An Taisce
The National Trust for Ireland
5 Foster Place
Dublin 2, Ireland
D02 V0P9

20260225-ACP-323980

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

Sent by email to: sids@pleanala.ie

25th February 2026

Ref: 323980
App: Uisce Éireann
For: Proposed Water Supply Project for the Eastern and Midlands Region
Site: in the counties of Clare, Limerick, Tipperary, Offaly, Kildare, and Dublin.

A Chara,

Thank you for referring the above application to An Taisce for comment. We wish to make the following observations.

1. Need for Reliable Drinking Water Source

An Taisce fully recognises the importance of ensuring a reliable and clean source of drinking water for the Eastern and Midlands Region, including the Greater Dublin Area, to meet supply challenges in the years ahead. We also recognise that the subject proposal appears to be the only significant plan to address those challenges.

We consider that any project introducing a major new drinking water source cannot occur in isolation, however. Water is a very finite resource and will only become more so as climate change worsens. We therefore welcome the progress made by Uisce Éireann on addressing the long-standing issue of water leakage in the existing water infrastructure, and recommend that leak reduction efforts in the Eastern and Midlands Region be increased even further so that, should the subject proposal be granted, water piped from the Shannon is not wasted. Similarly, we also recommend that demand reduction measures and programmes also be continued and expanded, including the promotion of water use efficiency measures, the incentivisation of conservation efforts among water users, the use of tariffs to promote conservation, and the use of water recycling and rainwater harvesting measures.

It is also crucial that any project to increase water supply will not have significant adverse environmental effects. An Taisce has multiple concerns in this regard, including about the adequacy of the assessments accompanying the subject application, which we discuss in the following sections.

2. Demand Projections

In our submission to the non-statutory consultation, we noted that Uisce Éireann's population growth forecasts for the Greater Dublin Area appeared to be outdated due to a reliance on 2016 census data, which would be likely to underestimate the amount of water supply required throughout the duration of the project. It is submitted that the most recent census figures, as well as current and projected population estimates for the region in the National Planning Framework, should be utilised to inform water supply and demand forecasts. We recommend that An Coimisiún should clarify that such figures have been integrated into the proposal and the Supply Demand Balance (SDB).

Additionally, we consider that demand in the period beyond 2050 requires at least some evaluation. The applicant's response to the scoping consultation submissions states the following (section 4.1.1 of the Consultation Report) in this regard:

> *"Projections within this plan are limited to the year 2050 in alignment with the National Planning Framework (2025) and the most recent Central Statistics Office population forecasts. This timeframe reflects the horizon over which there is a reasonable degree of confidence in demographic, economic, and environmental data. Beyond 2050, the uncertainty associated with long-term projections increases significantly, reducing their reliability for strategic planning purposes. As such, extending projections beyond this point would not provide a robust basis for decision-making.*
>
> *The Proposed Project is designed to meet normal operational supply needs well beyond 2050, even though its capacity is based on peak demand projections for 2050."*

While we acknowledge the uncertainty of the projections after 2050, this project is intended to provide security of water supply well beyond that year. At the same time, the impacts of climate change are predicted to worsen in the coming decades, including the likelihood and severity of droughts and water shortages. We therefore submit that in the interest of ensuring the project's sufficiency and resiliency in the longer term, demand projections beyond 2050 should still be discussed and considered in the application while acknowledging the increased uncertainty.

Regarding non-domestic users, the applicant's Consultation Report states in section 4.1.7 that the non-domestic demand forecast is provided in the Regional Water Resources Plan – Eastern and Midlands (RWRP-EM). This plan is from 2022, so it should be ensured that the non-domestic demand forecasting is up to date and has taken into account any changes since 2022.

3. Abstraction from the Parteen Basin

We note that the Parteen Basin is linked to Lough Derg and is controlled by the ESB as a source of water for energy production at Ardnacrusha power station. The current water management regime diverts most of the flow from Lough Derg to the Ardnacrusha power station, and the remaining water enters the Old River Shannon channel with a minimum compensatory flow of 10m3/second. The subject proposal seeks to *"abstract enough raw water from the River Shannon at Parteen Basin to provide up to 300Mld of treated water by 2050."* (EIAR, Ch.9: Water, p.1).

