23. Are mitigation measures defined in quantifiable operational terms?
24. What contingency applies if monitoring identifies deviation from predicted modelling?

SECTION G — ARTICLE 4(7)

25. Has a formal internal assessment been undertaken regarding potential engagement of Article 4(7)?
26. If deterioration cannot be excluded with absolute certainty, why has Article 4(7) not been invoked?
27. Have alternative supply options been modelled to the same evidential depth and temporal resolution as the proposed abstraction?

SECTION H — METHODOLOGICAL LOCALISATION AND EQUIVALENCE

28. What empirical evidence demonstrates that UKTAG lake-level thresholds correlate directly with Irish EPA Biological Quality Element class boundaries in the Shannon system?
29. Has biological element response (fish, macroinvertebrates, macrophytes, phytoplankton) been directly modelled, or is lake-level deviation treated as a proxy?
30. What validation has been undertaken to confirm that UK typology assumptions apply to the regulated Shannon river–lake–river continuum?
31. If upper-bound model uncertainty is applied, does any BQE approach deterioration thresholds?
32. Have multi-year Atlantic-influenced drought sequences specific to Irish climatic conditions been stress-tested?
33. Has the EPA formally confirmed methodological equivalence between UKTAG lake-level guidance and Irish WFD biological classification standards?

CONCLUDING SECTION

Potential Errors of Law

Without prejudice to the substantive planning merits, the following matters are legally material.

If the Board were to grant consent in the absence of:

- Element-specific class-boundary analysis;
- Demonstrated equivalence between adopted methodology and Irish classification standards;
- Quantified basin-scale cumulative modelling under worst-case conditions;
- Transparent uncertainty disclosure;
- Consideration of Article 4(7) where deterioration risk remains;

such a determination would risk:

1. Failure to apply the correct legal test under Article 4 WFD;
2. Failure to consider mandatory relevant considerations under S.I. 272/2009;
3. Irrational conclusion in light of evidential gaps;
4. Breach of EU law obligations binding on the State.

The legal standard under Article 4 is strict and precautionary. Where reasonable scientific doubt remains, authorisation must be refused.