

Our Case Number: ACP-323980-25



An
Coimisiún
Pleanála

Tipperary County Council
Civic Offices
Nenagh
Co. Tipperary

Date: 04 August 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 submission in relation to the above-mentioned proposed development and will take it into consideration in its determination of the matter.

The Commission will revert to you in due course in respect of this matter.

Please be advised that a copy of all submissions/observations received in relation to the application will be made available for inspection on the Commission's website at the following link:
<https://www.pleanala.ie/en-ie/case/323980>.

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

PA09

Teil
Glao Áitiúil
Láithreán Gréasáin
Ríomhphost

Tel
LoCall
Website
Email
(01) 858 8100
1800 275 175
www.pleanala.ie
communications@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

Eimear Reilly

From: LAPS
Sent: Wednesday 22 July 2026 10:24
To: Eimear Reilly
Subject: FW: ACP 323980
Attachments: Report on UE Reply to Submissions 21.7.2027.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Categories: PA Only

From: Kiely, Teresa <teresa.kiely@tipperarycoco.ie>
Sent: Tuesday 21 July 2026 16:59
To: SIDS <sids@pleanala.ie>
Cc: LAPS <laps@pleanala.ie>
Subject: ACP 323980

Caution: This is an **External Email** and may have malicious content. Please take care when clicking links or opening attachments. When in doubt, contact the ICT Helpdesk.

To whom it concerns attached please find,

The report from the Executive and submissions from Cllr Seamus Morris and Joe Hannigan on the UE reply to submissions report as circulated by yourselves.

Kind regards
Teresa

Teresa Kiely
Administrative Officer, Planning Section,
Tipperary County Council, Civic Offices, Nenagh, Co Tipperary
T: 0818 06 5000 Main office Ext 6987

It may suit me to send emails outside of my normal workings hours, I do not expect a response or action from you outside your own working hours.

E: teresa.kiely@tipperarycoco.ie

W: www.tipperarycoco.ie



Tipperary County Council Disclaimer <https://www.tipperarycoco.ie/governance-and-administration/data-access-request/disclaimer-email>



Comhairle Contae Thiobraid Árann
Tipperary County Council

Submission to An Comisuin Pleanála

in response to correspondence received on 24/6/2026

July 2026

An Comisuin Pleanála Ref. No:	ACP-323980-25
Applicant:	Uisce Eireann
Proposed Development:	Proposed water supply project for the eastern and midlands region
Development Location	Counties of Clare, Limerick, Tipperary, Offaly, Kildare and Dublin.

Table of Contents

PART 1. INTRODUCTION.....	3
Introduction.....	3
PART 2. FURTHER SUBMISSIONS.....	3
2.1 Benefit to Tipperary and Balanced Regional Development	3
2.2 Water Supply Project and ESB Licencing requirement at Ardnacrusha/Parteen Basin.....	3
2.3 Impacts on water and ecology of the Parteen Basin/Lough Derg/ River Shannon.....	4
2.4 Biodiversity	4
2.5 Roads / Traffic	5
2.6 Clarity, Transparency and Efficacy of Mitigation in the EIAR & NIS.....	5
2.7 Agriculture/ Land / Spread of Disease	5
2.8 Development Contributions, Bond & Community Benefit Scheme	6
2.9 Infrastructure Failure	6
2.10 Tourism and Landscape	6
PART 3. CONCLUSION.....	6

PART 1. INTRODUCTION

Introduction

On 24/6/2026 correspondence was received from An Comisuin Pleanala (ACP) inviting submissions or observations from Tipperary County Council in relation to Uisce Eireann's response to the submissions received by An Coimisiún Pleanála, dated 6th May 2026 and 2nd June 2026 on application ACP-323980-25.

Application ACP-323980-25 relates to the application for the Proposed Water Supply Project for the Eastern and Midlands Region.

This report sets out (Under Part 2 Further Submissions) the observations of Tipperary County Council on Uisce Eireann's response to the submissions made on the application.

PART 2. FURTHER SUBMISSIONS

2.1 Benefit to Tipperary and Balanced Regional Development

Section 10.3 of the Chief Executives(CE) Report notes the *proposal will result in significant investment in water supply infrastructure that will primarily serve the eastern region, enabling growth in this region. The project will not contribute directly to balanced regional development in the Southern region, or specifically in the Mid-West area. Aligned with the points made in Section 9.2 the development of such infrastructure in the manner proposed is considered contrary to the objectives of achieving balanced regional development as set out in the RSES and NPF.*

Section 10.2 of the Chief Executives(CE) Report notes the Mid West region and Tipperary will not benefit directly from the project.

The content of the UE Response to Submissions Report (UERSR) regarding the above matters are noted.

The position of TCC regarding the benefits to Tipperary, balanced regional development and alignment with planning policy remain. TCC requests that ACP fully considers whether the distribution of benefits and impacts is consistent with regional planning objectives.

2.2 Water Supply Project and ESB Licencing requirement at Ardnacrusha/Parteen Basin

Under Section 10.4 of the Chief Executives(CE) Report it was noted that the project will require an abstraction licence from the EPA under the Water Environment (Abstractions and Associated Impoundments) Act 2022 and that a licence is required for the impoundment of water in the Parteen Basin by the ESB. The CE report noted that the relationships between these consents including their sequencing, their environmental assessments, including cumulative effects and the scope of the 'whole' project for their

respective EIA processes are not considered within this EIAR. This is a matter of significant concern given the inter-related issues involved.

The UE Response to Submissions Report (UERSR) states that:

the 'whole' of the Proposed Project for which development consent is being sought has been included within the SID Planning Application. It is not appropriate to compare the water abstraction licensing process to the planning application process, as these are two different regimes with different requirements. The Abstraction Licence authorises the operation of the Proposed Project i.e. the abstraction. Consent to build the Proposed Project is within the scope of the SID Planning Application.

The abstraction license application will be an application for the Proposed Project abstraction from the associated ESB impoundment, in line with the requirements of the Water Environment (Abstractions and Associated Impoundments) Act 2022. For the purpose of the planning application, it is not correct to refer to the impoundment and Proposed Project as 'the whole project', as the ESB impoundment is an existing development which is already consented via statute and planning permission is only being sought for the Proposed Project.

The foregoing points are noted. The point of concern made with regard to the relationships between these consents including their sequencing, their environmental assessments, including cumulative effects remain. This is a matter of significant concern given the inter-related issues involved.

Tipperary County Council will rely on An Comisuin Pleanala to engage with this matter, in particular the requirement for a "whole" project assessment in the context of EIA.

2.3 Impacts on water and ecology of the Parteen Basin/Lough Derg/ River Shannon

Section 10.5 of the Chief Executives(CE) Report set out concerns with regard to impacts on water and ecology with particular concerns regarding assessment of impacts on the Lower Shannon.

The points made in the UE Response to Submissions Report (UERSR) regarding these matters are noted. This is a matter of significant complexity given the inter-related issues involved and the points of concern outlined in the Chief Executives(CE) Report remain.

Tipperary County Council will rely on An Comisuin Pleanala to engage fully with this matter.

2.4 Biodiversity

Section 10.6 of the Chief Executives(CE) Report set out concerns with regard to impacts on biodiversity with particular concerns noted with regard to impacts on bats, badgers and aquatic invasive non-native species.

The points made in the UE Response to Submissions Report (UERSR) regarding these matters are noted.

This is a matter of particular importance and. Tipperary County Council will rely on An Comisuin Pleanala to engage fully with this matter.

2.5 Roads / Traffic

Section 10.9 of the Chief Executives(CE) Report set out concerns with regard to impacts on Roads/Traffic. The points of concern included the proposed access onto the N52 at Lisgarriff which was considered to contravene the Spatial Planning and National Roads Guidelines (2012) and Policy 12-5 of the Tipperary County Development Plan 2022. TCC recommended that the option of providing access to the compound from the L5079 be explored.

The points of concern also related to failure to demonstrate sight lines in accordance with Tipperary County Development Plan 2022 requirements.

The points made in the UE Response to Submissions Report (UERSR) regarding the construction compound access onto the N52 national road are noted. The points of concern raised by TCC remain, notwithstanding that the entrance will be temporary.

The points made in the UE Response to Submissions Report (UERSR) regarding the sightlines are noted. TCC recommend that sight lines from all entrances onto the public road network must demonstrate compliance with Tipperary County Development Plan 2022 requirements. An Comision Pleanala should request clear drawings demonstrating compliance in this regard.

2.6 Clarity, Transparency and Efficacy of Mitigation in the EIAR & NIS

Section 10.7 of the Chief Executives(CE) Report set out concerns with regard to mitigation measures contained in the EIAR and NIS noting that some measures will require a high degree of effort, precision and oversight and the level of specification of mitigation measures leaves them open to interpretation, which may fail to ensure that they are effective in practice.

The points made in the UE Response to Submissions Report (UERSR) regarding this matter are noted. Tipperary County Council request that the consent process should ensure that all mitigation measures are sufficiently clear (and enforceable) to ensure that they will be implemented to appropriate standards and specifications and that their efficacy will be audited in a transparent and accessible manner to ensure that effects do not exceed those predicted in the EIA process.

2.7 Agriculture/ Land / Spread of Disease

Section 10.8 of the Chief Executives(CE) Report set out concerns with impacts to badger sets, spread of disease and impact on Agriculture in Tipperary.

The points made in the UE Response to Submissions Report (UERSR) regarding this matter are noted.

Tipperary County Council request that An Comisuin Pleanala fully engage with the points of concern outlined in the CE report regarding these matters.

2.8 Development Contributions, Bond & Community Benefit Scheme

Section 11.2 of the Chief Executives(CE) Report advised that Development Contributions are payable (for the project) under the Tipperary County Council Development Contribution Scheme 2020 and requested (in the event of a grant of permission) An Comisuin Pleanala to attach conditions for the payment of development contributions in line with the Tipperary County Council Development Contribution Scheme 2020.

Section 11.3 of the of the Chief Executives(CE) Report recommend that conditions be attached for the payment of a bond for road repairs/reconstruction and a separate sum to cover the costs of monitoring and responding to queries from the public during the construction phase of the development.

Tipperary County Council do not agree with the points made in the UE Response to Submissions Report (UERSR) regarding contributions and bonds.

Should permission be granted Tipperary County Council request An Comisuin Pleanala to include conditions requiring the payment of Development Contributions in accordance with the applicable classes in the adopted Development Contribution Scheme 2020 and bond as per the recommendations contained in the CE report.

Part 9 of the CE report set out the view of Tipperary County Council on the Community Gain Proposals. Community Gain Proposals should not be viewed as means to address or off set development contributions. The points made in the CE report regarding Community Benefit stand.

Tipperary County Council note that under An Comisuin Pleanala Case Reference ACP-321454-24 (Brittas Wind Farm-SID application) the conditions attached to the grant of permission included for a Bond (Condition 24) and Development Contributions (Condition 25) and these were separate to the Community Benefit Fund proposals for this project (Condition 26).

2.9 Infrastructure Failure

The Chief Executives(CE) Report raised concerns with regard to infrastructure failure. The points made in the UE Response to Submissions Report (UERSR) regarding this matter are noted.

2.10 Tourism and Landscape

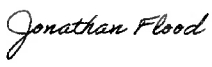
The Chief Executives(CE) Report raised concerns with regard to the impact of the development on Tourism and Landscape. The points made in the UE Response to Submissions Report (UERSR) regarding these matters are noted. The points as set out in the CE report stand.

PART 3. CONCLUSION

The Chief Executives(CE) Report prepared by Tipperary County Council contained the key issues and considered views of Tipperary County Council (TCC) regarding the effects of the development on the environment and on the proper planning and sustainable development of the area. Having examined the

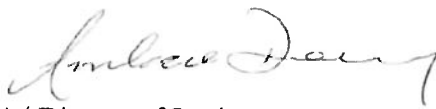
UE Response to Submissions Report (UERSR) the key issues and considered views of Tipperary County Council remain as set out in the Chief Executives(CE) Report

Tipperary County Council request that An Comisuin Pleanala engage fully with the points of concern outlined in the Chief Executives(CE) Report in consideration of the application.

Signed: 

Date: 14/7/2026

Senior Executive Planner

Signed: 
A/ Director of Services

Date: 15/07/2026

Elected Members Submissions

Cllr Joe Hannigan-

The original submission by Tipperary County Council raised concern with the sludge that will be generated and the management of same. The reply to this matter by Uisce Eireann is noted. The points of concern as outlined in the original submission regarding this matter remain.

Cllr Seamus Morris

See detailed report attached.

AN COIMISIÚN PLEANÁLA
STRATEGIC INFRASTRUCTURE DEVELOPMENT
Case Reference: ACP-323980-25

FORMAL SUBMISSION

**IN OBJECTION TO THE PROPOSED WATER SUPPLY PROJECT Response to the
Submission Report prepared by the WSP on behalf of Uisce Éireann.**

Eastern and Midlands Region

Counties Clare, Limerick, Tipperary, Offaly, Kildare and Dublin

Submitted by	Elaine Doyle, Director and Secretary of The River Shannon Environmental Protection Alliance Address: 3 Newtown Park, Castletroy, Limerick, V94 HTD1 doyle_elaine@hotmail.com Mobile 087 9083727 ACP Case Number-323980-25
Applicant	Uisce Éireann
Document in response to	Water Supply Project Eastern and Midlands Region Response to Submissions Report ('RtS Report'), May 2026, (585 pages, 28 chapters, 114 submissions addressed)
Submission deadline	21 July 2026 (per ACP letter of 26 June 2026, correcting clerical error in letter of 24 June 2026)
Date	Friday 17 th July 2026
Status	Formal submission not privileged; may be published on the ACP public file

I. Table of Contents

Section	Title
Cover page / title	Cover page
Table of Contents	Single TOC — section numbers 1–30
1	Executive Summary and Core Propositions
2	The RtS Report: Status and Provenance
3	Preliminary Matters
3.1	Status of the RtS Report as an Advocacy Document
3.2	Procedural Concern: Adequacy of Response Period — Aarhus Convention
3.3	Request for an Oral Hearing
3.4	Access to Information Requests — Documents Not on Public File
4	EIA Directive — Failure to Conduct a Lawful Alternatives Assessment
4.1	The Legal Standard
4.2	Strategic Screening Substituted for Project-Level Assessment
4.3	The SEA/EIA Structural Gap — Effet Utile
4.4	The Wallingford Reports and the Missing Public Record
4.5	Poulaphouca — An Inadequately Assessed Alternative
4.6	'Feasible' Means Viable — A Logical Contradiction in Uisce Éireann's Own Language
4.7	At Least 100 of the 594 Feasible Options Warrant Project-Level Assessment
4.8	A Smaller, Trigger-Conditioned Lough Ree Abstraction as Part of a Multi-Source Matrix
4.9	The Cost-Benefit of a 50km Shorter Pipeline — A Question Never Asked
5	Habitats Directive — Appropriate Assessment Standard Not Met (Art 6(3))
5.1	The Legal Standard
5.2	The Internal Contradiction in the RtS Report (Para 49)
5.3	In-Combination Assessment — Three Gaps
5.4	Qualifying Interests Not Fully Addressed — Holohan Lacunae
5.5	Power v An Bord Pleanála — Conservation Objectives
5.6	Ardnacrusha Already Idles 20 Days Per Year — Drawdown Is an Annual Routine
5.7	Emergency Derogation from the Normal Operating Band — The Mechanism Gap
5.8	Lough Derg Cannot Be Operated as a Demand-Management Reservoir
5.9	Lough Derg Evaporation — A Significant Unassessed Demand on the System
6	Water Framework Directive — Inadequate Compliance Assessment
6.1	The Legal Standard
6.2	The 10m ³ /s Baseline: A 1929 Engineering Decision

Section	Title
6.3	Article 4(8) — Shannon Basin Integrity
6.4	Article 4(7) — Why Was No Derogation Assessment Conducted?
7	Piecemeal Consenting — Abstraction Licence Sequencing
8	Leakage — CRU Enforcement Action, Rising Rates, and the Collapsed Demand Case
8.1	The Legal and Factual Significance
8.2	Leakage Went UP in 2022, 2023 and 2024
8.3	The €20 Million Regulatory Fine — What It Means
8.4	Pipeline Replacement Rate: Below Even the Stated Figure
8.5	The Correct National Leakage Rate Is 43%, Not 36%
8.6	The Greater Dublin Area 29% Figure Is Unverified
8.7	What the CRU Data Does to the Supply-Demand Balance
8.8	Leakage Elimination — A Mandatory Article 4(7)(d) Consideration
9	UKTAG Methodology: Unvalidated and Selectively Applied
10	Climate Emergency: Ireland's Statutory Obligations
10.1	Project Emissions and Cumulative Sectoral Budget
10.2	Drought Modelling — Historical Basis and Compound Events
10.3	Real-World Evidence on Drought Risk — Cape Town and the Loire
10.4	The Compensation Flow as a Climate-Stranded Asset
10.5	The Ardnacrusha 1.2% Renewable Energy Concession
11	Further Grounds Advanced by Sabrina Joyce-Kemper
11.1	WFD Article 4(8) — Inter-Basin Transfer and Basin Integrity
11.2	Environmental and Subsurface Impacts of Leakage in Dublin
11.3	People Over Wind — ESB Operational Management as Inadmissible Mitigation
11.4	Zone of Influence Artificially Constrained
11.5	Article 4(7)(d) — The Five-Part Test Not Met
12	MPAG Findings: Verbatim and Significance for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance
13	ESB Flow Data and the 2018 Drought
14	Core Propositions from Allied Submissions
14.1	Friends of the Irish Environment
14.2	An Taisce
14.3	Salmon Watch Ireland
14.4	Waterways of Clare
15	Biodiversity: Specific Gaps in the Assessment

Section	Title
15.1	Atlantic Salmon at Approximately 5% of Conservation Limits
15.2	Groundwater Dependent Terrestrial Ecosystems
15.3	Invasive Non-Native Species — Inter-Catchment Transfer Risk
16	Sludge Production from the Proposed Water Treatment Plant
17	Wastewater Return Flows — An Unassessed Full Water Cycle Impact
18	Poulaphouca Reservoir — The Achilles Heel of the Alternatives Case
19	The 10:1 CBA Ratio and the Preliminary Business Case
20	CEMP Mitigation Enforceability
21	Atlantic Salmon and the Ecological Collapse of the Shannon
22	Population, Human Health and Public Safety
22.1	2022 Census Data
22.2	Long-Distance Pipeline — Bacterial Regrowth and Drinking Water Directive
22.3	Lead Pipes — Drinking Water Directive 2036 Deadline
23	Carbon Cost of Treating Water Lost to Leakage
24	Chapter-Specific Gaps from the Full RtS Report Audit
24.1	Chapter 3 — Constitutionality of Compulsory Acquisition Powers
24.2	Chapter 25 — Shannon Callows SPA: Hydrological Function Assessment Absent
24.3	Chapter 10 — INNS Inter-Catchment Transfer Risk
25	Chapter 26 WFD: Three New Grounds
25.1	Derg TN Is Not an HMWB — The Applicant's Own Concession at Para 2967
25.2	UKTAG Q95 Threshold Exceeded on Applicant's Own Data
25.3	Shannon (Lower)_OSO at Poor Status — Heightened WFD Burden
25.4	Grounds Arising from the Heightened WFD Burden for Poor Status Water Bodies
26	Chapter 27 — Rebutting Four 'Not Relevant' Dismissals
26.1	Geotechnical Sinkhole Risk (RtS §27.2)
26.2	Environmental Liability Directive 2004/35/EC (RtS §27.4)
26.3	Carbon Cost Comparison (RtS §27.6)
26.4	Lead Pipes / Drinking Water Directive (RtS §27.3)
27	Legal Reference Table
28	THM Contamination — Drinking Water Directive Non-Compliance (Clareville WTP)
29	Alternatives — Copenhagen Benchmark, Kildare Groundwater, Modular Framework
29.1	The Copenhagen / HOFOR Benchmark
29.2	Kildare Groundwater — A Feasible Alternative Never Project-Level Assessed

Section	Title
29.3	The Multi-Point Modular Supply System — The Correct Legal Framework
30	Ecological Irreversibility — The 1% Failure Rate and the Waddenzee Standard
30.1	The Core Ecological Principle
30.2	Why the EIAR's Concession Is Legally Fatal
30.3	The Waddenzee Standard Applied
31	Consolidated Priority Summary of All Grounds
32	Consolidated Requests to An Coimisiún Pleanála
32.1	Procedural — before any determination
32.2	EIA Directive / Alternatives
32.3	Habitats Directive and Biodiversity
32.4	Water Framework Directive
32.5	Drinking Water Directive / THM
32.6	Consenting and Licensing
32.7	Additional requirements
33	Conclusion
34	Appendix
34.1	Sabrina Joyce-Kemper Report Dublin. Date of Submission: 25th February 2026 - also attached as doc to submission.

Executive Summary and Core Propositions

Every independent legal, technical, and scientific review of this application has reached the same conclusion: the proposed Water Supply Project, as assessed and presented, does not demonstrate compliance with binding EU environmental law, and planning consent cannot lawfully be granted on the information currently before the Commission.

The five foundational propositions of this submission are:

Proposition 1 Leakage before abstraction

Nationally 43% of already-treated, already-pumped, already-paid-for water is been lost through infrastructure leakage. Before abstracting a single additional litre from the River Shannon, this waste must be quantified, costed, and demonstrated to be irreducible under Article 4(7)(d) WFD. It has not been.

Proposition 2 The 2% figure is legally impermissible

The proposed abstraction is not '2% of average Shannon flow'. That arithmetic artefact uses annual mean discharge. Ecological and legal impact is determined by low-flow, drought-period conditions in which the same abstraction volume represents 30–50% of available flow. ESB FOI data demonstrates 74 consecutive days in 2018 when the pipeline could not have operated without breaching the statutory compensation flow. The EIAR has not been backtested against this scenario.

Proposition 3 The 1929 baseline is legally circular

The 10m³/s statutory minimum compensation flow in the Old River Shannon below Parteen was set in 1929 as an engineering compromise for the Ardnacrusha hydroelectric scheme. It has never been assessed against WFD ecological objectives, Habitats Directive conservation requirements, or current climate projections. Using it as the fixed ecological baseline for this application is circular and legally inadequate.

Proposition 4 The alternatives assessment is legally deficient

The alternatives assessment desalination, groundwater, Poulaphouca, demand management, leakage elimination was conducted at strategic plan level between 1994 and 2022. It has never been repeated at project EIA level with current costs, current climate data, or current demand figures. The two Wallingford Hydrological Reports underpinning the original screening have never been placed in the public domain. This renders the EIAR alternatives chapter legally deficient under Article 5(1)(d) EIA Directive.

Proposition 5 The ecological system is already in crisis

The Lower Shannon and Lough Derg are already under severe ecological pressure. Atlantic salmon in the Lower Shannon are estimated to be at approximately 5% of their conservation limits (Tipperary County Council statutory submission), with the Castleconnell spawning beds representing the last known wild Atlantic salmon spawning grounds in the Shannon. NPWS conservation objectives identify the Common Tern breeding population of the Lough Derg SPA as having collapsed, with no breeding pairs recorded during the 2024 survey (pending further survey confirmation). Against this backdrop, any additional abstraction must be demonstrated, beyond reasonable scientific doubt, not to adversely affect the integrity of European sites.

2. The RtS Report: Status and Provenance

The RtS Report (585 pages, 28 chapters, dated 6 May 2026) was prepared by WSP at the instruction of Uisce Éireann. It is an advocacy document, not an independent assessment. Every conclusion it reaches including blanket assertions of compliance with the EIA Directive (para 140), the Habitats Directive (para 54), and the WFD (para 56/2862) is a conclusion reached by the Applicant's own team. An Coimisiún Pleanála has not verified any of these conclusions, and no court or independent body has examined them.

A structural issue that the ACP Inspector should be specifically alerted to is the repeated use of cross-references to other chapters in response to substantive objections, rather than addressing the issue where it is raised. The River Shannon Environmental Protection Alliance has undertaken a systematic audit of these cross-references and identified numerous instances where they defer, rather than resolve, the matters in question. This issue is examined in Section 23, with the full chapter audit provided in Section 27.

3. Preliminary Matters

3.1 Status of the RtS Report as an Advocacy Document

For the reasons stated at Section 2, ACP must approach the RtS Report with the rigour that its provenance demands. The repeated blanket compliance assertions do not constitute independent verification and must be tested against the grounds set out in this submission.

3.2 Procedural Concern: Adequacy of Response Period Aarhus Convention

The River Shannon Environmental Protection Alliance draws ACP's attention to the chronology of correspondence:

- ACP letter dated 24 June 2026 deadline for response understood to be in August 2026
- ACP letter dated 26 June 2026 (Eimear Reilly, Executive Officer) advised the 24 June letter contained a clerical error; corrected deadline is 21 July 2026
- ACP letter dated 30 June 2026 formal notice under section 37J(3) that the Commission will not determine the application within the statutory 18-week objective period and intends to determine it before 2 July 2027

The corrected 21 July deadline gave the River Shannon Environmental Protection Alliance fewer than four weeks to respond to a 585-page technical document. The Commission is taking one full year beyond the statutory objective period to reach its own conclusion. Requiring civil society objectors to respond in 4 weeks while the Commission takes 12 months is inconsistent with Aarhus Convention Article 6(7) requirements for fair, equitable and timely public participation. The River Shannon Environment Protection River Shannon Environmental Protection Alliance has formally requested an extension of the response deadline to no earlier than 29 August 2026 and reserves the right to rely upon this procedural prejudice in any future judicial review proceedings.

Aarhus Convention, Article 6(7)

The public participation procedure shall allow the public to submit, in writing or as appropriate at a hearing or inquiry, any comments, information, analyses or opinions that it considers relevant to the proposed activity.

3.3 Request for an Oral Hearing

The River Shannon Environmental Protection Alliance formally requests that ACP convene an Oral Hearing under section 134 of the Planning and Development Act 2000 (as amended). This application involves:

- One of the most consequential infrastructure planning decisions in the history of the State
- Live, unresolved scientific disputes about hydrological modelling, drought-flow impacts, and ecological effects on the Lower River Shannon SAC
- Contested legal questions under the Habitats Directive, EIA Directive, and WFD that cannot be resolved by reference to documents prepared by the Applicant alone
- Significant divergence between the Applicant's technical positions and those of three County Councils, Inland Fisheries Ireland, LAWPRO, and multiple prescribed bodies

An Oral Hearing would enable cross-examination of the Applicant's expert witnesses, allow independent scientific evidence to be tested, and enable the Inspector to reach a properly evidenced view on disputed

factual matters. Without one, ACP risks determining an application of this magnitude on the basis of unverified advocacy documents prepared by one party.

3.4 Access to Information Requests Documents Not on Public File

The River Shannon Environmental Protection Alliance has made, or is making, formal requests under the European Communities (Access to Information on the Environment) Regulations 2007–2018 (AIE Regulations) and the Freedom of Information Act 2014 for the following documents. ACP should note these requests and consider whether the absence of this material from the public record is itself a procedural deficiency:

- The foundational Wallingford Hydrological Reports (understood to date from approximately 1994 and 2007), which underpin the NWRP alternatives screening and have never been placed in the public domain; and the HR Wallingford External Assurance Review (2024), commissioned by the CRU as a Public Spending Code compliance review and considered by the MPAG.
- The full NWRP alternatives-screening matrices and weightings in all iterations to enable assessment of whether the criteria remain valid against current climate and cost data.
- The Preliminary Business Case and all CBA model inputs including discount rate, time horizon, and ecological cost monetisation methodology underlying the 10:1 benefit-cost claim.
- The underlying model files, input datasets and complete numerical outputs supporting EIAR Appendix A9.1 and Annex A, including the 1995 and 2018 drought periods and all abstraction, climate-change and environmental-flow simulations.
- The evidence, analysis and decision-making records underpinning the NIS Article 6(3) integrity conclusions for all affected European sites, including the Lower River Shannon SAC and the Lough Derg SPA, and the basis for concluding that there is no reasonable scientific doubt as to the absence of adverse effects on site integrity notwithstanding the acknowledged 'minor residual effects' (RtS, para. 49).
- Correspondence between EPA and Uisce Éireann on the scoping of the water abstraction licence EIA, and the timeline for the ESB abstraction/impoundment licence application.

4. EIA Directive Failure to Conduct a Lawful Alternatives Assessment

4.1 The Legal Standard

Article 5(1)(d) of Directive 2011/92/EU (as amended by 2014/52/EU) requires the EIAR to include 'a description of the reasonable alternatives studied by the developer which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment.' The requirement is substantive, not formal.

In Case C-87/02 (Commission v Italy, 2004), the CJEU confirmed an alternatives assessment must be genuine comparative analysis, not post-hoc justification of a pre-selected option. In Kelly v An Bord Pleanála [2019] IEHC 84, the Irish High Court quashed a permission where the alternatives chapter was conducted for a pre-selected option rather than as a genuine comparative exercise.

4.2 Strategic Screening Substituted for Project-Level Assessment

Throughout Chapter 5, for every alternative raised leakage reduction, desalination, groundwater, Poulaphouca, rainwater harvesting, demand management the Applicant gives the same near-verbatim response:

"...the assessment of reasonable alternatives in respect of the Proposed Project, did not re-consider strategic alternatives that had been considered and discounted by the NWRP... the reasonable alternatives in respect of the Proposed Project did not include [groundwater / desalination / rainwater harvesting / alternative sources]." RtS Report, paras 361, 365, 378, 382, 388

The legal effect: no alternative to the chosen abstraction source, route, or scale was assessed at the EIA stage supporting this planning application. The Applicant concedes this explicitly at para 382, where desalination discussion is offered 'by way of general information and background' and is 'not the reasonable alternatives assessment.' This is a concession that no comparative project-level alternatives assessment was conducted for desalination. The same logic applies to every alternative addressed in Chapter 5.