We would highlight that Lough Derg is designated as the Lough Derg (Shannon) SPA (site code: 004058), and the Parteen Basin is within the Lower River Shannon SAC (site code: 002165). Therefore, they both contain important and sensitive habitat for an abundance of bird and other species, and the proposal requires robust assessment as well as the implementation of conservation measures during project construction and operations should permission be granted.

3.1 Baseline

We would observe that the proposed abstraction is not being introduced into an ecologically neutral baseline. It is being proposed for an already significantly altered hydrological regime in which approximately 90–95% of the long-term average flow of the Lower River Shannon SAC at Parteen Regulating Weir is being abstracted from the SAC and diverted to Ardnacrusha hydroelectricity scheme. This leaves a predominantly uniform statutory compensation flow of 10 cumecs (m^3/s) for 15 km of the old Lower River Shannon SAC channel, for the majority of the year.

The NIS and EIAR assess the proposed abstraction relative to this managed regime, without recognition that the baseline itself is both heavily hydrologically impacted and as a result ecologically constrained. The NIS and EIAR rely on modelling which depends on the statutory 10 m^3/s compensation flow, with the implicit assumption that this is ecologically sound. However, this extant reduced flow condition has never been assessed against Water Framework Directive (WFD) objectives, or the conservation requirements of the SAC. As such, any project which depends on the hydrological status quo in order to operate is, in effect, relying on the continuation of the existing ecological degradation.

While the environmental assessments do demonstrate limited hydrometric change within the system, the assessment does not assess the adequacy of that system, or how it complies with our European environmental law obligations. The assessments have failed to demonstrate that the current compensation regime maintains the hydrological conditions consistent with WFD requirements in the >15 km SAC river channel between Parteen Regulating Weir and the confluence with the tailrace, or conducive to the conservation objectives of the qualifying interests of that SAC.

While the NIS does state that the Proposed Project would not impede a future "flow-sharing decision" or gate adjustments at Parteen Weir to allow more water to be provided to the Natura 2000 river channel downstream of Parteen Regulating Weir, this has not been scientifically assessed within the provided documentation. This assertion should be verified against a defined future environmental flow regime. A robust ecological assessment of the 15km old river Shannon channel would likely highlight the need for far higher flows than the standard 10 m^3/s to meet the requirements of both WFD and Habitats Directive, but without knowing what the necessary levels might be, the assertion that it would not impede on this future flow-sharing decision cannot be considered scientifically robust, in the absence of an evidence base.

The proposed abstraction is operationally dependant on the Ardnacrusha hydroelectricity scheme and relies on the continued regulation of flows between the hydropower and the compensation discharge. The key issue and lacuna here is that the ecological adequacy of the existing regime has never been assessed or demonstrated, and this project relies upon the altered hydrological regime. The cumulative assessment for this project fails to assess the adequacy of the existing baseline, and as such must be considered a lacuna for the purposes of Appropriate Assessment. The NIS in-combination assessment concluded (Table 8.3):

> *"Given that the Proposed Project alone would not adversely affect the integrity of the Lower River Shannon SAC, and that there would be no additional barrier effects to fish migration or mortality of fish with the proposed mitigation measures in place, or any change to the*

generator discharge rate at the Ardnacrusha Generating Station, there would be no possibility for any significant in-combination effects with the Shannon Hydroelectric Scheme."

The EIAR (para 604 of chapter 4) highlights the following: "*The proposed abstraction of water is in essence, an abstraction from water normally used in the hydro-power plant, using the same existing water level controls, and therefore avoiding having to construct a new impoundment.* "

As such, the proposed project is functionally dependant on the extant Ardnacrusha development, and the impact of the extant Ardnacrusha development must be thoroughly assessed as part of this new development, particularly given the adequacy of the 10 m^3/s compensation flow has never been assessed against our EU environmental legal obligations.

The risk of failing to do this analysis is that introducing a new large-scale abstraction into an already constrained system could seriously constrain the implementation of future necessary in environmental flow reforms required in order to comply with EU law. The ecological assessment of the adequacy of the 10 m^3/s compensation flow and the quantification of the flows which would be necessary to restore the ecological function of the Old River Shannon for both WFD and Habitats Directive compliance should be a critical element of the cumulative assessment carried out as part of this project. However, this assessment is absent, and in the absence of the provision of further detail by the applicant on this specific point, this must be considered a lacuna for the purposes of the Habitats Directive.