Material changes since alternatives were last screened (1994–2022) that required project-level re-assessment:

- Capital cost has increased from €800m–€1.4bn to €4.58–5.96bn more than a fourfold escalation
- Ireland enacted the Climate Action and Low Carbon Development Acts 2015–2021 with binding carbon budgets and 2050 neutrality objective
- The Water Environment (Abstractions and Associated Impoundments) Act 2022 created an entirely new licensing regime
- ICARUS and Met Éireann have published progressively stronger evidence of increasing Shannon drought frequency and severity
- National leakage is now confirmed by the CRU at 43% (correct definition), with leakage rising in 2022, 2023 and 2024 — the opposite of the falling trajectory assumed in the demand model
- The renewable energy cost curve for alternatives such as desalination has shifted dramatically

4.3 The SEA/EIA Structural Gap: *effet Utile*

The Applicant's position (RtS para 137) that the NWRP/Eastern and Midlands Plan was subject to SEA, and that this satisfies the project-level alternatives requirement is legally incoherent. If this argument were

correct, the SEA of any major national infrastructure plan would permanently relieve every derived project from any meaningful Article 5(1)(d) alternatives assessment. This renders Article 5(1)(d) a dead letter for all plan-derived projects incompatible with the EIA Directive's purpose and with the EU principle of effectiveness (*effet utile*).

The CJEU in *Commission v Ireland* (C-50/09) confirmed that EIA obligations must be met at project level regardless of prior strategic assessments. The fact that a prior SEA identified a 'preferred option' does not exempt the EIAR from genuine project-level comparative assessment using the project-specific environmental data, costs, and technology information that only becomes available at EIAR stage.

4.4 The HR Wallingford Reports and the Missing Public Record

Two hydrological assessments of the River Shannon system — understood to have been prepared by Wallingford Hydrosolutions (formerly the Institute of Hydrology) in approximately 1994 and 2007 — are understood to underpin the alternatives screening conducted under the NWRP. These foundational reports have never been placed in the public domain and are distinct from the HR Wallingford External Assurance Review of 2024, which was commissioned by the CRU as a Public Spending Code value-for-money review (addressed in Section 12 of this submission). The 2024 review did not assess the environmental or ecological adequacy of the alternatives analysis — only its financial and governance compliance. The alternatives assessment in the EIAR cannot be evaluated for legal compliance with Article 5(1)(d) without sight of the methodology, criteria, and conclusions of those foundational assessments. ACP should require Uisce Éireann to place both reports on the public file before determining this application.

4.5 Poulaphouca/Pollaphuca: An Inadequately Assessed Alternative

Poulaphouca Reservoir has a total storage capacity of approximately 166 billion litres (active storage 148 billion litres), a surface area of 22.26 km², and existing integration with Ballymore Eustace WTP and the Greater Dublin Area water supply system. It is located 115km closer to Dublin than Parteen Basin. The RtS Report (para 374) treats Poulaphouca optimisation as outside the formal alternatives assessment, noting only that any increases 'would need to be carefully planned.' This acknowledgment of conceivable additional yield was never examined at project level with current engineering and environmental data. The failure to do so is an independent Article 5(1)(d) deficiency.

5. EIA Directive Four Additional Grounds on Alternatives

The Consolidated Formal Submission (4) addresses the alternatives assessment failure under Article 5(1)(d) EIA Directive in detail. This section adds four further arguments that reinforce and extend the legal case.

5.1 'Feasible' Means Viable: A Logical Contradiction in Uisce Éireann's Own Language

At RtS Report para 368, Uisce Éireann states it 'assessed over 1,100 unconstrained options, narrowing them to 594 feasible alternatives including groundwater, reservoirs, and transfer schemes.'

The logical contradiction in Uisce Éireann's own words

At RtS para 365, Uisce Éireann states: 'UÉ does not agree there are suitable alternative sources of water available, therefore, the reasonable alternatives considered in respect of the Proposed Project did not include alternative sources.' At RtS para 368, Uisce Éireann states it narrowed 1,100 options to '594 feasible alternatives.' These two statements cannot both be true. If 594 options were feasible by the Applicant's own word, meaning viable to some degree then some of them were suitable alternatives. The Applicant cannot simultaneously assert that no suitable alternatives exist and that 594 alternatives were feasible. This is a direct logical contradiction.

Angela Ryan, Asset Strategy Management with Uisce Éireann in response to arguments from us RSEPA that not enough thought went into alternative options. Ms Ryan said 'alternatives are not feasible, pointing to the vital role that dams play in significant amounts of water to be extracted from rivers without causing environmental concerns. Ireland has only four suitable dammed rivers the Shannon, the Liffey, the Lee and the Erne. The Lee has been earmarked for a new project piping water to west Cork, so the Shannon is best placed to solve supply issues to Dublin and the Midlands. When you are taking water supply from a river, the difference in volume you can take if there is and if there isn't a dam is enormous" Ms Ryan said.

We the RSEPA were astounded with this revelation. If they knew they always wanted a dammed river, why did they spend from 2014 to September 2024 going through the motions of considering non dammed options? Why did Irish Water does not declare this to Department in 2014 and save the taxpayer the €67,624,953, and the ten years spent on technical assessment of all alternatives.

The word 'feasible' has a precise meaning in engineering and planning practice: viable to some degree; capable of being done; workable and achievable. By characterising 594 options as feasible, Uisce Éireann confirmed in its own language that each was viable to some degree at the time of screening. The legal consequences are direct:

- Article 5(1)(d) EIA Directive requires description of the 'reasonable alternatives studied by the developer which are relevant to the proposed project.' An alternative that is 'feasible' viable to some degree is potentially a 'reasonable alternative' within the meaning of this provision. The Applicant has confirmed 594 such alternatives existed.
- The Applicant cannot simultaneously claim to have identified 594 feasible alternatives and assert that no reasonable alternatives are available (RtS para 365). These two statements are in direct logical contradiction, and ACP should require the Applicant to resolve it.
- None of the screening of those 594 feasible alternatives was conducted at project EIA level with current (2026) cost data, current climate projections, or project-specific environmental baseline data. All screening occurred at NWRP strategic plan level, between 1994 and 2022.

5.2 At Least 100 of the 594 Feasible Options Warrant Project-Level Assessment

The narrowing from 1,100 to 594 represented the elimination of options that were genuinely non-feasible physically impossible, legally prohibited, or demonstrably unsuitable at any scale. The 594 that remained were, on the Applicant's own characterisation, viable to some degree. Within those 594, it is reasonable to expect that a substantial number the River Shannon Environment Protection River Shannon Environmental Protection Alliance submits conservatively at least 100 incorporated approaches that have never received project-level EIA assessment, including:

- Options incorporating Poulaphouca reservoir optimisation as a primary long-term supply source

- Options incorporating sustainable groundwater yield from the Kildare aquifer system
- Options incorporating multiple eastern river abstractions (Barrow, Boyne, Slaney, Liffey) in combination
- Options incorporating demand management as a primary rather than supplementary measure
- Options incorporating staged or phased supply development contingent on demonstrated demand materialisation
- Options incorporating desalination as a coastal supplementary source reducing the Shannon abstraction volume required

None of these received a project-level EIA alternatives assessment using current data. A generic reference to NWRP screening methodology from 2014–2022 does not satisfy Article 5(1)(d) for these options, all of which were feasible by the Applicant's own characterisation.

Request to ACP — 5.2

ACP should require Uisce Éireann to: (a) confirm what the 594 feasible alternatives were; (b) explain what criteria were used to narrow from 594 to the preferred single option; (c) confirm those criteria were applied using current (2026) cost, climate, and environmental data; and (d) identify which of the 594 involved Poulaphouca optimisation, eastern river incremental development, or demand management as a primary measure. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests that these documents be placed on the public file before any determination

5.3 A Smaller, Trigger-Conditioned Lough Ree Abstraction as Part of a Multi-Source Supply Matrix

Uisce Éireann rejected abstraction from Lough Ree on two grounds (RtS para 372): ESB minimum operation levels were not maintained during the 1995 drought without an abstraction, and such abstraction 'would likely have a negative environmental impact.' Both grounds were applied to a full-scale abstraction at the scale envisaged for the Shannon Pipeline 300+ Mld as a standalone single source.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance identifies a genuinely different option that Uisce Éireann's screening did not consider: a smaller, environmentally tolerable abstraction from Lough Ree as one component of a diversified multi-source supply matrix, not as a standalone replacement for the Shannon Pipeline. At a reduced scale, with appropriate trigger conditions, both rejection grounds may be manageable:

- Trigger mechanisms suspending Lough Ree abstraction below defined flow thresholds would address the drought-resilience concern analogous to the ESB minimum level trigger already applicable at Parteen
- Seasonal abstraction restricted to periods of high flow, with Poulaphouca compensating during low-flow periods, would address both resilience and environmental impact concerns
- Condition-based adaptive management abstraction ceasing automatically if ecological indicators cross defined thresholds provide a level of protection not available in the current Parteen design

Uisce Éireann's rejection of Lough Ree as a full-scale standalone alternative does not constitute assessment of Lough Ree as a component of a diversified portfolio approach. These are legally and operationally

different options. The EIA Directive requires genuine consideration of the former not to preclude genuine consideration of the latter.

5.4 The Cost-Benefit of a 50km Shorter Pipeline A Question Never Asked

Lough Ree is approximately 55km upstream of Lough Derg/Parteen Basin. The proposed pipeline from Parteen Basin to Dublin is 172km. A pipeline originating at Lough Ree would be approximately 122km a reduction of roughly 50km.

At the MPAG-confirmed upper cost range of €10.4bn (RCF P90/95), the pipeline infrastructure cost per kilometre is substantial. A 50km reduction in pipeline length represents a capital saving of potentially hundreds of millions of euros before pumping energy, operational costs, and 60-year maintenance are factored in. No cost-benefit analysis comparing the Parteen option against a Lough Ree option even one acknowledging the latter's lower dry-weather yield has ever been published or placed on the public file.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that this question was never properly asked in the NWRP alternatives screening or in the EIAR, and that it should be answered before this application is determined. ACP should require Uisce Éireann to confirm whether the cost-benefit of a Lough Ree origin pipeline was ever quantified. If it was not, this is a gap in the alternatives assessment. If it was, it should be on the public file.

6. Habitats Directive Three Additional Operational Grounds

The Consolidated Formal Submission (5 and 12) addresses the Habitats Directive compliance case in detail. Three further grounds arise from the operational realities of Lough Derg and Parteen Basin that have not been fully developed.

6.1 Ardnacrusha Already Idles 20 Days Per Year — Drawdown Is an Annual Routine

At RtS Report para 2643 in extreme droughts, ESB would cease generation at Ardnacrusha as they 'already do on average 20 days per year already

Ardnacrusha's turbines already shut down for an average of approximately 20 days per year under current conditions — without any pipeline abstraction in place. The 74-day 2018 shutdown was an extreme version of a phenomenon that occurs every year. The 74-day 2018 shutdown was therefore not a once-per-generation anomaly but an extreme version of a phenomenon that occurs which we are to understand from Met Éireann and ICHARUS data will occur every two years and possibly every year. Ardnacrusha is idle, for an average of about 20 full days each year due to lack of water flow. Note on current conditions (17 July 2026): OPW gauge data shows the Shannon at Athlone (Station 26027) has fallen to approximately 17 m³/s. Met Éireann forecasts no significant rainfall for at least 20 days. Ireland is in hydrological drought. The two-week lag between meteorological and hydrological drought means conditions at Parteen Basin will continue to deteriorate through the coming weeks.

The cumulative consequences over the operational life of the project have not been assessed:

- The EIAR's drought scenario modelling presents the 2018 event as a worst-case scenario. The correct framing based on the Applicant's own RtS para 2643 admission is that some degree of lake storage drawdown will occur every year.
- The NIS's Article 6(3) integrity conclusion does not address the cumulative ecological effect of routine annual plus drawdown events on qualifying interests of the Lower River Shannon SAC, the Lough Derg SPA and other affected European sites over the operational life

ACP should require the Applicant to supplement the EIAR and NIS with an assessment of the cumulative drawdown effect on Lough Derg lake levels over the full 60-year operational life, incorporating the routine annual idling periods alongside periodic significant drought events.

6.2 Emergency Derogation from the Normal Operating Band: The Mechanism Gap

The critical gap in the Article 6(3) compliance case

The Applicant's entire Article 6(3) Appropriate Assessment rests on the proposition that Lough Derg/Parteen lake levels will be maintained within the Normal Operating Band throughout the operational life of the pipeline. However, there is no legally binding mechanism identified in the planning application, the EIAR, or the NIS that will prevent emergency derogation from the Normal Operating Band if a prolonged drought makes this operationally necessary.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance identifies this as a specific and foreseeable scenario. During a prolonged drought when Ardnacrusha has already been idle for weeks, when Lough Derg is at the lower end of its Normal Operating Band, and when Dublin is experiencing acute water shortage the political, operational, and societal pressure to continue pipeline

abstraction will be overwhelming. 'Emergency permissions' under section 181A of the Planning and Development Act 2000 exist precisely to allow infrastructure to operate outside normal consent conditions during a declared national emergency.

If emergency permissions were granted in such circumstances to draw Lough Derg below the Normal Operating Band:

- This would breach the habitat thresholds that form the entire foundation of the Article 6(3) integrity conclusion.
- The NIS's 'no adverse effect on integrity' conclusion would be simultaneously falsified by the operational reality it was supposed to prevent.
- There is no identified legal mechanism planning condition, licence condition, or statutory agreement that would make such derogation impossible.

Under Waddenzee (C-127/02) and Sweetman (C-258/11), the 'no reasonable scientific doubt' standard requires that the ecological protections underpinning the Article 6(3) conclusion be legally guaranteed, not merely operationally intended. A promise of operational restraint that can be overridden by emergency planning permission is not a legal guarantee. It is a conditional assurance that collapses in precisely the circumstances where it matters most.

Request to ACP — §6.2

ACP should require Uisce Éireann to identify the specific, legally binding mechanism planning condition, licence condition, or statutory agreement that would prevent emergency derogation from the Normal Operating Band during a prolonged drought. If no such mechanism can be identified, the Article 6(3) integrity conclusion falls, because it rests on an assurance that cannot survive a national water emergency.

6.3 Lough Derg Is a Protected SAC and SPA: It Cannot Be Operated as a Demand Management Reservoir

The operational logic of the proposed project during drought conditions relies on drawing upon water stored within Lough Derg where inflows are insufficient to satisfy both the proposed abstraction and the statutory compensation flow. In effect, the proposed project treats Lough Derg as a storage reservoir whose water level can be managed to meet downstream demand. Lough Derg is not simply a water supply reservoir. It is

- A designated Special Area of Conservation (Lower River Shannon SAC, site code 002165) under the Habitats Directive (92/43/EEC), supporting qualifying interests including Atlantic salmon, lamprey, freshwater pearl mussel, otter, and alluvial forests.
- A component of the Lough Derg (Shannon) SPA and the Shannon Callows SPA European sites with qualifying bird species (common tern, whooper swan, Greenland white-fronted goose) whose habitats and conservation objectives are influenced by the hydrological regime.
- A natural lake water body under the Water Framework Directive. Lough Derg is not designated as a Heavily Modified Water Body (HMWB); only Parteen Basin has HMWB status.
- A waterbody subject to the objectives and Programme of Measures established under the Water Framework Directive, including environmental flow requirements.

Operating Lough Derg as a demand-management reservoir by drawing down lake levels during drought conditions to maintain pipeline supply is fundamentally incompatible with the conservation objectives of these protected sites and the obligations arising under the Habitats and Water Framework Directives. Unless

Uisce Éireann can demonstrate beyond reasonable scientific doubt, that such a scenario would not adversely affect the integrity of the affected European sites, the proposed development cannot satisfy the requirements of Article 6(3) of the Habitats Directive.

As the River Shannon Environment Protection River Shannon Environmental Protection Alliance has established in the main submission (12), approximately 179km of Lough Derg shoreline (including islands) would be exposed during a sustained drawdown event. Any deterioration of SAC-qualifying habitats or significant disturbance of SPA qualifying species resulting from drawdown below the Normal Operating Band is could constitute deterioration within the meaning of Article 6(2) of the Habitats Directive regardless of whether emergency conditions apply.

6.4. Lough Derg Evaporation: A Significant but Insufficiently Examined Component of the System Water Balance

A significant but insufficiently examined pressure on the water budget

The EIAR's hydrological modelling assesses the proposed pipeline abstraction (3.47 m³/s at peak) as the primary new demand on the Lough Derg/Parteen Basin system. Although evaporation has been incorporated into the model, its magnitude is not readily apparent within the assessment. Expressing evaporation losses as equivalent continuous flows demonstrates that, during warm summer conditions, evaporation represents a water loss comparable to, or greater than, the proposed abstraction. For example, on a hot summer drought day — precisely the conditions of maximum stress on the Shannon system — Lough Derg loses between 354 and 708 million litres of water per day to evaporation. At the upper range, this evaporative loss is equivalent to 8.19 m³/s — more than twice the proposed pipeline abstraction and more than 80% of the entire statutory compensation flow. This is not a minor background factor. It is a major, temperature-sensitive, drought-coincident pressure on the water budget. Given its potential influence on modelled lake levels during drought, the importance of evaporation, the methodology adopted to estimate it, and the associated uncertainty warrant far more explicit consideration within the assessment.

Summer temperatures will rise most directly increasing evaporation from Lough Derg the Shannon catchment's PET will increase by 13.5% by 2080 Gharbia et al. (2018) cited in this report found that "for the Shannon River Basin this could result in the PET being 13.5% larger in 2080 than today." PET is potential evapotranspiration — the amount of water evaporated and transpired. A 13.5% increase in PET over the pipeline's operational life means the net water available in the Shannon catchment after evaporation losses will be progressively smaller. This directly supports the River Shannon Environment Protection River Shannon Environmental Protection Alliance's Section 39 evaporation argument and the climate-stranded baseline ground

Fealy et al. (2018): "Summer (June, July, August) and Autumn (September, October, November) will see the largest increases with 3.1°C warming expected during Autumn by the end of the Century." Summer is when Lough Derg evaporation is highest and Shannon inflow is lowest, as temperatures increase, the evaporative loss from Lough Derg's 118 km² surface will increase, making the unmodelled evaporation demand progressively larger over the pipeline's operational life.

Surface evaporation from open water bodies is governed by four primary variables: water surface temperature, air temperature, wind speed, and atmospheric humidity. The critical and counter-intuitive

feature of evaporation as a water budget factor is this: the conditions that maximise evaporation are precisely the same conditions that define a hydrological drought.

During a summer drought in Ireland:

- Air and water temperatures are elevated — increasing the vapour pressure differential that drives evaporation
- Humidity is reduced — allowing faster evaporation into a drier atmosphere
- Clear skies and strong sunshine increase direct solar heating of the water surface
- Dry, warm winds carry moisture away from the lake surface, maintaining the vapour pressure differential

All four variables that increase evaporation are simultaneously present during the drought conditions that the EIAR identifies as the period of maximum stress on the Shannon system. This is not a coincidence — it is a physical relationship. The same meteorological conditions that reduce Shannon inflows also accelerate water loss from the Lough Derg surface. The EIAR does not account for this compounding effect.

Lough Derg has a surface area of approximately 118 km² (118 million m²). Using standard open water evaporation rates applicable to Irish summer conditions at air temperatures around 25°C:

Scenario	Evaporation rate (mm/day)	Daily volume lost (million litres)	Equivalent flow (m ³ /s / cumecs)	As % of statutory 10m ³ /s comp. flow
Mild warm day (light wind, some cloud)	3 mm/day	354 million litres	4.09 m ³ /s	41% of compensation flow
Hot summer day (moderate wind, sunny)	4.5 mm/day	531 million litres	6.15 m ³ /s	61% of compensation flow
Hot drought day (strong wind, clear sky)	6 mm/day	708 million litres	8.19 m ³ /s	82% of compensation flow
For comparison: Proposed pipeline abstraction	—	300 Mld (peak)	3.47 m ³ /s (peak)	35% of compensation flow

The figures in the table are derived from standard hydrological methodology for open water evaporation (Penman open water evaporation method, widely used in Irish catchment hydrology). The River Shannon Environment Protection River Shannon Environmental Protection Alliance acknowledges that the precise

evaporation rate on any given day will vary with actual meteorological conditions. The range of 3–6 mm per day represents a conservative to moderate estimate for Irish summer conditions; rates above 6 mm/day are possible during extended heatwaves of the type that are becoming more frequent under climate change projections.

The Conversion to Flow Equivalents

To understand evaporation as a component of the system water budget, it is necessary to convert the daily volume to an equivalent continuous flow in cubic metres per second (cumecs) — the same unit used throughout the EIAR for abstraction, compensation flow, and inflow assessments.

The conversion is:

Daily volume (m³) ÷ 86,400 seconds per day = equivalent flow (m³/s)

- 3 mm/day evaporation: $354,000 \text{ m}^3 \div 86,400 = 4.09 \text{ m}^3/\text{s}$
- 4.5 mm/day evaporation: $531,000 \text{ m}^3 \div 86,400 = 6.15 \text{ m}^3/\text{s}$
- 6 mm/day evaporation: $708,000 \text{ m}^3 \div 86,400 = 8.19 \text{ m}^3/\text{s}$

For comparison, the proposed pipeline abstraction at peak operation is 3.47 m³/s, and the statutory minimum compensation flow to the Old River Shannon is 10.0 m³/s.

On a hot summer drought day with evaporation at 6 mm/day, Lough Derg loses water to the atmosphere at a rate equivalent to 8.19 m³/s — approximately 2.4 times the proposed pipeline abstraction, and 82% of the entire statutory compensation flow. This evaporative loss occurs whether or not the pipeline is operational, whether or not Ardnacrusha is generating, and whether or not the drought conditions persist.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance presents below a simple system water budget for Lough Derg/Parteen Basin during a hot drought day, incorporating the evaporation loss. All figures are in m³/s:

Demand on Lough Derg system	Flow (m ³ /s)	Daily volume (million litres)	Notes
Statutory minimum compensation flow (Old River Shannon)	10.0 m ³ /s	864 MI	Legally required minimum at all times
Limerick City supply (Clareville WTP)	0.6 m ³ /s	52 MI	Current abstraction; growing. Limerick City supply is entirely dependent on Parteen Basin source water; demand projected to grow.

Demand on Lough Derg system	Flow (m ³ /s)	Daily volume (million litres)	Notes
Proposed Dublin Pipeline (peak abstraction)	3.47 m ³ /s	300 MI	Proposed new demand on the system
Surface evaporation from Lough Derg (hot drought day — 6mm)	8.19 m ³ /s	708 MI	Incorporated in the hydrological model; however, the magnitude and associated uncertainty are not explicitly presented, and the sensitivity of modelled lake levels to evaporation assumptions has not been examined.
TOTAL SYSTEM DEMAND (hot drought day, pipeline operating)	22.26 m ³ /s	1,924 MI/day	Against total Shannon low flow at Parteen of ~20m ³ /s in drought

The critical finding from the system water budget

During a hot drought day with the proposed pipeline operating at peak capacity, the total demand on the Lough Derg/Parteen system from the statutory compensation flow, Limerick supply, pipeline abstraction, and surface evaporation is approximately 22.26 m³/s. The total natural inflow to Parteen Basin from the Shannon during the 2018 drought was approximately 10–11 m³/s (based on ESB FOI data showing Ardnacrusha took zero water for 74 days, consistent with inflows at or near the 10m³/s compensation flow level). On a hot drought day, total system demand exceeds available inflow by approximately 12 m³/s. Every one of those 12 m³/s must come from Lough Derg Lake storage not just the pipeline's 3.47 m³/s. Water budget table.

The EIAR's hydrological model accounts for the compensation flow, the Limerick abstraction, and the pipeline abstraction as demands on lake storage during drought. It does not account for surface evaporation. The omission is material because:

- Evaporation at 6 mm/day (8.19 m³/s equivalent) is the largest single demand on the system after the statutory compensation flow, exceeding the proposed pipeline abstraction by a factor of 2.4.

- Unlike the other demands, evaporation cannot be controlled, suspended, or reduced — it is a physical process driven by meteorological conditions that are independent of operational decisions.
- The conditions that maximise evaporation (heat, low humidity, wind, sunshine) are exactly the conditions that define a hydrological drought and that simultaneously minimise Shannon inflow — creating a compound effect is not explicitly examined within the assessment. PET (evaporation/transpiration) is accelerated by the same effects upstream on Lough Ree. Our figs calculate the loss from the surface of Lough Derg. There will be a cascade effect of a drought across the midlands and so water we assume reaches Lough Derg, may not, because of PET losses upstream on Lough Ree etc.
- Under climate change projections (ICARUS, met Éireann), summer temperatures and drought frequency in the Shannon Midlands are projected to increase — meaning the evaporative loss per drought event will increase over the 60-year operational life of the pipeline.

6.4.1 The Ecological Consequence: The Importance of Evaporation During Drought

The EIAR's modelled worst-case lake level drawdown of 134 mm (2018 drought analogue; RtS Report, para. 1421) is derived from a hydrological model that incorporates catchment inflows, direct precipitation, evaporation and operational outflows. Evaporation becomes an increasingly important component of the water balance during drought conditions, when inflows are simultaneously reduced and evaporative losses are greatest. Consequently, confidence in the predicted drawdown is dependent on the methodology used to estimate open-water evaporation and the associated uncertainty.

The assessment does not present a sensitivity analysis demonstrating how alternative, but reasonable, evaporation estimates would influence the predicted 134 mm drawdown or the conclusions of the ecological assessment.

Given the importance of evaporation to the system water balance during drought conditions:

- Reduced inflows and increased evaporation occur simultaneously, placing maximum pressure on the Lough Derg water balance. The assessment does not explicitly examine the sensitivity of the predicted drawdown to this combination of conditions.
- The report demonstrates that evaporation increases under climate change, but it does not explain how sensitive the predicted drawdown and ecological conclusions are to those increased evaporation losses.
- The NIS's Article 6(3) integrity conclusion relies on modelled lake levels derived from assumptions regarding evaporation, but the implications of uncertainty in those assumptions for the ecological assessment are not discussed.
- The 20-day average annual Ardnacrusha idle period (RtS para 2643, addressed in §36.1 of this submission), during which the Lough Derg is already drawing down, occurs predominantly in warm summer conditions when evaporation rates are highest, compounding pressure on the lake water balance.

6.4.2 Why This Is Legally Significant

The treatment of evaporation, together with the limited assessment of uncertainty associated with its estimation, has the following legal implications:

- Under Article 5(1) of the EIA Directive, the EIAR must contain adequate information on the likely significant effects of the proposed development. As evaporation is a major component of the Lough Derg water balance during drought conditions, the assessment should demonstrate that the adopted evaporation methodology and its associated uncertainty have been adequately considered.
- Under Article 6(3) of the Habitats Directive and the Waddenzee standard of 'no reasonable scientific doubt,' the NIS's conclusion that lake levels will remain within the Normal Operating Band during drought depends on a hydrological model that is sensitive to assumptions regarding open-water evaporation. In the absence of such analysis, it is unclear whether uncertainty in the estimation of evaporation has been reduced to the level required by the Article 6(3) standard of no reasonable scientific doubt.
- Under the WFD Article 4(1) no-deterioration requirement as interpreted in Weser (C-461/13). The WSIAR's conclusion that there will be no deterioration in quality elements of the affected water bodies relies on outputs from the hydrological model, yet the report does not examine how uncertainty in those outputs could influence the assessment of WFD quality elements.
- Under WFD Article 4(7)(d), the 'no significantly better environmental alternative' test requires confidence in the assessment of the proposed option's environmental impacts. The implications of uncertainty in the estimation of open-water evaporation for predicted lake levels and the assessment of alternatives are not explicitly examined.

What the EIAR Should Contain and Does Not

The Hydrological Modelling Report incorporates evaporation as part of the Lough Derg water balance, estimating open-water evaporation using the Oudin potential evaporation method, scaled to observations from the Met Éireann Gurteen station and converted to open-water evaporation using the Finch formula. Given the importance of evaporation to the lake water balance during drought conditions, additional information on the validation of this methodology, the associated uncertainty and the sensitivity of modelled lake levels to alternative evaporation estimates would improve confidence in the assessment.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance has not had access to the underlying model datasets or calibration and sensitivity analyses supporting the hydrological model. In light of the importance of evaporation to the predicted lake levels during drought conditions, further information demonstrating the robustness of the adopted methodology would assist in evaluating the reliability of the model outputs.

Note on the River Shannon Environment Protection River Shannon Environmental Protection Alliance's own calculation

The figures in this section are calculated by the River Shannon Environment Protection River Shannon Environmental Protection Alliance using standard open-water evaporation methodology applied to Lough Derg's surface area (118 km²). The River Shannon Environment Protection River Shannon Environmental Protection Alliance is not a hydrological modelling organisation and does not claim the precision of a peer-reviewed engineering study. The purpose of presenting these figures is to demonstrate order of magnitude of evaporation losses from Lough Derg when expressed as equivalent continuous flows. They are intended to provide context for the importance of evaporation within the lake water balance rather than to replicate or replace the Applicant's hydrological model.

Requests to An Coimisiún Pleanála

1. Require the Applicant to provide additional information on the validation of the Oudin–Finch evaporation methodology, including the basis for its selection, any calibration or validation undertaken, and the sensitivity of modelled lake levels to uncertainty in the adopted evaporation estimates.
2. Require the Applicant to demonstrate that the adopted evaporation methodology provides an appropriate representation of open-water evaporation for Lough Derg, or to justify why alternative recognised methodologies were not adopted.
3. Require the Applicant to demonstrate the sensitivity of the predicted 134 mm worst-case drawdown (2018 drought analogue; RtS para. 1421) to uncertainty in the adopted evaporation methodology and to confirm whether the conclusions of the NIS remain robust under reasonable alternative evaporation assumptions.

Require the Applicant to assess whether the conceded 'measurable effects during extreme drought periods' (RtS para 2626 remain robust having regard to the assumptions adopted in estimating evaporation and the associated uncertainty, and to address this in the context of the NIS's Article 6(3) integrity conclusion.

4. Require the Applicant to demonstrate that the projected increases in evaporation incorporated within the hydrological model under future climate scenarios do not materially affect the Article 6(3) integrity conclusions or the Water Framework Directive assessment over the operational life of the project.

The Roadmap for the Lower River Shannon (2021)

This was a report that was prepared by CDM Smith, a specialist international fish passage engineering firm, commissioned by the **Department of Housing, Local Government and Heritage**. It is the Irish State's own commissioned expert report on the ecological condition of the Lower River Shannon and what needs to be done to restore it. The Steering Group that commissioned it included Irish Water (now Uisce Éireann) as a named member.

The findings that directly support the River Shannon Environment Protection River Shannon Environmental Protection Alliance's case, in order of importance:

The 10m³/s compensation flow is explicitly stated not to represent current best practice

At page 12 (Section 2.2.2), the report states:

"Minimum flow provision represents best practice for hydropower schemes. However, the low and unvaried compensation flow of the Shannon Scheme do not present current international best practice."

And at Section 8.1, Conclusion/Basic Considerations:

"The minimum flow provision at Parteen Weir represents European and international best practice for hydropower schemes, in general. However, the comparatively low and uniform compensation flow practice does not present current best practice."

This is the Irish State's own expert consultants, commissioned by a government department, in a document to which Uisce Éireann was party as a Steering Group member, stating in plain terms that the 10m³/s

compensation flow does not meet current best practice. The River Shannon Environment Protection River Shannon Environmental Protection Alliance's entire WFD baseline circularity argument (6.2 of the consolidated submission) rests on the proposition that this flow was set in 1929 for engineering reasons and has never been assessed against WFD ecological objectives. This report from 2021, commissioned by the Irish State confirms it.

Environmental flows of 17–50 m³/s are needed not 10 m³/s

Section 7.4.2 contains the expert EFlow recommendation for the Shannon Scheme. The report proposes:

- A raised baseflow of **17 m³/s** during normal flow conditions (compared to current 10 m³/s)
- Freshets of **21–31 m³/s** weekly during the March–September migration period
- Freshets of up to **65 m³/s** during October–December

The ecologically appropriate flow for the Old River Shannon is substantially higher than 10 m³/s the baseline the WSIAR uses for its entire WFD 'no deterioration' assessment. If the ecologically appropriate flow is 17–65 m³/s and the current flow is 10 m³/s, then:

- The current baseline is already below the ecologically required level
- 'No deterioration relative to 10m³/s baseline' says nothing meaningful about WFD compliance
- Adding a pipeline abstraction that competes for the same water budget makes achieving the required EFlow even harder

The report explicitly considers Irish Water's proposed abstraction and flags it as a constraint

At Section 8.2.4 (Concept U2), the report states: *"The impact of increasing the EFlow on other potential users of the flow also needs to be considered. In our EFlow concept, applying a hydrological approach, we considered the proposal by Irish Water to abstract 4 m³/s on average from the Parteen Basin."*

The State's own 2021 roadmap specifically modelled Irish Water's proposed abstraction as a competing demand when assessing the EFlow requirements for fish passage. The EFlow concept and the pipeline abstraction are not independent of each other the report acknowledges they compete for the same flow budget. Yet the EIAR and NIS treat the compensation flow as a fixed baseline without acknowledging this competition.

Uisce Éireann (then Irish Water) was at the table when this report was being produced. It was aware in 2021 that the State's own expert consultants had concluded that the 10m³/s compensation flow does not represent best practice and that ecologically appropriate flows for fish passage are substantially higher. It proceeded to submit a planning application for a pipeline abstraction that competes for the same water budget, without disclosing this finding in its NIS or WSIAR. This is a deliberate omission from the public record.

The existing fish passes at Parteen and Ardnacrusha do not represent best practice

Section 8.2.2 and 8.1 confirm that the Parteen Weir fish pass and Ardnacrusha fish lock "do not facilitate multi-fish species passage, and cannot be brought up to present best practice, which is why we recommend that they be completely revised/replaced."

This is directly relevant to the NIS's treatment of the ESB hatchery and fish passage infrastructure as adequate mitigation. If the State's own 2021 roadmap recommends complete replacement of the existing fish passes, then the NIS's reliance on the existing passes as part of the ecological management regime for the SAC qualifying interests (salmon, lamprey) is relying on infrastructure that the State's own experts have said is not fit for purpose.

Atlantic salmon catches dropped from 414,000 pounds to 42,000 pounds — immediately after Ardnacrusha was built

Section 1.1 cites the historical record: "according to Reale (2011) 'the effect of the scheme was well documented in the local media at the time and it is estimated that catches of salmon on the Limerick fishery dropped from 414,000 pounds, to 42,000 pounds after the scheme was built.'"

A 90% collapse in salmon catches in the decade following the Ardnacrusha scheme provides the historical baseline for the River Shannon Environment Protection River Shannon Environmental Protection Alliance's argument that the Shannon system is in ecological crisis: it has been degraded for nearly 100 years and the EIAR proposes to add a further pressure on a population that is already at 5% of conservation limits.

A required increase in compensation flow would directly conflict with the pipeline abstraction

This is the logical trap that the report sets up, though it does not close it explicitly. The EFlow recommendation requires flows of 17–65 m³/s to restore ecological function. The statutory minimum is currently 10 m³/s. If the RBMP process eventually requires higher compensation flows which this 2021 Government-commissioned report recommends the pipeline abstraction will physically constrain delivery of that flow during drought conditions. This is the 'climate-stranded baseline' and 'stranded compensation flow asset' argument from the consolidated submission.

The number of days at minimum baseflow would need to reduce from 11 months to 2 months per year

Table 13 (Section 7.4.2) in the report shows that under the recommended EFlow regime, days with minimum baseflow (10 m³/s) in an average year would reduce from approximately 340 days (current) to approximately 66 days. Currently the Old River Shannon runs at the minimum statutory 10 m³/s for approximately 11 months of the year. The recommended regime would deliver ecologically meaningful higher flows for approximately 10 months of the year. The proposed pipeline abstraction works directly against this transition.

(WFD 1929 baseline circularity): The Irish State's own expert consultants, in a report commissioned by the Department of Housing in 2021 to which Uisce Éireann was a party, found that the 10m³/s compensation flow "does not present current best practice." The WSIAR's use of this same flow as the fixed ecological baseline for its WFD 'no deterioration' analysis cannot withstand scrutiny in light of this finding.

(Habitats Directive — qualifying interests not fully assessed): The 2021 Government roadmap recommends complete replacement of the Parteen Weir fish pass and Ardnacrusha fish lock as unfit for multi-species passage. The NIS's reliance on these structures as part of the ecological management regime for the SAC is relying on infrastructure the State's own experts have condemned as inadequate.

(Ardnacrusha 20 days idling — annual drawdown): The report's EFlow modelling considers the pipeline abstraction as a competing demand. The EFlow concept and the pipeline compete for the same flow budget. The EIAR has never modelled what the pipeline abstraction does to the feasibility of achieving the EFlow regime that the State's own experts have recommended.

(Article 4(7) — no derogation assessment): Article 4(7)(d) WFD requires demonstration that the objectives cannot be achieved by a significantly better environmental option. The 2021 roadmap recommends a specific EFlow regime requiring flows of 17–65 m³/s. The pipeline abstraction competes with this objective. If the beneficial objective — ecological restoration of the Old River Shannon SAC to Good Ecological Potential — requires higher flows than currently exist, and the pipeline abstraction reduces the available water budget during drought conditions, then the pipeline cannot pass the Article 4(7)(d) test.

The most powerful single argument: Uisce Éireann was at the table when this report was produced. It cannot claim ignorance of these findings. Its failure to disclose them in the NIS and WSIAR, while submitting a planning application for an abstraction that competes with the recommended EFlow regime, is a material omission from the public record that ACP should treat with the seriousness it deserves.

The CDM Smith report 2021, commissioned by the ESB, proposes a comprehensive fish-passage restoration strategy centred on increasing and diversifying flow through the Old River Shannon channel, rather than maintaining the current static statutory minimum. This strategy includes:

- Elevated Baseline Flow: A generally higher baseline flow in the Old River channel to provide a viable fish passage beyond Ardnacrusha, thereby mitigating entrainment in the tailrace.
- Seasonal Water Releases: Weekly water releases during spring and summer, strategically timed to facilitate upstream salmon migration.
- Nocturnal Autumn Spills: Night-time water spills in autumn, designed to support the safe downstream migration of eels during their peak migratory period.
- Enhanced Fish Passes: Upgraded fish passes at both Ardnacrusha and Parteen Weir to improve fish bypass capabilities.
- Exclusionary Measures: Implementation of barriers or exclusion mechanisms to prevent fish from entering hazardous areas, such as the turbine tailrace.

The core principle of these recommendations is variability. Instead of a single, fixed compensatory flow throughout the year, CDM Smith's model advocates for a flow regime that incorporates pulsed increases during biologically critical periods (e.g., spring/summer for salmon, autumn nights for eels), in addition to an elevated baseline.

Implications for Pipeline Development.

It is asserted that the seasonally augmented flow regime of this variable could be jeopardized if the pipeline's abstraction is sanctioned under the existing minimum compensation flow. A drought-period abstraction of 300 MI/d would compete for the same water volumes that the CDM Smith plan seeks to reserve, often during critical periods when migration flows are most crucial and water margins are most constrained. Anglers advocates for the ACP to conduct a combined assessment of both proposals, ensuring that the pipeline's permitted abstraction does not inadvertently limit the higher, pulsed flows deemed necessary by the fish-passage roadmap, even prior to its finalization.

We contend that independent evaluations of the pipeline and the fish-passage roadmap enable each project to disclaim accountability for potential adverse impacts on the other. In reality, both initiatives draw upon the same finite flow budget at Parteen, meaning a decision regarding one effectively limits the possibilities for the other.

1.1 The Corporation's Objectives	
The Corporation's primary objective is to protect and enhance the environmental quality of the River Shannon and its catchment area, ensuring sustainable use of the river for future generations. This includes maintaining and improving the ecological health of the river, protecting water quality, and promoting sustainable land use practices within the catchment area.	
The Corporation also aims to raise public awareness of environmental issues and encourage community participation in environmental protection efforts. This includes providing information and advice to the public on how to reduce their environmental impact and participating in community events and campaigns.	
The Corporation's activities are guided by the following principles:	
• Precautionary Principle: Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.	
• Polluter Pays Principle: Those who pollute should be held responsible for the costs of the pollution.	
• Sustainable Development Principle: Development should meet the needs of the present without compromising the ability of future generations to meet their own needs.	
• Community Participation Principle: The public should have access to information and participate in decision-making processes.	
The Corporation's activities are also guided by the following objectives:	
• To maintain and improve the ecological health of the River Shannon and its catchment area.	
• To protect water quality and prevent pollution.	
• To promote sustainable land use practices within the catchment area.	
• To raise public awareness of environmental issues and encourage community participation in environmental protection efforts.	
The Corporation's activities are also guided by the following policies:	
• Water Quality Policy: To maintain and improve the quality of water in the River Shannon and its catchment area.	
• Land Use Policy: To promote sustainable land use practices within the catchment area.	
• Pollution Prevention Policy: To prevent and control pollution from all sources.	
• Public Awareness Policy: To raise public awareness of environmental issues and encourage community participation in environmental protection efforts.	
The Corporation's activities are also guided by the following measures:	
• Water Quality Measures: To monitor and assess the quality of water in the River Shannon and its catchment area.	
• Land Use Measures: To manage land use within the catchment area to prevent pollution and protect the environment.	
• Pollution Prevention Measures: To prevent and control pollution from all sources.	
• Public Awareness Measures: To raise public awareness of environmental issues and encourage community participation in environmental protection efforts.	

7. Alternatives Copenhagen Benchmark, Kildare Groundwater, and the Modular Framework

The Consolidated Formal Submission (4 and 17) addresses the alternatives assessment failure in detail. Three further dimensions of the alternatives case are developed here.

A. 7.1 The Copenhagen / HOFOR Benchmark

Copenhagen is a European capital city with population and surface area comparable to Dublin and similar temperate maritime climate. HOFOR (Hovedstadens Forsyningsselskab) is the water authority supplying the Copenhagen metropolitan area. The comparison with the proposed Shannon-Dublin Pipeline is instructive and is presented to ACP as admissible evidence of what genuine supply resilience looks like in a comparable modern city:

Parameter	Copenhagen HOFOR	Dublin / Greater Dublin Area
Population served	1 million+ consumers	2 million (GDA)
Primary water source	100% groundwater borehole matrix	River Liffey (current); River Shannon (proposed)
Number of sources	Distributed matrix across the region	Single river currently; single pipeline proposed
Treatment required	No chlorination naturally clean groundwater	Full treatment: coagulation, flocculation, UV, chlorination
THM formation risk	Minimal groundwater very low in NOM	High Shannon high NOM from peatland catchments
Network leakage rate	6% (current operational)	43% (correct CRU definition, 2024)
Resilience	High failure of any single borehole does not affect supply	Low single pipeline failure halts supply to GDA
Ecological impact	Minimal no river abstraction, no SAC disturbance	Significant abstraction from Lower River Shannon SAC
Capital cost model	Distributed investment; no mega-project required	€4.58–10.4bn single pipeline proposed

The HOFOR system is not theoretical. It is fully operational, supplying over one million consumers, meeting EU Drinking Water Directive standards, with a network leakage rate of 6% against Ireland's correct national rate of 43% (CRU definition, 2024).

The River Shannon Environment Protection River Shannon Environmental Protection Alliance does not contend that Copenhagen's model can be transplanted to Dublin without modification. The purpose of the comparison is more precise:

- It demonstrates that a capital city of comparable size and climate can be served from distributed groundwater without a single large-scale river abstraction, without a 172km long-distance pipeline, and without the ecological disruption of abstracting from a protected SAC
- It demonstrates that 6% leakage is achievable in a modern, comparable urban water system as a current operational reality not an aspirational 2040 target. Ireland's 43% national rate is not inevitable; it reflects decades of underinvestment in network renewal that has continued while a €10.4bn pipeline has been promoted

- It demonstrates that true resilience multiple sources, no single critical point of failure is achievable without a single mega-project, using distributed investment rather than concentrated infrastructure

Ireland is not Copenhagen. But the question the EIA Directive requires to be answered is whether there is a 'significantly better environmental option that is technically feasible and not disproportionately costly' (WFD Article 4(7)(d)). A distributed groundwater approach achieving 6% leakage in Copenhagen suggests that Ireland's trajectory 43% leakage and a €10.4bn single-source pipeline is not the only available model. It is a choice, and it is a choice that has not been subjected to genuine project-level comparative assessment.

7.2 Kildare Groundwater: A Feasible Alternative Never Project-Level Assessed

The Kildare limestone aquifer system including the south Kildare Karst and the major unconfined limestone aquifer belt running through Counties Kildare and Laois is one of the most significant groundwater resources in Ireland. Its potential for sustainable water supply to the Greater Dublin Area has not been quantified or presented in the EIAR alternatives assessment at project level.

Kildare groundwater was among the 594 'feasible alternatives' identified at NWRP level. It was eliminated at strategic plan stage without project-level EIA assessment of: its sustainable yield under current and projected climate conditions; the capital cost of developing a distributed borehole network; the environmental impact compared to the proposed Shannon abstraction; the water quality characteristics relative to Shannon source water (including THM precursor content); and its potential contribution as part of a multi-source supply matrix alongside Poulaphouca and demand management.

ACP should require Uisce Éireann to provide this assessment before determining the application.

7.3 The Multi-Point Modular Supply System: The Correct Legal Framework

The correct question for this planning application is not 'is there a supply gap and can the Shannon pipeline fill it?' The correct question under the EIA Directive, the WFD, and the Habitats Directive is: 'what is the least environmentally damaging, most resilient, most cost-effective combination of measures that can sustainably meet the projected demand?'

That question has never been asked or answered at project EIA level. Only the Shannon pipeline has been developed to planning application stage. No alternative or combination of alternatives has been subjected to equivalent engineering, environmental, or economic assessment at project level.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that the following combination of measures which it terms a multi-point modular supply matrix is a legitimate and potentially superior environmental option under WFD Article 4(7)(d) that has never been genuinely assessed:

- Poulaphouca reservoir optimisation as the primary long-term supply buffer (148 billion litres active storage, already owned, already connected to the treatment and distribution network, already being used by Uisce Éireann as an interim measure see 34 of the Consolidated Formal Submission).
- Kildare groundwater matrix as a distributed baseload supply component with no river abstraction and minimal ecological impact. Incremental eastern river development (Barrow, Boyne, Slaney, Liffey) at environmentally tolerable abstraction rates, varied seasonally and by flow conditions.

- Aggressive demand management leakage reduction to 15% or below (EU/international standard); commercial user water efficiency requirements; progressive metering.
- A smaller, trigger-conditioned Lough Ree component (see 35.3 above) contributing to seasonal supply flexibility.

This approach delivers diversified supply from multiple catchments, no single point of failure, no 172km critical infrastructure entity, and no large-scale abstraction from the Lower River Shannon SAC. Its capital cost anchored to an asset (Poulaphouca) that already exists would be a fraction of the €4.58–10.4bn Shannon Pipeline. It has not been assessed. That assessment is required before this application can be lawfully determined.

8. Ecological Irreversibility the 1% Failure Rate and the Waddenzee Standard

The Consolidated Formal Submission (5) addresses the Habitats Directive standard under Article 6(3) and the specific internal contradiction in RtS Report para 49. This section addresses a further and equally fundamental dimension of the Habitats Directive case: the incompatibility of ecological irreversibility with any probability-based acceptance of harm.

8.1 The Core Ecological Principle

Environmental ecological impact is frequently irreversible and usually has long-lasting consequences. Sustaining habitats and protected SACs is not something that tolerates a failure rate however low that rate is expressed as a percentage of years or events. Even though extreme drought events may be rare and brief, like a forest fire, they cannot be factored into any modelling as 'acceptable.'

This is not an emotional argument. It is the scientific and legal basis of the Habitats Directive. Protected status is assigned to European sites precisely because the habitats and species concerned cannot recover from ecological harm within timescales relevant to human planning decisions. The salmon that fail to spawn in a drought year cannot be retrospectively restored. The common tern colony that is displaced from Lough Derg by a drawdown event cannot be recalled. The freshwater pearl mussel population damaged by low dissolved-oxygen conditions in a drought summer may not recover for a generation.

8.2 Why the EIAR's Concession Is Legally Fatal

Uisce Éireann's modelling concedes (RtS para 2626) that 'there would be measurable effects during extreme drought periods such as those in 1995 and 2018.' The EIAR presents these as rare events affecting perhaps 1–2% of modelling years and implicitly asks ACP to accept that the ecological consequences of 1–2% of years are a price worth paying for water supply security in the other 98–99%.

This framing is legally impermissible under the Habitats Directive. The reasons are specific:

- Atlantic salmon spawning beds: at 5% of conservation limits (Tipperary County Council, statutory submission), salmon eggs exposed during a drought drawdown event die. One failed spawning season at this population level is not recoverable within any operationally relevant timeframe. There is no margin for a 1% failure rate.
- Common tern breeding population on Lough Derg: NPWS conservation objectives identify the breeding population as having collapsed, with no breeding terns recorded during the 2024 survey. In these circumstances, even a short-duration drought-induced drawdown cannot simply be assumed to be acceptable for a qualifying SPA species.
- Alluvial forest and wetland habitats along 179km of Lough Derg shoreline: exposure of littoral habitat during drawdown affects plant communities, invertebrate populations, and the species that depend on them. These effects are not reversible when water levels return to normal.
- Freshwater pearl mussel critically endangered in the Shannon catchment, among the longest-lived invertebrates in Ireland, protected under Annex II of the Habitats Directive is highly sensitive to low-flow, low dissolved-oxygen conditions in summer drought. Populations that take decades to establish can be eliminated by a single adverse event.

8.3 The Waddenzee Standard Applied

The forest fire principle that a small probability of irreversible harm cannot be modelled as acceptable is the plain-English version of the CJEU's standard in Case C-127/02 (Waddenzee, 2004):

"The competent national authorities are to authorise the activity only if they have made certain that it will not adversely affect the integrity of that site. That is so when there is no reasonable scientific doubt as to the absence of such effects." CJEU, Case C-127/02, Waddenzee, 2004

'No reasonable scientific doubt' is fundamentally incompatible with a 1% or 2% probability of ecological harm. The moment the EIAR concedes that there will be 'measurable effects during extreme drought periods' however rare, it has conceded the existence of reasonable scientific doubt. That concession ends the Article 6(3) assessment. It cannot be rescued by characterising the probability as low or the event as infrequent.

Under the precautionary principle (Article 191(2) TFEU) and the Habitats Directive standard as interpreted by the CJEU, a small but non-zero probability of irreversible ecological harm requires refusal, not consent with mitigation promises. The EIAR concedes the probability of harm. It does not establish and cannot establish the certainty of its absence.

Request to ACP — §8.3

ACP should require the NIS to address, for each qualifying interest of the Lower River Shannon SAC and associated SPAs, the ecological consequences of the 1995 and 2018 drought scenarios which the Applicant concedes will produce measurable effects for the conservation status of that qualifying interest over the 60-year operational life of the pipeline. The question is not whether these effects will occur: the Applicant concedes they will. The question is whether they constitute adverse effects on site integrity, and what the cumulative consequence of periodic such events is for the long-term conservation status of each qualifying interest. This analysis is missing from the NIS. Until it is provided, the Article 6(3) conclusion cannot be established to the Waddenzee standard of no reasonable scientific doubt.

9. Additional Requests to An Coimisiún Pleanála Arising from Sections 34–38

In addition to the consolidated requests at Section 32 of the Consolidated Formal Submission, the River Shannon Environment Protection River Shannon Environmental Protection Alliance makes the following specific additional requests arising from the new grounds advanced in Sections 34–38:

1. (arising from §10.3 — Drought / Cape Town ground) Require Uisce Éireann to model a three-year consecutive drought scenario in the Shannon catchment and to demonstrate at what point the pipeline would cease to supply the GDA, what Lough Derg lake levels would be at the end of each year, and what the contingency supply would be.
2. (arising from §4.6–4.7 — Feasible alternatives ground) Require Uisce Éireann to provide the full list of the 594 'feasible alternatives' from the NWRP screening, confirm what criteria were used to narrow from 594 to the preferred option, and confirm those criteria were applied using current (2026) cost, climate, and environmental data.
3. (arising from §4.8 — Lough Ree smaller abstraction) Require Uisce Éireann to confirm whether a smaller, trigger-conditioned Lough Ree abstraction as one component of a multi-source matrix was assessed at project EIA level, and if not, to provide that assessment.
4. (arising from §4.9 — 50km pipeline cost saving) Require Uisce Éireann to quantify the capital and operational cost saving from a Lough Ree origin pipeline (approximately 122km) versus the Parteen origin pipeline (172km) as part of a transparent cost-benefit comparison.
5. (arising from §6.1 — Ardnacrusha 20-day idling) Require Uisce Éireann to model the cumulative drawdown effect on Lough Derg lake levels over the 60-year operational life incorporating the routine annual 20-day Ardnacrusha idling periods (RtS para 2643) combined with periodic drought years.
6. (arising from §6.2 — Emergency derogation mechanism gap) Require Uisce Éireann to identify the specific legally binding mechanism planning condition, licence condition, or statutory agreement that would prevent emergency derogation from the Normal Operating Band in a prolonged drought, and to confirm no emergency planning power could override it.
7. (arising from §6.3 — Lough Derg as reservoir) Require Uisce Éireann to confirm that operating Lough Derg lake levels below the Normal Operating Band to maintain pipeline supply even under emergency conditions is legally permissible under the SAC and SPA designations of the water body, and to identify the legal basis on which it would be so.
8. (arising from §7.2 — Kildare groundwater) Require Uisce Éireann to provide a sustainable yield assessment for the Kildare groundwater system as a component of a multi-source GDA supply alternative, and to compare its capital cost, water quality, and environmental impact with the Shannon Pipeline.
9. (arising from §8 — Ecological irreversibility / Waddenzee standard) Require the NIS to address, for each qualifying interest of the Lower River Shannon SAC and associated SPAs, the ecological consequences of the conceded 'measurable effects' in 1995 and 2018 drought analogues over the 60-year operational life, and to demonstrate that these consequences do not constitute adverse effects on site integrity to the standard of no reasonable scientific doubt required under Waddenzee (C-127/02).

10. Habitats Directive Appropriate Assessment Standard Not Met

10.1 The Legal Standard

Article 6(3) of Directive 92/43/EEC permits consent only where the competent authority has ascertained that the project will not adversely affect the integrity of the site meaning no reasonable scientific doubt remains (Waddenzee, C-127/02). In Sweetman (C-258/11), the CJEU confirmed a project liable to undermine conservation objectives must be refused under Article 6(3) unless Article 6(4) derogation is available. In Holohan (C-461/17), the Court held a NIS must identify all aspects of the project likely to affect qualifying interests and must address all scientific evidence. Under People Over Wind (C-323/17), mitigation measures cannot be relied upon to exclude likely significant effects unless precisely defined, scientifically certain, fully secured, and demonstrably capable of eliminating adverse effects.

In the Irish courts: Callaghan v An Bord Pleanála [2018] IEHC 463, Concerned Residents of Treascon [2022] IEHC 595, and the broader body of High Court authority on Holohan confirm these standards are applied with full rigour in Irish law.

10.2 The Internal Contradiction in the RtS Report (Para 49)

Critical legal vulnerability RtS para 49

'While no adverse effects on the integrity of the Lower River Shannon SAC are predicted, some minor residual effects on biodiversity have been identified. However, these residual effects are limited in scale and extent and would not significantly affect the ecological structure, function, or overall biodiversity value of Parteen Basin.'

This formulation is legally incoherent under Article 6(3):

- It simultaneously concedes residual effects and asserts no adverse effect on integrity. Under Sweetman and Holohan, any residual effect on a qualifying habitat or species requires the competent authority to specifically explain, with scientific reasoning, why that effect does not constitute an adverse effect on integrity not simply to assert that it does not.
- The phrase 'would not significantly affect' imports an EIA-style materiality threshold into the Article 6(3) test. These are legally distinct standards. Article 6(3) does not permit a 'significance' filter between 'residual effect' and 'adverse effect on integrity.'
- Para 52 states the NIS 'applied the precautionary principle throughout' but under Waddenzee, the precautionary principle means uncertainty itself defeats the Article 6(3) conclusion. Scientific uncertainty about whether residual effects constitute adverse effects on integrity requires refusal, not a finding of compliance.
- Para 54 asserts Article 6(4) derogation is not required because Article 6(3) compliance has been established. This circular reasoning means ACP would be determining the application without any assessment of whether imperative reasons of overriding public interest, alternatives, and compensatory measures exist all of which are required under Article 6(4) if Article 6(3) is not met.

10.3 In-Combination Assessment Three Gaps

Cases C-293/17 and C-294/17 (Coöperatie Mobilisation, 2018) require in-combination effects across all plans and projects affecting the same European site. Three specific gaps:

- ESB Ardnacrusha scheme: the combined hydrological modification of the Shannon under drought conditions when both the hydroelectric diversion and the proposed abstraction operate against a reduced inflow has not been modelled as a single integrated scenario. The two systems are hydrologically interdependent but assessed in separate processes by separate applicants.
- ESB's pending abstraction/impoundment licence application: the environmental assessment of that application has not yet been conducted. In-combination effects of the two operations have never been assessed by a single competent authority on complete information for both.
- Third-party catchment abstractions: the Shannon supplies numerous other public water supply and industrial abstraction points whose cumulative burden on low-flow conditions during drought has not been specifically assessed in the NIS.

10.4 Qualifying Interests Not Fully Addressed Holohan Lacunae

The Lower River Shannon SAC (site code 002165) the Lough Derg SPA (site code 004058); and the other affected European sites support has multiple qualifying interests and conservation objectives. Holohan requires the NIS to address every qualifying interest that could be affected. Specific lacunae identified:

- Atlantic salmon flow regime thresholds for migration and spawning, sediment transport dynamics for spawning substrate, and the effect of temperature/dissolved oxygen changes under altered abstraction regimes during low-flow scenarios are not demonstrated
- Freshwater pearl mussel critically endangered; highly sensitive to flow regime, sedimentation, and water quality changes. The NIS treatment is inadequate given the species' conservation status
- Sea lamprey, river lamprey, brook lamprey species-specific minimum flow thresholds and seasonal migration cue flow not provided
- Common tern Lough Derg (Shannon) SPA no terns recorded in the 2024 survey. The SPA qualifying interest population has collapsed on the lake. The NIS does not address the contribution of the existing water level management regime to this collapse, or whether the proposed abstraction will further impede restoration
- Shannon Callows SPA no hydro-ecological analysis of whether the proposed abstraction will alter the timing or duration of floodplain inundation affecting the SPA's qualifying bird species (golden plover, lapwing, curlew, Bewick's swan)

10.5 Power v An Bord Pleanála Conservation Objectives

A live CJEU reference (Power v An Bord Pleanála) is awaiting a ruling as to whether a competent authority is precluded from carrying out an Appropriate Assessment without compliant, site-specific conservation objectives in place for the relevant European site. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP to identify whether all Natura 2000 sites within the hydrological zone of influence have adopted, legally compliant conservation objectives, and if any do not, to address this in light of the pending ruling.

11. Water Framework Directive Inadequate Compliance Assessment

11.1 The Legal Standard

Article 4(1)(a)(i) WFD imposes the obligation to prevent deterioration of all bodies of surface water. In *Weser* (C-461/13) the CJEU confirmed: (a) the prohibition on deterioration is an individually binding obligation at project consent stage; (b) any deterioration of even one quality element triggers the prohibition even if overall status classification is unchanged; (c) the competent authority must itself verify compliance it cannot rely solely on the Applicant's assessment.

SJK's statutory submission (§2.2.1) identifies a specific deficiency: the Water Status Impact Assessment Report (WSIAR) relies on UK Environment Agency guidance rather than the Common Implementation Strategy (CIS) guidance adopted by the European Commission. Post-Brexit UK guidance is not interpretatively authoritative in EU law. CIS Guidance Document No. 36 (2017) requires deterioration to be assessed at the level of individual biological, hydromorphological, and physico-chemical quality elements, with complete, precise, and definitive findings. Any reliance on 'risk-based' or 'not significant' reasoning is legally insufficient.