The requirement for certainty when carrying out an Appropriate Assessment has been clearly fleshed out in case law. It is now very well established in law that approval can only be granted for plans and projects when it has been established beyond all reasonable scientific doubt that the subject proposal will not adversely impact any Natura 2000 sites. In Case C-258/11, Sweetman & Others v An Bord Pleanála & Others, the CJEU held that:

> *"authorisation for a plan or project ....may therefore be given only on condition that the competent authorities ....are certain that the plan or project will not have lasting adverse effects on the integrity of the site. That is so where* ***no reasonable scientific doubt remains*** *as to the absence of such effects"* [emphasis added].

In Kelly v An Bord Pleanála & Ors. [2013 No 802 J.R.], with reference to Commission v Spain c-404/09, the High Court held in para. 36 that the competent authority must carry out an AA for a plan or project in light of the best scientific knowledge in the field and that the final determination of the competent authority must include complete, precise and definitive findings. The case repeated the conclusion of the CJEU at para. 44 in Case C-258/11, namely that an AA: "*cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt*."

This test has not only been established in Irish law but further developed in recent case law, with reference to the Kelly judgement, in Connelly v ABP [2018] IESC 31 (paras. 8.15 & 8.16) and Foley v EPA & Ors and Hayes v EPA & Ors [2022] IEHC 470 (para. 118).

Similarly, Article 5 of the Surface Water Regulations 2009 requires a public authority, in the performance of its functions, not to undertake those functions in a manner that knowingly causes or allows deterioration in the chemical or ecological status of a body of surface water.

Regarding the WFD, in Case C- 461/13 Weser the CJEU held:

"Article 4(1)(a)(i) to (iii) of Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy must be interpreted as meaning that the Member States are required

— unless a derogation is granted
— to refuse authorisation for an individual project where it may cause a deterioration of the status of a body of surface water or where it jeopardises the attainment of good surface water status or of good ecological potential and good surface water chemical status by the date laid down by the directive."

The Relevant Authority in this case needs to consider whether the authorisation for this project, which relies functionally on the ongoing hydrological alteration of the River Shannon, an alteration which was never assessed for compliance with WFD, would in fact jeopardise the attainment of WFD objectives for the waterbody. An Article 4 WFD assessment is necessary, but to be ecologically meaningful it must assess the impact of the existing hydrological alteration on WFD status. Given the proposed pipeline is functionally dependent on the existing impoundment and hydrological regime, the impact of the existing impoundment must be rigorously assessed as part of the WFD Article 4 assessment. This assessment has not been provided by the applicant.

We would note the recently tendered project (reference 7328234) by the State to address foundational gaps in the understanding of the Lower River Shannon hydrology and ecology. The tender is seeking to develop environmental flow recommendations and hydrological modelling for the Shannon scheme in order to inform restoration of ecological function and compliance with EU environmental law. We would observe that this is the exact information which is necessary in order to fully assess the impact on this proposal on the ecology and function of the River Shannon from both a Habitats Directive and a WFD perspective. While we welcome the State seeking this information, it clearly underscores the prematurity of this planning application, and the inadequacy of the environmental assessment which accompanies this application given this information is clearly not yet readily available. This information should form the ecological basis for this planning decision.

3.2 Inadequate Fish Surveys

An Taisce has concerns about the adequacy of the fish surveys at the abstraction point. It appears that the application relies primarily on a 2016 survey by Inland Fisheries Ireland. This is now ten years out of date and very limited in scope, and we therefore consider it to be insufficient for assessing the subject proposal.

It would appear that the applicant has not carried out species-specific surveying using accepted standardised methods for key Qualifying Interests of the Lower River Shannon SAC, including Atlantic salmon and three species of lamprey (brook, river and sea). It appears that no netting or electrofishing were carried out. As noted by Inland Fisheries Ireland, *"Electrofishing of juveniles presents an alternative (and fisheries independent) source of population information, as the numbers of juveniles should be a good reflection of the number of adults which produced them and the relative productive capacity of the river."*[1] This is significant given that the Shannon is noted by experts as recording low salmon fry abundance, with the potential for the subject proposal to act as an additional pressure for the species requiring close consideration. Survey techniques such as electrofishing would

[1] Holmes *et al.* 2025. Report on Salmon Monitoring Programmes 2023 funded under the Salmon and Sea Trout Rehabilitation, Conservation and Protection Fund. https://www.fisheriesireland.ie/sites/default/files/2025-02/report-on-salmon-monitoring-programmes-2023-funded-under-the-sstrcpf.pdf

allow for an accurate baseline characterisation of existing juvenile fish numbers, and a comparison with previous surveys to determine if declining trends are in effect.