11.2 The 10m³/s Baseline: A 1929 Engineering Decision

The fundamental circularity

The 10m³/s statutory minimum compensation flow to the Old River Shannon below Parteen was established as part of the arrangements for the Ardnacrusha hydroelectric scheme, constructed 1925–1929. It was not determined by any ecological flow assessment, any WFD quality-element analysis, or any assessment of the conservation requirements of the Lower River Shannon SAC.

The WSIAR acknowledges (RtS para 35) that 'the assessment does not assume that the historic origin of the 10m³/s statutory minimum compensation flow is determinative for WFD compliance' yet it then uses exactly this flow as the operative baseline for its entire 'no deterioration' finding. This is circular: demonstrating 'no deterioration relative to baseline' says nothing about whether the baseline itself is WFD-compliant.

An Taisce (statutory submission) confirms: 'A robust ecological assessment of the 15km old river Shannon channel would likely highlight the need for far higher flows than the standard 10m³/s to meet the requirements of both WFD and Habitats Directive.' The State itself has tendered a project (Ref 7328234) to develop environmental flow recommendations and hydrological modelling for the Shannon scheme exactly the information needed to assess this application and it does not yet exist.

There are no flow-gauging stations on the Old River Shannon between Parteen Basin and the tidal limit at Limerick. The WSIAR's 'no deterioration' conclusion for this stretch is based entirely on modelled, unvalidated data. This is a fundamental evidential deficiency.

11.3 Article 4(8): Shannon Basin Integrity

SJK (§2.4) identifies Article 4(8) WFD: measures implemented must not permanently exclude or compromise achievement of the Directive's objectives in other bodies of water within the same river basin district. The Shannon River Basin District is a single hydrological unit. Permanent inter-basin transfer has never been assessed at the scale of the full Shannon basin's Programme of Measures under the Water Action Plan 2024. The documentation does not demonstrate that the abstraction during critical flow periods will not compromise the Shannon basin's Programme of Measures.

11.4 Article 4(7): Why Was No Derogation Assessment Conducted?

The Applicant states no Article 4(7) derogation analysis was needed because no deterioration is predicted (RtS para 2865). As demonstrated throughout this submission, that no-deterioration conclusion is not established on the available evidence. If there is a credible scientific case which the River Shannon Environment Protection River Shannon Environmental Protection Alliance contends there is that the abstraction will alter the hydromorphological regime of the Old River Shannon and Parteen Basin, the absence of an Article 4(7) analysis is a legal gap. Article 4(7) requires demonstration that: (1) all practicable mitigation steps are taken; (2) reasons are set out in the RBMP; (3) overriding public interest outweighs WFD objectives; and (4) beneficial objectives cannot be achieved by significantly better environmental options. Requirement (4) essentially restates the alternatives assessment obligation at WFD level a project that has not conducted a genuine EIA alternatives assessment has equally not met Article 4(7)(d).

12. Piecemeal Consenting: Abstraction Licence Sequencing

The Proposed Project is a drinking water supply infrastructure project. Its entire operational purpose is to abstract 154–300 Mld from Parteen Basin. Without the abstraction licence, the pipeline and WTP have no function. Yet the SID application seeks consent for the infrastructure without: (a) Uisce Éireann's own EPA abstraction licence even having been lodged; and (b) the ESB abstraction/impoundment licence which is a legal precondition of Uisce Éireann's application having been lodged. The Applicant acknowledges (RtS para 106) it intends to submit its licence application 'as soon as the ESB application is made.'

The HSE's submission (RtS para 101) notes the EIA scoping for the ESB abstraction licence began only in January 2026 after this planning application was substantially finalised. Cumulative and in-combination effects of the two interdependent operations have never been assessed by a single competent authority with access to complete information for both.

The principle that development consent cannot be artificially fragmented to avoid full cumulative environmental assessment is established in CJEU jurisprudence (*Kraaijeveld*, C-72/95) and in the Irish courts (*An Taisce v An Bord Pleanála* [2017] IECA 67). The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits ACP should not grant planning permission for this application while the two critical, interdependent abstraction licences remain unapplied-for and unassessed. Any consent should at minimum be conditioned so that construction cannot commence until both licences have been granted following completed EIAR processes.

13. Leakage CRU Enforcement Action, Rising Rates, Misleading Reporting, and the Collapsed Demand Case

The single most consequential set of facts in this submission from the Applicant's own Regulator

1. Leakage nationally went UP in 2022, 2023 and 2024 as confirmed by CRU published documents.
2. The CRU fined Uisce Éireann €20 million for missing its own legally binding leakage reduction targets: 176 million litres per day (Mld) of reduction was required between 2020 and 2024; only 90 Mld was achieved a shortfall of 86 Mld, equivalent to 49% of the committed target.
3. Uisce Éireann has been replacing an average of less than 0.3% of the mains water system per year over the last five years not the 0.4% it has published. The pipeline replacement rate is materially below even the inadequate rate publicly stated.
4. The true national leakage rate in 2024, applying the correct definition recently adopted by the CRU, is 43% not the figures Uisce Éireann has been reporting publicly.
5. Uisce Éireann's claim that leakage in the Greater Dublin Area is down to 29% is unsubstantiated: the CRU does not currently collect leakage data for specific Water Resource Zones (confirmed by CRU Commissioner to Emma Kennedy (consultant and Member of River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance). There is no data to verify this figure.

Every one of these facts was available when Uisce Éireann prepared its application to An Coimisiún Pleanála, and when it prepared its Response to Submissions Report (May 2026). None of them appears in the RtS Report in a form that honestly represents their significance. The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that these facts, taken together, are not peripheral to this application they are fatal to its core justification.

13.1 The Legal and Factual Significance: Why Leakage Is Not a Side Issue

Throughout this application and the RtS Report, Uisce Éireann has treated leakage reduction as a background measure being pursued in parallel with the proposed pipeline, not as an alternative to it. The River Shannon Environment Protection River Shannon Environmental Protection Alliance, the MPAG, and multiple other objectors have repeatedly challenged this framing on legal grounds specifically under Article 4(7)(d) of the Water Framework Directive, which requires demonstration that the project's objectives cannot be achieved by 'significantly better environmental options that are technically feasible and not disproportionately costly.'

The CRU's own enforcement action and the data from its published reports now transform this from a legal argument into a documented factual record. The Regulator not the River Shannon Environment Protection River Shannon Environmental Protection Alliance, not a campaign group has found that:

- Uisce Éireann failed to achieve its own committed leakage reduction targets between 2020 and 2024
- The shortfall is 86 million litres per day nearly half of the committed reduction
- National leakage is rising, not falling, over 2022–2024
- The network renewal rate is below even the already-inadequate rate that has been publicly stated

These are not contested propositions. They are findings of the statutory regulator, confirmed in published CRU documents. ACP cannot determine this application without confronting what they mean for the project's justification.

A. The WFD Article 4(7)(d) Dimension

Article 4(7)(d) WFD requires that the project's objectives cannot be achieved by a 'significantly better environmental option that is technically feasible and not disproportionately costly.' The MPAG Review Note (January 2024, Appendix D of this submission) found independently that the leakage alternatives analysis in the Preliminary Business Case 'did not follow best practice.' That was in January 2024, before the CRU enforcement action.

The CRU enforcement findings which post-date the MPAG review make the Article 4(7)(d) case substantially stronger. We are no longer arguing that leakage reduction is a theoretically viable alternative that was inadequately assessed. We can now demonstrate that leakage reduction has been demonstrably mismanaged; that the targets set were not achieved; that the rates claimed have not been independently verified; and that the publicly stated figures have been challenged by the Regulator itself through a €20 million enforcement action.

An alternative that the Applicant has failed to adequately pursue is not an alternative that has been genuinely tested and found wanting. It is an alternative whose potential has been undermined by poor performance. The question for ACP is whether an additional €4.58–10.4bn pipeline is the appropriate response to that underperformance or whether genuine, properly resourced, independently verified leakage reduction should be demonstrated first.

B. The EIA Directive Dimension

The Applicant's demand projections, and the supply-demand deficit that is the entire foundation of the project need case, are built on the assumption that leakage will be reduced to 25% nationally by 2030. This assumption has now been demonstrated to be unreliable:

- Leakage is going up, not down
- The pipeline replacement rate is below what was publicly stated
- A €20 million regulatory fine has been imposed for missing the 2020–2024 targets. Note: A further CRU enforcement action in July 2026 resulted in an additional penalty, with CRU data showing a leakage-specific reduction of only 59 megalitres per day against a target of 177.5 megalitres per day. ACP should require Uisce Éireann to confirm the full details of all CRU enforcement actions relating to leakage reduction targets in the period 2020–2026

If the leakage reduction trajectory underpinning the demand model is wrong, the supply-demand balance underpinning the project's need case is wrong. An EIAR whose demand projections rest on leakage reduction targets that the Applicant's own Regulator has found were not met is an EIAR that cannot be relied upon as an accurate assessment of the project need.

14. Leakage Went UP in 2022, 2023 and 2024

CRU confirmed: national leakage is rising, not falling

CRU published documents confirm that national leakage increased in 2022, 2023 and 2024. This is the opposite of the trajectory that the Preliminary Business Case, the EIAR demand projections, and the RtS Report all assume. The RSEPA requests that ACP note this finding and require Uisce Éireann to address it specifically in any further information it provides.

The trajectory of leakage as confirmed by CRU data is as follows:

Year	Headline leakage % (UÉ published)	Correct leakage % applying CRU definition (2024 basis)	Direction of travel	Status
2018	46%		▼ Falling (claimed)	Baseline: WSP project first proposed
2022	37%		▲ Rising	CRU: leakage INCREASED
2023	36%		▲ Rising	CRU: leakage INCREASED
2024	36%	43%	▲ Rising	CRU enforcement action; fined €20m
2030 (planned)	25% (target)		? Unachievable on current trajectory	Target already missed 2020–2024

The River Shannon Environment Protection River Shannon Environmental Protection Alliance draws ACP's attention to the gap in the 2018–2022 column. Uisce Éireann has consistently presented the headline figure of leakage reducing from 46% in 2018 to approximately 36–37% in 2022. This was the figure presented throughout the planning application and repeated in the RtS Report as evidence of the national leakage reduction programme making progress. CRU published documents now establish that over the same period, actual leakage was rising and that the correct national leakage figure, applying the definition the CRU has recently adopted, was 43% in 2024.

The implications are significant:

- The supply-demand balance in the EIAR incorporated a leakage reduction from 46% to a trajectory towards 25% as a reduction in per-capita demand. If the correct figure for 2024 is 43% and rising the assumed demand reduction has not materialised.
- The MPAG Review Note (January 2024) found that Census 2022 data had not been incorporated into the demand analysis. We now know that neither had the correct leakage figures. The demand projections underpinning the project need case are doubly unreliable.
- The 25% target for 2030 built into the EIAR has been demonstrated to be unachievable on the current trajectory given that the 2020–2024 targets were missed by 49%.

B. The €20 Million Regulatory Fine: What It Means

Uisce Éireann fined €20 million by its own Regulator for missing leakage targets

The CRU imposed a €20 million fine on Uisce Éireann for failure to achieve its legally binding leakage reduction targets between 2020 and 2024. The target was to reduce leakage by 176 million litres per day (Mld). The actual reduction achieved was 90 a shortfall of 86 Mld, representing 49% of the committed target undelivered.

This is not an academic observation about performance metrics. It is a formal regulatory enforcement action by the Commission for Regulation of Utilities (CRU) the same body whose HR Wallingford review the Applicant has repeatedly cited in the RtS Report as 'independent' endorsement of the project's business case. The facts are:

Metric	Target 2020–2024	Actual 2020–2024	Shortfall	% of target missed
Leakage reduction (Mld/day)	176 Mld	90 Mld	86 Mld	49%
CRU regulatory consequence			€20 million fine imposed	

The scale of the regulatory enforcement action is itself significant. A €20 million fine from a regulatory body is not a technical compliance matter. It reflects a finding that Uisce Éireann's performance fell materially below its statutory obligations over a sustained four-year period.

C. What 86 Mld of Unachieved Reduction Represents

The 86 Mld of unachieved leakage reduction is not an abstraction. It is a concrete quantity that can be compared directly with the project's own parameters:

- The initial operational capacity of the proposed Shannon-Dublin Pipeline is 154 Mld
- The 86 Mld unachieved leakage reduction represents 56% of that initial operational capacity
- Had Uisce Éireann achieved its own 2020–2024 leakage reduction target, the supply-demand gap in the Greater Dublin Area would have been reduced by 86 Mld more than half the initial pipeline capacity without any new abstraction, any new treatment plant, any new pipeline, or any environmental impact on the Lower River Shannon SAC
- The remaining shortfall between achieved leakage reduction and the 25% 2030 target is now significantly larger than it was assumed to be when the EIAR was prepared

Put differently: the Irish State is being asked to spend up to €10.4bn building a 172km pipeline to the River Shannon because Uisce Éireann failed to reduce leakage by 86 Mld when it was legally required to do so. The regulatory response to that failure has been a €20 million fine. The planning response to that failure cannot be the approval of a pipeline that will pipe new water into the same leaking network.

The logical position stated plainly

If Uisce Éireann had achieved its own 2020–2024 leakage reduction targets, the supply-demand gap would be approximately 86 Mld smaller than it currently is. The pipeline is being proposed, in part, to fill a gap that should not exist. The appropriate regulatory and planning response to a €20m enforcement action for missing

leakage targets is to require those targets to be met before authorising a major new abstraction not to authorise the abstraction as a substitute for meeting them.

D. The CRU/HR Wallingford Endorsement in New Context

Throughout the RtS Report, the Applicant relies on the CRU's HR Wallingford External Assurance Review as evidence of independent endorsement of the project's business case. The River Shannon Environment Protection River Shannon Environmental Protection Alliance has addressed in the main submission (Appendix D, MPAG analysis) that the HR Wallingford review was a Public Spending Code compliance exercise concerned with cost estimation, scheduling, and governance not an environmental or ecological assessment.

There is now a further dimension: the CRU the same body that commissioned the HR Wallingford review subsequently imposed a €20 million enforcement fine on Uisce Éireann for missing its leakage reduction targets. These two CRU actions are in tension. The CRU cannot simultaneously be cited as endorsing the project's demand case (through the HR Wallingford review) while having found through its regulatory enforcement function that the leakage reduction programme whose performance underpins that demand case materially underperformed.

ACP should require the Applicant to specifically address how the CRU's enforcement action affects the demand projections in the EIAR, given that those projections assumed leakage reduction targets that the CRU has now found were missed by 49%.

15. Pipeline Replacement Rate: Below Even the Stated Figure

Uisce Éireann has published a figure of 0.4% of the mains water system being replaced per year. CRU data establishes that the actual average replacement rate over the last five years has been less than 0.3% per year.

This distinction matters for two reasons:

15.1 The Infrastructure Renewal Rate Has Direct Consequences for Leakage

Leakage from water mains is primarily a function of pipe age, pipe material, and ground conditions. The older and more deteriorated the pipe network, the higher the structural leakage rate. A mains replacement rate of less than 0.3% per year means the average mains pipe is not replaced for more than 333 years. At this renewal rate:

- The 2030 leakage reduction target of 25% cannot be achieved by infrastructure renewal alone it would require a simultaneous programme of active leak detection and repair at a scale that has not been resourced
- The structural leakage rate will continue to increase as the network ages further meaning the 'baseline' against which any future leakage reduction is measured is itself deteriorating
- Any supply added through the Shannon Pipeline will flow into a network that is ageing faster than it is being renewed

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that a pipeline replacement rate of less than 0.3% per year, combined with rising leakage rates and a missed 2020–2024 regulatory target, is inconsistent with any claim that the leakage alternative has been genuinely and adequately pursued as a demand-side measure.

15.2 The Published Figure Is Misleading

The gap between the published 0.4% figure and the actual less-than-0.3% figure is not a rounding issue. It represents a material overstatement of network renewal performance by Uisce Éireann. In the context of an application for a €4.58–10.4bn infrastructure project, where the adequacy of the leakage alternative has been repeatedly raised by the River Shannon Environment Protection River Shannon Environmental Protection Alliance, the MPAG, the CRU's own reviewers, and multiple other objectors, the publication of a materially higher renewal rate than has actually been achieved is a serious matter.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance does not characterise the discrepancy as deliberate misstatement. It may reflect different methodological definitions of what constitutes 'mains replacement.' However, the practical consequence is that decision-makers including the MPAG in January 2024, An Coimisiún Pleanála in these proceedings, and the public in the debate about this project have been working with infrastructure renewal data that overstates actual performance. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests that ACP require Uisce Éireann to provide the CRU's own data series on mains replacement rates and to reconcile it with the 0.4% figure published in the project documentation.

15.3 The Correct National Leakage Rate Is 43%, Not 36%

Uisce Éireann has reported national leakage at approximately 36–37% in its recent publications. The CRU has recently adopted a revised definition of leakage consistent with the definition used by water regulators across the EU and the UK under which the correct national leakage rate in 2024 is 43%.

15.4 Why the Definition Matters

Leakage in water supply networks can be measured and defined in several different ways:

- Real losses: water physically lost from the network through pipe bursts, joint failures, and reservoir leaks the narrowest definition
- Apparent losses: water that was delivered but not metered, billed, or recorded including theft, meter error, and unmetered supply
- Unbilled authorised consumption: water used by firefighting, street washing, and other public services that is not billed

A headline 'leakage' figure that uses only real losses and excludes apparent losses will be systematically lower than a figure using the full definition. The CRU's revised definition which the River Shannon Environment Protection River Shannon Environmental Protection Alliance understands to be consistent with EU and international best practice captures a broader measure of non-revenue water.

The difference between 36% and 43% is not a technicality. It is seven percentage points of national water production representing, at Ireland's total treated water output, hundreds of millions of litres per day of water that is being produced, treated, pumped, and paid for, but never beneficially used. The EIAR's leakage baseline of 36–37% understates the true scale of the problem by a margin that is material to the project need case.

15.5 The Supply-Demand Balance Is Materially Wrong

The supply-demand balance that forms the foundation of the project need case was calculated using the 36–37% leakage figure, not the 43% figure that reflects the correct definition. This means:

- The demand-side saving assumed from achieving the 2030 leakage target of 25% is calculated from a wrong baseline the actual saving from achieving 25% real losses would be larger than calculated, because the true starting point is 43%, not 36–37%
- Conversely, the trajectory to 25% is further from the true baseline than the EIAR assumes, making the 2030 target even harder to achieve than the EIAR's modelling already shows
- The EIAR's analysis of what level of leakage reduction would be required to eliminate or substantially reduce the supply-demand gap is based on incorrect starting data

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that ACP must require Uisce Éireann to recalculate the supply-demand balance using the CRU's correct 43% leakage baseline, and to restate the project need case on that basis. Until that recalculation is produced and independently verified, the demand case for this project rests on foundations that the Regulator's own data has undermined.

15.6 The Greater Dublin Area 29% Figure Is Unverified

No data exists to verify the claimed 29% GDA leakage figure confirmed by CRU Uisce Éireann has stated that leakage in the Greater Dublin Area is down to 29%. The CRU does not currently collect leakage data for specific Water Resource Zones, including the Greater Dublin Area. This was confirmed by CRU. There is therefore no independent data source against which the 29% GDA figure can be verified. It is Uisce Éireann's own figure, unaudited by the regulator, unverifiable by any external party, and unsupported by any data series that is available to ACP, to the public, or to this process.

The significance of this extends well beyond the GDA figure itself. The GDA is the primary demand zone that this pipeline is being built to serve. The supply-demand gap that justifies the project is calculated against the GDA's forecast demand and the GDA's existing and projected supply. If the leakage figure for the GDA the primary variable in that calculation cannot be independently verified because the CRU does not collect Water Resource Zone-level leakage data, then the central demand case for the project is built on unverifiable data.

This is not a peripheral point about data quality. It is a fundamental challenge to the transparency and verifiability of the project need case. Article 5(1) of the EIA Directive requires the EIAR to contain adequate information about the project and its impacts. A demand case built on a GDA leakage figure that neither the regulator nor the public can independently verify is not adequate information. It is an assertion.

15.7 What Independent Verification Would Require

For ACP to be able to assess whether the supply-demand gap in the GDA justifies a €4.58–10.4bn pipeline, it would need at minimum:

- A Water Resource Zone-level leakage dataset, collected and audited by the CRU or an independent verifier, using the correct CRU definition of leakage
- A specific supply-demand balance for the GDA/Eastern Water Resource Zone using that verified dataset
- A sensitivity analysis showing the supply-demand gap under different leakage reduction scenarios (25% by 2030 as planned; 20% by 2035; 15% by 2040 as a European-standard target)
- An independent audit of the GDA supply and demand data, not produced by or on behalf of Uisce Éireann

None of these currently exists. ACP is being asked to determine the largest water infrastructure investment in the history of the Irish State on the basis of a demand case whose primary variable cannot be independently verified.

15.8 The Pattern of Misleading Leakage Reporting

The River Shannon Environment Protection River Shannon Environmental Protection Alliance draws ACP's attention to the cumulative pattern that emerges from the CRU data:

- National leakage stated as 36%; correct figure under CRU definition is 43%
- Network renewal rate stated as 0.4%; actual rate established by CRU data as less than 0.3%
- Leakage trajectory stated as reducing; CRU confirms it rose in 2022, 2023 and 2024
- 2020–2024 leakage reduction target of 176 Mld stated as being pursued; CRU found only 90 Mld achieved; €20 million fine imposed

- GDA leakage stated as 29%; CRU confirms no data exists to verify this figure

Each individual discrepancy might be explained as a methodological difference or a data collection gap. The cumulative pattern in which every stated figure systematically presents a more favourable picture of leakage performance than the data supports is a concern that ACP should address directly.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance is not making an allegation of dishonesty. It is making an evidentiary observation: a project whose demand case rests on leakage data that has been found, in multiple respects and by the project's own regulator, to be materially inaccurate or unverifiable, is a project whose demand case ACP cannot accept at face value. The Regulator's enforcement action confirms this.

15.9 What the CRU Data Does to the Supply-Demand Balance

The combined effect of the correct leakage data 43% nationally (not 36–37%), rising (not falling), with the 2030 target of 25% now demonstrably unachievable on current trajectory on the supply-demand balance that underpins the project need case is profound. The River Shannon Environment Protection River Shannon Environmental Protection Alliance sets out the key implications in summary form:

Parameter	As assumed in EIAR	As established by CRU data	Impact on project need case
National leakage rate (2024)	36–37%	43%	Demand baseline understated. True demand gap is different from assumed.
Leakage trend 2022–2024	Falling (projected)	RISING	Supply-demand balance worsening faster than projected but NOT because of shortage. Because of uncontrolled loss.
2020–2024 target (176 Mld reduction)	On track (assumed)	Only 90 Mld achieved. Missed by 86 Mld (49%).	86 Mld of supply gap should not exist. It exists only because regulatory targets were missed.
2030 target: 25% national leakage	Achievable (projected)	Unachievable on current trajectory given missed 2020–2024 targets and rising trend.	Demand-side saving assumed in EIAR will not materialise. Gap will be larger than projected.
GDA leakage rate (29%)	Stated by UÉ	No independent verification exists. CRU does not collect WRZ-level leakage data. (CRU Commissioner Kennedy)	Primary demand zone leakage figure is unverifiable. Core demand calculation is based on unaudited data.
Mains replacement rate	0.4% per year (published by UÉ)	<0.3% per year (CRU data)	Network renewal rate is below stated figure. Structural leakage will continue to increase. Supply added by pipeline will flow into a deteriorating network.

The bottom line

If the CRU's own data is used instead of Uisce Éireann's published figures, the supply-demand deficit is: (a) larger, because the true leakage baseline is 43% not 36–37%; (b) more slowly closing, because leakage is rising not falling; (c) partly self-created, because 86 Mld of the deficit represents targets Uisce Éireann was legally required to meet and did not; and (d) built on an unverifiable GDA figure that the Regulator cannot independently confirm. The case for an immediate €4.58–10.4bn pipeline on these numbers has not been made.

15.10 Specific Requests to An Coimisiún Pleanála Arising from This Ground

The River Shannon Environment Protection River Shannon Environmental Protection Alliance makes the following specific requests arising from the CRU data, the enforcement action, and the leakage reporting concerns:

1. REQUIRE Uisce Éireann to provide, on the public file, the CRU's own published data series on national leakage rates for 2018–2024, applying the CRU's correct definition, and to reconcile this with the 36–37% figures published in the EIAR and RtS Report.
2. REQUIRE Uisce Éireann to provide a specific statement of the national leakage rate in 2024 applying the CRU's revised definition and to update the supply-demand balance in the EIAR using the correct 43% baseline.
3. REQUIRE Uisce Éireann to confirm the volume of leakage reduction achieved in each year from 2020 to 2024, the target for each year, the cumulative shortfall, and the regulatory consequence including formal acknowledgment of the CRU's €20 million enforcement action.
4. REQUIRE Uisce Éireann to provide the CRU's data on mains replacement rates for the last five years and to reconcile this with the 0.4% figure published in the project documentation.
5. REQUIRE Uisce Éireann to confirm whether any independent, CRU-audited leakage data exists for the Greater Dublin Area / Eastern Water Resource Zone, and if not, to acknowledge that the 29% GDA leakage figure relied upon in the supply-demand balance is an unverified internal estimate.
6. REQUIRE Uisce Éireann to produce a revised supply-demand balance that: (a) uses the 43% correct national leakage baseline; (b) reflects the actual 2020–2024 leakage trajectory (rising, not falling); (c) incorporates a revised leakage reduction trajectory consistent with the actual performance record; and (d) demonstrates the supply-demand gap that would remain if leakage reduction targets from 2025 to 2040 are met in full before any additional abstraction from any source is considered.
7. REQUIRE Uisce Éireann, in the context of the demand case for this project, to specifically address how the CRU's €20 million enforcement action for missing leakage targets affects the demand projections in the EIAR, given that those projections assumed compliance with the targets that were not achieved.
8. NOT GRANT consent for this application until the supply-demand balance has been independently verified using CRU-audited leakage data, and until it has been demonstrated with evidence, not assertion that the achievable demand-side saving from genuine, properly resourced, independently verified leakage reduction to EU-standard levels (15% real losses) has been quantified and compared against the environmental and financial cost of the proposed pipeline.

15.11 Leakage Elimination: A Mandatory Article 4(7)(d) Consideration

Article 4(7)(d) WFD requires that the objectives pursued cannot be achieved by 'significantly better environmental options that are technically feasible and not disproportionately costly.' SJK (§3.2–3.3) identifies that the project documentation does not present:

- A quantified leakage elimination strategy
- A cost-benefit comparison between large-scale abstraction and network renewal
- A business case addressing the cost of treating water (coagulation, flocculation, chemical dosing, UV disinfection, pumping energy, infrastructure maintenance, all OPEX) that is subsequently lost to leakage

- An assessment of the carbon emissions associated with treating and pumping water that is never delivered to end users

Sabrina Joyce Kemper makes the irrationality argument: 'It is prima facie irrational to abstract and treat additional raw water while continuing to permit a substantial proportion of treated water to leak into the subsurface environment.' Uisce Éireann's own figures show 46% treated water loss in 2018 when this project was first proposed, falling to 36% in 2022, with a planned reduction only to 25% by 2030. The independent Maublanc/Hydratec review (An Fóram Uisce, 2019) found that international benchmarks Malta (70% leakage reduction in 12 years), Portugal/Lisbon (70% in 8 years), Scotland (48% in 7 years) demonstrate far more aggressive leakage reduction is achievable than UÉ's targets assume. The RtS Report (Ch 27.6) dismisses the carbon cost comparison as 'not relevant to the SID planning application.' This dismissal is not WFD-compliant: Article 4(7)(d) specifically requires assessment of significantly better environmental alternatives, of which leakage reduction is the most directly relevant.

The Applicant's own dismissal of the carbon comparison (RtS para 3104–3105) is legally deficient

Section 15 of the Climate Action and Low Carbon Development (Amendment) Act 2021 requires ACP, when performing its functions, to have regard to Ireland's carbon budgets. The carbon cost of treating and pumping 36% of the project's yield into the ground is a material omission from EIAR Chapter 13. Referencing the NWRP SEA as the locus of the relevant climate assessment is not a substitute for project-level EIA the NWRP SEA was not conducted under EIAR conditions and did not quantify the carbon cost of the leakage scenario.

16. UKTAG Methodology: Unvalidated and Selectively Applied

Friends of the Irish Environment (RtS para 2983) state that the proposed abstraction exceeds UKTAG low-flow percentage benchmarks when measured against the Q95 value in the Applicant's own modelling data, and that 'compliance with UKTAG river standards has not been demonstrated' on the figures presented.

The Applicant (paras 2985–2992) simultaneously: (a) relies on UKTAG thresholds as confirmation the project passes the relevant hydrological tests ('The Proposed Project passed the UKTAG test' para 2992); and (b) dismisses UKTAG as non-statutory and non-determinative when an objector demonstrates the project may fail those same thresholds. This selective invocation is not intellectually coherent. The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits either UKTAG thresholds are relevant in which case the exceedance at Q95 is a finding ACP must address or they are not relevant, in which case the 'passed the UKTAG test' claim must be withdrawn.

The Applicant also concedes (para 2991) that UKTAG lake-level thresholds have not been 'empirically calibrated against Irish EPA biological class-boundary metrics.' If the thresholds are not calibrated against Irish ecological quality element boundaries, neither a pass nor a failure tells us anything reliable about WFD deterioration making the UKTAG analysis worthless as WFD evidence either way. ACP should require either (a) an Irish-specific calibration of UKTAG thresholds against Irish EPA biological class boundaries; or (b) a WFD compliance assessment based purely on CIS guidance and Irish EPA biological monitoring methodology without UKTAG reliance.

17. Climate Emergency: Ireland's Statutory Obligations

Section 15 of the Climate Action and Low Carbon Development (Amendment) Act 2021 requires public bodies, when performing their functions, to have regard to the national climate objective, climate action plans, and carbon budgets. In *Friends of the Irish Environment v An Bord Pleanála* [2021] IEHC 50, the High Court confirmed planning bodies must meaningfully engage with climate obligations, not merely note them.