3.3 Impacts of Climate Change

Climate change will have increasingly significant impacts on water and rainfall levels around the country. As highlighted by the EPA's Climate Change Assessment, *"drought-related stresses on water supplies will increase in the future as demand increases and as extended dry spells become more common."* (EPA, 2024, p.172).[2] In the context of the subject application, the increased likelihood of dry spells and drought, particularly in the summer months, will likely mean longer and more frequent periods of low flow levels in the Shannon, Lough Derg, the Parteen Basin, etc., and indeed lead to lower low flow volumes.

A robust assessment of the proposal against various climate change scenarios is therefore crucial, in particular looking at meteorological drought due to precipitation deficits and hydrological drought due to streamflow and groundwater deficits requires full consideration. As emphasised by the EPA, *"It is critical that assessments of future water available for use (WAFU) are updated using contemporary climate change projections."* (EPA, 2024, p.137)[3].

The climate modelling used in the Abstraction Assessment uses the existing water management regime, including the current $10m^3/s$ compensation flow and assumes this will remain in place as the baseline condition. As described above, however, this existing water management regime has not been ecologically assessed or assessed against our legal obligations under the Water Framework Directive or Habitats Directive. It has also not been established that the current regime will be ecologically sufficient or legally compliant into the future, particularly when factoring in the impacts of climate change. The $10m^3/s$ flow level itself has not been climate-proofed. Similarly, the assessment of the proposed abstraction amounts has not considered whether or not this would impact the achievement of ecological restoration measures required under the Habitats Directive or the achievement and maintenance of at least good water quality status under the Water Framework Directive. This is particularly important in relation to future climate scenarios when water levels may be low. Ultimately, we recommend that the project needs to be assessed against various climate scenarios and legally compliant ecological management scenarios, and the intersections thereof, and not simply rely on the current (and unassessed) water management regime.

4. Pipeline Route and Biodiversity

We would emphasise the importance of adopting a mitigation hierarchy which seeks to avoid adverse impact to and removal of established biodiversity features along the entirety of the pipeline route. This includes mature native woodland fragments, peatlands, hedgerows, wetland areas and areas with wetland indicating sediment, as well as areas of naturally regenerating scrub and vegetation. These are likely to act as habitat for an abundance of animal, plant and fungi species, while providing a variety of ecosystem services such as flood regulation, carbon sequestration, soil health and genetic resilience. As a last resort, any tree or vegetation removal which is considered unavoidable should engage in replacement planting which utilises native species of Irish provenance.

This is of direct relevance with regard to the ecological value of the mature ash and hazel woodland (WN2) site surveyed along the southeastern side of the Parteen Basin (RAW2). The consultant in the Parteen Basin Habitat Assessment (Appendix 8.1) has noted it to be of "moderate to high ecological

[2] https://www.epa.ie/publications/monitoring--assessment/climate-change/ICCA_Volume-3.pdf
[3] https://www.epa.ie/publications/monitoring--assessment/climate-change/ICCA_Volume-3.pdf

value" and to have an affinity with the EU Habitats Directive Annex 1 Alluvial woodland habitat type [91E0]. Therefore, an articulation of stringent mitigation measures and a priority for retention is advised given the site's "international conservation importance." It could also support habitat for Qualifying Interest species of the Lower River Shannon SAC, such as the Otter.

Furthermore, it is noted that the Pipeline Routing Report (Appendix A3.1) and EIAR Ch.8: Biodiversity refers specifically to traversing of the following waterbodies; Nenagh River, Little Brosna River, Clareen Stream, Breaghmore River, Camcor River, Silver River, Clodiagh River, Figile River, Blackwater River, River Liffey, Grand Canal and Kilmastulla River. River crossings require careful planning to ensure the avoidance of trenching techniques, for example, to preserve the ecological integrity of the aquatic ecosystem. Furthermore, Horizontal Directional Drilling (HDD) methods, if proposed, should avoid release of drilling fluids and should articulate a rapid spill response protocol in the event of malfunction. EIAR Ch.8: Biodiversity (p.226) acknowledges that bentonite drilling fluid is to be utilised by the applicant during HDD. This substance can introduce contaminants to groundwater, surface water and sensitive ecological receptors, especially due to fugitive drilling mud and fluids, referred to as "Inadvertent Returns" (IR).[4] Consequently, mitigation measures should be sufficiently robust to avoid river collapse and contaminant introduction into the aquatic environment.

We also recommend that An Coimisiún assess the potential for increases in soil erosion to ensue during construction works due to vegetation removal during trenching. Compaction and soil profile disturbance may also affect groundwater recharge patterns which should be particularly considered at areas of higher permeability to ensure that groundwater quality status does not deteriorate and compromise WFD objectives. The potential for higher surface water run-off with sediment-laden water into sensitive aquatic receptors should also be considered, especially rivers and streams noted for salmonid populations whose gravel spawning grounds can be smothered by excess siltation. Excess sedimentation may also give rise to hydromorphological impacts.

It is noted from EIAR Ch.4: Water (p.1) that power for the Raw Water Intake and Pumping Station (RWI&PS) would be via an underground electrical connection. It should be ensured that the transmission cabling route avoids particularly ecologically sensitive sites. A new access road is also proposed to access the pumping station site for maintenance. Potential ecological impacts to facilitate road construction should be mitigated against, with particular regard to sensitive siting of the access road route.

Two raw water rising mains (RWRMs) are proposed whose siting should have regard to ecological sensitivities. Regular maintenance and a rapid response protocol in the event of infrastructural defect should also be conditioned as part of development consent.

It is noted that the proposed Water Treatment Plant involves works within an area of land of 2.5ha on a temporary basis. It should be ensured that appropriate and rigorous ecological surveys of sufficient seasonality and duration have been carried out prior to commencement of construction works to account for potential disturbance to species such as birds. Post-construction remediation of any disturbed habitat in the surrounds of the treatment plant would be a necessary condition of any development consent.

The proposal then seeks to construct a 37-kilometre pipeline of treated water from the Water Treatment Plant to a Break Pressure Tank. A full assessment of potential construction phase impacts to nature reserves and locally important biodiversity sites should be carried out, additional to European Sites (SACs & SPAs) and pNHAs/NHAs. It is noted that regular maintenance access is being

[4] Weis *et al.* 2021. Final Report: Horizontal Directional Drilling. New Jersey Department of Environmental Protection Science Advisory Board. https://dep.nj.gov/wp-content/uploads/sab/sab-hdd.pdf

facilitated via provisioning of permanent wayleaves, necessitating consideration of permanent habitat loss, encroachment upon sensitive wetland sites etc.

The Break Pressure Tank is located within a 7ha site in Knockanacree, Co. Tipperary and represents the focal point of water pressure management from the source at Parteen Basin. Consequently, specific consideration should be given to proposed management and rapid response protocols for this piece of infrastructure which will be handling large amounts of pressure. Furthermore, a new permanent access road for maintenance requires integration into an ecological impact assessment to ensure that the route seeks to avoid sites of highest sensitivity.

4.1 Avoiding Impacts to Wetlands and Bogs

Wetland/bogland sites within the proposal's zone of influence (but excluding Natura2000 sites, NHAs and pNHAs, as these have already been assessed in the EIAR and NIS) include:

Gortybrigane Bog (MIW_TI241), Shallee (White) (MIW_TI216), Capparoe (MIW_TI218), Monaroan Cutover Bog (MIW_TI217), Monsea, Boolagelagh (MIW_TI203), Boolagelagh Wetland (MIW_TI649), Ardcroney Turlough (MIW_TI614), Ballylusky (MIW_TI615), Drumroe (MIW_TI149), Eminiska Wetland (MIW_TI622), Behamore Bog and Fen (Tipperary) (MIW_TI163), Ballyatty Bog (MIW_OF114), Bigwood Fen and Woodland (MIW_OF19), Fortel (MIW_OF144), Annaghmore Bog (MIW_OF186), Annaghmore Lough Fen pNHA (site code: 000413), Monettia Bog (MIW_LA26), Clonad Bog (MIW_OF253), Mountlucas Bog West (MIW_OF252), Rathfeston Bog (MIW_OF254), Esker Bog (MIW_OF219), Esker Bog Rathlumer (MIW_OF220), Cloncreen Bog Windfarm (MIW_OF214), Ballydermot Bog Ballykilleen (MIW_OF208), Ballydermot Bog Clonbrown (Offaly) (MIW_OF216), Ballydermot Bog Cushaling West (MIW_OF210), Ballydermot Bog Cloncant (MIW_OF212), Ballydermot Bog Codd (MIW_OF212), Ballydermot (MIW_KE215), Timahoe South (MIW_KE210), Timahoe North (MIW_KE211), Gilltown Bog (MIW_KE209).