Three climate-specific grounds:

17.1 Project Emissions and Cumulative Sectoral Budget

The Applicant states annualised GHG emissions of 11,628 tCO₂eq equivalent to 0.04% of Ireland's 2030 Non-ETS target (para 2109). The 0.04% framing is technically accurate for a single project but misses the cumulative question: does the State have headroom in its sectoral ceilings for this and all other major infrastructure projects competing for the same shrinking carbon budget? The RtS Report does not attempt to answer this. Section 15 of the Climate Action Act requires meaningful engagement with this dimension.

17.2 Drought Modelling: Historical Basis and Compound Events

"The hydrological modelling presented in Appendix A9.1 Abstraction Assessment relies on a 52-year simulation period (1972–2023) and identifies perceptible abstraction effects only during 1995 and 2018 drought analogues. However, the modelling does not demonstrate performance under reconstructed historical droughts, compounded multi-season hydrological drought, or prolonged climate-adjusted scenarios." River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance, quoted at RtS Report para 1441

The Applicant's RCP8.5 Upper 75th percentile adjustment applied to the historical model is a genuine attempt at forward projection, but it is an adjustment to historical observations not first-principles climate modelling. This approach underestimates the tails of the distribution: compound, consecutive-year droughts that are most ecologically damaging and are projected by ICARUS (Maynooth University) and Met Éireann to increase in frequency and severity in the Irish Midlands.

17.3 Real-World Evidence on Drought Risk — Cape Town and the Loire

The River Shannon Environment Protection River Shannon Environmental Protection Alliance argues extensively that the Uisce Éireann's hydrological modelling does not adequately capture compound drought risk, and that the EU Water Resilience Strategy argues against single-source critical infrastructure. The River Shannon Environment Protection River Shannon Environmental Protection Alliance provides two concrete, documented real-world examples that should be before ACP. These are not hypothetical scenarios they are recent events from comparable modern water systems.

Cape Town: 'Day Zero' How a Modern City with Multiple Reservoirs Nearly Ran Dry

Cape Town, South Africa, 2015–2018

Cape Town has several large storage reservoirs and a sophisticated water management system. Between 2015 and 2018, a record three-year drought caused combined reservoir storage to fall to 13% of total capacity a level at which water pressure could not be maintained in the distribution network. The city faced 'Day Zero' the point at which municipal water supply would be shut off and residents required to collect rations from central distribution points. Only aggressive emergency rationing (50 litres per person per day, reduced from 87) averted the shut-off. Recovery took years after rainfall returned.

The lessons for this application are specific and direct:

- Cape Town had multiple reservoirs not a single pipeline from a single distant river. Yet a three-year drought still brought the city to the edge of 'Day Zero.' The proposed Shannon-Dublin Pipeline is a single source from a single river. If an event comparable to Cape Town's 2015–2018 drought struck the Shannon catchment, there would be no fallback.
- The 2018 drought on the Shannon during which ESB data shows Ardnacrusha took zero water for 74 consecutive days is not an outlier. It is a recent, documented analogue for the type of event that brought Cape Town to near-crisis even with multiple reservoirs.
- Climate change projections including ICARUS data on the Shannon Midlands indicate that compound multi-year droughts of the Cape Town type are becoming more probable in Ireland's climate trajectory. The project's hydrological modelling uses a 52-year historical dataset (1972–2023) that contains only two significant drought events (1995 and 2018) and does not model consecutive multi-year drought sequences.
- Cape Town's survival depended on demand restriction to 50 litres per person per day. At the proposed 300 Mld peak abstraction from the Shannon, the supply to the Greater Dublin Area will include large non-domestic users (data centres, industry) whose demand is not obviously compressible in the way domestic demand is. The demand-side flexibility assumptions embedded in the project's drought-scenario analysis have not been tested against a real multi-year drought scenario.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that ACP should require the Applicant to model explicitly the scenario of a Cape Town-type three-year compound drought in the Shannon catchment specifically: at what point in such a drought would the Shannon Pipeline cease to be able to supply the GDA, and what is the proposed contingency supply? The EIAR does not answer this question.

17.4 River-Dependent Infrastructure in a Climate Emergency — France (July 2026)

The River Shannon Environment Protection River Shannon Environmental Protection Alliance notes that in July 2026 flows in several major rivers in France have dwindled with corresponding rise in temperature, forcing the partial or complete shutdown of several nuclear power stations due to lack of cooling water. This is a real-time, contemporaneous example occurring within weeks of this submission being written of river-dependent infrastructure being rendered inoperable by low river flows.

The relevance to this application is straightforward:

- The River Shannon's flow is directly affected by drought in exactly the same way as the Loire. The Shannon at Parteen Basin during the 2018 drought provided zero operational flow for Ardnacrusha for 74 consecutive days.
- The French example demonstrates that even in modern, well-managed European river systems, extreme low-flow events can render river-dependent infrastructure non-operational. France's nuclear programme which is rather more consequential in energy security terms than Dublin's water supply was unable to operate during a summer drought.
- The proposed pipeline is a river-dependent infrastructure system. Its peak demand on hot summer days when Dublin's water consumption is highest will coincide precisely with the Shannon's lowest available flow: summer drought conditions. This is the opposite of a resilient design.

These two real-world examples Cape Town and the rivers in France demonstrate that the risk scenarios the River Shannon Environment Protection River Shannon Environmental Protection Alliance, SJK, and other objectors have identified are not theoretical. They are the type of events that occur in modern, well-managed water and infrastructure systems under climate stress. They should be before ACP as admissible real-world evidence when it assesses the project's resilience case.

18 A Smaller, Trigger-Conditioned Lough Ree Abstraction as Part of a Multi-Source Matrix

The Consolidated Formal Submission develops the Lough Ree / Lough Derg inconsistency at length the argument that Uisce Éireann applied an environmental objection to five Lough Derg abstraction points that applies with equal force to Parteen Basin, because they are the same connected lake. River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission adds two further points on Lough Ree that are not in the existing material.

18.1 A Smaller Lough Ree Abstraction, Combined with Other Sources

Uisce Éireann rejected abstraction from Lough Ree on two grounds (RtS para 372): first, that 'ESB minimum normal operation levels for the Shannon at Lough Ree were not maintained during the 1995 drought without an abstraction'; and second, that such abstraction 'would likely have a negative environmental impact.' Both grounds were applied to the full-scale abstraction envisaged at strategic plan level 300+ Mld at full operation.

River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance identifies a point that Uisce Éireann's screening did not consider: a smaller, environmentally tolerable abstraction from Lough Ree, as one component of a multi-source resilient supply matrix, rather than as a standalone full replacement for the Shannon-Dublin Pipeline.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that this is a genuinely different option from the one Uisce Éireann assessed and rejected. The two grounds for rejection ESB minimum levels during drought and negative environmental impact may both be manageable at a smaller abstraction scale, combined with:

- Trigger mechanisms that suspend Lough Ree abstraction below defined flow thresholds (analogous to the ESB minimum level already applicable at Parteen), thus addressing the drought resilience concern
- Seasonal abstraction restricted to periods of high flow, with storage at Poulaphouca compensating for periods when Lough Ree flow is insufficient
- Environmental conditions requiring abstraction to cease if ecological indicators cross defined thresholds a condition-based, adaptive approach rather than a fixed-rate abstraction

A multi-source matrix that includes a modest, trigger-conditioned Lough Ree component, combined with Poulaphouca optimisation, Kildare groundwater, and demand management, has never been assessed at project EIA level. Uisce Éireann's rejection of Lough Ree as a full-scale single alternative does not constitute assessment of Lough Ree as a component of a diversified portfolio approach. These are different options and the EIA Directive requires the former not to preclude assessment of the latter.

18.2 The Cost-Benefit of a 50km Shorter Pipeline — A Question Never Asked

River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance asks a question that does not appear anywhere in the 585-page RtS Report: 'Was the cost-benefit of reducing the pipeline length by 50km considered?'

Lough Ree is approximately 55km north of Lough Derg/Parteen Basin. The proposed pipeline from Parteen Basin to Dublin is 172km. A pipeline originating at Lough Ree would be approximately 122km a saving of roughly 50km of pipeline, which at current infrastructure cost rates represents a saving of hundreds of

millions of euros in capital expenditure alone, before accounting for pumping energy, operational costs, and maintenance over a 60-year life.

This is not a trivial consideration to have been left unasked. At the MPAG-confirmed upper cost range of €10.4bn for the Parteen–Dublin option, the cost-per-kilometre of the pipeline infrastructure is substantial. A systematic cost-benefit analysis comparing the Parteen option against a Lough Ree option even one recognising the latter's lower dry-weather yield would provide a quantified basis for the trade-off between cost and drought-condition security. No such analysis has ever been published.

ACP should require Uisce Éireann to confirm whether the cost-benefit of a Lough Ree abstraction with a 122km pipeline, as a partial alternative or supplementary source to the Parteen abstraction, was ever quantified. If it was not, that is a gap in the alternatives assessment. If it was, it should be on the public file.

19. Ardnacrusha

The River Shannon Environment Protection River Shannon Environmental Protection Alliance identifies three connected operational points about the operational reality of Lough Derg/Parteen Basin that are not fully developed in the Consolidated Formal Submission.

19.1 Ardnacrusha

At RtS Report Section 2643, Uisce Éireann states that in extreme droughts, ESB would cease generation at Ardnacrusha as they already do 'on average 20 days per year already.'

This is the Applicant's own data, in its own document, and it is devastating to the project's drought-resilience case. Ardnacrusha's turbines already shut down for an average of approximately 20 days per year under current conditions with no additional abstraction. This means the 74-day 2018 shutdown was an extreme version of a phenomenon that happens every single year.

- During those 20 days per year (approximately 5.5% of the year) when Ardnacrusha already idles, the only water available at Parteen is the statutory 10m³/s compensation flow plus any natural inflow.
- Adding a 3.47 m³/s pipeline abstraction to those days means that during the routine annual shut-down periods not just extreme drought years the pipeline would need to draw from Lough Derg storage.
- Over the operational life of the project, if Ardnacrusha idles for 20 days per year, the pipeline will be drawing from lake storage for approximately 20 days per year, every year not just in exceptional drought years.
- The cumulative drawdown effect on Lough Derg lake levels over a 60-year operational life, from routine annual 20-day idling periods plus occasional drought years, has not been assessed in the EIAR.

The 20 days per year figure transforms the drought scenario from an exceptional risk to a routine operational challenge. The EIAR presents the 2018 drought as a worst-case scenario affecting 74 days. The correct framing, on Uisce Éireann's own admission, is that conditions requiring lake-storage drawdown will occur every year and that conditions requiring it for weeks at a time will occur regularly, not once per generation.

19.2 Emergency Derogation from the Normal Operating Band — The Mechanism Gap

The River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission — why this must be addressed by ACP

The River Shannon Environment Protection River Shannon Environmental Protection Alliance makes a specific prediction: 'In a drought crisis, emergency/exceptional permissions will be granted to maintain supply to homes and data centres, and UÉ will continue to draw water down below the current ESB Lower Operating Band while the drought persists. But Lough Derg is a protected waterbody. The interference with habitats, especially along the shorelines, is forbidden.'

This prediction goes to the heart of the Habitats Directive compliance case. The Applicant's entire Article 6(3) Appropriate Assessment rests on the proposition that Lough Derg/Parteen lake levels will be maintained within the Normal Operating Band during the operation of the pipeline. River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission identifies the operational reality that the Applicant has not addressed:

- During a prolonged drought when Ardnacrusha has already been idle for weeks, when Lough Derg is already at the lower end of its Normal Operating Band, and when Dublin is short of water the political and operational pressure to continue abstracting water from the pipeline, even if this requires drawing lake levels below the Normal Operating Band, will be overwhelming.
- There is no legally binding mechanism in the planning application or the EIAR that would prevent emergency derogations from the Normal Operating Band in such circumstances. 'Emergency permissions' under section 181A of the Planning and Development Act 2000 exist precisely to allow infrastructure to operate outside normal consent conditions in a declared emergency.
- If emergency permissions are granted to draw Lough Derg below the Normal Operating Band as River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance predicts will happen this will breach the habitat thresholds that form the entire basis of the Article 6(3) 'no adverse effect on integrity' conclusion. The NIS's integrity conclusion is therefore conditional on a promise of operational restraint that cannot be legally guaranteed.
- The Applicant has never addressed what would happen to the Lower River Shannon SAC habitats and qualifying species if the Normal Operating Band were breached during a sustained drought. The NIS models compliance with the Band as a given. It does not model the ecological consequences of Band breach, because it asserts Band breach will not occur. But it cannot guarantee this.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that this is precisely the kind of 'reasonable scientific doubt' that, under Waddenzee (C-127/02) and Sweetman (C-258/11), defeats the Article 6(3) conclusion. If there is a credible, foreseeable scenario and the River Shannon Environment Protection River Shannon Environmental Protection Alliance has identified one with specificity in which the ecological protections relied upon in the NIS will be breached, the precautionary principle requires refusal under Article 6(3), not consent with a crossed-fingers assurance that it will not happen.

19.4 Lough Derg Is a Protected SAC and SPA — It Cannot Be Operated as a Demand-Management Reservoir

River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission identifies a framing issue that goes to the constitutional validity of the project's operational concept: 'The pipeline project intends to treat Lough Derg as a reservoir.'

This is factually accurate and legally significant. The operational logic of the project during drought conditions drawing on Lough Derg Lake storage when flow is insufficient to meet the pipeline abstraction alongside the statutory compensation flow treats the lough as a storage reservoir whose level can be managed up and down to meet downstream demand. But Lough Derg is not a reservoir in the legal sense. It is:

- A designated Special Area of Conservation (Lower River Shannon SAC, site code 002165) under the Habitats Directive (92/43/EEC).
- Part of the Lough Derg (Shannon) SPA and the Shannon Callows SPA, designated under the Birds Directive, supporting qualifying bird species including Common Tern, Whooper Swan and Greenland White-fronted Goose, whose habitats and conservation objectives are influenced by the hydrological regime.

- A Heavily Modified Water Body (Lough Derg HMWB) under the WFD, subject to Good Ecological Potential requirements.
- A waterbody in respect of which Ireland is obligated under the WFD to implement a Programme of Measures that includes environmental flow requirements.

Operating Lough Derg as a demand-management reservoir drawing it down during drought to maintain pipeline supply is incompatible with all of these designations. The interference with habitats along the 179km of Lough Derg shoreline (including islands) that would result from drawing lake levels below the Normal Operating Band is, as River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance states, 'forbidden' under the Habitats Directive. Unless Uisce Éireann can demonstrate not assert how this scenario can be prevented from occurring during a prolonged drought, the pipeline project cannot be permitted to proceed.

This submission is made in mid July 2026. Ireland is currently experiencing an extreme hydrological drought. Met Éireann's Drought Monitor for July 2026 classifies the Shannon Midlands and surrounding regions as experiencing Severe drought conditions (SPEI classification). OPW river gauge #25017 data for the Shannon at Banagher shows level already in the lower 5% band of the annual average flow. As hydrological droughts lag daily weather observations, it remains to be seen how serious this drought becomes, and to what degree and duration low flows into Lough Derg will occur. Ardnacrusha hydroelectric station is already generating with one turbine, only for very short periods, and does so to regulate the water level in Parteen Basin within the normal operating band, to preserve the integrity of the man made walls of the Parteen Basin and Headrace canal.

The specific request to ACP arising from this ground

ACP should require Uisce Éireann to provide a specific, legally binding operational protocol not an EIAR assurance that defines: (a) the precise trigger conditions under which Lough Derg lake level would fall below the Normal Operating Band as a result of the pipeline abstraction during drought; (b) the specific mechanism that would prevent pipeline abstraction from continuing in those circumstances; and (c) the legal instrument (planning condition, licence condition, or statutory agreement) that would make that operational protocol enforceable without the possibility of emergency derogation. If no such mechanism can be identified, the Article 6(3) integrity conclusion falls.

20. The Copenhagen / HOFOR Benchmark

The River Shannon Environment Protection River Shannon Environmental Protection Alliance identifies a specific international benchmark that does not appear anywhere in the 585-page RtS Report and has not been addressed in the existing consolidated submission: the example of Copenhagen's water supply system operated by HOFOR (Hovedstadens Forsyningselskab).

20.1 The Copenhagen Benchmark

Copenhagen is a European capital city with a population and surface area comparable to Dublin. Its climate and rainfall are similar temperate maritime. It presents an instructive contrast to the proposed Shannon-Dublin Pipeline:

Parameter	Copenhagen (HOFOR)	Dublin / Greater Dublin Area
Population served	1 million+ consumers	2 million (GDA)
City area / climate	Like Dublin; temperate maritime	Temperate maritime
Primary water source	100% groundwater from borehole matrix	River Liffey / currently proposed: River Shannon
Number of sources	Distributed matrix of boreholes across region	Single river (currently); single pipeline (proposed)
Treatment required	No chlorination required naturally clean	Full treatment required: coagulation, flocculation, UV, chlorination
THM formation risk	Minimal groundwater has very low NOM	High Shannon has high NOM from peatland catchments
Network leakage	6% (current)	43% (correct CRU definition, 2024)
Resilience	High failure of any single borehole does not affect supply	Low single pipeline failure halts supply to GDA
Ecological impact	Minimal no river abstraction, no SAC disturbance	Significant abstraction from Lower River Shannon SAC
Capital cost of supply model	Distributed investment; no mega-project required	€10.4bn pipeline proposed

The HOFOR model is not theoretical or experimental. It is a fully operational system that has served over one million consumers in the Copenhagen metropolitan area for decades, meeting EU Drinking Water Directive standards, with a network leakage rate of 6% compared to Ireland's correct national rate of 43% (CRU definition, 2024).

The River Shannon Environment Protection River Shannon Environmental Protection Alliance does not contend that Copenhagen's model can be transplanted to Dublin without modification the geology, the existing infrastructure, and the scale differ. The purpose of the comparison is different and more precise:

- It demonstrates that a capital city of comparable size and climate can be served entirely from distributed groundwater without a single large-scale river abstraction, without long-distance pipeline transfer, and without the ecological disruption associated with abstracting from a protected SAC
- It demonstrates that a 6% leakage rate is achievable in a modern, comparable urban water system not as an aspirational future target, but as a current operational reality. Ireland's 43% national rate is not

inevitable: it is a consequence of underinvestment in network renewal that has persisted while €10.4bn pipeline options have been promoted

- It demonstrates that true resilience multiple sources, no single point of failure is achievable without a single mega-project

20.2 Kildare Groundwater — A Feasible Alternative Never Project-Level Assessed

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that 'a matrix of multiple boreholes across the aquifers of Kildare' as part of a resilient multi-source supply alternative. The Kildare limestone aquifer system including the south Kildare Karst and the major unconfined limestone aquifer belt is one of the most significant groundwater resources in Ireland. Its potential for sustainable water supply to the Greater Dublin Area has not been fully quantified or presented in the EIAR alternatives assessment.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that ACP should require Uisce Éireann to provide a specific assessment of the sustainable yield of the Kildare groundwater system under current and projected climate conditions, the capital cost of developing a distributed borehole network serving the GDA, and the environmental impact of such development compared to the proposed Shannon abstraction. This is not a peripheral option it is one of the 594 'feasible alternatives' that was never assessed at project EIA level.

20.3 7.3 The Multi-Point Modular Supply System — The Correct Legal Framework

The River Shannon Environment Protection River Shannon Environmental Protection Alliance concludes this section with a call for 'a multi-point modular system with inbuilt flexibility to adapt to changes, and allowing for evolution as demand shifts in unexpected directions.' The River Shannon Environment Protection River Shannon Environmental Protection Alliance formally adopts this framing as its own.

The correct question for this planning application is not simply 'is there a supply gap and can the Shannon pipeline fill it?' The correct question under the EIA Directive, the WFD, and the Habitats Directive is: 'what is the least environmentally damaging, most resilient, most cost-effective combination of measures that can sustainably meet the projected demand?' That question has never been asked at project EIA level. Only the Shannon pipeline option has been developed to the level of a planning application. No alternative or combination of alternatives has been subjected to equivalent assessment.

A multi-point modular approach Poulaphouca optimisation, Kildare groundwater matrix, incremental eastern river development, aggressive leakage reduction, and demand management is a legitimate and, the River Shannon Environment Protection River Shannon Environmental Protection Alliance contends, potentially superior environmental option under Article 4(7)(d) WFD. Its dismissal at strategic plan level without project-level EIA assessment, combined with the MPAG's finding that the leakage alternatives analysis was deficient, means that the central legal question of this application has never been properly answered.

21. Ecological Irreversibility — The 1% Failure Rate and the Waddenzee Standard

The River Shannon Environment Protection River Shannon Environmental Protection Alliance identifies a principle of ecological science and law that has not been stated in this form in the Consolidated Formal Submission, and that deserves to be before ACP in terms that are direct and clear.

"Environmental ecological impact is frequently irreversible and usually has long lasting consequences. Sustaining habitats and protected SACs is not something that tolerates a 1% failure rate. Even though the occurrences may be rare and brief, like a forest fire, they cannot be factored in to any modelling as 'acceptable'. This is why we have the Habitats Directive, and Protected status assigned to these waterbodies, to speak for the billions of dependent creatures that do not have a voice." Christopher Campion, submission of 14 July 2026

This statement is not merely rhetorical. It articulates, in plain language, the legal standard that the CJEU has applied in Habitats Directive cases since Waddenzee (C-127/02): the standard of 'no reasonable scientific doubt.' The precautionary principle in environmental law Article 191(2) TFEU exists precisely because ecological harm, unlike economic harm, is frequently irreversible. You cannot un-extinguish a species population. You cannot un-damage a spawning bed. You cannot restore a shoreline habitat that has been exposed, dried, and ecologically disrupted during a multi-week drought drawdown of a lake level.

21.1 Why the EIAR's Concession Is Legally Fatal

Uisce Éireann's modelling concedes (RtS para 2626) that there would be 'measurable effects during extreme drought periods such as those in 1995 and 2018.' The EIAR presents these as rare events affecting perhaps 1–2% of the years in the modelling period and in effect asks ACP to accept that the ecological consequences of 1–2% of years are an acceptable price for water supply security in the other 98–99% of years.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance's forest fire analogy precisely captures why this framing is legally impermissible. A forest fire may be a 1% event occurring rarely and briefly. But the ecological damage is not proportionate to its frequency. Old-growth woodland destroyed in a single fire may take centuries to recover, if it recovers at all. The same logic applies to:

- Atlantic salmon spawning beds exposed and dewatered during a sustained lake level drawdown in drought conditions salmon eggs exposed to air die. The spawning event for that year is lost. At the 5% of conservation limits level already documented by Tipperary County Council, there is no margin for even one failed spawning year, let alone repeated failures during periodic drought years.
- Common tern nesting habitat on Lough Derg the population has already collapsed on the lake (National Parks and Wildlife Service (NPWS), Conservation Objectives: Lough Derg (Shannon) SPA 004058, Version 1, Department of Housing, Local Government and Heritage, 2024.). A further disturbance during a drought-induced water level drawdown event, however brief, cannot be modelled as 'acceptable' for a species whose breeding population that has already collapsed on the lake.
- Alluvial forest and wetland habitat along the 179km of Lough Derg shoreline exposure of shoreline habitat during drawdown, even for weeks, affects littoral plant communities, invertebrate populations, and the species that depend on them. These effects are not reversible when water levels return to normal.
- Freshwater pearl mussel one of the longest-lived invertebrates in Ireland, protected under the Habitats Directive, critically endangered in the Shannon catchment is especially sensitive to low-flow,

low-oxygen conditions during summer drought. A brief but severe drought-drawdown event could damage or eliminate populations that take decades to establish.

21.2 The Waddenzee Standard Applied

The River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission states that 'sustaining habitats and protected SACs is not something that tolerates a 1% failure rate' is the plain-English version of the CJEU standard in Waddenzee:

"The competent national authorities are to authorise the activity only if they have made certain that it will not adversely affect the integrity of that site. That is so when there is no reasonable scientific doubt as to the absence of such effects." CJEU, Case C-127/02, Waddenzee, 2004

'No reasonable scientific doubt' is incompatible with a 1% or 2% probability of ecological harm. The moment the EIAR concedes that there will be 'measurable effects during extreme drought periods' even rare ones it has conceded the existence of reasonable scientific doubt. That is the end of the Article 6(3) assessment. It cannot be rescued by classifying the probability as low or the event as rare. Under the Habitats Directive, a small probability of irreversible harm is treated as a certainty of harm for the purposes of the precautionary principle.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that this principle articulated by the River Shannon Environment Protection River Shannon Environmental Protection Alliance through the forest fire analogy and grounded in CJEU jurisprudence in Waddenzee and Sweetman is the single clearest statement of why the NIS's Article 6(3) conclusion cannot stand. The integrity of the Lower River Shannon SAC during drought years is not something that can be modelled, averaged, and accepted at a 1–2% failure rate. It requires certainty, not probability. The EIAR concedes the probability of harm. It cannot establish the certainty of its absence.

The request to ACP arising from this ground

ACP should specifically require the NIS to address, for each qualifying interest and conservation objectives of the Lower River Shannon SAC, the Lough Derg SPA and the other affected European sites, the ecological consequences of the specific drought scenarios (1995 and 2018 analogues) in which the Applicant concedes there will be measurable effects. The question is not whether these effects will occur the Applicant concedes they will. The question is whether they constitute adverse effects on integrity of the site in those years, and what the cumulative consequence of periodic adverse years is for the long-term conservation status of each qualifying interest. Until that analysis is before ACP, the Article 6(3) conclusion cannot be established to the Waddenzee standard.

21.3 Additional Requests to An Coimisiún Pleanála

1. Require Uisce Éireann to model a Cape Town-type three-year consecutive drought scenario for the Shannon catchment, and to demonstrate at what point in such a drought the pipeline would cease to be able to supply the GDA and what the contingency supply would be.
2. Require Uisce Éireann to provide the full list of the 594 'feasible alternatives' from the NWRP screening, and to explain with reference to 2026 data why each has been excluded from the project-level EIA alternatives assessment.
3. Require Uisce Éireann to confirm whether a smaller, trigger-conditioned Lough Ree abstraction as one component of a multi-source supply matrix was assessed at project EIA level, and if not, to provide that assessment.
4. Require Uisce Éireann to quantify the capital cost saving from a Lough Ree origin pipeline (approximately 122km) versus the Parteen origin pipeline (172km), and to present this as part of a transparent cost-benefit comparison of alternatives.
5. Require Uisce Éireann to specifically address RtS para 2643 (Ardnacrusha already idles 20 days per year on average) and to model the cumulative drawdown effect on Lough Derg lake levels over the 60-year operational life arising from routine annual idle periods combined with periodic drought years.
6. Require Uisce Éireann to identify the specific, legally binding mechanism planning condition, licence condition, or statutory agreement that would prevent emergency derogation from the Normal Operating Band in a prolonged drought, and to confirm that such a mechanism exists and is proposed as a condition of any consent.
7. Require Uisce Éireann to address specifically whether treating Lough Derg as a drought-buffer reservoir drawing its levels down to maintain pipeline supply is compatible with the SAC designation, the SPA designation, and the WFD HMWB Good Ecological Potential obligations applicable to the water body.
8. Require Uisce Éireann to provide a sustainable yield assessment for the Kildare groundwater system as a component of a multi-source GDA supply alternative, and to compare its capital and environmental cost with the Shannon Pipeline.
9. Require Uisce Éireann to respond specifically to the 1% failure rate / forest fire principle: for each qualifying interest of the Lower River Shannon SAC, what are the ecological consequences of the 1995 and 2018 drought analogues conceded by the Applicant to produce measurable effects for the conservation status of that qualifying interest? How many such years can occur during the 60-year operational life without constituting an adverse effect on site integrity?

21.4 10.3 The Compensation Flow as a Climate-Stranded Asset

The entire WFD and Habitats Directive compliance case rests on the permanence of the 10m³/s compensation flow. The Applicant acknowledges (paras 43, 2859) this regime 'may be revised in future via the RBMP process.' This admission confirms the current 10m³/s figure is not treated as a permanently valid ecological reference only as the current regulatory position. In a climate emergency with increasing drought frequency, there is a realistic prospect the RBMP will require an increased compensation flow. If that happens, the fixed Parteen infrastructure may physically constrain delivery of an increased compensation flow during drought. This long-term, cumulative risk has not been assessed.

21.5 10.4 The Ardnacrusha 1.2% Renewable Energy Concession

At RtS para 2130, the Applicant summarises the River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission that 'removal of Ardnacrusha would reduce the renewable share by only 1.2 percentage points.' The RtS Report does not contest this figure anywhere in Chapter 16. The River Shannon Environment Protection River Shannon Environmental Protection Alliance submits it should be treated as conceded. A 1.2 percentage point reduction in renewable generation cannot constitute the 'overriding public interest' required to override Habitats Directive obligations for a system in ecological collapse.

22. Further grounds Advanced by Sabrina Joyce-Kemper

Sabrina Joyce-Kemper, Planning and Environmental Consultant holding an Advanced Diploma in Planning and Environmental Law from the Honourable Society of King's Inns, has made a non-statutory consultation submission (March 2025). The River Shannon Environment Protection River Shannon Environmental Protection Alliance endorses and adopts her issues and findings in our own submission some of these are as follows:

22.1 WFD Article 4(8): Inter-Basin Transfer and Basin Integrity

Article 4(8) requires that measures implemented do not permanently exclude or compromise achievement of the Directive's objectives in other bodies of water within the same river basin district. The Shannon River Basin District is a single hydrological unit. Permanent abstraction from its headwaters to the Eastern River Basin District has never been assessed at the scale of the Shannon basin's full Programme of Measures under the Water Action Plan 2024.