These should be cross-referenced with sites assessed within the applicant's EIAR and NIS, given that sites of potential ecological significance identified within Wetlands Survey Ireland[5] mapping may not be included.

As noted in Appendix A3.1: Pipeline Routing Report (p.13), *"there are extensive areas of peatland in County Offaly and eastern County Kildare through which the pipeline will be constructed."* Some of these sites, while currently consisting of cutover raised bog, may qualify for 'degraded bog of natural regeneration potential [7120]' classification under the Habitats Directive. This is a restorable habitat type under the Nature Restoration Law (NRL) and construction phase activity for underground pipeline and operational maintenance activity should be planned in accordance with this to ensure that works minimise further degradation as much as possible.

It should be noted that research conducted by Renou-Wilson *et al* (2015)[6] demonstrates the importance of rehabilitating/restoring cutover bogs via rewetting and blocking of drains etc, to reinstate their essential carbon sequestration function. As noted by the researchers:

> *"Despite a shallower peat depth, cutover bogs hold the largest soil organic carbon stock (tCha–1) after natural peatlands regardless of peatland type. These results imply the*

5 https://wetland.maps.arcgis.com/apps/View/index.html?appid=e13b75c3bcab4932b992aa0169aa4a32&extent=-12.6266,51.3236,-3.2168,55.4102

6 Renou-Wilson et al. 2015. Peatland Properties Influencing Greenhouse Gas Emissions and Removal. EPA. Report No. 401. https://www.epa.ie/publications/research/climate-change/Research_Report_401.pdf

importance of these degraded ecosystems in providing some critical ecosystem services. Therefore, they should be identified for immediate management interventions to prevent further degradation, particularly the ongoing loss of their carbon store."

It should be ensured that pipeline installation and ancillary infrastructure development does not impede the ability of bog areas to be restored within community projects and wider NRL implementation.

Impacts to low-lying and flat bog and wetland sites require particular consideration given that topographical considerations were a prominent feature of route design to maximise flow and energy efficiency.

Disturbing areas of cutover and functioning bog may create run-off of peat into waterways which potentially contains elevated levels of nutrients, Dissolved Organic Carbon (DOC), sediment, heavy metals, sulphate and ammonium/ammonia. Particular consideration should be given to WFD waterbodies at risk of not achieving good status by 2027 which may be in the vicinity of these areas. Peat can be an especially significant pressure on waterbodies in the midlands (as demonstrated in the map below), which the pipeline is proposed to run through. Wetland/bogland receptors considered by us to be within the pipeline's zone of influence are listed above and should be cross-referenced with receptors listed by the applicant in their impact assessments.

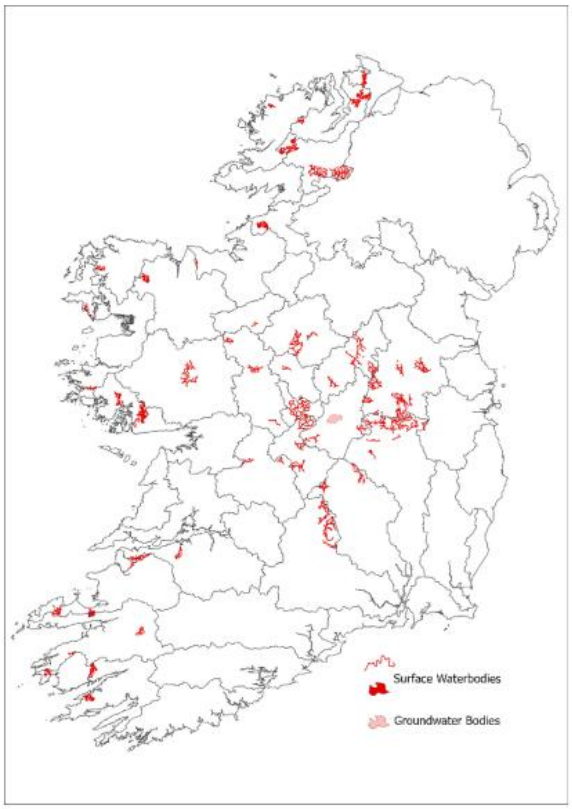


Figure 1: Waterbodies where peat is a significant pressure (August 2023).

(From EPA Catchment Report on Drained Peat, 2024)[7]

[7] https://www.catchments.ie/wp-content/uploads/2024/05/Impacts-of-Drained-Peat-on-Water-Quality.pdf

4.2 Article 10 of the Habitats Directive

Throughout the entirety of the proposed pipeline route and associated infrastructure, from abstraction point to the Termination Point Reservoir, it should be demonstrated that the project is in adherence to Article 10 of the Habitats Directive with regard to protection of stepping stones and ecological corridors including nature conservation sites (other than European sites), habitat areas and species' locations:

> *"Member States shall endeavour, where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the* ***management of features of the landscape*** *which are of* ***major importance for wild fauna and flora****.*
>
> *Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the* ***migration, dispersal and genetic exchange of wild species.****"* [An Taisce emphasis].

This is a necessity given that construction corridors could lead to temporary and/or permanent habitat fragmentation. It is noted that EIAR Ch.8: Biodiversity (p.221) refers to permanent habitat loss being associated with the construction of the aforementioned key infrastructure points to facilitate site clearance and maintenance access (see image below). These may act as barriers to ecological connectivity at a landscape level which should be considered by An Coimisiún in light of the above Article 10 requirements.

- Permanent habitat loss associated with the construction (site clearance and site access) of key infrastructure within the defined works area for the Proposed Project
  - RWI&PS (2.6ha for the site and 1.4ha for the access road)
  - WTP (29.1ha for the site and 1.9ha for the access road)
  - BPT (5.2ha for the site and 1.8ha for the access road)
  - BPS (2.6ha)
  - FCV (0.5ha for the site)
  - TPR (7.5ha and 0.9ha for the access road)
  - Line Valves (3,315m^2, approximately 65m^2 concrete area at surface and 51 Line Valves in total)
  - Air Valve chambers (22,896m^2, approximately 72m^2 for each Air Valve and 289 Air Valves in total)
  - Washout Valve chambers (1,634m^2, approximately 7.1m^2 for above-ground features and 187 Washout Valves in total)

(From EIAR Chapter 8: Biodiversity)

5. Community Benefit Scheme and Biodiversity Conservation

We note that Uisce Éireann seeks to align the proposed Community Benefit Scheme (CBS) with policies to promote biodiversity conservation. It is submitted that the following measures represent an opportunity to adhere to this stated aim while tackling pressing ecological issues of importance to the region from which water will be abstracted.

5.1 Increase Old Shannon Flow Rate

Flow rates in the Old River Shannon channel could be increased above the current statutory minimum compensation flow rate of 10m3/s, which has historically altered the flow regime and sedimentation processes, leaving the Old River Shannon in an ecologically precarious position. The possibility of utilising funds from the Community Benefit Scheme for alterations to the Parteen Weir which impedes an increased flow regime should be considered.

5.2 Removal of Fish Barriers

Remediation of problematic fish passes which act as barriers to upstream fish migration, causing them to experience difficulty reaching spawning grounds and other important habitats, should be considered. It is noted that the Water Action Plan 2024 contains an action for improvement of fish migration in the Lower Shannon (p. 117):

> *"Hymo 7: Implementation of the roadmap of actions, including the use of state-of-the-art technical solutions, to improve fish migration in the lower Shannon at the Hydroelectric scheme located around Parteen and Ardnacrusha. The pilot project will initially examine the feasibility of mitigation and will progress to the next stages, as appropriate."*

This aligns with the 'Environment Objective' in Table 3-2 of the Community Benefit Scheme report which seeks to provide:

> *"Supports for local projects that seek to protect or enhance the natural environment including those aligned with the objectives of protecting and enhancing water bodies, water conservation and climate action initiatives as per the objectives of the* ***Water Action Plan****, the Climate Action Plan, and the National Biodiversity Action Plan."*
> [An Taisce emphasis]

We would encourage investigation of the potential for integration of such a pilot project, and the recommendations of the CDM Smith (2021)[8] report below, with the Community Benefit Scheme attached to the proposed project.