22.2 Environmental and Subsurface Impacts of Leakage in Dublin

SJK (§4) identifies a EIAR gap: the geotechnical and hydrological impacts of chronic subsurface leakage in Dublin's water network. These include sinkhole formation and ground subsidence; weakening of building foundations; increased sewer and infrastructure failure; groundwater contamination; and soil chemistry alteration from residual disinfectants. Under Article 191(2) TFEU, the precautionary principle and preventive action principle apply. Continuing systemic leakage while expanding abstraction conflicts with both. The RtS Report (Ch 27.2) dismisses this as 'not relevant to the SID planning application.' This dismissal is inadequate: the geotechnical costs of continued leakage are directly relevant to the Article 4(7)(d) alternatives assessment; and Article 3(1) of the EIA Directive requires assessment of indirect effects, which include increasing the volume of treated water entering the Dublin subsurface via leakage when 300 Mld of new supply is added to a network losing 36%.

22.3 People Over Wind: ESB Operational Management as Inadmissible Mitigation

The NIS repeatedly relies on ESB operational management of Lough Derg within a 'Normal Operating Band' to exclude adverse effects. Where the avoidance of adverse effect depends on ongoing operational adjustments, those measures constitute mitigation. Under People Over Wind (C-323/17), mitigation at AA stage may only be relied upon where it is precisely defined, scientifically certain, fully secured, and demonstrably capable of eliminating adverse effects beyond reasonable scientific doubt. The NIS does not demonstrate that maintenance within the Normal Operating Band ensures conservation objectives will be achieved under all hydrological scenarios.

22.4 Zone of Influence Artificially Constrained

The NIS defines the abstraction Zone of Influence between Meelick Weir and Limerick Dock based on hydraulic control points. This excludes altered flow variability across the wider catchment; modified seasonal drawdown patterns affecting floodplain ecology; reduced natural flood pulses; cumulative interaction with climate-induced low-flow periods; and changes in assimilative capacity of waterbodies due to pollution inputs during extreme weather events. SJK specifically asks: how many wastewater treatment plants and industrial discharge licences exist within the hydrologically linked catchment, and have worst-case-scenario

discharge loads been fed into the EIAR and NIS models for both? Both EIA and AA require worst-case, not average, scenario assessment.

22.5 11.5 Article 4(7)(d) The Five-Part Test Not Met

CIS Guidance No. 20 and No. 36 require, if deterioration cannot be excluded, a five-part sequential Article 4(7) analysis: (i) identification of specific quality elements at risk; (ii) demonstration that all practicable mitigation is taken; (iii) reasoned analysis of overriding public interest; (iv) structured alternatives assessment showing no significantly better environmental option; and (v) compliance with Article 4(8) basin-wide integrity. No such analysis is presented. This omission is legally material and, absent demonstration that each condition is met, the application cannot satisfy Article 4(7) as a derogation route.

23 . The MPAG Review Note: What It Is and Why It Matters

The Major Projects Advisory Group (MPAG) is a body established by the Department of Public Expenditure, NDP Delivery and Reform under Project Ireland 2040. Its purpose is to support the application of Ireland's Infrastructure Guidelines (formerly the Public Spending Code) and to provide independent oversight of major public investment proposals before they receive Government approval to proceed.

The MPAG Review Note dated 25 January 2024 reviewed the Preliminary Business Case (PBC) for the Water Supply Project, Eastern and Midlands Region, at Approval Gate 1 the first formal decision point in the Government's capital project lifecycle. The documents considered by MPAG included the Preliminary Business Case itself, the HR Wallingford External Assurance Review (prepared on behalf of the Commission for Regulation of Utilities (CRU)), the DHLGH Report, a Leakage Position Paper, and extensive sensitivity analyses.

Critical clarification on the 'Wallingford Report'

The MPAG Review Note of January 2024, which references and summarises the HR Wallingford External Assurance Review as one of 12 documents it considered. The two foundational hydrological assessments of the River Shannon system (understood to date from approximately 1994 and 2007) referred to in the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's main submission as the 'Wallingford Reports' are separate documents that remain unpublished and have not been placed on the public file. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's AIE requests for those documents remain outstanding. The MPAG Review Note reviewed here is a governance document, not a hydrological assessment.

Notwithstanding this clarification, the MPAG Review Note is highly significant for for the following reasons:

- It contains findings made by the Irish Government's own project oversight body not by objectors, not by interest groups, not by campaign organisations. These are the State's own conclusions about the adequacy of the project's business case.
- Several of its findings directly corroborate and reinforce the legal and technical grounds advanced in the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Consolidated Formal Submission, particularly on leakage reduction, the cost-benefit analysis, schedule risk, judicial review risk, Habitats Directive compliance, and the adequacy of the alternatives analysis.
- The MPAG Review Note was issued in January 2024 before the SID planning application was lodged with An Coimisiún Pleanála meaning that its findings represent a contemporaneous, independent assessment of the state of the project's evidence base at the time the application was being prepared.
- The HR Wallingford External Assurance Review, which the MPAG considered, was commissioned by the CRU. In the consolidated submission and earlier critique documents, the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance has challenged the characterisation of CRU's role as an 'independent environmental reviewer.' The MPAG Review Note itself confirms that the HR Wallingford review was a Public Spending Code compliance review a financial and governance assessment not an environmental or ecological assessment.

23.1 MPAG Findings: Verbatim and Significance for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance

The following table maps each of the MPAG's substantive findings against the relevant grounds in the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Consolidated Formal Submission. The MPAG paragraph references are to the Review Note as numbered. Direct quotations are from the MPAG document itself.

MPAG	MPAG finding (verbatim / summarised)	Significance for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission	Flag
2.3	Insufficient analysis has been carried out within the options analysis of longer term leakage reduction strategies. Longer term leakage reduction strategies were not included in the options analysis brought forward and the external reviewers were not assured that the company had followed best practice in this regard.	MPAG independently confirms the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's core leakage ground (Consolidated Submission 8): that leakage reduction was not adequately assessed as an alternative. The MPAG's own reviewer (HR Wallingford) 'was not assured the company had followed best practice' on leakage options. This is a finding by the State's own governance process, not by an objector.	CRITICAL
2.4	The level of leakage in the current water supply infrastructure is high and should be prioritised in line with the WSP, as the new Shannon Source will be piped into the existing water supply pipeline.	MPAG confirms that new Shannon water will be piped into the same leaking infrastructure the factual predicate for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Article 4(7)(d) WFD irrationality argument (Consolidated Submission 8). If the State's own advisory body says leakage must be prioritised alongside the project, it cannot be 'not relevant' to the planning application.	CRITICAL
2.2	The census 2022 figures have not yet been incorporated into the project need analysis raising concerns about whether the project remains at an appropriate scale and whether the population trends outlined in the preliminary business case remain appropriate.	MPAG independently confirms An Taisce's and the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's demand-projection ground (Consolidated Submission 21.1). The State's own project oversight body found in January 2024 that the demand forecasts underpinning the project may be based on outdated data. The RtS Report's assertion that demand projections use 'trusted national sources' (para 91) does not address whether 2022 census data was incorporated the MPAG found it had not been at PBC stage.	HIGH
3.4	The preliminary business case does not examine the affordability of this scheme, therefore not meeting a key requirement of the Infrastructure Guidelines. The level of funding required for this project is not contained within existing NDP allocations. Non-domestic revenues would not meet the operating cost of the proposal.	MPAG found the project failed to meet a 'key requirement of the Infrastructure Guidelines' on affordability. This reinforces the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's ground (Consolidated Submission 18) that the 10:1 CBA is based on undisclosed	HIGH

MPAG	MPAG finding (verbatim / summarised)	Significance for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission	Flag
		methodology. It also reveals that the project's own funding sources were unresolved at PBC stage a significant governance gap that the planning application does not address.	
3.1	The eBCR of 12.25 had previous values of 3.25 (Indecon, 2016) and 8.87 (EY, 2023) in the economic appraisals carried out during the options analysis, with BCR increasing despite rises in estimated costs. This is a result of additional benefit criteria being incorporated.	MPAG reveals that the benefit-cost ratio has tripled (from 3.25 to 12.25) across successive appraisals despite costs increasing significantly. MPAG attributes this to 'additional benefit criteria being incorporated' in each iteration. This confirms the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's concern (Consolidated Submission 18) that the CBA methodology is insufficiently transparent and that the inputs driving the ratio have changed without independent verification.	HIGH
4.4 / 4.5	The cost forecast should incorporate the RCF P90/95 as the upper range. Given the high degree of risk for the schedule potentially needing to be extended as a result of delays in the judicial reviews or delays in the construction timeline, analysis into how this would impact cost forecasts should be presented.	MPAG identifies that the RCF P90/95 upper cost range is €9.255–10.405bn substantially higher than the €5.96bn presented in the R5 Report as the upper range. If delays arising from judicial review or CJEU reference materialise, the true project cost could approach €10bn. This has never been presented to ACP. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance submits this cost range should be before ACP when it assesses the Article 4(7)(iii) overriding public interest test.	HIGH
4.7	The proposal requires consideration/analysis into the possibility of failing to meet the ambitious project delivery date and the impact this would have on the options analysis (versus desalination in particular) and costings.	MPAG itself identifies desalination as a relevant comparator if the project delivery date is not met directly reinforcing the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's alternatives assessment ground (Consolidated Submission 4). If the State's own project oversight body considers desalination a relevant comparator under schedule delay scenarios, the dismissal of desalination from the formal alternatives assessment is even harder to sustain.	HIGH
4.8	There is significant risk of judicial review and delays arising from legal challenges in Ireland, and potentially at EU level, which could result in the project being set back a number of years.	MPAG identifies the risk of Irish judicial review and EU-level legal challenge as 'significant.' This is the State's own project oversight body acknowledging that the legal grounds advanced by the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance and others are credible and consequential enough to constitute a project risk registered in the business case. The schedule does not include allowance for this risk.	HIGH

MPAG	MPAG finding (verbatim / summarised)	Significance for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission	Flag
5.1 / 5.2	Outstanding issues include requirements within the Habitat Directive at Parteen Basin. Concerns exist over planning permission requirements. Clarity is needed as to whether there are other Natura 2000 sites along the project route and if the EIA is complete.	MPAG at the PBC stage in January 2024 found that Habitats Directive compliance at Parteen Basin was an outstanding unresolved issue, that it was unclear whether all Natura 2000 sites along the route had been identified, and that the EIA was not confirmed as complete. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that the SID planning application cannot be determined until it is confirmed that all of these gaps identified by the State's own oversight process have been fully and demonstrably resolved.	CRITICAL
5.5	EPA has not provided Uisce Éireann with indicative acceptable abstraction levels in advance of the coming into force of this crucially relevant legislation.	As of January 2024, the EPA had not confirmed acceptable abstraction levels. This confirms the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's ground on abstraction licence sequencing (Consolidated Submission 7): the planning application was lodged and progressed before the fundamental regulatory question of what abstraction volume the EPA considers environmentally acceptable had been determined.	CRITICAL
5.7	The project schedule does not include allowance for a potential judicial review of any grant of planning permission, nor of a reference to the European courts.	MPAG expressly flags the absence of judicial review and European Court reference allowance from the project schedule. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that this acknowledged planning risk is not a reason to rush determination it is a reason for ACP to ensure its decision is legally unimpeachable, which requires the grounds identified in the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's consolidated submission to be fully addressed.	NOTED
10	HR Wallingford External Assurance Process found that the Preliminary Business Case meets the requirements of the Public Spending Code / Infrastructure Guidelines and should progress to Approval Gate 2. HR Wallingford recommended: (a) any updates to key data should be reported to CRU; (b) affordability and financing should be further examined.	This confirms what the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance has stated in the consolidated submission (8.1, 19 of the gap analysis): the HR Wallingford review was a Public Spending Code compliance review concerned with value for money, costs, scheduling, and governance. It was not an environmental assessment. CRU forwarding or endorsing a business case under the Public Spending Code is not endorsement of environmental compliance. The Applicant's use of CRU/HR Wallingford to support its environmental case overstates what this review covers.	NOTED



24 Key Observations: What the MPAG Review Note Establishes

24.1 The State's Own Oversight Body Found the Leakage Alternatives Analysis Deficient

The most significant finding for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's submission is at MPAG paragraph 2.3:

"Insufficient analysis has been carried out within the options analysis of longer term leakage reduction strategies. Longer term leakage reduction strategies were not included in the options analysis brought forward and the external reviewers were not assured that the company had followed best practice in this regard." MPAG Review Note, para 2.3, 25 January 2024

This finding was made not by the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance, not by a campaign group, and not by an objector. It was made by the Irish Government's own project oversight body, reviewing the project's own business case, against the project's own documentation, in January 2024more than two years before the SID planning application was lodged.

The MPAG's finding that the external reviewers (HR Wallingford, acting for CRU) 'were not assured that the company had followed best practice' on leakage reduction alternatives is a direct independent corroboration of the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Article 4(7)(d) WFD ground: that leakage elimination as a significantly better environmental alternative was not adequately assessed.

The Applicant's response throughout the RtS Report is that leakage reduction is 'being addressed' through the National Leakage Plan and that a comparison with the WSP is 'not relevant to the SID planning application.' The MPAG's finding which is now on the public records that this approach did not follow best practice. ACP cannot ignore this conclusion.

The irrationality loop confirmed by MPAG

MPAG para 2.4 explicitly states that leakage must be 'prioritised in line with the WSP, as the new Shannon Source will be piped into the existing water supply pipeline.' This is the State's own project oversight body acknowledging that the new Shannon water will be piped into the same leaking infrastructure the factual basis for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's prima facie irrationality argument. You cannot claim a cost-benefit ratio of 12.25:1 for a project that by the State's own account will deliver its water into a system losing 36% through leakage, without first demonstrating why that leakage has not been eliminated.

24.2 The True Upper Cost Range Is €9.255–10.405 billion

The RtS Report consistently presents the project cost range as €4.58bn–€5.96bn. The MPAG Review Note reveals a fuller picture. The Reference Class Forecasting (RCF) methodology which uses comparable real-world mega-project outcomes rather than project-team 'inside view' estimates produces the following range (MPAG para 4.3):

Methodology	P50 (€m)	P80 (€m)	P90 (€m)	P95 (€m)
'Inside view' QRA (project team estimate)	4,306	4,446	4,520	4,579

Methodology	P50 (€m)	P80 (€m)	P90 (€m)	P95 (€m)
'Outside view' RCF (comparable mega-projects)	3,357	5,958	9,255	10,405

The RtS Report presents the €5.96bn figure (the P80 of the RCF) as the upper range. But the MPAG itself recommended (para 4.4) that the project should use the RCF P90/95 as the upper range, noting this 'would be consistent with other projects who have used these methodologies.' At P90 and P95 of the RCF, the project cost range is €9.255–10.405 billion.

This has direct legal consequences:

- The Article 4(7)(iii) WFD 'overriding public interest' test requires the benefits of the project to outweigh its costs. A cost-benefit ratio calculated against a management base of €4.58bn looks very different against an RCF P90/95 cost of €9–10bn. The CBA methodology should have been applied against the full RCF range, as MPAG recommended, before being relied upon in an Article 4(7) analysis. It was not.
- At a potential cost of €9–10bn, the comparative economics of alternatives such as desalination, Poulaphouca optimisation, or aggressive demand management look materially different from the comparison conducted in 2018 against a €800m–€1.4bn project estimate. The alternative-options analysis has never been updated against the RCF P90/95 cost range.
- The MPAG also notes (para 4.7) that if the project delivery date is not met, 'the impact on the options analysis versus desalination in particular' should be assessed. This is the State's own advisory body independently identifying desalination as a comparison point that the project's own analysis does not adequately examine.

24.3 Habitats Directive Compliance Was an Unresolved Issue at the Time of Application

MPAG paragraph 5.1 records that at January 2024, 'requirements within the Habitat Directive at Parteen Basin' were listed as outstanding issues not yet addressed. MPAG paragraph 5.2 states that 'clarity is needed as to whether there are other Natura 2000 sites along the project route and if the EIA is complete.'

The planning application was subsequently lodged in 2025. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that these findings from January 2024 create a material question: have the Habitats Directive concerns at Parteen Basin identified by MPAG as outstanding been fully resolved in the EIAR and NIS, or have they been carried forward and addressed only at the level of assertion in those documents? The NIS's conclusion of 'no adverse effect on integrity' while conceding residual effects (RtS Report para 49) suggests the latter.

An Taisce's related finding

An Taisce's submission noted that the State has tendered a project (Ref 7328234) to develop environmental flow recommendations for the Shannon scheme the foundational ecological data needed to assess Habitats Directive compliance and that this data 'does not yet exist.' Taken together with MPAG's January 2024 finding that Habitats Directive compliance was unresolved, this creates a consistent picture: the NIS's integrity conclusion was reached without the foundational ecological data that the State itself has acknowledged is needed.

24.4 The EPA Had Not Set Acceptable Abstraction Levels Before the Application Was Lodged

MPAG paragraph 5.5 states:

"EPA has not provided Uisce Éireann with indicative acceptable abstraction levels in advance of the coming into force of this crucially relevant legislation." MPAG Review Note, para 5.5, 25 January 2024

This is the State's own project advisory body confirming, in January 2024, that the single most important regulatory question for this project what volume of water can lawfully be abstracted from the Shannon under the Water Environment (Abstractions and Associated Impoundments) Act 2022, on the basis of environmental standards set by the EPA had not been resolved. The SID planning application was subsequently lodged without this determination having been made.

This directly reinforces the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's abstraction licence sequencing ground (Consolidated Submission 7). ACP is being asked to determine an application for infrastructure whose core operational activity the abstraction has not been cleared at the level of: (a) what volume the EPA considers environmentally acceptable; (b) what conditions the EPA would attach to the abstraction licence; or (c) what the ESB's parallel licence application will show. All three are preconditions for a complete cumulative environmental assessment.

24.5 Judicial Review Risk Was Formally Acknowledged by MPAG

MPAG paragraph 4.8 states: 'There is significant risk of judicial review and delays arising from legal challenges in Ireland, and potentially at EU level, which could result in the project being set back a number of years.'

MPAG paragraph 5.7 states: 'The project schedule does not include allowance for a potential judicial review of any grant of planning permission, nor of a reference to the European courts.'

These findings are significant not as advocacy for the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's position, but as objective acknowledgement by the State's own infrastructure oversight body that: (a) the legal challenges raised by the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance and others are sufficiently credible and material to constitute a project risk; and (b) the project has not adequately planned for them. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance does not cite these findings to suggest that legal risk should deter determination it cites them to emphasise that the grounds for judicial review are substantial, well-founded, and acknowledged even by those within the State's own governance process.

The appropriate response to acknowledged judicial review risk is to ensure the planning decision is legally unimpeachable not to rush determination. The grounds set out in the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Consolidated Formal Submission are precisely the grounds that, if not adequately addressed, would expose any grant of permission to successful challenge.

24.6 CRU/HR Wallingford: Governance Review, Not Environmental Assessment

The MPAG Review Note records (para 10) that 'the External Assurance Process undertaken by HR Wallingford, on behalf of CRU, has found that the Preliminary Business Case meets the requirements of the Public Spending Code / Infrastructure Guidelines and should progress to Approval Gate 2.'

This is a compliance finding under the Public Spending Code concerned with value for money, cost estimation methodology, schedule robustness, and governance. It explicitly recommends that 'the affordability and financing of the project should be further examined' and that 'any updates to key data should be reported to the CRU.'

The Applicant relies on CRU/HR Wallingford as an 'independent' body that endorsed the project's alternatives assessment and economic case (RtS Report paras 88, 128–130, 370). The MPAG Review Note makes clear what the HR Wallingford review actually was. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that ACP should not treat a Public Spending Code compliance review by an infrastructure economics consultancy as independent corroboration of the Applicant's EIA Directive alternatives assessment or WFD compliance conclusions. These are entirely different legal and technical domains. The HR Wallingford review was not, and did not purport to be, an ecological assessment, a hydrological peer review, or an EU environmental law compliance analysis.

What HR Wallingford did and did not review

HR Wallingford reviewed: cost estimation methodology, schedule robustness, procurement strategy, demand projections, and governance compliance with the Public Spending Code. HR Wallingford did NOT review: the ecological adequacy of the NIS; WFD quality-element deterioration findings; Habitats Directive integrity conclusions; the hydrological model's treatment of drought scenarios; or the legal compliance of the EIAR alternatives chapter under Article 5(1)(d) of the EIA Directive.

25 Specific Submissions to An Coimisiún Pleanála Arising from This Document

Having regard to the MPAG Review Note and the analysis above, the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance makes the following specific additional submissions and requests:

25.1 4.1 Full RCF Cost Range Must Be Before ACP

ACP should require the Applicant to present the full Reference Class Forecasting cost range including the P90 (€9.255bn) and P95 (€10.405bn) figures in its assessment materials before ACP. The Article 4(7)(iii) WFD 'overriding public interest' analysis, the cost-benefit ratio relied upon to justify the project, and the alternatives comparison should all be re-assessed against the RCF P90/95 range that the MPAG itself recommended should be presented to decision-makers.

25.2 4.2 Leakage Alternatives Analysis: Best Practice Gap Acknowledged

ACP should note that the State's own project oversight body and its commissioned external reviewer (HR Wallingford/CRU) both found that longer-term leakage reduction strategies were not included in the options analysis and that 'best practice' was not followed. This finding by MPAG, made in January 2024, substantially strengthens the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Article 4(7)(d) ground and its irrationality argument. It is not open to the Applicant to simply assert that leakage is being addressed under the National Leakage Plan when the State's own oversight process found the leakage options analysis to be deficient.

25.3 4.3 EPA Abstraction Levels Must Be Confirmed

ACP should require confirmation from the EPA, before determining this application, of what volume of abstraction from the Shannon system at Parteen Basin the EPA considers environmentally acceptable under the Water Environment (Abstractions and Associated Impoundments) Act 2022. The MPAG found in January 2024 that no such indication had been provided. The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance is not aware that this situation has changed. Without this information, ACP cannot assess whether the proposed 154–300 Mld abstraction is within or outside the EPA's environmental assessment framework.

25.4 4.4 Habitats Directive Outstanding Issues Must Be Demonstrably Resolved

MPAG identified Habitats Directive compliance at Parteen Basin as an outstanding unresolved concern in January 2024. ACP should require the Applicant to specifically address how and when each of the Habitats Directive concerns identified by MPAG at paragraph 5.1 was resolved, with reference to specific sections of the NIS and/or supplementary environmental information. A general assertion that the NIS demonstrates compliance is not sufficient given the MPAG's pre-application finding.

25.5 4.5 Desalination as a Schedule-Delay Comparator

The MPAG itself identified (para 4.7) that if the project fails to meet its delivery date, 'the impact on the options analysis versus desalination in particular' should be considered. The project schedule is described by MPAG as 'ambitious' and the MPAG explicitly flags a high risk of delays from judicial review and European court proceedings. ACP should require the Applicant to provide the schedule-delay scenario analysis recommended by MPAG, including a comparison with desalination under extended timeline assumptions, as part of a complete alternatives assessment. This directly supports the River Shannon Environmental

Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's EIA
Directive alternatives ground.

25.6 Conclusion

The MPAG Review Note of 25 January 2024 is not a document produced by objectors or campaign groups. It is a document produced by the Irish Government's own major infrastructure oversight body, reviewing the project's own business case against the project's own documentation. Its findings, summarised in this analysis, independently corroborate five of the most important grounds in the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Consolidated Formal Submission:

- The leakage reduction alternatives analysis was deficient and did not follow best practice the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's Article 4(7)(d) and irrationality grounds (Consolidated Submission 8)
- The true project cost range, on the RCF 'outside view' methodology, is €9.255–10.405bn at P90/95the CBA relied upon for the overriding public interest test was assessed against materially understated costs (Consolidated Submission 18)
- Habitats Directive compliance at Parteen Basin was an unresolved outstanding concern as of January 2024, when the planning application was being prepared (Consolidated Submission 5, 20)
- The EPA had not set indicative acceptable abstraction levels before the application was lodged confirming the abstraction licence sequencing problem (Consolidated Submission 7)
- The risk of judicial review and EU-level legal challenge was formally identified as 'significant' by MPAG confirming the legal credibility of the grounds the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance advances (Consolidated Submission, all grounds)

The River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance submits that ACP's Inspector should treat the MPAG Review Note as a primary source document in the assessment of this application. Its findings are not the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's characterisation of the project's weaknesses they are the Irish State's own contemporaneous assessment of those weaknesses, made in January 2024, before the application was lodged.

26 .ESB Flow Data and the 2018 Drought

The River Shannon Environment Protection River Shannon Environmental Protection Alliance obtained ESB flow data for Parteen Basin under the Freedom of Information Act (Appendix E to the River Shannon Environment Protection River Shannon Environmental Protection Alliance's Comprehensive Objection). This data reveals the most concrete operational test of the project's feasibility.

The 2018 drought arithmetic an impossible equation

ESB FOI data shows that in 2018 there were 74 consecutive days during which Ardnacrusha took zero water turbines completely idle. During this period, the only flow at Parteen Basin was 10.5 m³/s just sufficient to meet the statutory minimum compensation flow. If the proposed pipeline had been operating: • Total Shannon flow at Parteen: 10.5 m³/s (at statutory minimum) • Limerick City abstraction (Clareville WTP): 0.6 m³/s • Remaining: 9.9 m³/s • Pipeline abstraction: 3.47 m³/s • Pipeline as proportion of TOTAL Shannon flow: $3.47/10.5 = 33\%$ Conclusion: for those 74 days in 2018, the pipeline COULD NOT have operated without either (a) reducing the statutory compensation flow below 10 m³/s unlawful; or (b) drawing down Lough Derg lake storage, with no capacity to control drought duration.

Ireland experiences significant droughts approximately every two years. The EIAR has not been back-tested against the 2018 scenario. The Applicant's hydrological model acknowledges effects during 2018 but does not present a full operational simulation showing how the pipeline would have been managed during those 74 days and what Lough Derg lake levels would have been at the end of that period.

There are three outlets from Parteen Basin: Ardnacrusha, the Old River Shannon (minimum 10m³/s), and Clareville WTP (0.6m³/s for Limerick). The proposed pipeline adds a fourth. During drought, when Ardnacrusha already cannot operate, it is mathematically impossible to simultaneously satisfy all four demands. The EIAR's response that abstraction will come from 'lake storage' is accurate in a hydrological modelling sense but does not address the ecological question: what does the resulting Lough Derg drawdown do to littoral habitats, spawning beds, tern nesting islands, and dissolved oxygen conditions during precisely the period of maximum ecological stress?

The River Shannon Environment Protection River Shannon Environmental Protection Alliance also documents (Comprehensive Objection, 7.1) that a 28cm decline in Lough Derg water levels in September 2025 was a primary contributor to an algal bloom on the lake. The documented September 2025 algal bloom event should be specifically addressed in the EIAR's water quality assessment, including whether the model predicts additional algal bloom frequency and severity under the proposed abstraction regime during drought years.

27. Core Propositions from Allied Submissions

27.1 Friends of the Irish Environment

FIE, submitting with Dr William O'Connor's ecological review and FP Logue Solicitors' legal analysis, identifies four structural deficiencies:

- The project is assessed primarily as supply infrastructure rather than as part of the full water cycle. Assessment must take place at catchment scale across the full cycle of abstraction, use, and return flows. Approximately 300 Mld of new supply will generate approximately 300 Mld of additional wastewater loading within connected catchments yet no regional water balance assessment demonstrating that receiving waters can accommodate this loading without Article 4(1) WFD deterioration has been provided.
- HMWB designation does not reduce assessment obligations. Where the environmental baseline is already subject to hydromorphological pressure and restoration obligations, additional abstraction must be assessed against potential future environmental flow requirements, not historic operating conditions alone.
- Cumulative effects on migratory salmon and lamprey under low-flow migration periods have not been clearly demonstrated, and uncertainty regarding potential effects should be resolved before a compliance conclusion is reached.
- Any conclusion that no significantly better environmental alternative exists must be supported by clear and transparent analysis capable of independent verification demonstrating system-wide optimisation including sequencing of infrastructure delivery, storage resilience, and demand-side measures.

FIE conclusion

On the information provided, 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 the absence of such information, where compliance with environmental obligations cannot be established, the competent authority cannot reach a reasoned scientific conclusion that the objectives of the WFD will not be compromised.

27.3 An Taisce

An Taisce (statutory prescribed body) identifies:

- The proposed abstraction is not being introduced into an ecologically neutral baseline. Approximately 90–95% of the long-term average flow of the Lower River Shannon SAC at Parteen Regulating Weir is already diverted to Ardnacrusha, leaving a predominantly uniform 10 cumecs for 15 km of the Old Shannon for the majority of the year. The NIS assesses the proposed abstraction relative to this managed regime without recognising that the baseline itself is both heavily hydrologically impacted and ecologically constrained.
- The 10m³/s compensation flow has never been assessed against WFD objectives or the conservation requirements of the SAC. Any project depending on the hydrological status quo is, in effect, relying on continuation of existing ecological degradation.
- The State has tendered a project (Ref 7328234) to develop environmental flow recommendations for the Shannon scheme the exact information needed to assess this application and it does not yet exist.

ACP is being asked to consent to a major new abstraction while the State simultaneously acknowledges that the foundational ecological baseline data does not exist.

27.4 Salmon Watch Ireland

Salmon Watch Ireland (12 May 2026, addressing the ESB retrospective EIA scoping) identifies issues directly relevant to the cumulative assessment of this application:

- The 1988 baseline proposed for the ESB retrospective EIA may institutionalise an already ecologically degraded condition. The Shannon Scheme commenced operation in 1929; substantial impacts predate 1988 and must be incorporated in any baseline.
- The ESB's salmon hatchery at Parteen is presented as mitigation without supporting evidence of effectiveness. Under People Over Wind, unvalidated mitigation cannot be relied upon to exclude likely significant effects.
- No quantitative fish passage assessment has been provided: adult upstream passage efficiency, smolt downstream survival, turbine mortality, delay times and fallback rates, and seasonal migration success should all be based on telemetry, tagging, or counter data.
- Species-specific minimum flow thresholds, seasonal migration cue flows, spawning and juvenile habitat requirements, and redd dewatering risk assessments are absent.