The CDM Smith (2021) expert report for the Department of Housing regarding fish migration in the Lower River Shannon Catchment highlighted the fish pass deficiencies in the Parteen Weir, Ardnacrusha and the Old River Shannon generally, with recommendations for rectification provided which were never implemented as far as we are aware. These recommendations are reproduced below for clarity and it is submitted that these should be prioritised elements of the Community Gain Scheme:

> *"The existing* ***Parteen Weir fish pass and Ardnacrusha fish lock****, although designed correctly at the time of installation based on best practice techniques, have deficiencies, 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.***
>
> *There are a number of* ***natural and manmade rock/riprap bars*** *in the* ***Old River Shannon*** *that - based on our observations - potentially* ***hamper upstream migration*** *in the depleted reach, especially of small/young fish or weak swimmers, particularly in the long-lasting compensation flow conditions."*

[8] CDM Smith. 2021. Roadmap for the Lower River Shannon. Provisions of Expert Advisory Services Regarding Fish Migration in the Lower River Shannon Catchment.

The report also refers to a lack of specific fish protection facilities or downstream fishways/bypasses at Parteen Weir or Ardnacrusha, which the Community Benefit Scheme could assist.

Two options for improving upstream passage are presented in Section 8.2 of the CDM Smith report, which should be closely considered as a co-benefit of implementing the proposal for which the CBS could be leveraged:

> *"There are two realistic options for improving upstream passage, called Concepts U1 and U2 and which can be summarised as follows:*
>
> - *Concept U1 includes new state-of-the-art fish passes at Ardnacrusha Station and Parteen Weir; and*
> - *Concept U2 comprises blockage of the tailrace for upstream migrating fish and entire fish diversion into the Old River Shannon, together with an increase in compensation flow and freshet releases (EFlow regime) in the Old River Shannon."*

With regard to improvement of downstream fish passage, the report recommends on p. 134 *"that an ichthyological review is conducted on the effects of the Shannon Scheme on the species populations (composition and abundance), taking into account fisheries restoration efforts ongoing or anticipated".* This would inform a robust downstream fish passage strategy, which we submit requires consideration and integration into the proposal, particularly assessment of the four concepts presented in the report which include a bypass facility, a partial depth-guidance facility, turbine/weir management and a full depth barrier/bypass at a number of locations. As a preliminary matter, it should also be investigated whether such a review to inform the baseline ecological characterisation has been conducted to date. We would refer An Coimisiún to our analysis elsewhere in the submission in respect of baseline deficiencies associated with the proposal.

5.3 Nutrient Enrichment

It is noted that eutrophication impacts in Lough Derg have been reported by local community groups. The potential for the Community Benefit Scheme to contribute to eutrophication remediation actions should be explored.

5.4 Invasive Species

According to the EPA Report on 'Investigating the Likelihood of a Lough Neagh Bloom Scenario Happening in Ireland', Lough Derg contains 14 invasive species, including zebra mussel. It is recommended that the potential for the Community Benefit Scheme to assist in funding of targeted invasive species eradication programmes should be closely considered.

6. Energy for Operations

We note that Uisce Éireann have stated that they are pursuing a power purchase agreement (PPA) for renewable energy in relation to the grid-generated electricity needed for the various Infrastructure Sites (this will supplement the proposed on-site renewables at five of the Infrastructure Sites). We recommend that details of the (PPA) be confirmed prior to any grant of permission.

7. Onus on the Competent Authority

The subject proposal is for a very significant infrastructure project covering a very large spatial area, and the application materials are therefore quite extensive and complex. An Taisce respectfully submits that the onus of responsibility for assessing the implications of the proposal and the accompanying assessments, identifying any potential deficiencies in the planned approach and in the assessments, and determining if there is adequate information provided to enable the making of a determination with regard to the subject application ultimately lies with An Coimisiún Pleanála as the competent authority. Given that complexity and highly technical nature of the subject proposal, it is submitted that An Coimisiún will need ensure it has access to, either in-house or externally, the full complement of highly specialised experts needed to address the many distinct aspects of the proposal. We also consider that it would not be reasonable in such a complex, highly specialised and technically challenging case to expect any prescribed body or members of the public operating under the constraints of relatively short public consultation timeframes to be able to comprehensively identify issues, deficiencies, etc. with the application and the associated assessments.

Please acknowledge this submission and advise us of any decision made.

Is muidne le meas,

Seán O'Callaghan
Planning and Environmental Policy Officer
An Taisce – The National Trust for Ireland

Dr. Elaine McGoff
Head of Advocacy
An Taisce – The National Trust for Ireland

Phoebe Duvall
Senior Planning and Environmental Policy Officer
An Taisce – The National Trust for Ireland