27.5 Waterways of Clare

"Here is where the fatal flaw in the proposed Water Supply Project lies. The new abstraction is embedded within, and dependent upon, this same regulated system. The planning application acknowledges that water management will need to change in the future but it does not define what that change will look like, nor assess the abstraction against the environmentally compliant regime that will be required. The proposed abstraction is not trivial. It represents roughly 35% of the flow currently left in the Old River Shannon for an average of 93% of the year." Waterways of Clare, statement recorded at Parteen Regulating Weir

28 Priority New Grounds

Case C-164/17 *Grace and Sweetman v An Bord Pleanála* (CJEU, 2018): a project cannot rely on assumed or undefined future management measures to exclude adverse effects under Article 6(3) of the Habitats Directive. The proposed abstraction is embedded within the ESB dam management regime and cannot function independently of it. The NIS concludes the project will not impede future 'flow-sharing decisions' — but no defined future ecological operating scenario is presented against which this can be tested. The hydrological regime necessary to achieve compliance with the Habitats Directive and the WFD has not been defined, quantified or assessed. Under C-164/17, reliance on undefined future management flexibility cannot remove reasonable scientific doubt. This case was confirmed and applied in Ireland in *Connolly v ABP* [2018] IESC 31. Source: Dr W. O'Connor (Ecofact), FIE submission, 25 February 2026.

The most recent IFI fish counter data (2024) records only 124 salmon passing through the Ardnacrusha fish pass in the whole year. At Parteen Regulating Weir, 966 were recorded — but these were predominantly hatchery fish returning to the hatchery. The River Shannon is at the bottom of all Irish rivers for meeting its conservation limit (CL) escapement target. The CL for the Shannon is approximately 50,000 salmon per year. Actual numbers are in the hundreds. Additionally, two Irish Red Data Book species — Smelt (*Osmerus eperlanus*) and Pollan (*Coregonus autumnalis*) — which IFI specifically requested be surveyed, are absent from the NIS. European eel (critically endangered) has no structured assessment despite readily available ESB eel trap data. DAHG formally requested an Impingement Mortality and Entrainment Characterisation Study — this was not conducted. These are not minor omissions. They are specific, documented, formal requests from statutory and government bodies that were not met. Source: Dr W. O'Connor (Ecofact), FIE submission; IFI 2024 Counter Report.

UKTAG Q95 calculation (Dr O'Connor): The Applicant's own Appendix A9.1 states the Q95 net inflow to the Lough Derg/Parteen system is 25.6 m³/s. The proposed peak abstraction is 3.47 m³/s. This represents 13.6% of Q95 — exceeding the UKTAG 10% EQS benchmark for most river types, and even more stringent thresholds apply to sensitive salmonid watercourses. The assessment does not present a naturalised Q95; the regulated Q95 is likely higher than the natural Q95, meaning the true percentage of natural low flow abstracted is even higher.

Inter-basin transfer (Dr O'Connor): The project is a mandatory Annex I EIAR scheme because it constitutes a water transfer exceeding 100 million m³/year. Despite this being the legal trigger for the EIAR, the EIAR does not assess the environmental implications in the receiving basin. Chapter 9 states this is addressed in Appendix A9.1 — but that Appendix does not contain this assessment. The EPA explicitly required it in scoping. This is a stated-but-absent assessment that is legally required for Annex I EIAR compliance.

Source: Dr W. O'Connor (Ecofact), FIE submission, 25 February 2026.

PRIORITY

An Taisce (statutory prescribed body) identifies a specific and additional dimension to the 1929 baseline circularity argument that has not been captured in the consolidated submission: not only has the 10m³/s compensation flow never been assessed against WFD objectives, it has also never been 'climate-proofed.' The abstraction assessment models climate change by reducing inflows but retains the 10m³/s as a fixed structural baseline. Under projected summer temperature increases and drought frequency increases, compliance with EU environmental law may require increased environmental baseflows. The climate modelling demonstrates compatibility with the historic 1935 regime under projected Q95 reductions — but does not demonstrate

compatibility with the environmentally compliant regime that may be required under future climate conditions. Source: An Taisce submission, 25 February 2026.

Article 10 Habitats Directive / HDD bentonite risk

An Taisce identifies a legal ground not cited in the consolidated submission: Article 10 of the Habitats Directive requires Member States to manage landscape features of importance for species migration, dispersal and genetic exchange — including rivers and their banks and stepping stones such as ponds and small woods. A 172km linear pipeline corridor crossing 639 watercourses and numerous woodland fragments, wetlands, and peatlands has the potential to fragment ecological connectivity at landscape scale. ACP must assess compliance with Article 10 for the full pipeline route, not only European sites. Additionally, Horizontal Directional Drilling (HDD) using bentonite drilling fluid creates risk of 'inadvertent returns' — subsurface blowouts of drilling fluid into groundwater, watercourses, and sensitive ecological receptors. Source: An Taisce submission, 25 February 2026.

Section 10 — Murray-Darling Basin / Colorado River precedents

The Murray-Darling Basin (Australia) is the closest international analogue for the Shannon situation: a temperate, developed country with regulated rivers and 'sustainable' abstraction rules in which ecological collapse was triggered during drought years — mass fish kills (2018–19), collapse of native fish populations, salinity increases, algal blooms. Multiple government reviews found over-allocation and weak enforcement caused collapse even though abstraction limits existed on paper. The critical point: abstraction impacts are non-linear and emerge most strongly during low-flow years — precisely the condition the EIAR models least reliably.

The Colorado River (USA/Mexico) no longer reaches the sea. Every individual abstraction was 'within legal limits.' Environmental flows were ignored until collapse. Climate change made the system far more fragile than projected. This is the 'within legal limits' argument applied to the 2% framing — legally permissible average abstraction that is operationally impossible during drought.

Source: River Shannon Environmental Protection River Shannon Environmental Protection Alliance Comprehensive Objection, Chapter 13, 20 February 2026.

Reid v ABP; Community Benefit Scheme fish pass condition

Reid v An Bord Pleanála [2021] IEHC 362 (Humphreys J., para 48): 'The board must have sufficient expertise to fully understand and properly evaluate the developer's fact-specific material and the science underlying it... 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.' This is directly applicable to this application, which requires expertise in hydrology, EU environmental law, ecology, fisheries science, groundwater, climate modelling, and water regulation. ACP should confirm it has commissioned or retained this range of expertise before determining the application.

Community Benefit Scheme — fish pass conditions: An Taisce specifically requests that ACP condition the Community Benefit Scheme (CBS) to fund CDM Smith (2021) Concept U1 and U2 fish pass improvements at Parteen Weir and Ardnacrusha. Without this condition, the CBS 'Environment Objective' is unenforceable. Source: An Taisce submission; FP Logue Solicitors submission.

1988 ESB baseline / hatchery genetic impacts / Exceptionality Test

Salmon Watch Ireland (12 May 2026) makes three points not fully captured in the consolidated submission: (1) The proposed 1988 ESB retrospective EIA baseline institutionalises an already degraded condition — substantial impacts from the 1929 scheme predate 1988 and must be included. (2) Hatchery mitigation genetic risks: straying rates, domestication effects, disease transfer, and reproductive fitness of hatchery fish have not been assessed. Under People Over Wind, unvalidated mitigation cannot be relied upon to exclude likely significant effects. (3) The Exceptionality Test Report for the ESB retrospective EIA must publicly address why environmental assessment was not undertaken from 1929; whether retrospective authorisation undermines the EIA Directive; and whether exceptional circumstances genuinely exist. Failure to make this analysis publicly available undermines Aarhus public participation rights.

Source: Salmon Watch Ireland submission to EPA, 12 May 2026 (also relevant to ACP via piecemeal consenting ground).

29. Biodiversity: Specific Gaps in the Assessment

29.1 Atlantic Salmon at Approximately 5% of Conservation Limits

Critical quantified finding Tipperary County Council (statutory body)

Atlantic salmon populations in the Lower Shannon are at roughly 5% of their conservation limits (RtS para 1346). At this level, the Habitats Directive does not merely require 'no further deterioration' it requires positive restoration to Favourable Conservation Status. Any further pressure on a species at 5% of conservation limits is ecologically and legally unacceptable, regardless of how 'small' or 'marginal' the incremental impact is described as being.

The Castleconnell River Association monitors approximately 200 wild salmon spawning beds (redds) in the Old River Shannon the only, and last, wild salmon still spawning in the Shannon. The Shannon historically hosted the biggest wild salmon runs of all rivers in Europe, estimated at over 400,000 fish per year. Once these spawning populations are gone, they cannot be re-established.

29.2 Groundwater Dependent Terrestrial Ecosystems

Tipperary County Council (RtS para 1351) identifies that the GWDTE assessment uses the 2% drawdown figure as its basis. The Applicant's response addresses only GWDTEs immediately adjacent to Parteen Basin. It does not assess whether GWDTEs in hydrologically connected areas along the Old River Shannon corridor including wetlands dependent on groundwater connectivity to the river may be affected by altered flow variability and reduced flood pulses during drought periods.

29.3 Invasive Non-Native Species Inter-Catchment Transfer

Offaly County Council (RtS para 1338) identifies that the EIAR does not assess how the project may influence the spread of INNS. The pipeline physically connects the Shannon and Eastern catchments for the first time in Irish history, creating permanent vectors for inter-catchment species transfer. Zebra mussel (*Dreissena polymorpha*) already established in the Shannon, devastating where introduced is of particular concern. An INNS-specific inter-basin risk assessment has not been provided. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP require this as a condition of any grant.

30. Sludge Production from the Proposed Water Treatment Plant

A significant environmental impact not adequately assessed in the EIAR or Chapter 22 (Resource and Waste Management): sludge production from the proposed Birdhill Water Treatment Plant at peak operational capacity.

At peak abstraction of 4 m³/s (approximately 345,600 m³/day), using standard municipal water treatment parameters of 0.08–0.12 kg dry solids per m³ treated:

- Dry sludge produced: approximately 28–42 tonnes of dry solids per day
- Dewatered sludge volume (at 20% solids): approximately 140–210 m³ per day
- Annual dewatered sludge: approximately 51,100–76,650 m³ per year
- 60-year operational life total: approximately 3–4.6 million m³ of dewatered sludge requiring management and disposal

For context, Ringsend Wastewater Treatment Plant treating 40% of national wastewater produces approximately 40,000–50,000 tonnes of wet sludge per year. No sludge management plan, disposal pathway, or lifecycle GHG assessment for sludge is on the public file. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP require a full sludge management plan as a condition of any grant, including volume quantification at 154, 300, and 330 Mld; disposal routes and receiving environments; GHG emissions from sludge management over the 60-year operational life; and phosphorus and aluminium loading to agricultural soils if land-spreading is the disposal route.

31. Wastewater Return Flows: An Unassessed Full Water Cycle Impact

Friends of the Irish Environment (1) identifies that the project is assessed primarily as supply infrastructure, not as part of the full water cycle. Approximately 300 Mld of new potable supply will generate approximately 300 Mld of additional wastewater loading in connected Eastern catchments. No regional water balance assessment has been presented demonstrating that receiving waters can accommodate this additional loading without risk of WFD deterioration. Material submitted during the process indicates wastewater treatment infrastructure in parts of the receiving region is already operating at or near capacity, with upgrades dependent on future delivery programmes. Outcome-based obligations under Article 4 WFD require assessment on the basis of demonstrated environmental performance, not anticipated future infrastructure upgrades.

32. Poulaphouca Reservoir

Poulaphouca has total storage of approximately 166 billion litres (active: 148 billion litres), a surface area of 22.26 km², and existing integration with Ballymore Eustace WTP and Greater Dublin Area infrastructure. It is approximately 115km closer to Dublin than Parteen Basin. The River Shannon Environment Protection River Shannon Environmental Protection Alliance's Comprehensive Objection demonstrates:

- Sustainable yield optimisation from existing Poulaphouca storage has not been comparatively assessed at project level
- Operational flexibility as a drought buffer or seasonal supplement has not been evaluated against the Shannon alternative using equivalent methodology
- The cost of Poulaphouca optimisation versus the current €4.58–5.96bn for the Shannon pipeline has not been comparatively presented

The Applicant's acknowledgment (RtS para 374) that any Poulaphouca increase 'would need to be carefully planned' is an implicit admission that increases are at least conceivable yet this was never properly examined at project EIA stage.

18. The 10:1 CBA Ratio and Preliminary Business Case

The Applicant asserts a 10:1 benefit-cost ratio from a 2024 Preliminary Business Case whose methodology, discount rate, time horizon, and treatment of non-market environmental costs are not on the public file. A CBA of this scale is highly sensitive to: (a) the discount rate a 3.5% vs 7% rate changes 60-year present values by a factor of 3–5; (b) whether ecological costs (salmon population collapse, SAC degradation, tern extinction) are assigned any monetary value; (c) the time horizon beyond 2050. A CBA with unpublished inputs cannot sustain the Article 4(7)(iii) 'overriding public interest' analysis. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP place the Preliminary Business Case and all model inputs on the public file before determination.

19. CEMP Mitigation Enforceability

The Applicant's claim that CEMP measures are 'binding commitments' is conditional on ACP imposing specific enforceable conditions which it has not yet done. The CEMP is described as an evolving document 'further amended by the Contractor.' A document subject to contractor amendment is not equivalent to a

precise, judicially enforceable planning condition. 'Captured in a register and tracked' describes internal corporate governance, not statutory enforcement. No statutory enforcement body for CEMP compliance during construction across a 170km, 500-landholding linear corridor has been identified. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP require: the final CEMP on the public file before determination; a schedule of objective, measurable conditions; and identification of the enforcement body and mechanism.

20. Atlantic Salmon and the Ecological Collapse of the Shannon

The combination of evidence from Tipperary County Council (5% of conservation limits), Salmon Watch Ireland (hatchery mitigation remains unvalidated), the National Parks and Wildlife Service's *Conservation Objectives: Lough Derg (Shannon) SPA 004058* (Version 1, 2024 and Waterways of Clare (collapse of breeding population of common tern, with no breeding pairs recorded in 2024 survey), and the River Shannon Environment Protection River Shannon Environmental Protection Alliance's own submission (74 Castleconnell spawning reeds the last Shannon salmon) presents a consistent picture of a river system already under severe ecological pressure. The Habitats Directive's precautionary standard under Article 6(3) 'no reasonable scientific doubt' cannot be satisfied merely by demonstrating that the proposed abstraction will not accelerate an existing decline. The Applicant must demonstrate that it will not impede the restoration and achievement of the conservation objectives required by the Habitats Directive.

21. Population, Human Health and Public Safety

21.1 2022 Census Data

The Applicant (RtS paras 91–94) asserts forecasts use 'trusted national sources' but does not confirm whether 2022 census results have been incorporated. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP specifically require the Applicant to confirm the vintage of population data in the current demand model and provide a revised supply-demand balance using 2022 census data and current CSO projections if they have not been incorporated. The entire project justification rests on these demand figures.

21.2 Long-Distance Pipeline Bacterial Regrowth and Drinking Water Directive

No scientific assessment of water quality risks specifically associated with 172km pressurised water transfer has been presented. WHO and EFSA guidance identifies long-distance transfer as requiring dedicated management protocols. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests: a microbiological risk assessment (Legionella, total coliforms, trihalomethane formation); a chemical migration risk assessment for steel pipeline material over 60 years; and in-transit water quality monitoring at intermediate inspection points along the 172km route.

21.3 Lead Pipes Drinking Water Directive 2036 Deadline

Directive (EU) 2020/2184 requires lead pipe elimination from distribution networks by 2036. The Dublin network contains a significant but unquantified number of lead service connections. The RtS Report (Ch 27.3) dismisses the lead pipe submission as 'not relevant' the River Shannon Environment Protection River Shannon Environmental Protection Alliance contests this. The 2036 deadline creates a known capital expenditure requirement not costed in the CBA. The interaction between Birdhill WTP treatment chemistry

and lead leaching in legacy pipes has not been assessed. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP require this assessment and costing as a condition of any grant.

22. Carbon Cost of Treating Water Lost to Leakage

The RtS Report (Ch 27.6) dismisses the carbon cost comparison between leakage reduction and WSP as 'not relevant to the SID planning application' (para 3104). The River Shannon Environment Protection River Shannon Environmental Protection Alliance rebuts this directly. Article 4(7)(d) WFD requires assessment of 'significantly better environmental options' a leakage reduction programme avoiding or reducing new abstraction is precisely such an option. Section 15 of the Climate Action Act requires ACP to have regard to carbon budgets. The carbon cost of treating and pumping 36% of the project's yield into the ground is a material omission from EIAR Chapter 13. The Applicant's reference to the NWRP SEA as the locus of the relevant climate assessment does not satisfy the project-level EIA obligation the NWRP SEA was not conducted under EIAR conditions and did not use current lifecycle carbon methodology.

23. Chapter-Specific Gaps from the Full RtS Report Audit

23.1 Chapter 3 Constitutionality of Compulsory Acquisition Powers

RSPA's non-statutory submission raises the constitutionality of CPO powers used to acquire land across approximately 500 holdings in 6 counties for a project whose primary beneficiary population is 170km away. The River Shannon Environment Protection River Shannon Environmental Protection Alliance draws ACP's attention to: the report (RtS para 2522) that some landowners did not receive written notification of their inclusion in the CPO schedule; the Article 43 Irish Constitution (property rights) and ECHR-First Protocol Article 1 proportionality questions that the planning process does not resolve; and the reality that constitutional challenges to the CPO itself are foreseeable, adding to the overall legal vulnerability of the project.

23.2 Chapter 25 Shannon Callows SPA: Hydrological Function Assessment Absent

RSPA (6.10) identifies a NIS lacuna under Holohan (C-461/17): the Shannon Callows SPA supports golden plover, lapwing, curlew, and Bewick's swan species dependent on predictable seasonal floodplain inundation, invertebrate productivity linked to hydroperiod, and shallow water margins. The NIS addresses this SPA primarily in terms of construction disturbance. It does not contain an explicit hydro-ecological analysis demonstrating that the proposed abstraction will not alter floodplain hydroperiod in a manner capable of affecting Special Conservation Interests. Holohan requires the NIS to address all aspects of the project likely to affect each qualifying interest. This is a lacuna on the face of the NIS.

23.3 Chapter 10 INNS Inter-Catchment Transfer Risk

Addressed fully at Section 14.3. Offaly County Council's ground is a specific, consequential biodiversity risk arising from the novel inter-basin physical connection created by this project not addressed by reference to standard INNS mitigation protocols applicable to a single catchment.

24. Chapter 26 WFD: Three New Grounds

24.1 Derg TN Is Not an HMWB The Applicant's Own Concession at Para 2967

"It is not correct to state that both water bodies are designated as HMWBs in the 3rd Cycle River Basin Management Plan (2022–2027), as Lough Derg does not have HMWB status. The water body name for Lough Derg is Derg TN and for Parteen it is Lough Derg HMWB." Applicant, RtS Report para 2967

This is a material admission. Derg TN directly affected by lake level changes from the proposed abstraction is a natural water body subject to Good Ecological Status (GES) objectives, not the less demanding Good Ecological Potential (GEP) standard applicable to HMWBs. The WSIAR must demonstrate no deterioration relative to GES for Derg TN. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP require the Applicant to confirm the WFD classification and applicable objective for each affected water body and to confirm WSIAR conclusions hold against the correct standard for Derg TN.

24.2 UKTAG Q95 Threshold Exceeded on Applicant's Own Data

FIE (RtS para 2983) states the proposed abstraction exceeds UKTAG low-flow percentage benchmarks when measured against the Q95 value in the Applicant's own modelling. The River Shannon Environment Protection River Shannon Environmental Protection Alliance requests ACP require: (a) the Q95 flow for the Old River Shannon from the EIAR model; (b) the abstraction as a percentage of Q95; and (c) the applicable UKTAG river low-flow threshold for a river of equivalent sensitivity. If the abstraction exceeds the UKTAG threshold at Q95, the claim of having 'passed the UKTAG test' (para 2992) cannot stand.

24.3 Shannon (Lower)_OS0 at Poor Status Heightened WFD Burden

Tipperary County Council (para 1346) identifies that Shannon (Lower)_OS0 was at Poor Status in the last EPA Q value monitoring cycle (2021). Weser (C-461/13) requires that a project must not 'jeopardise the attainment of good surface water status.' A project adding abstraction pressure to a water body at Poor Status furthest from Good Status faces the most demanding evidential standard for demonstrating it will not impede recovery. The WSIAR does not specifically address this heightened burden. The 'legacy pressures' argument that historic hydromorphological degradation is simply the baseline does not discharge the Article 4(1) obligation: the competent authority must refuse authorisation where the project jeopardises attainment of WFD objectives, regardless of the source of prior degradation.

25. Chapter 27 Rebutting Four 'Not Relevant' Dismissals

Chapter 27 of the RtS Report dismisses four substantive grounds with the same blanket response: 'The Applicant does not consider this matter to be relevant to the SID planning application.' Each dismissal is legally inadequate.

25.1 Geotechnical Sinkhole Risk (RtS 27.2)

The geotechnical costs and risks of continued leakage are directly relevant to the Article 4(7)(d) alternatives assessment an assessment that excludes the negative externalities of the status quo is biased toward the new supply option. Article 3(1) EIA Directive requires assessment of indirect effects adding 300 Mld of new supply to a 36%-leaking network increases the volume of treated water entering Dublin's subsurface. RSPA grounds this in Article 191(2) TFEU and the precautionary principle the Applicant's response does not engage with this legal basis at all.

25.2 Environmental Liability Directive 2004/35/EC (RtS 27.4)

Article 5 of Directive 2004/35/EC requires preventive measures where there is an imminent threat of environmental damage. The Lower River Shannon SAC at degraded ecological status with salmon at 5% of conservation limits is precisely the environment the Directive protects. The ELD is part of the EU environmental law framework within which ACP must operate and reinforces the precautionary principle arguments throughout this submission. The dismissal as 'not relevant' does not engage with this legal dimension.

25.3 Carbon Cost Comparison (RtS 27.6)

Addressed fully at Section 22. The dismissal as 'not relevant' fails to engage with Article 4(7)(d) WFD and Section 15 of the Climate Action Act. The Applicant's reference to the NWRP SEA does not satisfy the project-level obligation.

25.4 Lead Pipes (RtS 27.3)

Addressed at Section 21.3. The dismissal fails to engage with the Drinking Water Directive 2036 obligation, the lead-chemistry interaction risk, and the CBA costing gap.

26. Legal Reference Table

Reference	Case / Instrument	Area	Key principle
C-127/02	Waddenzee (CJEU, 2004)	Habitats	No reasonable scientific doubt standard for Art 6(3); precautionary principle means uncertainty defeats authorisation
C-258/11	Sweetman v ABP (CJEU, 2013)	Habitats	Project undermining conservation objectives must be refused; 'prior certainty' standard; no balancing at Art 6(3) stage
C-461/17	Holohan v ABP (CJEU, 2018)	EIA+HD	NIS must address all qualifying interests and all scientific evidence; no lacunae permitted; complete precise definitive findings required
C-293/17 & C-294/17	Coöperatie Mobilisation (CJEU, 2018)	Habitats	In-combination effects must include all plans/projects including already-permitted ones affecting the same SAC
C-399/14	Grüne Liga Sachsen (CJEU, 2016)	Habitats	Defective AA cannot be cured retrospectively unless original authorisation would still have issued
C-323/17	People Over Wind (CJEU, 2018)	Habitats	Mitigation cannot be relied on at screening stage; at AA stage mitigation must be precisely defined, secured, scientifically certain
C-72/95	Kraaijeveld (CJEU, 1996)	EIA	Member States cannot define project scope to circumvent EIA; salami-slicing/piecemeal consenting prohibited
C-50/09	Commission v Ireland (CJEU, 2011)	EIA	EIA obligations apply at project level regardless of prior strategic assessments
C-87/02	Commission v Italy (CJEU, 2004)	EIA	Alternatives must be genuine comparative analysis, not post-hoc justification of pre-selected option
C-461/13	Weser/Bund für Umwelt (CJEU, 2015)	WFD	Art 4(1) is individually binding at project consent; deterioration of even one quality element triggers prohibition
C-525/12	Commission v Germany (CJEU, 2014)	WFD	Art 4 non-deterioration is an objective individually binding obligation, not a programmatic RBMP duty
[2018] IEHC 463	Callaghan v ABP (High Court)	HD+WFD	AA quashed where failure to consider all hydrological impact pathways on a water-dependent Natura site
[2021] IEHC 50	FIE v ABP (High Court)	Climate	Planning bodies must meaningfully engage with climate obligations under Climate Action Acts; mere noting is insufficient
[2019] IEHC 84	Kelly v ABP (High Court)	EIA	EIA alternatives chapter quashed where developer pre-selected preferred option before comparative assessment
[2017] IECA 67	An Taisce v ABP (CoA)	EIA	Courts will scrutinise whether EIA screening and alternatives meet the substance, not just form, of EU requirements
[2022] IEHC 595	Concerned Residents v ABP (High Court)	HD	Conceded residual effects irreconcilable with 'no adverse effect on integrity' absent detailed scientific explanation
Directive 2011/92/EU (amend. 2014/52/EU)	EIA Directive	EIA	Art 5(1)(d): alternatives; Art 8a: conditions must reflect EIAR commitments; Art 11: access to justice
Directive 92/43/EEC	Habitats Directive	Natura	Art 6(2): ongoing protection; Art 6(3): AA standard; Art 6(4): IROPI derogation only if 6(3) fails
Directive 2000/60/EC	Water Framework Directive	Water	Art 4(1) no deterioration / good status; Art 4(7) derogation; Art 4(8) basin integrity; Art 14 public participation

Reference	Case / Instrument	Area	Key principle
Directive 2001/42/EC	SEA Directive	Plans	Art 5/7: strategic alternatives; cannot substitute for project-level EIA alternatives assessment
Directive 2004/35/EC	Environmental Liability Directive	ELD	Art 5 preventive obligation where imminent threat of environmental damage; polluter pays principle
Directive 2020/2184/EU	Drinking Water Directive	DWD	Lead pipe elimination by 2036; resource efficiency; microbiological and chemical standards for distribution
Aarhus Convention Art 6(7) & 9(2)	Aarhus Convention	Access	Fair, equitable, timely public participation; access to justice in environmental matters
Reg. 2021/1119	European Climate Law	Climate	55% GHG reduction by 2030; climate neutrality by 2050 binding on Member States
Climate Action Acts 2015–2021	Irish Climate Act	Climate	S.15: ACP must have regard to national climate objective, carbon budgets, and sectoral emissions ceilings
Art 191(2) TFEU	Treaty on the Functioning of the EU	Principles	Precautionary principle and preventive action principle apply in EU environmental policy

27. Complete Coverage Audit All 28 RtS Report Chapters

RtS Report Chapter	Ground / Issue	Coverage	Location in this doc
Ch 1 Introduction	RtS para 49: residual effects vs 'no adverse integrity' core AA	✓ Addressed	5.2
Ch 2 Overarching Matters	Abstraction licence sequencing; piecemeal consent	✓ Addressed	7
Ch 2 Overarching Matters	10:1 CBA ratio opacity; Preliminary Business Case not on file	✓ Addressed	18
Ch 3 Planning	CPO constitutionality / landowner notification issues	✓ Addressed	23.1
Ch 4 Consultation	Aarhus effective participation; corrected deadline prejudice	✓ Addressed	3.2
Ch 5 Alternatives	Wallingford Report 2024s; NWRP screening; Poulaphouca	✓ Addressed	4, 17
Ch 5 Alternatives	SEA/EIA structural gap effet utile	✓ Addressed	4.3
Ch 7 Construction	CEMP 'binding' claims; enforceability; final form not on file	✓ Addressed	19
Ch 8 Noise/Vibration	Standard construction impacts	✗ Not pursued	
Ch 9 Traffic	Agricultural access disruption	✗ Not pursued	
Ch 10 Biodiversity	Atlantic salmon; lamprey; pearl mussel; otter; bats	✓ Addressed	5.4, 14, 20
Ch 10 Biodiversity	Salmon at ~5% conservation limits quantified by Tipperary CC	✓ Addressed	14.1
Ch 10 Biodiversity	GWDTes 2% drawdown basis challenged	✓ Addressed	14.2
Ch 10 Biodiversity	INNS inter-catchment transfer risk	✓ Addressed	14.3, 23.3
Ch 11 Water (Hydrology)	2% vs 29% Q95; 2018 drought; no gauges Old River Shannon	✓ Addressed	12
Ch 11/26 UKTAG	UKTAG thresholds not validated against Irish EPA biological metrics	✓ Addressed	9, 24.2
Ch 12 Water (General)	Wastewater return flows; assimilative capacity in Eastern catchment	✓ Addressed	16
Ch 13 Soils/Geology	Pipeline corridor geology	✗ Not pursued	
Ch 14 Agriculture	Construction disruption; farm access	✗ Not pursued	
Ch 15 Air Quality	Construction dust; standard mitigation	✗ Not pursued	
Ch 16 Climate	11,628 tCO ₂ eq 'immaterial'; cumulative sectoral emissions; RCP8.5 compound drought gap	✓ Addressed	10
Ch 16 Climate	Ardnacrusha 1.2% renewable concession	✓ Addressed	10.4
Ch 16 Climate	Carbon cost of leaked water Ch 27 dismissal rebutted	✓ Addressed	22
Ch 17 Population	2016 census base; 2022 data confirmation not provided	✓ Addressed	21.1
Ch 18 Human Health	Long-pipeline bacterial/chemical risk; DWD compliance	✓ Addressed	21.2
Ch 18 Human Health	Lead pipes Ch 27.3 dismissal contested	✓ Addressed	21.3
Ch 19 Landscape/Visual	Standard rural corridor impacts	✗ Not pursued	
Ch 20 Cultural Heritage	Standard archaeological mitigation	✗ Not pursued	
Ch 21 Material Assets	Navigation; angling; water recreation; economic value unmonetised	✓ Addressed	17
Ch 22 Resource/Waste	Sludge 28–42 t/day; no sludge management plan	✓ Addressed	15

RtS Report Chapter	Ground / Issue	Coverage	Location in this doc
Ch 23 Major Accidents	Pipeline failure scenarios	X Not pursued	
Ch 24 Cumulative Effects	In-combination under drought; climate trajectory; third-party abstractions	✓ Addressed	5.3, 12, 13
Ch 25 NIS (Natura)	Art 6(3) Sweetman/Holohan/Waddenzee; People Over Wind; Power v ABP	✓ Addressed	5.1–5.5
Ch 25 NIS	Common tern SPA functionally extinct	✓ Addressed	5.4, 20
Ch 25 NIS	Shannon Callows SPA hydrological function assessment absent	✓ Addressed	23.2
Ch 26 WFD	Art 4(1) element-level; Weser; CIS vs UK guidance; Art 4(7) absent	✓ Addressed	6, 9
Ch 26 WFD	Derg TN is NOT an HMWB Applicant's own concession para 2967	✓ Addressed	24.1
Ch 26 WFD	UKTAG Q95 exceeded on Applicant's own data (FIE)	✓ Addressed	24.2
Ch 26 WFD	Shannon (Lower)_OSO at POOR status heightened WFD burden	✓ Addressed	24.3
Ch 27 Additional Topics	Geotechnical sinkhole risk 'not relevant' dismissal rebutted	✓ Addressed	25.1
Ch 27 Additional Topics	Environmental Liability Directive 'not relevant' rebutted	✓ Addressed	25.2
Ch 27 Additional Topics	Carbon cost comparison 'not relevant' rebutted	✓ Addressed	22
Ch 27 Additional Topics	Lead pipes/DWD 'not relevant' rebutted	✓ Addressed	21.3

27. Consolidated Priority Summary of All Grounds

Ground	Nature of vulnerability	Strength	Section
Alternatives assessment EIA Dir Art 5(1)(d)	Strategic 1994–2022 NWRP screening substituted for project EIA level. Wallingford Report 2024s never published. SEA/EIA structural gap (effet utile). Cost quadrupled since last comparison.	Critical	4, 17
Habitats Directive Art 6(3) AA integrity standard	Conceded residual effects irreconcilable with 'no adverse integrity' finding. Salmon at 5% conservation limits. Shannon Callows SPA hydroperiod unassessed. People Over Wind / ESB management reliance.	Critical	5, 14, 23.2
Abstraction licence sequencing piecemeal consent	SID consent precedes two EPA licences (UÉ + ESB). ESB retrospective EIA not yet conducted. Cumulative assessment never done across both.	Critical	7, 14.3
Leakage elimination WFD Art 4(7)(d)	36% treated water lost. No quantified leakage elimination strategy. Carbon cost of leaked water unassessed. Prima facie irrationality argument.	Critical	8, 22
WFD Art 4(1) 1929 baseline circularity	10m ³ /s compensation flow set 1929; never assessed against WFD. UK/UKTAG guidance used instead of CIS. Derg TN is natural water body (not HMWB) Applicant's own concession.	High	6, 9, 24.1
2018 drought 74-day operational impossibility	ESB FOI data: 74 days zero Ardnacrusha flow. Pipeline CANNOT simultaneously satisfy statutory flow, Limerick supply AND Dublin abstraction. Model not back-tested.	High	12
WFD Art 4(8) Shannon basin integrity	Inter-basin transfer not assessed at full Shannon River Basin District level against Water Action Plan 2024 Programme of Measures.	High	6.3
No flow gauges Old River Shannon Parteen–Limerick	'No deterioration' conclusion for most affected stretch based on unvalidated model outputs no independent observational data exists.	High	6.2
Aarhus Convention effective participation	4-week window for 585-page technical report while Commission takes 1 year. Corrected deadline with 25 days remaining.	High	3.3
UKTAG Q95 exceeded on Applicant's own data	FIE: abstraction exceeds UKTAG low-flow benchmarks at Q95. Applicant invokes UKTAG when it shows pass, dismisses it when FIE shows fail.	High	6.2, 24.2
Shannon (Lower)_OS0 at POOR status	Heightened WFD burden: must demonstrate project will not impede recovery. Applicant's 'baseline' argument does not address this.	High	24.3
Climate compound drought not modelled	52-yr historical basis + RCP8.5 adjustment; no first-principles compound/consecutive drought. ICARUS evidence on Shannon Midlands drought frequency not incorporated.	Medium-High	10
Sludge unassessed WTP output	28–42 t dry sludge/day at peak. No sludge management plan. No disposal pathway. No GHG lifecycle assessment for sludge.	Medium-High	15
Wallingford Report 2024s not on public file	Two foundational hydrological assessments (1994, 2007) underlying original alternatives screening never placed in public domain. AIE requests lodged.	Medium-High	4.4

Ground	Nature of vulnerability	Strength	Section
Wastewater return flows unassessed	300 MLD new supply → 300 MLD additional wastewater. Assimilative capacity in Eastern catchment not demonstrated. Infrastructure already at/near capacity.	Medium	16.1
Atlantic salmon / ecological receptors	Last Shannon spawning population at Castleconnell. 5% conservation limit. Common tern functionally extinct on Lough Derg (no birds 2024 survey).	Medium	14, 20
INNS inter-catchment transfer risk	Pipeline physically connects Shannon + Eastern catchments for first time. Zebra mussel, Asian clam vectors not specifically assessed.	Medium	23.3
CRU cited as independent misleading	CRU reviewed under Public Spending Code (value for money only). Under the Public Spending Code and Water Services Sector Specific Guidelines (WSSSG) the CRU has an external assurance role in performing external review of major projects relating to the water services sector.	Medium	11.1
CBA/Preliminary Business Case opacity	10:1 ratio underpinned by unpublished methodology, discount rate, ecological cost treatment. Cannot support Art 4(7)(iii) overriding public interest test.	Medium	18
Subsurface leakage impacts Dublin	GWDTEs along Old River Shannon corridor; sinkhole risk; geotechnical cumulative impact. Ch 27.2 dismissal as 'not relevant' legally inadequate.	Medium	8, 25.1
CEMP mitigation unenforced	'Binding' claims conditional on ACP conditions not yet imposed. No final CEMP on file. No statutory enforcement body identified.	Low-Medium	19
Lead pipes / Drinking Water Directive	DWD 2036 deadline; interaction with Birdhill WTP chemistry; not costed in CBA. Ch 27.3 dismissal as 'not relevant' contested.	Low-Medium	21.3

28. Consolidated Requests to An Coimisiún Pleanála

The River Shannon Environment Protection River Shannon Environmental Protection Alliance makes the following specific requests, in order of urgency:

28.1 Procedural before Ardany determination

1. CONVENE an Oral Hearing under section 134 of the Planning and Development Act 2000 (as amended) before any determination.
2. REQUIRE Uisce Éireann to place the Wallingford Hydrological Reports (1994 and 2007) and review of the report and the full NWRP alternatives-screening matrices on the public file.
3. REQUIRE the Preliminary Business Case and all CBA model inputs (discount rate, time horizon, ecological cost monetisation) to be placed on the public file.
4. CONFIRM on the record that all 61 RtS Report references to the River Shannon Environment Protection River Shannon Environmental Protection Alliance (under both naming variants) are attributed to WSP_SUB_26 and form part of the public file.

28.2 Alternatives and EIA

5. REQUIRE a project-level alternatives assessment using 2026 costs, current climate projections, and current demand data specifically including Poulaphouca optimisation, Kildare groundwater, demand management, aggressive leakage reduction to EU-standard levels ($\leq 15\%$), and desalination by an independent expert not contracted to Uisce Éireann.
6. REQUIRE quantification and independent verification of treated water currently lost to Dublin network leakage and a demonstration that leakage reduction to below 20% is not a significantly better environmental alternative under WFD Article 4(7)(d).
7. REQUIRE confirmation that the 2022 census data and current CSO population projections have been incorporated into the supply-demand balance, with a revised model provided if they have not.

28.3 Habitats Directive and Biodiversity

8. REQUIRE the NIS to be supplemented with species- and habitat-specific ecological threshold assessments for all qualifying interests of the affected European sites, including the Lower River Shannon SAC, the Lough Derg SPA and the Shannon Callows SPA. This should include, inter alia, Atlantic salmon, lamprey, freshwater pearl mussel, otter, common tern, and alluvial forest habitats.
9. REQUIRE the Applicant to confirm whether all Natura 2000 sites within the hydrological zone of influence have legally compliant, adopted conservation objectives, and to address this in light of Power v An Bord Pleanála.
10. REQUIRE an INNS inter-catchment transfer risk assessment, specifically addressing the potential transfer of zebra mussel, Asian clam, and New Zealand mudsnail via the inter-basin connection.

28.4 Water Framework Directive

11. REQUIRE a strict element-level WFD deterioration assessment consistent with CIS Guidance No. 36 not a significance-based EIA assessment for every quality element of every affected water body.

12. REQUIRE the Applicant to confirm the WFD classification and applicable objective (GES or GEP) for Derg TN as a natural water body and to confirm WSIAR conclusions hold against the GES standard.
13. REQUIRE the Applicant to produce a table showing the abstraction volume as a percentage of Q95 flow against the applicable UKTAG river low-flow threshold, confirming whether the project passes or fails on its own data.
14. REQUIRE the Applicant to address the heightened WFD evidential burden for Shannon (Lower)_OS0 at Poor Status and to demonstrate the project will not impede recovery to Good Status.

28.5 Consenting and Licensing

15. NOT GRANT consent until both the ESB Parteen Basin impoundment licence and Uisce Éireann's water abstraction licence have been granted by the EPA following completed EIAR processes. Alternatively, condition any grant so that construction cannot commence until both licences are in place.
16. REQUIRE a schedule of enforceable planning conditions with precise, objectively measurable criteria, identifying the statutory enforcement body and enforcement pathway for CEMP compliance.
17. REQUIRE the final CEMP and REAC in complete forms to be publicly available before any grant of permission.

28.6 Additional requirements

18. REQUIRE a full sludge management plan for the Birdhill WTP at 154, 300, and 330 Mld abstraction rates, including disposal pathway, GHG lifecycle assessment, and agricultural loading assessment.
19. REQUIRE a regional water balance assessment demonstrating that receiving waters in the Eastern catchment can accommodate 300 Mld of additional wastewater loading without WFD deterioration.
20. REQUIRE a 172km long-distance water transfer risk assessment addressing bacterial regrowth, chemical migration, and trihalomethane formation potential during transit, consistent with Directive (EU) 2020/2184.
21. REQUIRE the Inspector to audit all cross-references in the RtS Report to confirm every substantive ground is resolved with complete, precise, and definitive findings not merely relocated to another chapter.

30. Conclusion

This summary is intended to give An Coimisiún Pleanála's Inspector an immediate overview of the principal grounds, the key facts, and the specific requests made.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance's central submission in one paragraph

Every independent legal, technical, scientific, and governmental review of this application has arrived at the same conclusion: the proposed Water Supply Project, as assessed and presented, does not demonstrate compliance with binding EU environmental law, and planning consent cannot lawfully be granted on the information currently before the Commission. This conclusion has been reached by the River Shannon Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance, by Sabrina Joyce-Kemper (Planning and Environmental Consultant, King's Inns), by Friends of the Irish Environment with independent ecological analysis and legal advice from FP Logue Solicitors, by An Taisce, by Salmon Watch Ireland, by Waterways of Clare, and critically by the Irish State's own infrastructure oversight body, the Major Projects Advisory Group, which found in January 2024 that the leakage alternatives analysis did not follow best practice, that the EPA had not set acceptable abstraction levels, and that Habitats Directive compliance at Parteen Basin was unresolved. They are the findings of the Irish State's own governance process.

29 1. The Ecological System Is Already in Crisis

Before any assessment of whether the proposed pipeline's impacts are acceptable, ACP must confront what the evidence shows about the current state of the River Shannon system:

- Atlantic salmon in the Lower Shannon are at approximately 5% of their conservation limits (Tipperary County Council, statutory body). The Shannon historically hosted the largest wild salmon runs in Europe — an estimated 400,000 fish per year. Catches collapsed from 414,000 pounds to 42,000 pounds in the decade after Ardnacrusha was built (CDM Smith/DHLGH Roadmap, 2021). The Castleconnell redds — a few hundred metres of river near Limerick city — are the last place wild salmon spawn in the River Shannon. Once gone, they cannot be restored.
- Common tern — a qualifying interest of the Lough Derg Shannon SPA — breeding population collapse on Lough Derg. No breeding pairs were recorded during the 2024 survey (National Parks and Wildlife Service (NPWS), Conservation Objectives: Lough Derg (Shannon) SPA 004058, Version 1, Department of Housing, Local Government and Heritage, 2024, although the Conservation Objectives note that further survey work is required to confirm the species' current breeding status. Against this backdrop, any additional pressure on the SPA requires particularly careful assessment under the Habitats Directive.
- The Old River Shannon below Parteen Weir runs at the statutory minimum of 10 m³/s for approximately 11 months of the year. This flow was set in 1929 as an engineering compromise for the Ardnacrusha hydroelectric scheme. It was never assessed against any ecological standard. The Irish State's own expert consultants — commissioned by the Department of Housing in 2021 to produce a fish passage roadmap, with Uisce Éireann on the Steering Group — concluded plainly that this flow 'does not present current international best practice' and recommended flows of 17–65 m³/s to restore ecological function.
- Ireland is currently — as this submission is written in July 2026 — experiencing an extreme hydrological drought. The Shannon at Parteen Basin during the 2018 drought provided zero

operational flow for Ardnacrusha for 74 consecutive days. The ESB's own data, obtained under FOI, confirms that Ardnacrusha already idles for an average of 20 days per year under current conditions — without any pipeline abstraction. Every one of those days is a day on which the pipeline, if operational, would draw from Lough Derg Lake storage.

Against this baseline, the Applicant is asking ACP to authorise a new abstraction of up to 300 million litres per day from the same water system. The Habitats Directive's precautionary standard 'no reasonable scientific doubt' about the absence of adverse effects cannot be met for a system in this condition.

30 2. The Demand Case Is Built on Data the Regulator Has Contradicted

The entire project justification rests on a supply-demand deficit in the Greater Dublin Area. Every one of the key figures underpinning that deficit has been challenged or contradicted by the Applicant's own Regulator, the Commission for Regulation of Utilities (CRU):

What the CRU's own data shows

The correct national leakage rate in 2024, applying the CRU's revised definition, is 43% — not the 36–37% Uisce Éireann has been reporting publicly.

Leakage nationally went UP in 2022, 2023 and 2024 — the opposite of the falling trajectory assumed in the demand model.

The CRU fined Uisce Éireann €20 million for missing its 2020–2024 leakage reduction targets: 176 Mld of reduction was required; only 90 Mld was achieved — a 49% shortfall.

The network mains replacement rate is less than 0.3% per year — not the 0.4% Uisce Éireann has published.

Uisce Éireann's claim that GDA leakage is down to 29% is unverifiable. CRU Commissioner has confirmed to Emma Kennedy (RSEPA Consultant) confirmed the CRU does not collect leakage data for specific Water Resource Zones. There is no data to support this figure.

The Irish Government's Major Projects Advisory Group (MPAG), reviewing the Preliminary Business Case in January 2024, independently found that the leakage options analysis 'did not follow best practice' and that new Shannon water 'will be piped into the existing water supply pipeline' — confirming that the project adds new supply to a network losing 43% to leakage without first demonstrating that leakage reduction is not a significantly better environmental alternative.

The 86 Mld of leakage reduction that was legally required between 2020 and 2024 and was not delivered represents 56% of the pipeline's initial operational capacity. Ireland is being asked to spend up to €10.4 billion on a 172km pipeline partly to fill a supply gap that exists only because Uisce Éireann missed a statutory target and was fined €20 million for doing so.

31 3. Poulaphouca: The Publicly Owned Solution Being Used as a Temporary Fix

Poulaphouca Reservoir — the Blessington Lakes — has 148 billion litres of active storage capacity. It was built between 1937 and 1940 specifically to serve Dublin's water supply. It is publicly owned. It is 45km from Dublin — 115km closer than Parteen Basin. Ballymore Eustace Water Treatment Plant is already on the reservoir and connected to the Greater Dublin Area supply network.

Thames Water in England is currently seeking planning permission to build a new reservoir of approximately 150 billion litres — virtually identical to Poulaphouca — at an estimated cost of £3.6–5 billion, to secure supply for 15 million Londoners.

Uisce Éireann now confirms it will use Poulaphouca to secure Dublin's supply during the construction period of the Shannon Pipeline — because it can. If it can secure Dublin's supply for five to seven years at zero new capital cost using Poulaphouca, the question of why Poulaphouca cannot secure Dublin's supply for twenty or thirty years — with demand management and incremental eastern river development — has never been answered at project EIA level. It has been assumed away.

The project need case, the cost-benefit ratio, and the alternatives assessment are all undermined by this single fact: Ireland already owns a reservoir of the scale Thames Water is spending €5bn to build, purpose-built for Dublin's water supply, and Uisce Éireann is proposing to spend up to €10.4bn on a pipeline instead.

32 4. The Wallingford Reports: Foundations That Have Never Been Tested

The alternatives assessment underpinning this application rests on two hydrological assessments of the River Shannon system — understood to have been prepared by Wallingford Hydrosolutions in approximately 1994 and 2007 — which formed the foundation of the NWRP alternatives screening. These reports have never been placed in the public domain. They have never been independently reviewed. They cannot be examined by ACP, by the Inspector, or by any party to these proceedings.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance has made formal AIE requests for both reports. Without them, the alternatives assessment cannot be evaluated for legal compliance with Article 5(1)(d) of the EIA Directive. ACP should require Uisce Éireann to place both reports on the public file before determining this application. A permission granted without these documents being publicly available and independently reviewed would be built on foundations that no one outside Uisce Éireann has ever seen.

33 5. What the Irish State's Own Bodies Have Found

The River Shannon Environment Protection River Shannon Environmental Protection Alliance is not alone in identifying these deficiencies. The following findings come from Irish State bodies and Government-commissioned reports — not from campaign groups:

- MPAG Review Note (January 2024, Department of Public Expenditure): Leakage alternatives analysis 'did not follow best practice.' EPA had not set acceptable abstraction levels. Habitats Directive compliance at Parteen Basin was an outstanding unresolved concern. True RCF P90/95 project cost range is €9.255–10.405bn — never presented to ACP. Desalination identified as relevant comparator if project schedule slips.
- Lower Shannon Roadmap (CDM Smith for DHLGH, 2021, with Uisce Éireann on the Steering Group): The 10m³/s compensation flow 'does not present current international best practice.' Recommended ecological flows of 17–65 m³/s. The existing Parteen fish pass and Ardnacrusha fish lock 'cannot be brought up to present best practice' and should be completely replaced. The pipeline abstraction was specifically flagged as a competing demand on the flow budget.
- UCD Dooce Centre (O'Loughlin and Mozafari, 2023): Uisce Éireann's NWRP uses IPCC AR4 data — two generations old. Multi-year droughts projected to be 11–48% more frequent by mid-century. Q95 flows projected to reduce by 21% by the 2080s. Shannon Basin PET to increase 13.5% by 2080. The project's hydrological modelling methodology is not fit for purpose.
- An Taisce (statutory prescribed body): The State itself has tendered a project (Ref 7328234) to develop environmental flow recommendations for the Shannon scheme — the foundational ecological data needed to assess this application — and it does not yet exist. ACP is being asked to consent to a major new abstraction while acknowledging, through its own tendering process, that the baseline ecological knowledge is not available.
- Tipperary County Council (statutory body): Atlantic salmon in the Lower Shannon are at approximately 5% of their conservation limits. Even small flow reductions may have harmful effects on spawning, nursery habitat and migration.

- Clare County Council (statutory body): The EIA process may be legally deficient in several respects that have previously resulted in successful judicial review challenges in Ireland.

34 6. Summary of Grounds

#	Ground	Legal basis	Strength	Section	Key facts
1	EIA Directive — Alternatives Assessment	Art 5(1)(d)	Critical	4, 17, 35	Wallingford Reports (1994/2007) unpublished. NWRP strategic screening (1994–2022) substituted for project EIA assessment. SEA/EIA effet utile gap. Costs quadrupled. MPAG: leakage analysis deficient. Poulaphouca: 148bn litre publicly owned reservoir, 115km closer to Dublin, being used as interim measure — never assessed as long-term alternative. 594 feasible options never project-level assessed.
2	Habitats Directive — Appropriate Assessment	Art 6(3)	Critical	5, 14, 20	RtS para 49 concedes 'minor residual effects' then asserts 'no adverse effect on integrity' — legally incoherent under Sweetman and Holohan. Salmon at 5% of conservation limits. Common tern breeding population collapse on Lough Derg (zero breeding pairs, 2024). Shannon Callows SPA hydrological function unassessed. ESB operational management inadmissible as mitigation under People Over Wind. Ardnacrusha already idles 20 days/year — drawdown is annual, not exceptional. No legal mechanism prevents emergency derogation from Normal Operating Band.
3	Abstraction Licence Sequencing — Piecemeal Consent	EIA Dir / CJEU	Critical	7	SID planning consent precedes two interdependent EPA licences (UÉ and ESB). ESB retrospective EIA not yet conducted. Cumulative assessment never done across both. MPAG (Jan 2024): EPA had not set acceptable abstraction levels when this was written. Kraaijeveld prohibition on salami-slicing directly engaged.
4	Leakage — CRU Enforcement and Collapsed Demand Case	WFD Art 4(7)(d)	Critical	8, 22	National leakage is 43% (correct CRU definition) — not 36% as published. Leakage ROSE in 2022, 2023 and 2024. CRU fined UÉ €20m for missing 2020–2024 targets: 176 Mld reduction required; only

#	Ground	Legal basis	Strength	Section	Key facts
					90 Mld achieved (49% shortfall). Network renewal rate <0.3%/year not 0.4% as stated. GDA 29% figure unverifiable — CRU Commissioner Kennedy confirmed no WRZ-level data exists. MPAG: leakage alternatives analysis did not follow best practice.
5	Water Framework Directive — Baseline Circularity	Art 4(1), Art 4(7)	High	6, 24	10m ³ /s compensation flow set 1929 as engineering compromise. Never assessed against WFD. Lower Shannon Roadmap (2021, commissioned by DHLGH, UÉ on Steering Group): 'the low and unvaried compensation flow practice does not present current best practice.' Recommended EFlow: 17–65 m ³ /s. Derg TN is NOT an HMWB — Applicant's own concession at RtS para 2967 — so GES not GEP applies. UKTAG Q95 exceeded on Applicant's own data (FIE). Shannon (Lower)_OSO at Poor Status — heightened burden.
6	THM Contamination — Drinking Water Directive	Dir 2020/2184	Critical	27, 31	Clareville WTP (Limerick) draws from Ardnacrusha Headrace and Old River Shannon — fed solely from Parteen Basin. Same source water as proposed Birdhill WTP. Clareville currently supplies Limerick with water containing THM levels far exceeding 100µg/l maximum permitted. Applicant's response at RtS para 2272 misleadingly implies these are different source waters. No upgrade plan for Clareville provided.
7	Climate — Compound Drought Not Modelled	Climate Acts / CJEU	High	10, 34	EIAR uses 52-year historical baseline with RCP8.5 adjustment. O'Loughlin & Mozafari (UCD Dooge Centre, 2023): UÉ's NWRP uses IPCC AR4 data — two generations behind current assessment reports. Multi-year droughts projected 11–48% more frequent by mid-century (Leahy et al. 2021). Q95 flows projected to reduce 21% by 2080s (Meresa et al. 2022). Shannon Basin PET to increase 13.5% by 2080 (Gharbia et al. 2018). Recent events, including Cape Town 2015–2018: multi-reservoir city nearly failed in 3-year

#	Ground	Legal basis	Strength	Section	Key facts
					drought. Loire Basin July 2026: river-dependent nuclear stations closed.
8	Lough Derg Evaporation — Insufficiently assessed System Demand	EIA Dir Art 5(1) / WFD	High	39	On a hot drought day, Lough Derg (118 km ²) loses 354–708 million litres to evaporation — equivalent to 4.09–8.19 m ³ /s. At 6mm/day, evaporation exceeds the pipeline abstraction by a factor of 2.4 and equals 82% of the statutory compensation flow.
9	Data Centres — Omitted from 585-Page RtS Report	EIA Dir / Public Interest	High	30	The words 'data centre' do not appear in the 585-page RtS Report. Ireland has 80+ operational data centres and 40+ in planning. Peak cooling demand coincides with peak drought — hot summer conditions — when Shannon flow is lowest. True allocation of pipeline output to data centre cooling has never been disclosed. Water is a Common Good.
10	Aarhus Convention — Effective Participation	Aarhus Art 6(7)	High	3.2	Corrected 21 July deadline gave <4 weeks to respond to 585-page document. Commission takes 1 year (to July 2027) to reach its own determination. Extension request made. Proportionality of this disparity is inconsistent with Aarhus Article 6(7).

35 7. What the River Shannon Environment Protection River Shannon Environmental Protection Alliance Requests of An Coimisiún Pleanála

The River Shannon Environment Protection River Shannon Environmental Protection Alliance makes the following essential requests, in priority order:

36 Before any determination

- CONVENE an Oral Hearing. The disputed scientific, hydrological, ecological, and legal questions in this application cannot be resolved on paper. Cross-examination of the Applicant's experts is required.
- EXTEND the response deadline to no earlier than 29 August 2026, consistent with Aarhus Convention Article 6(7). The corrected 21 July deadline gave the River Shannon Environment Protection River Shannon Environmental Protection Alliance fewer than four weeks to respond to a 585-page document while the Commission itself takes one full year to determine the application.
- REQUIRE Uisce Éireann to place the two Wallingford Hydrological Reports (approximately 1994 and 2007) and the full NWRP alternatives-screening matrices on the public file.

- REQUIRE the Preliminary Business Case and all CBA model inputs — including the discount rate, time horizon, and ecological cost methodology — on the public file. The 10:1 ratio claimed cannot support the Article 4(7)(iii) overriding public interest test without disclosure of its foundations.
- REQUIRE confirmation from the EPA of what volume of abstraction from Parteen Basin it considers environmentally acceptable under the Water Environment (Abstractions and Associated Impoundments) Act 2022.

37 On alternatives

- REQUIRE a project-level alternatives assessment using 2026 costs, current climate projections, and current demand data — including Poulaphouca as a long-term option, Kildare groundwater, demand management, leakage reduction to EU-standard levels, and the eastern rivers (Liffey, Boyne, Barrow, Slaney) in combination.
- REQUIRE quantification and independent verification of treated water lost to Dublin network leakage, and a demonstration that leakage reduction to below 20% is not a significantly better environmental alternative under WFD Article 4(7)(d).

38 On Habitats Directive

- REQUIRE the NIS to be supplemented with species-specific ecological threshold assessments for all qualifying interests of the affected European sites, including the Lower River Shannon SAC the Lough Derg (Shannon) SPA and the Shannon Callows SPA, with each qualifying habitat and species assessed—addressed individually as required by Holohan (C-461/17).
- REQUIRE the Applicant to demonstrate that the conceded 'measurable effects during extreme drought periods' (RtS para 2626) do not constitute adverse effects on the integrity of the affected European sites over the 60-year operational life of the project, for each qualifying interest individually.
- REQUIRE the Applicant to identify the legally binding mechanism that would prevent emergency derogation from the Normal Operating Band during a prolonged drought. In the absence of such a mechanism, the Article 6(3) integrity conclusion depends upon an operational assumption that is not legally secured and may not hold in the very circumstances in which the project is intended to operate.

39 On Water Framework Directive and THM

- REQUIRE a strict element-level WFD deterioration assessment using CIS guidance, not post-Brexit UK guidance, for every quality element of every affected water body — including Derg TN as a natural water body subject to GES, not GEP.
- REQUIRE documentary confirmation of current THM levels in Limerick City's drinking water from Clareville WTP, and a specific plan for bringing Clareville to the same standard as the proposed Birdhill WTP before the abstraction commences.

40 On consenting

- NOT GRANT consent until both the ESB Parteen Basin impoundment licence and Uisce Éireann's water abstraction licence have been granted by the EPA following completed EIAR processes.

41 8. Conclusion

This is one of the most consequential planning decisions in the history of the Irish State. It will determine whether a 172km pipeline is built from the River Shannon to Dublin at a true project cost of potentially €10.4bn abstracting water from one of Ireland's most ecologically significant river system. The proposal is advanced against an ecological baseline that has deteriorated significantly, a compensation flow regime established in 1929, climate assumptions that have been criticised as relying on outdated projections, and an alternatives assessment founded on unpublished hydrological reports that have never been subjected to independent public scrutiny.

The River Shannon Environment Protection River Shannon Environmental Protection Alliance is not opposed to securing Dublin's water supply. It is opposed to doing so through this project, in this form, with this level of evidence, against this ecological baseline, in these climate conditions. The Shannon ecosystem cannot absorb another pressure of this magnitude. The evidence from the River Shannon Environment Protection River Shannon Environmental Protection Alliance, from allied objectors, from statutory bodies, from Government-commissioned reports, and from the Applicant's own Regulator does not support the conclusion that it can.

Planning permission for this application cannot **lawfully** be granted on the information currently before the Commission. The River Shannon Environment Protection River Shannon Environmental Protection Alliance urges ACP to convene an Oral Hearing, require the outstanding information identified in this submission, and refuse to determine this application until it can be satisfied — to the standard the Habitats Directive and the EIA Directive require — that the grounds for objection have been answered.

ELAINE DOYLE

Director and Secretary

River Shannon Environmental Protection River Shannon Environment Protection River Shannon
Environmental Protection Alliance Company Ltd (WSP_SUB_26)

3 Newtown Park, Castletroy, Limerick, V94 HTD1

Mobile: 087 9083727

Email: doyle_elaine@hotmail.com

This submission is made without prejudice to the River Shannon Environmental Protection River Shannon Environment Protection River Shannon Environmental Protection Alliance's right to advance additional or supplementary grounds, to engage independent expert witnesses, and to challenge any grant of permission by way of judicial review. The River Shannon Environment Protection River Shannon Environmental Protection Alliance expressly reserves all rights under the Aarhus Convention and under EU and Irish environmental law.